



 **HAND  
BOOK**

**1**  
**2013**

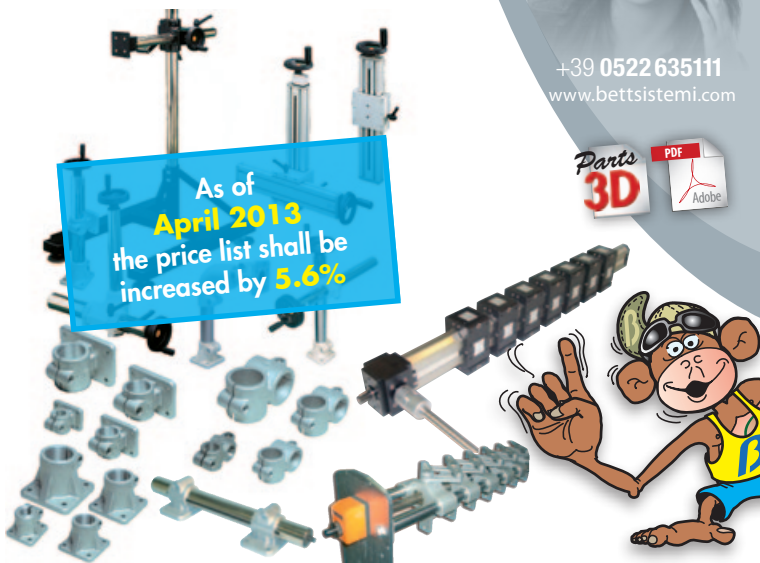
# Connectors, positioners and format change units











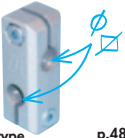





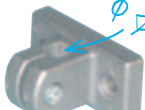









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Parts  
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## Connectors pg.37

 <p>Single-hole p.38</p>	<p><b>ANTI-ROTATION</b></p>  <p>Single-hole p.39</p>	 <p>Single hole with 2 screws p.40</p>	<p><b>ANTI-ROTATION</b></p>  <p>Single hole with 2 screws p.41</p>
<p><b>ANTI-ROTATION</b></p>  <p>Single hole with 2 screws A p.42</p>	 <p>Cross-type p.44</p>	<p>Stainless steel</p>  <p>Cross-type p.46</p>	<p>Plastic</p>  <p>Cross-type p.47</p>
 <p>Cross-type p.48</p>	 <p>Cross-type p.50</p>	 <p>Cross-type p.52</p>	 <p>Cross-type p.54</p>
 <p>Cross-type reinforced p.56</p>	<p>Plastic</p>  <p>With flange p.58</p>	 <p>With flange p.59</p>	<p>Stainless steel</p>  <p>With flange p.60</p>
 <p>With positionable flange p.62</p>	 <p>With orthogonal flange p.63</p>	<p><b>ROBUST</b></p>  <p>With flange for parallel mounting Ø12 p.61</p>	 <p>With round flange p.64</p>
<p><b>NEW</b></p>  <p>With orthogonal flange, with pin Ø18 p.66</p>	<p><b>NEW</b></p>  <p>With orthogonal flange, with pin Ø12 p.65</p>	 <p>With inserted flange p.67</p>	 <p><b>BETT</b> SISTEMI Original <b>B</b> COMPONENTS</p>



## Connectors and accessories pg.67

 <p>Ø20-30 p.68 Ø40 p.69 Ø50 p.70 Ø60 p.71</p> <p>With flange</p>	 <p>With vertical flange p.72</p>	 <p>Flange mount p.73</p>	 <p>With square flange p.74</p>
 <p>Slidi with flange p.75</p>	 <p>Shaft support p.76</p>	 <p>With round flange p.77</p>	 <p>Shaft support p.80</p>
 <p>Shaft support p.79</p>	 <p>With flange, two halves p.80</p>	 <p>With round pedestal p.83</p>	 <p>With pedestal p.84</p>
 <p>For Y articulated joints p.87</p>	 <p>For Z articulated joints p.88</p>	 <p>For X articulated joints p.89</p>	

## Plastic

M8  
M10



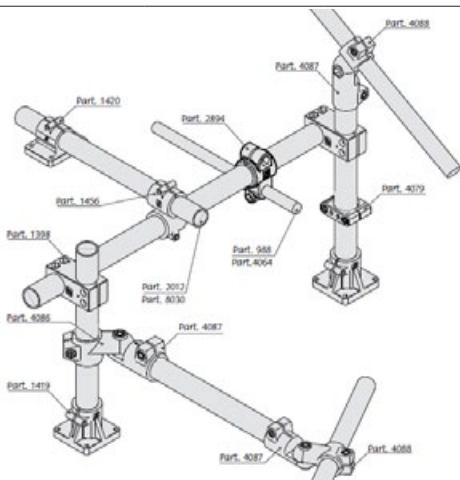
Ratchet levers p.90

## Zamak

M8  
M10



Ratchet levers p.91



Special connectors  
can be made to  
the customer's  
design



## Sliding bushes and shafts pg.95



Flange holder p.96



With flange p.97



With flange p.98



With guided fitting p.99

**BALL BEARING**



Flange holder p.100

**INSERTED FLANGE**



With flange p.101

**HARDENED**

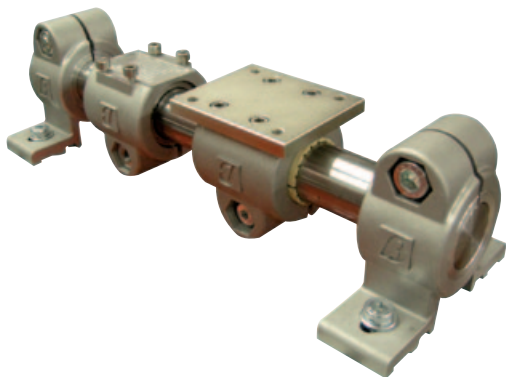


Sliding shaft p.102





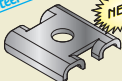




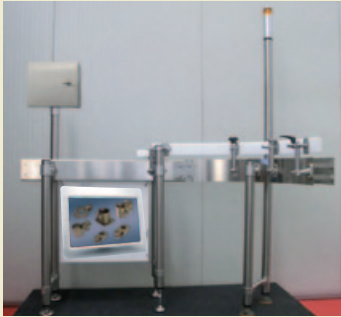


Sliding shaft p.103

## Applications







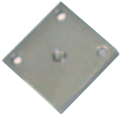
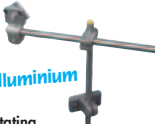

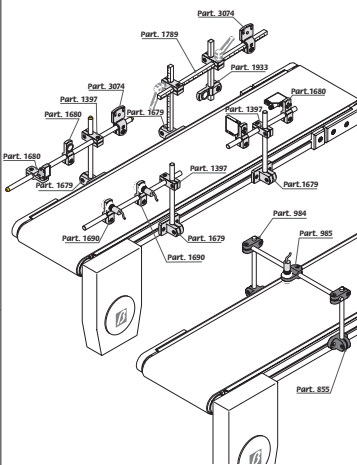



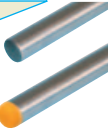
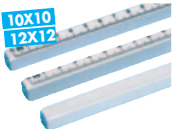












## Connectors in stainless steel pg.105

<p>Stainless steel</p>  <p>Cross-type p.110</p>	<p>Stainless steel</p>  <p>Cross-type lock/release p.112</p>	<p>Stainless steel</p>  <p>Cross-type p.113</p>	<p>Stainless steel</p>  <p>With parallel flange p.114</p>
<p>Stainless steel</p>  <p>With parallel flange Ø16 p.115</p>	<p>Stainless steel</p>  <p>With parallel flange p.116</p>	<p>Stainless steel</p>  <p>With parallel flange p.117</p>	<p>Stainless steel</p>  <p>Orthogonal p.118</p>
<p>Stainless steel</p>  <p>With adjustable flange p.120</p>	<p>Stainless steel</p>  <p>With orthogonal flange p.121</p>	<p>Stainless steel</p>  <p>Orthogonal p.122</p>	<p>Stainless steel</p>  <p>Support head p.124</p>
<p>Stainless steel</p>  <p>Connection joint for tube p.123</p>	<p>Stainless steel</p>  <p>Adjustable foot p.126</p>	<p>Stainless steel</p>  <p>Photocell holder p.127</p>	<p>Stainless steel</p>  <p>Reflector holder Ø16 p.128</p>
<p>Stainless steel</p>  <p>Reflector holder Ø16 p.129</p>	<p>Stainless steel</p>  <p>Reflector holder Ø16 p.130</p>	<p>Stainless steel</p>  <p>Photocell holder Ø16 mm or reflector p.131</p>	<p>Stainless steel</p>  <p>Photocell holder Ø16 mm or reflector p.132</p>
<p>Stainless steel</p>  <p>Guide holder pin p.133</p>	<p>Stainless steel</p>  <p>Guide holder pin p.134</p>	<p>Stainless steel</p>  <p>Guide holder p.135</p>	<p>Stainless steel</p>  <p>Guide p.136</p>

 <p>Accident prevention p.138</p>	 <p>NEW</p> <p>Square guard for 30 x 8 mm plates p.140</p>	<p>Stainless steel</p>  <p>NEW</p> <p>Supporting bracket for 30 x 8 mm plates p.141</p>	
 <p>NEW</p> <p>Light column p.146</p>	<p>Stainless steel</p>  <p>NEW</p> <p>Box with blind door p.145</p>	<p>Stainless steel</p>  <p>NEW</p> <p>Joining plate with 6 holes p.142</p>	<p>Stainless steel</p>  <p>NEW</p> <p>Joining plate with 4 holes p.143</p>
			
			 <p>Guide to component selection p.106</p>

## Product identification and availability pg.151

 <p>Photo cell holder p.154</p>	 <p>Photo cell holder p.155</p> <p><i>Stainless steel</i></p>	 <p>Photo cell holder p.156</p> <p>Plastic</p>	 <p>Reflector holder p.158</p> <p>Plastic</p>
 <p>Sensor or reflector holder p.159</p>	 <p>Sensor or reflector holder p.160</p>	 <p>Turnable flange p.161</p>	
 <p>Rotating sensor mounting p.162</p> <p><i>Aluminium</i></p>	 <p>Photo cell mounting kit p.163</p> <p><i>Aluminium</i></p>		
 <p>Reflector mounting kit p.166</p> <p>Plastic</p>	 <p>Sensor or reflector mounting kit p.165</p> <p><i>Aluminium</i></p>		
 <p>Kit supporto fotocellula p.164</p> <p>Plastic</p>			
 <p>Connection tube p.188</p> <p><i>Stainless steel</i></p>	 <p>Square rods p.189</p> <p>10X10 12X12</p>		

<p>Plastic</p>  <p>Ratchet levers M6</p> <p>p.190</p>	 <p>Reflector</p> <p>p.191</p>		
 <p><b>NEW</b></p> <p>Format changeover with aluminium clamps</p> <p>p.181/a</p>	 <p><b>NEW</b></p> <p>Square cross connector Ø40 and Ø45</p> <p>p.181/b</p>	 <p><b>NEW</b></p> <p>Square flanged cross connector Ø40 and Ø45</p> <p>p.181/c</p>	 <p><b>NEW</b></p> <p>Square flanged connector Ø40 and Ø45</p> <p>p.181/d</p>
 <p><b>NEW</b></p> <p>Cross clamp D1 = Ø42.4 Ø40 and D2=Ø20</p> <p>p.181/e</p>	<p>Stainless steel</p>  <p><b>NEW</b></p> <p>Stainless steel square tube 40x40</p> <p>p.181/f</p>	 <p><b>NEW</b></p> <p>End cap 40x40</p> <p>p.181/f</p>	 <p>Special connectors can be made to the customer's design</p> <p>p.81</p>

## Product conveyance and manual format change pg.167



<p><b>FIXED</b></p>  <p>Head guide clamp</p> <p>p.169</p>	<p><b>HEIGHT-ADJUSTABLE</b></p>  <p>Head guide clamp</p> <p>p.170</p>	 <p>Pin holder clamp</p> <p>p.171</p>	<p>Stainless steel</p>  <p>Ø12</p> <p>Connection tube with caps</p> <p>p.172</p>
<p>Stainless steel</p>  <p><b>NEW</b></p> <p>Ø12</p> <p>Guide fastening pin with flat end</p> <p>p.173</p>	<p>Stainless steel</p>  <p><b>NEW</b></p> <p>Ø12</p> <p>Guide fastening pin with hexagonal head</p> <p>p.30</p>	<p>Stainless steel</p>  <p><b>NEW</b></p> <p>Ø16</p> <p>Guide fastening pin with flat end</p> <p>p.425</p>	

 <p><b>NEW</b></p> <p>Guide holder clamp with bracket p.176</p>	 <p><b>NEW</b></p> <p>Guide holder clamp with blade holder angle p.177</p>	 <p>Blade holder clamp p.178</p>	 <p><b>NEW</b></p> <p>Clamp with package-turning rollers p.180</p>
 <p><b>NEW</b></p> <p>Guide holder clamp with Ø12 plastic pin p.186</p>	 <p><b>NEW</b></p> <p>Pin for guides support in plastic p.182</p>	 <p><b>NEW</b></p> <p>Guide holder clamp with Ø12 steel pin p.187</p>	 <p><b>NEW</b></p> <p>Pin for guide support p.175</p>
 <p>Product containment guide with end runner p.183</p>	 <p><b>NEW</b></p> <p>Safety end block p.183/a</p>	 <p>Product containment guide with end runner p.184</p>	 <p><b>NEW</b></p> <p>Safety end block p.184/a</p>
 <p><b>NEW</b></p> <p>Product containment guide with end runner p.185</p>			
			

## Control panel supports pg.193



Swivel kit p.194



Swivel kit p.201



Swivel kit p.202



Swivel kit p.203



Fixed kit p.204



Fixed kit p.205



Swivel kit p.196



Swivel kit p.197



With swivel pedestal p.206



Angle p.207






With swivel flange p.198






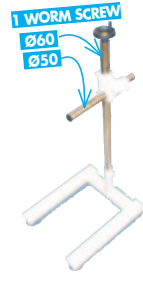
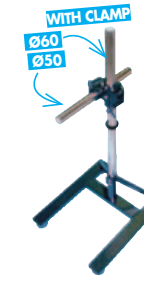




With swivel round pedestal p.199





		 Load diagrams p.217	 Application examples p.200

Positioners for column setup in steel 

 2 WORM SCREWS Ø60 Ø50 Cross-type with pedestal p.224	 2 RACKS Ø60 Ø50 Cross-type with pedestal p.226	 1 WORM SCREW Ø60 Ø50 Cross-type with pedestal p.228	 WITH CLAMP Ø60 Ø50 Cross-type with pedestal p.230
 2 WORM SCREWS Ø60/60 Cross-type with pedestal p.235	 2 WORM SCREWS Ø60/50 Cross-type reinforced p.236	 2 FIXED AXES Ø60/50 Cross-type reinforced p.238	 2 RACKS Ø60/50 Cross-type reinforced p.240





<p><b>2 WORM SCREWS</b> <b>Ø50/50</b></p>  <p>Cross-type with pedestal p.241</p>	<p><b>2 WORM SCREWS</b> <b>Ø40/40</b></p>  <p>Cross-type p.242</p>	<p><b>2 WORM SCREWS</b> <b>Ø30/30</b></p>  <p>Cross-type p.243</p>	<p><b>2 WORM SCREWS</b> <b>Ø30/20</b></p>  <p>Cross-type p.244</p>
<p><b>2 WORM SCREWS</b> <b>Ø30/18</b></p>  <p><b>NEW</b></p> <p>Cross-type p.245</p>	<p><b>2 WORM SCREWS</b> <b>Ø20/20</b></p>  <p><b>NEW</b></p> <p>Cross-type p.246</p>	<p><b>2 WORM SCREWS</b> <b>Ø18/18</b></p>  <p>Cross-type p.247</p>	
		 <p>Special cross positioners can be made to the customer's design</p> <p>p.232</p>	





## Column positioners pg.248

<p><b>WORM SCREW</b> <b>Ø60</b></p>  <p>With 1 carriage with pedestal p.249</p>	<p><b>WORM SCREW</b> <b>Ø60</b></p>  <p>With 1 carriage p.250</p>	<p><b>WORM SCREW</b> <b>Ø60</b></p>  <p>With 1 carriage p.251</p>	<p><b>WORM SCREW</b> <b>Ø60</b></p>  <p>Column only p.252</p>
<p><b>WORM SCREW</b> <b>Ø50</b></p>  <p>With 1 carriage with pedestal p.254</p>	<p><b>WORM SCREW</b> <b>Ø50</b></p>  <p>With 1 carriage p.255</p>	<p><b>WORM SCREW</b> <b>Ø50</b></p>  <p>With 1 carriage p.256</p>	<p><b>WORM SCREW</b> <b>Ø50</b></p>  <p>With 1 carriage with pedestal p.257</p>
<p><b>WORM SCREW</b> <b>Ø50</b></p>  <p>Column only p.258</p>	<p><b>WORM SCREW</b> <b>Ø40</b></p>  <p>With 1 carriage p.260</p>	<p><b>WORM SCREW</b> <b>Ø35</b></p>  <p>With 1 carriage p.261</p>	<p><b>WORM SCREW</b> <b>Ø30</b></p>  <p>With 1 carriage p.262</p>
<p><b>WORM SCREW</b> <b>Ø30</b></p>  <p>Column only p.262</p>	<p><b>WORM SCREW</b> <b>Ø20</b></p>  <p>With 1 carriage p.264</p>	<p><b>WORM SCREW</b> <b>Ø20</b></p>  <p>Column only p.265</p>	<p><b>WORM SCREW</b> <b>Ø20</b></p>  <p>With 1 cross-type carriage p.266</p>
<p><b>Ø18</b></p>  <p>With 1 carriage p.267</p>	<p><b>WORM SCREW</b> <b>Ø18</b></p>  <p>Column only p.268</p>	<p></p> <p>Millimetre scale marking p.269</p>	





## Accessories for column positioners pg.273



**Handwheels**  
(Ø60, Ø50, Ø40, Ø35  
Ø30, Ø20, Ø18 and for  
profile positioners) **p.274**



**Handwheels  
for format change**  
(Ø60, Ø50, Ø40, Ø35 and  
for profile positioners) **p.275**



**Handle**  
(Ø60, Ø50, Ø40, Ø35 and  
for profile positioners) **p.276**



**Bossed knob**  
(Ø30, Ø20, Ø18) **p.277**



**Handling knob**  
(Ø30, Ø20, Ø18) **p.278**



**Revolution counter**  
(Ø60, Ø50) **p.279**



**Revolution counter kit**  
(Ø30, Ø20, Ø18) **p.280**



**Revolution counter kit  
with brake**  
(Ø30, Ø20, Ø18) **p.281**



**Revolution counter kit  
with round angular  
idler**(Ø30, Ø20, Ø18) **p.282**



**MINIMOTOR  
drive kit**  
(Ø60, Ø50) **p.283**



**Coupling  
for gearmotor  
BONFIGLIOLI MVF30** **p.284**





 <p>Couplings for FIAMA gearmotors</p>	 <p>Motor-drive kit</p>	 <p>Support for control panel holder (Ø60)</p>	p.285	p.286	p.287		
<b>TURNABLE</b>  <p>Bracket coupling (Ø50)</p>	 <p>Bracket coupling (Ø50)</p>	 <p>End flange</p>	 <p>Bracket coupling (Ø50)</p>	p.288	p.289	p.290	p.291
 <p>Adapter plate</p>	 <p>Orientable bracket coupling</p>	 <p>Bracket coupling</p>	 <p>Reduction bush</p>	p.292	p.293	p.293	p.293
 <p>Wheel</p>	 <p>Wheel with brake</p>			p.293	p.293		
 <p>Standard base</p>	 <p>Feet and wheels</p>	 <p>Feet only</p>	 <p>Wheels only</p>	p.293	p.293	p.293	p.293
							



## Profile positioners for Setup in alluminium pg.297



Cross-type p.298



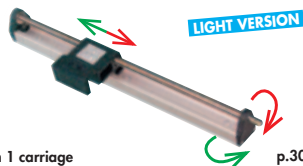
Cross-type p.300



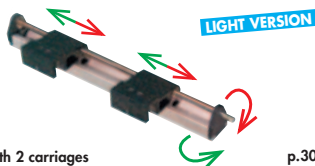
With 1 carriage p.302



With 1 carriage p.304



With 1 carriage p.307



With 2 carriages p.308



Revolution counter kit p.309



Knob with revolution counter and brake p.310





Knob with revolution counter p.310

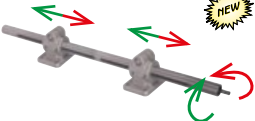

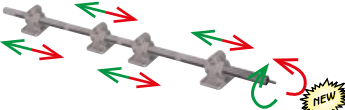



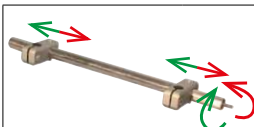
Siko knob with integrated revolution counter p.310



 <p>Knob with revolution counter and brake on angle p.310</p>	 <p><b>NEW</b></p> <p>Handwheel kit with revolution counter and brake p.309/a</p>		

Positioners for format change pg.313 

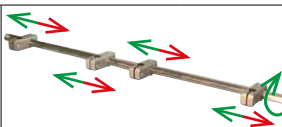
 <p><b>NEW</b></p> <ul style="list-style-type: none"> <li><b>Ø60</b> p.314</li> <li><b>Ø50</b> p.316</li> <li><b>Ø30</b> p.318</li> <li><b>Ø20</b> p.321</li> <li><b>Ø18</b> p.327</li> </ul> <p>With round column with 2 carriages (Ø60, Ø50, Ø30, Ø20, Ø18)</p>	 <p><b>NEW</b></p> <ul style="list-style-type: none"> <li><b>Ø60</b> p.315</li> <li><b>Ø50</b> p.317</li> <li><b>Ø30</b> p.319</li> <li><b>Ø20</b> p.323</li> <li><b>Ø18</b> p.328</li> </ul> <p>Round column only with 2 opposed screws (Ø60, Ø50, Ø30, Ø20, Ø18)</p>
 <p><b>NEW</b></p> <ul style="list-style-type: none"> <li><b>Ø20</b> p.324</li> <li><b>Ø18</b> p.330</li> </ul> <p>With round column with 4 carriages (Ø20, Ø18)</p>	 <p><b>NEW</b></p> <ul style="list-style-type: none"> <li><b>Ø20</b> p.326</li> <li><b>Ø18</b> p.331</li> </ul> <p>Positioner with 4 cross-type opposed carriages (Ø20, Ø18)</p>

**NEW**

- Ø60** p.314/a
- Ø50** p.316/a
- Ø30** p.318/a
- Ø20** p.322
- Ø18** p.327/a

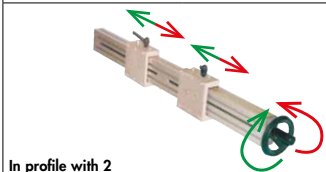
Positioner with 2 cross-type opposed carriages (Ø60, Ø50, Ø30, Ø20, Ø18)



**NEW**

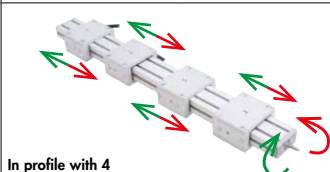
- Ø20** p.325
- Ø18** p.330/a

Positioner with 4 cross-type opposed carriages Ø20



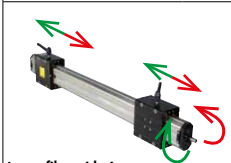
In profile with 2 opposite one-track carriages

p.332



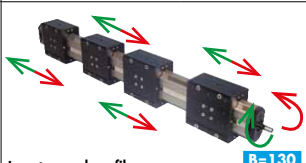
In profile with 4 opposite one-track carriages

p.332



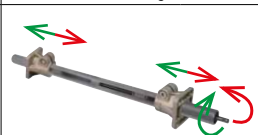
- B=130** p.334
- B=70** p.336

In profile, with 4 two-track carriages



- B=130** p.338
- B=70** p.340

In octagonal profile, with 4 two-track carriages

**NEW**

- Ø60** p.314/b
- Ø50** p.316/b
- Ø30** p.318/b
- Ø20** p.321/a
- Ø18** p.327/b

Positioner with 2 carriages with pedestal (Ø60, Ø50, Ø30, Ø20, Ø18)





## Positioners for format change pg.342

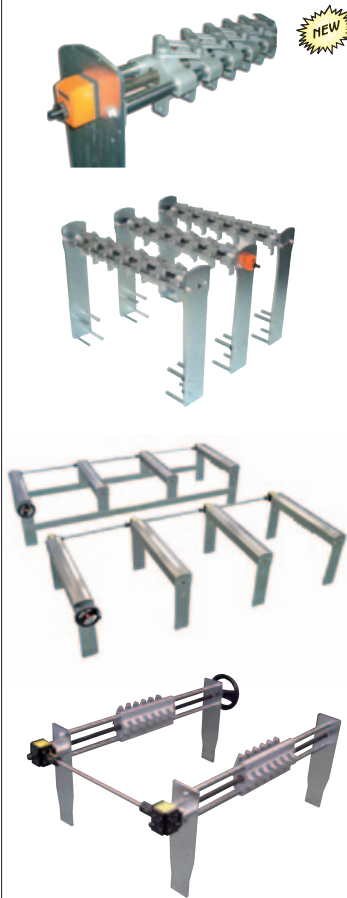
Linked together in octagonal profile

p.342



Pantograph type system

p.346





Removable safety handwheel

p.364



Revolution counter with adapter

p.364/a

## Accessories for format change pg.373



Fastening bracket for octagonal profile

p.373



Fixed coupling bracket

p.374



Bracket fastening kit with blade holder pin

p.375



Clamp with fastening jaws

p.376





## Accessories for octagonal positioners pg.377



Bracket flange p.376/a



Fastening angle with reference notches p.376/a



Plate for fastening positioner carriage in 45x90 profile p.377



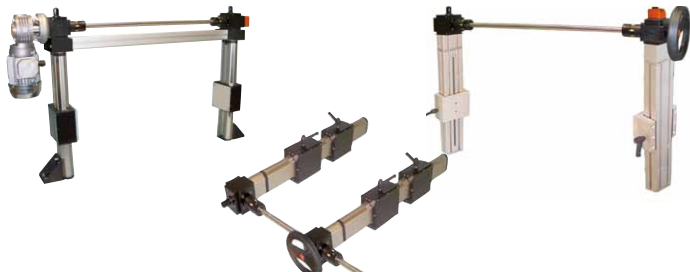
Fitting bracket p.377




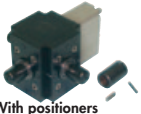

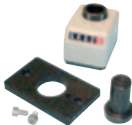
Plate for fastening on carriage p.377



## Accessories for synchronizing positioners profile pg.382





 <p>Octagonal angular idler p.382</p>	 <p>With positioners and angular idler, 45x90 profile p.389</p>	 <p>Drive shaft p.390</p>	 <p>Revolution counter p.393</p>

## Accessories for synchronizing $\varnothing 40$ -50 positioners column pg.384





 <p><b>NEW</b></p> <p>Round angular idler p.383</p>	 <p><b>NEW</b></p> <p>Round angular idler complete p.384</p>	 <p><b>NEW</b></p> <p>Round angular idler 90° p.386</p>	 <p>Drive shaft p.390</p>
 <p><b>NEW</b></p> <p>Gearmotor coupling kit p.394</p>	 <p><b>NEW</b></p> <p>Bonfiglioli MVF 44/F gearmotor coupling kit p.395</p>	 <p><b>NEW</b></p> <p>Bonfiglioli MVF 44/F gearmotor coupling kit p.395</p>	
 <p><b>NEW</b></p> <p>Round angular idler with revolution counter and handwheel p.393/a</p>	 <p><b>NEW</b></p> <p>Propeller shaft with cardan joints p.393/c</p>	 <p><b>NEW</b></p> <p>Cardan joint p.393/e</p>	 <p><b>NEW</b></p> <p>Safety joint cover for cardan joint p.393/f</p>
 <p><b>NEW</b></p> <p>Carriage with bracket plate guide on positioner p.393/g</p>	 <p><b>NEW</b></p> <p>Track p.393/i</p>	<p><b>NEW</b></p> <p>Application example p.393/k</p>	

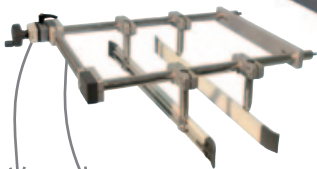
## Accessories for synchronizing $\varnothing$ 18-20 positioners column pg.397

 <p><b>NEW</b></p> <p>Idler synchronisation kit p.397</p>	 <p><b>NEW</b></p> <p>Drive synchronisation kit p.30</p>	 <p><b>NEW</b></p> <p>Spacer bar p.399</p>	
---	---	---	---



**NEW**

**WITH 2  
OPPOSED CARRIAGES**

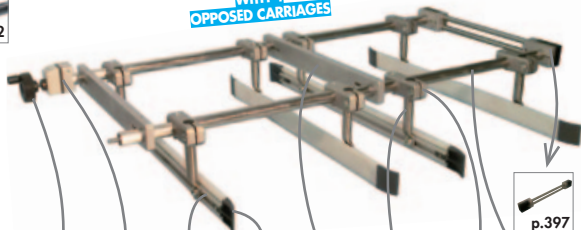


p.30



p.322

**WITH 4  
OPPOSED CARRIAGES**



p.397



p.277



p.280



p.184



p.184



p.399



p.425



p.48



p.322



**NEW**

Manual format change with positioners Ø30

p.399/a



**NEW**

Application diagram of the 3-track synchronisation kit

p.399/b

**NEW**

Idler synchronisation kit

p.399/c















**NEW**














<b>Accessories pg.403</b> 			
	<b>STAINLESS STEEL</b> p.404 <b>NICKEL-PLATED STEEL</b> p.406 <b>ALUMINIUM</b> p.407 <b>IRON</b> p.408		<b>HARDENED</b> p.102 <b>CHROME-PLATED</b> p.103 <b>GROUND</b> p.409 <b>STAINLESS STEEL</b> p.410
<b>Tubes</b>		<b>Sliding shaft</b>	
			
<b>Caps for tubes</b> p.411	<b>Caps for tubes</b> p.412 p.413	<b>Hole caps</b> p.414	<b>Screw caps</b> p.415
	 <b>NEW</b>		
<b>Protection caps</b> p.416	<b>Stop ring</b> p.418		
 <b>WITH M8 END</b>	 <b>10x10</b> <b>12x12</b>	 <b>10x10</b> <b>WITH M8 END</b>	 <b>16x16</b>
<b>Round millimetre rules</b> p.420	<b>Square millimetre rules</b> p.422	<b>Square millimetre rules</b> p.424	<b>Extruded square rod</b> p.426
 <b>16x16</b>		 <b>NEW</b>	
<b>Square millimetre rules</b> p.427	<b>Labels</b> p.30 p.430	<b>Adhesive millimetre rules</b> p.431	




**More technical information**

  <b>Advantages Maximum application flexibility</b>  p.212	  <b>Nuts and bolts and tightening</b>  p.213	  <b>Surface finishes</b>  p.214
  <b>Diagrammi di carico per sostegni quadri comando</b>  p.217	  <b>Mechanical properties</b>  p.218	  <b>Resistance to chemical agents</b>  p.436

Realizzazioni		
	 Special connectors can be made to the customer's design  p.81	 Special kits can be made to the customer's design  p.153
 Special cross positioners can be made to the customer's design  p.232	  More refereces  p.192 p.233 p.270 p.342	
Sales information		
 Bett Sistemi only one partner  p.32	 How we supply the components - KanBan - Consignment Stock  p.432 p.434	
 Index by part  p.444	 General conditions of sale  p.446	 Continual improvement  p.450

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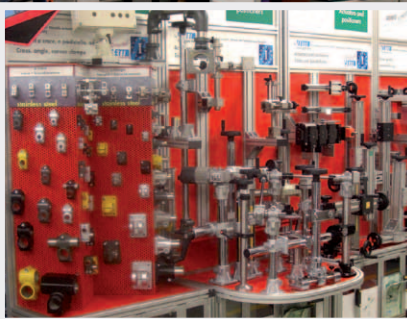


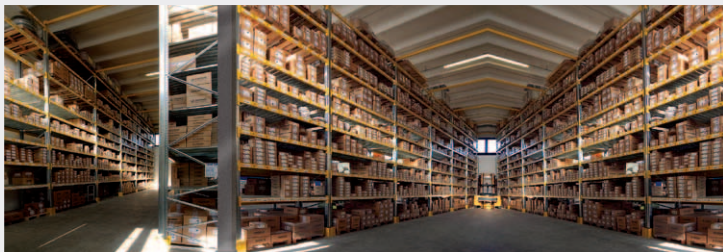
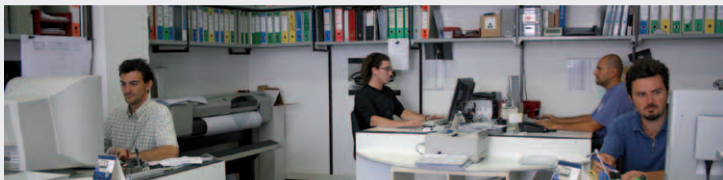
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- Immediate
- Specific
- Original
- Complementary
- Accurate
- Ecological
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# Collection

# Components



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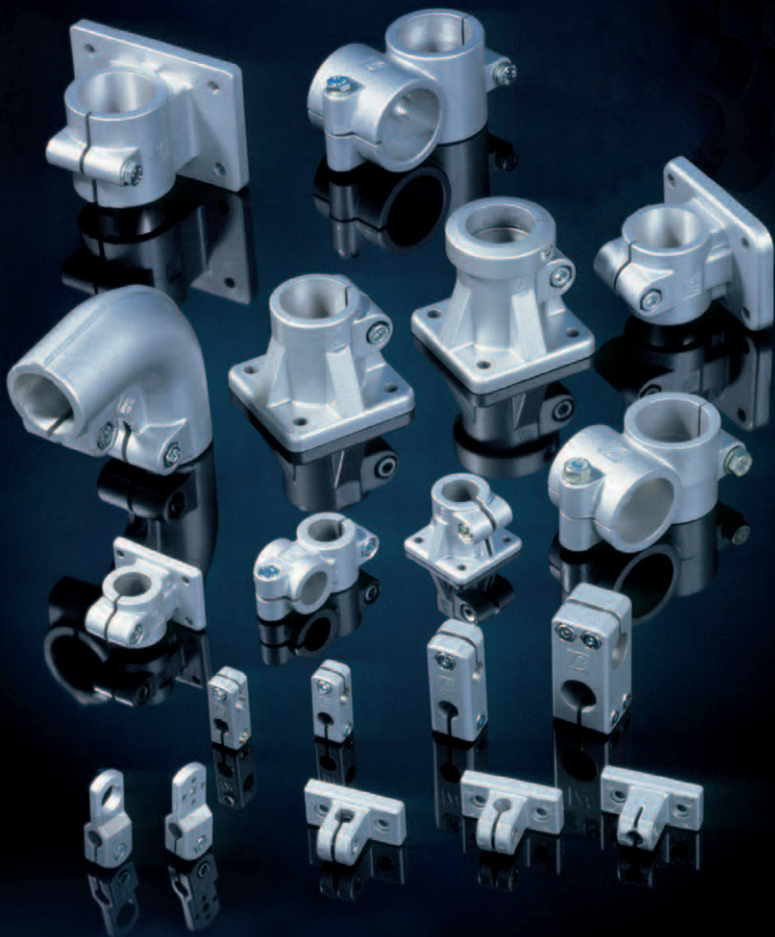
**KanBan**

go to p.432 

**Consignment  
Stock**

go to p.434 

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# Connectors



Technical information and application diagrams

1 p.211



Single-hole

Ø12 and Ø10.

1 p.38



Cross

from Ø10 to Ø60 and from Ø8 to Ø16.

1 p.44



With flange

from Ø10 to Ø60 and from Ø8 to Ø10.

1 p.58



With pedestal

from Ø18 to Ø60.

1 p.83



For articulated joints

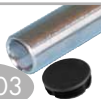
from Ø20 to Ø50.

1 p.87



Combinations and accessories

1 p.403



## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data provided by us **shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components**. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).

# 3166 Single-hole

**Use:** assembly of round or square drawn bars with the same fastening screw.

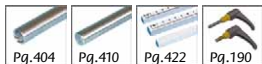
**Material:** aluminium connector; UNI 5931 socket head screw; polyamide anti-rupture torque limiter.

**Standard pack:** 50 pieces.

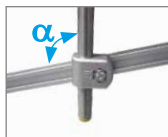
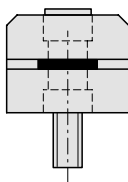
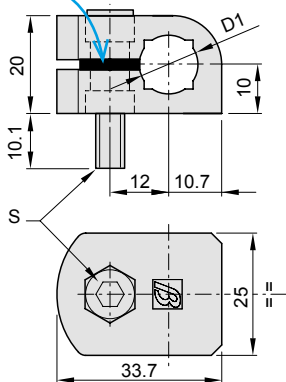
**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations**




Torque limiter



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-5%	-10%	-17%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	S	Finish	Weight g	Stock	€ piece
663246	12,1	10,2	M6x25	shot peening	31,5	✓	9,13

**Personalizations** other finishes on request  Pg.214

## 3165

# Single-hole with centring in 8 mm groove

**Use:** Assembly of round or square drawn bars in fixed orthogonal position with the same fastening screw.

**Material:** aluminium connector; UNI 5931 socket head screw and square nut with spring, part number 1786 in galvanised steel; Polyamide anti-rupture torque limiter.

**Standard pack:** 50 pieces.

**Advantages:** reduced dimensions and fast assembly.

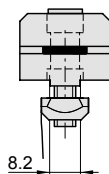
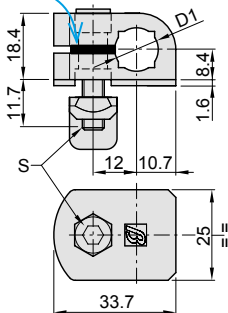
**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations:**



Torque limiter



Tolerance	
D1	
$\varnothing 12,1$	$+0,15$ $0$
$\varnothing 10,2$	$\pm 0,05$



### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-5%	-10%	-17%	on request

Order code	D1 $\varnothing$	D1 $\square$	S	Finish	Weight g	Stock	€ pezzo
663206	12,1	10,2	M6x25	shot peening	31	✓	10,84

**Personalizations:** other finishes on request Pg.214

# 3281 Single hole with two screws

**Use:** assembly of round or square drawn bars with one screw **independent** of the fastening screw.

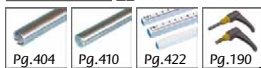
**Material:** aluminium connector; UNI 5931 socket head screws and UNI5588 hexagonal nut in galvanized steel; grey plastic ratchet lever M6x16,5 with brass threaded pin Part. 3135; Polyamide antirupture torque limiter.

**Standard pack:** 50 pieces.

**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

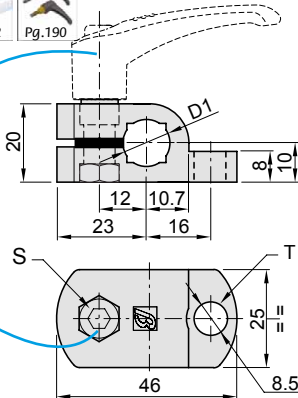
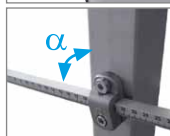
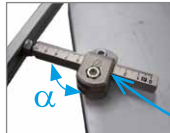
**Combinations**



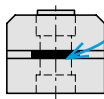
Version with lever



Version with screw

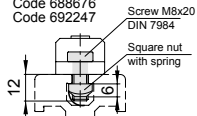


Torque limiter



Tolerance	
$D1$	
$\varnothing 12,1$	$+0,15$ $0$
$\varnothing 10,2$	$\pm 0,05$

Code 688676  
Code 692247



For profiles with 8mm groove

## QUANTITY DISCOUNT

Q.ty Discounts	50+	100+
	-17%	on request

Order code	$D1$ $\varnothing$	$D1$ $\varnothing$	S	T	Finish	Weight g	Stock	€ piece
688666	12,1	10,2	M6x14	-	shot peening	37	■	9,49
688676	12,1	10,2	M6x14	M8x20 + nut	shot peening	51	■	10,25
692237	12,1	10,2	lever	-	shot peening	49	■	16,84
692247	12,1	10,2	lever	M8x20 + nut	shot peening	63	■	17,47

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 50 pieces, delivery in 15 days.

## 3238

# Single hole with two screws with centring in 8 mm groove

**Use:** assembly of round or square drawn bars in fixed orthogonal position with one screw **independent** of the fastening screw.

**Material:** aluminium connector; UNI 5931 socket head screw and square nut with spring, part number 1786 in galvanised steel; polyamide anti-rupture torque limiter.

**Standard pack:** 50 pieces.

**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations:**



Version with lever



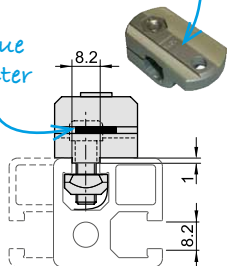
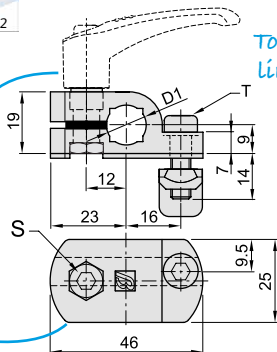
Version with screw



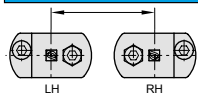
Tolerance	
D1	
$\varnothing 12,1$	$\begin{matrix} +0,15 \\ 0 \end{matrix}$
$\varnothing 10,2$	$\pm 0,05$



Torque limiter



Min. distance between centres  
46 mm



**QUANTITY DISCOUNT**

Q.ty	50+	100+
Discounts	-17%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	S	T	Version	Finish	Weight g	Stock	€ piece
687286	12,1	10,2	M6x12	M6x20	RH	shot peening	39	■	10,35
620987	12,1	10,2	M6x12	M6x20	LH	shot peening	39	■	10,35
692257	12,1	10,2	lever	M6x20	RH	shot peening	51	■	19,31
692267	12,1	10,2	lever	M6x20	LH	shot peening	51	■	19,31

**Personalizations:** other finishes on request Pg.214 .

**Products not in stock:** minimum order 50 pieces, delivery in 15 days.

# 3241 Single hole with two screws with centring in 8 mm groove

**Use:** orthogonal assembly in groove of round drawn bars.

**Material:** aluminium connector; UNI 5931 socket head screw, UNI 5587 hexagon nut and anti-rupture torque limiter in galvanised steel.

**Standard pack:** 50 pieces.

**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial 12 round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations** 



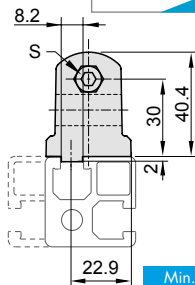
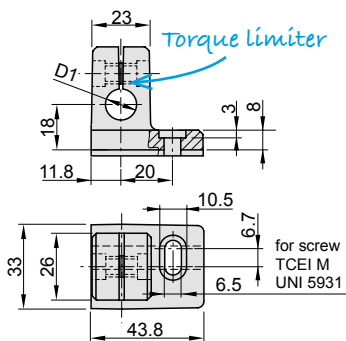
Pg.404

Pg.410

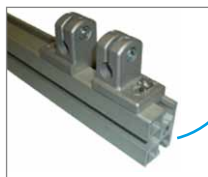
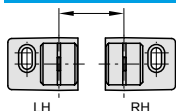
Pg.190



Anti-rotation



Min. distance between centres 23.6 mm



Tolerance

D1

Ø12,1	+0,15	0
-------	-------	---

### QUANTITY DISCOUNT

Q.ty Discounts	50+	100+
	-17%	on request

Order code	D1 Ø	D1 ∅	S	Version	Finish	Weight g	Stock	€ piece
687586	12,1	-	M6x16	RH	shot peening	70	■	11,86
687756	12,1	-	M6x16	LH	shot peening	70	■	11,86

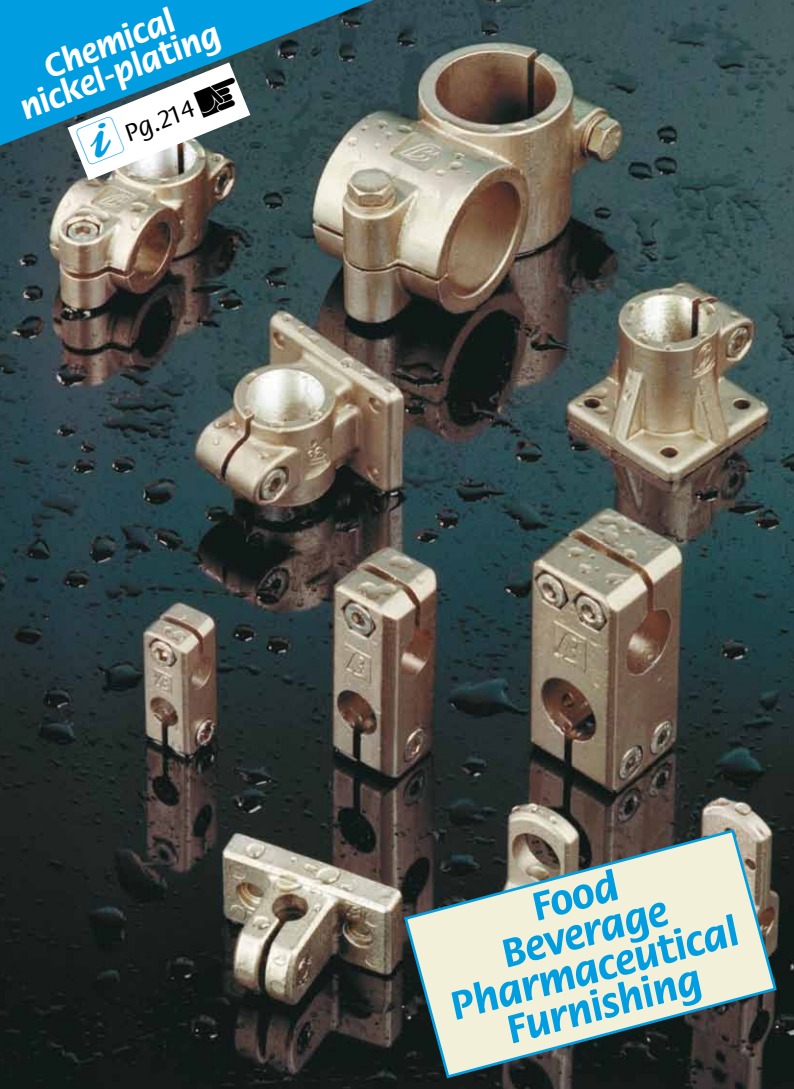
**Personalizations** other finishes on request  Pg.214 

**Products not in stock** minimum order 50 pieces, delivery in 10 days.

**Chemical  
nickel-plating**

 Pg. 214 

**Food  
Beverage  
Pharmaceutical  
Furnishing**



# 1397 → Cross

from Ø12 to Ø15 and  $\nabla$  10 mm

**Use:** orthogonal connection between two round or square drawn bars.  
**Suitable** for applications exposed to **accidental impact**.

**Material** aluminium connector; 2 UNI 5931 socket head screws, 2 UNI 5588 hexagon nuts and 2 anti-rupture torque limiters in galvanised steel.

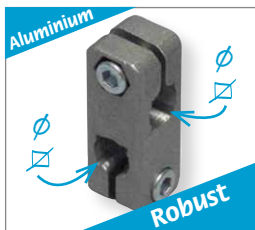
**Standard pack:** 48 pieces.

**Tightening torque** 10 Nm (M6).

For further hole sizes Pg.215 .

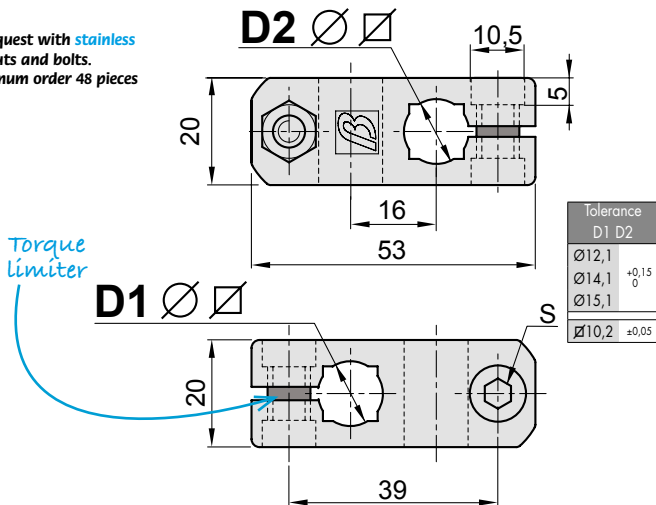
**Warning:** if combined with commercial Ø12 round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations**



• On request with **stainless steel** nuts and bolts.

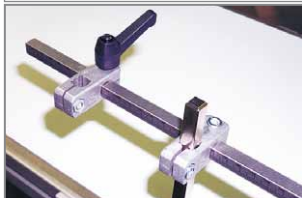
• **minimum order 48 pieces**



## ↓ 1397

## Cross


from Ø12 to Ø15 and  $\nabla$  10 mm



### QUANTITY DISCOUNT

Q. ty	1+	5+	9+	48+	96+
Discounts	-	-5%	-10%	-17%	on request

Order code	D1 Ø	D1 ∅	D2 Ø	D2 ∅	S	Finish	Weight g	Stock	€ piece
621634	12,1	-	12,1	-	M6x14	shot peening	48	✓	7,19
634084	12,1	-	12,1	-	M6x14	grey RAL7010	48	■	8,21
612272	12,1	-	12,1	-	M6x14	grigio RAL9006	48	■	8,21
621624	12,1	10,2	12,1	10,2	M6x14	shot peening	47	✓	8,60
634114	12,1	10,2	12,1	10,2	M6x14	grey RAL7010	47	■	9,62
685372	12,1	10,2	12,1	10,2	M6x14	grey RAL9006	47	■	9,62
621644	12,1	-	14,1	-	M6x14	shot peening	46	✓	7,19
634094	12,1	-	14,1	-	M6x14	grey RAL7010	46	■	8,21
612342	12,1	-	14,1	-	M6x14	grey RAL9006	46	■	8,21
690887	12,1	10,2	15,1	-	M6x14	shot peening	45	■	8,60
690897	12,1	10,2	15,1	-	M6x14	grey RAL7010	45	■	9,62
690907	12,1	10,2	15,1	-	M6x14	grey RAL9006	45	■	9,62
621654	14,1	-	14,1	-	M6x14	shot peening	44	✓	7,19
634104	14,1	-	14,1	-	M6x14	grey RAL7010	44	■	8,21
612352	14,1	-	14,1	-	M6x14	grey RAL9006	44	■	8,21

Personalizations other finishes on request  Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

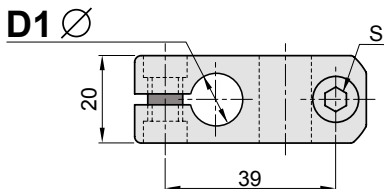
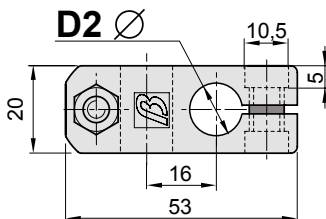
# 1397 Cross in stainless steel

Ø12 mm

**Material** AISI 316 stainless steel connector; 2 UNI 5931 socket head screws, 2 UNI 5588 hexagon nuts in AISI 304 stainless steel (without torque limiter).

**Characteristics:** see part 1397 in aluminium.

**Tightening torque** 10 Nm (M6).



**Food & Beverage**



Tolerance	
D1	D2
Ø12,1	$\begin{matrix} +0,10 \\ -0,05 \end{matrix}$

- On request with **stainless steel** nuts and bolts. **inox**.
- **minimum order 48 pieces.**

### QUANTITY DISCOUNTS

Q.ty Discounts	1+	5+	9+	48+	96+
	-	-5%	-10%	-17%	on request

Order code	D1 Ø	D2 Ø	S	Finish	Weight g	Stock	€ piece
656834	12,1	12,1	M6x14	electropolished	107	✓	9,68

**Personalizations** other finishes on request  Pg.214 

## 984

# Cross in plastic

from  $\varnothing 10$  and  $\varnothing 8$  from  $\varnothing 12$  and  $\varnothing 10$  mm

**Use:** connection of round or square bars. Tube tightening **not constant over time** Pg.218

**Material** reinforced polyamide connector; 2 UNI 5931 socket head screws and 2 nuts in galvanised steel.

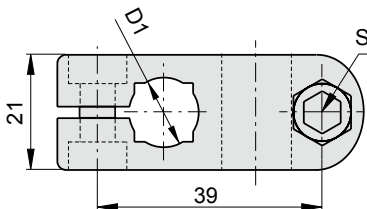
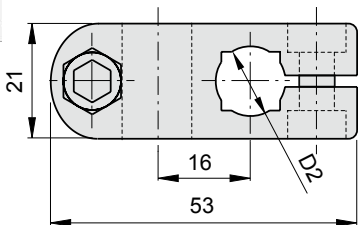
**Standard pack:** 50 pieces.

**Tightening torque** 4,9 Nm (M5).

**Mechanical properties** Pg.215

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	9+	50+	100+
	-	-10%	-17%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	D2 $\varnothing$	D1 $\varnothing$	S	Finish	Weight g	Stock	€ piece
656521	10,1	8,2	10,1	8,2	M5x12	black RAL9005	26	✓	2,41
650201	10,1	8,2	10,1	8,2	M5x12	grey RAL7016	26	■	2,41
656531	12,1	10,2	12,1	10,2	M5x12	black RAL9005	26	✓	2,41
650211	12,1	10,2	12,1	10,2	M5x12	grey RAL7016	26	■	2,41

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 200 pieces, delivery in 20 days.

1450 →

## Cross

Ø15 to Ø20mm -  $\nabla$  12 and  $\nabla$  16 mm

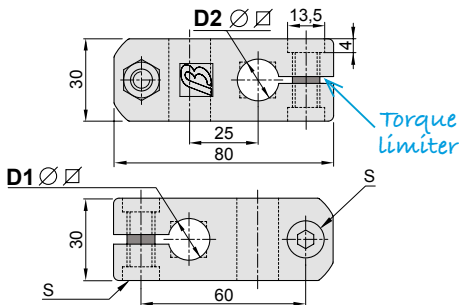
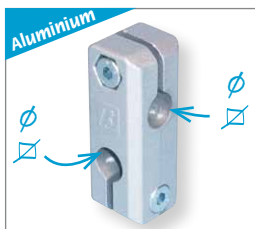
**Use:** orthogonal connection between two round drawn bars.

**Material:** aluminium connector; 2 DIN 7984 socket head screws, 2 UNI 5589 hexagon nuts and 2 anti-rupture torque limiters in galvanised steel.

**Standard pack:** 24 pieces.

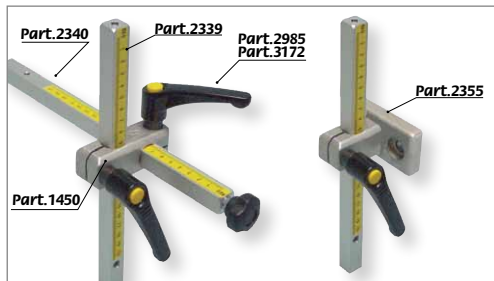
**Tightening torque:** 25 Nm (M8).

**Combinations:**



Tolerance	
D1	D2
Ø15,1	+0,15 0
Ø16,1	+0,15 0
Ø18,1	+0,15 0
Ø20,2	+0,05 0
$\nabla$ 12,2	+0,05 0
$\nabla$ 16,0	+0,10 0

## Application example



- On request, from part 1450 other versions can be obtained with square holes made by broaching on round holes. Example: on Ø15 you obtain  $\nabla$ 12 on Ø16 you obtain  $\nabla$ 14 on Ø20 you obtain  $\nabla$ 16
- minimum order 24 pieces, delivery in 5 days.
- On request with stainless steel nuts and bolts.
- minimum order 48 pieces.

## ↓ 1450

## Cross

Ø15 to Ø20mm - ∅ 12 and ∅ 16 mm

### QUANTITY DISCOUNT

Qty Discounts	1+	5+	9+	24+	48+
	-	-5%	-10%	-13%	on request

Order code	D1		D2		S	Finish	Weight g	Stock	€ piece
	∅	∅	∅	∅					
621554	15,1	-	15,1	-	M8x25	shot peening	163	✓	8,25
634014	15,1	-	15,1	-	M8x25	grey RAL7010	163	■	9,28
625302	15,1	-	15,1	-	M8x25	grey RAL9006	163	■	9,28
621564	15,1	-	16,1	-	M8x25	shot peening	160	✓	8,25
634024	15,1	-	16,1	-	M8x25	grey RAL7010	160	■	9,28
625312	15,1	-	16,1	-	M8x25	grey RAL9006	160	■	9,28
621574	15,1	-	18,1	-	M8x25	shot peening	155	✓	8,25
634034	15,1	-	18,1	-	M8x25	grey RAL7010	155	■	9,28
625322	15,1	-	18,1	-	M8x25	grey RAL9006	155	■	9,28
621584	16,1	-	16,1	-	M8x25	shot peening	145	✓	9,16
634044	16,1	-	16,1	-	M8x25	grey RAL7010	156	■	10,18
625332	16,1	-	16,1	-	M8x25	grey RAL9006	145	■	10,18
621594	16,1	-	18,1	-	M8x25	shot peening	142	✓	9,16
634054	16,1	-	18,1	-	M8x25	grey RAL7010	152	■	10,18
625342	16,1	-	18,1	-	M8x25	grey RAL9006	142	■	10,18
621604	18,1	-	18,1	-	M8x25	shot peening	140	✓	9,16
634064	18,1	-	18,1	-	M8x25	grey RAL7010	150	■	10,18
625352	18,1	-	18,1	-	M8x25	grey RAL9006	140	✓	10,18
621614	20,2	-	20,2	-	M8x25	shot peening	135	✓	9,16
634074	20,2	-	20,2	-	M8x25	grey RAL7010	140	■	10,18
665122	20,2	-	20,2	-	M8x25	grey RAL9006	135	■	10,18
644757	20,2	-	15,1	12,2	M8x25	shot peening	140	■	11,00
641647	20,2	16	20,2	16	M8x25	shot peening	134	✓	11,00
641657	20,2	16	20,2	16	M8x25	grey RAL7010	134	■	12,02
641667	20,2	16	20,2	16	M8x25	grey RAL9006	134	■	12,02

**Personalizations** other finishes on request Pg.214

■ **Products not in stock** For painted versions minimum order 1 piece, delivery in 5 days; for versions with square holes made on request: minimum order 24 pieces, delivery in 5 days.

1398

Cross

Ø25 to Ø30 mm

**Use:** orthogonal connection between two round drawn bars.

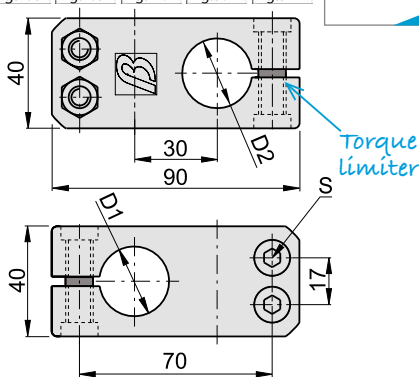
**Material:** aluminium connector; 4 DIN 7984 socket head screws with countersunk head, 4 hexagon nuts and 4 anti-rupture torque limiters in galvanised steel.

**Standard pack:** 8 pieces.

**Tightening torque:** 25 Nm (M8).

For further hole sizes Pg.215

**Combinations**



Tolerance

D1 D2

Ø25,2	+0,2 0
Ø27,2	
Ø30,2	

**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

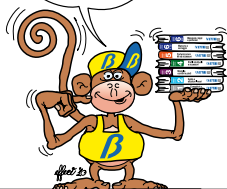
Order code	D1 Ø	D2 Ø	S	Finish	Weight g	Stock	€ piece
621504	25,2	25,2	M8x35	shot peening	295	✓	12,11
621984	25,2	25,2	M8x35	grey RAL7010	295	■	13,54
617852	25,2	25,2	M8x35	grey RAL9006	295	■	13,54
621524	25,2	30,2	M8x35	shot peening	272	✓	12,11
634004	25,2	30,2	M8x35	grey RAL7010	272	■	13,54
665302	25,2	30,2	M8x35	grey RAL9006	272	■	13,54
621514	27,2	27,2	M8x35	shot peening	274	✓	12,11
621994	27,2	27,2	M8x35	grey RAL7010	274	■	13,54
612282	27,2	27,2	M8x35	grey RAL9006	274	■	13,54

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 1 piece, delivery in 5 days.



Have you  
 got all the  
 Books?



# 1456 → Cross

## Ø20 to Ø60 mm

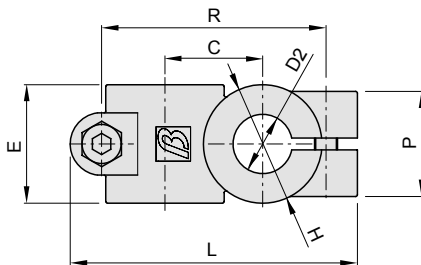
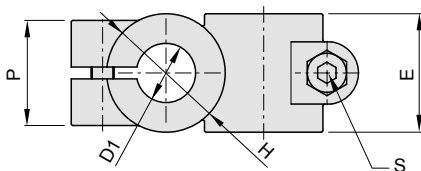
**Use:** orthogonal connection between two round bars.

**Material:** aluminium connector; 2 UNI 5931 socket head screws, 2 DIN 985 self-locking hexagon nuts in galvanised steel.

**Standard pack:** see table.

For further hole sizes Pg.215

**Combinations**



Tolerance D1 D2	
Ø20,1	$+0,15$ 0
Ø25,2	
Ø30,2	
Ø40,2	
Ø50,3	
Ø60,3	$+0,20$ 0

### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 D2	C mm	E mm	H mm	L mm	P mm	R mm	S	Finish	Weight g	Stock	€ piece
689395	20,1	33	40	40	97	36	76	M8x25	shot peening	253	✓	9,92
689365	20,1	33	40	40	97	36	76	M8x25	grey RAL7010	253	■	11,50
689335	20,1	33	40	40	97	36	76	M8x25	grey RAL9006	219	■	11,50

**Standard pack:** 8 pieces.

**Tightening torque:** 25 Nm (M8)



## 1456

## Cross

### Ø20 to Ø60 mm

Order code	D1 D2	C mm	E mm	H mm	L mm	P mm	R mm	S	Finish	Weight g	Stock	€ piece
689405	25,2	33	40	40	97	36	76	M8x25	shot peening	219	✓	9,92
689375	25,2	33	40	40	97	36	76	M8x25	grey RAL7010	219	■	11,50
689345	25,2	33	40	40	97	36	76	M8x25	grey RAL9006	219	■	11,50
689415	30,2	33	40	40	97	36	76	M8x25	shot peening	172	✓	9,92
689385	30,2	33	40	40	97	36	76	M8x25	grey RAL7010	172	■	11,50
689355	30,2	33	40	40	97	36	76	M8x25	grey RAL9006	172	✓	11,50

**Standard pack:** 8 pieces.

**Tightening torque** 25 Nm (M8)

601846	30,2	45	56	56	127	46	101	M10x35	shot peening	608	✓	15,45
601856	30,2	45	56	56	127	46	101	M10x35	grey RAL7010	608	■	18,15
601866	30,2	45	56	56	127	46	101	M10x35	grey RAL9006	608	■	18,15
601876	40,2	45	56	56	127	46	101	M10x35	shot peening	451	✓	15,45
601886	40,2	45	56	56	127	46	101	M10x35	grey RAL7010	451	■	18,15
601896	40,2	45	56	56	127	46	101	M10x35	grey RAL9006	451	■	18,15

**Standard pack:** 4 pieces.

**Tightening torque** 50 Nm (M10)

601786	40,2	53	65	65	145	59	119	M10x50	shot peening	841	✓	16,01
601796	40,2	53	65	65	145	59	119	M10x50	grey RAL7010	841	■	18,83
601806	40,2	53	65	65	145	59	119	M10x50	grey RAL9006	841	■	18,83
601816	50,3	53	65	65	145	59	119	M10x50	shot peening	610	✓	16,01
601826	50,3	53	65	65	145	59	119	M10x50	grey RAL7010	610	■	18,83
601836	50,3	53	65	65	145	59	119	M10x50	grey RAL9006	610	■	18,83


**Standard pack:** 2 pieces.

**Tightening torque** 50 Nm (M10)

601756	60,3	65	80	80	169	59	143	M10x50	shot peening	987	✓	22,66
601766	60,3	65	80	80	169	59	143	M10x50	grey RAL7010	987	■	25,82
601776	60,3	65	80	80	169	59	143	M10x50	grey RAL9006	987	■	25,82

**Standard pack:** 2 pieces.

**Tightening torque** 50 Nm (M10)

**Personalizations** other finishes on request  Pg.214

■ **Products not in stock** minimum order 1 piece, delivery in 5 days.

2984 →

**Cross**

D2 from Ø16 to Ø18 et D1 from Ø25 to Ø30 mm

**Use:** orthogonal connection between two round bars of different diameter.

**Material:** aluminium connector; 2 UNI 5931 socket head screws, 2 DIN 985 self-locking hexagon nuts in galvanised steel.

**Standard pack:** 8 pieces.

**Tightening torque:** 25 Nm (M8) 10 Nm (M6).

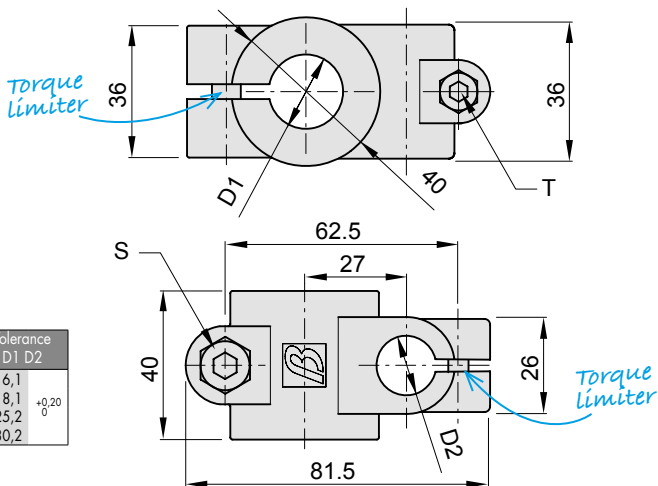
screw S:Pg.90 Part. 2985 code 602956;

screw S:Pg.91 Part. 3172 code 663306/663336;

screw T:Pg.190 Part. 3135 code 661606.

For further hole sizes Pg.215 .

**Combinations**

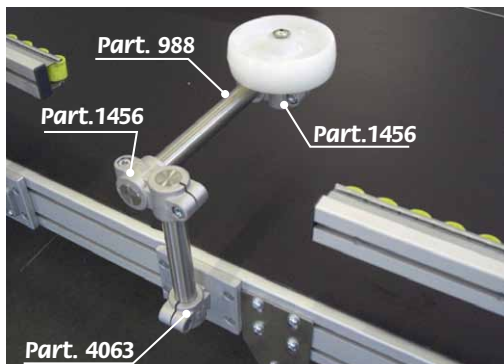


Tolerance	
D1	D2
Ø16,1	
Ø18,1	
Ø25,2	+0,20
Ø30,2	0

## ↓ 2984

## Cross

D2 from Ø16 to Ø18 et D1 from Ø25 to Ø30 mm



### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-5%	-10%	-15%	on request

Order code	D1 Ø	D2 Ø	S	T	Finish	Weight g	Stock	€ piece
663276	25,2	16,1	M8x25	M6x20	shot peening	149	✓	8,92
663506	25,2	16,1	M8x25	M6x20	grey RAL7010	149	■	10,35
664996	25,2	16,1	M8x25	M6x20	grey RAL9006	149	■	10,35
663396	25,2	18,1	M8x25	M6x20	shot peening	144	✓	15,86
664936	25,2	18,1	M8x25	M6x20	grey RAL7010	144	■	17,29
665086	25,2	18,1	M8x25	M6x20	grey RAL9006	144	■	17,29
663486	30,2	16,1	M8x25	M6x20	shot peening	130	✓	15,86
664976	30,2	16,1	M8x25	M6x20	grey RAL7010	130	■	17,29
665126	30,2	16,1	M8x25	M6x20	grey RAL9006	130	■	17,29
663496	30,2	18,1	M8x25	M6x20	shot peening	125	✓	18,31
664986	30,2	18,1	M8x25	M6x20	grey RAL7010	125	■	19,70
665136	30,2	18,1	M8x25	M6x20	grey RAL9006	125	■	19,70

Personalizations other finishes on request Pg.214

\*Products not in stock minimum order 1 piece, delivery in 5 days.

1999

# Reinforced cross

D1 = Ø50 and D2 = Ø60 mm

**Use:** orthogonal connection between two round bars.

**Material:** aluminium connector; 4 UNI 5931 socket head screws in galvanised steel.

**Standard pack:** 1 piece.

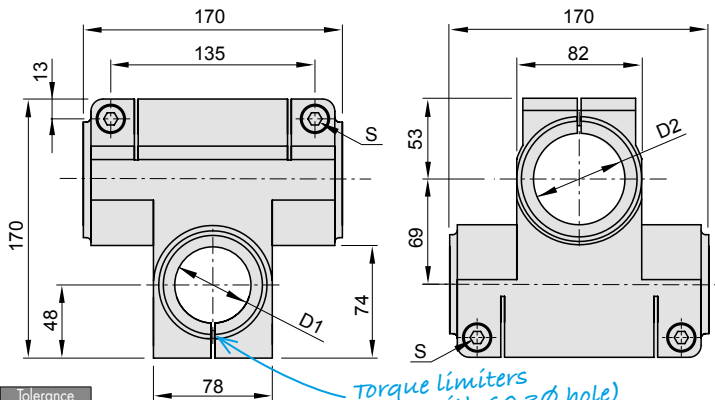
**Tightening torque:** Ø50,3 = 35 Nm; Ø60,3 = 50 Nm

screw S: Pg.90 Part. 2985 code 602976;

screw S: Pg.190 Part. 3172 code 663326/663356.

For further hole sizes Pg.215 .

**Combinations**



Tolerance	
D1	D2
Ø50,3	+0,05 0
Ø60,3	0 -0,05

### QUANTITY DISCOUNT

Q.ty	1+	2+	4+	8+
Discounts	-	-3%	-6%	on request

Order code	D1 Ø	D2 Ø	S	Finish	Weight g	Stock	€ piece
659383	50,3	60,3	M10x45	grey RAL9006	3950	✓	190.24
614569	60,3	60,3	M10x45	grey RAL9006	3935	■	190.24

**Personalizations** other finishes on request Pg.214

•Products not in stock minimum order 1 piece, delivery in 5 days.



855

# With flange in plastic

from  $\varnothing 10 - \varnothing 8$  to  $\varnothing 12 - \varnothing 10$  mm

**Use:** connection of round or square bars parallel to the fastening plane; tube tightening **not constant over time**.

**Material** reinforced polyamide connector; 1 UNI 5931 socket head screw, 1 hexagon nut, 2 DIN 7984 socket head screws, 2 square nuts in galvanised steel, part 802.

**Standard pack:** 50 pieces.

**Tightening torque** 4.9 Nm (M5).

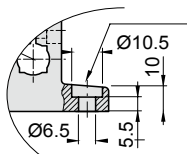
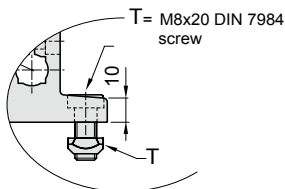
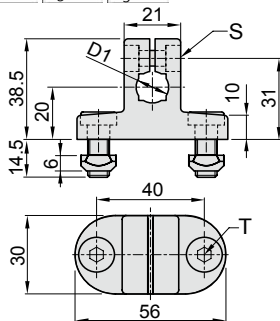
**Mechanical properties** Pg.218

**Warning:** if combined with commercial  $\varnothing 12$  round tubes, check that the tolerance corresponds to that of our part number 2012 ; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations**



Pg.422 Pg.410 Pg.404



T = seat for  
M6 UNI 5931  
screws

Cod. 602613  
Cod. 602643

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	50+	100+
	-	-3%	-6%	-8%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	S	Screws	Finish	Weight g	Stock	€ piece
618101	10,1	8,2	M5x12	M8x20	black RAL9005	57	✓	2,91
650181	10,1	8,2	M5x12	M8x20	grey RAL7016	57	■	2,91
618111	12,1	10,2	M5x12	M8x20	black RAL9005	57	✓	2,91
650191	12,1	10,2	M5x12	M8x20	grey RAL7016	57	■	2,91

T = seat for 5931 M6 socket head fastening screw

602613	10,1	8,2	M5x12	no	black RAL9005	47	✓	1,86
602643	12,1	10,2	M5x12	no	black RAL9005	47	✓	1,86

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 200 pieces, delivery in 20 days.

## 1679 With flange

Ø12 - Ø 10 mm

**Use:** connection of round or square drawn bars parallel to the fastening plane; **suitable** for applications exposed to **accidental impact**.

**Material** aluminium connector; 1 UNI 5931 socket head screw, 1 hexagon nut, 1 grub screw and 1 anti-rupture torque limiter in galvanised steel.

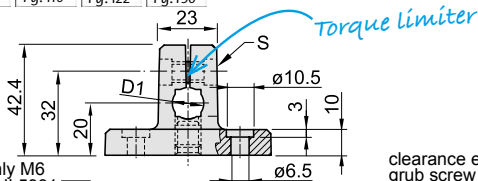
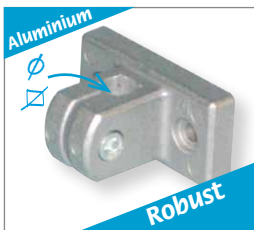
**Standard pack:** 50 pieces.

**Tightening torque** 10 Nm (M6).

For further hole sizes Pg.215

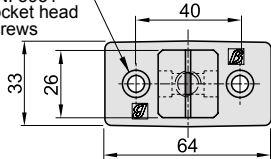
**Warning:** if combined with commercial Ø12 round tubes, check that the tolerance corresponds to that of our part number 2012 ; if combined with commercial 10x10 square rods, check that the tolerance corresponds to that of our part number 1789.

**Combinations**

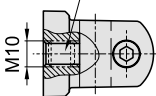


Tolerance D	
Ø12,1	+0,15 0
Ø14,1	0
Ø10,2	±0,05

only M6  
UNI 5931  
socket head  
screws



clearance elimination  
grub screw  
(on version Ø only)



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-5%	-10%	-17%	on request

Order code	D1 Ø	D1 Ø	S	Finish	Weight g	Stock	€
							piece
621694	12,1	-	M6x16	shot peening	95	✓	7,10
634144	12,1	-	M6x16	grey RAL7010	95	■	8,13
676172	12,1	-	M6x16	grey RAL9006	95	■	8,13
621704	12,1	10,2	M6x16	shot peening	93	✓	8,52
634154	12,1	10,2	M6x16	grey RAL7010	93	■	9,54
692642	12,1	10,2	M6x16	grey RAL9006	93	■	9,54

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

# 1679 With flange stainless steel

## Ø12 mm

**Use:** connection of round drawn bars parallel to the fastening plane; **suitable** for applications exposed to **accidental impact**.

**Material** AISI 316 stainless steel connector; 1 UNI 5931 socket head screw, 1 UNI 5587 hexagon nut in AISI 304 stainless steel.

**Standard pack:** 50 pieces.

**Tightening torque** 10 Nm (M6).

**Warning:** if combined with commercial Ø12 round tubes, check that the tolerance corresponds to that of our part number 2012.

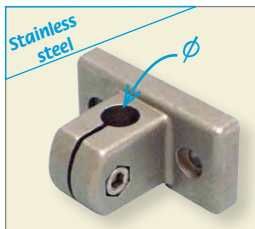
**Combinations** 



Pg.404

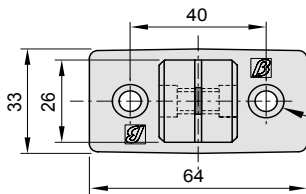
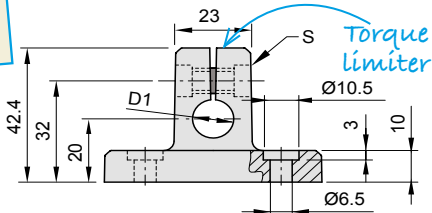
Pg.410

Pg.190



**Food & Beverage**

Tolerance	
D1	
Ø12,1	+0,10 -0,05





for M6 UNI 5931  
socket head screws



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-5%	-10%	-17%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
656844	12,1	M6x14	electropolished	252	✓	13,82

**Personalizations** other finishes on request  Pg.214 

## 3865

# With flange for parallel mounting $\varnothing 12$

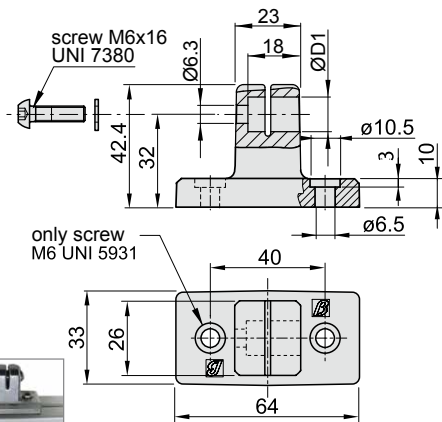
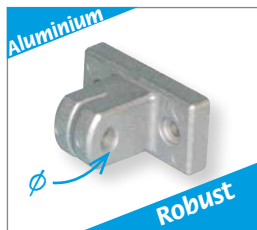
**Use:** Connection of round drawn bars parallel to the fastening plane; **suitable** for applications subject to **accidental impacts**.

**Material** aluminium connector; 1 screw M6x16 TCB UNI 7380 and 1 washer M6 in galvanised steel.

**Standard pack:** 50 pieces.

For further hole sizes Pg.215

**Combinations**



### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-5%	-10%	-17%	on request

Order code	D1 Ø	Finish	Weight g	Stock	€ piece
652248	12,1	shot peening	105	✓	8,13
652258	12,1	grey RAL7010	105	■	9,15
652268	12,1	grey RAL9006	105	■	9,15

**Personalizations** other finishes on request Pg.214

**\*Products not in stock** minimum order 1 piece, delivery in 5 days.

# 1843 With positionable flange

## Ø12 mm

**Use:** combined with the guide, **part 608261**, they allow horizontal adjustment of round drawn bars, even without a support surface.

**Material:** aluminium connector; 1 UNI 5931 socket head screw, 1 hexagon nut, 2 M8 grub screws and 1 anti-rupture torque limiter in galvanised steel.

**Standard pack:** 50 pieces.

**Tightening torque:** 10 Nm (M6).

For further hole sizes Pg.215

**Warning:** if combined with commercial 12 round tubes, check that the tolerance corresponds to that of our part number 2012.

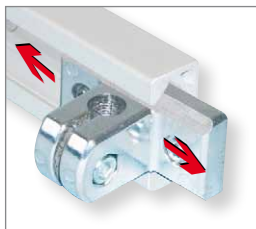
**Combinations**



Pg.404

Pg.410

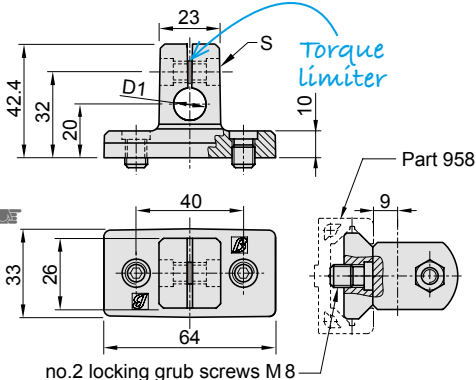
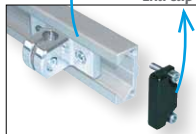
Pg.190



Tolerance	
D1	
Ø12,1	+0,15 0

C-shaped guide

End cap



### QUANTITY DISCOUNT

Q.ty Discounts	50+	100+
	-	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
621674	12,1	M6x16	shot peening	113	■	8,25
634124	12,1	M6x16	grey RAL7010	113	■	9,28
602833	12,1	M6x16	grey RAL9006	113	■	9,28

C-shaped guide L (mm)

608241	3000		anodised	2400	✓	80,40
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End cap						
608261				33	✓	8,23

**Personalizations** other finishes on request Pg.214

Products not in stock minimum order 50 pieces, delivery in 15 days.

## 1707

# With orthogonal flange

### Ø12 mm

**Use:** connection of round drawn bars at 90° with respect to the fastening plane; **suitable** for applications exposed to **accidental impact**.

**Material** aluminium connector; 1 UNI 5931 socket head screw and 1 hexagon nut in galvanised steel.

**Standard pack:** 50 pieces.

**Tightening torque** 10 Nm (M6).

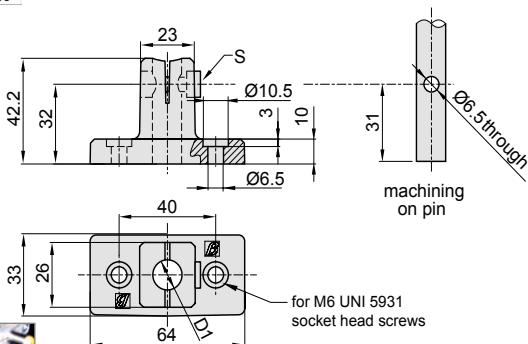
For further hole sizes Pg.215 .

**Warning:** if combined with commercial Ø12 round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations**



Tolerance	
D1	
Ø12,1	+0,15 0



*version with pin*

### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-5%	-10%	-17%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
621684	12,1	M6x20	shot peening	91	✓	7,10
634134	12,1	M6x20	grey RAL7010	91	■	8,13
676552	12,1	M6x20	grey RAL9006	91	■	8,13

**Personalizations** other finishes on request Pg.214

**\*Products not in stock** minimum order 1 piece, delivery in 5 days.

3864

# With round flange

D1= 12Ø- Ø10 and D2= 12Ø

**Use:** connection of parallel/orthogonal bars to the fastening surface (parallel connection only for **tubes and rods**, orthogonal connection for **12Ø tubes and rods or 10x10 square tubes and rods**).

**Suitable** for applications exposed to **accidental impact**.

**Material** aluminium connector, 2 UNI5931 socket head screws in galvanized steel.

### Characteristics:

- Only one **dual-use connector** for parallel or orthogonal connections (alternative to part nos. 1679, 1707);

- The round flange improves product aesthetics;

- Thanks to the **double tightening screw**, the connector exercises **greater closing force** on the bar.

**Standard pack:** 4 pieces.

**Tightening torque** 4,9 Nm (M5).

**Combinations**

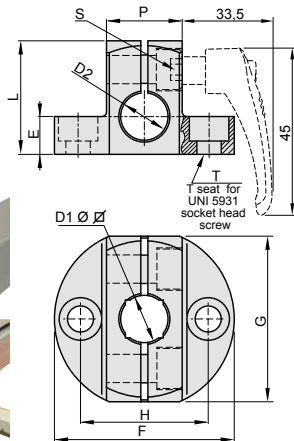
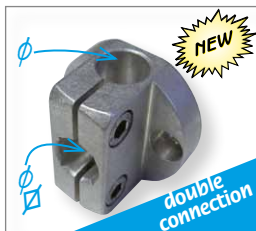
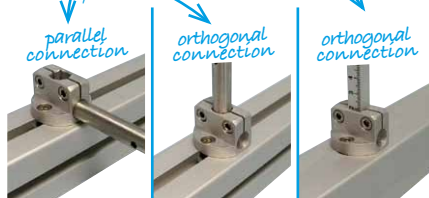


Ø10

parallel connection

orthogonal connection

orthogonal connection



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	16+	32+
	-	-5%	-10%	on request

Code	D1 Ø	D1 Ø	D2 Ø	E mm	F mm	G mm	H mm	L mm	P mm	T seat	S	Finish	Weight g	Stock	€ piece
652198	12	10	12	8	38	35	27	25	16	M5	M5x10	tumbled	33	✓	10,50
682068	12	10	12	8	38	35	27	25	16	M5	lever	tumbled	50	✓	12,50

**Personalizations** Other finishes on request Pg.214 , other hole diameters on request.

## 4242

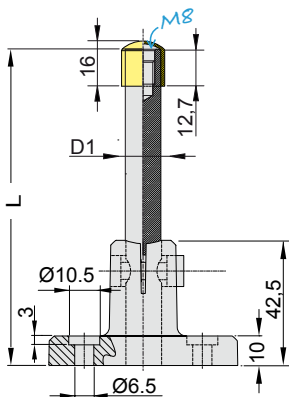
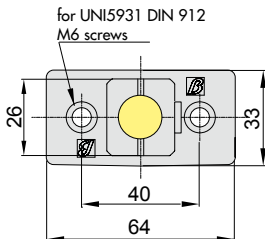
# With orthogonal flange with pin $\varnothing 12$ mm

**Use:** for side support of the guide clamps when the product is wider than the conveyor belt.

**Material:** flanged connector in shot peening aluminium; 1 stainless steel connection pin (round) screwed on, 1 vinyl end cap, 1 UNI 5931 screw and a galvanised steel hexagon nut for pin fastening.

**Standard pack:** 4 pieces.

**Combinations** 





### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	16+	32+
	-	-5%	-10%	on request

Code	D $\varnothing$	L mm	Connector finish	Pin finish	Cap colour	Weight g	Stock	€ piece
630257	12	100	shot peening	in stainless steel AISI303	yellow	177	■	22,42
630267	12	180	shot peening	in stainless steel AISI303	yellow	246	■	23,50

**Personalizations** of supports with greater length (L) pins

Other finishes on request  Pg.214 

# 3854 With orthogonal flange with pin $\varnothing 18$ mm

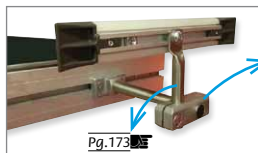
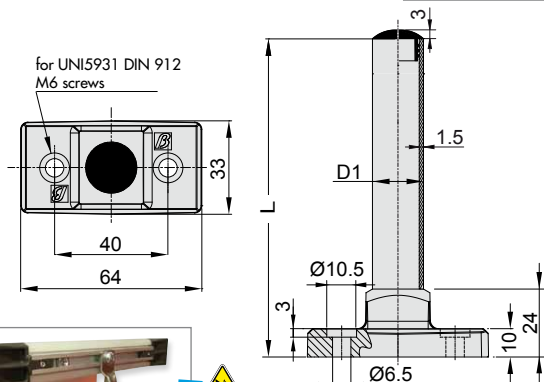
**Use:** for side support of the guide clamps when the product is wider than the conveyor belt.

**As an alternative** to Part 4242 for aesthetic requirements.

**Material** flanged connector in aluminium; 1 connection pin (tube) in stainless steel, glued, 1 end cap in polyethylene. The pin is glued with acrylic glue and caulked.

**Standard pack:** 4 pieces

**Combinations**



**Cut the tube to the desired length (L), which must perfectly match the length of the support so as to avoid dangerous and unsightly protrusions.**

### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	16+	32
	-	-5%	-10%	on request

Code	D Ø mm	L mm	Connector finish	Pin finish	Cap colour	Weight g	Stock	€ piece
630207	18	100	shot peening	in stainless steel AISI303	black polyethylene	127	■	22,42
630217	18	200	shot peening	in stainless steel AISI303	black polyethylene	182	■	23,50

**Personalizations** of supports with greater length (L) pins

Other finishes on request Pg.214

**Products not in stock** minimum order: 4 pieces, delivery in 10 days.

## 2355

# With inserted flange from $\varnothing 15$ to $\varnothing 30$ mm

**Use:** connection of round drawn bars parallel to the fastening plane.

**Material:** aluminium connector; 1 DIN 7984 socket head screw, 1 UNI 5587 hexagon nut and 1 anti-rupture torque limiter in galvanised steel.

**Standard pack:** 8 pieces.

**Tightening torque:** 25 Nm (M8).

For further hole sizes Pg.215 .

**Combinations:**



**Versions D1 = 25.2-30.2**

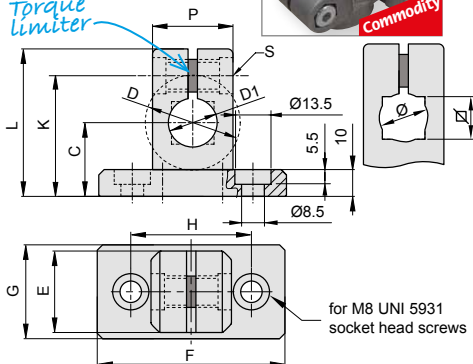


**Versions D1 = 15.1-16.1-18.1-20.2**



**Commodity**

Torque limiter



- On request, from part 2355 other versions can be obtained with square holes  $\square$  made by broaching on round holes. Example: on  $\varnothing 15$  you obtain  $\square 12$  on  $\varnothing 16$  you obtain  $\square 14$
- minimum order 24 pieces, add 5 days to standard delivery.
- On request with **stainless steel** nuts and bolts.
- minimum order 48 pieces.

Tolerance D1	
$\varnothing 15,1$	+0,15
$\varnothing 16,1$	0
$\varnothing 18,1$	
$\varnothing 20,2$	+0,05
$\varnothing 25,2$	+0,20
$\varnothing 30,2$	+0,10
$\square 16,0$	0

### QUANTITY DISCOUNT

Q. ty Discounts	1+	2+	4+	8+	16+
	-	-2%	-4%	-7%	on request

Order code	D1 $\varnothing$	D1 $\square$	C mm	D mm	E mm	F mm	G mm	H mm	K mm	L mm	P mm	S	Finish	Weight g	Socket	€ piece
690917	15,1	-	27,5	-	30	70	35	45	45	55	30	M8x25	shot peening	155	■	18,47
690927	16,1	-	27,5	-	30	70	35	45	45	55	30	M8x25	shot peening	153	■	18,47
663084	18,1	-	27,5	-	30	70	35	45	45	55	30	M8x25	grey RAL9006	150	✓	18,47
690937	20,2	-	27,5	-	30	70	35	45	45	55	30	M8x25	shot peening	142	■	18,47
691077	20,2	16,2	27,5	-	30	70	35	45	45	55	30	M8x25	shot peening	140	■	21,20
690947	25,2	-	28,5	40	40	70	40	52	50	60,5	36	M8x25	shot peening	170	■	19,62
690957	30,2	-	28,5	40	40	70	40	52	50	60,5	36	M8x25	shot peening	165	■	19,62

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 8 pieces, delivery in 15 days.

# 1420 With flange

from  $\varnothing 20$  to  $\varnothing 30$  mm

**Use:** connection of round bars parallel to the fastening plane.

**Material** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 2 pieces.

**Tightening torque** 25 Nm (M8).

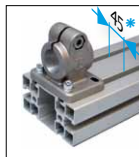
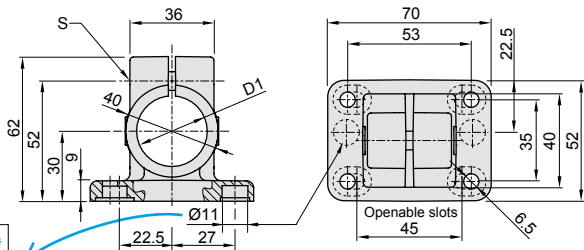
For further hole sizes Pg.215



## Combinations



Tolerance	
D1	
$\varnothing 20,1$	$\begin{matrix} +0,15 \\ 0 \end{matrix}$
$\varnothing 25,2$	$\begin{matrix} +0,20 \\ 0 \end{matrix}$
$\varnothing 30,2$	$\begin{matrix} +0,20 \\ 0 \end{matrix}$



$\varnothing 8$  holes for reduction and centring bushing seating on Robomec (8 mm) groove and on B-flex Series W and MC103 (11 mm) groove Pg.216   
For further hole sizes Pg.215

## QUANTITY DISCOUNT

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
602056	20,1	M8x25	shot peening	190	✓	8,91
602066	20,1	M8x25	grey RAL7010	190	■	10,49
602076	20,1	M8x25	grey RAL9006	190	■	10,49
602086	25,2	M8x25	shot peening	170	✓	8,91
602096	25,2	M8x25	grey RAL7010	170	■	10,49
602106	25,2	M8x25	grey RAL9006	170	■	10,49
602116	30,2	M8x25	shot peening	146	✓	8,91
602126	30,2	M8x25	grey RAL7010	146	■	10,49
602136	30,2	M8x25	grey RAL9006	146	■	10,49

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

## 1420

## With flange

### Ø40 mm

**Use:** connection of round bars parallel to the fastening plane.

**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

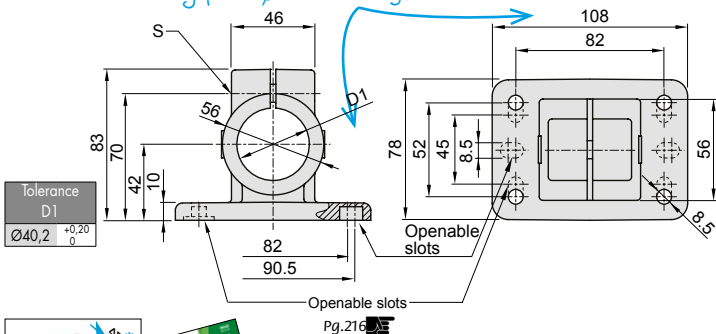
**Tightening torque:** 50 Nm (M10).

For further hole sizes Pg.215

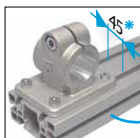
**Combinations**



*Warning: the flange dimensions vary from Ø30 and larger*



Tolerance	D1
Ø40,2	+0,20 0



### QUANTITY DISCOUNT

Q.ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1	S	Finish	Weight g	Stock	€ piece
602026	Ø 40,2	M10x35	shot peening	405	✓	15,11
602036	40,2	M10x35	grey RAL7010	405	■	17,81
602046	40,2	M10x35	grey RAL9006	405	■	17,81

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

# 1420 With flange

## Ø50 mm

**Use:** connection of round bars parallel to the fastening plane.

**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel..

**Standard pack:** 2 pieces.

**Tightening torque:** 50 Nm (M10).

**For further hole sizes:** Pg.215

**Combinations:**



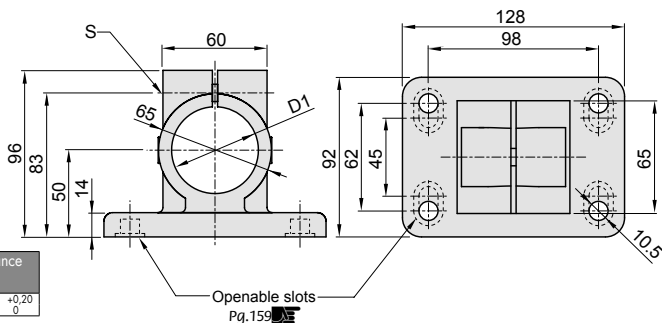
Pg.404

Pg.406

Pg.407

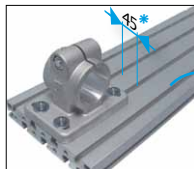
Pg.90

Pg.91



Tolerance

D1

 $\varnothing 50,3 \begin{matrix} +0,20 \\ 0 \end{matrix}$ 


### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
601966	50,3	M10x50	shot peening	602	✓	15,56
601976	50,3	M10x50	grey RAL7010	760	■	18,38
601986	50,3	M10x50	grey RAL9006	760	■	18,38

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 1 piece, delivery in 5 days.

## 1420

## With flange

### Ø60 mm

**Standard pack:** 2 pieces.

**Tightening torque** 50 Nm (M10).

For further hole sizes Pg.215 .

**Combinations**



Pg.404



Pg.406



Pg.407



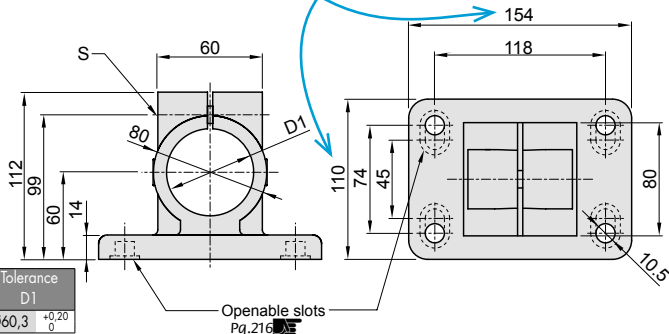
Pg.90



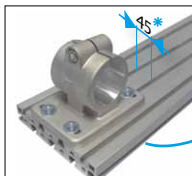
Pg.91



*Warning:  
The flange dimensions  
vary*



Tolerance	
D1	
Ø60,3	+0,20 0



### QUANTITY DISCOUNT

Qty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
601906	60,3	M10x50	shot peening	1035	✓	23,56
601916	60,3	M10x50	grey RAL7010	1035	■	26,72
601926	60,3	M10x50	grey RAL9006	1035	■	26,72

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

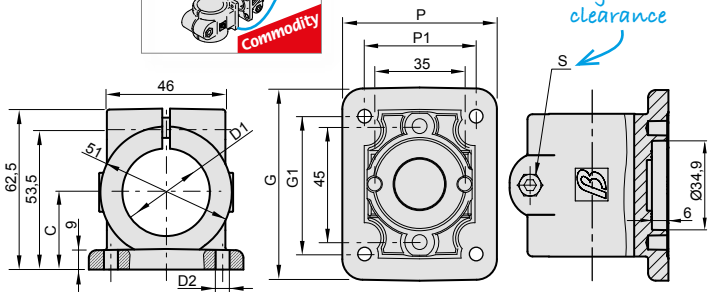
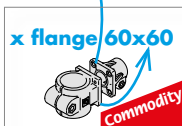
# 3746 With vertical flange

**Use:** connection of round bars parallel to the fastening plane.

**Material** aluminium connector; 1 DIN 985 self-locking hexagon nut, 4 UNI 5931 socket head screws in galvanised steel.

**Standard pack:** 4 pieces.

**Combinations** 





Tolerance	
D1	
Ø35,2	+0,20
Ø40,2	0

### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	D2 Ø/seat	P mm	P1 mm	G mm	G1 mm	S	Finish	Weight g	Stock	€ piece
629609	35,2	-	60	-	60	-	M8x35	shot peening	256	■	16,56
621867	35,2	M8	60	45	75	55	M8x35	shot peening	256	■	17,56
621927	35,2	M6	60	42	60	55	M8x35	shot peening <b>commodity</b>	233	■	on request
629619	40,2	-	60	-	60	-	M8x35	shot peening	252	■	20,56
621897	40,2	M8	60	45	75	55	M8x35	shot peening	252	■	21,56
621957	40,2	M6	60	42	60	55	M8x35	shot peening <b>commodity</b>	229	■	on request

**Personalizations** other finishes on request  Pg.214 

■ Products not in stock minimum order 4 pieces, delivery in 10 days, for **commodity** 15 days.

## 3240

# Flange mount

from  $\varnothing 20$  to  $\varnothing 60$  mm

**Use:** connectors with customised flange.

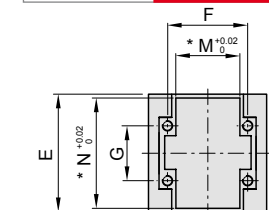
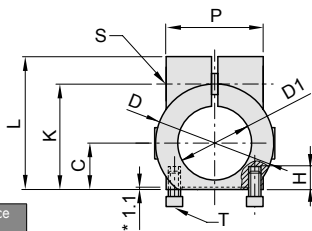
**Material** aluminium connector; 1 UNI 5931 socket head screw and 1 DIN 985 self-locking hexagon nut, 4 UNI 5931 socket head screws in galvanised steel.

**Standard pack:** 4 pieces.

**Tightening torque** 25 Nm (M8) 50 Nm (M10).

For further hole sizes Pg.215 .

**Combinations**



\* centring obtained by CNC

Tolerance	
D1	
$\varnothing 20,1$	$+0,15$ 0
$\varnothing 25,2$	$+0,20$ 0
$\varnothing 30,2$	
$\varnothing 35,2$	
$\varnothing 40,2$	
$\varnothing 50,3$	
$\varnothing 60,3$	



On request we can supply the connector complete with customised flange Pg.75

### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	48+
	-	-5%	on request

Order code	D1	C	D	E	F	G	H	K	L	M	N	P	T	S	Finish	Weight g	Stock	€	
	$\varnothing$	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			piece		
641677	20	120,5	40	40	30,4	14	15	41,5	52,5	20,7	33	36	M4x16	M8x25	shot peening	139	■	27,39	
641687	25	220,5	40	40	30,4	14	15	41,5	52,5	20,7	33	36	M4x16	M8x25	shot peening	131	■	27,39	
641697	30	220,5	40	40	30,4	14	15	41,5	52,5	20,7	33	36	M4x16	M8x25	shot peening	120	■	27,39	
688326	35	222,5	56	56	38	26	10	50,5	63,5	31	51	46	M5x12	M10x35	shot peening	224	■	28,40	
687576	40	222,5	56	56	38	26	10	50,5	63,5	31	51	46	M5x12	M10x35	shot peening	222	■	28,40	
641727	50	3	35	65	65	53,5	26	15	68	81	32,5	53	60	M5x16	M10x50	shot peening	370	■	30,41
641737	60	3	45	80	80	53,5	26	15	84	97	32,5	65	60	M5x16	M10x50	shot peening	605	■	32,95

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 10 days.

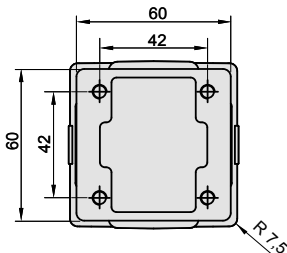
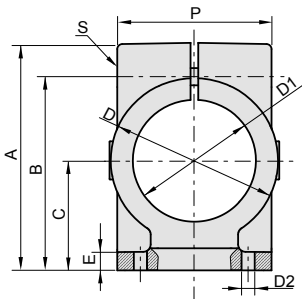
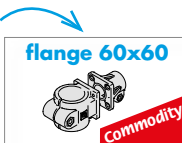
# 4085 with compatible square flange

**Use:** connection of round bars parallel to the fastening plane.

**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces ( $\text{OD}=56$ ), 2 pieces ( $\text{OD}=65$ ).

**Combinations**



Tolerance

D1

Ø30,2	+0,20
Ø40,2	
Ø50,3	

### QUANTITY DISCOUNT

Q.ty	4+	8+	12+	16+
Discounts	-	-34%	-45%	on request

Order code	D Ø	D1 Ø	D2 Ø/screw	A mm	B mm	C mm	E mm	P mm	S screw	Finish	Weight g	Stock	€ piece
622017	56	30,2	M6	79	65,5	37,5	5,5	46	M10X35	shot peening	326	■	47,77
622047	56	40,2	M6	79	65,5	37,5	5,5	46	M10X35	shot peening	290	■	47,77
622027	65	50,3	M6	89	76	43	7	60	M10X50	shot peening	660	■	50,41

**Personalizations** other finishes on request Pg.214

\*Products not in stock minimum order 4 pieces, delivery 15 days.

## 4063

# With inserted flange from Ø20 to Ø60 mm

**Use:** connection of round bars parallel to the fastening plane, flange suitable for application on structural profiles, 8mm groove, 45mm distance between centres.

**Material:** aluminium connector, inserted aluminium flange, 1 UNI 5931 socket head screw and 1 DIN 985 self-locking hexagon nut, 4 UNI 5931 socket head screws in galvanised steel.

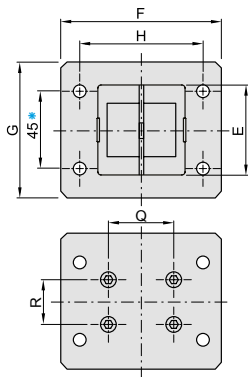
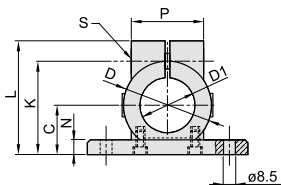
**Standard pack:** 4 pieces.

**Tightening torque:** 25 Nm (M8) 50 Nm (M10).

**Combinations:**



Tolerance	D1
	Ø20,1 $\begin{matrix} +0,15 \\ 0 \end{matrix}$
	Ø25,2
	Ø30,2
	Ø35,2
	Ø40,2 $\begin{matrix} +0,20 \\ 0 \end{matrix}$
	Ø50,3
	Ø60,3



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	48+
	-	-5%	on request

Order code	D1 Ø	C	D	E	F	G	H	K	L	N	P	Q	R	S	Finish	Weight g	Stock	€ piece
641567	20,1	29,5	40	40	69	60	54	51,5	61,5	9	36	30,4	14	M8x25	shot peening	233	█	65,09
641577	25,2	29,5	40	40	69	60	54	51,5	61,5	9	36	30,4	14	M8x25	shot peening	234	█	65,09
641587	30,2	29,5	40	40	69	60	54	51,5	61,5	9	36	30,4	14	M8x25	shot peening	229	█	65,09
641777	35,2	38	56	56	100	70	80	70	79	9	46	38	26	M10x35	shot peening	360	█	66,27
641607	40,2	38	56	56	100	70	80	70	79	9	46	38	26	M10x35	shot peening	362	█	66,27
641627	50,3	44	65	65	100	80	80	77	90	9	60	53,5	26	M10x50	shot peening	559	█	68,41
641637	60,3	54	80	80	100	90	80	93	106	9	60	53,5	26	M10x50	shot peening	816	█	71,06

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 4 pieces, delivery in 10 days.

# 3297 Shaft mount support

## from $\varnothing 30$ to $\varnothing 40$ mm

**Use:** end support for shafts and positioners arranged parallel to the fastening plane.

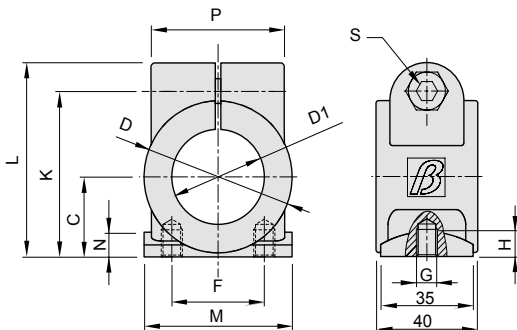
**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

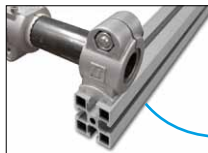
**Tightening torque:** 50 Nm (M10).

**For further hole sizes:** Pg.215

**Combinations:**



Tolerance	
D1	
$\varnothing 30,2$	+0,20
$\varnothing 35,2$	
$\varnothing 40,2$	



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	48+
	-	-5%	on request

Order code	D1 $\varnothing$	C	D	F	G	H	K	L	M	N	P	S	Finish	Weight g	Stock	€ piece
641127	30,2	29,5	56	35	M8	10	57,5	70,5	56	12,5	46	M10x35	shot peening	275	■	38,93
602247	35,2	29,5	56	35	M8	10	57,5	70,5	56	12,5	46	M10x35	shot peening	240	■	38,93
641137	40,2	29,5	56	35	M8	10	57,5	70,5	56	12,5	46	M10x35	shot peening	216	■	38,93

**Personalizations:** other finishes on request Pg.214

**Products not in stock:** minimum order 4 pieces, delivery in 10 days.

## 4080

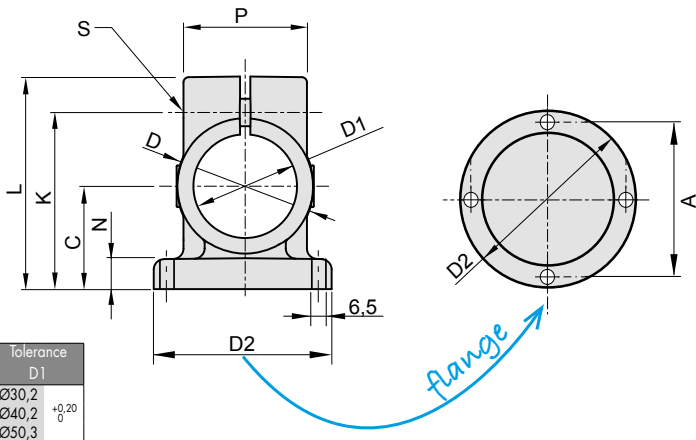
## With **round** flange

**Use:** connection of round bars parallel to the fastening plane.

**Material** aluminium joint; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces ( $\text{ØD}=56$ ), 2 pieces ( $\text{ØD}=65$ ).

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	12+	16+
	-	-37%	-47%	on request

Order code	D Ø	D1 Ø	D2 Ø	A mm	L mm	K mm	C mm	N mm	S screw	Finish	Weight g	Stock	€ piece
672097	56	30,2	80	68	78	65	37	5	M10x35	shot peening	343	■	46,59
672107	56	40,2	80	68	78	65	37	5	M10x35	shot peening	267	■	46,59
672127	65	50,3	90	77	89	76	43	7	M10x50	shot peening	334	■	49,62

**Personalizations** other finishes on request Pg.214

**\*Products not in stock** minimum order 4 pieces, delivery in 15 days.

# 3296 Shaft mount support

## from $\varnothing 30$ to $\varnothing 40$ mm

**Use:** end support for shafts and positioners arranged at  $90^\circ$  with respect to the fastening plane.

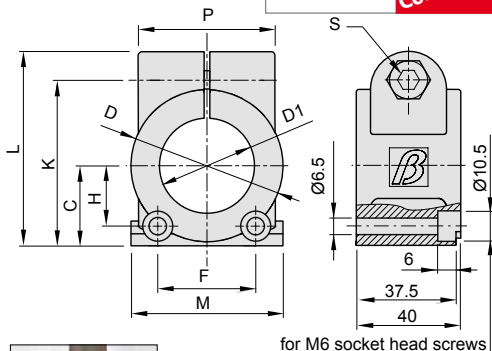
**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

**Tightening torque:** 50 Nm (M10).

For further hole sizes Pg.215 .

**Combinations**



Tolerance	
D1	
$\varnothing 30,2$	
$\varnothing 35,2$	$+0,20$
$\varnothing 40,2$	$0$

### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	48+
	-	-5%	on request

Order code	D1 $\varnothing$	C mm	D mm	F mm	H mm	K mm	L mm	M mm	P mm	S	Finish	Weight g	Stock	€ piece
641207	30,2	29,5	56	35	23	57,5	70,5	56	46	M10x35	shot peening	206	▪	38,93
602267	35,2	29,5	56	35	23	57,5	70,5	56	46	M10x35	shot peening	205	▪	38,93
641217	40,2	29,5	56	35	23	57,5	70,5	56	46	M10x35	shot peening	203	▪	38,93

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 10 days.

## 4203

# Shaft mount support from $\varnothing 30$ to $\varnothing 60$ mm

**Use:** end support for shafts and positioners arranged parallel to the fastening plane.

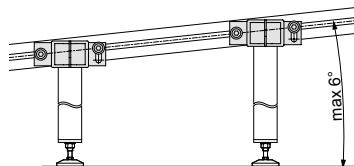
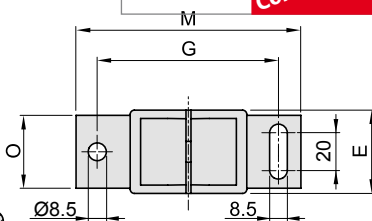
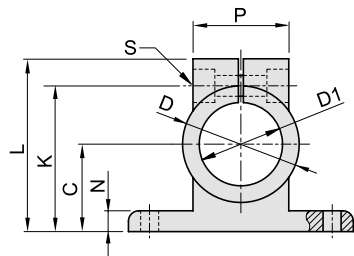
**Material:** aluminium connector; 1 UNI 5931 socket head screw and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

**Tightening torque:** 50 Nm (M10).

For further hole sizes Pg.215

**Combinations**



Tolerance	
D1	
Ø30,2	+0,20 0
Ø35,2	
Ø40,2	
Ø50,3	
Ø60,3	



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	48+
	-	-5%	on request

Order code	D1 Ø	C mm	D mm	E mm	G mm	K mm	L mm	M mm	N mm	O mm	P mm	S	Finish	Weight g	Stock	€ piece
629277	30,2	42	56	40	82	70	83	108	10	35	46	M10x35	shot peening	312	■	29,02
629287	35,2	42	56	40	82	70	83	108	10	35	46	M10x35	shot peening	262	■	29,02
629297	40,2	42	56	40	82	70	83	108	10	35	46	M10x35	shot peening	264	■	29,02
629307	50,3	50	65	40	98	83	96	128	14	35	60	M10x50	shot peening	374	■	31,55
629317	60,3	60	80	40	118	99	112	154	14	35	60	M10x50	shot peening	485	■	33,73

**Personalizations:** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 10 days.

4079

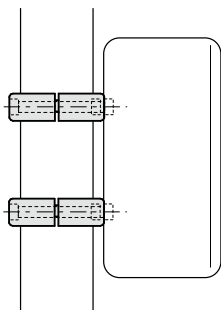
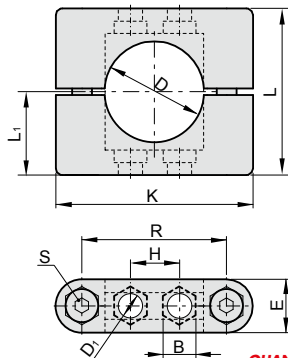
## With flange in 2 halves

**Use:** normally fitted in pairs on tubes with variable distance between centres in order to create two support surfaces on which to fasten control panels, junction boxes, etc.

**Material:** aluminium connector; 2 DIN 912 Allen screws and 2 DIN 985 self-locking hexagon nuts in galvanised steel.

**Standard pack:** 4 pieces.

**Combinations**



## QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	12+	16
	-	-3%	-10%	on request

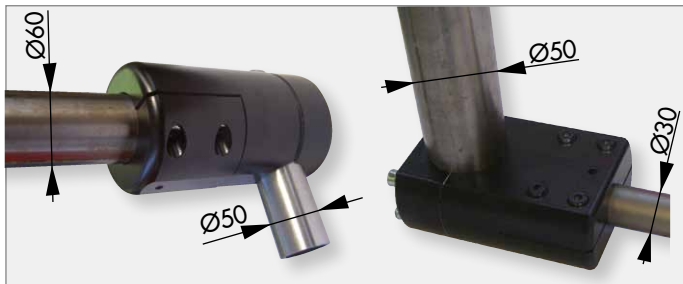
Order code	D	K	L	L1	D1	E	B	H	R	S	Finish	Weight g	Stock	€
	∅	mm	mm	mm	mm	mm	mm	mm	mm	mm			piece	
621747	20,2	70	55	27,5	8,5	22	M8	16	48	M8x45	shot peening	170	✓	26,42
621757	25,2	70	55	27,5	8,5	22	M8	16	48	M8x45	shot peening	166	■	26,42
621767	30,2	70	55	27,5	8,5	22	M8	16	48	M8x45	shot peening	160	■	26,42
621777	40,2	100	80	40	10,5	27	M10	30	73	M10x65	shot peening	392	■	28,65
621787	42,2	100	80	40	10,5	27	M10	30	73	M10x65	shot peening	386	■	28,65
621797	45,2	100	80	40	10,5	27	M10	30	73	M10x65	shot peening	380	■	28,65
621807	48,5	100	80	40	10,5	27	M10	30	73	M10x65	shot peening	375	■	28,65
621817	50,3	100	80	40	10,5	27	M10	30	73	M10x65	shot peening	370	■	28,65
621837	55,3	102,5	90	45	10,5	27	M10	30	73	M10x75	shot peening	412	■	30,56
621847	60,3	102,5	90	45	10,5	27	M10	30	73	M10x75	shot peening	400	■	30,56

**Personalizations** other finishes on request Pg.214

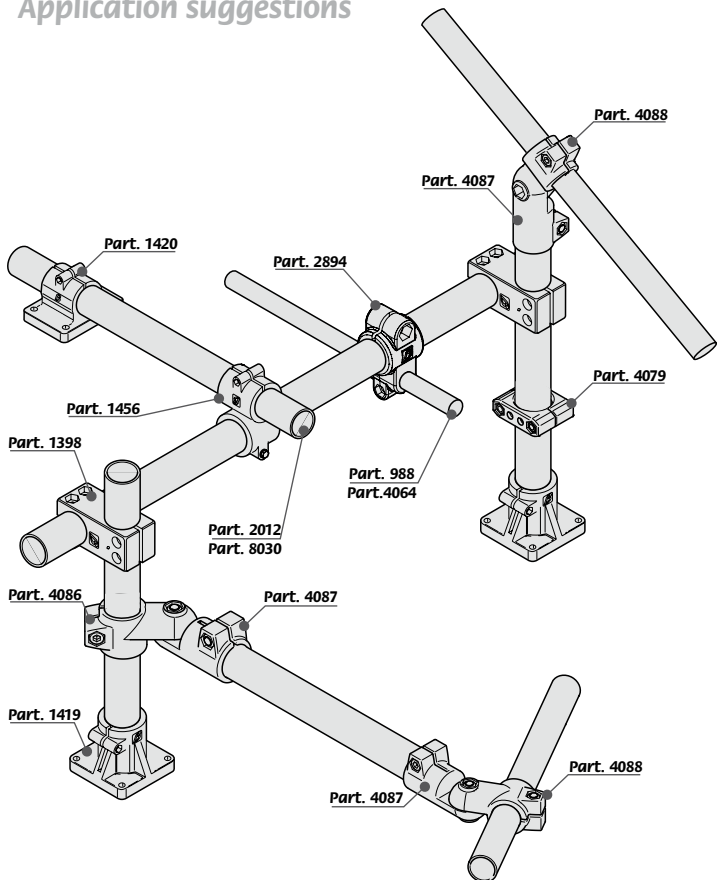
**Products not in stock** minimum order 4 pieces, delivery in 15 days.



Special connectors can be made to the customer's design



## Application suggestions



## 4084

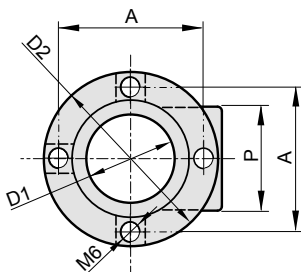
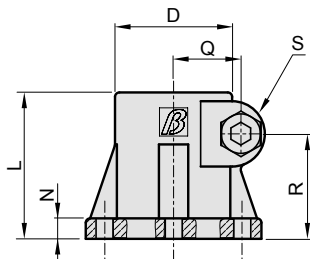
# With **round** pedestal

**Use:** connection of round bars at 90° with respect to the fastening plane.

**Material:** aluminium joint; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces (ØD=56), 2 pieces (ØD=66).

**Combinations**



Tolerance D1	
Ø30,2	+0,20 0
Ø40,2	
Ø50,2	+0,10 0



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	12+	16+
	-	-32%	-43%	on request

Order code	D Ø	D1 Ø	D2 Ø	A mm	L mm	R mm	N mm	P mm	Q mm	S screw	Finish	Weight g	Stock	€
														piece
672137	56	30,2	80	68	63	41,5	3,5	44	27,5	M10X35	shot peening	365	■	51,25
672147	56	40,2	80	68	63	41,5	3,5	44	27,5	M10X35	shot peening	289	■	51,25
672157	66	40,2	80	68	75	50,5	4,5	60	33	M10X50	shot peening	580	■	51,25
672167	66	40,2	90	77	75	50,5	4,5	60	33	M10X50	shot peening	668	■	51,25
672177	66	50,2	80	68	75	50,5	4,5	60	33	M10X50	shot peening	465	■	51,25
672187	66	50,2	90	77	75	50,5	4,5	60	33	M10X50	shot peening	550	■	51,25

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 15 days.

# 1419 → With pedestal from $\varnothing 10$ to $\varnothing 60$ mm

**Use:** connection of round bars at 90° with respect to the fastening plane.

**Material:** aluminium connector; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** see table.

For further hole sizes Pg.215

**Combinations**



Pg.404

Pg.406

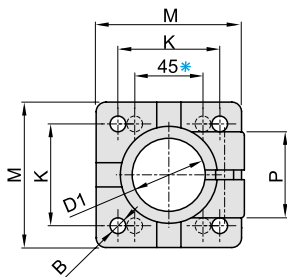
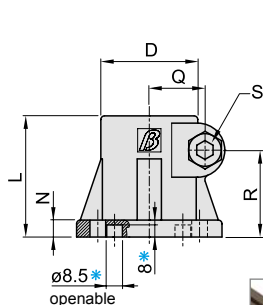
Pg.407

Pg.409

Pg.410

Pg.90

Pg.91



Tolerance D1	
$\varnothing 10,1$	
$\varnothing 12,1$	
$\varnothing 14,1$	
$\varnothing 15,1$	+0,15
$\varnothing 16,1$	0
$\varnothing 18,1$	
$\varnothing 20,1$	
$\varnothing 25,2$	
$\varnothing 30,2$	+0,20
$\varnothing 35,2$	0
$\varnothing 40,2$	
$\varnothing 50,2$	+0,10
$\varnothing 60,3$	+0,20



$\varnothing 10,1$   
 $\varnothing 12,1$   
 $\varnothing 14,1$   
 $\varnothing 15,1$   
 $\varnothing 16,1$

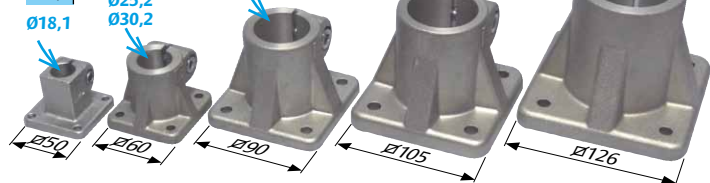
minimum order 40 pieces  
delivery in 20 days

$\varnothing 20,2$   
 $\varnothing 25,2$   
 $\varnothing 30,2$

$\varnothing 35,2$   
 $\varnothing 40,2$

$\varnothing 50,2$

$\varnothing 60,3$





# ↓ 1419 With pedestal from Ø10 to Ø60 mm

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	B mm	D mm	K mm	L mm	M mm	N mm	P mm	Q mm	R mm	S	Finish	Weight g	Stock	€ piece
675048	10,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	98	■	14,00
675078	12,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	94	■	14,00
675118	14,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	90	■	14,00
675158	15,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	86	■	14,00
675198	16,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	84	■	14,00
634593	18,1	5,5	25	38	40	50	7	25	14	29	M6x18	grey RAL9006	80	✓	14,00
643754	20,1	6,5	40	42	50	60	9	35,5	22	35	M8x25	shot peening	190	✓	8,91
643764	20,1	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL7010	190	■	10,49
643774	20,1	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL9006	190	■	10,49
643784	25,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	shot peening	171	✓	8,91
643794	25,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL7010	171	■	10,49
643804	25,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL9006	171	■	10,49
643814	30,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	shot peening	150	✓	8,91
643824	30,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL7010	150	■	10,49
643834	30,2	6,5	40	42	50	60	9	35,5	22	35	M8x25	grey RAL9006	150	■	10,49

**Standard pack:** 8 pieces.

**Tightening torque** 25 Nm (M8).

681648	*	35,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	shot peening	336	✓	13,15
681658	*	35,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	grey RAL7010	336	■	15,85
681668	*	35,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	grey RAL9006	336	■	15,85
690534	*	40,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	shot peening	415	✓	15,11
690544	*	40,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	grey RAL7010	415	■	17,81
690554	*	40,2	8,5	56	64	70	90	10	44	27,5	48	M10x35	grey RAL9006	415	■	17,81

**Standard pack:** 4 pieces.

**Tightening torque** 50 Nm (M10).

643724		50,2	10,5	66	74	85	105	14	60	33	60	M10x50	shot peening	645	✓	15,56
643734		50,2	10,5	66	74	85	105	14	60	33	60	M10x50	grey RAL7010	645	■	18,38
643744		50,2	10,5	66	74	85	105	14	60	33	60	M10x50	grey RAL9006	645	■	18,38

**Standard pack:** 2 pieces.

**Tightening torque** 50 Nm (M10).

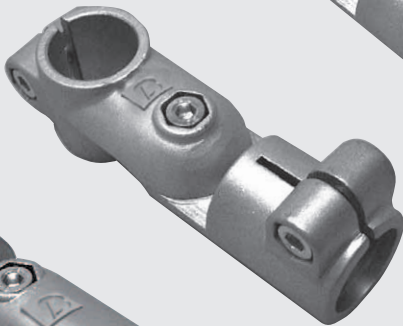
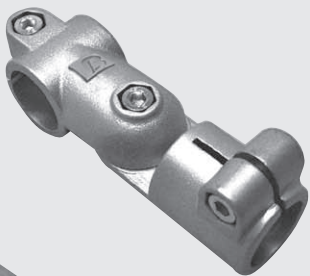
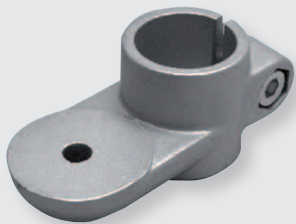
643694		60,3	10,5	80	90	100	126	14	60	39	73	M10x50	shot peening	980	✓	23,56
643704		60,3	10,5	80	90	100	126	14	60	39	73	M10x50	grey RAL7010	980	■	26,72
643714		60,3	10,5	80	90	100	126	14	60	39	73	M10x50	grey RAL9006	980	■	26,72

**Standard pack:** 2 pieces.

**Tightening torque** 50 Nm (M10).

**Personalizations** other finishes on request Pg.214

\*Products not in stock min. order 1 piece, delivery in 5 days; from Ø10,1 to Ø16,1 min. order 40 pieces, delivery in 20 days.



## 4086

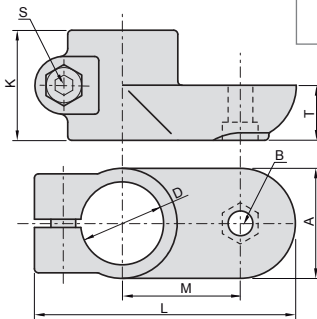
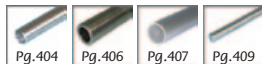
# For **Y** articulated joints

**Use:** articulated connections of round tubes.

**Material** aluminium joint; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	12+	16+
	-	-3%	-10%	on request

Order code	D Ø	A mm	B screw	K mm	L mm	M mm	T mm	S screw	Finish	Weight g	Stock	€ piece
621967	20,2	40	M8x30	40	95	43	20	M8x25	shot peening	185	✓	22,06
621977	25,2	40	M8x30	40	95	43	20	M8x25	shot peening	169	■	22,06
621987	30,2	40	M8x30	40	95	43	20	M8x25	shot peening	145	■	22,06
621997	40,2	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	712	■	28,51
622057	48,5	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	617	■	28,51
622087	50,3	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	587	■	28,51
677658	20,2	40	M8x30	40	95	43	20	M8x25	grey RAL 9006	185	■	25,32
677668	25,2	40	M8x30	40	95	43	20	M8x25	grey RAL 9006	169	■	25,32
677678	30,2	40	M8x30	40	95	43	20	M8x25	grey RAL 9006	145	■	25,32
677688	40,2	65	M10x55	65	147,5	70	32,5	M10x50	grey RAL 9006	712	■	31,77
677698	48,5	65	M10x55	65	147,5	70	32,5	M10x50	grey RAL 9006	617	■	31,77
677708	50,3	65	M10x55	65	147,5	70	32,5	M10x50	grey RAL 9006	587	■	31,77

**Personalizations** other finishes on request Pg.214

■ **Products not in stock** Shot peening: minimum order 4 pieces, delivery in 15 days; Grey RAL 9006: minimum order 4 pieces, delivery in 20 days.

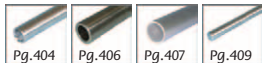
# 4087 For articulated joints

**Use:** articulated connections of round tubes.

**Material** aluminium joint; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

**Combinations**



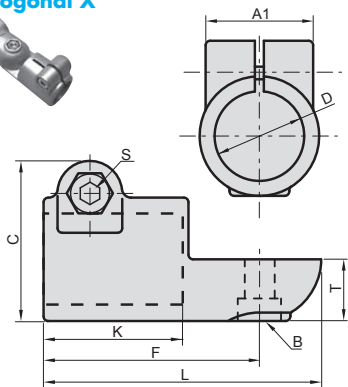
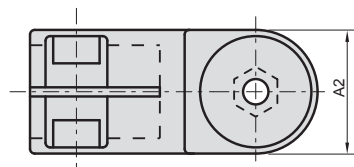
**Orthogonal Y**



**Coaxial**



**Orthogonal X**



### QUANTITY DISCOUNT

Q.ty	4+	8+	12+	16+
Discounts	-	-3%	-10%	on request

Order code	D Ø	A1 mm	A2 mm	B seat	F mm	K mm	L mm	C mm	T mm	S screw	Finish	Weight g	Stock	€ piece
671977	20,2	40	40	M8x30	72	42,5	92	52	20	M8x25	shot peening	208	✓	21,42
671987	25,2	40	40	M8x30	72	42,5	92	52	20	M8x25	shot peening	187	■	21,42
671997	30,2	40	40	M8x30	72	42,5	92	52	20	M8x25	shot peening	150	■	21,42
672007	40,2	65	65	M10x55	115	74	147,5	77,5	32,5	M10x50	shot peening	774	■	27,68
672017	48,5	65	65	M10x55	115	74	147,5	77,5	32,5	M10x50	shot peening	688	■	27,68
672027	50,3	65	65	M10x55	115	74	147,5	77,5	32,5	M10x50	shot peening	600	■	27,68

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 15 days.

## 4088

# For X articulated joints

**Use:** articulated connections of round tubes.

**Material** aluminium joint; 1 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

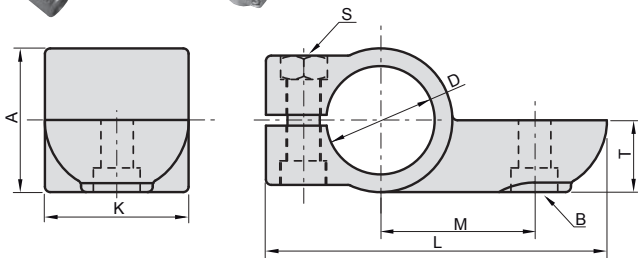
**Combinations**



**Orthogonal X**



**Parallel**



### QUANTITY DISCOUNT

Q. ty Discounts	4+	8+	12+	16+
	-	-3%	-10%	on request

Order code	D Ø	A mm	B screw	K mm	L mm	M mm	T mm	S screw	Finish	Weight g	Stock	€ piece
672037	20,2	40	M8x30	40	95	43	20	M8x25	shot peening	185	✓	21,42
672047	25,2	40	M8x30	40	95	43	20	M8x25	shot peening	169	■	21,42
672057	30,2	40	M8x30	40	95	43	20	M8x25	shot peening	145	■	21,42
672067	40,2	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	706	■	27,68
672077	48,5	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	615	■	27,68
672087	50,3	65	M10x55	65	147,5	70	32,5	M10x50	shot peening	585	■	27,68

**Personalizations** other finishes on request [Pg.214](#)

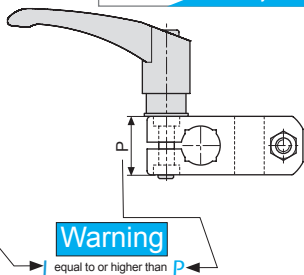
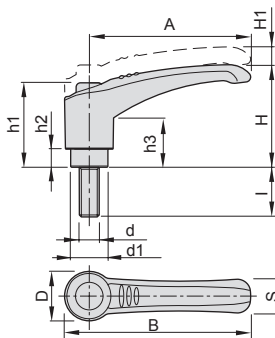
•Products not in stock minimum order: 4 pieces, delivery in 15 days.

## 2985 Ratchet levers in plastic

**Use:** replaces the screw when frequent clamp adjustments are necessary.

**Material:** reinforced polyamide lever and orange reinforced polyamide screw cap and galvanized steel washer.

**Standard pack:** 10 pieces.



**Color Map** black RAL9005;  
grey RAL7016

### QUANTITY DISCOUNT

Q.ty	1+	3+	6+	10+	20+
Discounts	-	-3%	-6%	-10%	on request

Order code	A	B	D	S	H	H1	h1	h3	d1	h2	d	l	Colour levers	Finish pin	Weight g	Stock	€ piece
629227	65	75	19,5	11,5	42,5	3,5	38	9,5	15	8,5	M8	25	black	stainless steel AISI303	37	✓	4,52
602956	65	75	20	13,5	41	3,5	34	19	15	7,5	M8	35	black	galvanised	41	✓	2,51
636878	65	75	20	13,5	41	3,5	34	19	15	7,5	M8	40	black	galvanised	44	✓	2,88
636898	65	75	20	13,5	41	3,5	34	19	15	7,5	M8	40	grey	galvanised	44	✗	3,13
636888	65	75	20	13,5	41	3,5	34	19	15	7,5	M8	50	black	galvanised	45	✓	3,18
636908	65	75	20	13,5	41	3,5	34	19	15	7,5	M8	50	grey	galvanised	45	✓	3,22
620997	80	92	20	13,5	41	3,5	34	19	15	7,5	M8	30	black	galvanised	38	✓	3,06
602966	80	92	24	16,5	53	4,5	44	26	20	12	M10	45	black	galvanised	88	■	3,31
602976	80	92	24	16,5	53	4,5	44	26	20	12	M10	60	black	galvanised	94	■	3,52

**Personalizations:** other finishes on request Pg.214

\*Products not in stock minimum order 1 piece, delivery in 5 days.

\*Products not in stock minimum order 100 pieces, delivery in 25 days.

## 3172

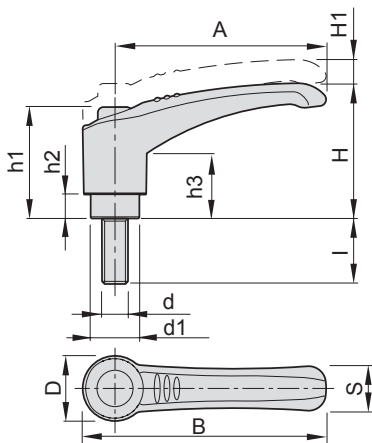
# Ratchet levers in zamak

**Use:** Replaces the screw when frequent clamp adjustments are necessary and when the working conditions are such that those with plastic grip are unadvisable.

**Material:** tumbled or painted Zamak lever, RAL1006 yellow reinforced polyamide screw cap, threaded pin and washer in galvanised steel.

**Standard pack:** 10 pieces.

**Combinations**

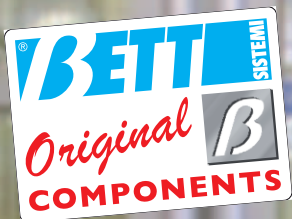


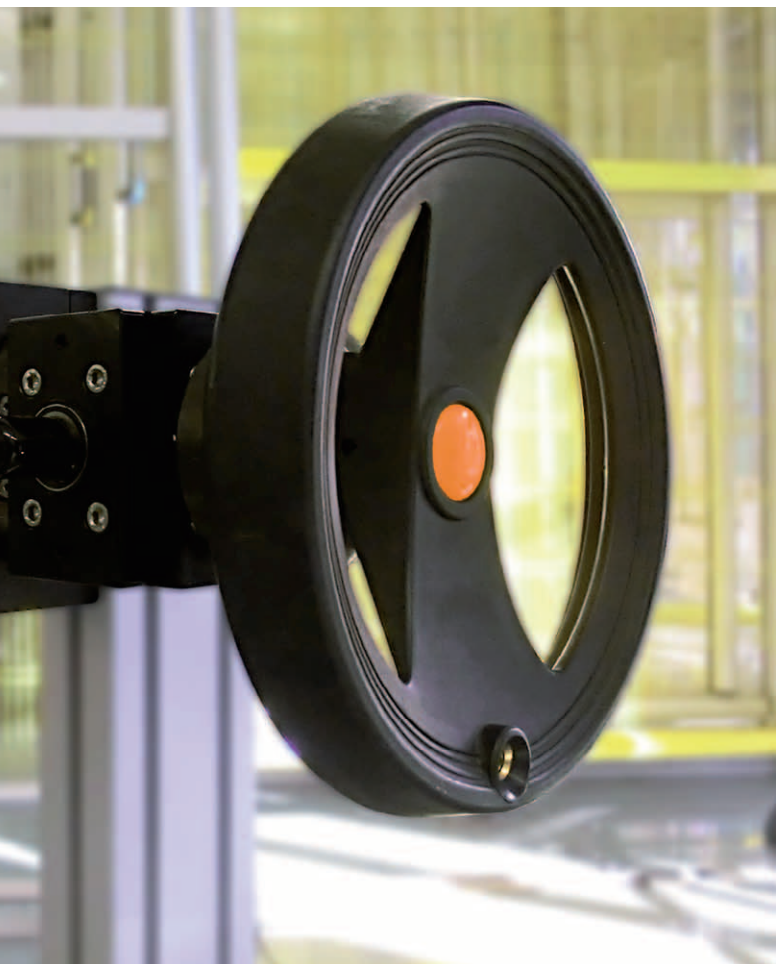
### QUANTITY DISCOUNT

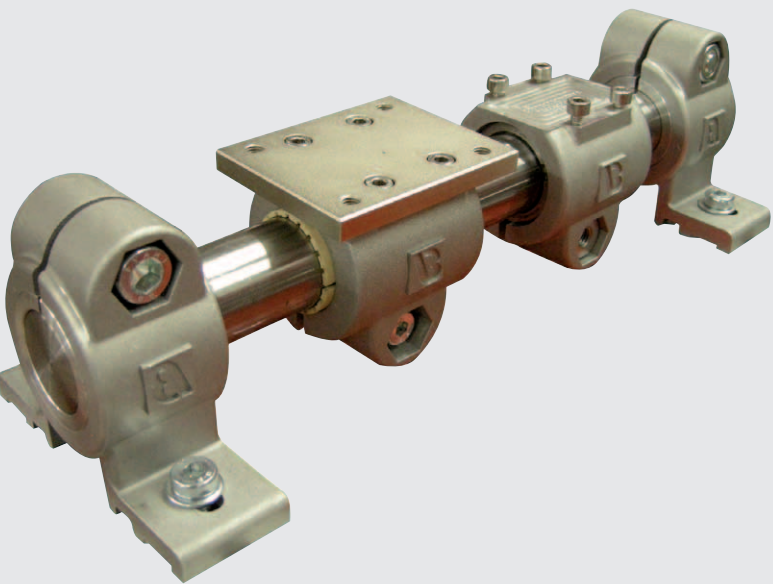
Q.ty Discounts	1+	3+	6+	10+	20+
	-	-3%	-6%	-10%	on request

Order code	A	B	D	S	H	H1	h1	h3	d1	h2	d	l	Finish	Weight g	Stock	€ piece
663306	61	70	17,8	10,5	29	33	20,5	12,5	13,5	10	M8	35	black RAL9005	78	■	5,27
663336	61	70	17,8	10,5	29	33	20,5	12,5	13,5	10	M8	35	tumbled	81	■	5,22
663316	76	87	21	12,5	34,5	38,5	24	17	16	12	M10	45	black RAL9005	125	■	6,80
663346	76	87	21	12,5	34,5	38,5	24	17	16	12	M10	45	tumbled	135	■	6,74
663326	76	87	21	12,5	34,5	38,5	24	17	16	12	M10	60	black RAL9005	131	■	8,52
663356	76	87	21	12,5	34,5	38,5	24	17	16	12	M10	60	tumbled	144	■	8,47

■ Products not in stock minimum order 1 piece, delivery in 5 days.







# Sliding bushes



Flange mount with anti-friction bushing

1 p.96



With flange with anti-friction bushing

1 p.97



Guided fitting with anti-friction bushing

1 p.99



Flange mount with linear bearing

1 p.100



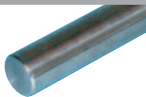
With flange with linear bearing

1 p.101



Combinations

1 p.102



## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data **provided by us shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components**. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. **It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).**

## 3270 Flage mount with anti-friction bushing

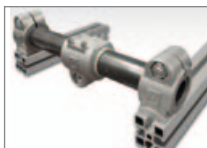
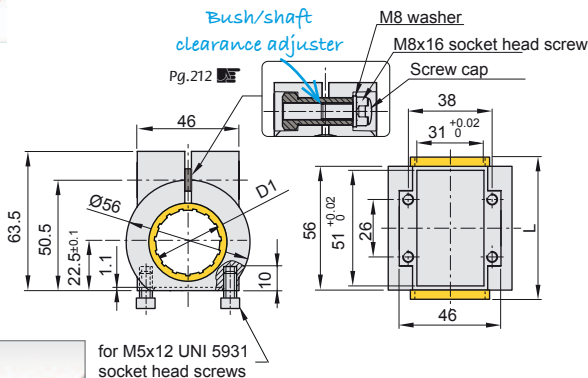
**Use:** for linear sliding on drawn or ground shafts with possibility of adjusting the clearance on the shaft; it allows application of customised flanges.

**Material:** Aluminium bush, 1 polyamide anti-friction bushing, 1 DIN 7984 M8 socket head screw, 4 UNI 5931 M5 socket head screws, 1 M8 washer, 1 galvanised steel torque limiter and 1 polyamide screw cap.

**Characteristics:** anti-friction bushing insensitive to dust and dirt, resistant to corrosion and abrasion, silent, with possibility of using it on not hardened shafts, operating temperature: +90°C to -50°C, friction coefficient 0.08 - 0.18  $\mu$ . **The limit switch prevents the bushings from locking on the shaft.**

**Standard pack:** 4 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	50+
	-	-5%	-10%

Order code	D1 Ø	Tolerance	L	Max dynamic load (N)	Max static load (N)	Finish	Weight g	Stock	€ piece
600747	30	+0,04 +0,085	62	2650	18400	shot peening	277	■	69,95
602447	35	+0,04 +0,085	68	3420	24000	shot peening	277	■	71,21

**Personalizations** other finishes on request Pg. 214

**Products not in stock** minimum order: 4 pieces, delivery in 15 days.

## 3287

## With flange with anti-friction bushing

**Use:** for linear sliding on drawn or ground shafts with possibility of adjusting the clearance on the shaft.

**Material:** aluminium bush, 1 polyamide anti-friction bushing, 1 DIN 7984 M8 socket head screw, 1 M8 washer, 1 galvanised steel torque limiter and 1 polyamide screw cap.

**Characteristics:** anti-friction bushing insensitive to dust and dirt, resistant to corrosion and abrasion, silent, with possibility of using it on not hardened shafts, operating temperature: +90°C to -50°C, friction coefficient 0.08 - 0.18  $\mu$ .

**The limit switch prevents the bushings from locking on the shaft.**

**Standard pack:** 4 pieces.

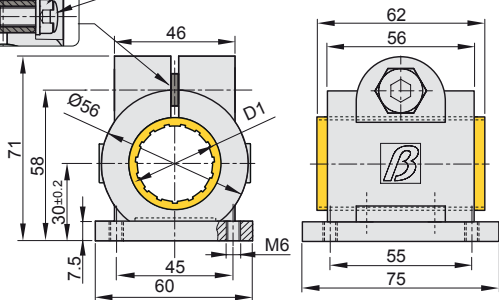
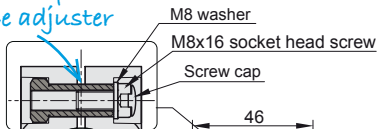
**Combinations**



On request we can supply the bush complete with customised flange

Bush/shaft  
clearance adjuster

Pg.212



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	50+
	-	-5%	-10%

Order code	D1 Ø	Tolerance	Max dynamic load (N)	Max static load (N)	Finish	Weight g	Stock	€ piece
600787	30	+0,04 +0,085	2650	18400	shot peening	370		88,84

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 20 days.

# 3828 With vertical flange with anti-friction bushing

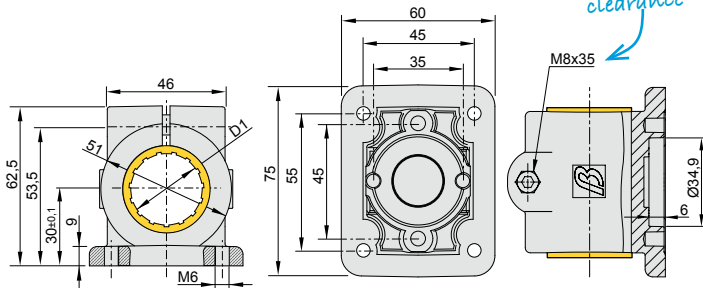
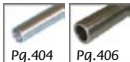
**Use:** for linear sliding on drawn or ground shafts with possibility of adjusting the clearance on the shaft.

**Material:** aluminium bush, 1 polyamide anti-friction bushing, 1 DIN 985 self-locking hexagon nut, 4 UNI 5931 socket head screws in galvanized steel.

**Characteristics:** anti-friction bushing insensitive to dust and dirt, resistant to corrosion and abrasion, silent, with possibility of using it on not hardened shafts, operating temperature: +90°C to -50°C, friction coefficient 0.08 - 0.18  $\mu$ .

**Standard pack:** 4 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q. ty	4+	8+	16+	32+	64+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1 Ø	Tolerance mm	Max dynamic load (N)	Max static load (N)	Finish	Weight g	Stock	€ piece
632068	30	+0,0+0,2	2650	18400	shot peening	270	✓	51,81

**Personalizations** other finishes on request Pg.214

## 3323

# Guided fitting with anti-friction bushing

**Use:** for linear sliding on drawn or ground shafts with possibility of adjusting the clearance on the shaft; it allows lock joining 35mm wide flat bars.

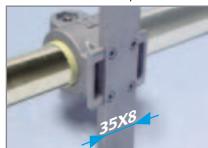
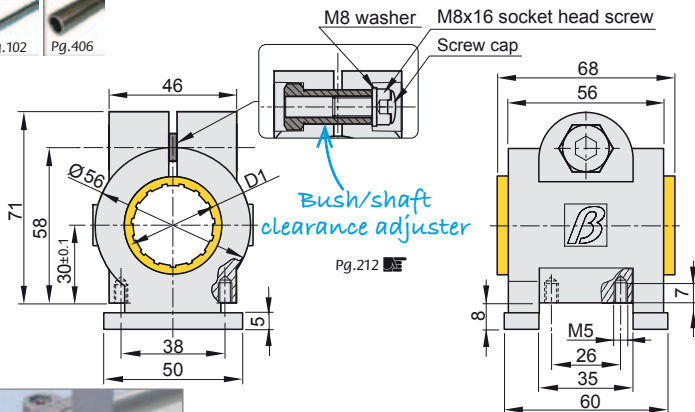
**Material:** aluminium bush, 1 polyamide anti-friction bushing, 1 DIN 7984 M8 socket head screw, 1 M8 washer, 1 galvanised steel torque limiter and 1 polyamide screw cap.

**Characteristics:** anti-friction bushing insensitive to dust and dirt, resistant to corrosion and abrasion, silent, with possibility of using it on not hardened shafts, operating temperature: +90°C to -50°C, friction coefficient 0.08 - 0.18  $\mu$ .

**The limit switch prevents the bushings from locking on the shaft.**

**Standard pack:** 4 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	50+
	-	-5%	-10%

Order code	D1 Ø	Tolerance	Max dynamic load (N)	Max static load (N)	Finish	Weight g	Stock	€ piece
600767	35	+0,04 +0,085	3420	24000	shot peening	288		81,60

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 20 days.



## 3286

# With flange with linear bearing

**Use:** for linear sliding on hardened and ground shafts.

**Material** aluminium bush, 1 linear ball bearing, 1 DIN 7984 M8 socket head screw, 1 M8 washer, 1 galvanised steel torque limiter and 1 polyamide screw cap.

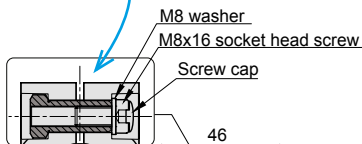
**Standard pack:** 4 pieces.

**Combinations**

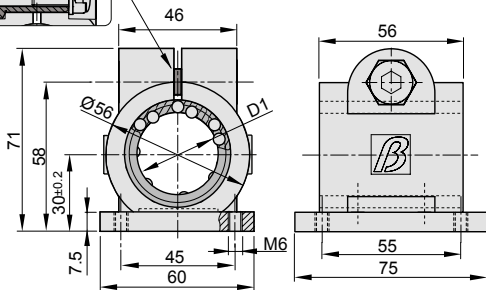


*Bush/shaft clearance adjuster*

*On request we can supply the bush complete with customised flange*



*Shaft tolerance  $\varnothing 30\text{ h6}$*



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	50+
	-	-5%	-10%

Order code	D1 $\varnothing$	Max dynamic load (N)	Max static load (N)	Finish	Weight g	Stock	€ piece
600777	30	1960	1890	shot peening	447,5	■	65,22

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 20 days.

2566

# Sliding shaft

round **hardened** chrome-plated ground

**Use:** for sliding bushes, suitable for linear ball bearing.

**Material** CF53 hardened steel (60-65 HRC).

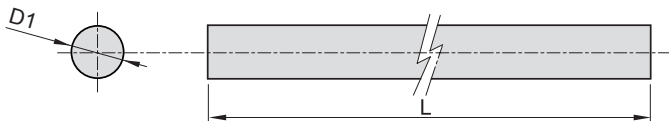
**Characteristics:** profondità della tempra: 1 to 2.5 mm;

cromatura prof. 15  $\mu\text{m}$  (950-1100 HV);

rettilinearità: 0,5/1000 mm.

rugosità: <0,02  $\mu\text{m}$

**Standard pack:** 6 metres.



### QUANTITY DISCOUNT

Bars Discounts	1+	6+	12+	24+
	-	-5%	-10%	on request

Order code	D1 Ø	L m	Finish	Weight Kg/m	Stock	€ bar
654307	30 h6	3	hardened - chrome plated - ground	5,51	■	122,49

**Personalizations** other finishes on request [Pg.214](#)

•Products not in stock minimum order 6 metres, delivery in 12 days.

## 3291

# Sliding shaft

## round chrome plated ground

**Use:** for sliding bushes, **not** suitable for linear ball bearing.

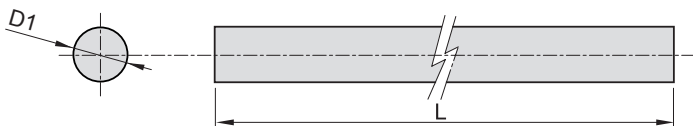
**Material:** C45 steel shaft.

**Characteristics:** chrome-plating depth 15  $\mu\text{m}$  (950-1100 HV);

rectilinearity: 0,5/1000 mm.

roughness: <0,02  $\mu\text{m}$

**Standard pack:** 6 metres.



### QUANTITY DISCOUNT

Bars	1+	6+	12+	24+
Discounts	-	-5%	-10%	on request

Order code	D1 Ø	L m	Finish	Weight Kg/m	Stock	€ bar
641547	30 h7	2	chrome plated - ground	5,51	■	52,92
641437	30 h7	3	chrome plated - ground	5,51	■	78,84
641557	35 h7	2	chrome plated - ground	8,17	■	78,26
641457	35 h7	3	chrome plated - ground	8,17	■	116,88

**Personalizations:** other finishes on request Pg.214

•Products not in stock minimum order 6 metres, delivery in 12 days.

The power of technical experience  
and the knowledge of applications  
mould stainless steel into an  
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beyond compare

# Connectors MENS

MENS

Technical information and application  
diagrams



1 p.106

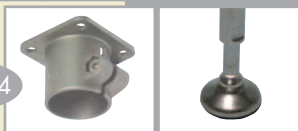
Cross, flanged and orthogonal

1 p.110



Support head and foot

1 p.124



Photocell and reflector holder

1 p.127



Product handling

1 p.133



Combinations

1 p.412

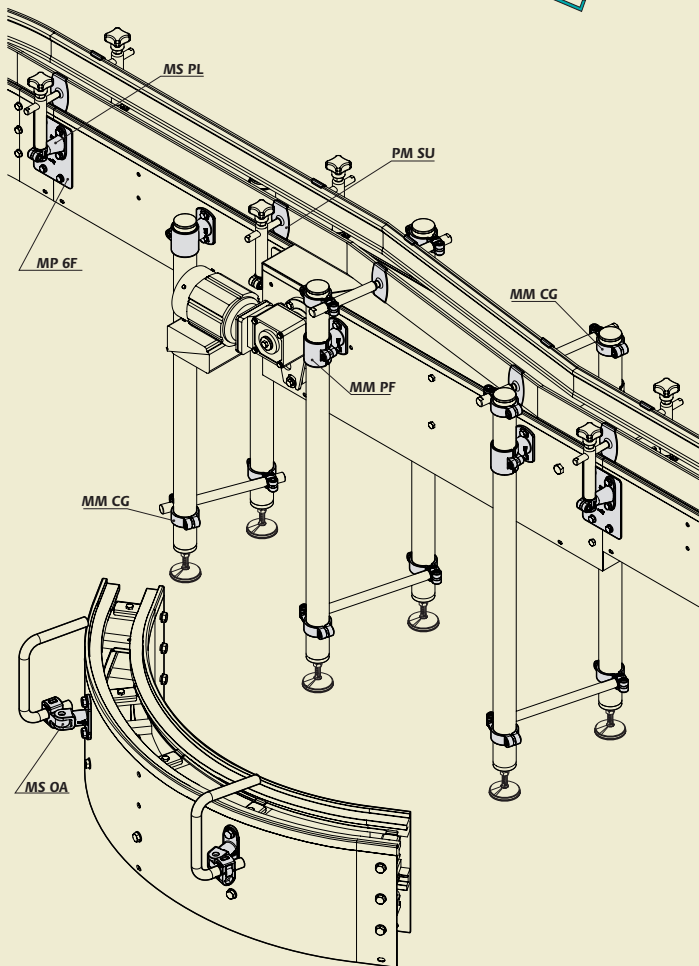
1 p.404

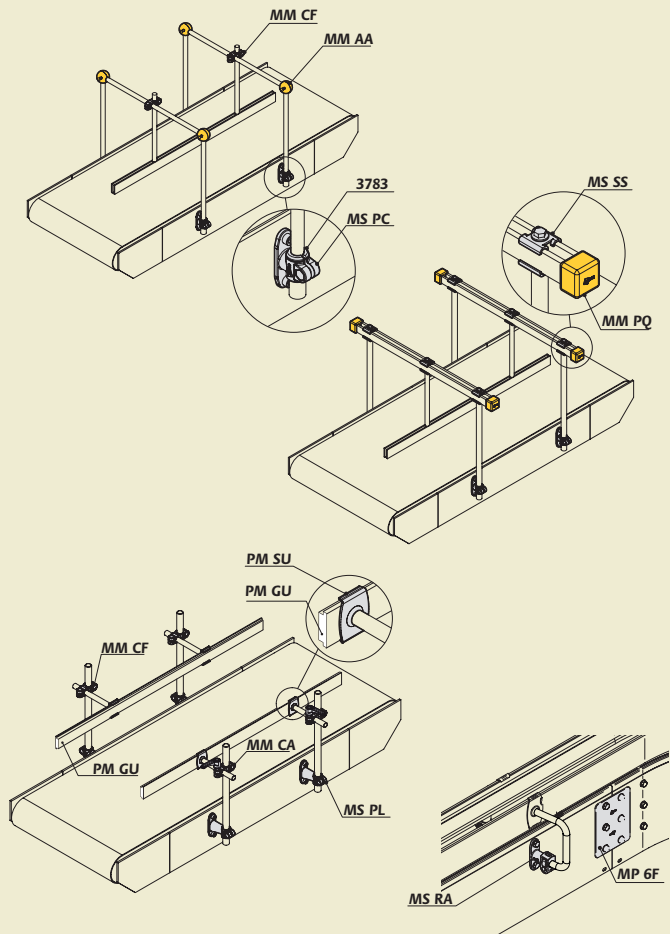
1 p.190

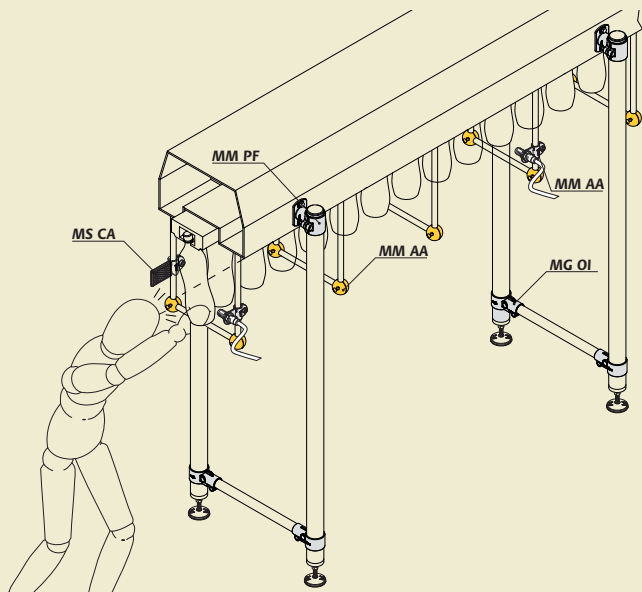
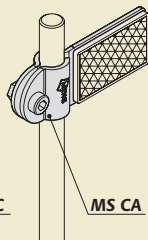
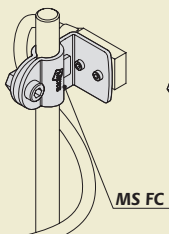
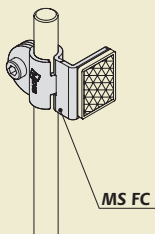
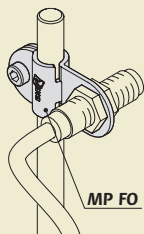


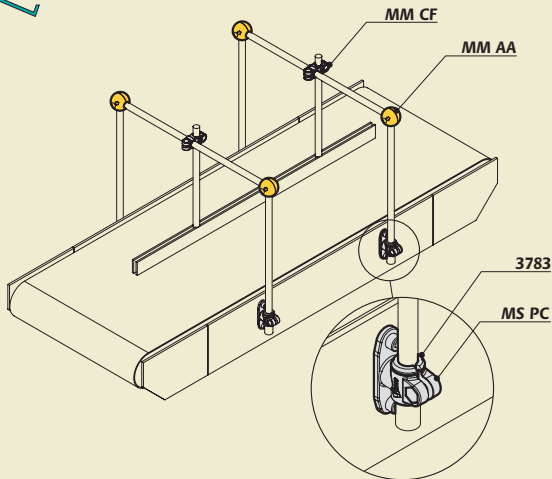
## AVVERTENZE

Le informazioni fornite servono solo alla descrizione del nostro componente. Non sono da intendere quale dichiarazione da parte nostra di una determinata caratteristica o dell'idoneità per un determinato uso. I nostri dati, **non esonerano il cliente dalle proprie valutazioni e controlli quindi dalle proprie responsabilità nell'adozione**. Tutte le informazioni si basano sulle competenze in possesso al momento della pubblicazione e non sono vincolanti. Per eventuali informazioni incomplete, errate o possibili danni dovuti a tali informazioni, non si accetta alcuna responsabilità. I prodotti possono in qualsiasi momento essere oggetto di modifiche, **si consiglia perciò di verificare gli aggiornamenti sul sito Web [www.bettsistemi.com](http://www.bettsistemi.com)**.









# MM CF Cross

## Ø12 to Ø20 mm

**Use:** orthogonal connection between two round drawn bars of equal or different diameter.

**Inadvisable for frequent adjustments.**

**Material** AISI 304 stainless steel; 2 M8x20 socket head screws in AISI 304 stainless steel, 2 M8 hexagon nuts in nickel-plated brass, 2 **anti-seizure** washers in brass.

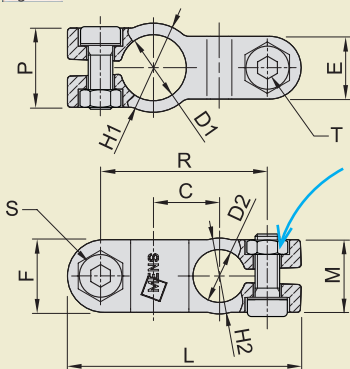
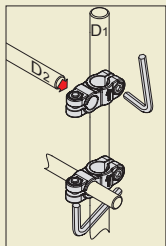
**Standard pack:** 8 pieces.

In case of frequent adjustments, it is advisable to use the lock/release cross connector. Pg.112

**Combinations**



**Functional design**



**Anti-seizure washer**

pg. 212

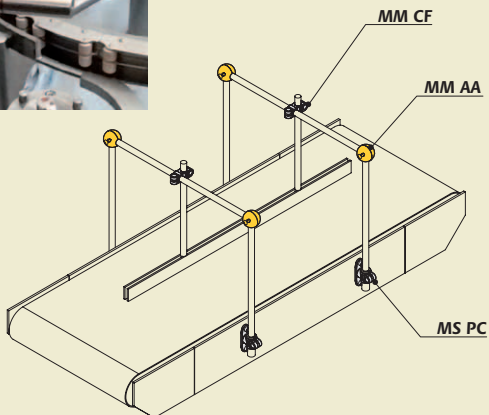
### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	on request

Order code	D1 Ø	D2 Ø	C	E	F	H1	H2	L	M	P	R	S	T	Finish	Weight g	Stock	€ piece
10003	16,1	12,1	16	17	20,6	23	18	59,3	17	22	41,5	M8x20	M6x16	electropolished	78	✓	9,34
630547	16,1	12,1	16	17	20,6	23	18	59,3	17	22	41,5	Without screws		electropolished	62	✓	7,92
10004	16,1	16,1	18	19	20,6	23	23	67,3	22	22	47	M8x20	M8x20	electropolished	100	✓	10,43
630557	16,1	16,1	18	19	20,6	23	23	67,3	22	22	47	Without screws		electropolished	80	✓	8,65
10002	20,1	16,1	20	19	22	27	23	70,8	22	24	50,5	M8x20	M8x20	electropolished	111	✓	13,03
630567	20,1	16,1	20	19	22	27	23	70,8	22	24	50,5	Without screws		electropolished	91	✓	11,24
10001	20,1	20,1	22	22	11	27	27	74,3	24	24	54	M8x20	M8x20	electropolished	136	✓	13,90
630577	20,1	20,1	22	22	11	27	27	74,3	24	24	54	Without screws		electropolished	116	✓	12,11

**Personalizations** other finishes on request Pg.214

**Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215



# MM CA Cross lock/release

## Ø16 to Ø20 mm

**Use:** It can be opened with Lock/Release system thanks to the two-half clamp which provides top-performance tightening and release, and makes pin D2 adjustment extremely easy.

**Material:** AISI 304 stainless steel; 2 M8x20 socket head screws in AISI 304 stainless steel, 2 M8 hexagon nuts in nickel-plated brass, 2 anti-seizure washers in brass.

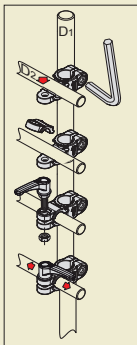
**Suitable for frequent adjustments.**

**Standard pack:** 8 pieces.



**Combinations** 



### Functional design

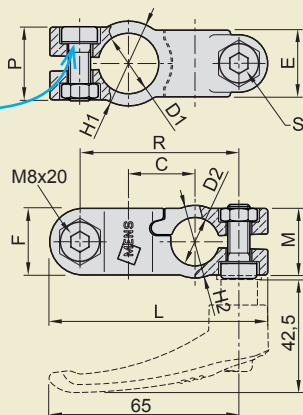


**Anti-seizure washer**

 pg. 212 





**Version with Ratchet Levers**




### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	on request

Order code	D1 Ø	D2 Ø	C	E	F	H1	H2	L	M	P	R	S	Finish	Weight g	Stock	€ piece
10039	16,1	16,1	20	22	22	24	24	68,5	22	22	49	M8x20	electropolished	117	✓	16,11
629197	16,1	16,1	20	22	22	24	24	68,5	22	22	49	A lever	electropolished	137	✓	20,63
10040	20,1	16,5	22	22	22	28	24	72	22	24	52,5	M8x20	electropolished	127	✓	17,41
629207	20,1	16,5	22	22	22	28	24	72	22	24	52,5	A lever	electropolished	147	✓	21,57
10041	20,1	20,1	25	24	22	28	28	77	24	24	57	M8x20	electropolished	161	✓	18,37
629217	20,1	20,1	25	24	22	28	28	77	24	24	57	A lever	electropolished	181	✓	22,89

**Personalizations** other finishes on request  Pg.214 

✓ **Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215 


## MM CG Cross in stainless steel

D1 = Ø20 and D2 = Ø48,3 mm

**Use:** orthogonal connection between two round bars of different diameter.

**Material:** AISI 304 stainless steel; 1 M8x25 socket head screw in AISI 304 stainless steel, 1 M8x20 socket head screw in AISI 304 stainless steel, 2 M8 hexagon nuts in nickel-plated brass, 2 anti-seizure washers in brass.

**Standard pack:** 8 pieces.

**Combinations** 



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Pg.410

Pg.412



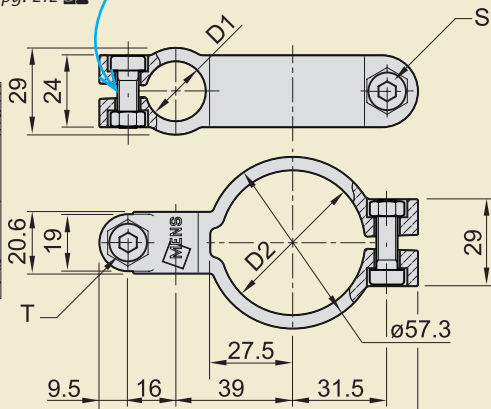
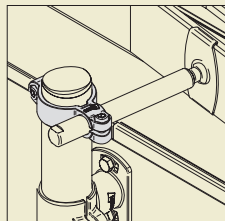
Pg.415

Stainless Steel



Functional design



Anti-seizure washer


 pg. 212 


## QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	on request

Order code	D1 Ø	D2 Ø	S	T	Finish	Weight g	Stock	€ piece
10005	20,1	48,3	M8x25	M8x20	electropolished	232	✓	22,22

**Personalizations** other finishes on request  Pg.214 

**✓ Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215 


# MM PF With parallel flange

## Ø48,3 mm

**Use:** connection parallel to the fastening plane of round bars.

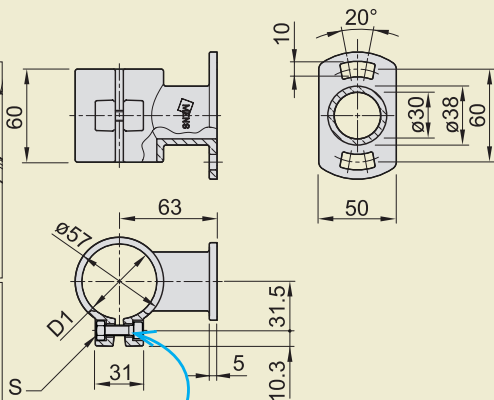
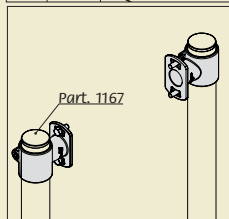
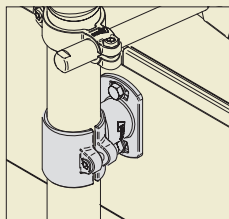
**Material** AISI 304 stainless steel; M8x25 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.

**Standard pack:** 2 pieces.



**Combinations** 



Stainless Steel





Anti-seizure washer


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### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20009	48,4	M8x25	electropolished	557	<input checked="" type="checkbox"/>	35,77

**Personalizations** other finishes on request  Pg.214 

**Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215 

## MS PA With parallel flange

Ø16 mm

**Use:** connection of round drawn bars parallel to the fastening plane. It can be fitted between the side member and the MMFP parallel flanged connector (used for support) without requiring further holes in the side member. Openable with **lock/release system** thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 brass anti-seizure washer.

**Characteristics:** designed to be interposed between the conveyor side member and the parallel flanged clamp avoiding further holes and fittings on the side member.

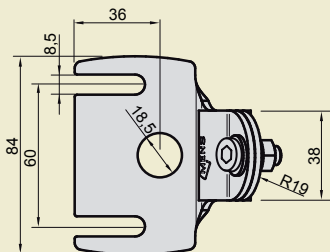
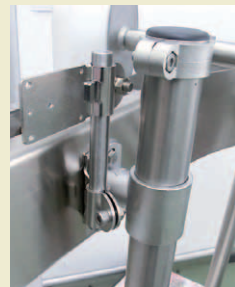
**Standard pack:** 8 pieces.

**Combinations** 





Pg.114

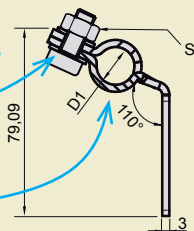
Functional design



Anti-seizure washer

 pg. 212 

Lock/release device



## QUANTITY DISCOUNT

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20075V	16	M8x20	electropolished	175	✓	20,34

# MS PC With parallel flange

## Ø20 mm

**Use:** connection of round drawn bars parallel to the fastening plane.

**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.

**Standard pack:** 8 pieces.

**Combinations**



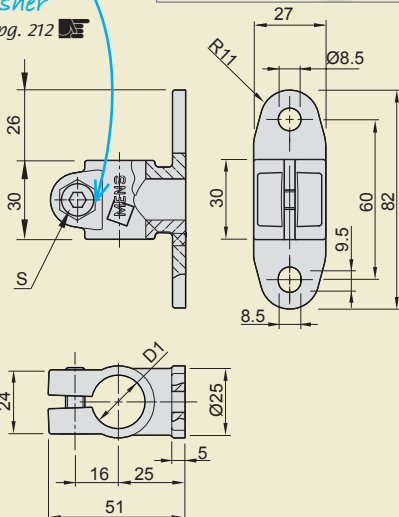
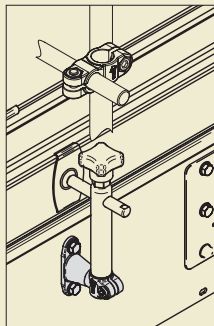
Stainless Steel



Anti-seizure washer

pg. 212

Functional design



**QUANTITY DISCOUNT**

Q.ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20010	20,1	M8x20	electropolished	185	<input checked="" type="checkbox"/>	16,46

**Personalizations** other finishes on request Pg.214

**Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215

# MS PL With parallel flange

## Ø20 mm

**Use:** connection of round drawn bars parallel to the fastening plane.

**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI stainless steel, M8 hexagon nut in nickel-plated brass, **anti-seizure** washer in brass.

**Standard pack:** 8 pieces.

**Combinations**



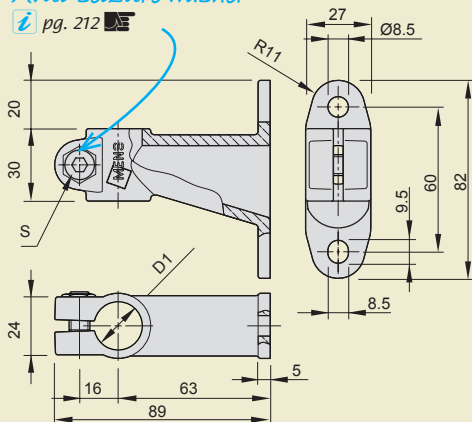
Stainless Steel



Functional design

Anti-seizure washer

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### QUANTITY DISCOUNTS

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20011	20,1	M8x20	electropolished	256	✓	26,53

**Personalizations** other finishes on request Pg.214

**✓ Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215

MG OS


## Orthogonal

D1 = Ø48,3 and D2 = Ø26,9 mm

**Use:** 90° connection between two round bars of different diameter, can be coupled to MG05008.

**Material:** AISI 304 stainless steel; M8x30 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, M6x20 socket head screw in AISI 304 stainless steel, M6 hexagon nut in nickel-plated brass, 2 anti-seizure washers in brass.

**Standard pack:** 2 pieces.

**Combinations** 



Pg.404



Pg.412

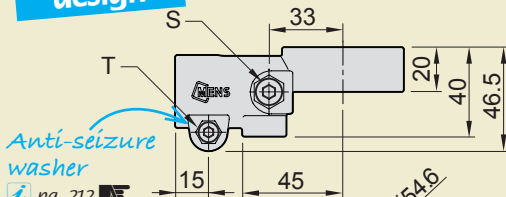




Pg.415

Stainless Steel



Functional design





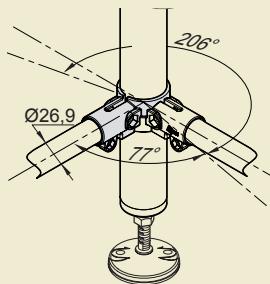
 pg. 212 

## QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	on request

Order code	D1 Ø	D2 Ø	S	T	Parts	Finish	Weight g	Stock	€ piece
05009	48,5	27,2	M8x30	M6x20	upper	electropolished	248	✓	33,73
05008	48,5	48,5	M8x30	M6x20	lower	electropolished	248	✓	33,73

**Personalizations** other finishes on request  Pg.214 



# MS RA With adjustable flange

## Ø16 mm

**Use:** connection of round drawn bars in position adjustable with respect to the fastening plane.

Openable with **lock/release** system thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

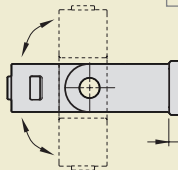
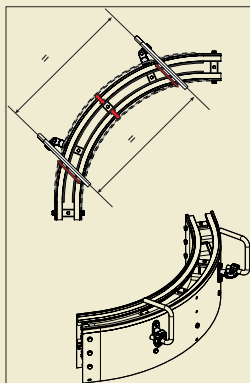
**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI stainless steel, M8 hexagon nut in nickel-plated brass, **anti-seizure** washer in brass.

**Standard pack:** 8 pieces.

**Combinations**

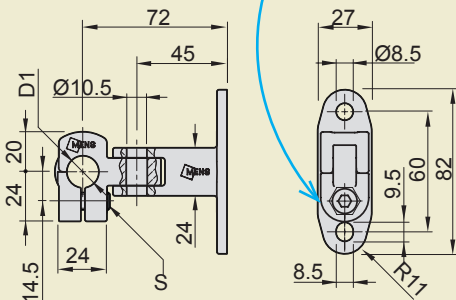


### Functional design



Anti-seizure washer

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### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20063	16,1	M8x20	electropolished	432	<input checked="" type="checkbox"/>	26,26

**Personalizations** other finishes on request Pg.214

**Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215

# MS OA With orthogonal flange


## Ø16 mm

**Use:** connection of round drawn bars perpendicular to the fastening plane.

Openable with **lock/release** system thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI stainless steel, M8 hexagon nut in nickel-plated brass, **anti-seizure** washer in brass.

**Standard pack:** 8 pieces.

**Combinations** 



Pg.404



Pg.412



Pg.410





Pg.415



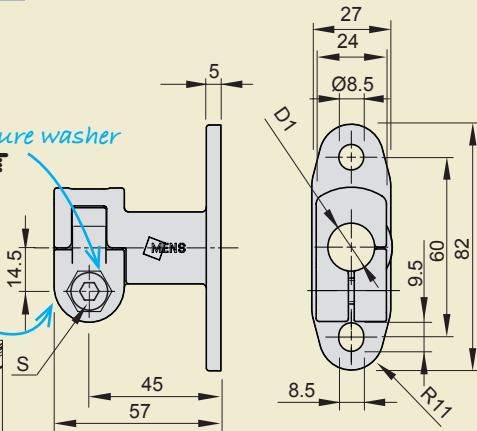
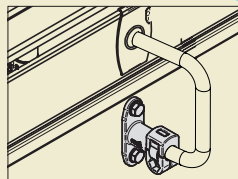
Lock/release

### Functional design

Anti-seizure washer

 pg. 212 



Lock/release device




#### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20064	16,1	M8x20	electropolished	239	✓	25,54

**Personalizations** other finishes on request  Pg.214 

✓ **Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215 




1182

## Connection joint for tube

**Use:** to couple a 48.3 Ø tube and a 40x20mm rectangular tube, at 90°.

**Material** connection joint, screw, washer and nut in AISI 304 stainless steel, nut protection cap in polyethylene.

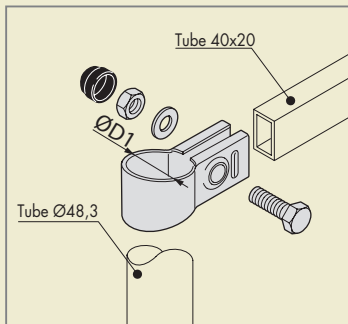
**State of supply** complete with 1 joint, 1 M10x45 hexagonal-head screw, 1 washer, 1 protection cap, 1 M10 hexagon nut.

**Combinations** 



Pg.404

Stainless Steel



## QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+
	-	-10%	-17%	on request

Order code	Pack	D1 Ø	Weight g	Stock	€ piece
639471	4 pcs	48.3	290	✓	20,25

# MT AP Support head

Ø48,3 mm

**Use:** connection of round bars at 90° with respect to the fastening plane.

**Material:** AISI 304 stainless steel; M8x30 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 **anti-seizure** washer in brass.

**Standard pack:** 2 pieces.

**Combinations**



Pg.404

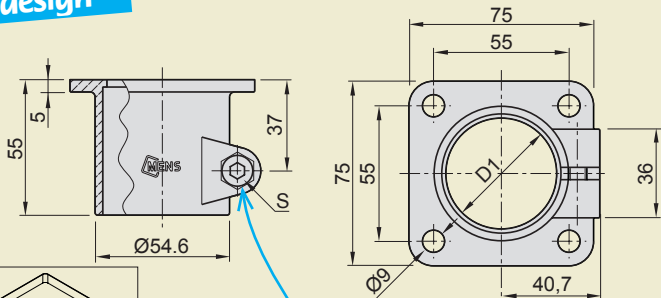
Pg.412

Pg.415

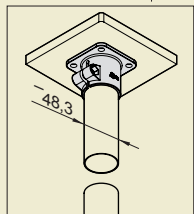
Stainless Steel



Functional design



Anti-seizure washer pg. 212



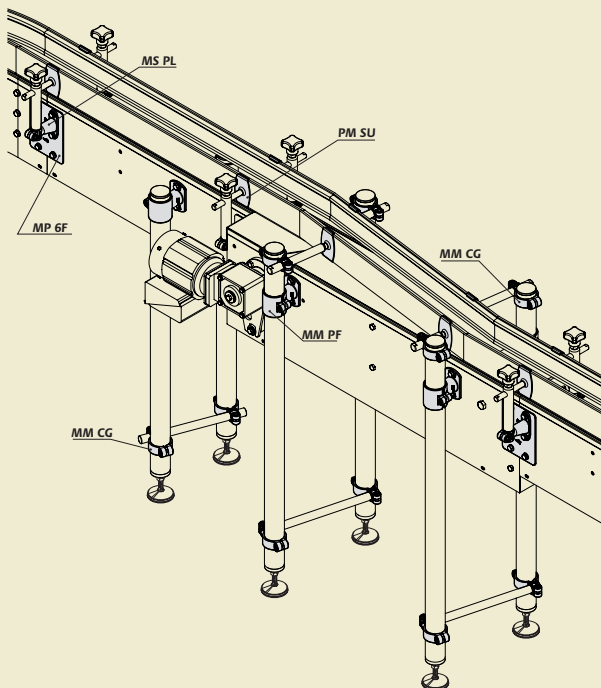
### QUANTITY DISCOUNT

Q.ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
19002	48,5	M8x30	electropolished	248	<input checked="" type="checkbox"/>	31,74

**Personalizations** other finishes on request Pg.214

**Product in stock** for orders of more than 32 pieces, see the sales information on page Pg.215



# WP RE Adjustable foot

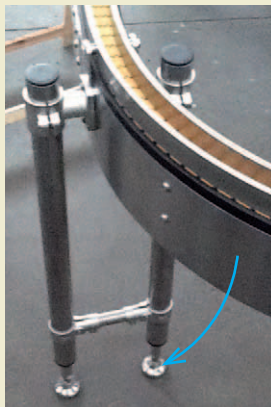
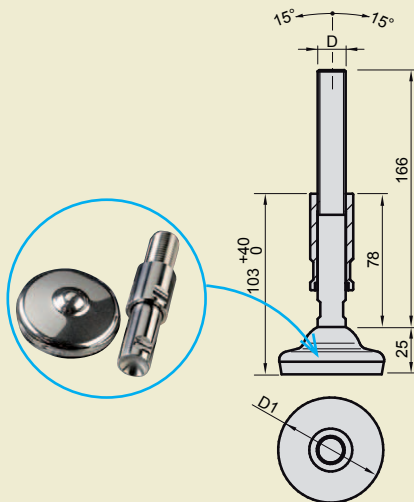
**Use:** adjustable foot suitable for application in the pharmaceutical and food industries. The rounded surface of the foot prevents dust from depositing, while the threaded height-adjustment pin is completely hidden preventing dirt accumulation and stagnation areas.

**Material** AISI 304 stainless steel.

**Standard pack:** 2 pieces.

Stainless  
Steel

NEW



### QUANTITY DISCOUNT

Qty Discounts	2+	4+	8+	16+	32+
	-	-3%	-6%	10%	contact us

Order code	Static load N	D1 Ø	D Ø	Finish	Weight g	Stock	€ piece
020013	6870	60	M16	electropolished	742	✓	67,50

## MS FO Photocell holder

**Use:** photocell fastening on round bars. Openable with *Lock/release* thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

**Material** AISI 304 stainless steel; M8x16 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.

**Standard pack:** 8 pieces.

**Combinations** 



Pg.404



Pg.410



Pg.412



Pg.415

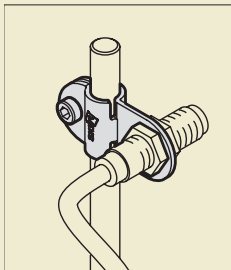
Stainless Steel

NEW





Lock/release

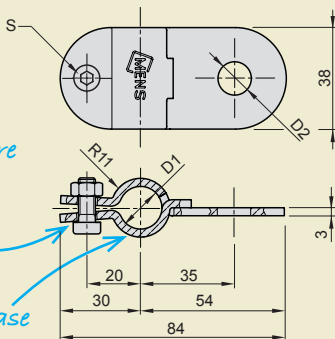
Functional design



Anti-seizure washer

 pg. 212 

Lock/release device



## QUANTITY DISCOUNT

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	contact us

Order code	D1 Ø	D2 Ø	S	Finish	Weight g	Stock	€ piece
20068-125	16,1	12,5	M8x16	electropolished	109	✓	20,20
20068-185	16,1	18,5	M8x16	electropolished	109	✓	20,20
20068-225	16,1	22,5	M8x16	electropolished	120	✓	20,20
20068-245	16,1	24,5	M8x16	electropolished	116	✓	20,20
20068-27	16,1	27	M8x16	electropolished	111	✓	20,20


# MS CA Reflector holder

## Ø16 mm

**Use:** reflector fastening on round bars. Openable with **Lock/release** thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

**Material:** AISI 304 stainless steel; M8x16 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.



**Standard pack:** 8 pieces.

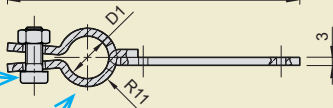
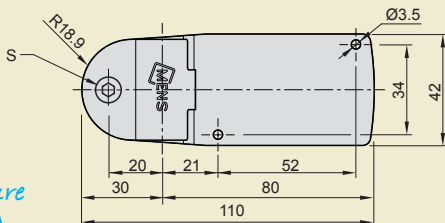
**Combinations** 



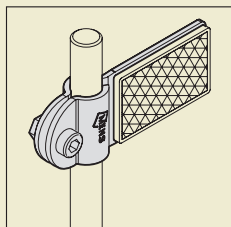
**Functional design**

Anti-seizure washer

 pg. 212 



lock/release device



### QUANTITY DISCOUNT

Qty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20065	16,1	M8x16	electropolished	109	<input checked="" type="checkbox"/>	19,51

# MS CB Reflector holder

## Ø16 mm

**Use:** reflector fastening on round bars. Openable with **Lock/release** thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

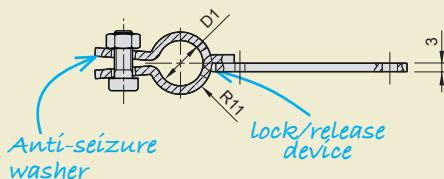
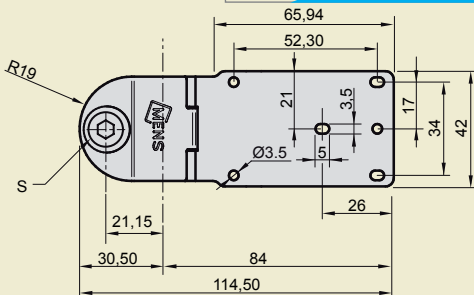
**Material** AISI 304 stainless steel; M8x20 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, brass anti-seizure washer.



**Standard pack:** 8 pieces.

**Combinations** 



**Functional design**



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### QUANTITY DISCOUNT

Qty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20074V	16,1	M8x20	electropolished	148	<input checked="" type="checkbox"/>	19,51


# MS CC Reflector holder

## Ø16 mm

**Use:** reflector fastening on round bars. Openable with Lock/release thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

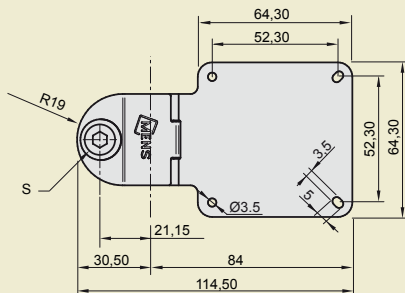
**Material:** AISI 304 stainless steel; M8x20 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, brass anti-seizure washer.

**Standard pack:** 8 pieces.



**Combinations** 



**Functional design**



Anti-seizure washer

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lock/release device

**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20073V	16,1	M8x20	electropolished	207	<input checked="" type="checkbox"/>	21,59


# MS FC Photocell holder

## Ø16 mm or reflector

**Use:** photocell or reflector fastening on round bars. Openable with **Lock/release** thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment.

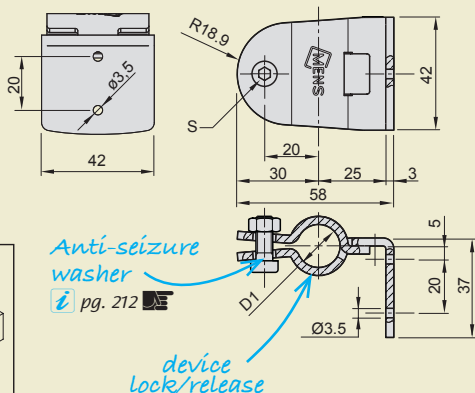
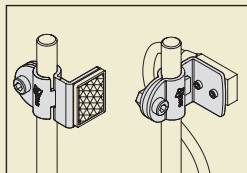
**Material** AISI 304 stainless steel; M8x16 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.

**Standard pack:** 8 pieces.

**Combinations** 



### Functional design



#### QUANTITY DISCOUNT

Qty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20066	16,1	M8x16	electropolished	127	✓	15,87

# MS FL Photocell holder

## Ø16 mm or reflector

**Use:** reflector fastening on round bars. Openable with **Lock/release** thanks to the clamp in two halves that allows performance tightening and release thus facilitating bar adjustment

**Material** AISI 304 stainless steel; M8x16 socket head screw in AISI 304 stainless steel, M8 hexagon nut in nickel-plated brass, 1 anti-seizure washer in brass.

**Combinations**



Pg.404

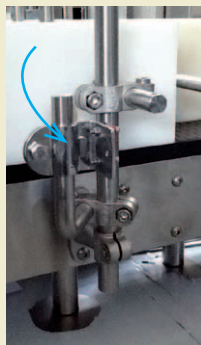
Pg.410

Pg.412

Pg.415

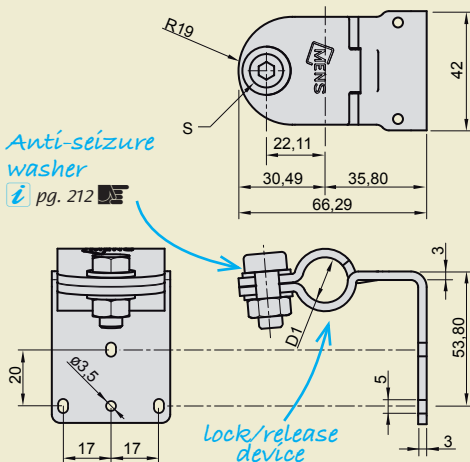


**Functional design**



*Anti-seizure washer*

pg. 212



**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	contact us

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
20076V	16,1	M8x20	electropolished	149	✓	21,17

**Products not in stock 8 pieces.**

PS GF

## Guide holder pin

Use: or fastening the product containment guide support.

**Material** AISI 304 stainless steel.**Standard pack:** 8 pieces.**Combinations** 

Pg.135



Pg.134



Pg.110



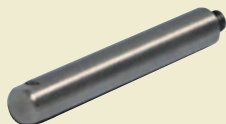
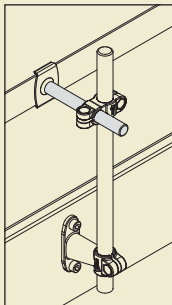
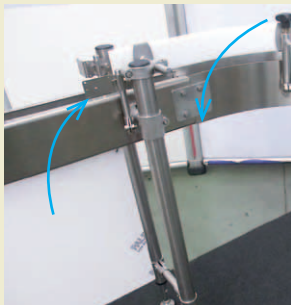
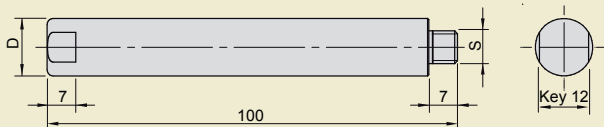
Pg.112



Pg.113

Stainless  
Steel

NEW

Functional  
design

## QUANTITY DISCOUNT

Qty Discounts	2+	4+	4+	16+	32+
	-	-3%	-3%	10%	contact us

Order code	D1 $\varnothing$	S	Finish	Weight g	Stock	€ piece
300019	14	M8	electropolished	117	✓	19,19

## PS GR Guide holder pin

**Use:** for fastening the product containment guide support.

**Material** AISI 304 stainless steel.

**Standard pack:** 8 pieces.

**Combinations**



Pg.133

Pg.116

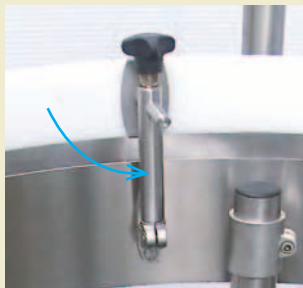
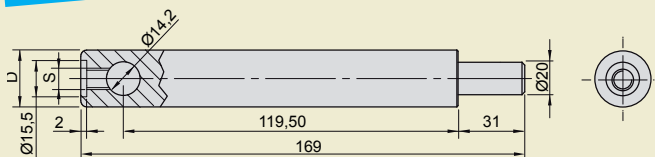
Pg.117

Stainless Steel

NEW



Functional design



## QUANTITY DISCOUNT

Qty	2+	4+	8+	16+	32+
Discounts	-	-3%	-6%	10%	contact us


Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
300075	25	M10	electropolished	600	✓	40,47

# PM SU Guide holder

**Use:** Product containment guide support.

**Material:** AISI 304 stainless steel.

**Standard pack:** 8 pieces.

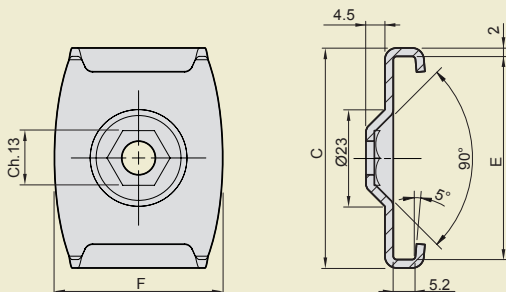
**Combinations:** 



Pg.133



Pg.136



### QUANTITY DISCOUNT

Qty Discounts	2+	4+	4+	16+	32+
	-	-3%	-3%	10%	contact us


Order code	C	E	F	Finish	Weight g	Stock	€ piece
140001	52,3	48,3	40	electropolished	40	✓	12,45
140002	82,3	78,3	50	electropolished	69	✓	12,45

## PG GU Guide

**Use:** for conveying and holding the products on the conveyor belt.

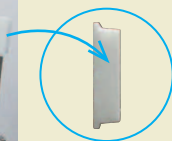
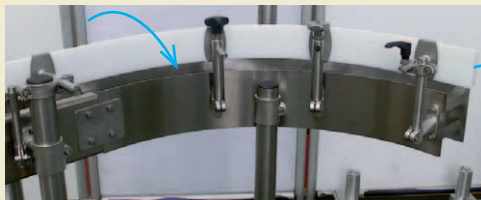
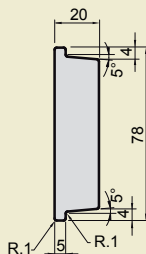
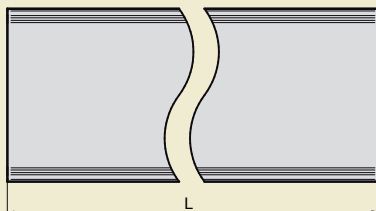
**Material** polyethylene.

**Standard pack:** 8 pieces.

**Combinations** 



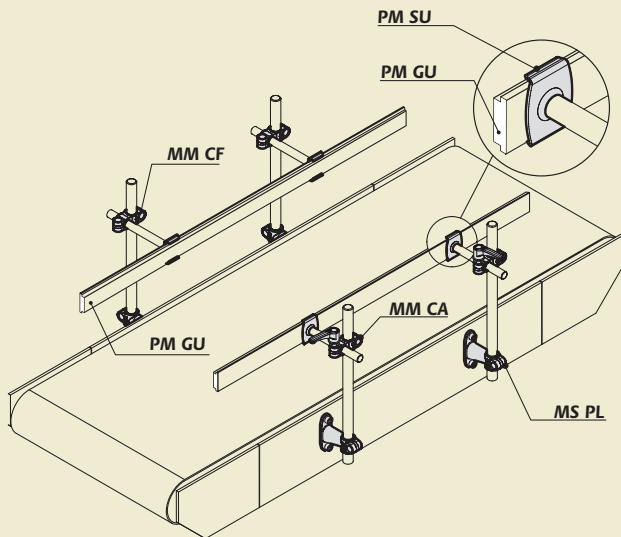
Pg.135



### QUANTITY DISCOUNT

Qty Discounts	2+	4+	4+	16+	32+
	-	-3%	-3%	10%	contact us

Order code	L	Colour	Weight Kg	Stock	€ piece
140446	1000	white RAL 9001	5,90	✓	75,92
140457	1500	white RAL 9001	8,85	✓	113,88
140458	2000	white RAL 9001	11,80	✓	151,84
140459	3000	white RAL 9001	17,70	✓	227,77




# MM AA Accident prevention

## Ø12 to Ø16 mm

**Use:** orthogonal connection between two round pins of equal or different diameter.

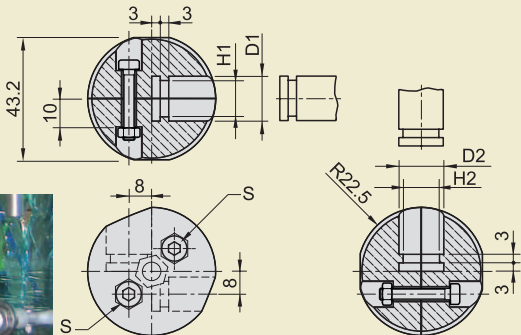
**Material:** polyamide; 2 M5x25 socket head screws in AISI 304 stainless steel, 2 M5 hexagon nuts in brass.

**Standard pack:** 24 pieces.

**Combinations** 



**Functional design**



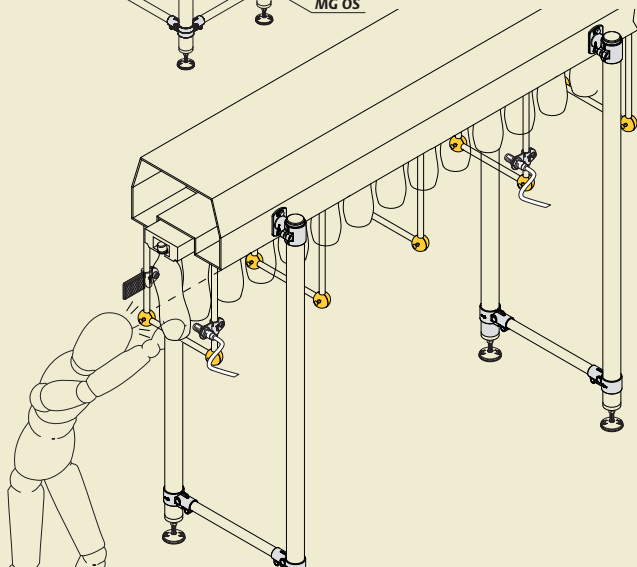
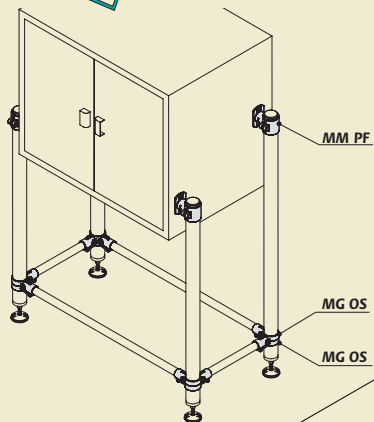
**Application of part 10042**



### QUANTITY DISCOUNT

Q.ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	10%	on request

Order code	D1 Ø	D2 Ø	H1 Ø	H2 Ø	S	Finish	Weight g	Sock	€ piece
10042	12	16	9	13	M5x25	orange RAL2004	21	✓	2,31
10043	16	16	13	13	M5x25	orange RAL2004	20	✓	2,31

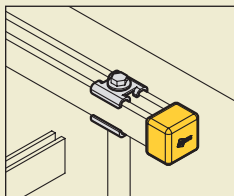
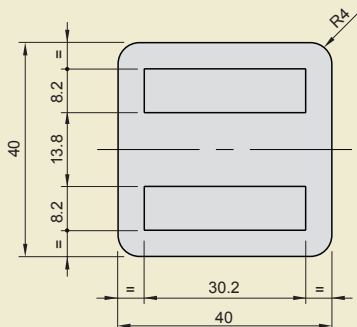


# MP PQ Square guard for 30 x 8 mm plates

Use: safety end piece for two 30 x 8 mm rectangular bars.

Material EPOM 50 shore.

Standard pack: 8 pieces.



### QUANTITY DISCOUNT

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	on request

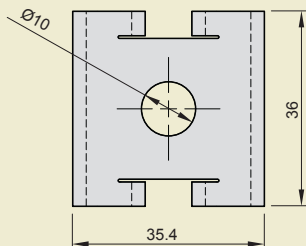
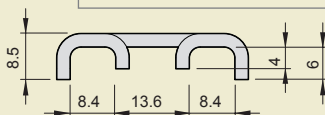
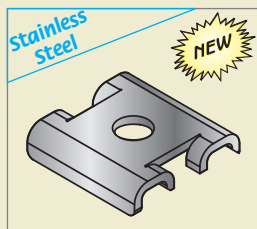
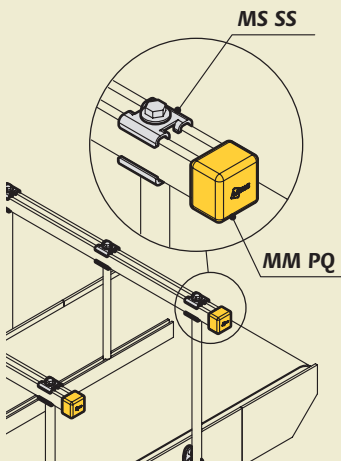
Order code	Colour	Weight g	Stock	€ piece
19001	orange RAL2011	38	✓	6,92

# MS SS Supporting bracket for 30 x 8 mm plates

**Use:** mounting bracket for 2 30 x 8 mm rectangular bars

**Material:** AISI 304 stainless steel.

**Standard pack:** 8 piece.



### QUANTITY DISCOUNT

Qty	2+	4+	8+	16+	32+
Discounts	-	-3%	-6%	10%	on request

Order code	Weight g	Stock	€ piece
15009	-	✓	6,92

# MP 6F Joining plate with 6 holes

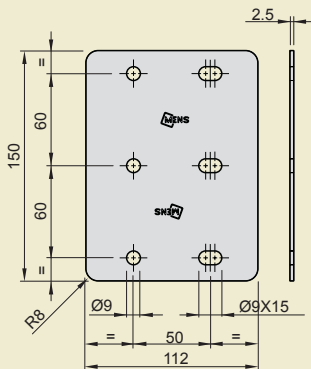
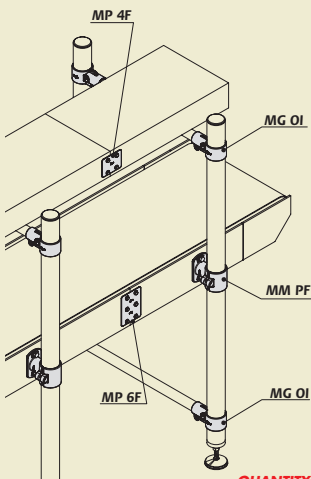
Use: joint between two side members of the conveyor.

**Material** AISI 304 stainless steel.

**Standard pack:** 2 pieces.



**Functional design**



### QUANTITY DISCOUNT

Qty Discounts	2+	4+	4+	16+	32+
	-	-3%	-3%	10%	contact us

Order code  
09004

Finish  
electropolished

Weight  
g  
325

Stock  
✓

€  
piece  
6,92

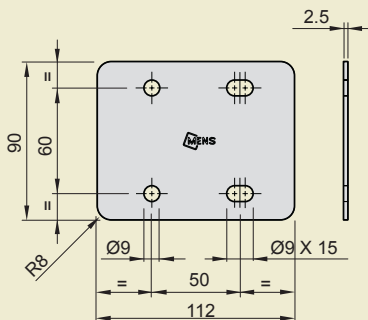
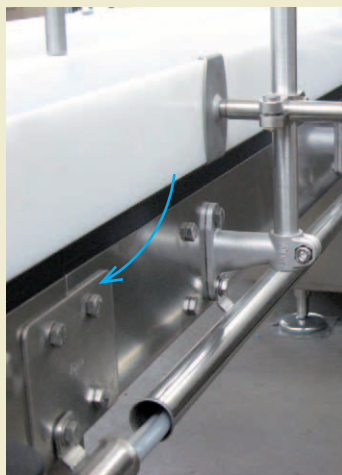
# MP 4F Joining plate with 4 holes

**Use:** joint between two side members of the conveyor.

**Material:** AISI 304 stainless steel.

**Standard pack:** 2 pieces.

Functional  
design



### QUANTITY DISCOUNT

Qty	2+	4+	4+	16+	32+
Discounts	-	-3%	-3%	10%	contact us

Order code	Finish	Weight g	Stock	€ piece
09005	electropolished	194	✓	6,92



4270

## Box with blind door

**Use:** for housing the electric control panel.

**Material** AISI304 stainless steel box, AISI304 stainless steel door hinges, polyurethane sealing gasket, galvanised steel wiring plate, AISI304 stainless steel nuts and bolts.

**Characteristics:**

- Box body with welded and finished corners.
- Door openable to minimum 120° with internal hinges
- without holes for tools or fittings on body and cover.
- IP66 IK10 degree of protection in compliance with EN 62208.

**Standard pack:** 1 piece.

**Combinations**

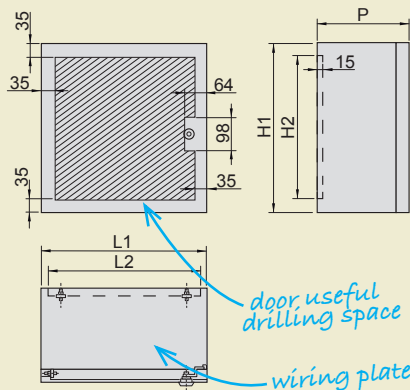
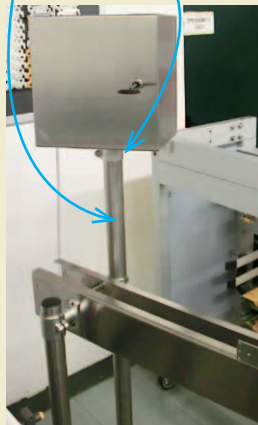
Pg.404



Pg.124

Stainless steel

NEW

**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+
	-	-5%	contact us

Order code	L1 mm	L2 mm	P mm	H1 mm	H2 mm	Finish	Weight Kg	Stock	€ piece
665908	300	266	210	300	227	scotch-brite	6,25	■	177,80

•Products not in stock minimum order 1 piece, delivery in 10 days.

## 4236 Light column


**Use:** warning light (example: machine stop).

**Material** polycarbonate lenses, silver-coloured thermoplastic body.

**Characteristics:**

- Interchangeable Led modules.
- High-intensity Led, wiring clamps in the same colour as the Led.
- Operating voltage: nominal voltage (24 V AC)  $\pm 10\%$  (21.6 - 26.4 V).
- Current: 52 mA / 1.25 W.
- Operating temperature:  $-30^{\circ}\text{C}$  /  $+60^{\circ}\text{C}$ .
- Continuous light (versions without acoustic signaler), continuous or intermittent light (versions with acoustic signaler)

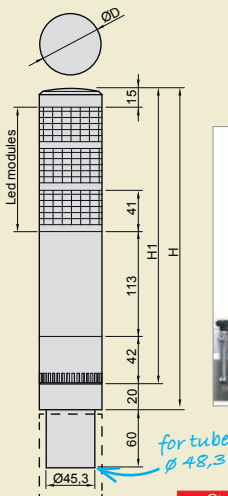
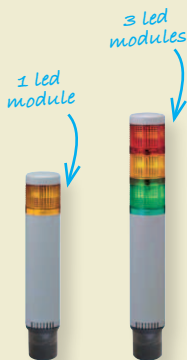
**Standard pack:** 1 piece.

**Combinations** 



Pg.404

Pg.124

**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	10%	contact us

Order code	D Ø	Led modules number	Led colour	H mm	H1 mm	Buzzer	Weight g	Stock	€ piece
630817	50	1	yellow	231	211	no	300	■	85,46
677338	50	1	yellow	231	211	yes	320	■	128,07
677348	50	3	red-yellow-green	272	252	no	420	■	126,68
677358	50	3	red-yellow-green	272	252	yes	440	■	169,31

**Customizations** Colors and combinations led to customer's request

■ **Products not in stock** minimum order 1 piece, delivery in 5 days.

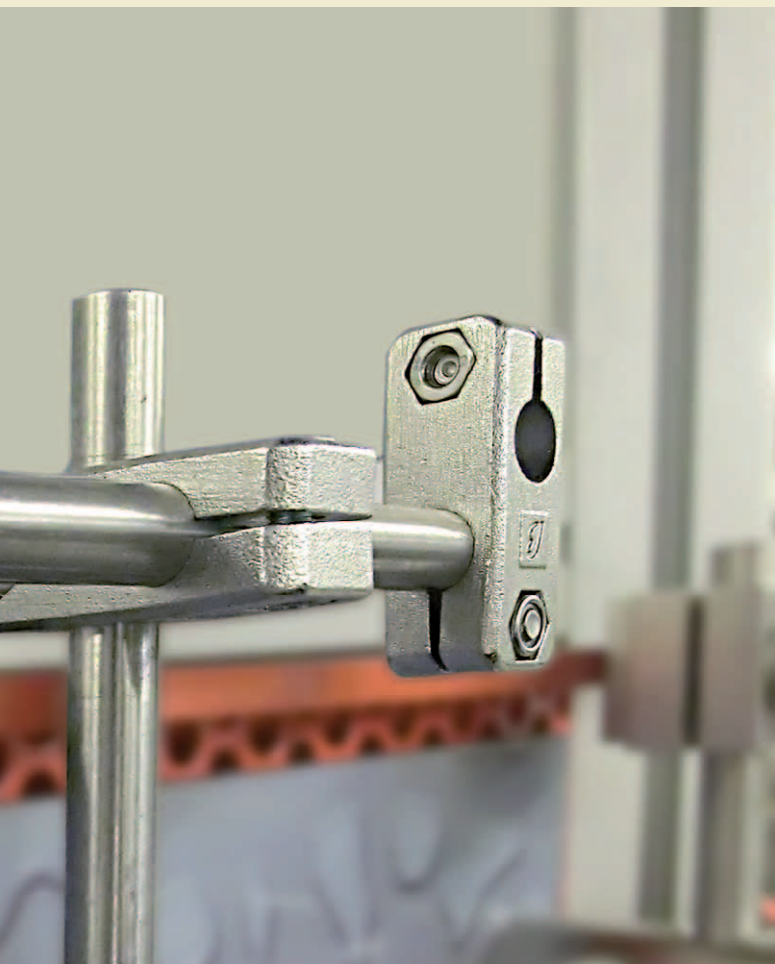
# MENS Stainless steel series

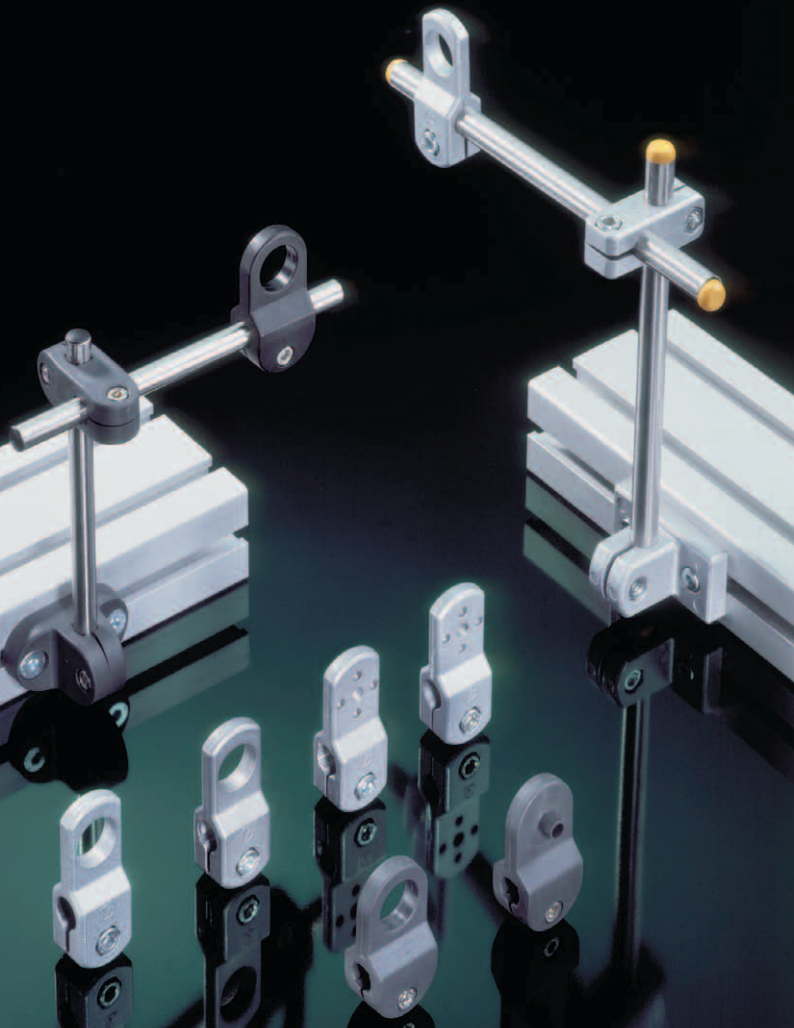
*"On Demand" prestige components*

an offer  
**beyond compare**

**Food  
Beverage  
Pharmaceutical  
Furnishing**







# Connectors

for product proximity sensors  
and conveyors

Technical information and application diagrams



..... 1 p.152

Photocell holder connectors and  
reflector holder connectors

..... 1 p.154



Cross connectors

..... 1 p.44



Flange connectors

..... 1 p.58



Support kits

..... 1 p.162



Clamps, pins and guides

..... 1 p.169



Combinations and accessories

..... 1 p.183



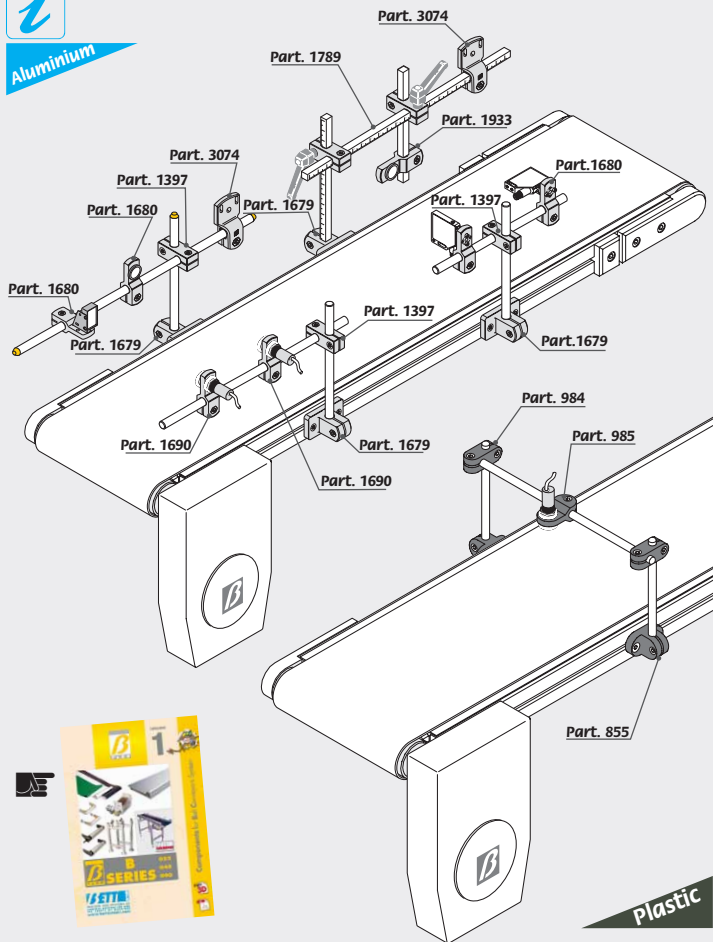
1 p.190

## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data provided by us shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).



Aluminium

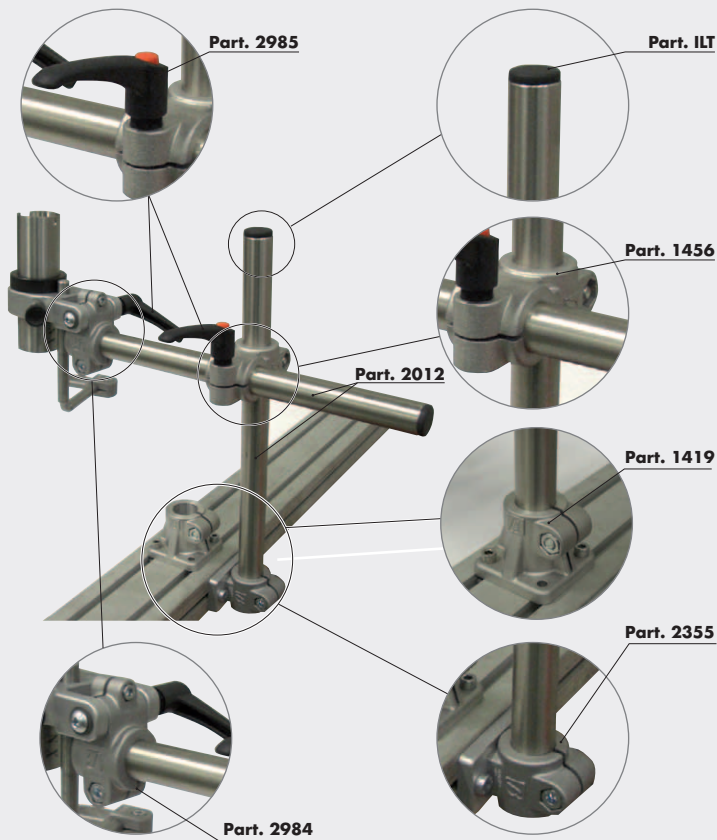


Plastic





Special kits can be made to the customer's design



# 1690 Photocell hole

**Use:** fastening of  $\varnothing 18$  photocells or proximity sensors; **suitable** for applications exposed to **accidental impact**.

**Material** aluminium connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut, 1 torque limiter in galvanised steel.

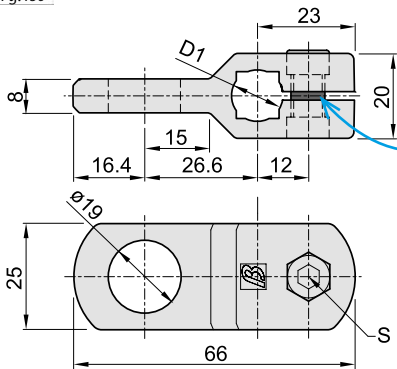
**Standard pack:** 50 pieces.

**Tightening torque** 10 Nm (M6).

**Mechanical properties** Pg.218

**Warning:** if combined with commercial 12 $\varnothing$  round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations**



Torque limiter

Tolerance D1	
$\varnothing 12,1$	+0,15 0
$\varnothing 14,1$	-17%
$\varnothing 10,2$	$\pm 0,05$

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-5%	-10%	-17%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	S screw	Finish	Weight g	Stock	€
						piece	piece
621734	12,1	-	M6x14	shot peening	43	✓	5,64
634184	12,1	-	M6x14	grey RAL7010	43	■	6,66
676182	12,1	-	M6x14	grey RAL9006	43	■	6,66
621744	12,1	10,2	M6x14	shot peening	43	✓	7,05
634194	12,1	10,2	M6x14	grey RAL7010	43	■	8,08
650863	12,1	10,2	M6x14	grey RAL9006	43	■	8,08

**Personalizations** other finishes on request Pg.214

\*Products not in stock minimum order 1 piece, delivery in 5 days.

1690

# Photocell hole in stainless steel

**Use:** fastening of  $\varnothing 18$  photocells or proximity sensors; **suitable** for applications exposed to **accidental impact**.

**Material:** AISI 316 stainless steel connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut in AISI 304 stainless steel.

**Standard pack:** 50 pieces.

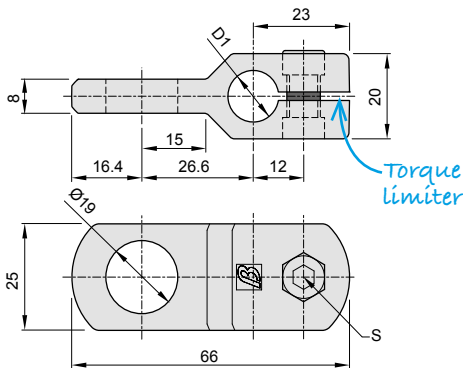
**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial 12 $\varnothing$  round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations:**



**Food & Beverage**



Tolerance	D1
$\varnothing 12,1$	$+0,10$ $-0,05$

### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-5%	-10%	-17%	on request

Order code	D1 $\varnothing$	S screw	Finish	Weight g	Stock	€ piece
656854	12,1	M6x14	electropolished	108	✓	8,86

**Personalizations:** other finishes on request Pg.214

# 985 Photocell hole in plastic

**Use:** fastening of  $\varnothing 18$  photocells or proximity sensors; tube tightening **not constant over time.**

**Material** reinforced polyamide connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut in galvanised steel.

**Standard pack:** 50 pieces.

**Tightening torque** 10 Nm (M6).

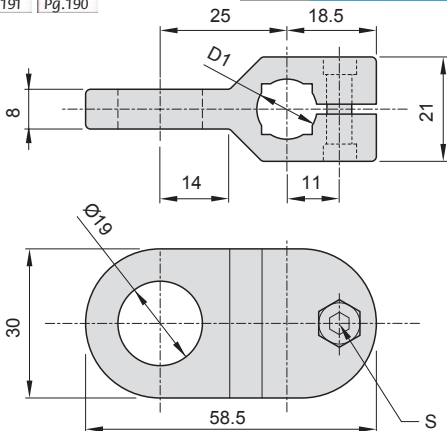
**Mechanical properties** Pg.218

**Warning:** if combined with commercial 12 $\emptyset$  round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations**



**Part.854** Pg.164



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-4%	-6%	-8%	on request

Order code	D1 $\varnothing$	D1 $\varnothing$	S screw	Finish	Weight g	Stock	€ piece
657131	10,1	8,2	M5x12	black RAL9005	23	✓	2,23
650121	10,1	8,2	M5x12	grey RAL7016	23	■	2,68
657141	12,1	10,2	M5x12	black RAL9005	23	✓	2,23
650221	12,1	10,2	M5x12	grey RAL7016	23	■	2,68

**Personalizations** other finishes on request Pg.214

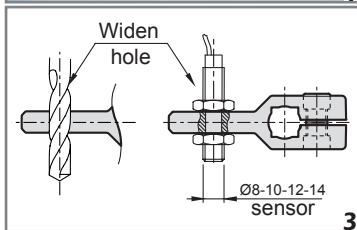
**Products not in stock** minimum order 200 pieces, delivery in 20 days.



1



2



3



4



5



6



7



8

# 1204 Reflector holder in plastic

**Use:** reflector fastening with clip pin, the tightening torque **is not constant over time**.

**Material** reinforced polyamide connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut in galvanised steel.

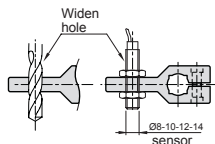
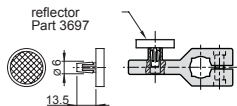
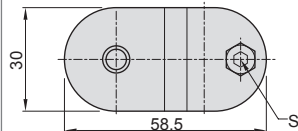
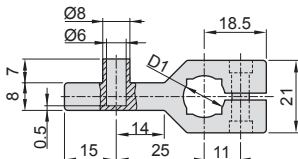
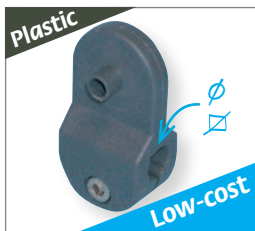
**Standard pack:** 50 pieces.

**Tightening torque** 4,9 Nm (M5).

**Mechanical properties** Pg.218 .

**Warning:** if combined with commercial 12ø round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations** .



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-4%	-6%	-8%	on request

Order code	D1 Ø	D1 ∅	S	Reflector	Finish	Weight g	Stock	€ piece
657171	10,1	8,2	M5x12	no	black RAL9005	23	✓	2,23
657151	10,1	8,2	M5x12	no	grey RAL7016	23	■	2,68
657181	12,1	10,2	M5x12	no	black RAL9005	23	✓	2,23
657161	12,1	10,2	M5x12	no	grey RAL7016	23	■	2,68
692307	10,1	8,2	M5x12	yes	black RAL9005	26,5	✓	20,68
692317	10,1	8,2	M5x12	yes	grey RAL7016	26,5	■	21,13
692327	12,1	10,2	M5x12	yes	black RAL9005	26,5	✓	20,68
692337	12,1	10,2	M5x12	yes	grey RAL7016	26,5	■	21,13

**Personalizations** other finishes on request  Pg.214 .

**Products not in stock** minimum order 200 pieces, delivery in 20 days.

1680

# Sensor or reflector holder

**Use:** sensor or reflector fastening with clip pin, **suitable** for applications exposed to **accidental impact**.

**Material:** aluminium connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut, 1 torque limiter in galvanised steel.

**Standard pack:** 50 pieces.

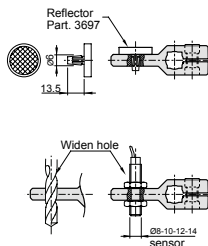
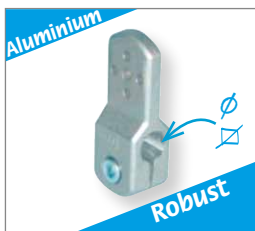
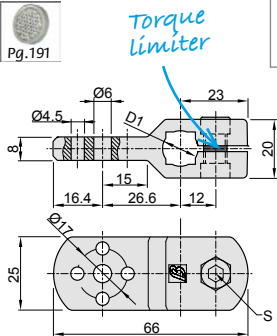
**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial 12ø round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations**



Tolerance	
D1	
Ø12,1	+0,15 0
Ø14,1	
Ø10,2	±0,05



### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-5%	-10%	-17%	on request

Order code	Ø	D1	S	Reflector	Finish	Poids g	Stock	€ piece
621714	12,1	-	M6X14	no	shot peening	47	✓	5,64
634164	12,1	-	M6X14	no	grey RAL7010	47	■	6,66
676192	12,1	-	M6X14	no	grey RAL9006	47	■	6,66
621724	12,1	10,2	M6X14	no	shot peening	47	✓	7,05
634174	12,1	10,2	M6X14	no	grey RAL7010	47	■	8,08
650853	12,1	10,2	M6X14	no	grey RAL9006	47	■	8,08
692347	12,1	-	M6X14	yes	shot peening	50,5	✓	24,09
692357	12,1	-	M6X14	yes	grey RAL7010	50,5	■	25,11
692367	12,1	-	M6X14	yes	grey RAL9006	50,5	■	25,11
692377	12,1	10,2	M6X14	yes	shot peening	50,5	✓	25,50
692387	12,1	10,2	M6X14	yes	grey RAL7010	50,5	■	26,53
692397	12,1	10,2	M6X14	yes	grey RAL9006	50,5	■	26,53

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

# 3074 Sensor or reflector holder

**Use:** sensor fastening (with possibility of adjustment) or reflector fastening with clip pin; **suitable** for applications exposed to **accidental impact**.

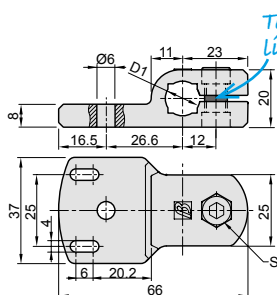
**Material:** aluminium connector, 1 UNI 5931 socket head screw and 1 UNI 5588 hexagon nut, 1 torque limiter in galvanised steel.

**Standard pack:** 50 pieces.

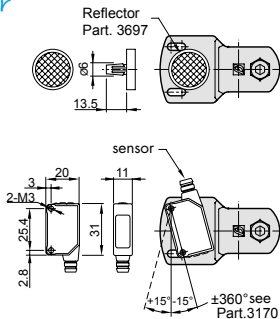
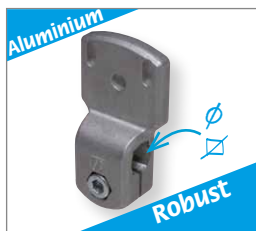
**Tightening torque:** 10 Nm (M6).

**Warning:** if combined with commercial 12ø round tubes, check that the tolerance corresponds to that of our part number 2012.

**Combinations**



Tolerance	
D1	
Ø12,1	+0,15 0
Ø14,1	0
∅10,2	±0,05



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	11+	50+	100+
	-	-5%	-10%	-17%	on request

Order code	D1 Ø	D1 ∅	S	Reflector	Finish	Weight g	Stock	€ piece
646176	12,1	10,2	M6X14	no	shot peening	47	✓	5,91
646386	12,1	10,2	M6X14	no	grey RAL7010	47	■	6,94
646398	12,1	10,2	M6X14	no	grey RAL9006	47	■	6,94
692277	12,1	10,2	M6X14	yes	shot peening	50,5	✓	24,36
692287	12,1	10,2	M6X14	yes	grey RAL7010	50,5	■	25,39
692297	12,1	10,2	M6X14	yes	grey RAL9006	50,5	■	25,39

**Personalizations** other finishes on request Pg.214

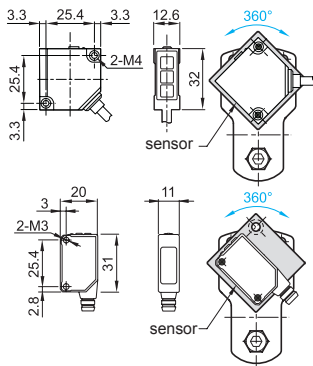
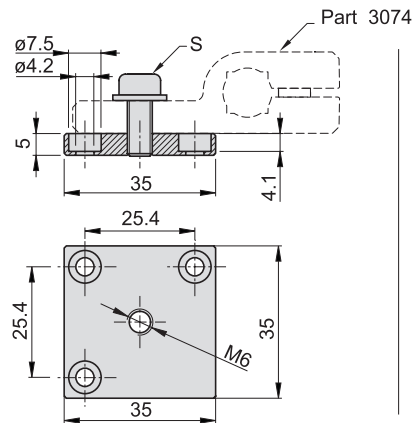
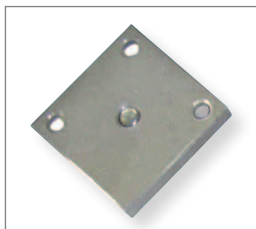
**Products not in stock** minimum order 1 piece, delivery in 5 days.

# 3170 Turnable flange

**Use:** combined with part 3074 allows orienting the sensor with 360° rotation.

**Material:** aluminium flange, UNI 5931 socket head screw and 1 galvanized steel washer.

**Standard pack:** 50 pieces.



### QUANTITY DISCOUNT

Q. ty	1+	5+	11+	50+	100+
Discounts	-	-12%	-37%	-63%	on request

Order code	S screw	Finish	Weight g	Stock	€ piece
663266	M6x14	shot peening	25	✓	13,93

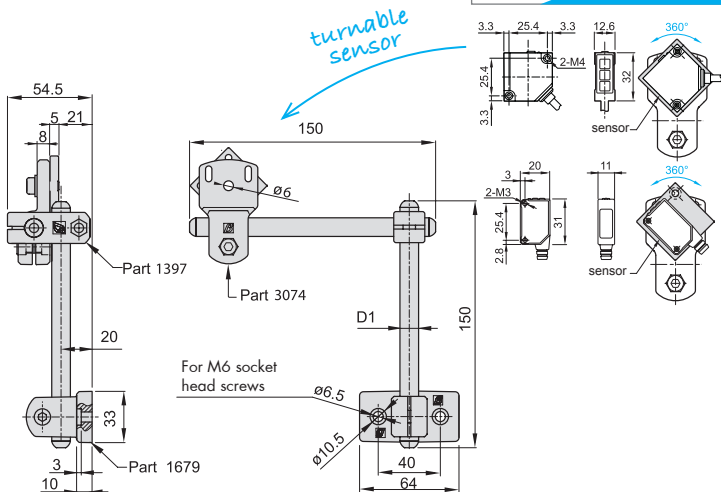
**Personalizations** other finishes on request Pg.214

# 3164 Support kits for turnable sensor

**Use:** Fastening of photocells or sensors suitable for applications exposed to accidental impact.

**Material:** 1 flange connector, 1 sensor holder connector and 1 aluminium cross connector; 1 M6x16 socket head screw, 3 M6x14 socket head screws, 4 M6 hexagon nuts, 4 torque limiters in galvanised steel; 2 stainless steel connection tubes; 4 reinforced polyamide caps.

**Standard pack:** 8 pieces.



### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-4%	-6%	-8%	on request

Order code	D1 $\phi$	Finish	Weight g	Stock	€ pezzo
663156	12	shot peening	285	■	30,48

Personalizations other finishes on request  Pg.214 

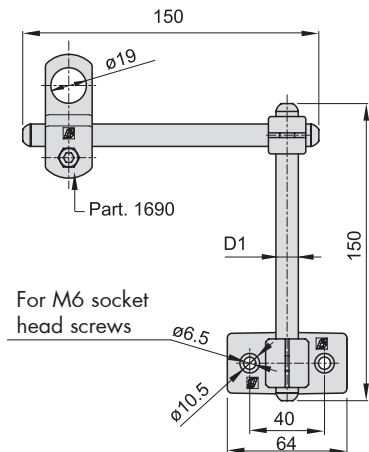
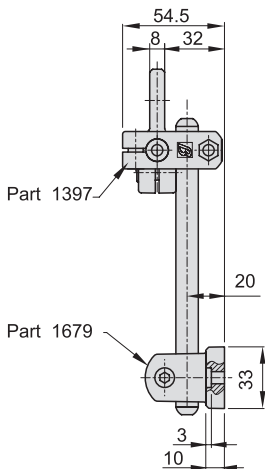
Products not in stock minimum order 1 piece, delivery in 15 days.

# 1924 Support kits for photocell

**Use:** fastening of  $\varnothing 18$  photocells or proximity sensors, suitable for applications exposed to **accidental impact**.

**Material:** 1 flange connector, 1 photocell holder connector and 1 aluminium cross connector; 1 M6x16 socket head screw, 3 M6x14 socket head screws, 4 M6 hexagon nuts, 4 torque limiters in galvanised steel; 2 stainless steel connection tubes; 4 reinforced polyamide caps.

**Standard pack:** 8 pieces.



### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-4%	-6%	-8%	on request

Order code	D1 Ø	Finish	Weight g	Stock	€ piece
621754	12	shot peening	292	✓	21,68
634204	12	grey RAL7010	292	■	24,75
634443	12	grey RAL9006	292	■	24,75

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.

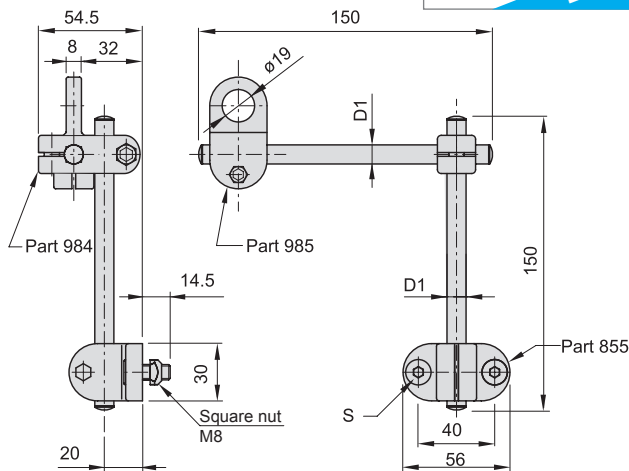
# 854 Support kits in plastic for photocell

**Use:** fastening of  $\varnothing 18$  photocells or proximity sensors, tube tightening **not constant over time.**

**Material** 1 flange connector, 1 photocell holder connector and 1 reinforced polyamide cross connector; 2 M8x20 socket head screws, 2 M8 square nuts, 4 M5x12 socket head screws and 4 M5 hexagon nuts in galvanised steel; 2 stainless steel connection tubes; 4 reinforced polyamide caps.

**Standard pack:** 8 pieces.

Mechanical properties Pg.218



### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-4%	-6%	-8%	on request

Order code	D1 $\varnothing$	S screw	Finish	Weight g	Stock	€ piece
60474	10	M8x20	black RAL9005	136	✓	13,44
665661	10	M8x20	grey RAL7016	136	■	13,44
621247	12	M8x20	black RAL9005	191	✓	13,56

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 200 pieces, delivery in 20 days.

1925

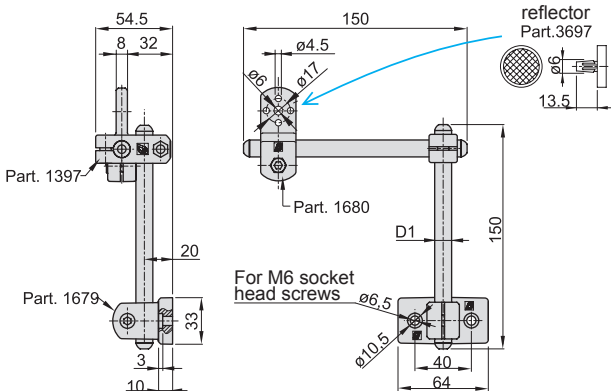
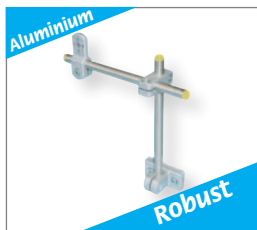
# Support kits for sensor or reflector

**Use:** fastening of sensors or reflectors with clip pin, suitable for applications exposed to **accidental impact**.

**Material** 1 flange connector, 1 photocell holder connector and 1 aluminium cross connector; 1 M6x16 socket head screw, 3 M6x14 socket head screws, 4 M6 hexagon nuts, 4 steel torque limiters; 2 stainless steel connection tubes; 4 reinforced polyamide caps.

**Standard pack:** 8 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-4%	-6%	-8%	on request

Order code	D1 Ø	Reflector	Finish	Weight g	Stock	€ piece
602936	12	no	shot peening	296	✓	21,68
602946	12	no	grey RAL7010	296	■	24,75
634453	12	no	grey RAL9006	296	■	24,75
692437	12	yes	shot peening	299,5	✓	40,13
692447	12	yes	grey RAL7010	299,5	■	43,20
692457	12	yes	grey RAL9006	299,5	■	43,20

**Personalizations** other finishes on request Pg.214



**Products not in stock** minimum order 1 piece, delivery in 5 days.

# 894 Support kits in plastic for reflector

**Use:** fastening of reflectors with clip pin, tube tightening **not constant over time.**

**Material** 1 flange connector, 1 reflector holder connector and 1 reinforced polyamide cross connector; 2 M8x20 socket head screws, 2 M8 square nuts, 4 M5x12 socket head screws and 4 M5 hexagon nuts in galvanised steel; 2 stainless steel connection tubes; 4 reinforced polyamide caps.

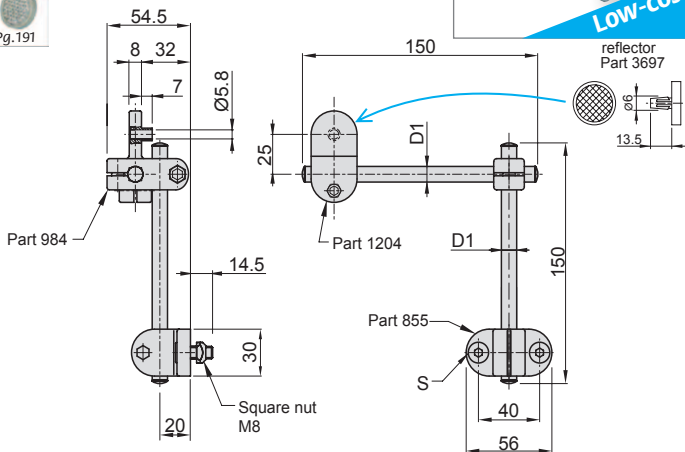
**Standard pack:** 8 pieces.

 Mechanical properties Pg.218 .

**Combinations** .





Pg.191

reflector  
Part 3697

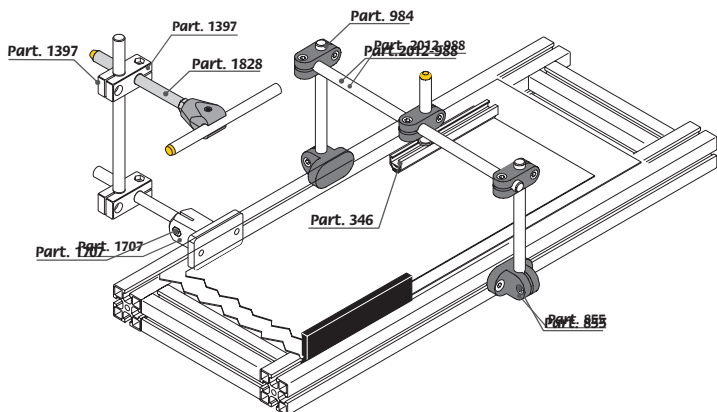
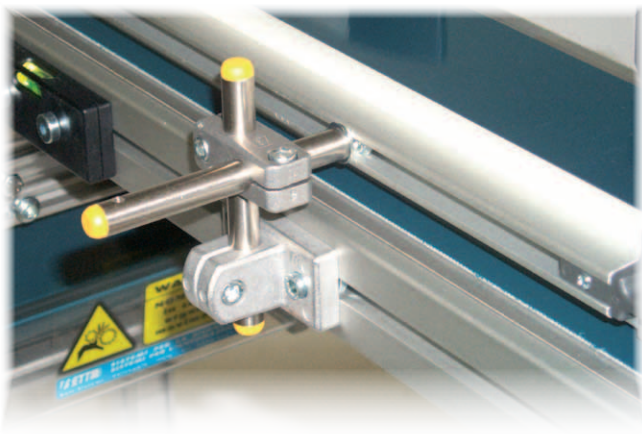
### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-4%	-6%	-8%	on request

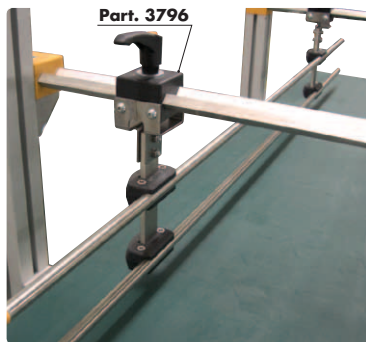
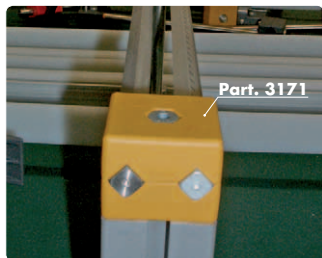
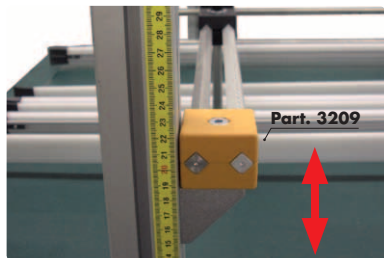
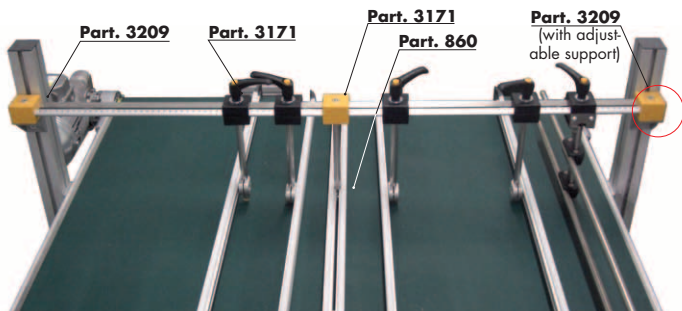
Order code	D1 Ø	S	Reflector	Finish	Weight g	Stock	€ piece
61026	10	M8X20	no	black RAL9005	176	✓	13,44
665671	10	M8X20	no	grey RAL7016	176	■	13,44
621237	12	M8X20	no	black RAL9005	176	✓	13,56
692467	10	M8X20	yes	black RAL9005	179,5	✓	31,89
692477	10	M8X20	yes	grey RAL7016	179,5	■	31,89
692487	12	M8X20	yes	black RAL9005	179,5	✓	32,01

**Personalizations** other finishes on request  Pg.214 .

**Products not in stock** minimum order 200 pieces, delivery in 20 days.



## Manual format change



3171

# Head guide clamp

**fixed**

**Use:** to construct bridge systems for format change with manual adjustment of the product containment guides. The pair of half-clamps can be used to construct sliding elements for containment guide adjustment in relation to the product width as well as static elements for fastening to the end of square rods.

**Material** 2 half-clamps in reinforced polyamide.

**Standard pack:** 20 pieces.

**Combinations**



Pg.189



Pg.415

**For clamp fastening to profile**

**Code 65923**  
M8x43 DIN 7984

internal cylindrical head (ch.5)

**Material** class 8.8 galvanised steel.

**Standard pack:** 100 pieces.

**Code 642577**  
M8x45 ISO 7380F

external convex head (ch.5)

**Material** AISI 304 stainless steel.

**Standard pack:** 100 pieces.

**Code 665196**  
UNI 5739 M8x45

external hexagon head (ch.1.3)

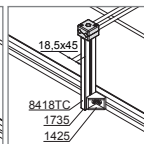
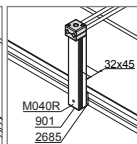
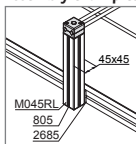
**Material** class 8.8 galvanised steel.

**Confezione standard:** 100 pieces.

**Standard pack:** complete with M8 washer.

Wrench 13  
depth 5

**Assembly examples**



**QUANTITY DISCOUNT**

Q.ty Discounts	1+	10+	20+	40+
	-	-5%	-10%	40+ on request

Order code	Colour	Weight g	Stock	€ piece
665186	grey RAL7016	34	✓	2,52
665496	yellow RAL1006	34	✓	2,52
<b>Fastening screw</b>				
65923		21	✓	0,45
642577		19	✓	0,85
665196		24	✓	0,55

## 3209 Head guide clamp height-adjustable

**Use:** to construct static elements for fastening to the end of square rods. Allows adjusting the bridge in height.

**Material:** 2 half-blocks in reinforced polyamide; 1 angle in sanded aluminium; 1 hex. nut M8, no.1 square nut with spring M8, no.1 screw M8x20 DIN 7984, no.1 screw M8x43 DIN 7984 in galvanised steel.

**Standard pack:** 20 pieces.

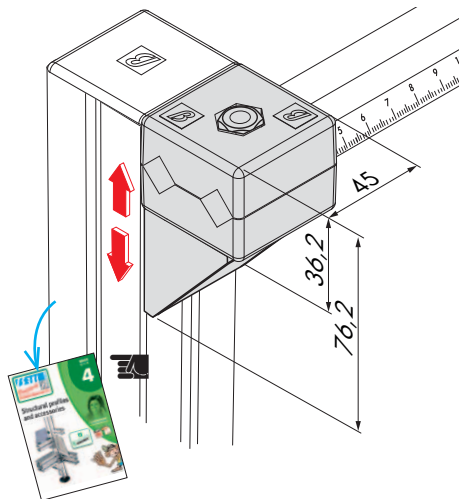
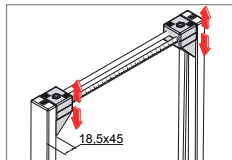
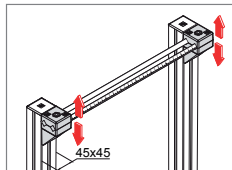
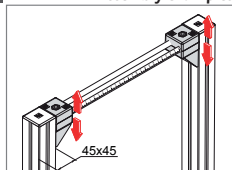
**Combinations**



Pg.189



### Assembly examples



### QUANTITY DISCOUNT

Q.ty Discounts	1+	10+	20+	40+
	-	-5%	-10%	on request

Order code	Colour	Weight g	Stock	€ piece
665526	grey RAL7016	134	✓	7,18
665536	yellow RAL1006	134	✓	7,18

# 4155 Format change clamp

## pin holder

**Use:** sliding element for product size adjustment. This clamp allows you to fasten pins on which the guide holder clamps is to be mounted. The ratchet lever provided allows fast kit adjustment. Hexagonal seat .

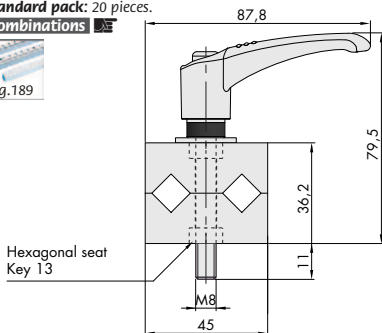
**Material** 2 half-blocks in reinforced polyamide; 1 ratchet lever in reinforced polyamide and screw covering button in reinforced polyamide, 1 threaded pin in galvanised steel, 1 OR in elastomer and 1 washer for M8 screw.

**Standard pack:** 20 pieces.

**Combinations**

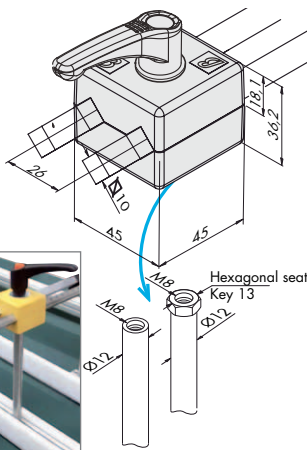
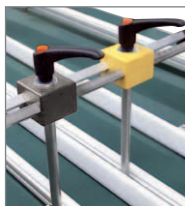
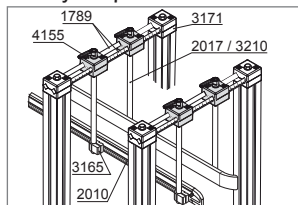


Pg.189



Hexagonal seat  
Key 13

### Assembly examples



Order code	Color clamp	Color lever	Color button	Weight g	QUANTITY DISCOUNT					
					Q.ty Discounts	1+	10+	20+	40+	
691817	grey RAL7016	black RAL9005	orange RAL2004	80	-	-5%	-10%	on request	Stock ✓	€ 4,64
632118	grey RAL7016	grey RAL7016	yellow RAL1006	80	-	-5%	-10%	on request	Stock ✓	€ 4,64
691827	yellow RAL1006	black RAL9005	orange RAL2004	80	-	-5%	-10%	on request	Stock ✓	€ 4,64
632128	yellow RAL1006	grey RAL7016	yellow RAL1006	80	-	-5%	-10%	on request	Stock ✓	€ 4,64

# 3210 Guide fastening pin with cap

**Use:** for fastening the conveying guide to the clamp (Part 4155) by means of the single-hole connector (Part 3166).

**Material** the pin is made up of a 120 1mm-thick tube in AISI 304 stainless steel with one flat end, and a hexagon insert in AISI 304 stainless steel glued to the other end.

**Characteristics:** the hexagonal end of the no.13 wrench fits perfectly into the seat of the clamp, preventing rotation during positioning and tightening.

**Standard pack:** 8 pieces.

**Combinations**

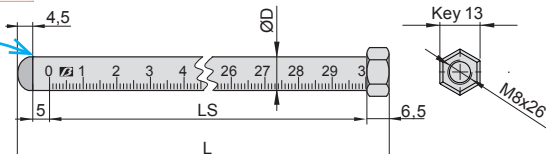


Pg.171

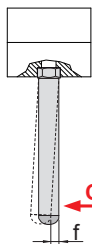
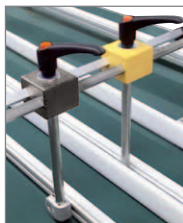
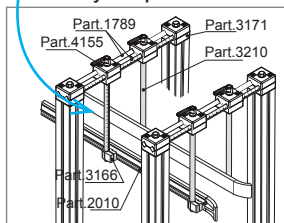
Pg.38

Pg.39

version with millimetre scale



Assembly examples



## QUANTITY DISCOUNT

Q.ty Discounts	2+	4+	8+	16+
	-	-10%	-17%	on request

Order code	D Ø	L mm	LS mm	C (N) f=3mm	C (N) f=5mm	Millimetre scale	Finish	Weight g	Stock	€ piece
629507	12	116	100	53	76	yes	brushed	41	■	12,82
629517	12	216	200	23	34	yes	brushed	69	■	13,16
629527	12	316	300	13	17	yes	brushed	96	■	13,49
629537	12	116	-	53	76	no	brushed	41	■	9,62
629547	12	216	-	23	34	no	brushed	69	■	9,96
629557	12	316	-	13	17	no	brushed	96	■	10,30

Personalizations length L on customer's request (max 500).

■ Products not in stock minimum order 8 pieces, delivery in 10 days.

3212

# Guide fastening pin with flat end

**Use:** coupled to the format changeover clamp (Part 4155), it allows fastening the product guides.

**Material** the pin is made up of a 12Ø 1mm-thick tube in AISI 304 stainless steel with one flat end, and a hexagon insert in AISI 304 stainless steel glued to the other end.

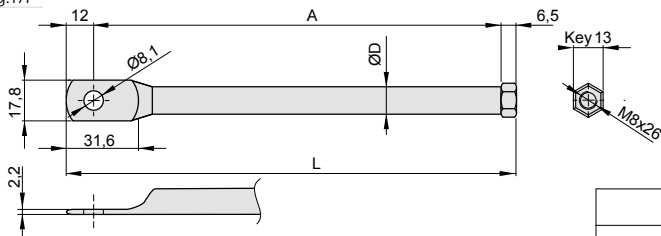
**Characteristics:** the hexagonal end of the no. 13 wrench fits perfectly into the seat of the clamp, preventing rotation during positioning and tightening.

**Standard pack:** 4 pieces.

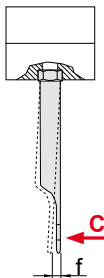
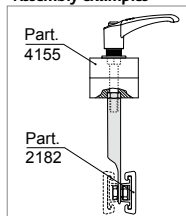
**Combinations**



Pg.171



### Assembly examples



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	16+	32+
	-	-10%	-17%	on request

Order code	D Ø	L mm	A mm	C (N) f=3mm	C (N) f=5mm	Finish	Weight g	Stock	€ piece
626857	12	128,1	109,6	46	66	brushed	43	■	31,54
674517	12	166,5	148	32	47	brushed	54	■	31,92
656657	12	428,1	409,6	8	12	brushed	125	■	34,47

**Personalizations** length L on customer's request (max 500).

**Products not in stock** minimum order 4 pieces, delivery in 5 days.

# 3213 Guide fastening pin with hexagon head

**Use:** coupled to the format changeover clamp (Part 4155), it allows fastening the product guides.

**Material:** the pin is made up of a 120 1mm-thick tube in AISI 304 stainless steel with 2 hexagon inserts in AISI 304 stainless steel, both glued to the ends.

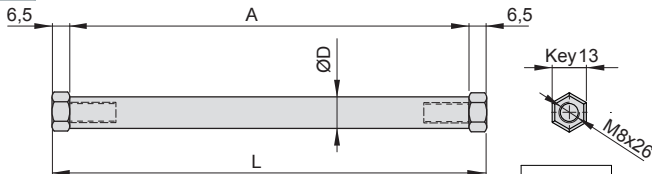
**Characteristics:** the hexagonal end of the no. 13 wrench fits perfectly into the seat of the clamp, preventing rotation during positioning and tightening.

**Standard pack:** 8 pieces.

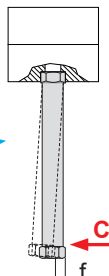
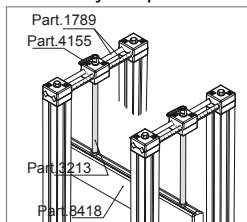
**Combinations**



Pg.171



## Assembly examples



## QUANTITY DISCOUNT

Q.ty Discounts	2+	4+	8+	16+
	-	-10%	-17%	on request

Order code	D Ø	L mm	A mm	C (N)		Finish	Weight g	Stock	€ piece
				f=3mm	f=5mm				
629567	12	84	71	75	105	brushed	40	■	13,99
629577	12	113	100	53	76	brushed	48	■	14,08
629587	12	213	200	23	34	brushed	75	■	14,42
629597	12	313	300	13	17	brushed	103	■	14,76

**Personalizations** length L on customer's request (max 500).

**Products not in stock** minimum order 8 pieces, delivery in 10 days.

2017

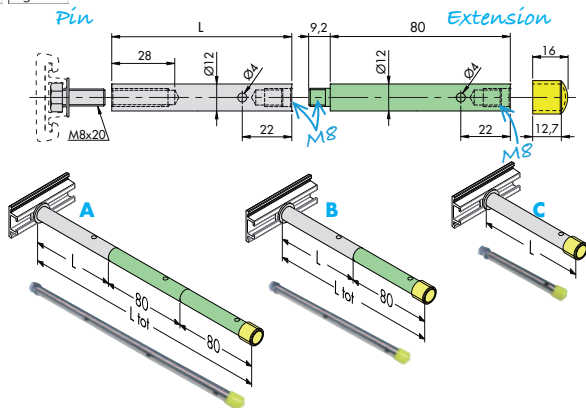
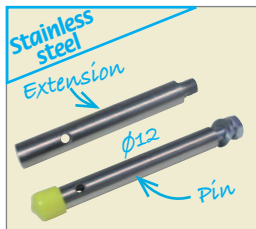
# Pin for guide support in stainless steel

**Use:** to support guides. These pins may be fitted individually or in combination with 80mm extensions so as to obtain longer pins.

**Material** 1 pin in AISI303 stainless steel, 1 Ø12 yellow vinyl cap, 1 hexagon head screw M8x20 in galvanised steel and 1 or 2 pin extensions, if provided.

**Standard pack:** 25 parts.

**Combinations**



### QUANTITY DISCOUNT

Qty Discounts	2+	25+	50+	100+
	-	-10%	-17%	on request

Code	Version	L mm	Extensions mm	Total L mm	Finish	Weight g	Stock	€ piece
637051	A	80	-	80	Drawn	69	✓	4,74
637031	A	100	-	100	Drawn	86	✓	5,11
637638	B	80	1 x 80	160	Drawn	136	✓	9,49
637648	B	100	1 x 80	180	Drawn	153	✓	9,86
637708	C	80	2 x 80	240	Drawn	202	✓	14,25
637718	C	100	2 x 80	260	Drawn	220	✓	14,60

**Personalizations** Total upper lengths with additional extensions fitted

## 4202

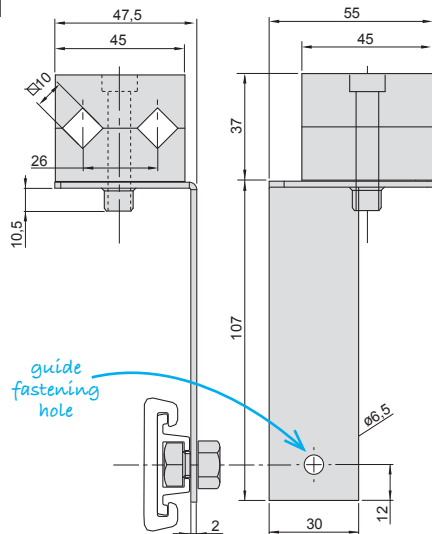
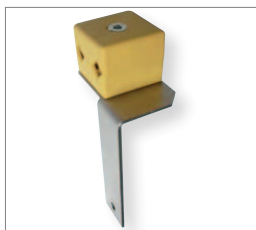
# Guide clamp with bracket

**Use:** sliding element complete with bracket for adjusting the central containment guides *in the case of side-by-side belts*.

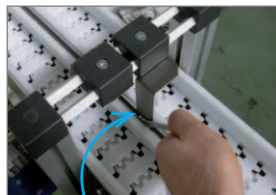
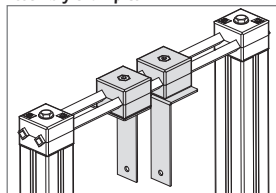
**Material** 2 half-blocks in reinforced polyamide; 1 Bracket in stainless steel AISI 304; 1 screw M8x43 DIN7984, 1 rivet M8 UNI9202, 1 screw M6x10 UNI EN24017, 1 square nut M6 in galvanised steel.

**Standard pack:** 4 pieces.

**Combinations**



### Assembly examples



minimum distance  
between the guides 6 mm

### QUANTITY DISCOUNT

Q.ty Discounts	1+	10+	20+	40+
	-	-5%	-10%	on request

Order code	Colour clamp	Weight g	Stock	€ piece
629257	grey RAL7016	160	■	9,50
629267	yellow RAL 1006	160	■	9,50

\*Products not in stock minimum order 4 pieces, delivery in 10 days.

4204

# Head guide clamp with blade holder angle

**Use:** sliding element for adjustment complete with flange for product containment blade fastening. The ratchet lever provided allows fast kit adjustment.

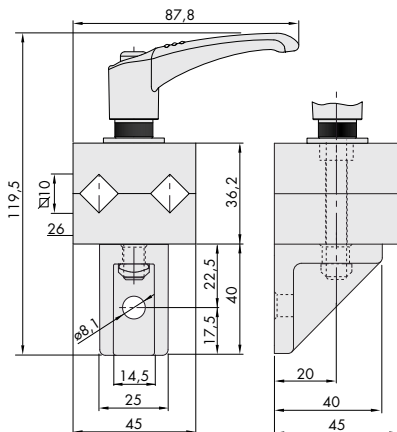
**Material:** 2 half-blocks in reinforced polyamide; 1 ratchet lever in reinforced polyamide and screw covering button in reinforced polyamide, 1 shot peening angle in aluminium, 1 M8 square nut.

**Standard pack:** 20 pieces.

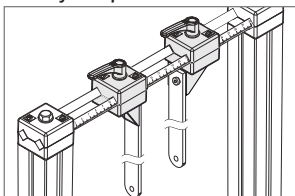
**Combinations**



Pg.189



### Assembly examples



### QUANTITY DISCOUNT

Q.ty Discounts	1+	10+	20+	40+
	-	-5%	-10%	on request

Order code	Color clamp	Color lever	Color button	Weight g	Stock	€ piece
629607	grey RAL7016	black RAL9005	orange RAL2004	130	✓	7,97
629617	grey RAL7016	grey RAL7016	yellow RAL1006	130	✓	7,97
629627	yellow RAL1006	black RAL9005	orange RAL2004	130	✓	7,97
629637	yellow RAL1006	grey RAL7016	yellow RAL1006	130	✓	7,97

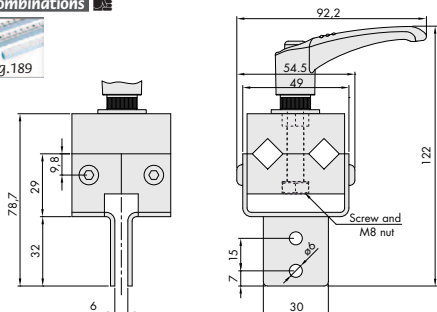
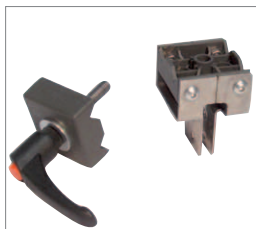
## 3796 **Format change clamp** blade holder

**Use:** sliding element for adjustment complete with flange for product containment blade fastening. The ratchet lever provided allows fast kit adjustment.

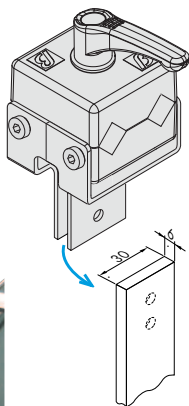
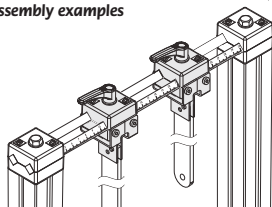
**Material** 2 half-blocks in reinforced polyamide; 2 blade holder brackets in stainless steel AISI 304; 1 ratchet lever in reinforced polyamide and screw covering button in reinforced polyamide, 1 in threaded pin in galvanised steel, 1 OR in elastomer, 1 washer for M8 screw, 1 M8 hex nut, 4 M5 hex nuts, 4 M5x8 UNI 7380 in galvanised steel.

**Standard pack:** 20 pieces.

**Combinations**



**Assembly examples**



### QUANTITY DISCOUNT

Q.ty	1+	10+	20+	40+
Discounts	-	-5%	-10%	on request

Order code	Color clamp	Color lever	Color button	Weight g	Stock	€ piece
689427	grey RAL7016	black RAL9005	orange RAL2004	80	✗	26,38
636848	grey RAL7016	grey RAL7016	yellow RAL1006	80	■	26,38
689437	yellow RAL1006	black RAL9005	orange RAL2004	80	✗	26,38
636858	yellow RAL1006	grey RAL7016	yellow RAL1006	80	■	26,38

✗ Products not in stock minimum order 100 pieces, delivery in 25 days.

■ Products not in stock minimum order 20 pieces, delivery in 15 days.



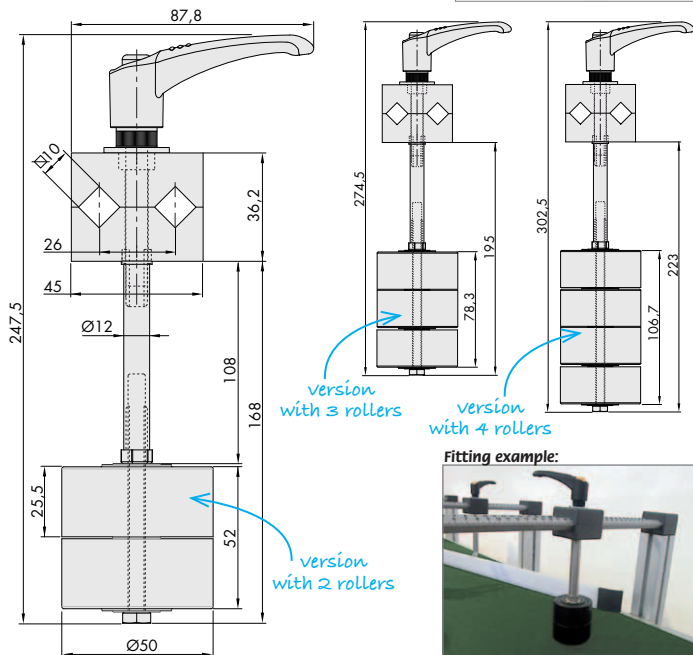
## 3846 → Clamp with package-turning rollers

**Use:** sliding element complete with pin with rollers for changing the conveying side of the package front on the conveyor belt.

**Material:** 2 half-blocks in reinforced polyamide; threaded pin in stainless steel; 2/3/4 rollers (see table) in polyamide; 1 roller fastening screw M8 UNI EN 24017 in stainless steel, spacers and washers in galvanised steel.

**Standard pack:** 1 piece.

**Combinations**

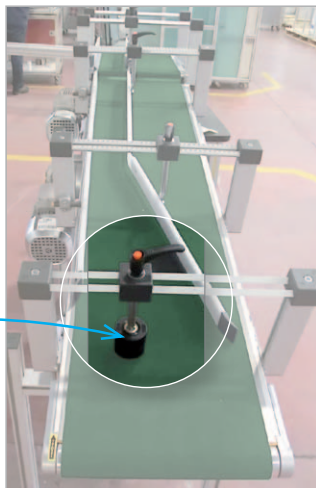
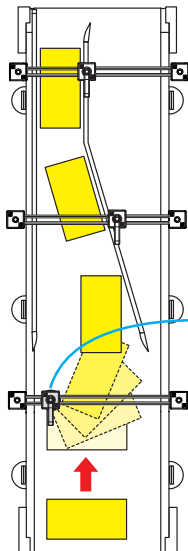


↓ 3846

## Clamp with package-turning rollers



Application  
example



### QUANTITY DISCOUNT

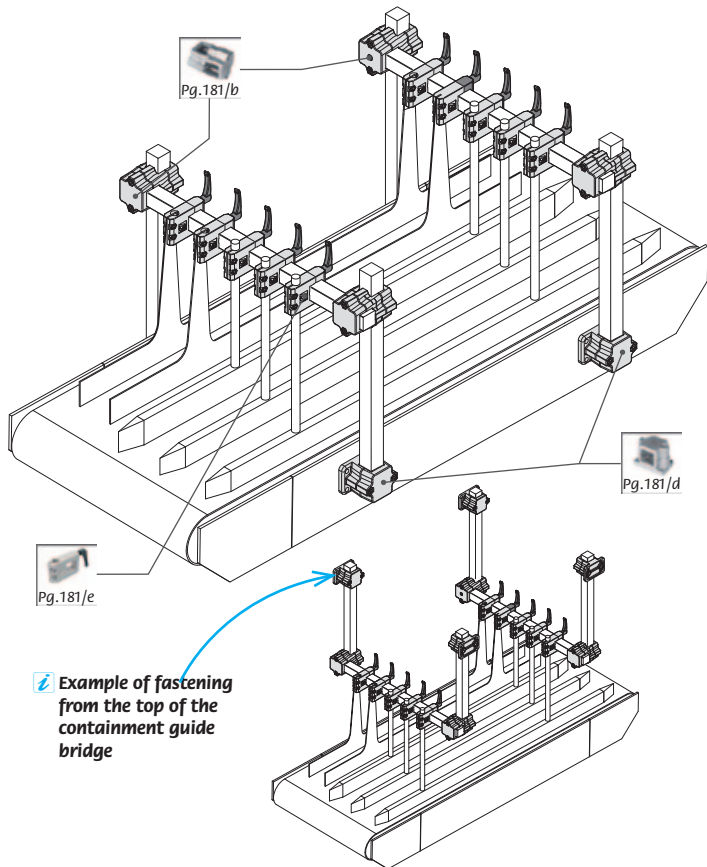
Q.ty Discounts	1+	10+	20+	40+
	-	-5%	-10%	a richiesta

Order code	Numbers rollers	Colour clamp	Colour lever	Colour button	Weight g	Stock	€ piece
630117	2	grey RAL 7016	black RAL 9005	orange RAL 2004	310	■	33,67
630127	2	grey RAL 7016	grey RAL 7016	yellow RAL 1006	310	■	33,67
630137	2	yellow RAL 1006	black RAL 9005	orange RAL 2004	310	■	33,67
637688	2	yellow RAL 1006	grey RAL 7016	yellow RAL 1006	310	■	33,67
630147	3	grey RAL 7016	black RAL 9005	orange RAL 2004	390	■	37,11
630157	3	grey RAL 7016	grey RAL 7016	yellow RAL 1006	390	■	37,11
630167	3	yellow RAL 1006	black RAL 9005	orange RAL 2004	390	■	37,11
649918	3	yellow RAL 1006	grey RAL 7016	yellow RAL 1006	390	■	37,11
630177	4	grey RAL 7016	black RAL 9005	orange RAL 2004	475	■	39,52
630187	4	grey RAL 7016	grey RAL 7016	yellow RAL 1006	475	■	39,52
630197	4	yellow RAL 1006	black RAL 9005	orange RAL 2004	475	■	39,52
649928	4	yellow RAL 1006	grey RAL 7016	yellow RAL 1006	475	■	39,52

\*Products not in stock minimum order 1 piece, delivery in 5 days

# Format changeover with aluminium clamps

**i** Guide to component selection



4591

# Square cross connector

## ☑ 40 and ☑ 45

**Use:** to connect square bars orthogonal to each other.

**Material:** aluminum connector; 4 UNI 5931 socket head screws (see table) and 4 DIN 985 self-locking hexagon nuts in galvanised steel.

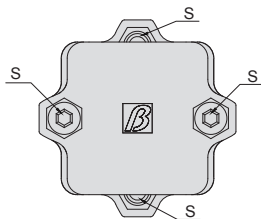
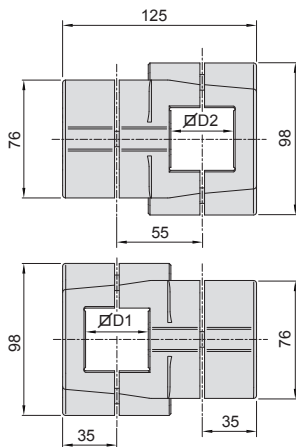
**Standard pack:** 2 pieces.

**Tightening torque:** 50Nm (M10).

**Combinations:** 



Pg. 181/f



### Application example:



### QUANTITY DISCOUNT

Qty Discounts	2+	10+	20+	40+
	-	-10%	-17%	contact us

Order code	$\varnothing D1$ mm	$\varnothing D2$ mm	S	Finish	Weight kg	Stock	€ piece
686898	40	40	M10x55	shot peened	0,96	✓	48,15
686778	40	40	M10x55	painted in grey RAL7010	0,96	■	57,03
686788	40	40	M10x55	painted in grey RAL9006	0,96	■	57,03
686908	45	45	M10x55	shot peened	0,88	✓	48,15
686798	45	45	M10x55	painted in grey RAL7010	0,88	■	57,03
686808	45	45	M10x55	painted in grey RAL9006	0,88	■	57,03

•Products not in stock minimum order 2 pieces, delivery in 5 days (unless stock runs out).

4592

# Square flanged cross connector

## 40 and 45

**Use:** to connect square bars parallel to the fastening plane and orthogonal to each other.

**Material** aluminium connector; 4 UNI 5931 socket head screws (see table) and 4 DIN 985 self-locking hexagon nuts in galvanised steel.

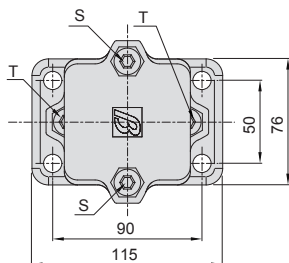
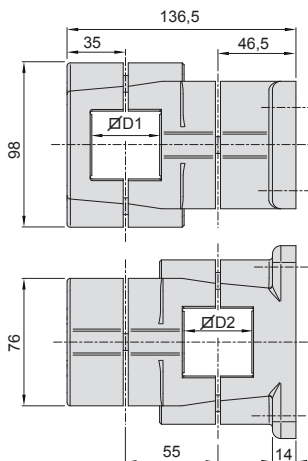
**Standard pack:** 2 pieces.

**Tightening torque** 50Nm (M10).

**Combinations**



Pg.181ff


**QUANTITY DISCOUNT**

Qty Discounts	2+	10+	20+	40+
	-	-10%	-17%	contact.us

Order code	$\varnothing D1$ mm	$\varnothing D2$ mm	S	T	Finish	Weight kg	Stock	€ piece
686918	40	40	M10x55	M10x60	shot peened	1,1	✓	53,26
686818	40	40	M10x55	M10x60	painted in grey RAL7010	1,1	■	61,65
686828	40	40	M10x55	M10x60	painted in grey RAL9006	1,1	■	61,65
686928	45	45	M10x55	M10x60	shot peened	1,02	✓	53,26
615799	45	45	M10x55	M10x60	painted in grey RAL7010	1,02	■	61,65
686848	45	45	M10x55	M10x60	painted in grey RAL9006	1,02	■	61,65

**Products not in stock** minimum order 2 pieces, delivery in 5 days (unless stock runs out).

4593

# Square flange connector

## ☒ 40 and ☒ 45

**Use:** to connect square bars parallel to the fastening plane.

**Material** aluminum connector; 2 UNI 5931 socket head screws (see table) and 2 DIN 985 self-locking hexagon nuts in galvanised steel.

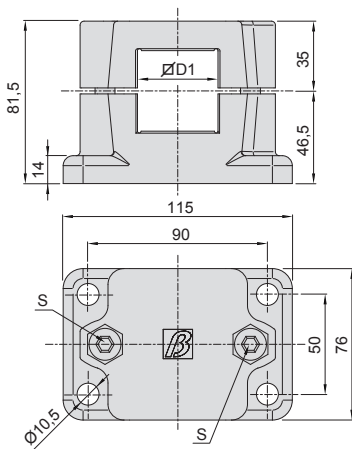
**Standard pack:** 2 pieces.

**Tightening torque** 50Nm (M10).

**Combinations**



Pg.181/f



### Application example:



### QUANTITY DISCOUNT

Qty Discounts	2+	10+	20+	40+
	-	-10%	-17%	contact us

Order code	$\varnothing D1$ mm	S	Finish	Weight kg	Stock	€ piece
686938	40	M10x65	shot peened	0,66	✓	33,59
686858	40	M10x65	painted in grey RAL7010	0,66	■	39,19
686868	40	M10x65	painted in grey RAL9006	0,66	■	39,19
686948	45	M10x65	shot peened	0,62	✓	33,59
686878	45	M10x65	painted in grey RAL7010	0,62	■	39,19
686888	45	M10x65	painted in grey RAL9006	0,62	■	39,19

•Products not in stock minimum order 2 pieces, delivery in 5 days (unless stock runs out).

## 4298

### Cross clamp

D1 =  $\varnothing 42,4 - \nabla 40$  and D2 =  $\varnothing 20$

**Use:** applied in bridge systems to hold products on the conveyor belts, it allows fastening guide pins or blades creating one or more tracks. It is used as sliding element to adjust the product size. It is also suitable to align/separate products at the end of the line in preparation for packaging. It allows horizontal or vertical adjustment of the product containment guides.

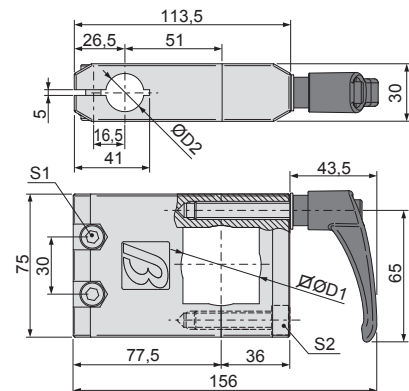
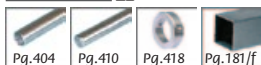
**Material:** aluminium clamp; 2 UNI 5931 socket head screws (see table, S1), 1 UNI 5931 socket head screw (see table, S2), 2 M8 hexagon nuts in galvanised steel; 1 ratchet lever and screw cap in reinforced polyamide, threaded pin and washer in galvanised steel.

**Characteristics:** greater lateral thrust resistance of high loads or accidental impact.

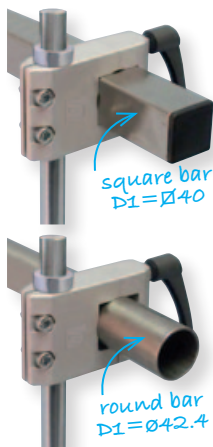
**Standard pack:** 8 pieces.

**Tightening torque:** 25 Nm (M8).

**Combinations:**



**Application examples:**



#### QUANTITY DISCOUNT

Qty Discounts	2+	8+	16+	32+
	-	-10%	-17%	contact us

Order code	ØD1 mm	D1 Ø	D2 Ø	S1	S2	Finish	Weight kg	Stock	€ piece
687008	40	42,4	20	M8x20	M8x40	shot peened	0,51	✓	60,00
687018	40	42,4	20	M8x20	M8x40	painted in grey RAL7010	0,51	■	66,30
687028	40	42,4	20	M8x20	M8x40	painted in grey RAL9006	0,51	■	66,30

**\*Products not in stock** minimum order 8 pieces, delivery in 5 days (unless stock runs out).

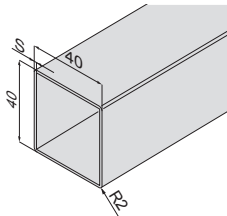
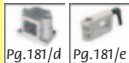
# 1126 **Stainless steel** square tube

## 40x40

**Use:** combined with the square-holed connectors, it allows making bridges for product containment guide adjustment.

**Material** AISI 304 stainless steel.

**Combinations**



### QUANTITY DISCOUNT

Qty Discounts	1+	2+	4+	8+
	-	-10%	-17%	contact us

Order code	Pack	S mm	Finish	Weight g/m	Stock	€ bar
687038	2 x 6 m	1,5	brushed	1,7	■	103,02

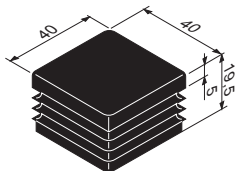
■ **Products not in stock** minimum order: 2 bars, delivery in 10 days (unless stock runs out).

# 1140 **End cap**

## 40x40

**Use:** To close the ends of 40x40 square tubes with a thickness from 1 to 3 mm.

**Material** polyethylene.



### QUANTITY DISCOUNT

Qty Discounts	1+	6+	12+	24+
	-	-10%	-17%	contact us

Order code	Pack	Colore	Tube thickness mm	Weight g	Stock	€ bar
687048	12 pcs	black RAL 9005	1 ÷ 3	8	✓	2,09

# 2016 Pin for guides support in plastic

**Use:** to fasten and adjust product containment guides.

**Material** pin in reinforced polyamide, cap in polyamide, hexagon head screw M8x20 in galvanised steel.

**Standard pack:** 50 pieces.

**Combinations**



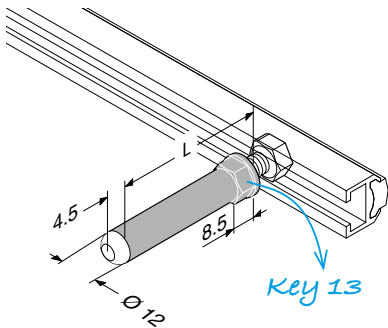
Pg.28

Pg.30

Pg.32

Pg.183

Pg.63



### QUANTITY DISCOUNT

Qty	2+	25+	50+	100+
Discounts	-	-10%	-17%	on request

Code	L m	Pin colour	Cap colour	Weight g	Stock	€ piece
615411	30	Grey RAL 7016	Yellow RAL 1006	16	✓	3,49
615421	40	Grey RAL 7016	Yellow RAL 1006	18	✓	3,85
615431	60	Grey RAL 7016	Yellow RAL 1006	22	✓	4,05

## 2182

# Product containment guide

### 40x13,5

**Use:** product handling and alignment on the belt during transport.

**Material:** aluminium profile, polyethylene guide.

**Standard pack:** 8 pieces.



#### QUANTITY DISCOUNT

Bars(3m)	1+	8+	16+	32+
Bars(6m)	1+	4+	8+	16+
Discounts	-	-10%	-17%	contact us

Order code	L m	Finish profile	Colour guide	Weight g	Stock	€ piece
609474	3	anodised	white UHMW	440	✓	30.60
608664	6	anodised	white UHMW	430	✓	58.92

## 2227

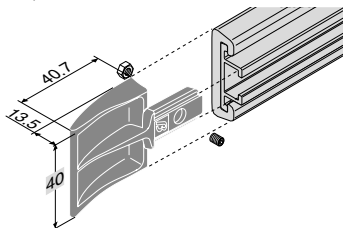
# End runner

### for guide 40x13,5

**Use:** as end piece of the guard Part 2182.

**Material:** reinforced polyamide, galvanised steel nuts and bolts.

**Standard pack:** 20 pieces.



#### QUANTITY DISCOUNT

Pieces	2+	10+	20+	40+
Discounts		-10%	-17%	contact us

Order code	Colour clamp	Weight g	Stock	€ piece
614904	grey RAL7016	15	✓	4.35

# 4603 → **Safety End Block** for guide 40x13.5



**Use:** to be used on the product outfeed side.

**Material** reinforced polyamide, galvanized steel screws.

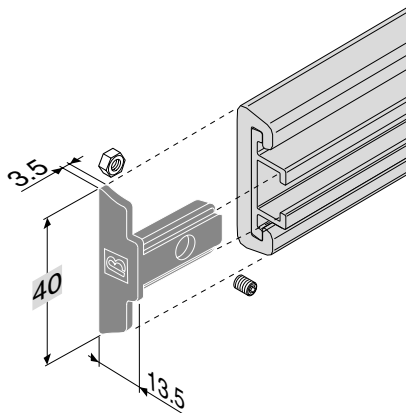
**Combinations**



Pg.183

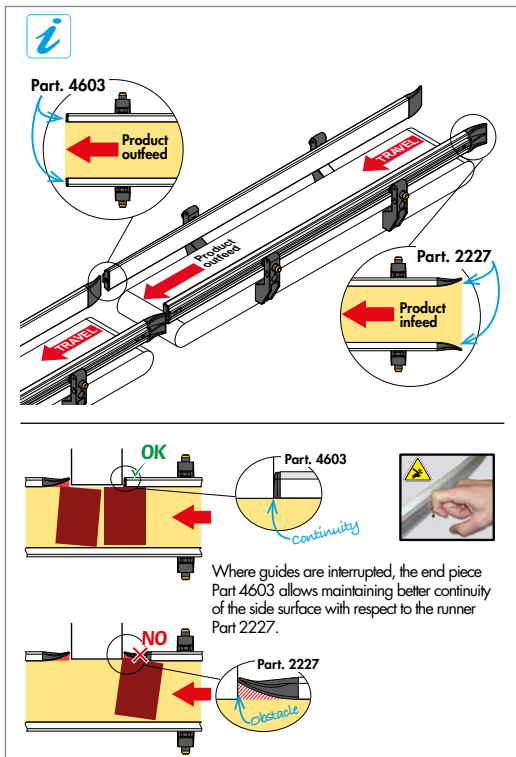


## Application example



↓ 4603

## Safety End Block for guide 40x13.5



### QUANTITY DISCOUNT

Pieces	2+	10+	20+	40+
Discounts		-10%	-17%	contact us

Order code	Colour clap	Weight g	Stock	€ piece
616509	grey RAL7016	7	✓	4.00

2010

## Product containment guide

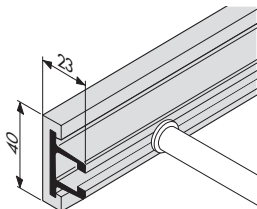
**40x23**

**Use:** product handling and alignment on the belt during transport.

**Material:** aluminium profile, polyethylene guide.

**Standard pack:** 8 pieces.

**Combinations:**



**QUANTITY DISCOUNT**

Bars (3mt)	1+	8+	16+	32+
Bars (6mt)	1+	4+	8+	16+
Discounts	-	-10%	-17%	on request

Order code	L m	Finish profile	Colour guide	Weight g	Stock	€ piece
632082	3	anodised	white UHMW	680	✓	41,34
606902	6	anodised	white UHMW	650	✓	80,40
617689	3	anodised	green RAL6024	650	■	41,34
617709	6	anodised	green RAL6024	650	■	80,40
617699	3	anodised	black RAL9005	650	■	41,34
617719	6	anodised	black RAL9005	650	■	80,40

\*Products not in stock minimum order 498 m, delivery 25 days.

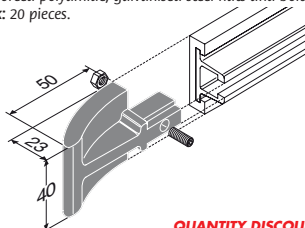
2011

## End runner for guide **40x23**

**Use:** as end piece of the guard Part 2010.

**Material:** reinforced polyamide, galvanised steel nuts and bolts.

**Standard pack:** 20 pieces.



**QUANTITY DISCOUNT**

Pieces	1+	10+	20+	40+
Discounts	-	-5%	-10%	on request

Order code	Colour clamp	Weight g	Stock	€ piece
673671	grey RAL7016	35	✓	6,57

# 4617 → **Safety End Block** for guide 40x23



**Use:** to be used on the product outfeed side.

**Material** reinforced polyamide, galvanized steel screws.

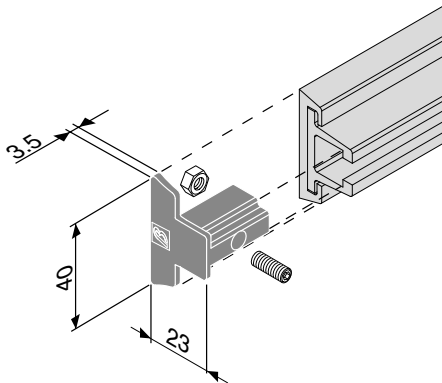
**Combinations**



Pg.184

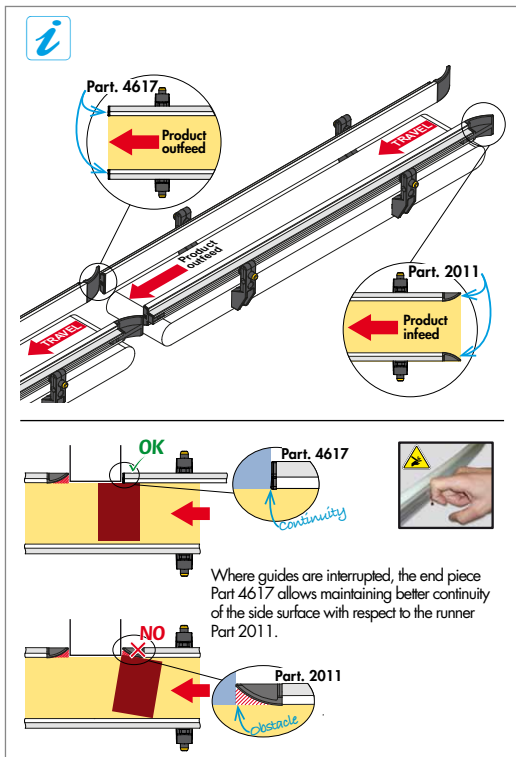


## Application example



↓ 4617

## Safety End Block for guide 40x23



### QUANTITY DISCOUNT

Pieces	2+	10+	20+	40+
Discounts		-10%	-17%	contact us

Order code	Colour clamp	Weight g	Stock	€ piece
622069	grey RAL7016	12	✓	4.20

## 346

# Product containment guide 16.4x16.6

**Use:** to convey and hold products in place.

**Material** aluminium and polyethylene.

**Standard pack:** 20 pieces.

**Combinations**



Pg.183

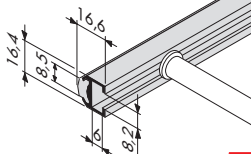
Pg.175

Pg.425



Pg.173

Pg.38



### QUANTITY DISCOUNT

Bars(3m)	1+	20+	40+	80+
Bars(6m)	1+	10+	20+	40+
Discounts	-	-10%	-17%	on request

Code	L m	Guide profile finish	Guide colour	Weight g/m	Stock	€ bar
65175	3	anodised	white UHMW	230	✓	23,16
631382	6	anodised	white UHMW	230	✓	40,50

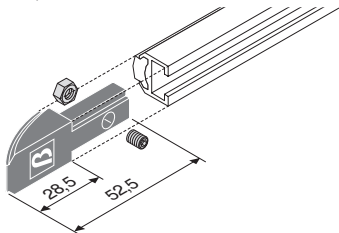
## 2018

# End runner for guide 16.4x16.6

**Use:** as end piece for guard Part 346.

**Material** reinforced polyamide, galvanised steel nuts and bolts.

**Standard pack:** 20 pieces.



### QUANTITY DISCOUNT

Qty	1+	10+	20+	40+
Discounts	-	-5%	-10%	on request

Code	Runner color	Weight g	Stock	€ piece
686562	grey RAL 7016	10	✓	3,75

1828

## Guide holder clamp

with  $\varnothing 12$  plastic pin

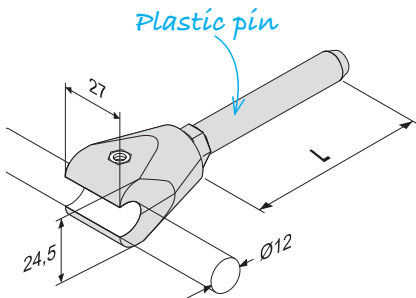
**Use:** to tighten side containment guides made with  $\varnothing 12$  round shafts.

**Material** clamp and pin in reinforced polyamide.

**Standard pack:** 50 pieces.

**State of supply** clamp complete with pin.

**Combinations**



### QUANTITY DISCOUNT

Qty Discounts	2+	25+	50+	100+
	-	-10%	-17%	on request

Code	L mm	Colour	Weight g	Stock	€ piece
602563	30	grey RAL 7016	54	✓	4,65
611303	30	black RAL9005	54	■	4,65
602573	40	grey RAL 7016	56	✓	4,98
611313	40	black RAL9005	56	■	4,98
602583	60	grey RAL 7016	58	✓	5,18
611323	60	black RAL9005	58	■	5,18

\*Products not in stock minimum order 100 pcs, delivery in 15 days.

## 1829

## Guide holder clamp with Ø12 steel pin

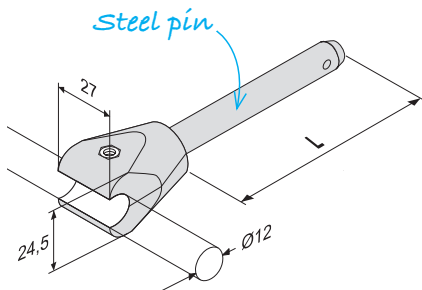
**Use:** tighten side containment guides made with Ø12 round shafts.

**Material:** Clamp in reinforced polyamide and pin in stainless steel.

**Standard pack:** 50 pieces.

**State of supply:** clamp complete with pin.

**Combinations:**



### QUANTITY DISCOUNT

Qty Discounts	2+	25+	50+	100+
	-	-10%	-17%	on request

Code	L mm	Clamp Finish	Weight g	Stock	€ piece
602593	80	grey RAL 7016	111	✓	9,23
611333	80	black RAL 9005	111	■	9,23
602603	100	grey RAL 7016	128	✓	9,54
611343	100	black RAL 9005	128	■	9,54

\*Products not in stock minimum order 100 pcs, delivery in 15 days.

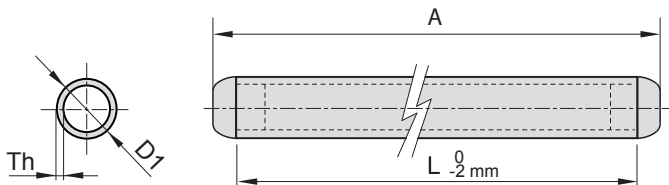
# 4115 Connection tube

in **stainless steel** with caps

**Use:** for connectors.

**Material:** AISI 304 stainless steel, polyamide caps.

**Standard pack:** 1 piece.



\* **Tolerance selected**

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	6+	12+	24+
	-	-5%	-10%	on request

Order code	D1 Ø	Thick.	L mm	A mm	Tube finishing	Colour caps	Weight g	Stock	€ piece
621257	* 10 ± 0,07	1	150	157	Brushed	black RAL 9005	32	✓	2,51
621267	* 12 +0,1/-0,05	1	150	159	Brushed	yellow RAL1006	42	✓	2,88
653968	* 12 +0,1/-0,05	1	300	309	Brushed	yellow RAL1006	74	■	3,40

**Personalizations:** length L on customer's request (max 500)

\***Products not in stock** minimum order 1 pc, delivery in 5 days.

## 1789

## Square rods

### 10x10 - 12x12 mm

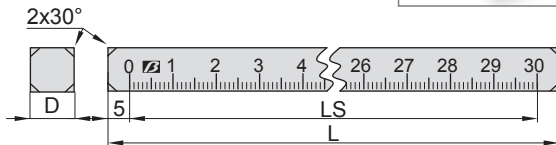
**Use:** in combination with 10 hole connectors for construction of sensor holders or product containment guides.

**Material:** aluminium.

**Characteristics:** millimetre scale for precise adjustment in format change. Square cross-section for axial movements only. Scratchproof treatment.

**Standard pack:** 16 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	16+	48+
	-	-10%	-17%	-22%	on request

Order code	D mm	LS mm	L mm	Finish	Millimetre scale	Weight g	Stock	€ piece
646866	10+0,20/-0,05	150	160	anodised/Scratchproof	yes	43	✓	7,54
676758 *	10+0,20/-0,05	200	210	anodised/Scratchproof	yes	56	■	12,31
697652	10+0,20/-0,05	300	310	anodised/Scratchproof	yes	83	✓	7,78
697662	10+0,20/-0,05	600	610	anodised/Scratchproof	yes	164	✓	10,81
697672	10+0,20/-0,05	1200	1210	anodised/Scratchproof	yes	325	✓	15,42
691097	10+0,25/-0	-	3000	anodised	no	850	✓	16,93
690377	12+0,20/-0,05	150	160	anodised/Scratchproof	yes	62	■	13,63
690387	12+0,20/-0,05	300	310	anodised/Scratchproof	yes	121	■	14,10
690397	12+0,20/-0,05	600	610	anodised/Scratchproof	yes	237	■	15,93
690407	12+0,20/-0,05	1200	1210	anodised/Scratchproof	yes	470	■	20,55

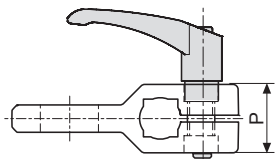
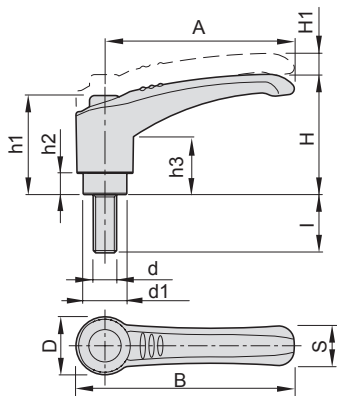
**Customisation** logo (only for versions with \*), millimetre scale (only for versions L≤1200mm)

# 3135 Ratchet levers in plastic

**Use:** Replaces the screw when frequent clamp adjustments are necessary.

**Material** RAL7010 grey and RAL1006 yellow plastic lever, stainless steel or brass threaded pin.

**Standard pack:** 50 pieces.



**Warning**

$l+h2$  equal to or higher than  $P$

### QUANTITY DISCOUNT

Q.ty Discounts	1+	25+	50+	100+
	-	-10%	-17%	on request

Order code	A mm	B mm	D mm	S mm	H mm	H1 mm	h1 mm	h3 mm	d1 mm	h2 mm	d mm	l mm	pin material	Weight g	Stock	€ piece
661616	45	53	16	10,5	32	3	27	17,5	9,9	6	M6	16,5	brass	17	✓	8,07
661606	45	53	16	10,5	38	3	33	23,5	9,9	12	M6	25	stainless steel	20	✓	8,07



## 3697

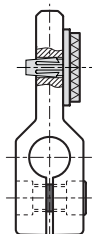
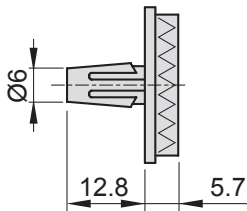
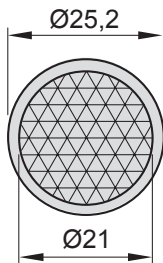
## Reflector with clip pin

**Use:** plugged into the reflector holder connectors, it reflects the signal of the photocell detecting the presence of the product.

**Material** in plastic, resistant to a temperature of 65°C.

**Standard pack:** 1 piece.

**Combinations**



### QUANTITY DISCOUNT

Q.ty	1+	5+	10+	50+	100+
Discount	-	-10%	-15%	-20%	on request

Order code	Weight g	Stock	€ piece
640727	3,5	✓	18,45



# Connectors

## for control panel supports



Technical information and application diagrams

1 p.211



Swivel support kit **3-axis**

1 p.194



Swivel support kit **2-axis**

1 p.201



Swivel support kit **1-axis**

1 p.203



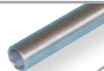
Fixed support kit

1 p.204



Combinations and accessories

1 p.404



1 p.90



### WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data **provided by us shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components**. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. **It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).**

# 1689 → Swivel support kit

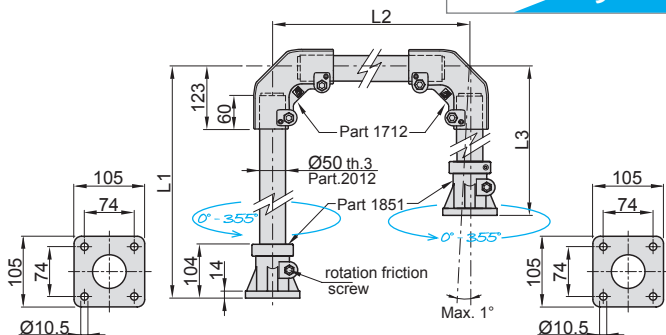
## L1 from 227 to 1700 mm

**Use:** machine control panel support. Possibility to run cables through the tube. Kit ready for installation.

**Material** 2 angle connectors, 2 aluminium swivel supports, stainless steel tubes, galvanised steel nuts and bolts.

 Load diagrams Pg.217 .

**Combinations** 



Minimum dimensions L1=227mm L2=246 mm L3=227

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+	50+
	-	-5%	-10%	-20%	on request

Order code	L1	L2	L3	Finish	Poids kg	Stock	€ piece
635214	227	550	250	grey RAL9006	6,5	■	344,32
627763	227	550	600	grey RAL9006	7,8	■	342,00
616913	227	550	710	grey RAL9006	8,1	■	339,34
698914	227	1124	1062	grey RAL9006	11,4	■	375,79
683294	227	1200	327	grey RAL9006	9,1	■	360,83
628073	230	300	230	grey RAL9006	5,6	■	328,40
681444	250	800	650	grey RAL9006	8,9	■	359,59
682774	250	800	850	grey RAL9006	9,6	■	364,14
637204	300	325	610	grey RAL9006	7,2	■	349,03
698954	300	500	300	grey RAL9006	6,8	■	345,97

↓ 1689

## Swivel support kit

L1 from 227 to 1700 mm

Order code	L1	L2	L3	Finish	Poids kg	Stock	€ piece
635424	300	575	750	grey RAL9006	8,6	■	357,89
635414	300	575	1050	grey RAL9006	9,7	■	364,71
664444	300	850	700	grey RAL9006	9,4	■	363,00
615924	320	1400	240	grey RAL9006	9,8	■	365,70
698974	370	800	350	grey RAL9006	8,3	■	355,51
698994	500	500	500	grey RAL9006	8,2	■	355,05
662844	620	1390	275	grey RAL9006	11	■	356,46
616353	700	700	227	grey RAL9006	8,6	■	357,94
655233	1000	500	225	grey RAL9006	9	■	349,68
689693	1000	800	227	grey RAL9006	9	■	356,33
608454	1150	953	227	grey RAL9006	11,1	■	373,90
608624	1200	350	400	grey RAL9006	9,8	■	354,64
698984	1200	1500	1200	grey RAL9006	16,7	■	409,56
634944	1210	685	220	grey RAL9006	10,4	■	369,03
673202	1262	1124	1062	grey RAL9006	15,1	■	382,70
669473	1262	1124	1062	grey RAL9006	15,1	■	382,70
698003	1300	800	227	grey RAL9006	11,1	■	362,95
698944	1300	800	300	grey RAL9006	11,4	■	375,49
698924	1300	900	300	grey RAL9006	11,7	■	377,76
699294	1350	950	350	grey RAL9006	12,2	■	381,17
636144	1400	850	300	grey RAL9006	11,9	■	378,89
699544	1600	1200	250	grey RAL9006	13,7	■	390,26
698964	1700	900	350	grey RAL9006	13,3	■	387,98

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 4 days.



# 3873 Swivel support kit

## L1 from 230 to 1700 mm

**Use:** machine control panel support.

**Characteristics:** possibility to run cables through the tube Allows fastening on vertical walls.

Kit ready for installation.

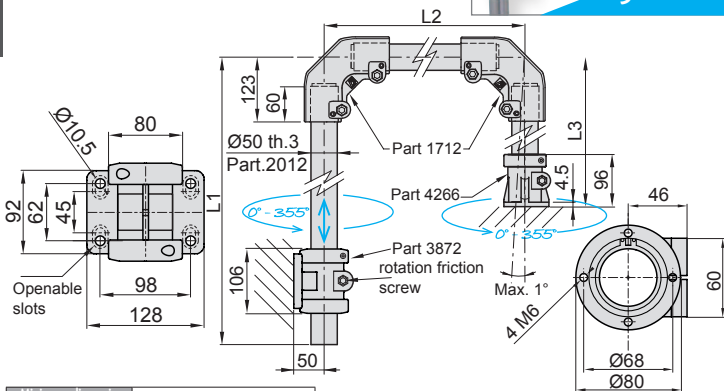
Load diagrams Pg.217 .

### Combinations



Pg.90

Pg.91



Minimum dimensions that may be ordered

L1=230mm L2=246 mm L3=219

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+	50+
	-	-5%	-10%	-20%	contattaci

Order code	L1 mm	L2 mm	L3 mm	Finish	Weight	Stock	€ piece
					kg		
675058	230	550	250	grey RAL9006	6,38	■	354,38
675088	230	550	600	grey RAL9006	7,61	■	362,33
675128	500	500	500	grey RAL9006	8,04	■	365,05
675168	1000	500	225	grey RAL9006	8,83	■	370,16
675208	1200	350	400	grey RAL9006	9,63	■	375,27
675248	1700	900	350	grey RAL9006	13,16	■	397,98

**Personalizations** Other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 10 days.

## 4267

# Swivel support kit

### L1 from 227 to 1700 mm

**Use:** machine control panel support.

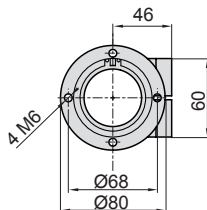
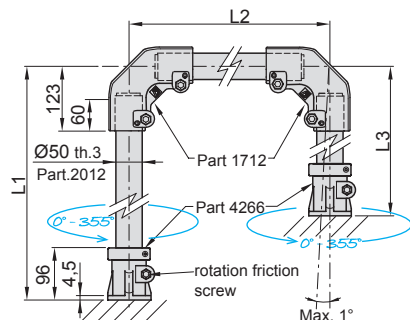
**Material** 2 angle connectors, 2 aluminium swivel supports, stainless steel tubes, galvanised steel nuts and bolts.

**Characteristics:** possibility to run cables through the tube Ideal for supporting control panels with **reduced depth**.

Kit ready for installation.

Load diagrams Pg.217

**Combinations**



Minimum dimensions that may be ordered L1=219mm L2=246 mm L3=219

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+	50+
	-	-5%	-10%	-20%	contact us

Order code	L1 mm	L2 mm	L3 mm	Finish	Weight kg	Stock	€
							piece
670888	219	550	250	grey RAL9006	6,04	■	344,13
670928	219	550	600	grey RAL9006	7,27	■	352,08
670968	500	500	500	grey RAL9006	7,70	■	355,05
671008	1000	500	225	grey RAL9006	8,49	■	360,16
671048	1200	350	400	grey RAL9006	9,29	■	365,27
671088	1700	900	350	grey RAL9006	12,82	■	387,98

**Personalizations** Other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 10 days.

# 3872 With swivel flange

## Ø50 mm

**Use:** swivel base for control panel support kit.

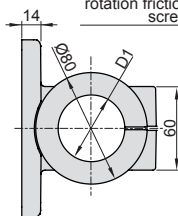
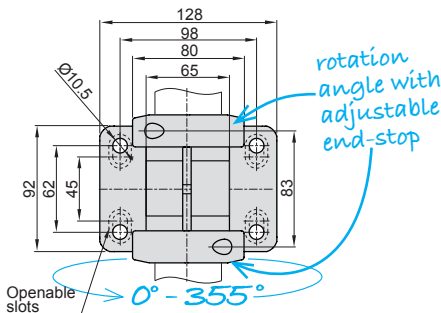
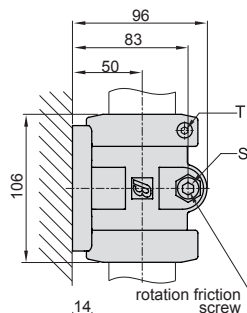
**Material** aluminium connector; 2 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel, 2 aluminium locking rings, 2 polyamide sliding rings.

**Characteristics:** Allows fastening on **vertical walls**.

Apart from tightening the tube, the two locking rings allow positioning the rotation end-stop to obtain angles smaller than 355°.

**Standard pack:** 1 piece.

**Combinations** 



### QUANTITY DISCOUNT

Q.ty Discounts	1+	4+	8+	16+	50+
	-	-6%	-10%	-15%	on request

Order code	D1 Ø	S	T	Finish	Weight g	Stock	€ piece
662578	50,5	M10x50	M6x25	grey RAL9006	935	■	98,23
662588	50,5	M10x50	M6x25	grey RAL7010	935	■	98,23

**Personalizations** Other finishes on request  Pg.214

\*Products not in stock minimum order 1 piece, delivery in 10 days.

## 4266

# A swivel round pedestal

### Ø 50mm

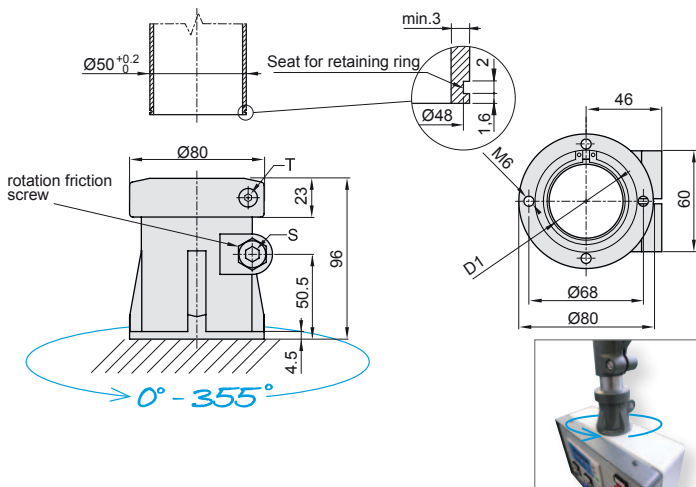
**Use:** or the construction of swivel supports.

**Material** aluminium connector; 2 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel, 1 aluminium locking ring, 2 polyamide sliding rings and 1 UNI 7435 50ø antiextraction ring in steel.

**Characteristics:** ideal for supporting control panels with **reduced depth**.

**Standard pack:** 1 piece.

**Combinations** 



### QUANTITY DISCOUNT

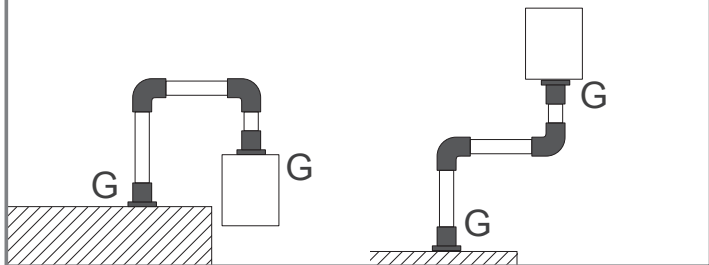
Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	T	Finish	Weight g	Stock	€ piece
665668	50,3	M10x50	M6x25	grey RAL9006	415	■	88,23
665718	50,3	M10x50	M6x25	grey RAL7010	415	■	88,23

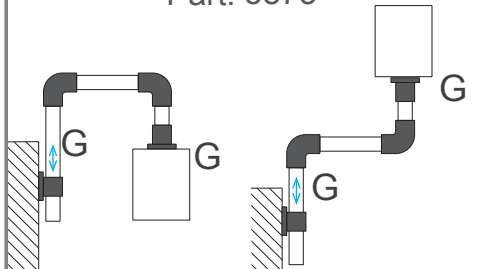
**Personalizations** Other finishes on request  Pg.214 

\*Products not in stock minimum order 1 piece, delivery in 10 days.

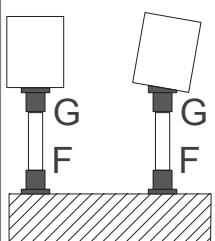
## Part. 1689 - Part. 4267



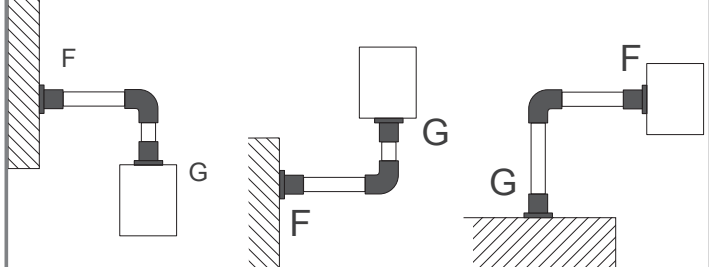
## Part. 3873



## Part. 1703 2540



## Part. 1702



## 1702

## Swivel support kit

**Use:** machine control panel support. Possibility to run cables through the tube. Kit ready for installation.

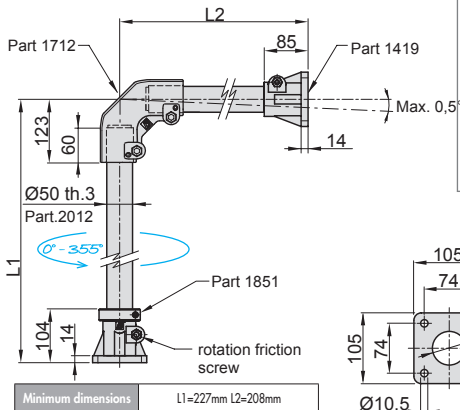
**Material** 1 angle connector, 1 swivel support and 1 aluminium fixed support, stainless steel tubes, galvanised steel nuts and bolts.

Load diagrams Pg.217

**Combinations**



2-axis



### QUANTITY DISCOUNT

Q. ty	1+	5+	8+	16+	50+
Discounts	-	-5%	-10%	-20%	on request

Order code	L1 mm	L2 mm	Finish	Weight Kg	Stock	€ piece
698934	230	300	grey RAL9006	3,9	■	215,42
699234	300	300	grey RAL9006	4,2	■	217,01
699244	350	300	grey RAL9006	4,4	■	218,15
634413	400	230	grey RAL9006	4,3	■	211,36
699264	500	500	grey RAL9006	5,6	■	226,09
699254	680	380	grey RAL9006	5,8	■	227,46
616603	700	700	grey RAL9006	7,0	■	235,18
633613	1000	1000	grey RAL9006	9,1	■	248,81

**Personalizations** other finishes on request Pg.214

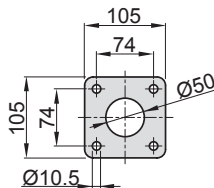
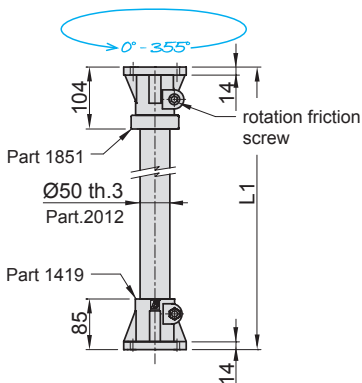
**Products not in stock** minimum order 1 piece, delivery in 4 days.

# 1703 Swivel support kit

**Use:** machine control panel support. Possibility to run cables through the tube. Kit ready for installation.

**Material:** 1 pedestal connector, 1 aluminium swivel connector, AISI 304 steel tube, galvanised steel nuts and bolts.

**Combinations**



Minimum dimensions

L1=189mm

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+	50+
	-	-5%	-10%	-20%	on request

Order code	L1 mm	Finish	Weight Kg	Stock	€ piece
616593	250	grey RAL9006	2,3	■	154,82
627343	300	grey RAL9006	2,5	■	155,94
633803	335	grey RAL9006	2,6	■	156,74
676803	500	grey RAL9006	3,2	■	160,49
699014	700	grey RAL9006	3,9	■	165,04
699004	806	grey RAL9006	4,3	■	167,44
650473	2000	grey RAL9006	8,5	■	188,90

**Personalizations** other finishes on request

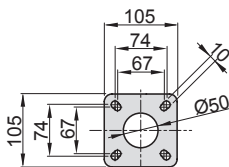
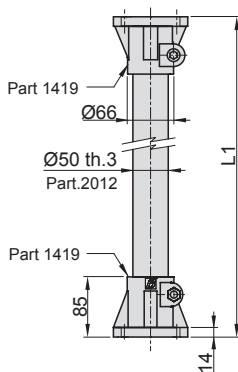
**Products not in stock** minimum order 1 piece, delivery in 4 days.



# 2541 Fixed support kit

**Use:** machine control panel support. Possibility to run cables through the tube. Kit ready for installation.

**Material:** 2 pedestal connectors, 1 AISI 304 steel tube, galvanised steel nuts and bolts.



Minimum dimensions

L1=124mm

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	30+
	-	-13%	-15%	on request

Order code	L1 mm	Finish	Weight kg	Stock	€ piece
688914	390	grey RAL9006	2,6	■	148,49
688934	575	grey RAL9006	3,3	■	150,25
688924	390	grey RAL7010	2,6	■	148,49
688944	575	grey RAL7010	3,3	■	150,25
682994*	390	white RAL1013	2,6	■	134,24
683004*	575	white RAL1013	3,3	■	135,78

\* minimum order 5 pieces

**Personalizations** other finishes on request  Pg.214

■ Products not in stock minimum order 1 piece, delivery in 10 days.

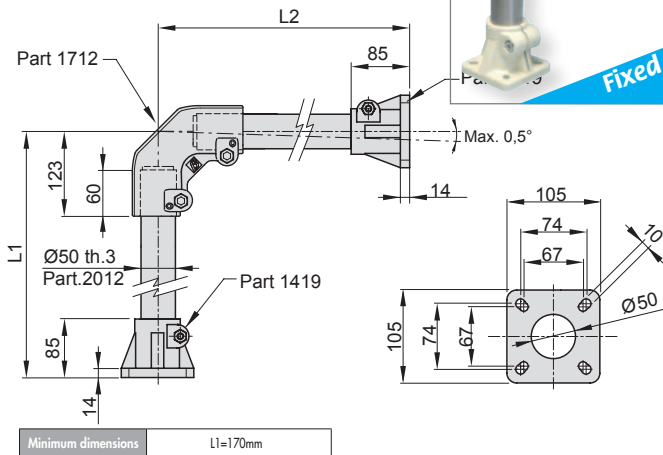
## 2551

## Fixed support kit

**Use:** machine control panel support. Possibility to run cables through the tube. Kit ready for installation.

**Material** 2 pedestal connectors, 1 angle connector, 1 AISI 304 steel tube segment, galvanized steel nuts and bolts.

Load diagrams Pg.217



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	30+
	-	-13%	-15%	on request

Order code	L1 mm	L2 mm	Finish	Weight Kg	Stock	€ piece
631435	350	227	grey RAL9006	3,9	■	203,07
631445	350	227	grey RAL7010	3,9	■	203,07
600225*	350	227	white RAL1013	3,9	■	184,27

\* minimum order 5 pieces

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 10 days.

# 1851 Swivel with pedestal

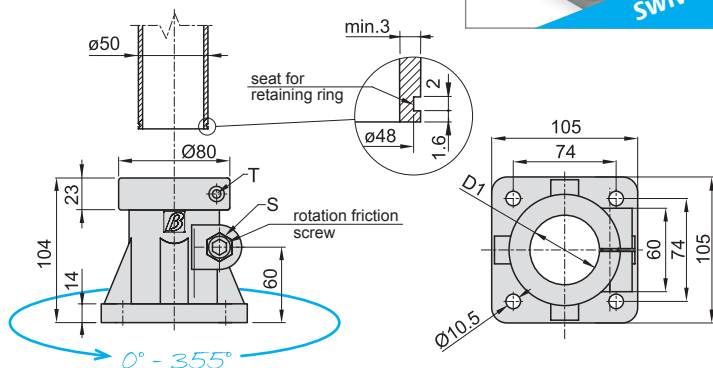
## Ø50 mm

**Use:** For swivel supports; ideal for supporting control panels.

**Material:** aluminium connector; 2 UNI 5931 socket head screws and 1 DIN 985 self-locking hexagon nut in galvanised steel, 1 aluminium locking ring, 2 polyamide sliding rings and 1 UNI 7435 50ø anti-extraction ring in steel.

**Standard pack:** 1 piece.

**Combinations**



Application Part. 1689



### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	T	Finish	Weight g	Stock	€ piece
610093	50,3	M10x50	M6x25	grey RAL9006	800	✓	88,23
669663	50,3	M10x50	M6x25	grey RAL7010	800	✓	88,23

**Personalizations** other finishes on request Pg.214

## 1712

## Angle Ø50 mm

**Use:** 90° connection between two round bars; ideal for supporting control panels.

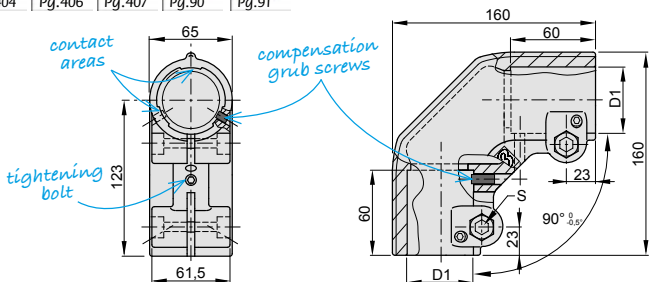
**Material:** aluminium connector; 2 UNI 5931 M10x50 socket head screws, 2 DIN 985 self-locking hexagon nuts, 4 UNI 5929 M10x10 headless screws, 2 UNI 5929 M10x25 headless screws in galvanised steel.

**Characteristics:** improved tube shape and locking system: the holes are shaped so that there are 3 contact areas to allow fitting all types of tube, even with large ovalizations; the 3 tightening grub screws ensure more even orthogonality and subsequent tightening.

**Standard pack:** 1 piece.

**Tightening torque:** 35 Nm (M10).

**Combinations:**  





### Sequence of operations for tube fastening:

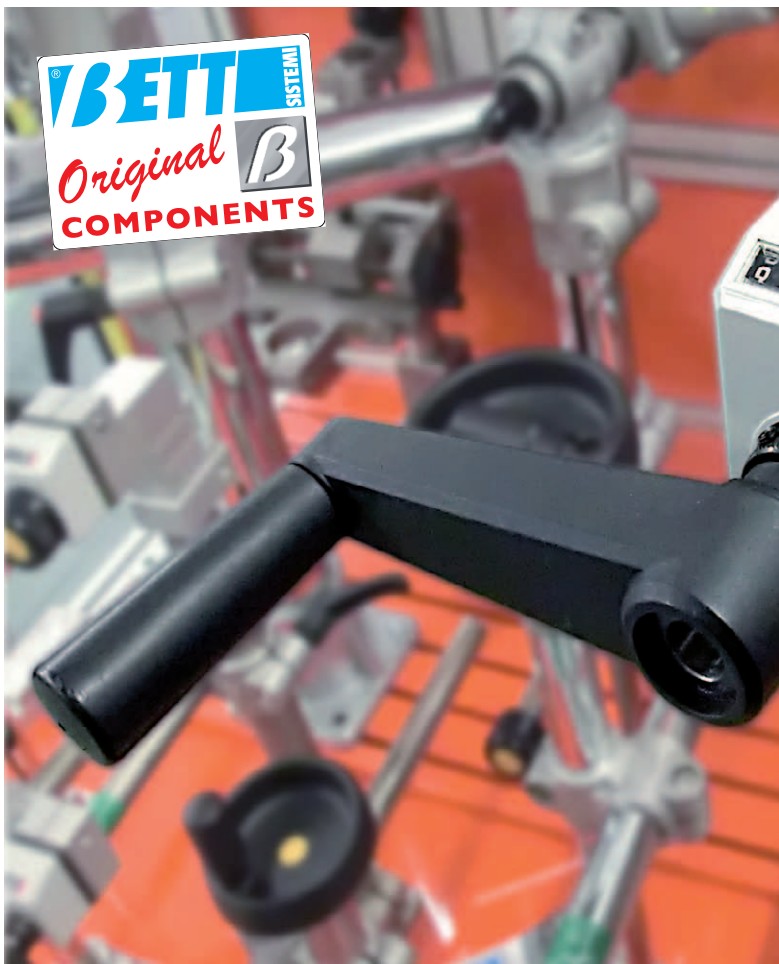
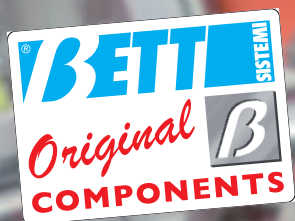


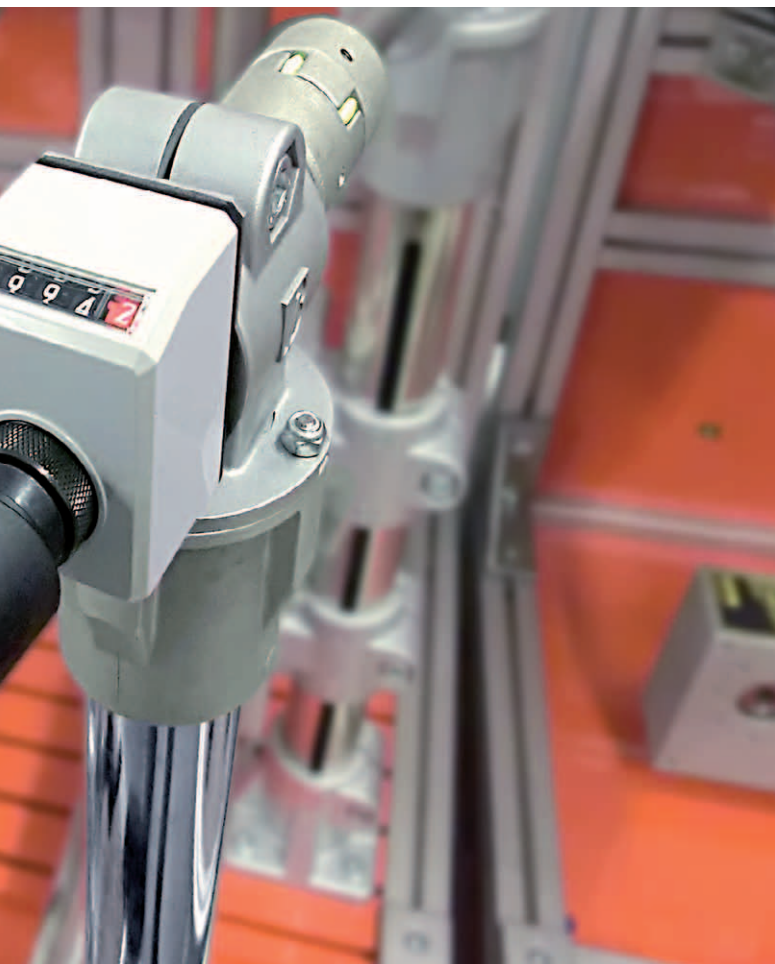
### QUANTITY DISCOUNT

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-3%	-6%	-10%	on request

Order code	D1 Ø	S	Finish	Weight g	Stock	€ piece
685312	50,3	M10x50	grey RAL9006	1050	✓	51,04
669463	50,3	M10x50	grey RAL7010	1050	✓	51,04

**Personalizations:** other finishes on request  Pg.214 







# Technical information



*Advantages – Maximum application flexibility*  
.....

1 p.212



*Nuts and bolts and tightening*  
.....

1 p.213



*Connector surface finishes*  
.....

1 p.214



*Hole size*  
.....

1 p.215



*Load diagrams for control panel supports*  
.....

1 p.217



*Mechanical properties*  
.....

1 p.218



*Application suggestions*  
.....

1 p.220



- The BETT SISTEMI fixing **connectors** are **reinforced** in some particularly stressed points by means of stiffening beads, taking into account the stress they have to undergo, in order to provide higher torque values.
- The hexagonal housing for the screw and the nut is on both sides so that **you can choose on which side to position the screw head**.
- Possibility of customisation to the customer's requirements (Pg.214 **surface finishes** and Pg.215 **hole precision**)

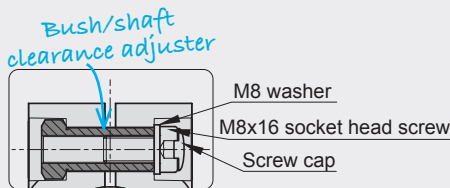
## Maximum application flexibility

- The Robojoint connectors are used in wide-ranging applications thanks to the range of accessories available and the compatibility with many other BETT SISTEMI products.
  - Linear actuators and positioners (Handbook 1);
  - Structural profiles (Handbook 5);
  - Conveyor components (Handbook 6)

## Bush/shaft clearance adjuster

- The sliding bushes are supplied with D1, obtained with the adjuster compression-tightened by means of an M8x16 socket head screw; if you wish to increase

D1 clearance, loosen the screw; if you wish to decrease D1 clearance, remove any excess as required from L. Remember to refit the screw cap to prevent tampering.



## Standard

- On the aluminium connectors: UNI 5931 or DIN 7984 socket head screws (countersunk head) in galvanised steel class 8.8.  
UNI 5588 or DIN 985 hexagon nuts (self-locking) in galvanised steel class 8.8.  
For the tightening values Pg.218
- On stainless steel connectors: UNI or DIN socket head screws  
UNI 5931 in AISI 304 stainless steel .  
UNI 5588 hexagon nuts in AISI 304 stainless steel.

## On request

- To facilitate and speed up tightening when making frequent adjustments, you can equip the connectors with ratchet tightening levers offered in our range of accessories Pg.90
- Stainless steel nuts and bolts on the aluminium connectors on request

## MENS Stock ✓

As these products are made **specifically for each customer**, the “in stock” ✓ indication in the table means that samples are available to allow the customer to perform his own tests and give us the go-head for production.

For order quantities of more than 32 pieces (in case of stock break), bear in mind that the first delivery will only be after 40 working days.

## Anti-seizure washer

Anti-seizure  
washer

- Prevents the under screw head of the stainless steel screw from seizing in its AISI 304 seat, translating any consequent torque loss into **better results** on F and Mt Pg.218

## Roughness

Lost wax precision casting (~ 6 micron) of AISI 304 stainless steel

## Commodity

These are products obtained by mechanical machining and deemed useful. However, the quantities sold do not yet justify investment in new equipment; any possible blowholes on the parts should therefore not be considered failed quality control.

Therefore, before ordering these items, you should perform tests to check that they are suited to the intended use and that their mechanical characteristics meet your requirements.

Commodity



- Shot peening
- Painting
- Ball polishing
- Chemical nickel-plating
- Etc.
- Electropolishing
- Mirror polishing

## Standard finishes

- Shot peening
- RAL painting

**RAL 9005**  
Black

**RAL 9006**  
Metallic grey

**RAL 7010**  
Dark grey

**RAL 1021**  
Yellow

**RAL 3020**  
Red

**RAL 2004**  
Orange

**RAL 5015**  
Blue

estimated delivery **5 days** from order acceptance (as the table)

## Other finishes on request

- **RAL painting selected by the customer**

Price and code on request.

The minimum quantity is **100 pieces** per colour (for lower quantities, a lump sum of € 45.00 will be added) and the estimated delivery is **10 days from order acceptance**.

- **Ball polishing**

Price and code on request.

Available for a minimum quantity of **50 pieces**.

For lower quantities a lump sum of € 45.00 will be added and the estimated delivery is **10 days from order acceptance**.

- **Brushing**

Surface and dimensional homogenization treatment passing an abrasive cloth on the tube in a rotary movement.

- **Chemical nickel-plating**

It is more resistant and functional than electrolytic nickel-plating and

- **Does not flake** (used in the food industry)

- **It is more resistant to oxidation** (used in the beverage industry as an alternative to stainless steel)

- **It is more aesthetic**

Price and code on request.

Available for a minimum quantity of **50 pieces**.

For lower quantities, a lump sum of € 45.00 will be added.

Estimated delivery **15 days from order acceptance**.



## Standard sizes

- The nominal diameters are designed for commercial tubes, in particular, profiled or extruded tubes and round drawn tubes or round or square cross-section ground tubes, with well-known different tolerances.

The sizes are listed in the table, in columns D1 and D2.

## Special sizes

- If you require a **larger** than standard hole (e.g. enlarging a cross connector from  $\varnothing 20\text{-}\varnothing 20$  to  $\varnothing 20\text{-}\varnothing 25$ ) take a fixed cost of € 30.00 into account for machine tooling and a machining cost of € 2.00 per hole for holes from  $\varnothing 14$  to  $\varnothing 30$ , € 3.00 per hole for holes from  $\varnothing 31$  to  $\varnothing 39$ , and € 4.00 for holes from  $\varnothing 40$  to  $\varnothing 60$  (prices valid only for aluminium connectors, for stainless steel connectors on request).

**Warning:** pay attention to the residual thickness.

Estimated delivery 10 days from order acceptance.

- If you require a **smaller** than standard hole in the table (e.g. reducing a cross connector from  $\varnothing 30\text{-}\varnothing 30$  to  $\varnothing 30\text{-}\varnothing 27$ ) a reduction bush needs to be made (at the expense of the customer). If you need sizeable quantities, please send us your request.
- Holes with **reduced clearance** can be also produced (tolerance less than standard, e.g.: connector with  $\varnothing 50 \pm 0.02$  rather than the standard hole of  $\varnothing 50,3$ ) to obtain a better tightening torque on the tube or rod used by the customer. The high precision in nominal diameter machining (locking holes) also allows us to produce precision devices. Minimum quantity 50 pieces.
- If you require a **square hole obtained by broaching** the standard hole in the table (e.g. on  $\varnothing 15$  you obtain  $\varnothing 12$ , on  $\varnothing 16$   $\varnothing 14$ , on  $\varnothing 20$   $\varnothing 16$ ) take a fixed cost of € 30.00 into account for machine tooling and a machining cost of € 2.00 per hole. Estimated delivery 10 days from order acceptance.

## On part 1420



Fig.1



Fig.2

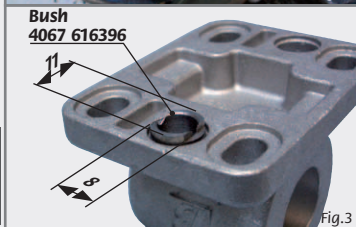


Fig.3



Fig.4

## On part 1419



Fig.5

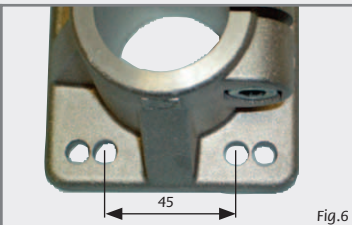


Fig.6

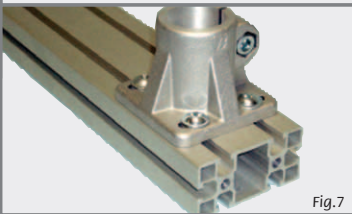


Fig.7

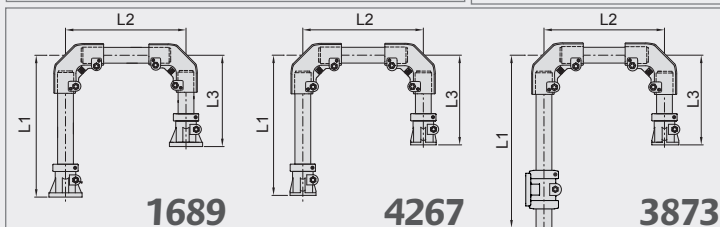
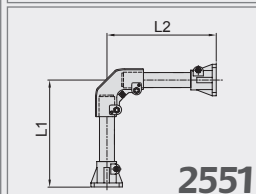
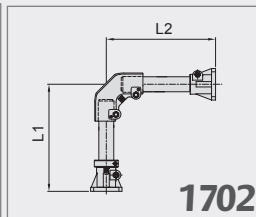
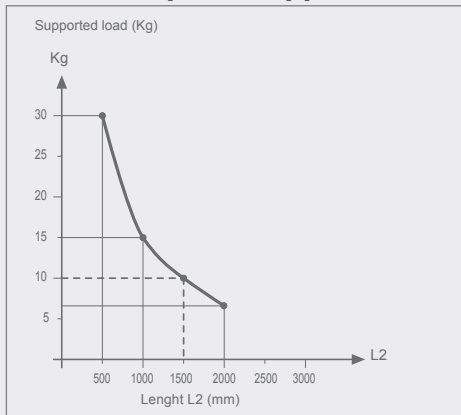
Fig.1,5,6 and 7: slot and hole opening for Robomec

45 mm distance between centres;

Fig.2: hole for M8 fastening screw

Fig. 3: centring bushing for Robomec (8mm) groove and for B-flex (11 mm) groove

## For control panel supports



The graph above indicates the maximum load supported in relation to the maximum length of the support (L2)

### Checking example:

Support with  $L_2 = 1000$  mm

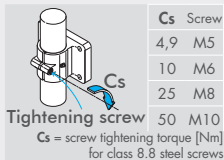
Applied load = 10 kg

From the graph you can see that for a load of 10 kg the maximum value of  $L_2$  is 1500 mm

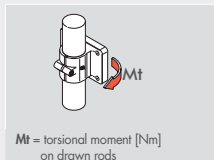
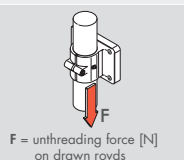
**$L_2$  (1000 mm) <  $L_2$  max (1500 mm) - The support has been CHECKED!**



# Mechanical properties

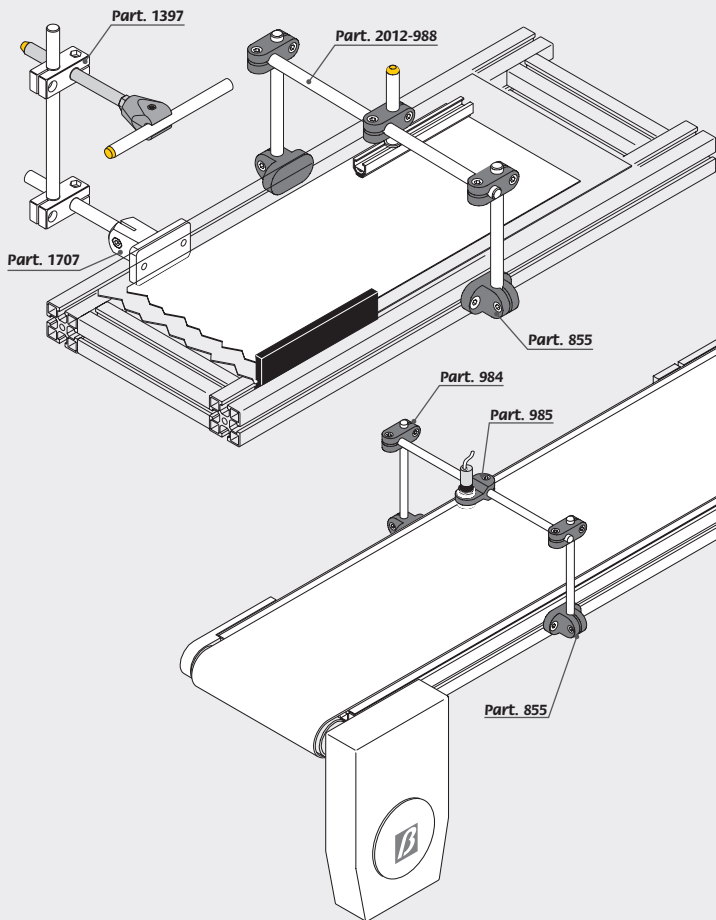


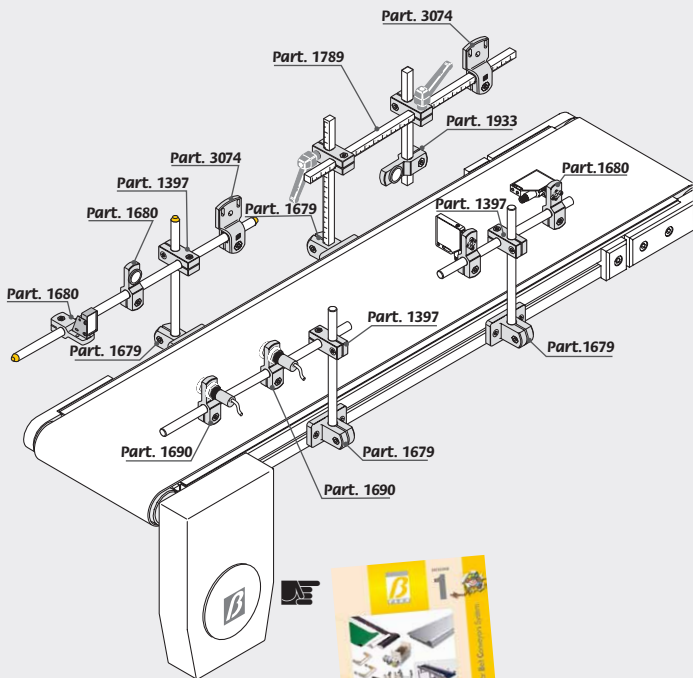
$C_s$	Screw
4,9	M5
10	M6
25	M8
50	M10

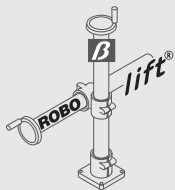


$\varnothing$		10		12		14		15		16		18	
$\nabla$		10								16			
Part.	$C_s$	F	Mt	F	F	Mt	F	Mt	F	Mt	F	F	Mt
855	4,9	255	3	770	650	5							
984	4,9	350	4	490	530	5							
985	4,9	245	3,5	630	780	6,8							
1204	4,9	245	3,5	630	780	6,8							
1397	10			2277	2600	20	4230	40					
1397	10	<i>Stainless steel</i>			3230	30							
1398	25												
1419	25÷50												
1420	25÷50											1520	20
1450	25						4880	80	8780	90	6500	11380	130
1456	25÷50												
1679	10			2150	2590	22							
1679	10	<i>Stainless steel</i>			3150	20							
1680	10			3250	580	9,5							
1690	10			3250	580	9,5							
1690	10	<i>Stainless steel</i>			2500	15							
1712	50												
1843	10				2590	22							
1999	50												
2355	25											11380	24
2984	25								1100	15		5530	58
3074	10			580	900	11							
3165	10			580	900	11							
3166	10				900	11							
3238	10			580	900	11							
3240	50												
3241	10				2590	22							
3281	10			580	900	11							
3294	50												
3296	50												
3297	50												
4063	50												





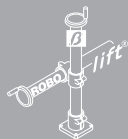




Discover all the solutions  
realized with our components



# Column positioners for **Setup**



CONTINUOUS  
OPERATION



Cross with ground pedestal

1 p.224



Cross

1 p.235



With 1 carriage, column only

1 p.249



Accessories

1 p.273



## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data **provided by us shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components**. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. **It is therefore advisable to check for updates on our website [www.bettisistemi.com](http://www.bettisistemi.com).**



## 3228 → Cross Ø60/50 with ground pedestal

**Use:** support adjustable on 2 axes with handwheel on worm screw for frequent adjustments for marking units.

**Material:** 2 electrolytic nickel-plated steel columns, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, 2 handwheels and 2 levers in reinforced polyamide, 1 steel pedestal, 4 polyamide feet with galvanised steel stem, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm). Pedestal adjustable in height for handling with transpallets.

Positioning accuracy:  $\pm 0,3$  mm/300mm\*

**Tightening torque:** Ø50 = 35 Nm; Ø60 = 50 Nm

**Operation:** STEP BY STEP (NO continuous operation!).

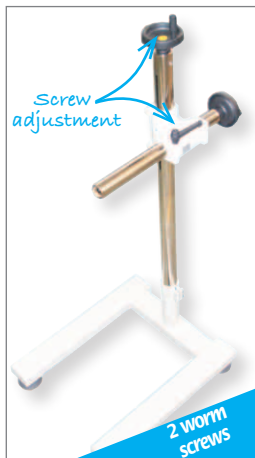
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order Code	Version	A mm	B mm	C1 mm	C2 mm	Carriage and Pedestal	Column mm marking	Weight Kg	Stock	€ piece
666946	with feet	1300	510	310	310	grey RAL7032	no	46	■	809,09
666956	with feet	1300	510	310	310	grey RAL9006	no	46	■	809,09
666966	with feet	1300	510	310	310	grey RAL7035	no	46	■	809,09
665738	with wheels	1300	510	310	310	grey RAL7032	no	50,5	■	867,83
665808	with wheels	1300	510	310	310	grey RAL9006	no	50,5	■	867,83
665868	with wheels	1300	510	310	310	grey RAL7035	no	50,5	■	867,83

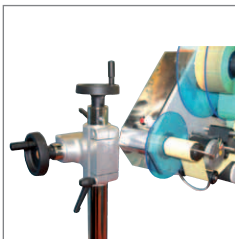
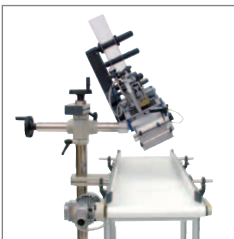
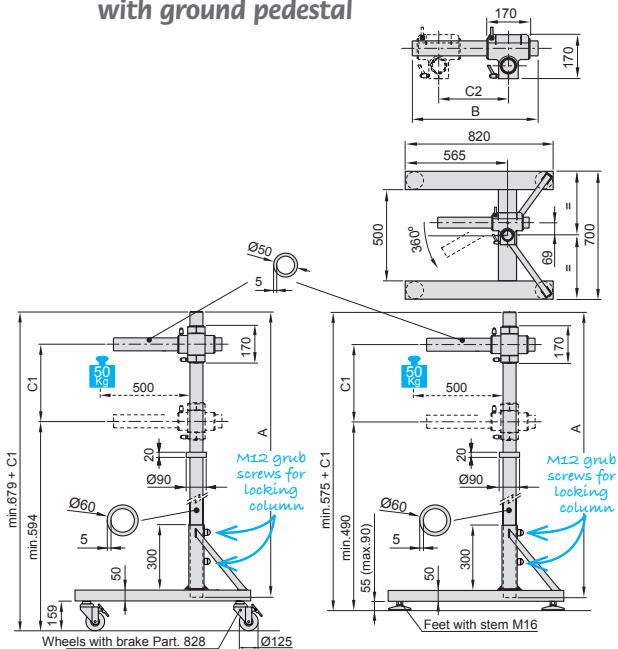
**Personalizations:** carriage RAL colour, column stroke and length (A =max 2000 mm), column with millimetre marking. Chemical nickel-plating Pg.214

■ Products not in stock minimum order 1 piece, delivery in 20 days.



**3228**

## Cross **Ø60/50** with ground pedestal





## 3222 → Cross Ø60/50 with ground pedestal

**Use:** support adjustable on 2 axes with handwheel **on rack for frequent adjustments** for marking units, ergonomic (the handwheels are on the cross unit).

**Material** 2 toothed columns in electrolytic nickel-plated steel, 1 aluminium carriage, 1 handwheel, 1 handle and 2 levers in reinforced polyamide, 1 steel pedestal, 4 polyamide feet with galvanised steel stem, galvanised steel nuts and bolts.

**Characteristics:** rack pitch 3 (1 handwheel turn = 3 mm). Pedestal adjustable in height for handling with transpallets.

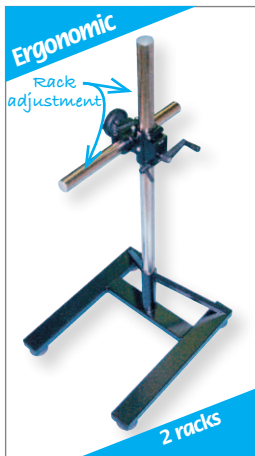
**Tightening torque** Ø50 = 35 Nm; Ø60 = 50 Nm

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Technical information on tubes Pg.406

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	3+	5+	10+	20+
	-	-18%	-20%	-22%	on request

Order code	Version	A mm	B mm	C1 mm	C2 mm	Carriage and Pedestal	Weight Kg	Stock	€ piece
666906	with feet	1500	650	985	480	black RAL9005	38,2	✓	908,71
665758	with wheels	1500	650	985	480	black RAL9005	42,7	✓	942,97

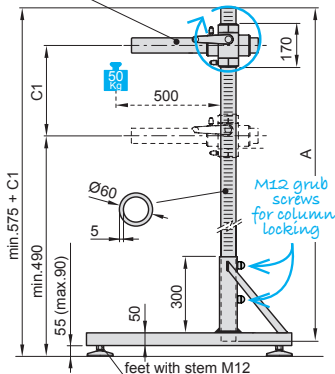
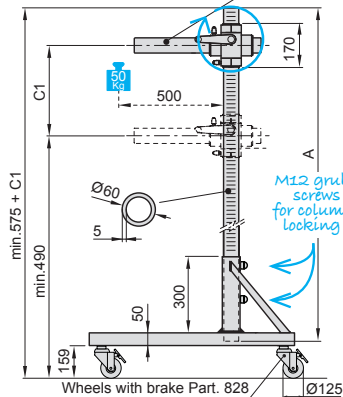
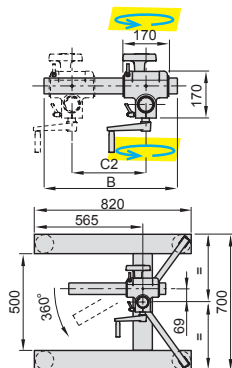
**Personalizations** carriage RAL colour, column stroke and length (A =max 2000 mm), column with millimetre marking, Chemical nickel-plating Pg.214

**Products not in stock** minimum order 10 pieces, delivery in 40 days.



↓ 3222

## Cross Ø60/50 with ground pedestal





## 3229 → Cross Ø60/50 (Ø 50 fixed) with ground pedestal

**Use:** support adjustable on the vertical axis with handwheel on worm screw, on the horizontal axis with clamp on fixed column. **For occasional adjustments on the horizontal axis.**

**Material:** 2 columns in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, 1 handwheel and 1 lever in reinforced polyamide, 1 steel pedestal, 4 polyamide feet with galvanised steel stem, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm). Pedestal adjustable in height for handling with transpallets.

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Tightening torque** Ø50 = 35 Nm; Ø60 = 50 Nm

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

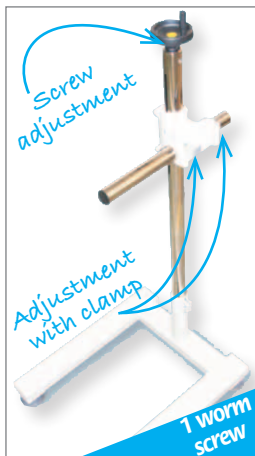
Technical information on tubes Pg.406

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	Version	A mm	B mm	C1 mm	C2 mm	Carriage and Pedestal	Column mm marking	Weight Kg	Stock	€ piece
666986	with feet	1300	500	310	320	grey RAL7032	no	36,7	■	663,05
666996	with feet	1300	500	310	320	grey RAL9006	no	36,7	■	663,05
667006	with feet	1300	500	310	320	grey RAL7035	no	36,7	■	663,05
665748	with wheels	1300	500	310	320	grey RAL7032	no	41,2	■	721,79
665818	with wheels	1300	500	310	320	grey RAL9006	no	41,2	■	721,79
665878	with wheels	1300	500	310	320	grey RAL7035	no	41,2	■	721,79

**Personalizations** carriage RAL colour, column stroke and length (A =max 2000 mm), column with millimetre marking, Chemical nickel-plating Pg.214

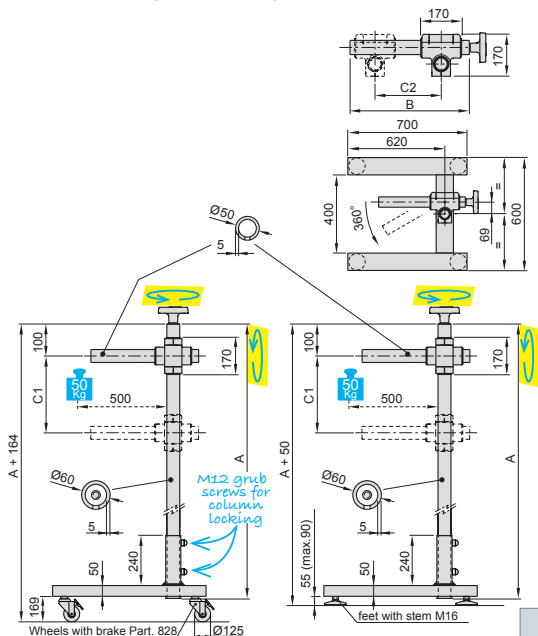
**Products not in stock** minimum order 1 piece, delivery in 20 days.



↓ 3229

## Cross $\text{Ø}60/50$

### ( $\text{Ø} 50$ fixed) with ground pedestal





## 3223 → Cross Ø60/50 (fixed) with ground pedestal

**Use:** support adjustable on 2 axes **with clamp** on fixed column for **occasional adjustments** for marking units.

**Material:** 2 columns in nickel-plated steel, 1 aluminium carriage, 1 handwheel, 1 handle and 2 levers in reinforced polyamide, 1 steel pedestal, 4 polyamide feet with galvanised steel stem, galvanised steel nuts and bolts.

**Characteristics:** pedestal adjustable in height for handling with transpallets.

**Tightening torque:** Ø50 = 35 Nm; Ø60 = 50 Nm

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Technical information on tubes Pg.406

**Combinations**



Pg.288



Pg.289



Pg.291



Pg.287



Pg.293



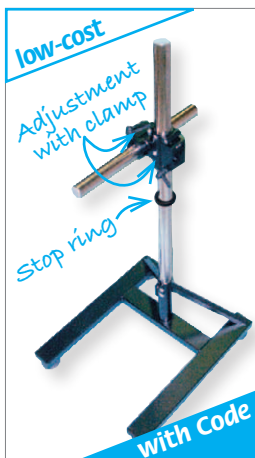
Pg.52



Pg.68



Pg.84



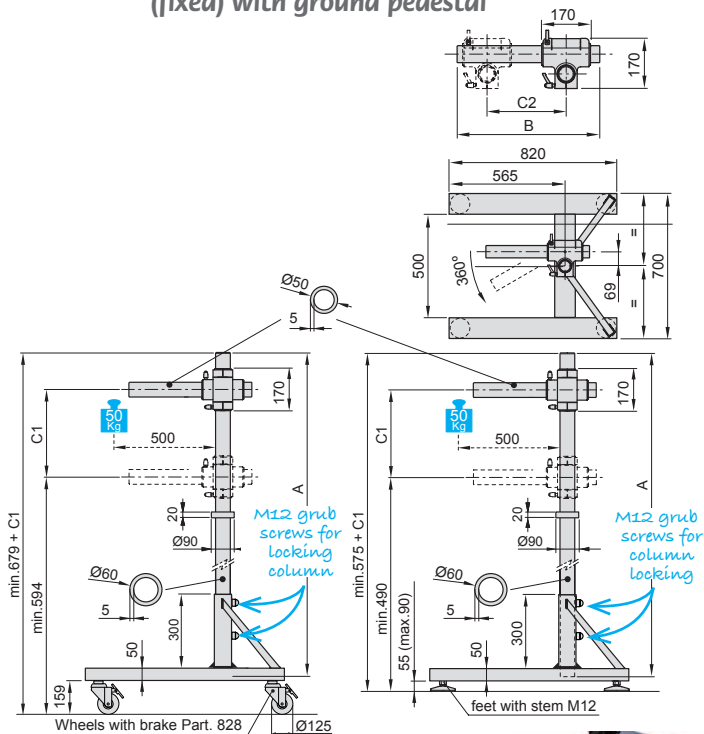
						QUANTITY DISCOUNT						
						Q.ty	1+	5+	8+	16+		
						Discounts	-	-5%	-10%	on request		
Order code	Version	A mm	B mm	C1 mm	C2 mm	Carriage and Pedestal	Weight Kg	Stock	€	piece		
666916	with feet	1500	650	985	480	black RAL9005	36,0	■	566,31			
691287	with wheels	1500	650	985	480	black RAL9005	40,5	■	600,57			
<b>Personalizations</b> carriage RAL colour, column stroke and length (A =max 2000 mm), column with millimetre marking, Chemical nickel-plating Pg.214										■		

■ **Products not in stock** minimum order 1 piece, delivery in 15 days.



↓ 3223

## Cross $\text{Ø}60/50$ (fixed) with ground pedestal





Special cross positioners can be made to the customer's design



Part. 1897

Part. 1303

Part. 1651

Part. 1897

Part. 1651

*custom*

*custom*



# Cross

**Ø60/60**

Pg.235 



**Ø60/50**

Pg.236 



**Ø50/50**

Pg.241 



**Ø40/40**

Pg.242 



**Ø30/30**

Pg.243 



**Ø30/20**

Pg.244 



**Ø30/18**

Pg.245 



**Ø20/20**

Pg.246 



**Ø18/18**

Pg.247 



## 1651

### Cross Ø60/60 with pedestal

**Use:** positioning adjustable on 2 axes **with handle on worm screw for frequent adjustments.**

**Material** 2 columns in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass 1 grey RAL9006 aluminium carriage, 1 aluminium pedestal, 2 reinforced polyamide handles, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** **STEP BY STEP** (NO continuous operation!).

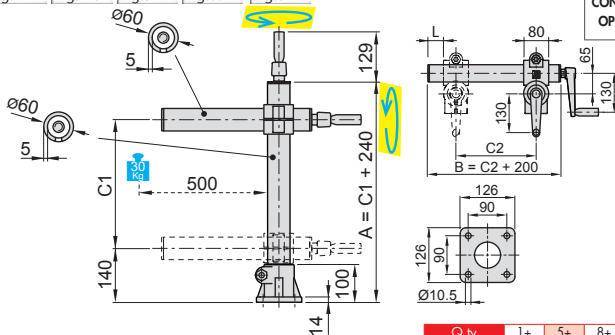
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

#### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

#### Combinations



#### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 stroke	C2 mm	L end stroke	Column mm marking	Weight Kg	Stock	€ piece
664872	510	510	270	310	120	no	11,7	✓	633,93

**Personalizations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



## 1907 → Cross Ø60/50 reinforced

**Use:** positioning adjustable on 2 axes with worm screw for frequent adjustments.

**Material** 2 columns in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Tightening torque** Ø50 = 35 Nm; Ø60 = 50 Nm

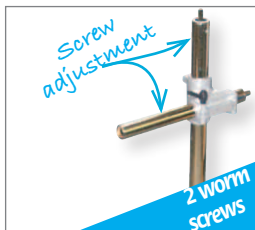
**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



CONTINUOUS OPERATION

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
633533	510	510	310	310	grey RAL7032	no	12,9	■	561,53
633873	510	510	310	310	grey RAL9006	no	12,9	■	561,53
633883	510	510	310	310	grey RAL7035	no	12,9	■	561,53
658623	1300	510	310	310	grey RAL7032	no	20,4	■	714,34
658633	1300	510	310	310	grey RAL9006	no	20,4	■	714,34
658643	1300	510	310	310	grey RAL7035	no	20,4	■	714,34

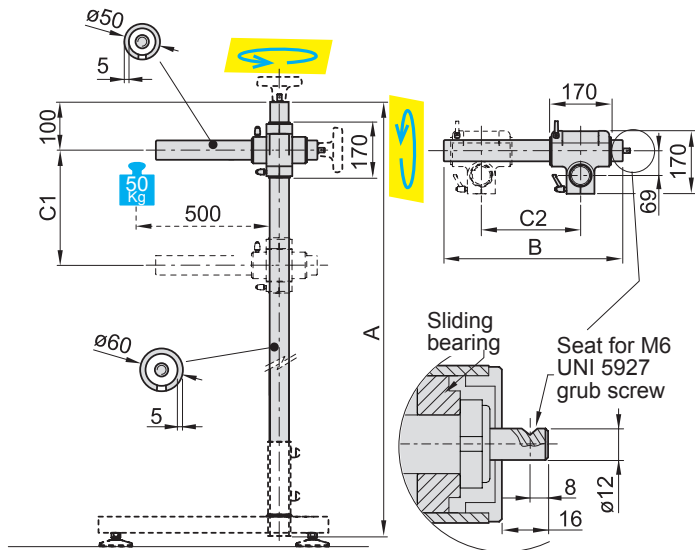
**Personalizations** carriage RAL colour, column stroke and length (A =max 2000 mm).

Chemical nickel-plating Pg.214

■ **Products not in stock** minimum order 1 piece, delivery in 15 days.



↓ 1907

**Cross Ø60/50**  
reinforced



## 1920 → Cross Ø60/50 (fixed) reinforced

Use: positioning adjustable on 2 axes **with clamp** on fixed column for **occasional adjustments**.

**Material** 2 columns in electrolytic nickel-plated steel, 1 aluminium carriage, galvanised steel nuts and bolts.

**Tightening torque** Ø50 = 35 Nm; Ø60 = 50 Nm

**Operation: STEP BY STEP (NO continuous operation!).**

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Technical information on tubes Pg.406

Millimetre scale marking Pg.269

**Combinations**



**recommended  
for fixed format**

### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
634243	500	500	340	340	grey RAL7032	no	11,5	■	292,56
634253	500	500	340	340	grey RAL9006	no	11,5	■	292,56
634263	500	500	340	340	grey RAL7035	no	11,5	■	292,56
633993	1300	500	1130	340	grey RAL7032	no	19,0	■	496,21
634003	1300	500	1130	340	grey RAL9006	no	19,0	■	496,21
634013	1300	500	1130	340	grey RAL7035	no	19,0	■	496,21

**Personalizations** carriage RAL colour, column stroke and length (A =max 2000 mm).

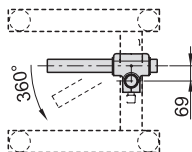
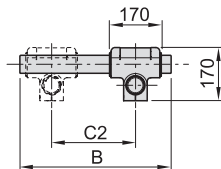
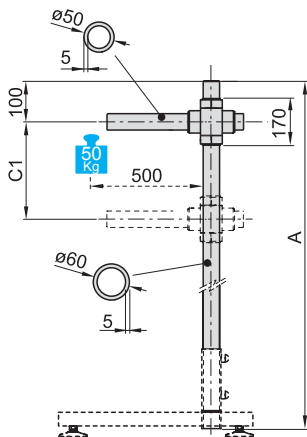
Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



↓ 1920

**Cross Ø60/50**  
**(fixed) reinforced**





## 2583

## Cross Ø60/50 reinforced

**Use:** positioning adjustable on 2 axes **with handwheel on rack for frequent adjustments.**

**Material:** 2 columns in electrolytic nickel-plated steel, 1 aluminium carriage, 1 handwheel, 1 handle and 2 levers in reinforced polyamide, galvanised steel nuts and bolts.

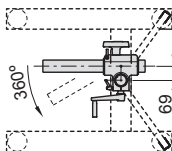
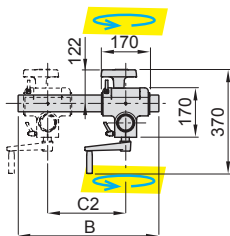
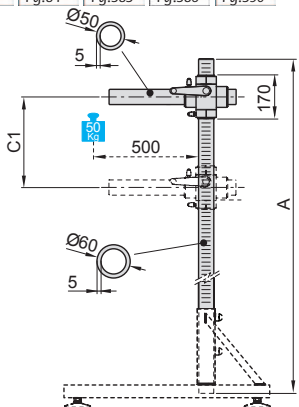
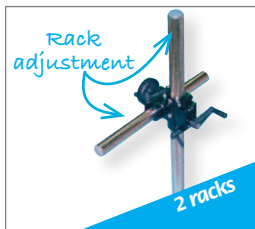
**Characteristics:** rack pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!).**

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Technical information on tubes Pg.406

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	Color carriage	Weight Kg	Stock	€ piece
689964	1500	650	1020	480	black RAL9005	18,8	✓	868,93

**Personalizations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 10 pieces, delivery in 40 days.



1416

# Cross Ø50/50 with pedestal

**Use:** positioning adjustable on 2 axes **with handwheel on worm screw for frequent adjustments.**

**Material** 2 columns in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, 1 aluminium pedestal, 2 reinforced polyamide handwheels, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn =4mm).

Positioning accuracy:  $\pm 0,3$  mm/300mm\*

**Operation:** **STEP BY STEP** (NO continuous operation!).

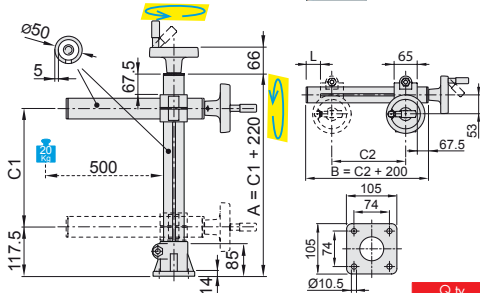
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 stroke	C2 stroke	L end stroke	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
618732	510	510	290	310	135	grey RAL9006	no	10	✓	462,53
602536	510	510	290	310	135	grey RAL9006	yes	10	■	474,59

**Personalizations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

■ **Products not in stock** minimum order 1 piece, delivery in 5 days.

■ **Products not in stock** minimum order 1 piece, delivery in 15 days.



## 2658

## Cross Ø40/40

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustments.**

**Material:** 2 chrome-plated steel columns, trapeze screws and lead nuts in steel, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

**Positioning accuracy:**  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** **STEP BY STEP** (NO continuous operation!).

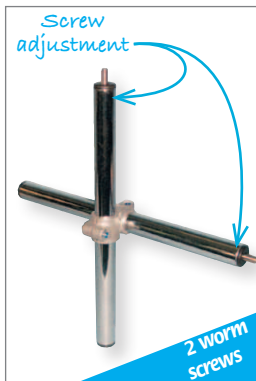
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

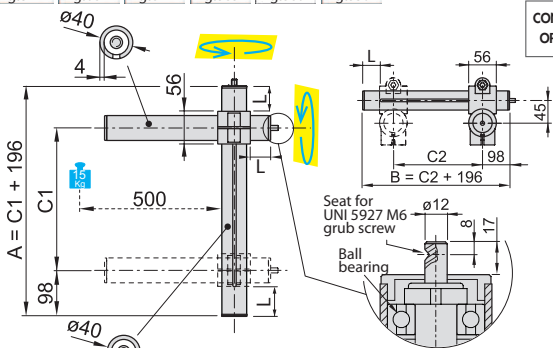
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



CONTINUOUS OPERATION  NO  YES



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	L end stroke	Column mm marking	Weight Kg	Stock	€ piece
600575	506	506	310	310	70	no	6.0	<input checked="" type="checkbox"/>	438,15

**Personalizations** carriage RAL colour Pg.214 , column stroke and length (A = max 2000 mm).

**Products not in stock** minimum order 1 piece, delivery in 15 days.



## 1971

## Cross Ø30/30

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustments.**

**Material:** 2 columns in electrolytic nickel-plated steel or stainless steel AISI304 (see table), trapeze screws and lead nuts in steel, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

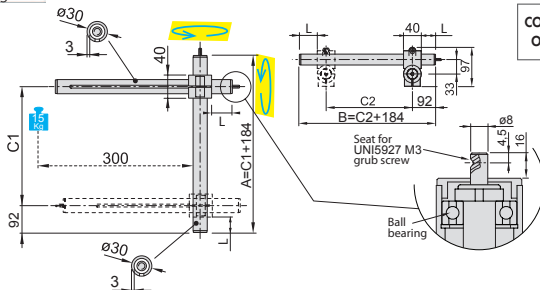
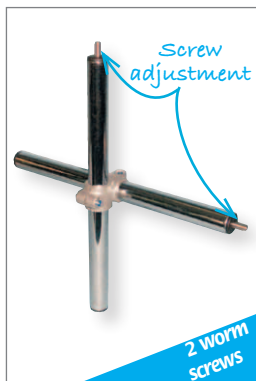
**Characteristics:** worm screw Tr16 pitch 4 (1 handwheel turn = 4mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
		-	-1.5%	on request		NO	NO	-35%	on request

Order code	A mm	B mm	C1 stroke mm	C2 mm	L end stroke	Material columns	Column mm marking	Weight Kg	Stock	€ piece
632548	410	410	226	226	72	nickel-plated steel	no	2,6	■	438,15
632558	410	410	226	226	72	stainless steel AISI304	no	2,6	✓	438,15

**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and length (A = 1450 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 4176

## Cross Ø30/20

**Use:** positioning adjustable on 2 axes with worm screw for frequent adjustments.

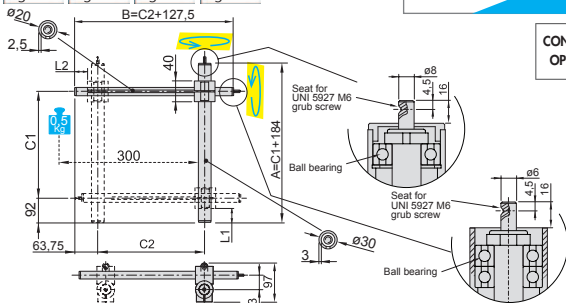
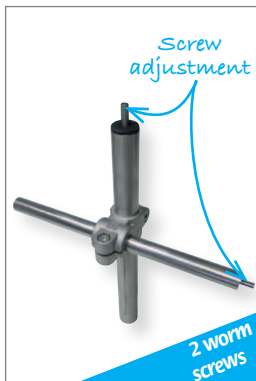
**Material:** 2 columns in electrolytic nickel-plated steel or stainless steel AISI304 (see table), trapeze screws and lead nuts in steel, ball bearing in steel (Ø20), steel trapeze screws, bronze nuts, ball bearing in steel (Ø20), 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Ø30 column: worm screw Tr16 pitch 4 (1 handwheel turn = 4mm); Ø20 column: worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
			-1.5%	on request		NO	NO	-3.5%	on request

Order code	A mm	B mm	C1 stroke mm	C2 mm	L1 end stroke mm	L2 end stroke mm	Material columns	Column mm marking	Weight Kg	Stock	€ piece
692607	410	300	226	172,5	72	43,75	nickel-plated steel	no	1,75	■	438,15
692617	410	300	226	172,5	72	43,75	stainless steel AISI304	no	1,75	■	438,15

**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and legth (A = 1450 mm; B= max 1000 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

■ **Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 4177

## Cross $\varnothing 30/18$

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustments.**

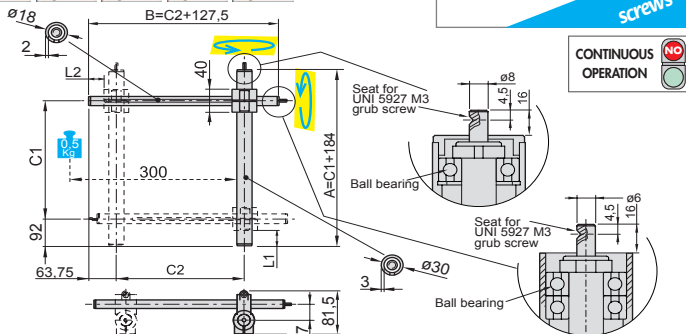
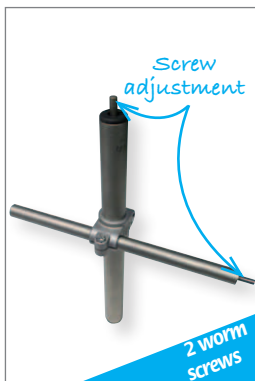
**Material** 2 columns in electrolytic nickel-plated steel or stainless steel AISI304 (see table), trapeze screws and lead nuts in steel, ball bearing in steel ( $\varnothing 18$ ), 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:**  $\varnothing 30$  column: worm screw Tr16 pitch 4 (1 handwheel turn = 4mm);  $\varnothing 18$  column: worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!)**  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



**CONTINUOUS OPERATION**

### QUANTITY DISCOUNT

Q. ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
		-	-15%	on request		NO	NO	-35%	on request

Order code	A mm	B mm	C1 stroke mm	C2 mm	L1 end stroke mm	L2 end stroke mm	Material columns	Column mm marking	Weight Kg	Stock	€ piece
692627	410	300	226	172,5	72	43,75	nickel-plated steel	no	1,75		438,15
692637	410	300	226	172,5	72	43,75	stainless steel AISI304	no	1,75		438,15

**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1450 mm; B= max 1000 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 3827 Cross Ø20/20

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustments.**

**Material:** 2 columns in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel (Ø20), 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

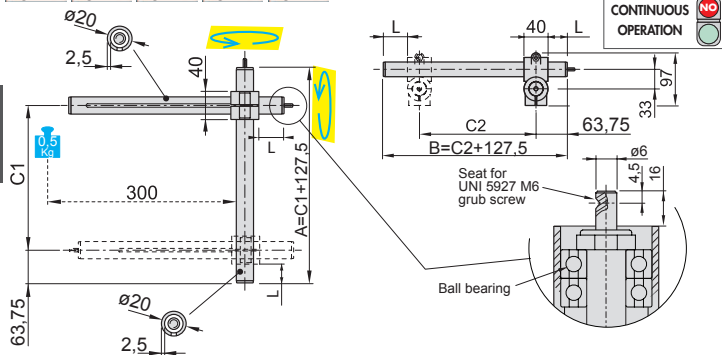
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!)**.

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

**Combinations**



### QUANTITY DISCOUNT

Order code	A mm	B mm	C1 stroke mm	C2 mm	L end stroke mm	Material columns	Column mm marking	Weight Kg	Stock	€ pièce	Q.ty Discounts									
											Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+	
631448	300	300	172,5	172,5	43,75	nickel-plated steel	no	1,25	■	397,58										
692577	300	300	172,5	172,5	43,75	stainless steel AISI304	no	1,25	✓	397,58										

**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel.

Chemical nickel-plating Pg.214

**\*Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



1974

Cross  $\varnothing 18/18$ 

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustments.**

**Material** 2 columns in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel ( $\varnothing 18$ ), 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

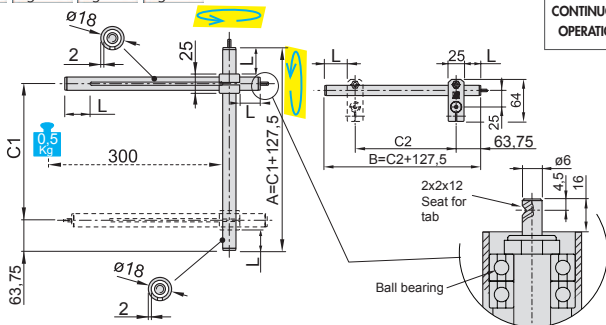
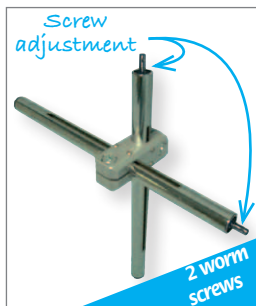
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**

**QUANTITY DISCOUNT**

Q.ty Discounts	Acciaio inox AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
		-	-1.5%	on request		NO	NO	-35%	on request


Order code	A mm	B mm	C1 mm	C2 mm	L end stroke	Material columns	Column mm marking	Weight Kg	Stock	€ piece
664828	300	200	172,5	72,5	51,25	nickel-plated steel	no	1,05	■	385,18
664948	300	200	172,5	72,5	51,25	stainless steel AISI304	yes	1,05	■	385,18
632538	300	300	172,5	172,5	51,25	nickel-plated steel	no	1,25	■	397,58
632528	300	300	172,5	172,5	51,25	stainless steel AISI304	no	1,25	✓	397,58


**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel.

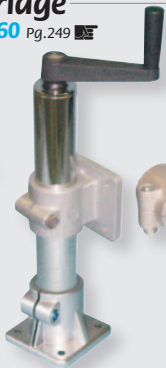
Chemical nickel-plating Pg.214

**\*Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.

# With 1 carriage

Ø60 Pg.249 

Ø50 Pg.254 



Ø40

Pg.260 

Ø35

Pg.261 

Ø30

Pg.262 

Ø20

Pg.264 

Ø18

Pg.267 

# Column only



Ø60

Pg.252 



Ø50

Pg.258 



Ø30

Pg.263 



Ø20

Pg.265 



Ø18

Pg.268 



## 1650

## With 1 carriage Ø60

**Use:** positioning adjustable with handle on one axis **with worm screw for frequent adjustments.**

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 grey RAL9006 aluminium carriage, 1 aluminium pedestal, 1 reinforced polyamide handle, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4 mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** **STEP BY STEP (NO continuous operation!).**

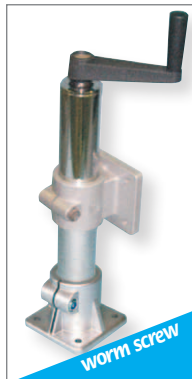
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

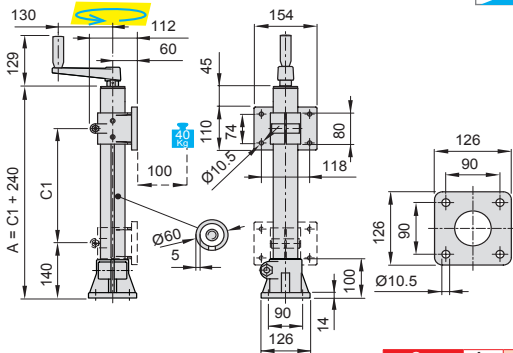
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



CONTINUOUS OPERATION  NO



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Column mm marking	Weight Kg	Stock	€ piece
664862	510	270	no	7,4	✓	361,12
617493	810	570	no	10,3	■	429,82
617503	910	670	no	11,3	■	452,74

**Customisations** carriage RAL colour, column stroke and length (A =max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.

## 1599 With 1 carriage Ø60

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



Pg.274

Pg.279

Pg.288

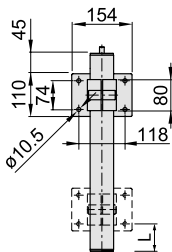
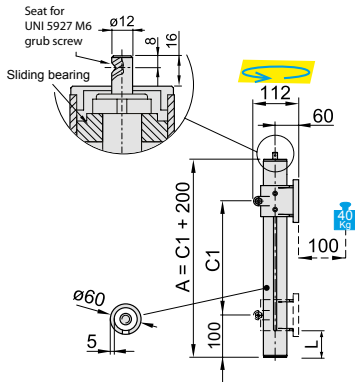
Pg.52

Pg.68

Pg.84



CONTINUOUS OPERATION  NO



### QUANTITY DISCOUNT

Q.ty Discount	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	A mm	C1 mm	L end stroke	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
664852	510	310	63	grey RAL9006	no	6	<input checked="" type="checkbox"/>	270,88
620904	810	610	63	grey RAL9006	no	7,2	<input type="checkbox"/>	341,63

**Personalizations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.

**3702****With 1 carriage Ø60**

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

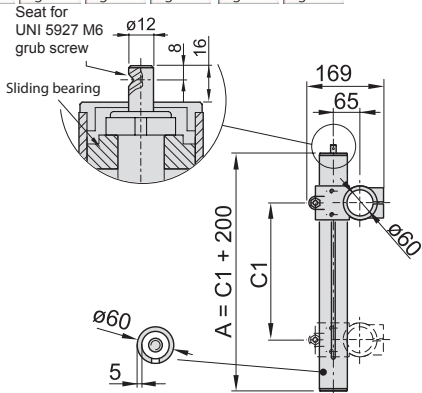
**WARNING**

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

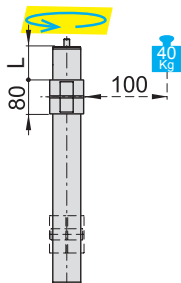
**Combinations** 

Seat for  
UNI 5927 M6  
grub screw

Sliding bearing



CONTINUOUS OPERATION  NO

**SCONTO QUANTITÀ**

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	L end stroke	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
642147	510	310	60	grey RAL9006	no	5,9	✓	296,76

**Customisations** carriage RAL colour, column stroke and length (A =max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



## 1986 → Column only Ø60

Use: positioning adjustable on one axis with worm screw for frequent adjustments /for combination with non-standard carriages constructed by the customer.

**Material** column in nickel-plated steel (electrolytic nickel-plating), trapeze or metric screw (see table) and lead nut in burnished steel, plain bearings in brass or ball bearings in steel (see table), 2 DIN 7984 M6x20 socket head screws in galvanized steel.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4 linear mm) or M20 worm screw, pitch 2.5 (1 handwheel turn = 2.5 linear mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

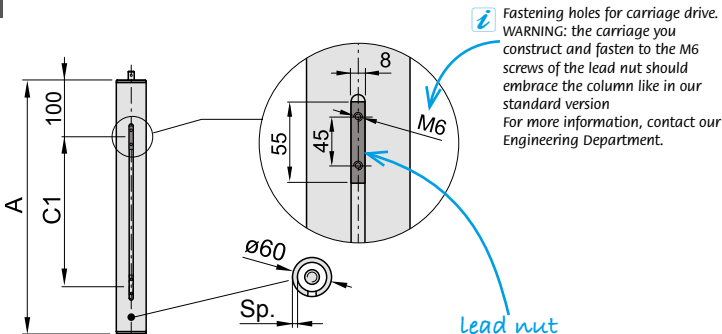
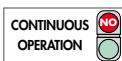
Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



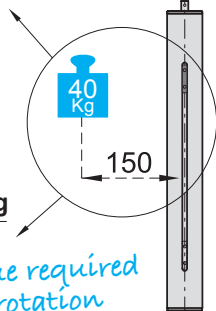
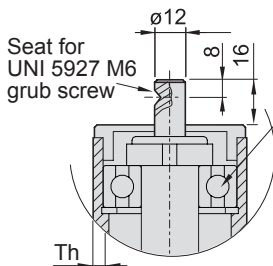
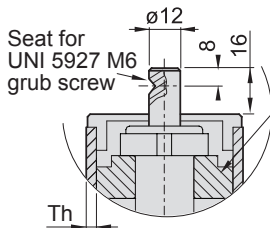
### Combinations





↓ 1986

## Column only Ø60

**M** = torque required for pin rotation

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Sp mm	Version bearing	Type screw	M (40Kg a 150 mm)	Column mm marking	Weight kg	Stock	€ piece
654853	510	310	5	sliding bearing	Tr20	5,5 Nm	no	4,9	✓	231,19
636324	910	710	5	sliding bearing	Tr20	5,5 Nm	no	8,7	▪	314,47
664905	1300	310	5	sliding bearing	Tr20	5,5 Nm	no	12,4	▪	407,73
658853	1300	310	10	sliding bearing	Tr20	5,5 Nm	no	17	▪	395,85
675888	510	310	5	ball bearing	M20	4,0 Nm	no	4,9	✓	241,19
675898	910	710	5	ball bearing	M20	4,0 Nm	no	8,7	▪	324,47
675908	1300	310	5	ball bearing	M20	4,0 Nm	no	8,7	▪	405,85

Personalisations column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

\*Products not in stock minimum order 1 piece, delivery in 15 days.



## 1415 With 1 carriage Ø50

**Use:** positioning adjustable on one axis with handwheel on worm screw for frequent adjustments.

**Material:** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 grey RAL9006 aluminium carriage, 1 aluminium pedestal, 1 reinforced polyamide handwheel, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Operation:** STEP BY STEP (NO continuous operation!).

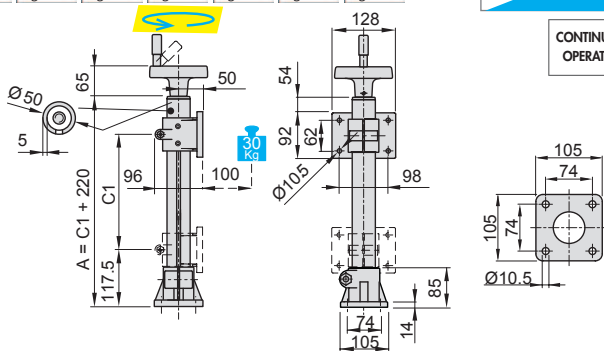
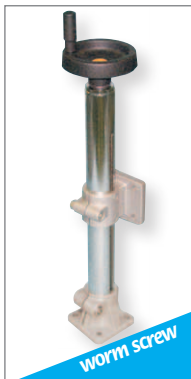
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Column mm marking	Weight Kg	Stock	€ piece
618722	510	290	no	5,8	✓	231,35
691727	660	440	no	6,9	■	260,57
633003	990	770	no	9,6	■	331,28

**Customisations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.





## 1697 With 1 carriage Ø50

**Use:** positioning adjustable on one axis with handwheel on worm screw for frequent adjustments.

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass 1 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$

**Combinations** 500 column only.

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

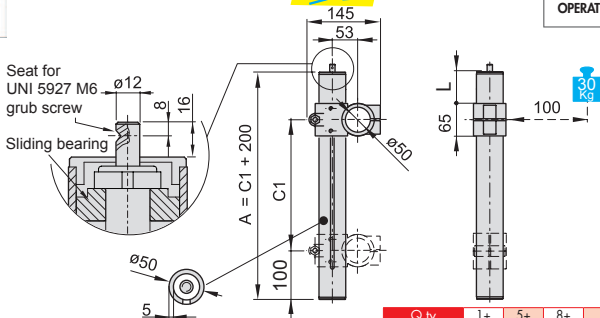
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations**



worm screw



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	L end stroke	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
675972	510	310	67,5	grey RAL9006	no	4,6	✓	205,87
650833	600	400	67,5	grey RAL9006	no	5,3	■	226,48
665228	610	410	67,5	grey RAL9006	no	5,4	✓	228,87

**Customisations** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



## 1883

## With 1 carriage Ø50

**Use:** positioning adjustable on one axis with handwheel on worm screw for frequent adjustments.

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 1 aluminium carriage, 1 aluminium pedestal, 1 reinforced polyamide handwheel, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3$  mm/300mm\*

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

500 column only.

Millimetre scale marking Pg.269

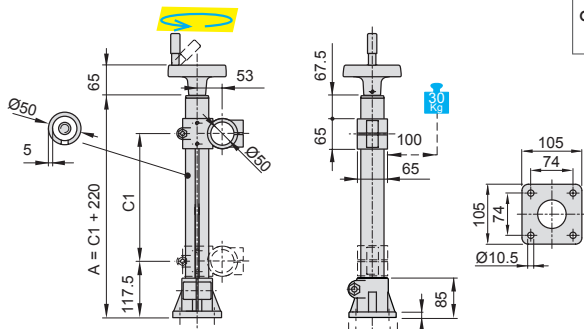
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q. ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Color carriage	Column mm marking	Weight Kg	Stock	€ piece
627203	510	290	grey RAL9006	no	5,6		269,99

**Customisations** carriage RAL colour, column stroke and length (A =max 2000 mm).

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



## 1951 → Column only Ø50

**Use:** positioning adjustable on one axis **with worm screw** for frequent adjustments, for combination with **non-standard carriages** constructed by the customer to his design.

**Material** 1 column in electrolytic nickel-plated steel, trapeze screws and lead nuts in steel, sliding bearing in brass, 2 DIN 7984 M6x12 socket head screws in galvanised steel.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4mm). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Operation:** **STEP BY STEP (NO continuous operation!)**.

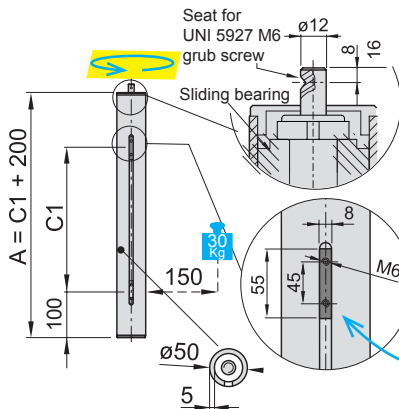
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



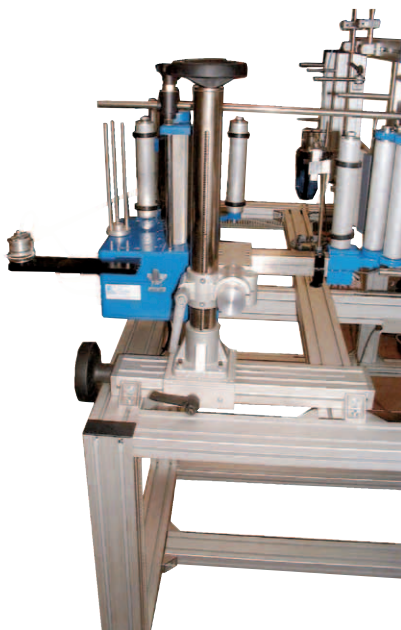
**Fastening holes for carriage drive**  
**WARNING:** the carriage you construct and fasten to the M6 screws of the lead nut should embrace the column like in our standard version  
 For more information, contact our Engineering Department.

Lead nut



↓ 1951

Column only Ø50



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Column mm marking	Weight Kg	Stock	€ piece
654843	510	310	no	4,0	✓	170,92
658863	610	410	no	4,8	✓	193,82
680714	710	510	no	5,6	▪	216,77
679764	810	610	no	6,3	▪	235,19
635984	860	660	no	6,7	▪	251,07
658873	1230	1030	no	9,6	▪	297,81

**Customisations** column stroke and length (A = max 2000 mm, min 250 mm).

Chemical nickel-plating Pg.214

▪ **Products not in stock** minimum order 1 piece, delivery in 15 days.



## 2657 With 1 carriage Ø40

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material:** 1 column in electrolytic nickel-plated steel, steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Operation:** **STEP BY STEP** (NO continuous operation!).

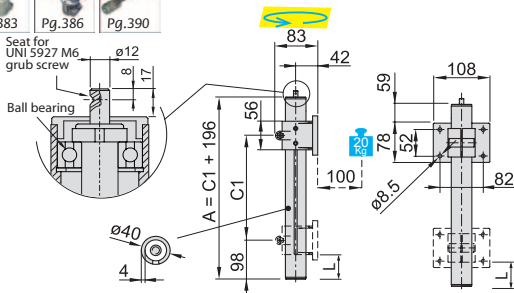
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+
	-	-35%	on request

Order code	A mm	C1 mm	L end stroke	Column mm marking	Weight Kg	Stock	€ piece
600565	506	310	72	no	4,3	■	321,24
680294	696	500	72	no	5,8	■	358,24

### Column only

600555	506	310	72	no	3,9	■	291,35
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**Customisations:** carriage RAL colour, column stroke and length (A = max 2000 mm).

Chemical nickel-plating Pg.214

■ **Products not in stock** minimum order 1 piece, delivery in 15 days.



3342

With 1 carriage **Ø35**

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material:** 1 column in electrolytic nickel-plated steel, steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr16 pitch 4 (1 handwheel turn = 4mm).

Positioning accuracy:  $\pm 0,3$  mm/300mm\*.

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**WARNING**

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations** 

Pg.274



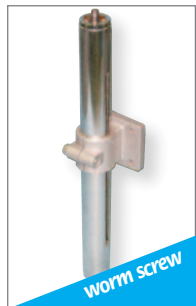
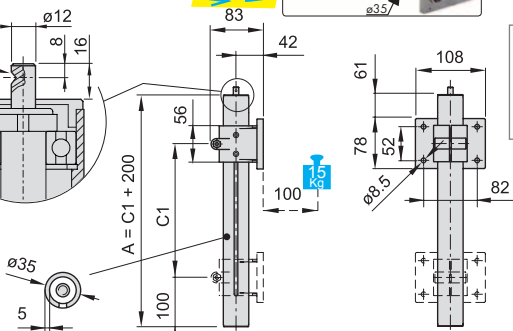
Pg.72



Pg.84

Seat for  
UNI 5927 M6  
grub screw

Ball bearing

CONTINUOUS  
OPERATION

3728

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	8+
		-35%	on request

Order code	A mm	C1 mm	Column mm marking	Weight Kg	Stock	€ piece
602487	510	310	no	3,8	■	321,24

**Column only**

654477	510	310	no	3,4	■	291,35
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**Customisations** carriage RAL colour, column stroke and length (A =max 2000 mm).

Chemical nickel-plating Pg.214

\*Products not in stock minimum order 1 piece, delivery in 15 days.



## 1972 With 1 carriage $\varnothing 30$

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL 9006 painted aluminium carriage, galvanised steel nuts and bolts.

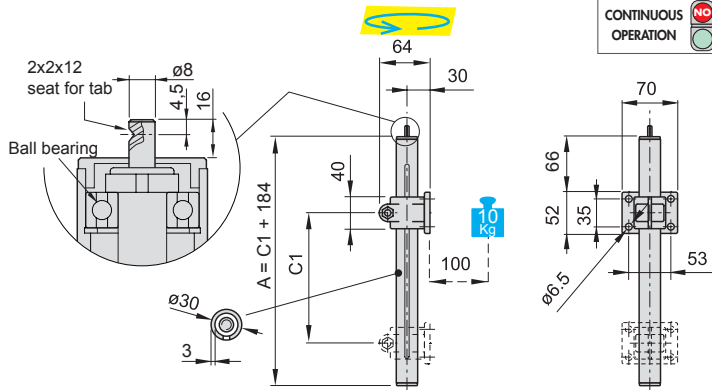
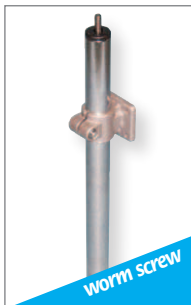
**Characteristics:** worm screw Tr16 pitch 4 (1 handwheel turn = 4mm).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
		-	-20%	on request		NO	NO	-40%	on request

Order code	A mm	C1 stroke	Material columns	Column mm marking	Weight Kg	Stock	€ piece
631868	410	226	nickel-plated steel	no	1,29	■	307,50
631858	410	226	stainless steel AISI304	no	1,40	✓	307,50

**Customizations** (Q.ty min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1450 mm), trapeze screw and lead nut: stainless steel.

Chemical nickel-plating Pg.214

■ **Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



1970

Column only  $\varnothing 30$ 

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments for combination with non-standard carriages constructed by the customer.

**Material:** column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 2 UNI 5933 M4X10 socket head screws in stainless steel.

**Characteristics:** worm screw Tr16 pitch 4 (1 handwheel turn = 4mm).

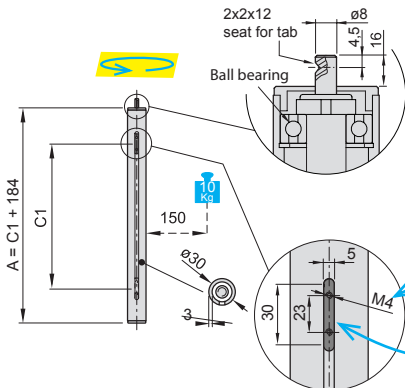
**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations** 

CONTINUOUS OPERATION



- Fastening holes for carriage drive  
**WARNING:** the carriage you construct and fasten to the M6 screws of the lead nut should embrace the column like in our standard version  
 For more information, contact our Engineering Department.

Lead nut

QUANTITY DISCOUNT		Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	<del>1+</del>	<del>5+</del>	8+	16+
Order code	A	C1			-20%	on request		NO	NO	-40%	on request
	mm	stroke	Material columns				Column mm marking		Weight Kg	Stock	€ piece
631618	410	226	nickel-plated steel				no		1,3	■	274,96
631758	410	226	stainless steel AISI304				no		1,3	✓	274,96

**Customizations** (min.8 pieces, delivery in 20 days) column: stroke and leght (A = 1450 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



## 4159 With 1 carriage Ø20

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 painted aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### Combinations



Seat for UNI 5927 M6 grub screw

4.5 Ø6

16

Ball bearing

Ø20

2.5

A = C1 + 127.5

C1

40

100

64

30

1 Kg

2° pin (see table)

70

52

37.75

35

Ø6.5

53

CONTINUOUS OPERATION



QUANTITY DISCOUNT		Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
Order code						on request		NO	NO	NO	on request
1 pin	2 pins	A mm	C1 mm	Material columns			Column mm marking	Weight Kg	Stock	€ piece	
692027	6920272P	200	72,5	nickel-plated steel			no	0,55	■	221,89	
631518	6315182P	200	72,5	stainless steel AISI304			no	0,55	■	221,89	
692037	6920372P	300	172,5	nickel-plated steel			no	0,70	■	234,60	
631528	6315282P	300	172,5	stainless steel AISI304			no	0,70	✓	234,60	
692047	6920472P	400	272,5	nickel-plated steel			no	0,85	■	247,31	
631538	6315382P	400	272,5	stainless steel AISI304			no	0,85	■	247,31	
692057	6920572P	500	372,5	nickel-plated steel			no	1,00	■	260,02	
631548	6315482P	500	372,5	stainless steel AISI304			no	1,00	■	260,02	

**Customizations** (min. 8 pieces, delivery in 20 days) carriage: RAL colour / shot peening / chemical nickel-plating; column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel.

Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



3817

Column only  $\emptyset 20$ 

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments for combination with non-standard carriages constructed by the customer.

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 painted aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

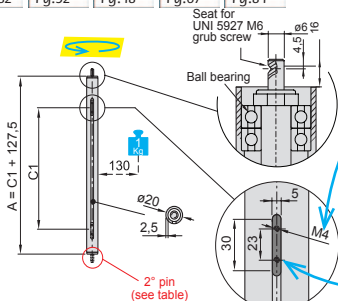
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

## Combinations



CONTINUOUS OPERATION



Fastening holes for carriage drive  
**WARNING:** the carriage you construct and fasten to the M6 screws of the lead nut should embrace the column like in our standard version  
For more information, contact our Engineering Department.

lead nut

QUANTITY DISCOUNT		Q.ty Discounts	Stainless steel AISI 304	1+	5+ -20%	8+ on request	Nickel-plated steel		5+	8+ -40%	16+ on request
Order code	1 pin	2 pins	A	C1	Material	Column mm	Weight	marking	Kg	Stock	€
691997	691997P	6919972P	200	72,5	nickel-plated steel	no	0,35			197,29	
631558	631558P	6315582P	200	72,5	stainless steel AISI304	no	0,35			197,29	
621508	621508P	6215082P	300	172,5	nickel-plated steel	no	0,50			210,00	
631568	631568P	6315682P	300	172,5	stainless steel AISI304	no	0,50			210,00	
692007	692007P	6920072P	400	272,5	nickel-plated steel	no	0,65			222,71	
631578	631578P	6315782P	400	272,5	stainless steel AISI304	no	0,65			222,71	
692017	692017P	6920172P	500	372,5	nickel-plated steel	no	0,80			235,42	
631588	631588P	6315882P	500	372,5	stainless steel AISI304	no	0,80			235,42	

**Customizations** (min.8 pieces, delivery in 20 days) column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 4205 With 1 cross-type carriage Ø20

**Use:** positioning adjustable on 2 axes **with worm screw for frequent adjustment.**

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 painted aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

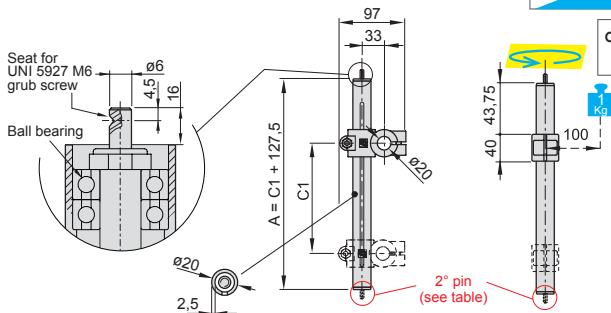
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269 .

**Combinations**



**CONTINUOUS OPERATION** NO YES



### QUANTITY DISCOUNT

Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
		-	-20%	on request		NO	NO	-40%	on request

Order code	A	C1	Material columns	Column mm marking	Weight Kg	Stock	€ piece
629707	200	72,5	nickel-plated steel	no	0,62	■	222,92
629717	200	72,5	stainless steel AISI304	no	0,62	■	222,92
629727	300	172,5	nickel-plated steel	no	0,77	■	235,63
629737	300	172,5	stainless steel AISI304	no	0,77	✓	235,63
629747	400	272,5	nickel-plated steel	no	0,92	■	248,34
629757	400	272,5	stainless steel AISI304	no	0,92	■	248,34
629767	500	372,5	nickel-plated steel	no	1,07	■	261,05
629777	500	372,5	stainless steel AISI304	no	1,07	■	261,05

**Customizations** (min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel.  
Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 1953

## With 1 carriage Ø18

**Use:** positioning adjustable on one axis with worm screw for frequent adjustments.

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 painted aluminium carriage, galvanised steel nuts and bolts.

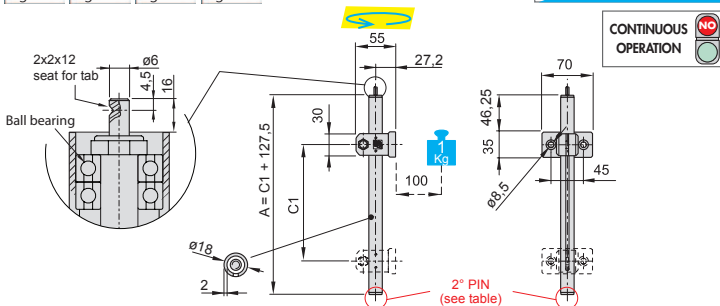
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



QUANTITY DISCOUNT		Q.ty Discounts	Stainless steel AISI 304	1+	5+	8+	Nickel-plated steel	1+	5+	8+	16+
				-	-20%	on request		NO	NO	-40%	on request
Order code		A	C1	Material	Column mm marking	Weight Kg	Stock	€			
1 pin	2 pins	mm	mm	columns				piece			
692687	692687P	200	72,5	nickel-plated steel	no	0,55	■	221,89			
692697	692697P	200	72,5	stainless steel AISI304	no	0,55	■	221,89			
631898	631898P	300	172,5	nickel-plated steel	no	0,70	■	234,60			
631888	631888P	300	172,5	stainless steel AISI304	no	0,70	✓	234,60			
692707	692707P	400	272,5	nickel-plated steel	no	0,85	■	247,31			
692717	692717P	400	272,5	stainless steel AISI304	no	0,85	■	247,31			
692727	692727P	500	372,5	nickel-plated steel	no	1,00	■	260,02			
692737	692737P	500	372,5	stainless steel AISI304	no	1,00	■	260,02			

**Customizations** (min.8 pieces, delivery in 20 days) carriage: RAL colour /shot peening / chemical nickel-plating; column: stroke and leght (A = 1000 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.



## 1973 Column only Ø18

Use: positioning adjustable on one axis with worm screw for frequent adjustments for combination with **non-standard carriages** constructed by the customer.

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 2 UNI 5931 M4X6 socket head screws in stainless steel.

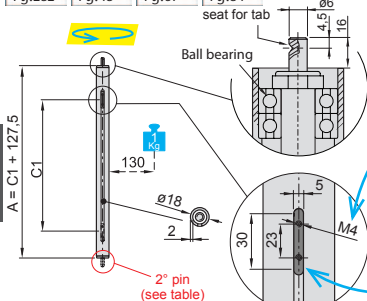
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



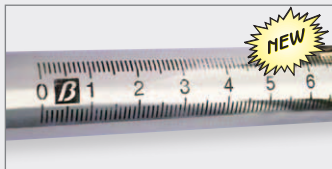
Fastening holes for carriage drive  
**WARNING:** the carriage you construct and fasten to the M6 screws of the lead nut should embrace the column like in our standard version  
 For more information, contact our Engineering Department.

Order code	Q.ty Discounts	Acciaio inox AISI 304				Nickel-plated steel	NO	NO	8+ 40%	16+ on request
		1+	5+	8+						
692947	6929472P	200	72,5	nickel-plated steel	no	0,35	█	197,29		
692957	6929572P	200	72,5	stainless steel AISI304	no	0,35	█	197,29		
631698	6316982P	300	172,5	nickel-plated steel	no	0,50	█	210,00		
631688	6316882P	300	172,5	stainless steel AISI304	no	0,50	✓	210,00		
692647	6926472P	400	272,5	nickel-plated steel	no	0,65	█	222,71		
692657	6926572P	400	272,5	stainless steel AISI304	no	0,65	█	222,71		
692667	6926672P	500	372,5	nickel-plated steel	no	0,80	█	235,42		
692677	6926772P	500	372,5	stainless steel AISI304	no	0,80	█	235,42		

**Customizations** (min.8 pieces, delivery in 20 days) column: stroke and leght (A=1000 mm), trapeze screw and lead nut: stainless steel. Chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days /8 pieces (nickel-plated steel), delivery in 20 days.

## Millimetre scale marking

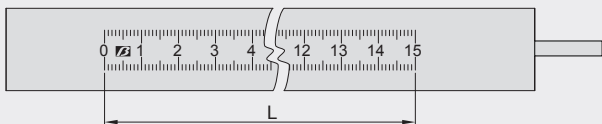


-The millimetre scale may be marked on tubes or round bars, so as to obtain an accurate result.

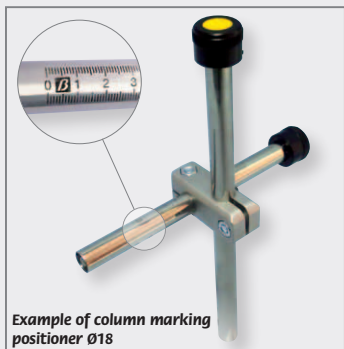
**All markings must be exclusively made on stainless steel or nickel-plated steel.**

-When made on positioner columns, it allows the user to check the carriage position along its travel.

-Characteristics: electrochemical marking in black colour.

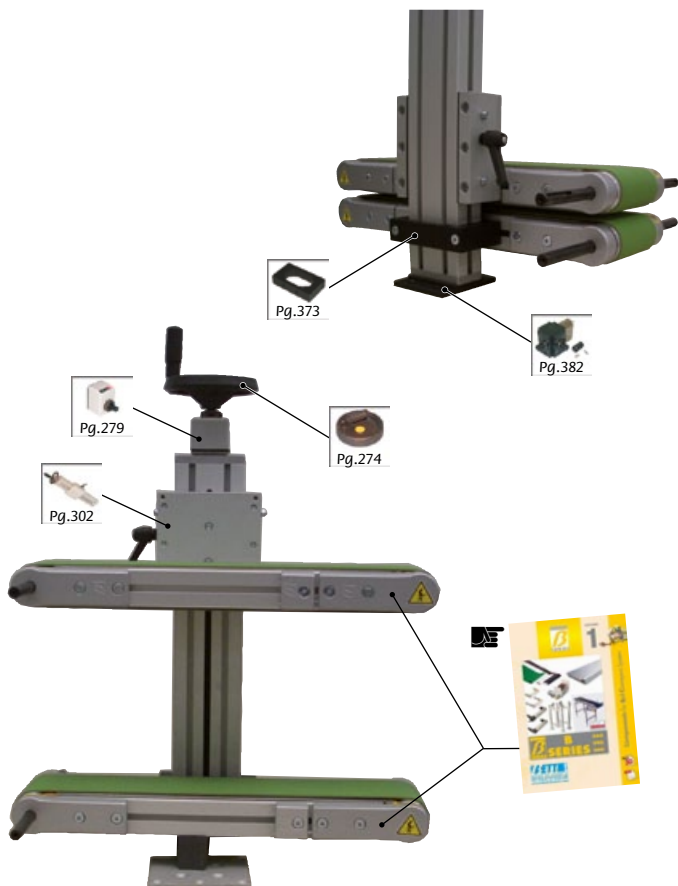


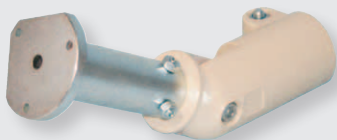
- Marking max. length: 35 cm.
- Marking price: 10€ (regardless of the length involved).
- Minimum order: 1 marking.
- Delivery: 5 days.



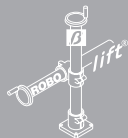
Example of column marking positioner Ø18







# Accessories



Handwheels

1 p.274



Revolution counters

1 p.279



Motor-drive kit

1 p.283



Bracket fittings

1 p.288



Additional accessories for positioners

1 p.293



## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data provided by us shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).



# 1897 Handwheel

## with **foldaway** grip

**Use:** for manual drive of the column and profile positioners with  $\varnothing 12$ ,  $\varnothing 8$  or  $\varnothing 6$  pin. The foldaway grip reduces the dimensions and the risk of movements caused by accidental impact.

**Material:** black reinforced polyamide, RAL1006 yellow reinforced polyamide cover, galvanised steel insert, UNI 5927 grub screw in burnished steel.

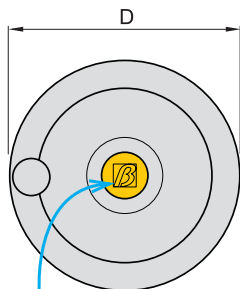
**Standard pack:** 1 piece.

**Combinations** based on the diameter, on  $\varnothing 60$ ,  $\varnothing 50$ ,  $\varnothing 40$ ,  $\varnothing 35$  column and profile positioners (see table).

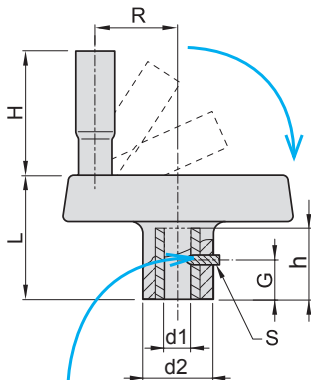
**Customisations** cover in RAL colour on request for seizable quantities.



safer



customisable RAL



drive and fastening grub screw

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	30+
	-	-3%	-7%	on request

Order code	Positioners combinations	d1 mm	d2 mm	d3 mm	D mm	R mm	L mm	H mm	G mm	h mm	S	Weight g	Stock	€ piece
627733	$\varnothing 60$ , $\varnothing 50$ , $\varnothing 40$ , $\varnothing 35$ , in profile	12 H7	28	36	125	47	65	68	8	22	M6x10	399	✓	18,92
697983	$\varnothing 30$	8 H7	20	28	100	37	48	57	10	22	M3x6	164	■	17,90
697973	$\varnothing 30$	8 H7	20	24	80	28	45	49	10	22	M3x6	138	✓	17,18
697963	$\varnothing 18$ , $\varnothing 20$	6 H7	16	24	80	28	45	49	10	32	M3x6	128	✓	17,18

\*Products not in stock minimum order 20 pieces, delivery in 15 days.



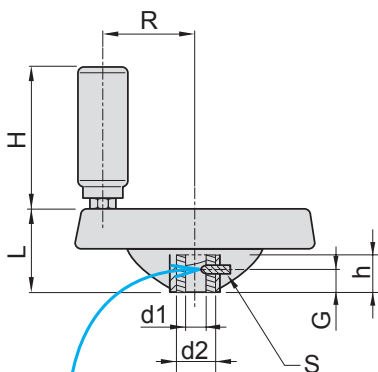
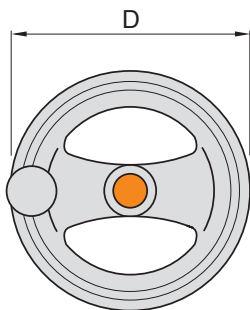
1467

# Handwheel with fixed grip

**Use:** for manual drive of the column and profile positioners with  $\varnothing 12$  pin.

**Material:** black reinforced polyamide, RAL2004 orange reinforced polyamide cover, galvanised steel insert, UNI 5927 grub screw in burnished steel.

**Standard pack:** 1 piece.



drive and fastening grub screw

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	30+
	-	-3%	-7%	on request

Order code	Positioners combinations	d1 mm	d2 mm	d3 mm	D mm	R mm	L mm	H mm	G mm	h mm	S	Weight g	Stock	€ piece
628642	$\varnothing 60, \varnothing 50,$ $\varnothing 40, \varnothing 35,$ in profile	12 H7	20	25	120	50	40	65	8	20	M5x10	211	✓	14,65

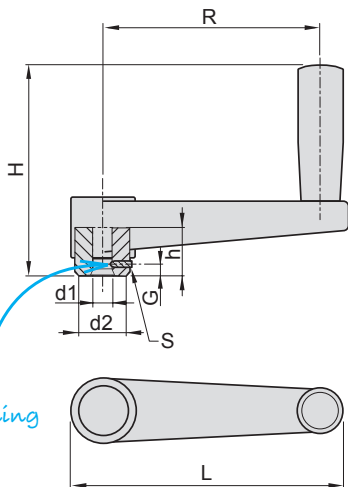


## 1767 Handle with fixed grip

**Use:** for manual drive of the column and profile positioners with  $\varnothing 12$  pin. Compared to the handwheel, it makes it easier to move heavy loads (compatible with the maximum capacity of the positioner) thanks to a greater range of rotation.

**Material:** black reinforced polyamide, anodised aluminium cover, insert and UNI 5927 grub screw in burnished steel.

**Standard pack:** 1 piece.



drive and fastening grub screw

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	30+
	-	-3%	-7%	on request

Order code	Positioners combinations	d1 mm	d2 mm	R mm	L mm	H mm	G mm	h mm	S	Weight g	Stock	€ piece
691832	$\varnothing 60, \varnothing 50, \varnothing 40, \varnothing 35$ , in profile	12 H7	28	130	162	129	7	30	M5x10	345	✓	25,98



1983

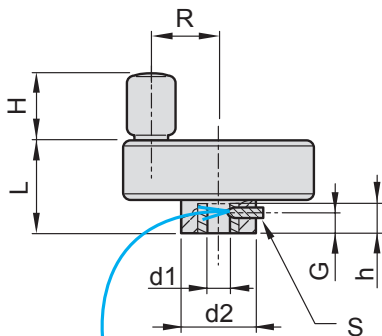
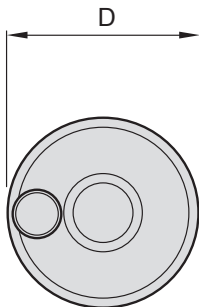
# Bossed knob

with **fixed** grip

**Use:** for manual drive of the  $\varnothing 18$  column positioners (with  $\varnothing 6$ ,  $\varnothing 8$  pin). The bossing allows a secure and comfortable grip for greater sensitivity in precision adjustments; the grip speeds up rotation for adjustments where several turns are required.

**Material** black polypropylene knob, black polyamide grip, brass insert, UNI 5925 grub screw in burnished steel.

**Standard pack:** 1 piece.



drive and fastening grub screw

### QUANTITY DISCOUNT

Q. ty Discounts	10+	30+
	-	on request

Order code	Positioners combinations	d1 mm	d2 mm	d3 mm	D mm	R mm	L mm	H mm	G mm	h mm	S	Weight g	Stock	€ piece
658823	$\varnothing 18 - \varnothing 20$	6 H9	14	20	50	17	25	19	5	19	M3x8	55	■	11,52
691277	$\varnothing 30$	8 H9	17	23	60	22	25	19	5	22	M3x8	75	■	17,90

■ **Products not in stock** minimum order 10 pieces, delivery in 10 days.

As an alternative, it is recommended to use the handwheel part 1897 in stock.



# 4148 Adjustment knob

**Use:** for manual drive of the column and profile positioners with  $\phi 8$  pin.

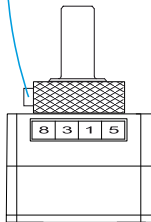
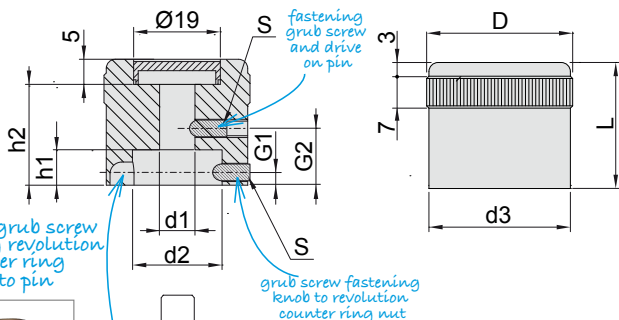
**Material:** black anodised aluminium, cover in yellow RAL 1006 reinforced polyamide, grub screw in brushed steel.

**Standard pack:** 1 piece.

**Combinations:** based on the diameter d1, on  $\phi 18$ ,  $\phi 20$ ,  $\phi 30$  column positioners (see table) and relative revolution counters.



reduced dimensions



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	50+
	-	-5%	-10%	on request

Order code	Positioners combinations	d1 Ø	d2 Ø	d3 Ø	D Ø	R mm	L mm	H mm	G mm	h mm	S	Weight g	Stock	€ piece
692067	Ø18, Ø20	6 H7	19,7	31	32	23	2,8	11	5,8	17	M3x4	40	✓	22,96
691737	Ø30	8 H7	19,7	31	32	23	2,8	11	5,8	17	M3x4	40	✓	22,96



1303

# Revolution counter

for positioners Ø60, Ø50 and with profile

**Use:** indicator for numerical reading of the movements on column and profile positioners with Ø12 pin and worm screw pitch 4.

**Material:** RAL7035 grey technopolymer body, burnished steel adapter pin, galvanized steel nuts and bolts.

**Characteristics:** increasing values with clockwise rotation;  
pitch 3 (1 handwheel turn = 0003 on the counter = 3mm) suitable for positioners with rack;

pitch 4 (1 handwheel turn = 0004 on the counter = 4mm) suitable for positioners with 1 carriage with worm screw pitch 4;

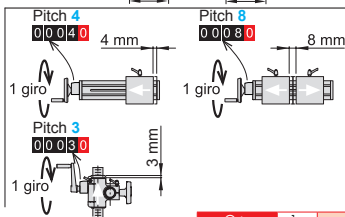
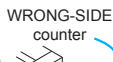
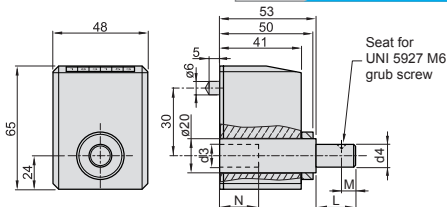
pitch 8 suitable for positioners with 2 opposed carriages with worm screw pitch 4.

**Standard pack:** 1 piece.



Clockwise direction

Possibility of Orientation  
(only for pitch 4-8 versions)

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	50+
	-	on request

Order code	Combinations positioners	Counter	Pitch	d3	d4	L	M	N	Weight	Stock	€
				mm	mm	mm	mm	mm	g	■	piece
630307	with rack	RIGHT SIDE	3	10	10	31	19	33	218	■	51,25
676558	with metric screw pitch 2,5	RIGHT SIDE	2,5	12	12	18	8,5	18,5	250	■	31,66
676678	with metric screw pitch 2,5	WRONG SIDE	2,5	12	12	18	8,5	18,5	250	■	31,66
683651	with worm screw pitch 4 1 carriage	RIGHT SIDE	4	12	12	18	8,5	18,5	250	✓	31,66
640707	with worm screw pitch 4 2 opposed carriages	RIGHT SIDE	8	12	12	18	8,5	18,5	250	■	31,66
685322	with worm screw pitch 4 1 carriage	WRONG SIDE	4	12	12	18	8,5	18,5	250	✓	31,66

•Products not in stock minimum order 1 piece, delivery in 20 days.



# 1975 Revolution counter

## for positioners Ø30, Ø20, Ø18

**Use:** indicator for numerical reading of the movements on Ø30 column positioners (with Ø8 pin and worm screw pitch 4).

**Material** RAL7035 grey technopolymer body, burnished steel adapter pin, tumbled aluminium fixing flange, galvanised steel nuts and bolts.

**Characteristics:** increasing values with clockwise rotation;  
pitch **3** (1 handwheel turn = 003 on the counter = 3 linear mm) suitable for 180 and 200 positioners with 1 carriage with pitch 3 worm screw.

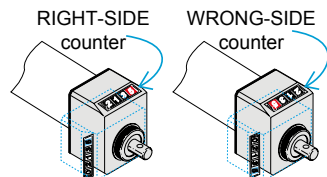
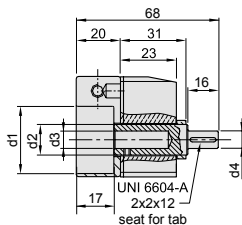
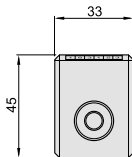
pitch **4** (1 handwheel turn = 004 on the counter = 4 linear mm) suitable for 300 positioners with 1 carriage with pitch 4 worm screw.

pitch **6** (1 handwheel turn = 006 on the counter = 6 linear mm) suitable for 180 and 200 positioners with 2 opposed carriages with pitch 6 worm screw.

pitch **8** (1 handwheel turn = 008 on the counter = 8 linear mm) suitable for 300 positioners with 2 opposed carriages with pitch 8 worm screw.

**Standard pack:** 1 piece.

**Combinations** 



### QUANTITY DISCOUNT

Q.ty Discounts	1+	50+
	-	on request

Order code	Positioners combinations	Counter	d1 Ø	d2 Ø	d3 Ø	d4 Ø	Pitch	Weight g	Stock	€ piece
658763	screw pitch 4 - 1 carriage	RIGHT SIDE	30	14	8	8	4	142	✓	82.35
655013	screw pitch 4 - 1 carriage	WRONG SIDE	30	14	8	8	4	142	✓	82.35
666928	screw pitch 4 - 2 opposed carriages	RIGHT SIDE	30	14	8	8	8	142	■	82.35
666938	screw pitch 4 - 2 opposed carriages	WRONG SIDE	30	14	8	8	8	142	■	82.35
622368	screw pitch 3 - 1 carriage	RIGHT SIDE	20	14	6	6	3	142	✓	82.35
622378	screw pitch 3 - 1 carriage	WRONG SIDE	20	14	6	6	3	142	✓	82.35
666968	screw pitch 3 - 2 opposed carriages	RIGHT SIDE	20	14	6	6	6	142	■	82.35
666978	screw pitch 3 - 2 opposed carriages	WRONG SIDE	20	14	6	6	6	142	■	82.35
658773	screw pitch 3 - 1 carriage	RIGHT SIDE	18	14	6	6	3	142	✓	48,67
655003	screw pitch 3 - 1 carriage	WRONG SIDE	18	14	6	6	3	142	✓	48,67
667008	screw pitch 3 - 2 opposed carriages	RIGHT SIDE	18	14	6	6	6	142	■	82.35
667018	screw pitch 3 - 2 opposed carriages	WRONG SIDE	18	14	6	6	6	142	■	82.35

\*Products not in stock minimum order 1 piece, delivery in 20 days.



4160

# Revolution counter kit

**with brake** for positioners Ø30, Ø20 and Ø18

**Use:** indicator for numerical reading of the movements on column and profile positioners Ø30 (with pin Ø8 and worm screw pitch 4) and Ø18/20 (with pin Ø6 and worm screw pitch 3), with brake for pin locking.

**Material:** RAL7035 grey technopolymer body, burnished steel adapter pin, tumbled aluminium fixing flange and brake flange, galvanised steel nuts and bolts.

**Characteristics:** increasing values with clockwise rotation;

pitch 3 (1 handwheel turn = 003 on the counter = 3 linear mm) suitable for 18Ø and 20Ø positioners with 1 carriage with pitch 3 worm screw.

pitch 4 (1 handwheel turn = 004 on the counter = 4 linear mm) suitable for 30Ø positioners with 1 carriage with pitch 4 worm screw.

pitch 6 (1 handwheel turn = 006 on the counter = 6 linear mm) suitable for 18Ø and 20Ø positioners with 2 opposed carriages with pitch 6 worm screw.

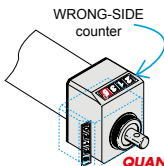
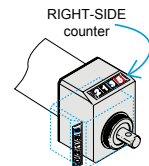
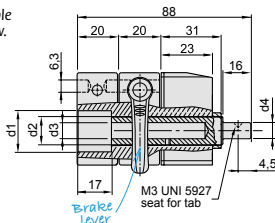
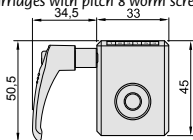
pitch 8 (1 handwheel turn = 008 on the counter = 8 linear mm) suitable for 30Ø positioners with 2 opposed carriages with pitch 8 worm screw.

**Combinations**

Pg.274

Pg.277

Pg.278

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	10+	50+
	-	-5%	-10%	on request

Order code	Positioners combinations	Counter	d1 Ø	d2 Ø	d3 Ø	d4 Ø	Pitch	Weight g	Stock	€ piece
622468	screw pitch 4 - 1 carriage	RIGHT SIDE	30	14	8	8	4	192	✓	105.58
622478	screw pitch 4 - 1 carriage	WRONG SIDE	30	14	8	8	4	192	✓	105.58
687498	screw pitch 4 - 2 opposed carriages	RIGHT SIDE	30	14	8	8	8	192	■	105.58
687508	screw pitch 4 - 2 opposed carriages	WRONG SIDE	30	14	8	8	8	192	■	105.58
622488	screw pitch 3 - 1 carriage	RIGHT SIDE	20	14	6	6	3	192	✓	105.58
622498	screw pitch 3 - 1 carriage	WRONG SIDE	20	14	6	6	3	192	✓	105.58
687538	screw pitch 3 - 2 opposed carriages	RIGHT SIDE	20	14	6	6	6	192	■	105.58
687548	screw pitch 3 - 2 opposed carriages	WRONG SIDE	20	14	6	6	6	192	■	105.58
622508	screw pitch 3 - 1 carriage	RIGHT SIDE	18	14	6	6	3	192	✓	105.58
622518	screw pitch 3 - 1 carriage	WRONG SIDE	18	14	6	6	3	192	✓	105.58
687578	screw pitch 3 - 2 opposed carriages	RIGHT SIDE	18	14	6	6	6	192	■	105.58
687588	screw pitch 3 - 2 opposed carriages	WRONG SIDE	18	14	6	6	6	192	■	105.58

•Products not in stock minimum order 1 piece, delivery in 20 days.



4161

# Revolution counter kit

with round angular idler for positioners Ø30, Ø20, Ø18

**Use:** angle adjustment (also where the shaft is in an uncomfortable position) with numerical reading of movements on column positioners Ø30 (with pin Ø8 and worm screw pitch4) and Ø18/20 (with pin Ø6 and worm screw pitch3).

**Material:** revolution counter in grey RAL 7035 technopolymer, brake flange and flange for positioner coupling in tumbled aluminum, small flange in RAL 7010 grey plastic, angular idler in anodised aluminum with steel shafts, nuts and bolts in galvanised steel.

**Characteristics:** increasing values with clockwise rotation;

pitch **3** (1 handwheel turn = 003 on the counter = 3 linear mm) suitable for 180 and 200 positioners with 1 carriage with pitch 3 worm screw.

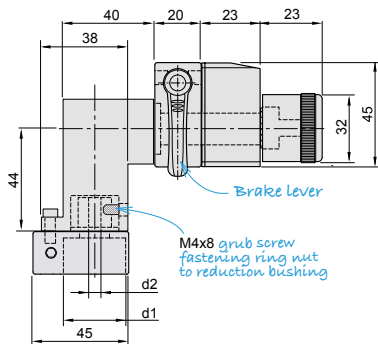
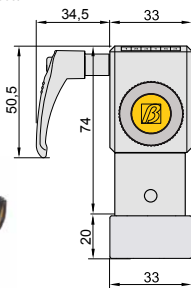
pitch **4** (1 handwheel turn = 004 on the counter = 4 linear mm) suitable for 300 positioners with 1 carriage with pitch 4 worm screw.

pitch **6** (1 handwheel turn = 006 on the counter = 6 linear mm)

suitable for 180 and 200 positioners with 2 opposed carriages with pitch 6 worm screw.

pitch **8** (1 handwheel turn = 008 on the counter = 8 linear mm) suitable for 300 positioners with 2 opposed carriages with pitch 8 worm screw.

**Standard pack:** 1 piece.



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	50+
	-	-5%	-10%	on request

Order code	Positioners combinations	d1 Ø	d2 Ø	Pitch	Weight g	Stock	€ piece
622418	screw pitch 4 - 1 carriage	30	8	4	390	■	263.94
631029	screw pitch 4 - 2 opposed carriages	30	8	8	390	■	263.94
622428	screw pitch 3 - 1 carriage	20	6	3	390	■	263.94
631039	screw pitch 3 - 2 opposed carriages	20	6	6	390	■	263.94
622438	screw pitch 3 - 1 carriage	18	6	3	390	■	263.94
631049	screw pitch 3 - 2 opposed carriages	18	6	6	390	■	263.94

\*Products not in stock minimum order: 1 piece, delivery in 20 days.



1764

# Drive kit Minimotor

**Use:** for motor drive of  $\varnothing 50$  and  $\varnothing 60$  column positioners.

**Material** painted aluminium adapter connector, steel flexible joint, galvanised steel nuts and bolts.

**Characteristics:** - power output: 0.18 kW

- no-load output revolutions: 70 rpm

- nominal output torque: 18 Nm (\*)

- voltage: 230/400 VAC - 50 Hz

- current: 0.9/0.52 A

- motor type: 2-pole, three-phase, asynchronous IP65 protection (CEI EN 60529)

(\*) for operating torques higher than 5.5 Nm, it is advisable to pin-lock the flexible joint with the pin of the positioner.

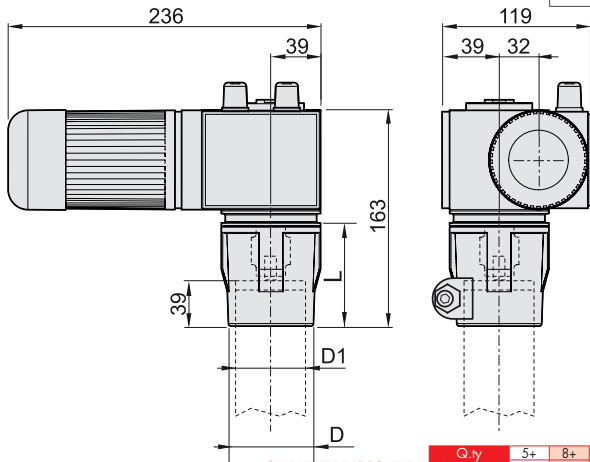
**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)



CONTINUOUS  
OPERATION



**QUANTITY DISCOUNT**

Q.ty Discounts	5+	8+	50+
	-	-5%	on request

Order code	D1 Ø	D mm	L mm	Finish	Weight Kg	Stock	€ piece
691702	50,3	66	75,6	grey RAL9006	5,2	■	644,89
691712	60,3	66	75,6	grey RAL9006	5,2	■	650,65

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 20 days.



## 3295

# Gearmotor coupling

## Bonfiglioli MVF30

**Use:** MVF30 gearmotor mount at the end of the column positioners.

**Material:** shot peening aluminium connector, 1 UNI 5931 socket head screw and 1 DIN 985 self-locking hexagon nut in galvanised steel.

**Standard pack:** 4 pieces.

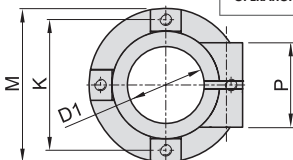
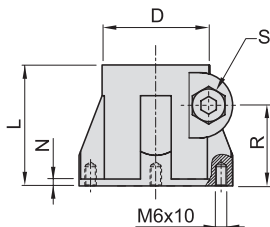
**Combinations:** ø30, ø35, ø40, ø50, ø60 column positioners.

**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

**Combinations**



CONTINUOUS OPERATION  NO



### QUANTITY DISCOUNT

Q.ty Discounts	4+	8+	50+
	-	-5%	on request

Order code	D1 Ø	D mm	L mm	K mm	M mm	N mm	P mm	R mm	S	Finish	Weight g	Stock	€ piece
602347	30,2	56	63	68	80	3,4	44	41,4	M10x35	shot peening	342	■	32,01
602357	35,2	56	63	68	80	3,4	44	41,4	M10x35	shot peening	338	■	32,01
602367	40,2	56	63	68	80	3,4	44	41,4	M10x35	shot peening	334	■	32,01
602377	50,3	66	75	68	80	4,4	60	50,4	M10x50	shot peening	435	■	32,01
602387	60,3	66	75	68	80	4,4	60	50,4	M10x50	shot peening	396	■	35,87

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 4 pieces, delivery in 10 days.



3158

# Gearmotor coupling

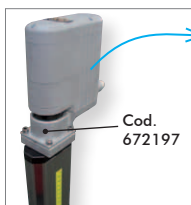
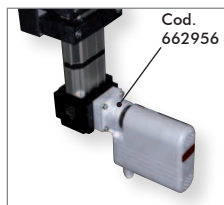
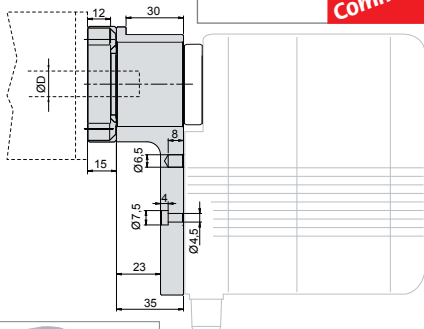
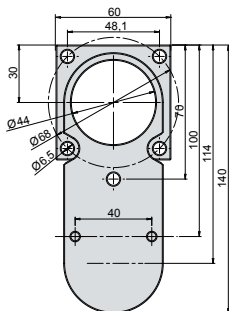
## Fiama SERVO 1-3 R75/1

**Use:** for motor-drive of 45x90 octagonal positioners part 1271-2125 and angular idler part 2283.

**Material:** aluminium flange, aluminium fastening plate, aluminium flexible joint, galvanised steel nuts and bolts.

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)



FIAMA gearmotor model. SERVO 1-3 R75/1

CONTINUOUS  
OPERATION

**QUANTITY DISCOUNT**

Q.ty	1+	4+	8+	16+
Discounts	-	-40%	-48%	on request

Order code	D Ø	Finish	Weight g	Stock	€ piece
662956	17	shot peening	423	■	316,73
672197	12	shot peening	423	■	316,73

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 pieces, delivery in 25 days.



## 2983

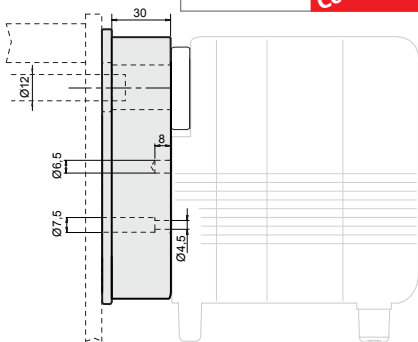
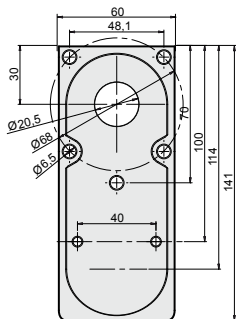
# Motor-drive kit for Fiama Servo.3M gearmotor

**Use:** for pantograph positioner motorisation for format change.

**Material** the kit includes 1 burnished steel reduction bush, 1 tumbled aluminium flange, galvanised steel nuts and bolts.

**Standard pack:** 1 motor-drive.

**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)



**QUANTITY DISCOUNT**

Q.ty	1+	4+	8+	16+
Discounts	-	-40%	-48%	on request

Order code

602786

Weight  
g

730

Stock

piece

199,88

Products not in stock minimum order 1 piece, delivery in 20 days.



2795

# Support for control panel holder

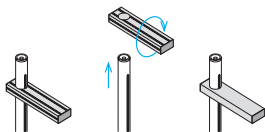
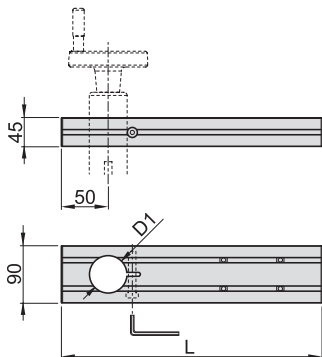
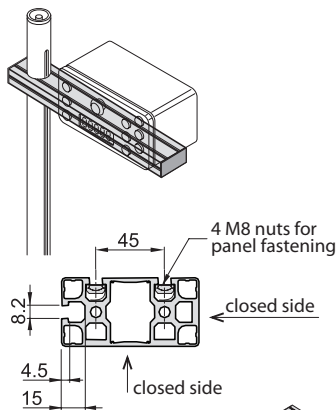
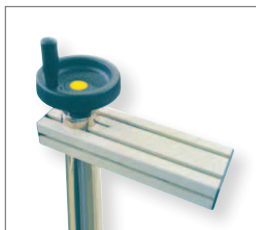
**Use:** support for control panels on vertical column.

**Material** painted aluminium support; 2 end caps in black ABS; 1 M8x60 socket head screw, 1 rectangular nut, 4 M8 nuts with spring in galvanised steel.

**Characteristics:** 2 sides with grooves, 2 closed sides; possibility of orienting the sides with grooves towards the top or the bottom as required.

**Standard pack:** 1 piece.

**Customisations** length L on request of the customer; minimum order 1 piece, delivery in 10 days.

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	10+	30+
	-	-50%	-58%	on request

Order code	D1 Ø	L mm	Finish	Weight Kg	Stock	€ piece
654357	60,2	600	silver-coloured anodised	2,2	■	102,06
630025	60,2	600	grey RAL9006	2,2	■	105,21

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 10 days.



# 1885 Bracket coupling

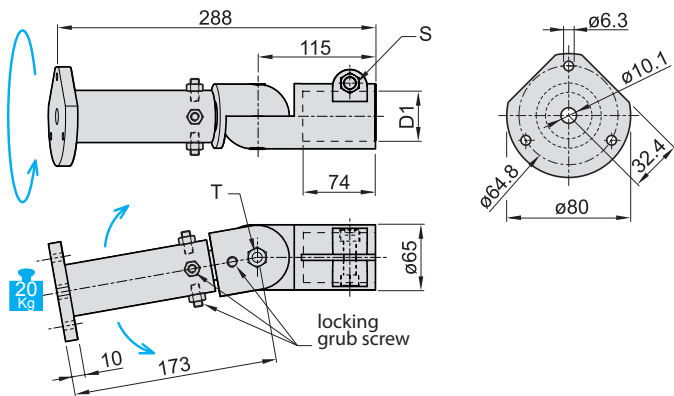
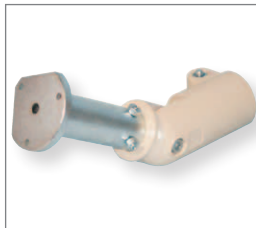
## articulated with turnable flange

**Use:** fastening of labelling machine heads on  $\varnothing 50$  positioners with possibility of position adjuster.

**Material:** articulated connector in painted aluminium, flange and nuts and bolts in galvanised steel.

**Standard pack:** 1 piece.

**Combinations:**  $\varnothing 50$  column positioners.



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	D1 $\varnothing$	S	T	Finish	Weight g	Stock	€ piece
627303	50,3	M10x50	M10x40	grey RAL9006	2062	■	168,81

**Personalizations:** other finishes on request Pg.214

•Products not in stock minimum order 10 pieces, delivery in 30 days.



1892

# Bracket coupling

## articulated

**Use:** articulated support for fastening coupling flanges to labelling machine heads. Applicable on  $\varnothing 50$  positioners.

**Material** articulated connector in painted aluminium, galvanised steel nuts and bolts.

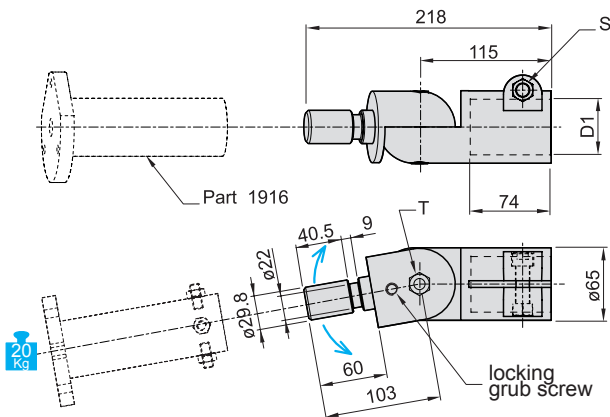
**Standard pack:** 1 piece.

**Combinations**  $\varnothing 50$  column positioners.

**Combinations**



Pg.290



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	D1 $\varnothing$	S	T	Finish	Weight g	Stock	€ piece
634033	50,3	M10x50	M10x40	grey RAL9006	1090	■	141,35
627593	50,3	M10x50	M10x40	grey RAL7032	1090	■	141,35
634043	50,3	M10x50	M10x40	grey RAL7035	1090	■	141,35
672307	50,3	M10x50	M10x40	black RAL9005	1090	■	141,35

**Personalizations** other finishes on request Pg.214

**\*Products not in stock** minimum order 1 pieces, delivery in 10 days.



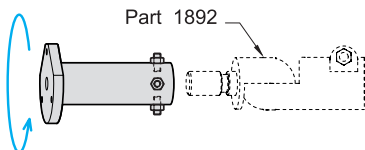
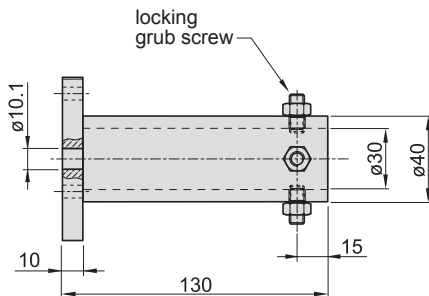
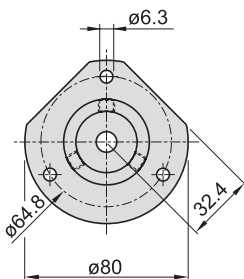
## 1916 **End flange** turnable

**Use:** used in combination with the articulated coupling part 1892, it allows fastening the labelling machine heads on the positioners making it possible to adjust rotation.

**Material:** flange and nuts and bolts in galvanised steel.

**Standard pack:** 1 piece.

**Combinations**



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	Weight g	Stock	€ piece
633793	990	■	27,42

■ Products not in stock minimum order 10 pieces, delivery in 30 days.



1917

# Bracket coupling

**fixed**

**Use:** labelling machine head fastening on  $\varnothing 50$  positioners with possibility of adjusting rotation.

**Material:** black anodised aluminium connector, 2 UNI 5931 M8 socket head screws in galvanised steel.

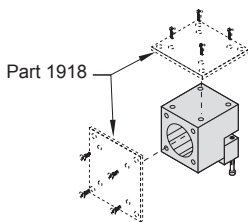
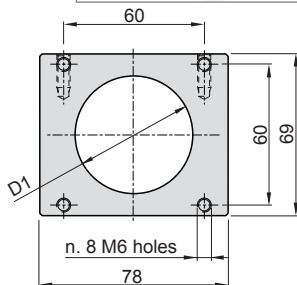
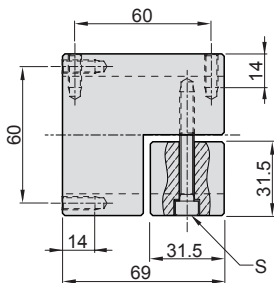
**Standard pack:** 1 piece.

**Combinations:**  $\varnothing 50$  column positioners.

**Combinations:**



Pg.292

**QUANTITY DISCOUNT**

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	D1 $\varnothing$	S	Finish	Weight g	Stock	€ piece
633903	50,3	M8x45	black anodised	620	✓	65,15

**Personalizations:** other finishes on request Pg.214



# 1918 Adapter plate

**Use:** in combination with coupling part 1917, it is used to fasten the labelling machine heads on the positioners.

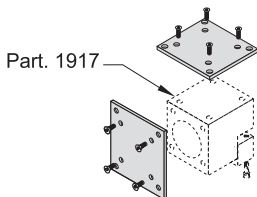
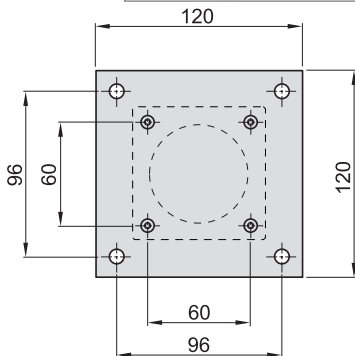
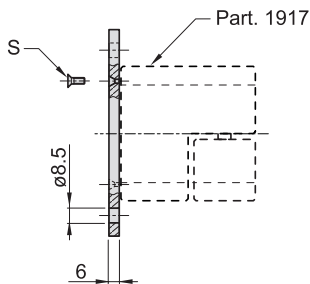
**Material:** black anodised aluminium, 4 UNI 5933 M6 socket head screw in galvanised steel.

**Standard pack:** 1 piece.

**Combinations**



Pg.291



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	S	Finish	Weight g	Stock	€ piece
633913	M6x20	black anodised	239	✓	10,00

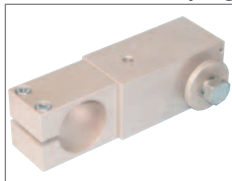
**Personalizations** other finishes on request Pg.214



# Additional accessories for positioners

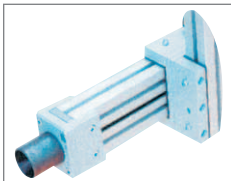
2003

**Orientable bracket coupling**



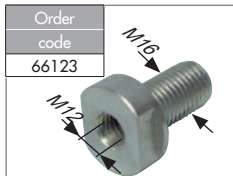
1978

**Bracket coupling**



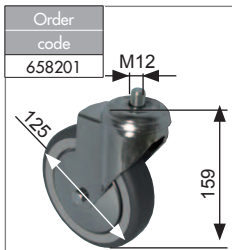
816

**Reduction bush**



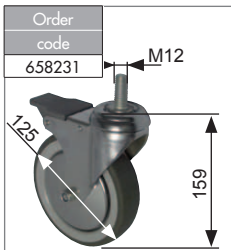
824

**Wheel**



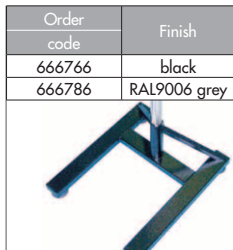
828

**Wheel with brake**

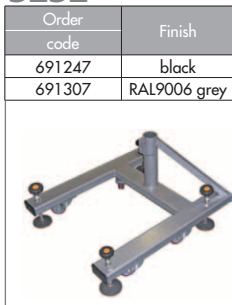


3219

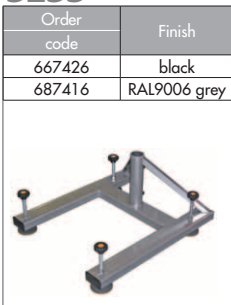
**Standard base**



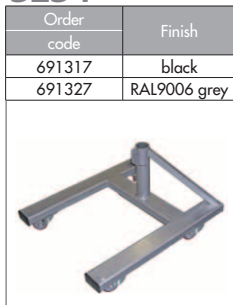
3232 **Feet and wheels**



3233 **Feet only**

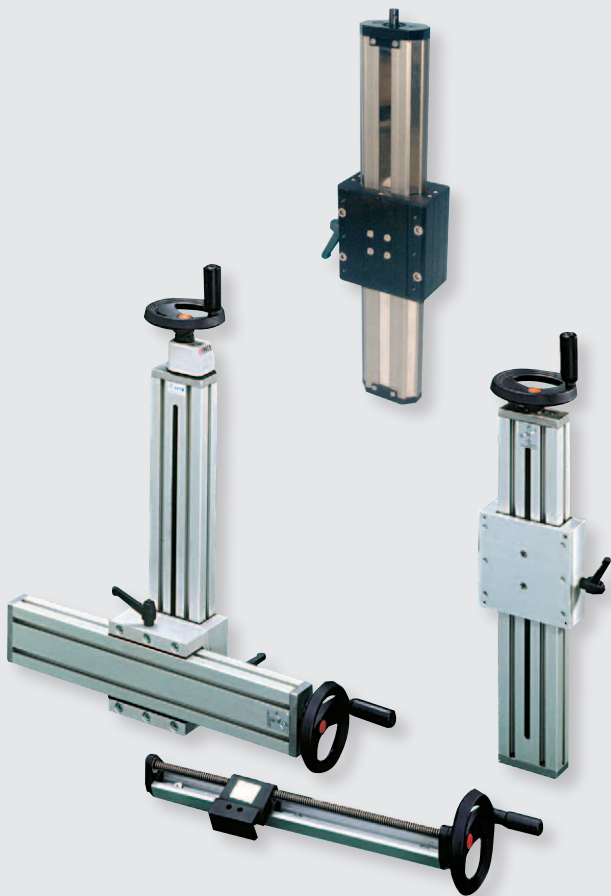


3234 **Wheels only**









# Profile positioners for **Setup**

Technical information and application diagrams

① p.211



Cross

① p.298



With 1 carriage

① p.302



Light

① p.307



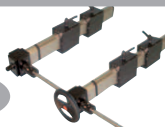
Accessories

① p.273



For synchronisation

① p.381





## 1270 → Cross 45x90 with grooves

**Use:** positioning adjustable on two axes **with worm screw**. Compatible with the Robomec structural system (see Handbook 4), the grooves offer the possibility of bracketing.

**Material:** profiles in anodised aluminium, trapeze screws and lead nuts in steel, 1 anodised aluminium carriage, 2 black reinforced polyamide ratchet levers, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr 20pitch 4 (1 handwheel turn = 4mm). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

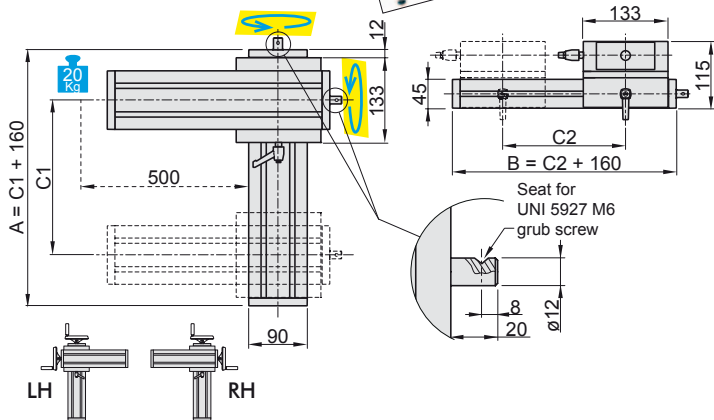
**Personalizations:** profile stroke and length ( $A = \text{max } 2000 \text{ mm}$ ), minimum order 1 piece, delivery in 10 days.

**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations





↓ 1270

# Cross

## 45x90 with grooves

**QUANTITY DISCOUNT**

Q. ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	Version	Handwheel	Rev. counter	Weight	Stock	€ piece
						Part. 1467	Part. 1303	kg		
624752	300	300	140	140	RH	yes	no	6,5	■	701,79
610913	300	300	140	140	RH	yes	yes	7,0	■	765,11
624722	350	350	190	190	RH	yes	yes	7,6	■	765,13
669833	500	300	340	140	RH	no	no	7,9	■	624,48
664364	500	300	340	140	RH	yes	yes	8,9	■	687,80
610903	500	350	340	190	RH	yes	yes	9,2	■	656,14
624772	500	500	340	340	RH	no	no	8,6	■	547,17
665501	500	500	340	340	RH	yes	no	9,0	■	547,17
673631	500	500	340	340	RH	yes	yes	9,5	■	610,48
624742	500	1000	340	840	RH	yes	no	12,1	■	636,37
669843	600	210	440	50	RH	no	no	7,4	■	642,33
621764	600	210	440	50	LH	no	no	7,4	■	642,33
669853	700	350	540	190	RH	no	no	8,9	■	660,18
624662	700	500	540	340	RH	yes	no	10,2	■	582,84
624762	700	500	540	340	RH	yes	yes	10,7	■	646,48
610893	700	700	540	540	RH	yes	no	11,5	■	618,56
680744	800	700	640	540	LH	yes	no	12,1	■	636,55
680854	900	800	740	640	RH	yes	yes	13,9	■	735,62
624732	1050	500	890	340	RH	yes	yes	13,0	■	708,93
610923	1200	600	1040	440	LH	yes	no	14,1	■	689,96

**Personalizations** profile stroke and length (A = max 2000 mm).

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



## 2155 → Cross 45x90 octagonal, closed

**Use:** positioning adjustable on two axes **with worm screw**. Compared to part 1270 (with grooves) it is more robust and cleanable.

**Material** profiles in titanium-coloured anodised aluminium, trapeze screws and lead nuts in steel, 1 black anodised aluminium carriage, 2 black reinforced polyamide ratchet levers, AISI 304 stainless steel nuts and bolts.

**Maintenance:** self-lubricating sliding components.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4 mm). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Personalizations** RAL colour, profile stroke and length (A = max 2000 mm), minimum order 1 piece, delivery in 10 days.

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Machining Pg.378

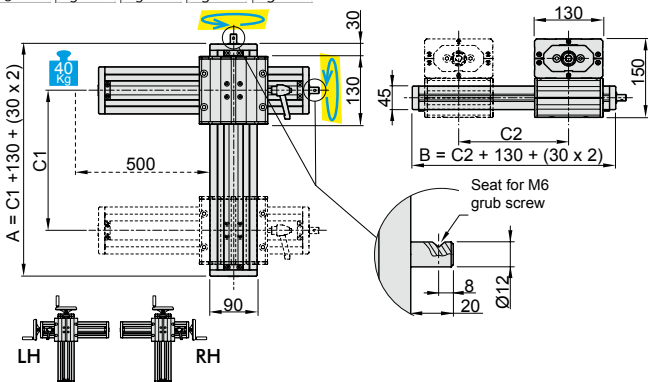
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



CONTINUOUS  
OPERATION





↓ 2155

**Cross**45x90 octagonal, **closed****QUANTITY DISCOUNT**

Q. ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	C2 mm	Version	Handwheel Part. 1467	Rev. counter Part. 1303	Weight kg	Stock	€ piece
698633	500	500	310	310	RH	-	-	11.0	■	547,17
636474	520	520	330	330	RH	-	-	11.2	■	554,32
679974	674	674	484	484	RH	-	-	12.8	■	605,30

**Personalizations** colour, profile stroke and length (A = max 2000 mm).

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



## 1271 → With 1 carriage 45x90 with grooves

**Use:** positioning adjustable on one axis **with worm screw**. Compatible with the Robomec structural system (see Handbook 4), the grooves offer the possibility of bracketing.

**Material** profile in anodised aluminium, trapeze screw and lead nut in steel, 1 anodised aluminium carriage, 1 black reinforced polyamide ratchet lever, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 RH pitch 4 (1 handwheel turn = 4mm). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

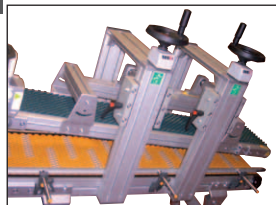
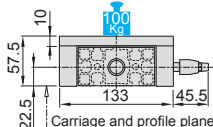
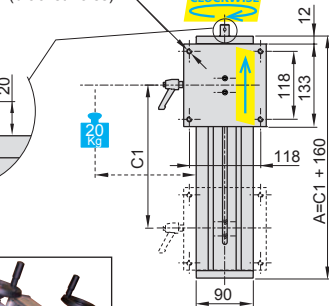
### Combinations



n.4 M6 depth10  
(bracket holes)

Seat for  
UNI 5927 M6  
grub screw

$\varnothing 12$   
8  
20





↓ 1271

# With 1 carriage

## 45x90 with grooves

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Handwheel Part.1467	Rev. counter Part.1303	RPM counter	Weight kg	Stock	€ piece
669733	300	140	no	no	Commodity -	3,5	■	353,87
686282	300	140	yes	no	Commodity -	3,7	■	353,87
624692	300	140	yes	yes	Commodity RIGHT SIDE pitch 4	4,0	■	385,53
681154	350	190	no	no	Commodity -	3,3	■	353,87
624702	350	190	yes	no	Commodity -	3,6	■	353,87
654533	400	240	no	no	Commodity -	3,7	■	353,87
618122	400	240	yes	yes	Commodity RIGHT SIDE pitch 4	4,1	■	385,53
669753	500	340	no	no	-	4,3	■	276,55
665511	500	340	yes	no	-	4,5	■	276,55
673641	500	340	yes	yes	LEFT SIDE pitch 4	4,7	■	308,67
665652	545	385	yes	no	-	4,8	■	284,28
665612	550	390	yes	yes	RIGHT SIDE pitch 4	5,1	■	317,58
669743	575	415	no	no	-	4,7	■	289,95
654553	600	440	no	no	-	4,9	■	287,22
654543	600	440	yes	no	-	5,1	■	294,40
624652	600	440	yes	yes	RIGHT SIDE pitch 4	5,4	■	326,51
624712	650	490	no	no	-	5,2	■	303,32
680954	650	490	yes	no	-	5,4	■	303,37
686302	660	500	yes	yes	RIGHT SIDE pitch 4	6,0	■	344,35
680864	660	500	yes	yes	LEFT SIDE pitch 4	6,0	■	344,35
686262	700	540	yes	no	-	5,7	■	312,23
680824	750	590	yes	yes	-	6,3	■	352,90
665642	800	640	no	no	-	6,2	■	330,08
665632	800	640	yes	no	-	6,4	■	330,08
624682	900	740	no	no	-	6,8	■	347,92
665622	900	740	yes	no	-	7,0	■	347,95
686322	1000	840	no	no	-	7,4	■	365,80
624642	1000	840	yes	yes	RIGHT SIDE pitch 4	7,9	■	397,87
679704	1020	860	no	no	-	7,6	■	369,52
602123	1050	890	no	no	-	7,7	■	374,88
686272	1100	940	yes	no	-	8,3	■	383,61
686292	1150	990	yes	yes	RIGHT SIDE pitch 4	8,8	■	433,56
679694	1200	1040	no	no	-	8,7	■	401,70
669773	1200	1040	yes	no	-	8,9	■	401,50
665602	1260	1100	yes	yes	RIGHT SIDE pitch 4	9,5	■	444,27
686252	1350	1190	yes	yes	RIGHT SIDE pitch 4	10,1	■	460,32
679714	1500	1340	yes	no	-	10,8	■	455,32
669763	1700	1540	no	no	-	11,9	■	490,75
679724	1950	1790	no	no	-	13,4	■	535,77
624632	2000	1840	yes	yes	RIGHT SIDE pitch 4	14,2	■	576,30
680724	2200	2040	no	no	-	15,0	■	580,47
681184	2200	2040	yes	no	-	15,2	■	599,38

Personalizations profile stroke and length (A = max 2940 mm).

\*Products not in stock minimum order 1 piece, delivery in 10 days.



## 2125 → With 1 carriage 45x90 closed, octagonal

**Use:** positioning adjustable on one axis **with worm screw**. Compared to the version with grooves it is **more rigid and cleanable**.

**Material:** profile in titanium-coloured anodised aluminium, trapeze screw and lead nut in steel, 1 black anodised aluminium carriage, 1 black reinforced polyamide ratchet lever, AISI 304 stainless steel nuts and bolts.

**Maintenance:** self-lubricating sliding components.

**Characteristics:** Tr20 worm screw, pitch 4 (1 handwheel turn = 4 mm). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$ .

**Personalizations:** minimum order 1 piece, delivery in 10 days.

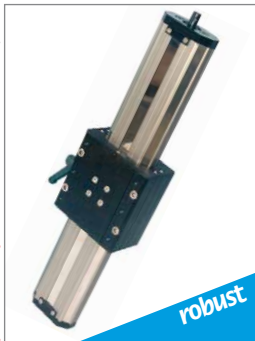
**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Machining Pg.378

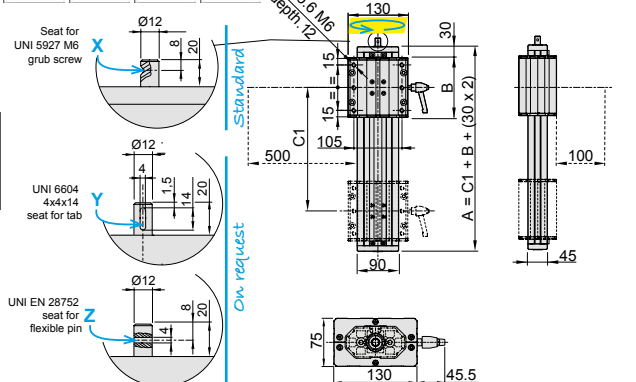
### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



**robust**

### Combinations





↓ 2125

## With 1 carriage

45x90 closed, octagonal

A = max 4000 mm,  
B = min. 70; max 500 mm

Add the letter corresponding to the desired handwheel coupling model to the order code:

Order example:

680734/X = with grub screw seat

680734/Y = with tab seat

680734/Z = with flexible pin seat



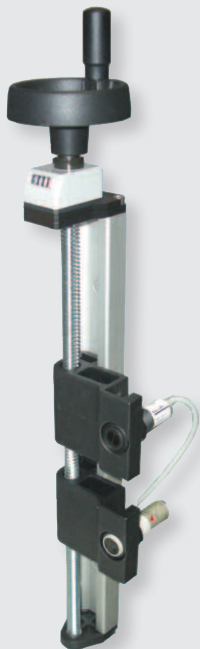
### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	Screw pin	A mm	B mm	C1 mm	Handwheel Part.1467	Rev. counter Part.1303	Weight kg	Stock	€ piece
690173	X	500	130	326	no	no	5,2	■	276,55
676423	X	600	130	426	no	no	5,9	■	294,43
680624	X	674	130	500	no	no	6,4	■	307,66
634784	X	700	130	526	no	no	6,6	■	312,23
630985	X	800	130	626	no	no	7,3	■	330,19
680574	X	900	130	726	no	no	8,0	■	348,06
680084	X	1070	130	896	no	no	9,3	■	378,99
681114	X	1174	130	1000	no	no	10,0	■	397,05
679984	X	1200	130	1026	no	no	10,2	■	297,51
688805	X	1250	130	1076	no	no	10,6	■	410,63
680734	X	1474	130	1300	no	no	12,2	■	450,68

Personalizations profile stroke and length (A=max 2940 mm); B=min. 70 - max 500 mm.

■ Products not in stock minimum order 1 piece, delivery in 10 days.





3719

# Light with one carriage

**Use:** positioning adjustable on one axis **with worm screw.**

**Material** anodised aluminium profile; steel trapeze screw; 1 carriage, 2 black reinforced polyamide terminals; 4 M4 socket head screws, 3 M6x16 oval-headed screws and 3 M6 square nuts in galvanised steel.

**Characteristics:** worm screw Tr12 pitch 3 (1 handwheel turn = 3 mm).

**Personalizations** profile stroke and length (A = max 970 mm), minimum order 1 piece, delivery in 10 days.

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

**Combinations**



Pg.274

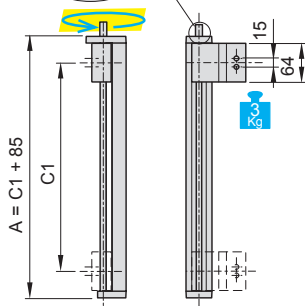
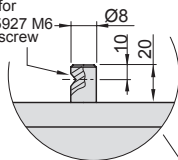


Pg.309



Pg.430

Seat for  
UNI 5927 M6  
grub screw

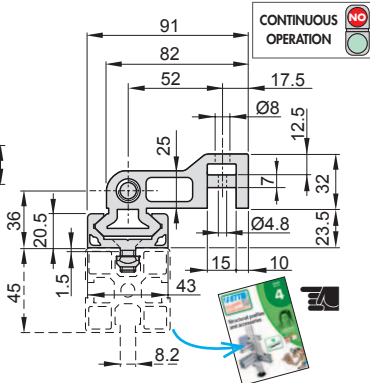


$$A = C1 + 85$$

C1



low-cost

CONTINUOUS  
OPERATION

### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Handwheel Part. 1897	Weight kg	Stock	€ piece
644947	435	350	no	1,1	■	89,07
644957	585	500	no	1,4	■	98,32
644967	700	615	no	1,6	■	105,53

**Personalizations** profile stroke and length (A = max 970 mm).

\*Products not in stock minimum order 1 piece, delivery in 10 days.



## 3720 Light with 2 carriages

**Use:** positioning adjustable on one axis **with worm screw**, carriages with opposed movement for format change adjustments.

**Material:** anodised aluminium profile; steel trapeze screw; 2 carriages, 2 black reinforced polyamide terminals; 4 M4 socket head screws, 3 M6x16 oval-headed screws and 3 M6 square nuts in galvanised steel.

**Characteristics:** worm screw Tr12 pitch 3, double-threaded (**1 handwheel turn = 6 mm on each carriage**).

**Personalizations:** profile stroke and length (A = max 1950 mm), minimum order 20 pieces, delivery in 15 days.

**Operation:** **STEP BY STEP (NO continuous operation!)**.

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

**Combinations**



Pg.274

Pg.309

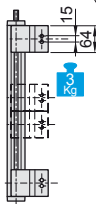
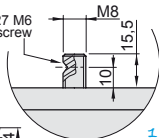
Pg.430



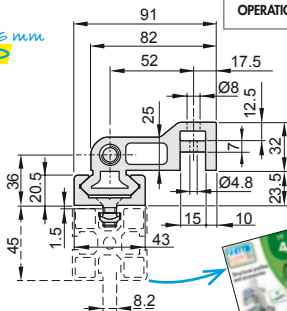
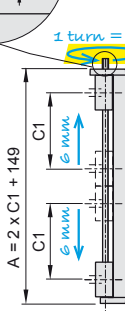
low-cost

CONTINUOUS OPERATION

Seat for UNI 5927 M6 grub screw



1 turn = 6 mm



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Handwheel Part. 1897	Weight kg	Stock	€ piece
644977	400	125	no	1,2	■	146,18

**Personalizations:** profile stroke and length (A = max 1950 mm).

x

■ Products not in stock minimum order 1 piece, delivery in 10 days.

x Products not in stock minimum order 20 pieces, delivery in 15 days.



3721

## Revolution counter kit

**Use:** for manual positioner drive, with indicator for numerical reading of carriage movement.

**Material:** handwheel in black reinforced polyamide, revolution counter in grey RAL 7035 technopolymer, adapter pin in burnished steel.

**Characteristics:** Version with pitch 3, increasing values with clockwise rotation (1 handwheel turn = 003 on the counter) suitable for positioners Part 3719 light with 1 carriage.

Version with pitch 12, increasing values with anticlockwise rotation (1 handwheel turn = 012 on the counter) suitable for positioners Part 3720 light with 2 opposed carriages.

**Standard pack:** 1 piece.

## Vertical application

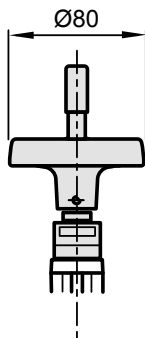
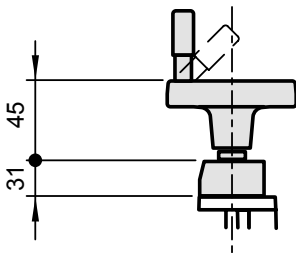
RIGHT SIDE counter



## Horizontal application



WRONG SIDE counter



## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	Positioner combinations	Counter	Pitch	Weight g	Stock	€ piece
644987	Part. 3719 light	Right side	3	400	■	82,40
644997	Part. 3719 light	Wrong side	3	400	■	82,40
617869	Part. 3720 light	Right side	12	400	■	82,40
617879	Part. 3720 light	Wrong side	12	400	■	82,40

■ Products not in stock minimum order 1 piece, delivery in 20 days.

## 3727

# Handwheel kit with revolution counter and **brake**

**Use:** for manual positioner drive, with indicator for numerical reading of carriage movement and brake for pin locking.

**Material** handwheel in black reinforced polyamide, revolution counter in grey RAL 7035 technopolymer, adapter pin in burnished steel, polyamide end piece, tumbled aluminium brake flange, small lever in RAL 7010 grey plastic.

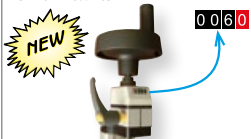
**Characteristics:** Version with pitch 3, increasing values with clockwise rotation (1 handwheel turn = 003 on the counter) suitable for positioners Part 3719 light with 1 carriage.

Version with pitch 12, increasing values with anticlockwise rotation (1 handwheel turn = 012 on the counter) suitable for positioners Part 3720 light with 2 opposed carriages.

**Standard pack:** 1 piece.

### Vertical application

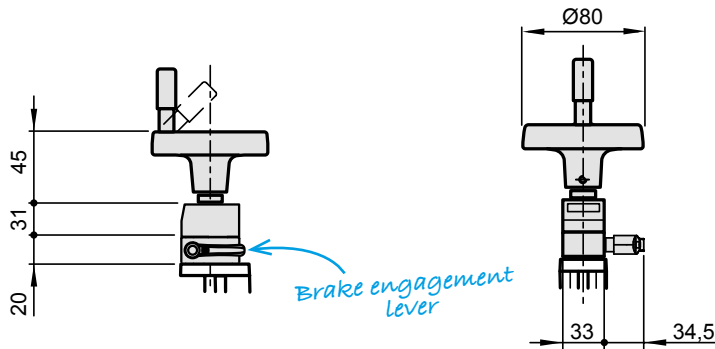
RIGHT SIDE counter



### Horizontal application



WRONG SIDE counter



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	Positioner combinations	Counter	Pitch	Weight g	Stock	€ piece
645067	Part. 3719 light	Right side	3	450	■	105,63
645057	Part. 3719 light	Wrong side	3	450	■	105,63
617859	Part. 3720 light	Right side	12	450	■	105,63
617849	Part. 3720 light	Wrong side	12	450	■	105,63

■ **Products not in stock** minimum order 1 piece, delivery in 20 days (unless stock runs out).



## On request

**3725** Knob with revolution counter and brake

**vertical** application



**3726** Knob with revolution counter

**vertical** application



**3727** Handwheel with revolution counter and brake

**vertical** application



**3722** Siko knob with integrated revolution counter

**horizontal** application



**3727** Handwheel with revolution counter and brake

**horizontal** application



**3723** Knob with revolution counter and brake on angle for

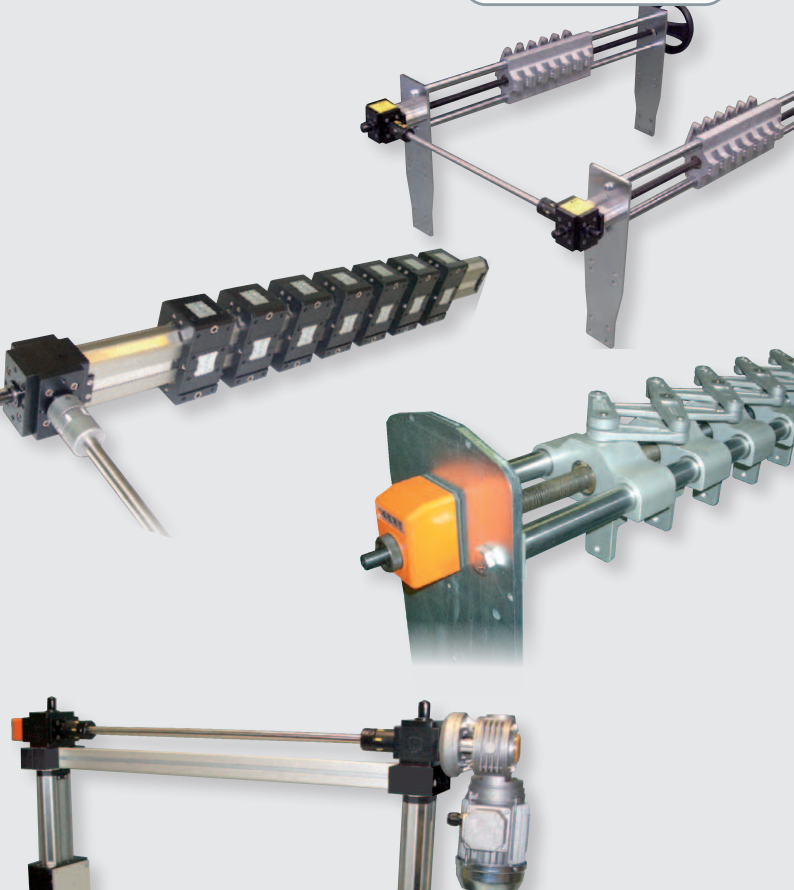
**horizontal** reading





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# Positioners for format change



Technical information and application diagrams

1 p.211



Column with 2 opposed carriages

1 p.314



2-4 opposed carriages in profile

1 p.332



2-4 opposed carriages in octagonal profile

1 p.334



Linked carriages in octagonal profile

1 p.342



Pantograph system

1 p.346



For synchronisation

1 p.381





2994

## With 2 opposed carriages

Ø60

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3$  mm/300mm\* for each carriage travel.

**Operation:** STEP BY STEP (NO continuous operation!). (max 70 rpm; max time = min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**WARNING**

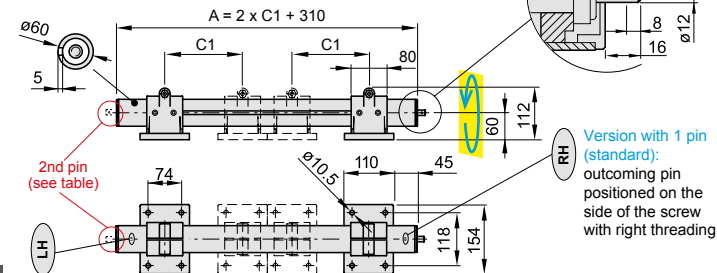
\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations** 

pitch 2



CONTINUOUS OPERATION

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	2 pins	A mm	C1 mm	Column mm marking	Weight kg	Stock	€ piece
615146	6151462P	510	100	no	7,9		391,57

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214 ; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.

# 4302 With 2 cross-type opposed carriages Ø60

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3$  mm/300mm\* for each carriage travel.

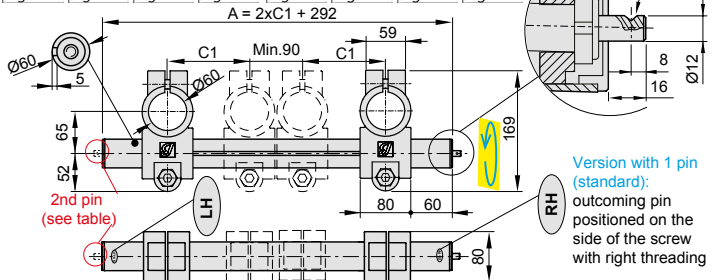
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



Version with 1 pin (standard):  
outcoming pin positioned on the side of the screw with right threading

### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	contact us

Order code	A	C1	Column mm marking	Weight kg	Stock	€ piece
1 pin	mm	mm				
2 pins						
687098	510	109	no	7,8	■	403,32

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 2000 mm), chemical nickel-plating

\*Products not in stock minimum order 1 piece, delivery in 15 days.

## 4303

## With 2 carriages with pedestal Ø60

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3$  mm/300mm\* for each carriage travel.

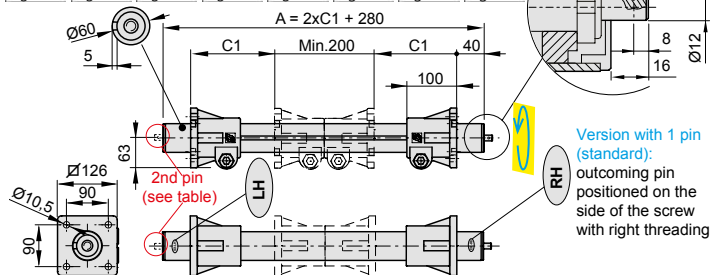
**Operation:** STEP BY STEP (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking .

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	A	C1	Column mm marking	Weight kg	Stock	€ piece
1 pin	mm	mm				
2 pins						
687108	510	115	no	7,8	■	403.32

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 2000 mm), chemical nickel-plating

**Products not in stock** minimum order 1 piece, delivery in 15 days.





2991

# Column only $\varnothing 60$

## with opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 4 DIN 7984 M6x20 screws in galvanised steel.

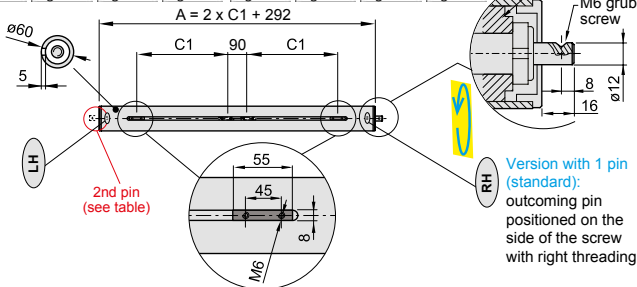
**Characteristics:** 1 column in nickel-plated steel (electrolytic nickel plating), trapeze screws and lead nuts in steel, 4 DIN 7984 M6x20 screws in galvanised steel.

**Operation:** **STEP BY STEP (NO continuous operation!)**.  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**WARNING**

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations****QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	2 pins	A mm	C1 mm	Column mm marking	Weight kg	Stock	€ piece
615136	6151362P	510	115	no	4,8		269,90

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214 ; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



# 2993 With 2 opposed carriages Ø50

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw T120 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$  for each carriage travel.

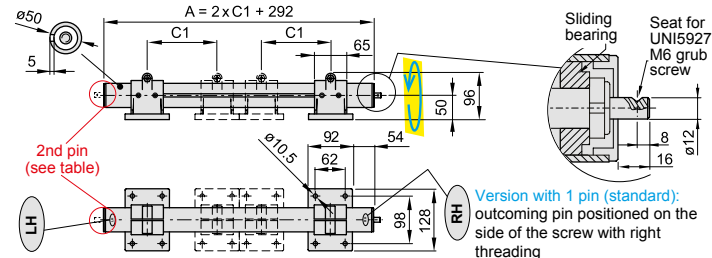
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Codice ordinazione	2 pins	A mm	C1 mm	Color carriage	Column mm marking	Weight kg	Stock	€ piece
615116	615116 <b>2P</b>	510	109	grey RAL 9006	no	5,5	■	304,72
654377	654377 <b>2P</b>	600	154	RAL 9006	yes	6,4	■	322,25
614347	614347 <b>2P</b>	1800	754	RAL 9006	no	15,6	■	530,00

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214 ; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.

# 4304 With 2 cross-type opposed carriages Ø50

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3 \text{ mm}/300\text{mm}^*$  for each carriage travel.

**Operation:** **STEP BY STEP** (NO continuous operation!).

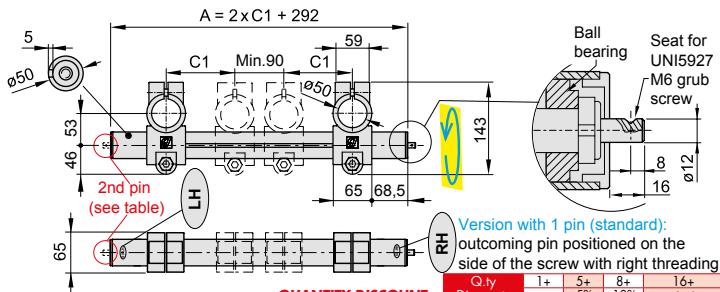
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	contact us

Order code	A	C1	Column mm	Weight	Stock	€
1 pin	mm	mm	marking	kg	piece	
687118	510	109	no	5,45	■	313,86

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 2000 mm), chemical nickel-plating

\*Products not in stock minimum order 1 piece, delivery in 15 days.



4305

With 2 carriages with pedestal  $\varnothing 50$ 

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 2 aluminium carriages, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3$  mm/300mm\* for each carriage travel.

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

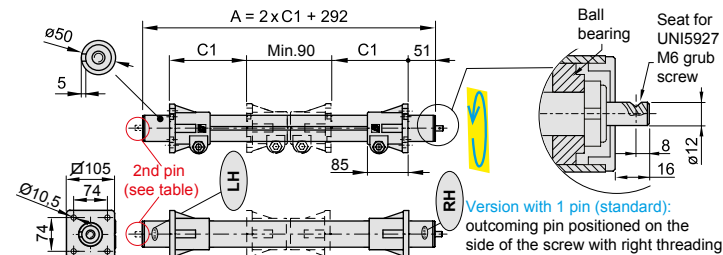
Millimetre scale marking

**WARNING**

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations**

CONTINUOUS OPERATION

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	A	C1	Column mm marking	Weight kg	Stock	€ piece
1 pin	mm	mm				
2 pins						
687128	510	122,5	no	5,5	■	313.86

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 2000 mm), chemical nickel-plating

\*Products not in stock minimum order 1 piece, delivery in 15 days.



2990

# Column only $\varnothing 50$

## with opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel, trapeze screws and lead nuts in steel, 4 DIN 7984 M6x12 screws in galvanised steel.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage). Positioning accuracy:  $\pm 0,3$  mm/300mm\*.

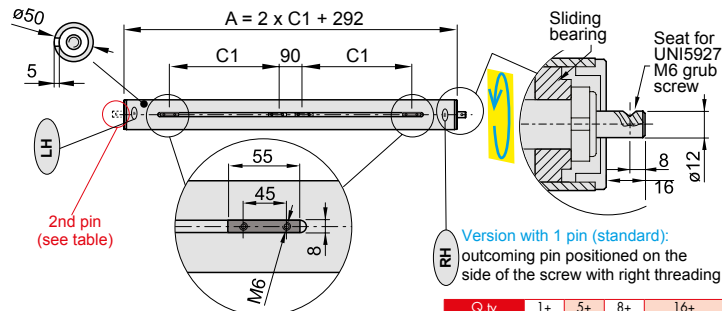
**Operation:** **STEP BY STEP (NO continuous operation!)**.

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**WARNING**

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

**Combinations** **QUANTITY DISCOUNT**

Order code	2 pins	A mm	C1 mm	Column mm marking	Weight kg	Stock	Q.ty Discounts				
							1+	5+	8+	16+	
615106	6151062P	510	122,5	no	4,0	■	-	-5%	-10%	on request	€ 227,29

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214 ; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 15 days.



# 2944 With 2 opposed carriages Ø30

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in chrome-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 carriages in aluminium, galvanised steel nuts and bolts.

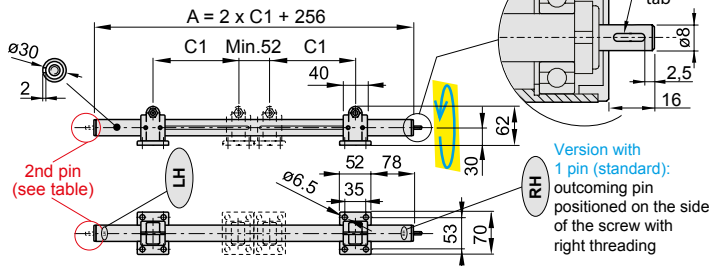
**Characteristics:** worm screw Tr14 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	2 pins	A mm	C1 mm	Column mm marking	Weight kg	Stock	€ piece
688785	6887852P	651	195	no	2,0	■	403,91
688725	6887252P	672	206	no	2,0	■	395,75
667406	6674062P	800	270	no	2,3	■	413,37

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

Products not in stock minimum order 1 piece, delivery in 20 days.

# 4306 With 2 cross-type opposed carriages Ø30

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in chrome-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 carriages in aluminium, galvanised steel nuts and bolts.

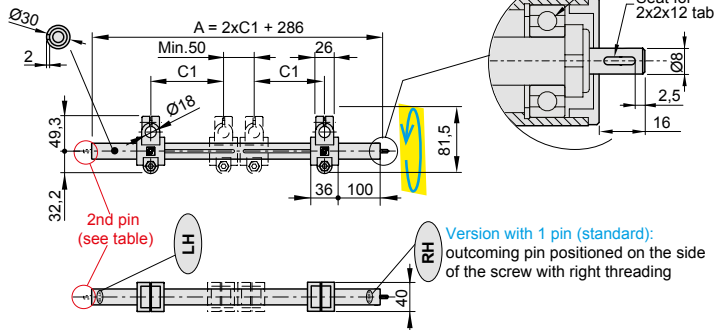
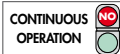
**Characteristics:** worm screw Tr14 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	contact us

Order code	A	C1	Column mm	Weight	Stock	€
1 pin	mm	mm	marking	kg	piece	
687138	672	193	no	2	■	407.62

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 1450 mm), chemical nickel-plating

Products not in stock minimum order 1 piece, delivery in 20 days.

## 4307

## With 2 carriages with pedestal Ø30

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

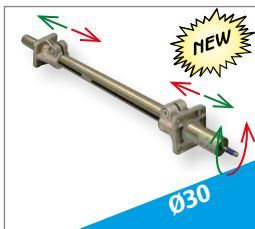
**Material:** 1 column in chrome-plated steel, trapeze screws and lead nuts in steel, 2 grey RAL 9006 carriages in aluminium, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr14 pitch 4 (1 handwheel turn = 4 mm on each carriage).

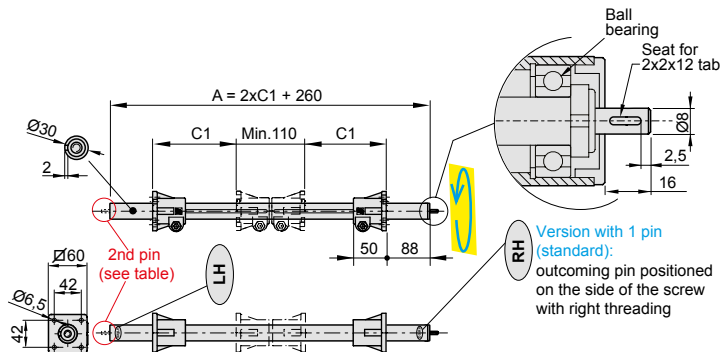
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	contact us

Order code	A	C1	Column mm marking	Weight kg	Stock	€ piece
1 pin	mm	mm				
2 pins						
687148	672	193	no	1,9	■	407.62

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 1450 mm), chemical nickel-plating

■ **Products not in stock** minimum order 1 piece, delivery in 20 days.



2988

# Column only Ø30

## with opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in chrome-plated steel, trapeze screws and lead nuts in steel, 4 UNI 5933 M4x10 screw in stainless steel.

**Characteristics:** worm screw Tr14 pitch 4 (1 handwheel turn = 4 mm on each carriage).

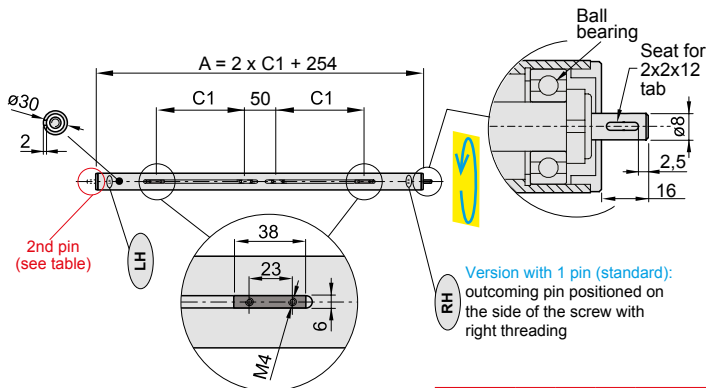
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	2 pins	A mm	C1 mm	Column mm marking	Weight kg	Stock	€ piece
615036	6150362P	672	212	no	1,6		346,45

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** carriage: RAL colour / shot peening / chemical nickel-plating Pg.214 ; column: stroke and length (A = max 2000 mm), chemical nickel-plating Pg.214

**Products not in stock** minimum order 1 piece, delivery in 20 days.



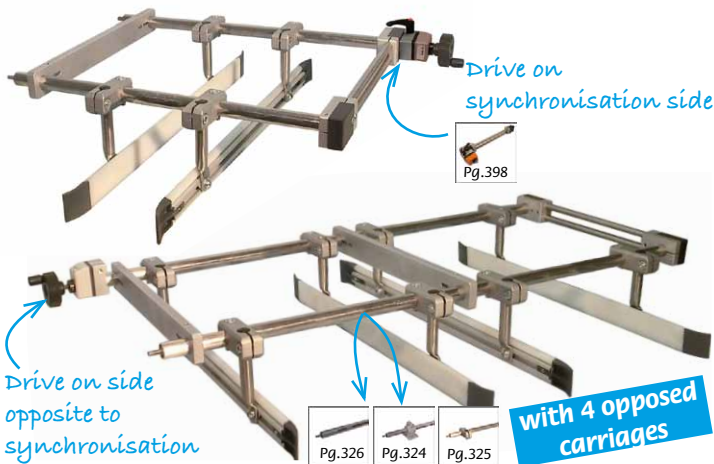
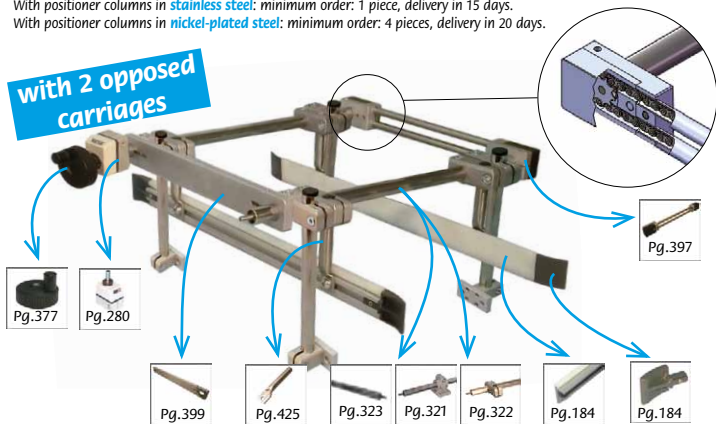
## Manual format change with positioners Ø20

**Complete synchronisation kits are available on request**

With positioner columns in **stainless steel**: minimum order: 1 piece, delivery in 15 days.

With positioner columns in **nickel-plated steel**: minimum order: 4 pieces, delivery in 20 days.

**with 2 opposed carriages**





3844

# With 2 opposed carriages Ø20 one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

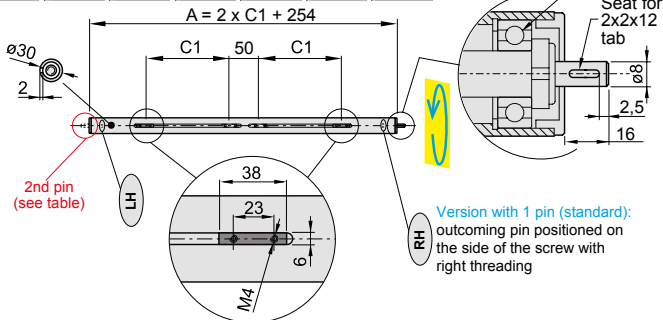
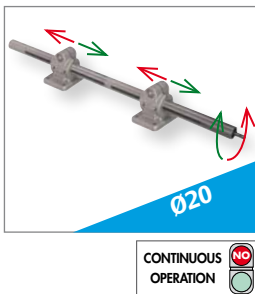
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



### QUANTITY DISCOUNT

Q.ty	Columns in	1+	5+	8+	Columns in	1+	5+	8+	16+
Discounts	stainless steel AISI 304	-	-5%	on request	nickel-plated steel	NO	NO	-10%	on request

Order code	A	C1	Material	Column mm	Weight	Stock	€
1 pin	2 pins	mm	mm	columns	marking	kg	piece
637478	6374782P	470	146,5	nickel-plated steel	no	0,98	322,36
637468	6374682P	470	146,5	stainless steel AISI304	no	0,98	322,36

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.

4308

## With 2 carriages with pedestal Ø20

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

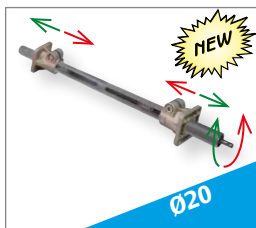
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

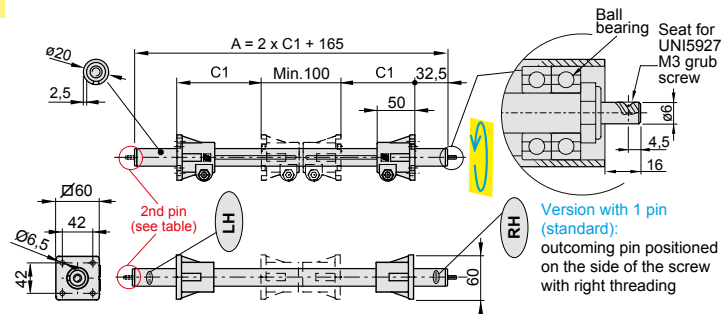
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



CONTINUOUS OPERATION



## QUANTITY DISCOUNT

Order code	Q.ty	Columns in			Column mm marking	Weight kg	Stock	€
		Discoun	stainless steel AISI 304	1+ 5+ 8+ contact us				
1 pin	2 pins							
687158	687158P				no	1	332.03	
687178	687178P				no	1	332.03	

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations:** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 1000 mm), chemical nickel-plating ; trapeze screws and lead nut: stainless steel.

Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pièces (nickel-plated steel), delivery in 20 days.



4254

## with 2 cross-type opposed carriage

Ø20 one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packing lines or bundling machine outfeed lines).

**Material:** 1 column in nickel-plated steel (electrolytic nickel-plating) or AISI304 stainless steel (see table), trapeze screws and lead nuts in bronze, ball bearings in steel, 2 carriages in grey RAL9006 aluminium, galvanised steel nuts and bolts.

**Characteristics:** worm screw, Tr10 pitch 3 (1 handwheel turn = 3 linear mm on each carriage).

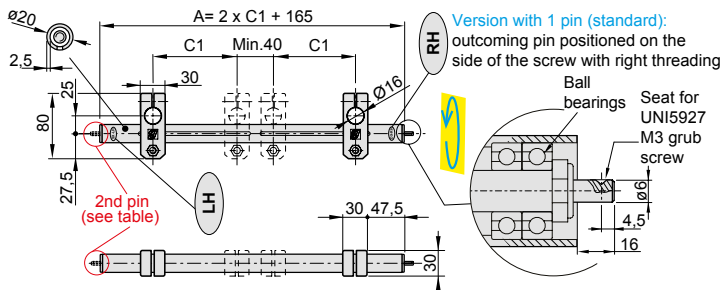
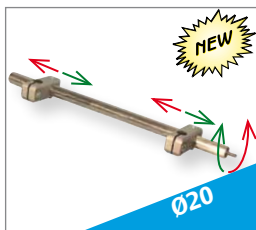
**Operation:** STEP BY STEP (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

Combinations



CONTINUOUS OPERATION  NO



Version with 1 pin (standard):  
outcoming pin positioned on the side of the screw with right threading

## QUANTITY DISCOUNT

Q.ty Discounts	Columns in stainless steel AISI 304	1+	8+	16+	Columns in nickel-plated steel	8+	16+	32+
		-	-10%	-15%		-	-10%	-15% on request

Order cod	A	C1	Column material	Millimetre column	Weight kg	Stock	€ piece
666268	470	152,5	nickel-plated steel	no	0,98	■	322,36
666278	470	152,5	AISI 304 stainless steel	no	0,98	■	326,36

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

Products not in stock Min. order 1 pc, delivery 15 days (stainless steel) / 8 pcs, delivery in 20 days (nickel-plated steel).



3843

# Column only Ø20 one-track

## with 2 opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), worm screws steel, lead nuts in bronze, 2 UNI 5933 M4x10 socket head screws in stainless steel.

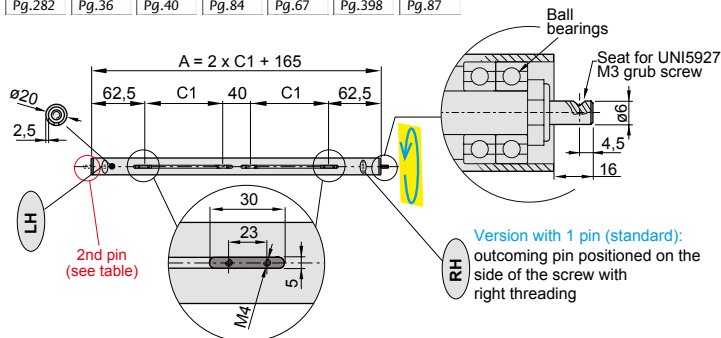
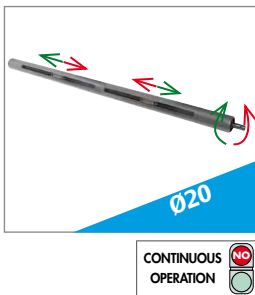
**Characteristics:** worm screws Tr10 pitch 3 (1 hadwheel = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	Columns in stainless steel AISI 304	1+ 5+ -5% on request	8+ 10+ on request	Columns in nickel-plated steel	<del>1+</del> <del>5+</del> NO NO	8+ -10% on request	16+ on request
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Order code	A	C1	Material columns	Column mm marking	Weight kg	Stock	€ piece
1 pin	mm	mm					
637378	470	152,5	nickel-plated steel	no	0,78	■	277,84
637448	470	152,5	stainless steel AISI304	no	0,78	■	277,84

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



# 3851 With 4 opposed carriages $\varnothing 20$ two-track

## with fixed distance between centres

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

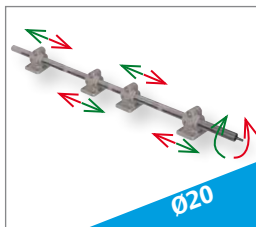
**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

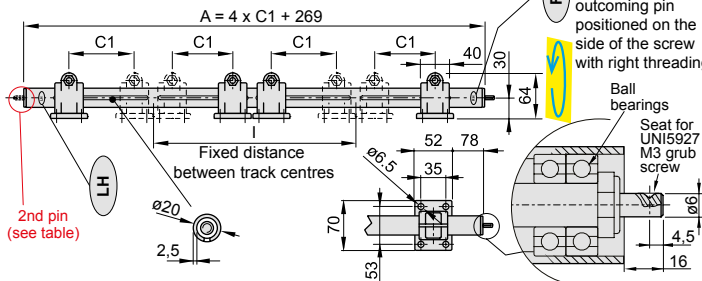
Millimetre scale marking Pg.269 .

**Combinations**



**CONTINUOUS OPERATION**

Version with 1 pin (standard):  
outcoming pin positioned on the side of the screw with right threading



### QUANTITY DISCOUNT

Q.ty Discounts	Columns in stainless steel AISI 304	1+	5+	8+	Columns in nickel-plated steel	1+	5+	8+	16+
		-	-5%	on request		NO	NO	-10%	on request

Order code	1 pin	2 pins	A mm	C1 mm	l+mm	Material columns	Column mm marking	Weight kg	Stock	€ piece
650328		6503282P	855	146,5	385	nickel-plated steel	no	2,00	■	488,80
650338		6503382P	855	146,5	385	stainless steel AISI304	no	2,00	■	488,80

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214 ; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214 ; trapeze screws and lead nut: stainless steel.

\*Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



# 4255 With 4 cross-type opposed carriages

## Ø20 two-track, fixed distance between centres

**Use:** positioning with opposed movement adjustable with **worm screw**. To reduce the setup time for format change (e.g. along 2 packing lines with fixed distance between centres or bundling machine outfeed lines).

**Material** 1 column in nickel-plated steel (electrolytic nickel-plating) or AISI304 stainless steel (see table), trapeze screws and lead nuts in bronze, ball bearings in steel, 4 carriages in grey RAL9006 aluminium, galvanised steel nuts and bolts.

**Characteristics:** worm screw, Tr10 pitch 3 (1 handwheel turn = 3 linear mm on each carriage).

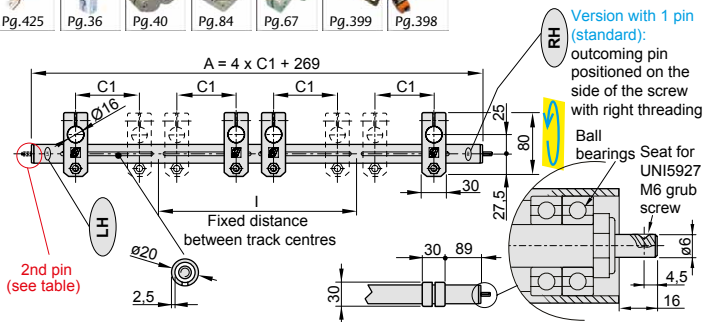
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q.ty Discounts	Columns in stainless steel AISI 304	1+	8+	16+	Columns in nickel-plated steel	1+	8+	16+	32+
		-	-10%	-15%		-	-10%	-15%	on request

Order cod for 1 pin	2 Pins	A mm	C1 mm	l mm	Column material	Millimetre column	Weight kg	Stock	€ piece
666288	6662882P	855	152,5	385	nickel-plated steel	no	2,00	■	407,75
666298	6662982P	855	152,5	385	AISI 304 stainless steel	no	2,00	■	407,75

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

Products not in stock Min. order 1 pc, delivery 15 days (stainless steel) / 8 pcs, delivery in 20 days (nickel-plated steel).



# 3849 Column only $\varnothing 20$ two-track

with fixed distance between centres with 4 opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packing lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), worm screws steel, lead nuts in bronze, 2 UNI 5933 M4x10 socket head screws in stainless steel.

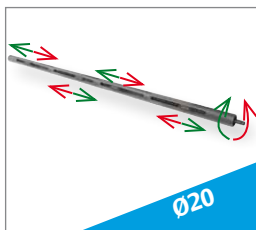
**Characteristics:** worm screws Tr10 pitch 3 (1 hadwheel = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!)**.

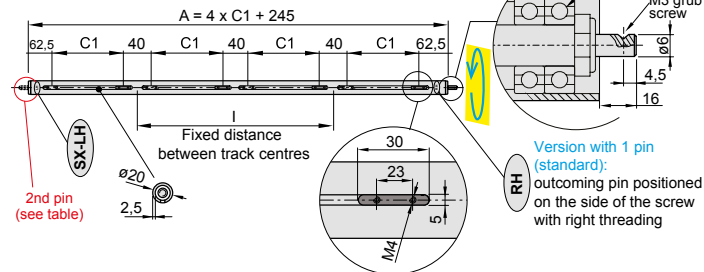
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION



## QUANTITY DISCOUNT

Q.ty	Columns in	1+	5+	8+	Columns in	1+	5+	8+	16+
Discounts	stainless steel AISI 304	-	-5%	on request	nickel-plated steel	NO	NO	-10%	on request

Order code	1 pin	2 pins	A mm	C1 mm	l+mm	Material columns	Column mm marking	Peso kg	Stock	€ pezzo
637788		6377882P	855	152,5	385	acciaio nichelato	no	1,70	■	399,75
637798		6377982P	855	152,5	385	acciaio inox AISI304	no	1,70	■	399,75

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

\*Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



3845

# With 2 opposed carriages Ø18 one-track

**Use:** positioning with opposed movement adjustable **with worm screw**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

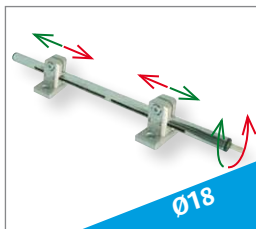
**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** **STEP BY STEP** (NO continuous operation!).

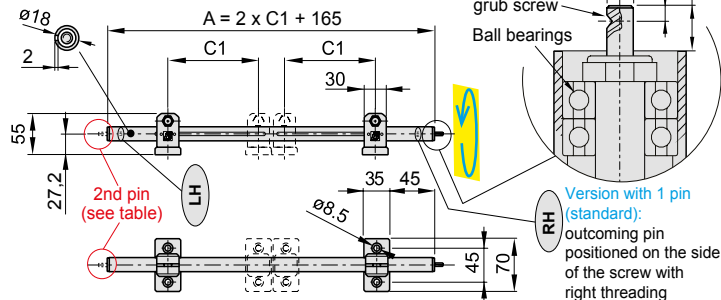
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q.ty	Columns in	1+	5+	8+	Columns in	1+	5+	8+	16+
Discounts	stainless steel AISI 304	-	-5%	on request	nickel-plated steel	NO	NO	-10%	on request

Order code	1 pin	2 pins	A	C1	Material	Column mm	Weight	Stock	€
			mm	mm	columns	marking	kg	piece	
637498	637498P	6374982P	470	152,5	nickel-plated steel	no	0,98	▪	322,36
637488	637488P	6374882P	470	152,5	stainless steel AISI304	no	0,98	▪	322,36

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



## 4310 With 2 cross-type opposed carriages Ø18 one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

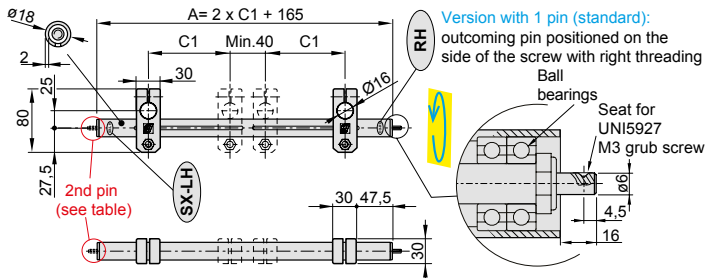
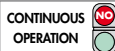
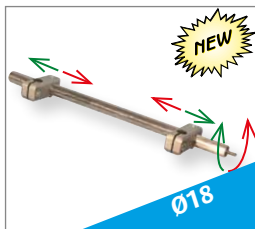
**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



QUANTITY DISCOUNT		Q.ty	Columns in	1+	5+	8+	Columns in	1+	5+	8+	16+
		Discounts	stainless steel AISI 304	-	-5%	contact us	nickel-plated steel	NO	NO	-10%	on request
Order code	A	C1	Material	Column mm	Weight	Stock	€				
1 pin	2 pins	mm	mm	columns	marking	kg	piece				
687198	6871982P	470	152,5	nickel-plated steel	no	0,98	332.03				
687208	6872082P	470	152,5	stainless steel AISI304	no	0,98	332.03				

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour/shot peening/chemical nickel-plating; column stroke and length (A = max 1000 mm), chemical nickel-plating; trapeze screws and lead nut: stainless steel.

**Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.

4309

## With 2 carriages with pedestal Ø18

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

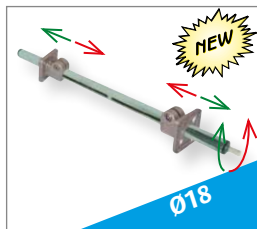
**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

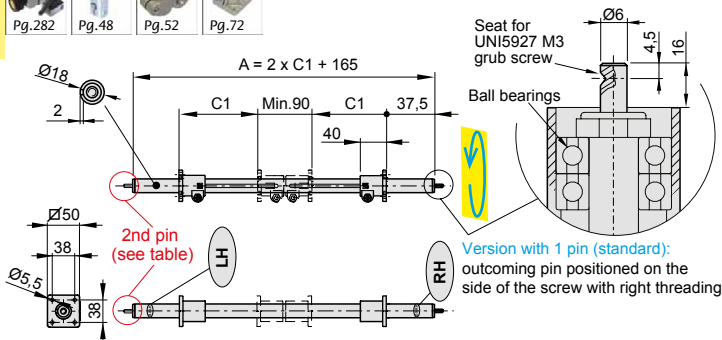
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



CONTINUOUS OPERATION



Version with 1 pin (standard):  
outcoming pin positioned on the side of the screw with right threading

## QUANTITY DISCOUNT

Order code	Q.ty	Columns in			Material	Column mm marking	Weight kg	Stock	€ piece
		1+	5+	8+					
687168	8	stainless steel AISI 304	-	contact us	nickel-plated steel	NO	NO	-10%	on request
687168P	8	stainless steel AISI 304	-	contact us	nickel-plated steel	NO	NO	-10%	on request
687188	8	stainless steel AISI 304	-	contact us	nickel-plated steel	NO	NO	-10%	on request
687188P	8	stainless steel AISI 304	-	contact us	nickel-plated steel	NO	NO	-10%	on request

Supplement for versions with 2 pins (2P): 10€

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour/shot peening/chemical nickel-plating; column stroke and length ( $A = \max 1000$  mm), chemical nickel-plating ; trapeze screws and lead nut: stainless steel.

Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pièces (nickel-plated steel), delivery in 20 days.



# 3842 Column only $\varnothing 18$ one-track

## with 2 opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screw in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packing lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), worm screws steel, lead nuts in bronze, 2 UNI 5933 M4x10 socket head screws in stainless steel.

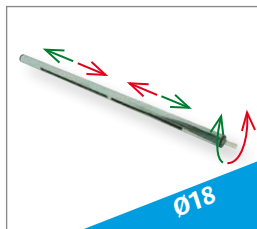
**Characteristics:** worm screws Tr10 pitch 3 (1 hadwheel = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!)**.

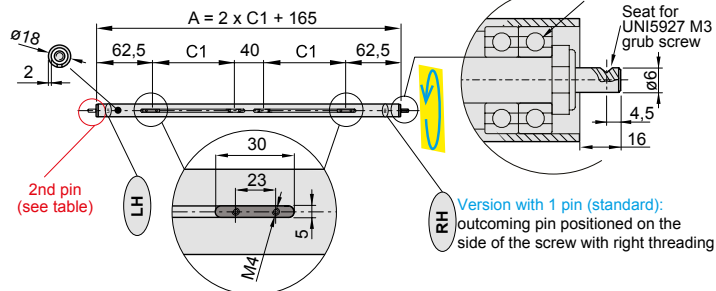
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION  NO



### QUANTITY DISCOUNT

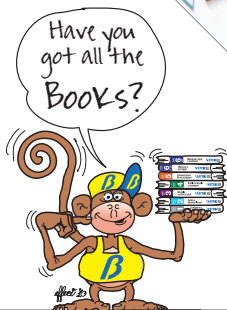
Q.ty Discounts	Columns in stainless steel AISI 304	1+	5+	8+	Columns in nickel-plated steel	1+	5+	8+	16+
			-5%	on request			NO	NO	-10% on request

Order code	2 pins	A mm	C1 mm	Material columns	Column mm marking	Weight kg	Stock	€ piece
637348	6373482P	470	152,5	nickel-plated steel	no	0,78	■	277,84
637358	6373582P	470	152,5	stainless steel AISI304	no	0,78	■	277,84

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating / stainless steel Pg.214; column: stroke and length (A = max 1000 mm), chemical nickel-plating Pg.214; trapeze screws and lead nut: stainless steel.

\*Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.





# 3853 With 4 opposed carriages $\varnothing 18$ two-track with fixed distance between centres

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

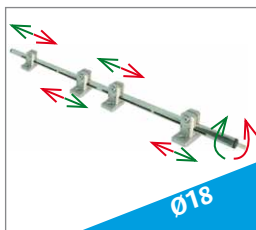
**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

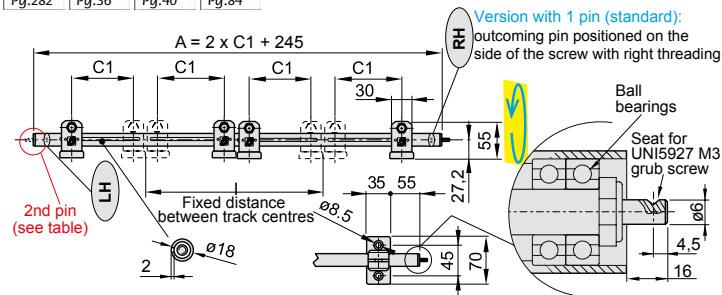
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS  
OPERATION



## QUANTITY DISCOUNT

Order code	Q.ty	Columns in			Material columns	Column mm marking	Weight kg	Columns in					
		Discoun	stainless steel AISI 304	1+ 5+ 8+ on request				nickel-plated steel	1+ NO	5+ NO	8+ -10%	16+ on request	
1 pin	2 pins	A mm	C1 mm	l+mm									
650368	6503682P	855	152,5	385	nickel-plated steel	no	2,00					488,80	
650378	6503782P	855	152,5	385	stainless steel AISI304	no	2,00					488,80	

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating Pg.214; column stroke and length (A = max 1000 mm), chemical nickel-plating; trapeze screws and lead nut: stainless steel Pg.214.

\*Products not in stock minimum order 1 piece (stainless steel), delivery in 15 days / 8 pièces (nickel-plated steel), delivery in 20 days.

## 4311 With 4 cross-type opposed carriages Ø18 two-track with fixed distance between centres

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material:** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), steel trapeze screws, bronze nuts, ball bearing in steel, 1 grey RAL9006 aluminium carriage, galvanised steel nuts and bolts.

**Characteristics:** worm screws Tr10 pitch 3 (1 handwheel turn = 3 mm).

**Operation:** STEP BY STEP (NO continuous operation!).

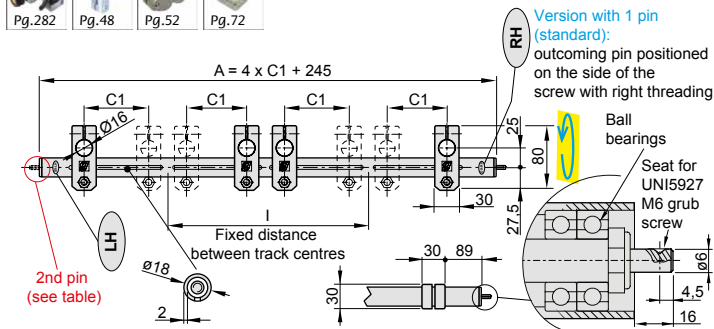
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking

**Combinations**



CONTINUOUS OPERATION



Version with 1 pin (standard):  
outcoming pin positioned on the side of the screw with right threading

### QUANTITY DISCOUNT

Q.ty Discounts	Columns in stainless steel AISI 304	1+	5+	8+	Columns in nickel-plated steel	1x NO	5x NO	8+ -10%	16+ on request
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Order code	1 pin	2 pins	A mm	C1 mm	I mm	Material columns	Column mm marking	Weight kg	Stock	€ piece
687218		687218P	855	152,5	385	nickel-plated steel	no	2,00	■	503.46
687228		687228P	855	152,5	385	stainless steel AISI304	no	2,00	■	503.46

**Supplement** for versions with 2 pins (2P): 10€

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour/shot peening/chemical nickel-plating/stainless steel ; column stroke and length (A = max 1000 mm), chemical nickel-plating ; trapeze screws and lead nut: stainless steel.

• **Products not in stock** minimum order 1 piece (stainless steel), delivery in 15 days / 8 pièces (nickel-plated steel), delivery in 20 days.



# 3852 Column only Ø18 two-track

with fixed distance between centres with 4 opposed worm screws

**Use:** positioning with opposed movement adjustable with worm screws in combination with **non-standard carriages constructed by the customer**. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines).

**Material** 1 column in electrolytic nickel-plated steel or stainless steel AISI304 (see table), worm screws in steel, lead nut in bronze, 2 UNI 5933 M4x10 socket head screws in stainless steel.

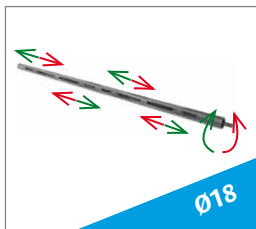
**Characteristics:** worm screw Tr10 pitch 3 (1 handwheel = 3 mm).

**Operation:** **STEP BY STEP (NO continuous operation!)**.

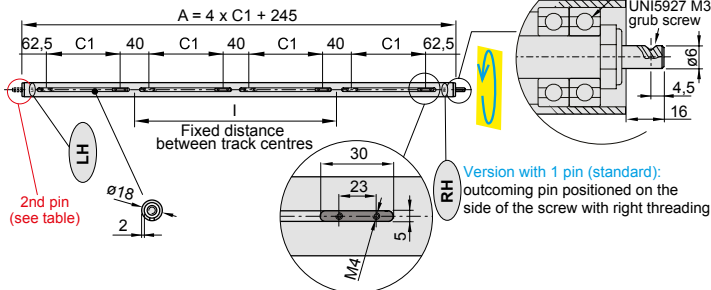
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Millimetre scale marking Pg.269

**Combinations**



CONTINUOUS OPERATION



Version with 1 pin (standard): outcoming pin positioned on the side of the screw with right threading

## QUANTITY DISCOUNT

Q.ty	Columns in stainless steel AISI 304	1+	5+	8+	Columns in nickel-plated steel	1+	5+	8+	16+
Discounts			-5%	on request		NO	NO	-10%	on request

Order code	1 pin	2 pins	A mm	C1 mm	I+mm	Material columns	Column mm marking	Weight kg	Stock	€
650348		6503482P	855	152,5	385	nickel-plated steel	no	1,70	■	399,75
650358		6503582P	855	152,5	385	stainless steel AISI304	no	1,70	■	399,75

Extra charge for versions with 2 pins (2P): 10 euros

**Personalizations** (Q.ty min. 8 pieces, delivery 20 days) carriage: RAL colour / shot peening / chemical nickel-plating Pg.214; column stroke and length (A = max 1000 mm), chemical nickel-plating; trapeze screws and lead nut: stainless steel Pg.214.

•Products not in stock: minimum order 1 piece (stainless steel), delivery in 15 days / 8 pieces (nickel-plated steel), delivery in 20 days.



## 1298 → In 45x90 profile with 2 opposed carriages one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines). Bracket fitting is also possible, using the grooves.

**Material** profile in anodised aluminium, trapeze screws and lead nuts in steel, 2 anodised aluminium carriages, 2 black reinforced polyamide ratchet levers, galvanised steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage).

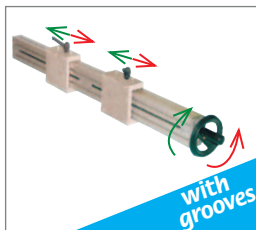
**Positioning accuracy:** ±0,3 mm/300mm\* for each carriage travel.

**Operation:** STEP BY STEP (NO continuous operation!).

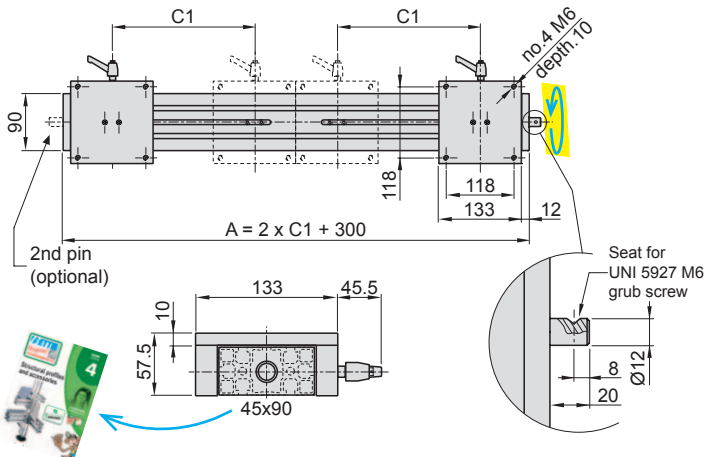
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



### Combinations





↓ 1298

# In 45x90 profile

with 2 opposed carriages **one-track**

**QUANTITY DISCOUNT**

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	C1 mm	Volantino Part. 1467	2nd pin	Weight kg	Stock	€ piece
672092	400	50	yes	no	5,0	■	653,62
680684	400	50	no	no	4,8	■	653,62
669823	500	100	yes	no	5,6	■	653,62
664154	560	130	yes	no	6,0	■	653,62
672102	600	150	yes	no	6,2	■	653,62
672082	700	200	yes	no	6,9	■	653,62
637804	700	200	no	no	6,7	■	653,62
637824	800	250	yes	no	7,5	■	653,62
683591	900	300	yes	no	8,2	■	576,30
601923	940	320	yes	no	8,4	■	583,44
672912	975	337,5	yes	no	8,6	■	589,38
669793	1050	375	no	no	8,9	■	603,07
601933	1300	500	yes	no	10,7	■	647,70
669813	1300	500	no	no	10,5	■	647,70
672062	1500	600	yes	no	11,9	■	683,35
601893	1600	650	yes	no	12,6	■	701,20
680754	1900	800	yes	no	14,5	■	755,07
669803	2000	850	no	no	14,9	■	772,65
680644	2900	1300	no	no	20,6	■	933,84

**Personalizations** column stroke and length (A = max 4000 mm), 2nd pin for motion transmission. ■

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



# 2247 → Octagonal with 2 opposed carriages

## B=130 one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines). Compared to the version with grooves, this tube-type model can also be cleaned.

**Material** Profile in titanium-coloured anodised aluminium, trapeze screws and lead nuts in steel, 2 black anodised aluminium carriages, AISI 304 stainless steel nuts and bolts, label with millimetre marking in destructible vinyl.

**Maintenance:** self-lubricating sliding components.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Positioning accuracy:**  $\pm 0.3$  mm/300mm\* for each carriage travel.

**Personalizations** 2nd pin for motion transmission, minimum order 1 piece, delivery in 10 days.

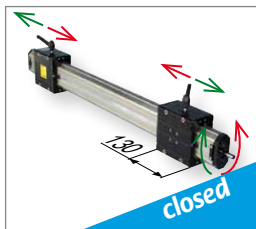
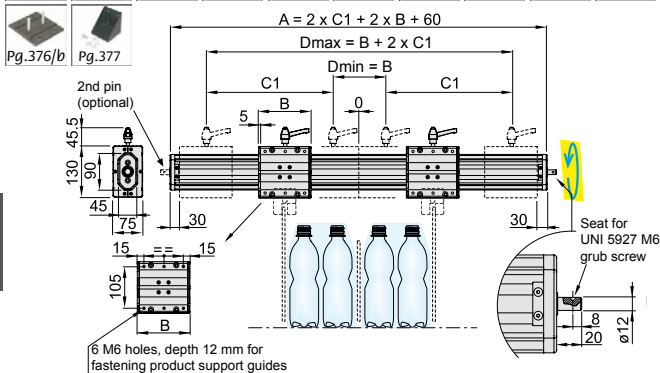
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Machining Pg.378

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.

### Combinations





## ↓ 2247 Octagonal with 2 opposed carriages

**B=130 one-track**

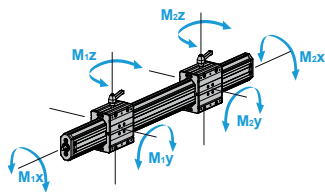
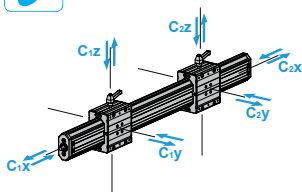
### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	2nd pin	Weight kg	Stock	€ piece
634644	624	130	152	no	7,5	■	648,56
634634	924	130	302	no	9,8	■	576,30

**Personalizations** column stroke and length (A = max 4000 mm, B = max 500), 2nd pin for motion transmission. ■

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



Code	C1x + C2x	C1x	C2x	C1y + C2y	C1y	C2y	C1z + C2z	C1z	C2z
	N	N	N	N	N	N	N	N	N
	2175	1087	1087	2500	1250	1250	3200	1600	1600
634644	M1x + M2x	M1x	M2x	M1y + M2y	M1y	M2y	M1z + M2z	M1z	M2z
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
	90	70	70	440	220	220	140	70	70

Code	C1x + C2x	C1x	C2x	C1y + C2y	C1y	C2y	C1z + C2z	C1z	C2z
	N	N	N	N	N	N	N	N	N
	2175	1087	1087	1680	840	840	2120	1060	1060
634634	M1x + M2x	M1x	M2x	M1y + M2y	M1y	M2y	M1z + M2z	M1z	M2z
	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
	90	70	70	440	220	220	140	70	70



# 2247 → Octagonal with 2 opposed carriages

## B=70 one-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. long packaging lines or bundling machine outfeed lines). Compared to the version with grooves, this tube-type model can also be cleaned.

**Material:** Profile in titanium-coloured anodised aluminium, trapeze screws and lead nuts in steel, 2 black anodised aluminium carriages, 2 black reinforced polyamide ratchet levers, AISI 304 stainless steel nuts and bolts, label with millimetre marking in destructible vinyl.

**Maintenance:** self-lubricating sliding components.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Positioning accuracy:**  $\pm 0,3$  mm/300mm\* for each carriage travel.

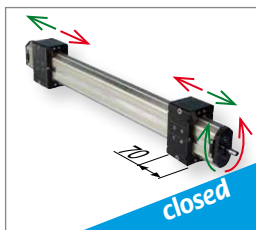
**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

✂ Machining Pg.378

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



CONTINUOUS  
OPERATION



### Combinations

pitch 8



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	B mm	C1 mm	2nd pin	Weight kg	Stock	€ piece
654747	494	70	147	no	6,3	■	648,56
615808	494	70	147	yes	6,4	■	658,81
654737	560	70	180	no	6,8	■	576,30
629697	1050	70	425	no	9,1	■	658,16

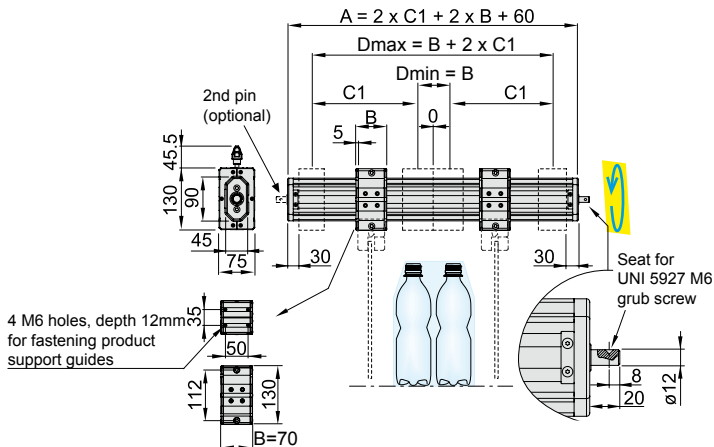
**Personalizations** column stroke and length (A = max 4000 mm, B = max 500), 2nd pin for motion transmission. ■

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



## ↓ 2247 Octagonal with 2 opposed carriages

**B=70** one-track





## 2156 → Octagonal with 4 opposed carriages two-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. along 2 packing lines with fixed distance between centres or bundling machine outfeed lines). Compared to the version with grooves it is in tubing and cleanable.

**Material** Profile in titanium-coloured anodised aluminium, trapeze screws and lead nuts in steel, 4 black anodised aluminium carriages, 4 black reinforced polyamide ratchet levers, AISI 304 stainless steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Positioning accuracy:**  $\pm 0,3$  mm/300mm\* for each carriage travel.

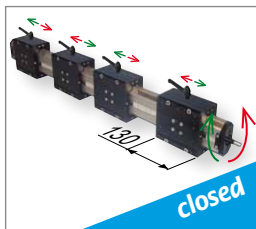
**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Machining Pg.378

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



### Combinations

pitch 8



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	A mm	I mm	K mm	B=Dmin mm	Dmax mm	Cl mm	Z mm	Y mm	2nd pin	Weight kg	Stock	€ piece
698643	980	468	30	130	322	96	16	146	no	12,6	■	794,25

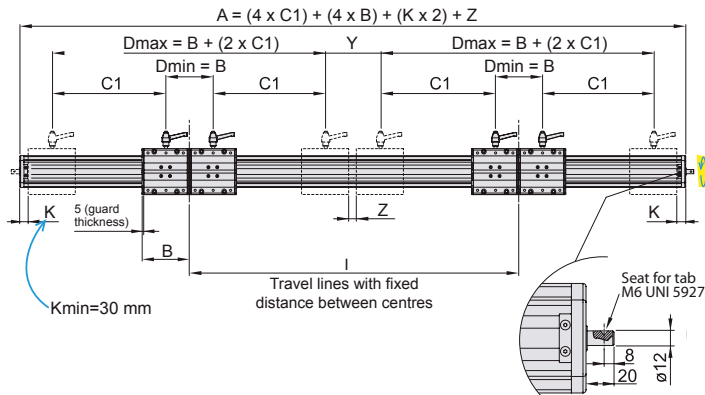
**Personalizations** column stroke and length (A = max 4000 mm), 2nd pin for motion transmission. ■

■ **Products not in stock** minimum order 1 piece, delivery in 10 days.



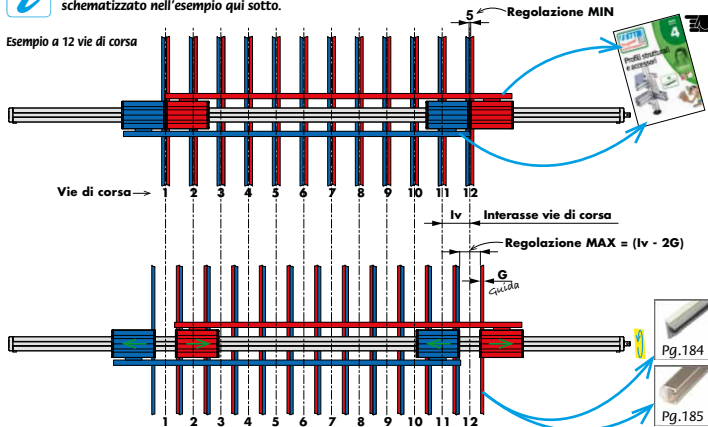
# 2156 Octagonal with 4 opposed carriages

## two-track



Esempio di realizzazione a più vie di corsa: collegando le coppie di carrelli con dei profilati di Robomec (vedi Handbook 4), si ottengono delle aste sulle quali è possibile fissare le guide di contenimento, come schematizzato nell'esempio qui sotto.

Esempio a 12 vie di corsa





# 2156 → Octagonal with 4 opposed carriages

## two-track

**Use:** positioning with opposed movement adjustable with worm screw. To reduce the setup time for format change (e.g. along 2 packing lines with fixed distance between centres or bundling machine outfeed lines). Compared to the version with grooves it is in tubing and cleanable.

**Material** Profile in titanium-coloured anodised aluminium, trapeze screws and lead nuts in steel, 4 black anodised aluminium carriages, AISI 304 stainless steel nuts and bolts.

**Characteristics:** worm screw Tr20 pitch 4 (1 handwheel turn = 4 mm on each carriage).

**Positioning accuracy:**  $\pm 0,3$  mm/300mm\* for each carriage travel.

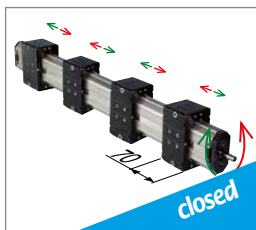
**Operation:** STEP BY STEP (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

Machining Pg.378

### WARNING

\* the indicated ACCURACY value is only theoretical. Actual accuracy depends on the actual conditions of use and its calculation must take into account the accuracy levels related to the performance of the position control system (encoder, etc.), as well as to the kinematic chain consisting of handwheel / crank / revolution counter kit or any coupling joints.



pitch 8

### Combinations



### QUANTITY DISCOUNT

Order code	A mm	I mm	K mm	B=Dmin mm	Dmax mm	C1 mm	Z mm	Y mm	Q. ty Discounts				Stock	€ piece
									1+	5+	8+	16+		
629667	980	450	40	70	380	155	0	70	no	-	-5%	-10%	on request	794,25
629647	980	468	30	70	382	156	16	86	no	-	-5%	-10%	on request	794,25
629677	1050	450	75	70	380	155	0	70	no	-	-5%	-10%	on request	805,96
629687	1050	464	61	70	394	162	0	70	no	-	-5%	-10%	on request	805,96

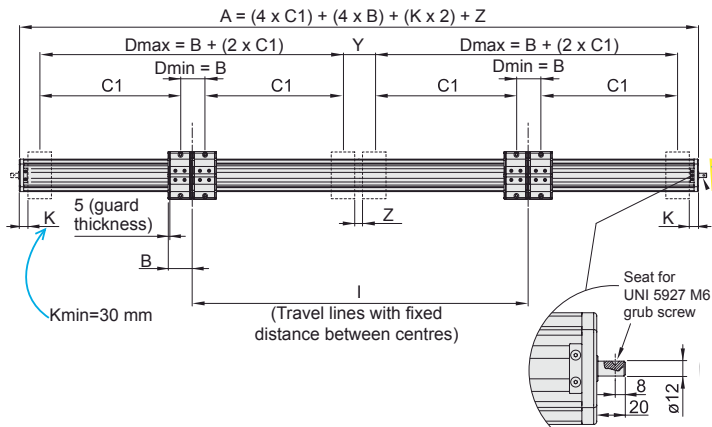
**Personalizations** column stroke and length (A = max 4000 mm) , 2nd pin for motion transmission.

\*Products not in stock minimum order 1 piece, delivery in 10 days.



# ↓ 2156 Octagonal with 4 opposed carriages

## two-track





## **i** Carriages linked together in octagonal profile **from 70 to 125 mm** (theoretical adjustment\*)

\* The format adjustment range decreases in relation to the guide thickness (img. 1-2-3-4).

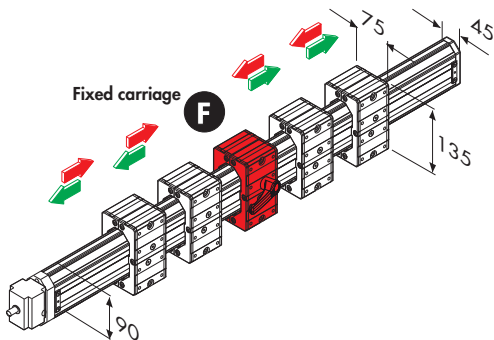
Example: Guide produced: thickness = 5 mm → min. format = 65, max. format = 120



**On request** Delivery time: 20 days.

We can construct positioners with up to 16 carriage (15 travel lines);  
If connected to a bridge, see the characteristics in the table on page 344.

· **Request technical service for applications different from those listed in the table on page 344.**

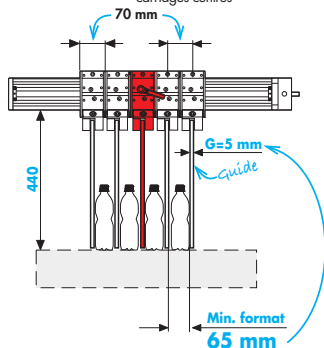




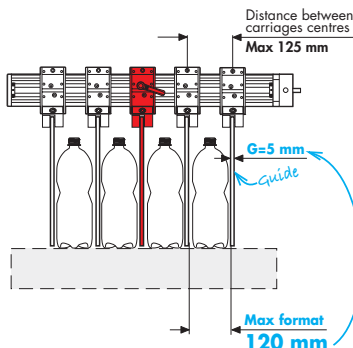
## Application examples with small/large bottles and bundles

Img. 1 - Fully **closed** with individual bottles

Carriage width = Minimum distance between carriages centres

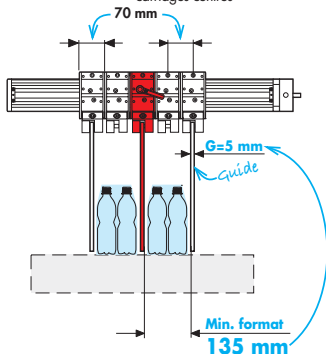


Img. 2 - Fully **open** with individual bottles

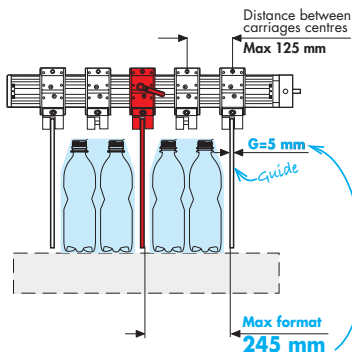


Img. 3 - Fully **closed** with bundle

Carriage width = Minimum distance between carriages centres



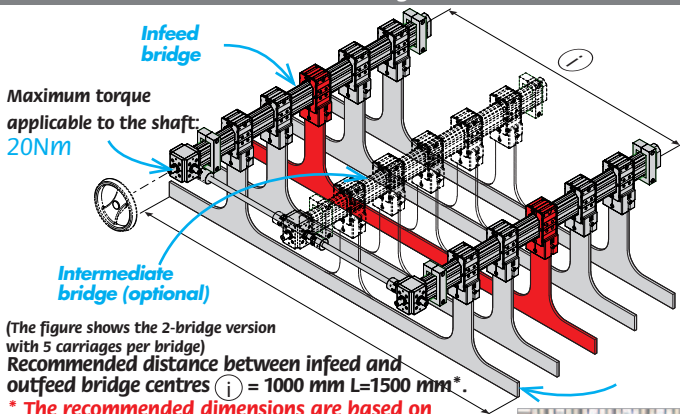
Img. 4 - Fully **open** with bundle





## Calculations and technical warnings

### Total blade weight limits

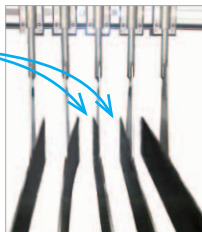


(The figure shows the 2-bridge version with 5 carriages per bridge)

Recommended distance between infeed and outfeed bridge centres  $i = 1000 \text{ mm}$   $L=1500 \text{ mm}^*$ .

\* The recommended dimensions are based on the difficulty of realisation of the rectilinear/parallel blades in relation to the thickness chosen (normally 5mm) and in keeping them such during operation.

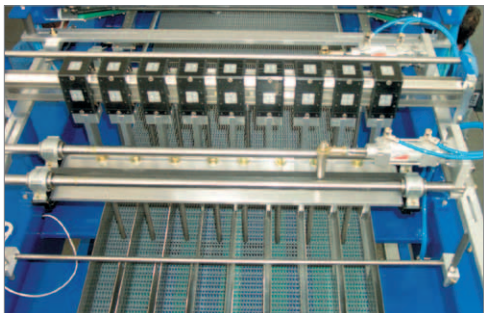
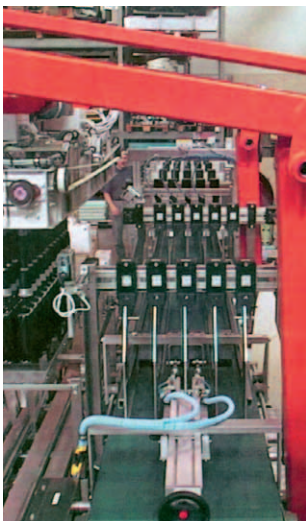
In case of a blade length  $i > 1500$  intermediate bridges may be required; they must be used ONLY to keep the blades parallel and must NOT be fastened to the blade nor be taken into account in splitting the total weight of the blades.



**NOTE:** the total blade weight must be calculated considering that only 2 bridges are supported (infeed and outfeed bridge).

No. of bridges	Max no. of carriages per bridge	Total no. of carriages	Total blade weight	Resulting torque on shaft	Max weight per bridge	Max weight of single carriage
2	5	10	300 Kg	8,5 Nm	150 Kg	30 Kg
2	7	14	260 Kg	10 Nm	130 Kg	18,5 Kg
2	9	18	220 Kg	17 Nm	110 Kg	12 Kg
2	11	22	180 Kg	17,5 Nm	90 Kg	8,1 Kg

All data refer to blades like the diagram on page 343 Fig. 1



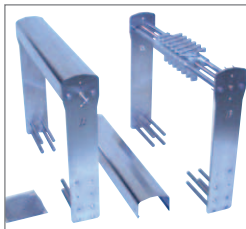


## Pantograph type

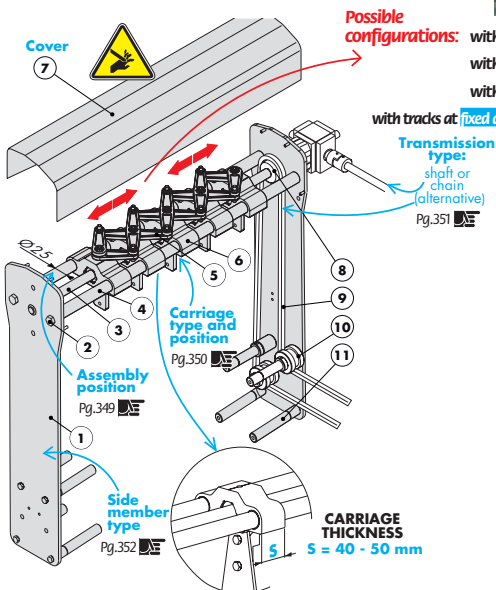
from 40 to 140 mm  
(theoretical adjustment\*)

\*The format adjustment range decreases in relation to the guide thickness Pg.348

Example: product guide thickness 5 mm, carriage S=50 → min. format = 45, max. format = 135



**WARNING:** We can construct positioners with **up to 9 carriages (8 tracks)**; if connected to each other (as shown in the photo below) **maximum 30 carriages** (example 6 positioners of 5 carriages)



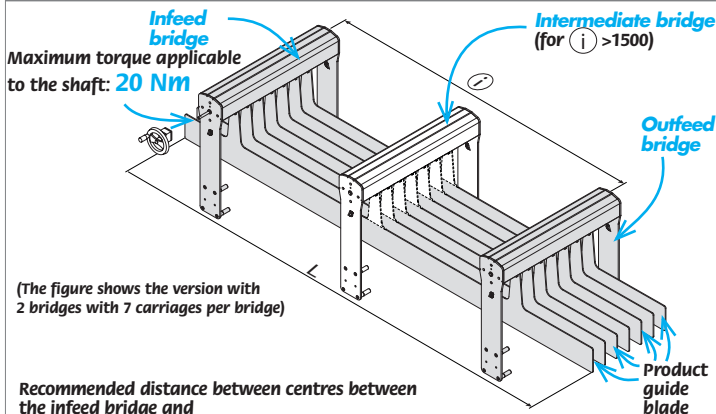
	Materials	
	Dry environment version	Wet environment version
①	Galvanised steel	AISI 304 <b>STAINLESS STEEL</b>
②	Galvanised steel	AISI 304 <b>STAINLESS STEEL</b>
③	Burnished steel	AISI 304 <b>STAINLESS STEEL</b>
④	Chrome-plated steel	
⑤	Shot peening aluminium	
⑥	Tumbled aluminium	
⑦	AISI 304 stainless steel	
⑧	Burnished steel	AISI 304 <b>STAINLESS STEEL</b>
⑨	Burnished steel	AISI 304 <b>STAINLESS STEEL</b>
⑩	Black Nylon	
⑪	Galvanised steel	AISI 304 <b>STAINLESS STEEL</b>
Remaining nuts and bolts in <b>STAINLESS STEEL</b>		



# Calculations and technical warnings



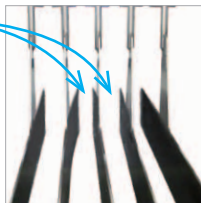
## Total blade weight limits



Recommended distance between centres between the infeed bridge and the outfeed bridge  $i = 1000 \text{ mm}$   $L=1500 \text{ mm}^*$ .

\* The recommended dimensions are based on the difficulty of realisation of the rectilinear/parallel blades in relation to the thickness chosen (normally 5mm) and in keeping them such during operation.

In case of blades with  $i > 1500$ , intermediate bridges may be necessary to be used **ONLY** to keep the blades parallel, they **MUST NOT** be fastened to the blade and must be taken into account in the division of the total weight of the blades.



**NOTE:** the total permissible blade weight must be calculated taking into account that it is supported by 2 bridges only (infeed bridge and outfeed bridge).

Max no. of carriages per bridge	Max. blade weight PI	no. of bridges	Total no. of carriages	Total blade weight	Resulting torque on shaft	Maximum weight per bridge
5	60 kg	2	10	300 kg	8.5 Nm	150 kg
7	37 kg	2	14	260 kg	10 Nm	130 kg
9	24 kg	2	18	220 kg	17 Nm	110 kg

The bridges with an EVEN number of carriages (**Nc**) are to be compared with the next number. Example: with **Nc=6** refer to **Nc=7**



# Format adjustment range

## Examples of application with small and large bottles and bundles

Fig. 5 - All **closed** with single bottles

Carriage dimensions  $S = \text{min. carriage axial distance}$

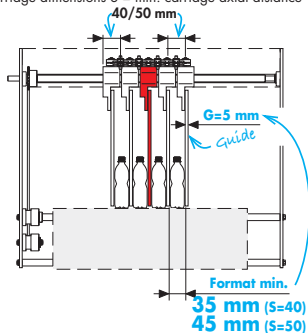


Fig. 6 - All **open** with single bottles

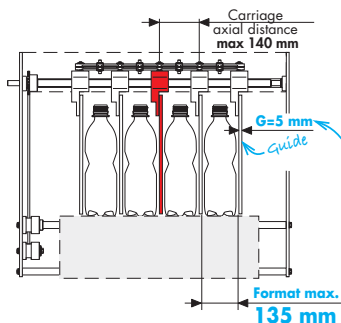


Fig. 7 - All **closed** with bundle

Carriage dimensions  $S = \text{min. carriage axial distance}$

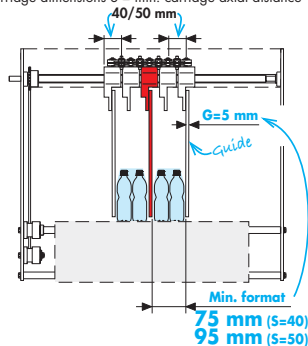
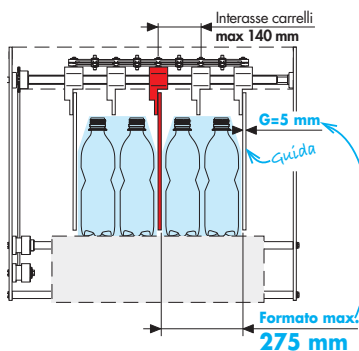
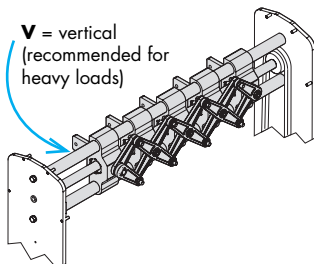
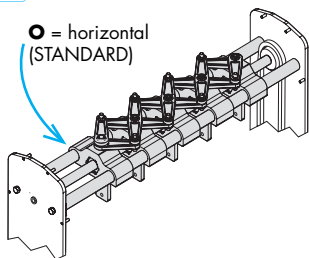


Fig. 8 - All **open** with bundle





## **i** Guide to choice **assembly position (PM)**



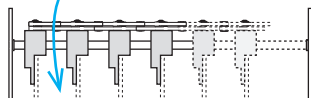
Example of bridge with assembly in **horizontal** position:

Code	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
order					mm	mm	mm	mm						mm			piece	
651388	8	<b>O</b>	A	Pd	50	1166	-	-	A	-	LH	RH	C1	551	yes	dry		

## **i** Guide to choice **carriage assembly type (MC)**

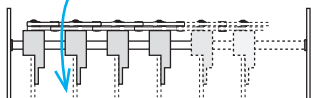
\*only for carriage type  
**TC = A**

**Pd** = parallel on the right



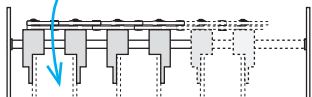
RH side ↓ Product feed direction LH side

**Ps** = parallel on the left



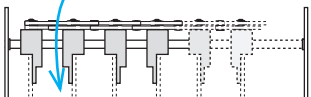
RH side ↓ Product feed direction LH side

**Ci** = internal opposed



RH side ↓ Product feed direction LH side

**Ps** = external opposed



RH side ↓ Product feed direction LH side

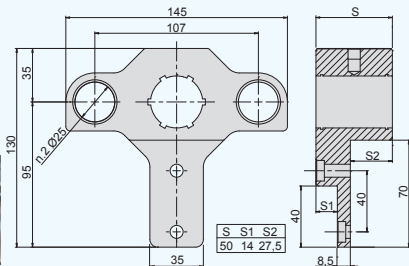
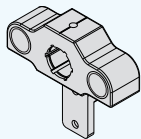
Example of bridge with carriage assembly **parallel on the right**:

Order	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
code					mm	mm	mm	mm						mm			piece	
651388	8	O	A	<b>Pd</b>	50	1166	-	-	A	-	LH	RH	C1	551	yes	dry		



## **i** Guide to choice carriage type (TC)

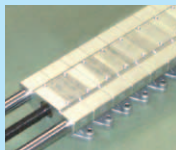
**A** = for blade fastening  
(STANDARD COMPONENTS)



**B** = for guide rod fastening



**C** = for guide/frame fastening

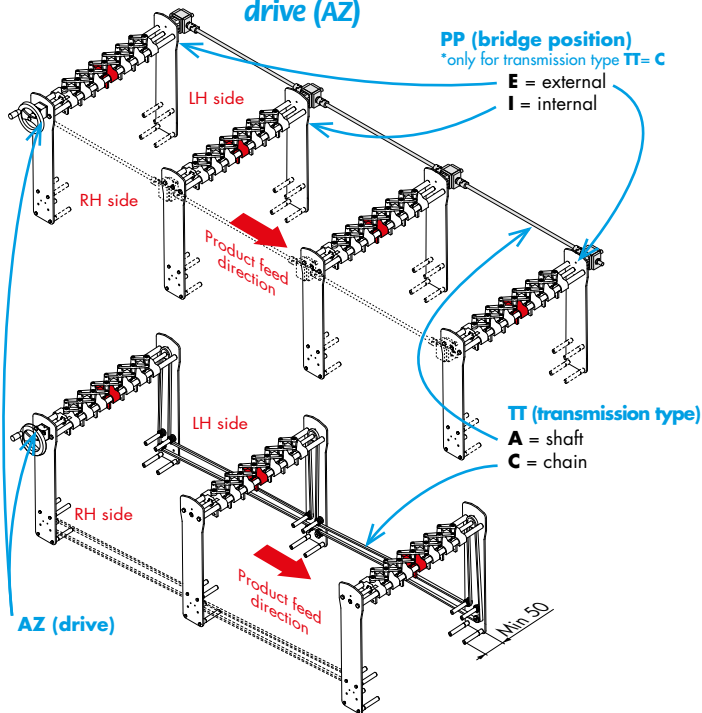


Example of bridge with carriage type **for blade fastening**:

Order	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
code					mm	mm	mm	mm						mm			piece	
651388	8	0	<b>A</b>	Pd	50	1166	-	-	A	-	LH	RH	C1	551	yes	dry		



## Guide to choice transmission type (TT) bridge position (PP) drive (AZ)



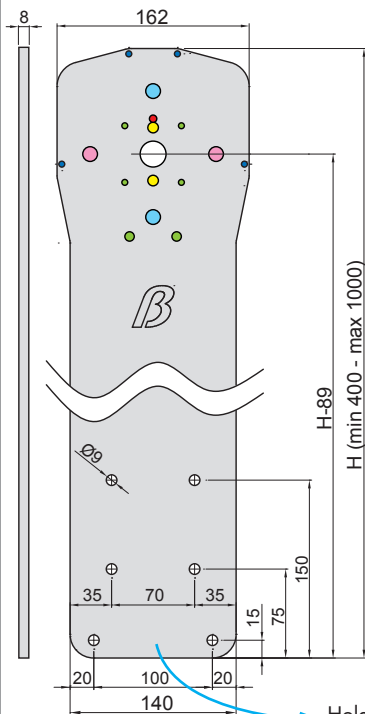
Example of bridge in head position with chain drive and RH side drive:

Order code	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
					mm	mm	mm	mm						mm				piece
650738	6	O	A	Ps	40	568	68.5	68.5	C	E	LH	RH	C3	680.5	yes	wet		

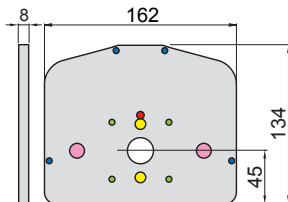


## **i** Guide to choice side member type (TF) STANDARD

**Sa** = high



**Sb** = low



Holes for:

● horizontal carriage assembly



● vertical carriage assembly



● cover fastening



● angular idler fastening



● gearmotor coupling kit fastening  
Fiama Servo.3M



● revolution counter anti-rotation centring



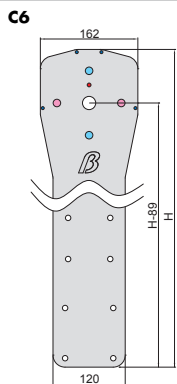
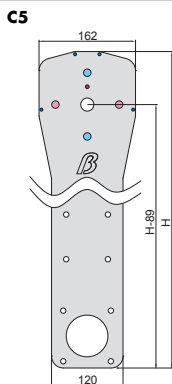
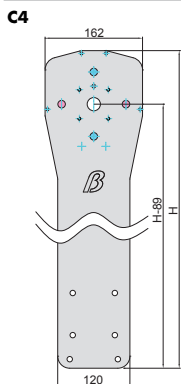
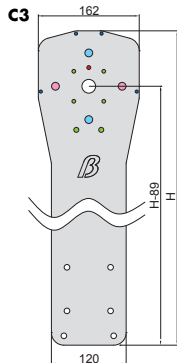
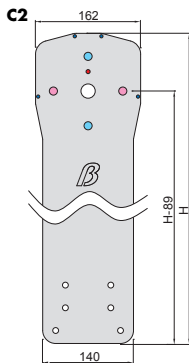
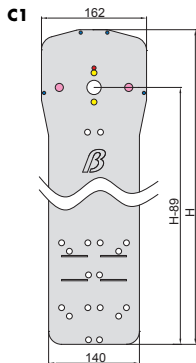
Holes for belt/machine fastening

Example of bridge with **standard high** side members Height 551 mm:

Order code	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
					mm	mm	mm	mm						mm				piece
651398	8	O	A	Pd	50	1166	-	-	A	-	LH	-	<b>Sa</b>	<b>551</b>	yes	dry		



## Guide to choice **side member type (TF) CUSTOMISED**



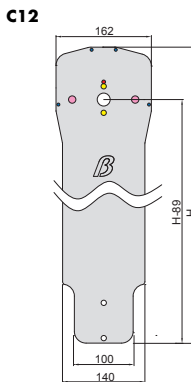
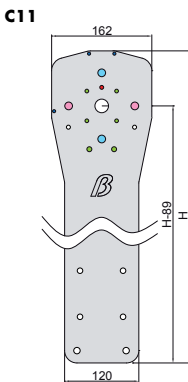
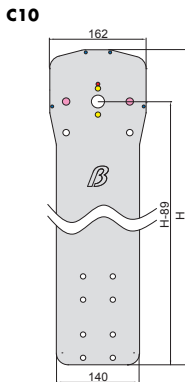
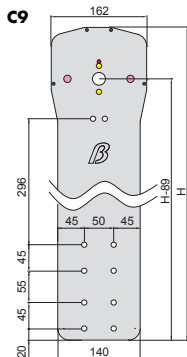
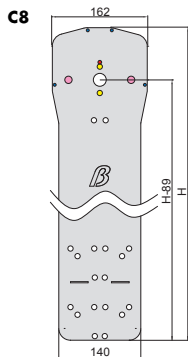
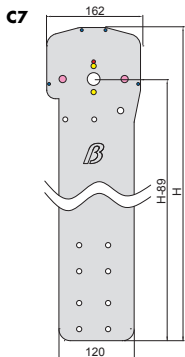
Example of bridge with **customised** side members **Type C3** Height 680.5 mm:

Order code	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
					mm	mm	mm	mm						mm			piece	
650738	6	O	A	Ps	40	568	68.5	68.5	C	E	LH	RH	<b>C3</b>	<b>680.5</b>	yes	wet		

**Personalizations** side member can be made to the customer's design



## Guide to choice **side member type (TF) CUSTOMISED**



Example of bridge with **customised** side members **Type C9** Height 609 mm:

Order code	nv	PM	TC	MC	S	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
					mm	mm	mm	mm						mm			piece	
689377	6	O	A	PD	50	778	-	-	A	E	LH	RH	<b>C9</b>	<b>609</b>	yes	dry		

**Personalizations** side member can be made to the customer's design



2359

## Gearing chain

**Use:** for motion transmission to the format changeover bridges.

**State of supply** the chain is supplied complete with joint.

**Material** steel

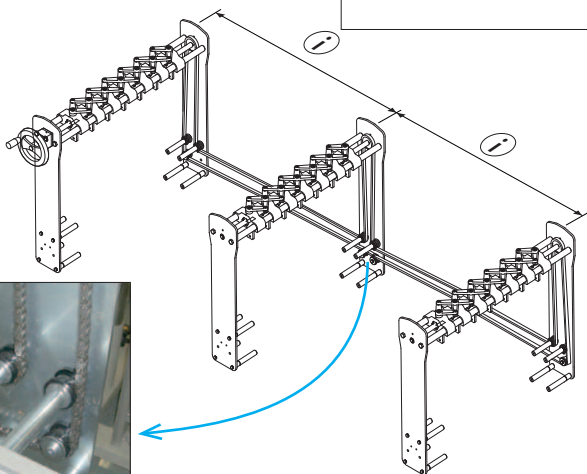
**Standard pack:** 5 m roll

**i** **Approximate calculation of chain development with standard side members (Sa):**

$(1500 \text{ mm} \times \text{no. of bridges}) + [(2 \times i) \times (\text{no. of bridges} - 1)]$

**Example (3 bridges, distance between centres  $i = 1000$ ):**

$(1500 \text{ mm} \times 3) + [(2 \times 1000) \times (3 - 1)] = 8500$

**QUANTITY DISCOUNT**

Q.ty	1+	2+	4+	8+
Discounts	-	-10%	-15%	on request

Code	Pack	Material	Weight	Stock	€
			g		piece
L5000	1 roll	burnished steel	2.20	✓	35.50
L5000I	1 roll	stainless steel	2.20	✓	150.50



## CFPACC With fixed central carriage

**Use:** for fast format changeover - based on the production dimensions - of manually or motor-driven packaging lines with fixed central guide.

**State of supply:** Complete with carriages, connecting rods, sliding shafts and worm screw, side members and fastening rods, covers (see table). The versions with shaft transmission include the angular idler indicated in the combinations, while the versions with chain drive include the pinion.

**Material:** available for both **dry** and **wet environment** Pg.346

**Characteristics:** M20 worm screw, pitch 2.5 (1 handwheel turn = 2.5 linear mm)

**Standard pack:** 1 piece.

**Combinations**



Pg.355



Pg.390



Pg.392



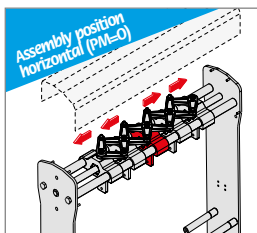
Pg.393



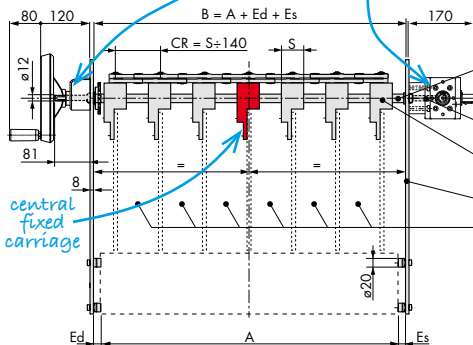
Pg.285



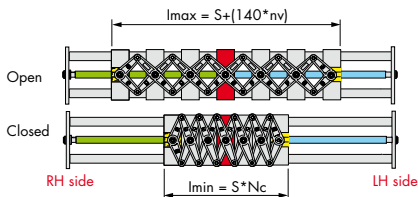
Pg.382



Assembly position horizontal (PM=0)



central fixed carriage



Product feed direction

### LEGEND

B	side member axial distance
S	carriage width
TT	(transmission type)  Pg.351
PP	(bridge position)
LT	(transmission side)
AZ	(drive side)
TC	(carriage type)  Pg.350
MC	(carriage assembly)
TF	(side member type)  Pg.352
nv	number of tracks (Nc-1)
Nc	number of carriages
CR	theoretical adjustment range (without guide, the adjustment range decreases in relation to the thickness of the guide and the clearance between the product and the guides)
A	machine/belt dimensions
Ed	fastening rod length
Es	fastening rod length
l <sub>max</sub> : max. carriage dimensions l <sub>min</sub> : min. carriage dimensions : metric screws (right and left) : threaded lead nut	



## CFPACC → With fixed central carriage



number of tracks	assembly position  Pg.349	carriage type  Pg.350	carriage assembly  Pg.349	carriage width	side member axial distance	machine/belt dimensions	right-hand fastening rod length	left-hand fastening rod length	transmission type  Pg.351	bridge position  Pg.351	transmission side	drive side	side member type  Pg.352	side member height
------------------	--	--	--	----------------	----------------------------	-------------------------	---------------------------------	--------------------------------	--	--	-------------------	------------	---	--------------------

QUANTITY DISCOUNT  
(DRY ENVIRONMENT)

Qty	1+	3+	6+	9+
Discounts	-	-10%	-15%	on request

QUANTITY DISCOUNT  
(WET ENVIRONMENT)

Qty	1+	3+	6+	9+
Discounts	-	-5%	-7%	on request

Order Code	nv	PM	TC	MC	S	B	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment  Pg.346	Stock 	€
					mm	mm	mm	mm	mm						mm			piece	
650578	6	O	A	Ps	40	577	493	42	42	C	E	sx	dx	C6	720,5	yes	wet	2029	
650618	6	O	A	Ps	40	577	493	42	42	C	I	sx	-	C6	720,5	yes	wet	2029	
650628	6	O	A	Ps	40	577	493	42	42	C	E	sx	-	C5	492	yes	wet	2029	
650738	6	O	A	Ps	40	705	568	68,5	68,5	C	E	sx	dx	C3	680,5	yes	wet	2029	
650788	6	O	A	Ps	40	705	568	68,5	68,5	C	I	sx	-	C4	680,5	yes	wet	2029	
650878	6	O	A	Ps	40	705	568	68,5	68,5	C	E	sx	-	C4	680,5	yes	wet	2029	
650888	6	O	A	Ps	40	705	625	40	40	C	I	sx	-	C4	680,5	yes	wet	2029	
650908	6	O	A	Ps	40	705	625	40	40	C	E	sx	-	C4	442	yes	wet	2029	
662408	6	O	A	Ps	50	770	586	92	92	C	E	dx	sx	C11	579	yes	wet	2029	
662418	6	O	A	Ps	50	770	586	92	92	C	E	dx	-	C11	579	yes	wet	2029	
662428	6	O	A	Ps	50	770	586	92	92	C	E	dx	sx	C11	329	yes	wet	2029	
672168	8	O	A	Pd	50	1135	1035	50	50	C	E	dx	sx	Sa	600	yes	wet	2398	
671688	8	O	A	Pd	50	1035	1035	0	0	A	E	dx	sx	Sa	600	yes	wet	2598	
630149	2	O	A	Ps	50	600	600	0	0	C	E	dx	sx	Sb	134	no	dry	986	
630159	2	O	A	Ps	50	600	600	0	0	C	I	-	sx	Sb	134	no	dry	986	
622339	6	O	A	Pd	50	906	638	134	134	C	E	sx	-	C13	604	no	dry	1473	
622349	6	O	A	Pd	50	906	638	134	134	C	E	sx	dx	C13	604	no	dry	1473	
650048	6	O	A	Pd	50	909	643	133	133	C	E	dx	sx	Sa	600	yes	dry	1611	
650058	6	O	A	Pd	50	909	643	133	133	C	E	dx	-	Sa	600	yes	dry	1611	
689377	6	O	A	Pd	50	778	778	0	0	A	E	sx	dx	C9	609	yes	dry	1811	
689387	6	O	A	Pd	50	778	778	0	0	A	E	sx	-	C9	609	yes	dry	1811	
632368	6	O	A	Pd	50	1036	936	50	50	C	E	dx	dx	Sa	694	yes	dry	1611	
632378	6	O	A	Pd	50	1036	936	50	50	C	I	dx	-	Sa	694	yes	dry	1611	
632388	6	O	A	Pd	50	1036	936	50	50	C	E	dx	-	Sa	694	yes	dry	1611	
664038	6	O	A	Pd	50	1060	1060	0	0	A	E	sx	-	C12	649	yes	dry	1811	
650178	6	O	A	Pd	50	1166	1166	0	0	A	E	sx	dx	C1	551	yes	dry	1811	
650188	6	O	A	Pd	50	1166	1166	0	0	A	E	sx	-	C1	551	yes	dry	1811	
664028	6	O	A	Pd	50	1600	1600	0	0	A	E	sx	dx	C12	649	yes	dry	1811	
689627	8	O	A	Pd	50	1118	1118	0	0	A	E	sx	dx	C9	609	yes	dry	2160	
689637	8	O	A	Pd	50	1118	1118	0	0	A	E	sx	-	C9	609	yes	dry	2160	
689667	8	O	A	Pd	50	1134	1134	0	0	A	E	sx	dx	C10	485	yes	dry	2160	
689677	8	O	A	Pd	50	1134	1134	0	0	A	E	sx	-	C10	485	yes	dry	2160	
651388	8	O	A	Pd	50	1166	1166	0	0	A	-	sx	dx	C1	551	yes	dry	2160	
651398	8	O	A	Pd	50	1166	1166	0	0	A	-	sx	-	C1	551	yes	dry	2160	



# ↓ CFPACC With fixed central carriage

621608	8	O	A	Pd	50	1166	1166	0	0	A	E	sx	dx	C8	551	yes	dry	▪ 2160
621618	8	O	A	Pd	50	1166	1166	0	0	A	E	sx	-	C8	551	yes	dry	▪ 2160
631238	8	O	A	Ps	50	1374	1374	0	0	A	E	sx	dx	C7	610	yes	dry	▪ 2160
631258	8	O	A	Ps	50	1374	1374	0	0	A	E	sx	-	C7	610	yes	dry	▪ 2160
Customisa- tions	even, max 8																	
	O / V																	
	A / B / C																	
	Pd/Ps/Ci/Ce																	
	40/50																	
	min 320 max 1800																	
min 320 max 1400																		
max 200																		
max 200																		
A / C																		
- / I / E																		
sx / dx																		
- / lh / rh																		
min 400 max 1000																		
yes / no																		
dry/ wet																		

▪ **Products not in stock** minimum order: 1 piece, delivery in 20 days.



## CFPACL With fixed lateral carriage

**Use:** for fast format changeover - based on the product dimensions - of manually or motor-driven packaging lines with fixed side guide.

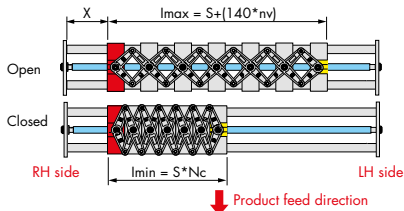
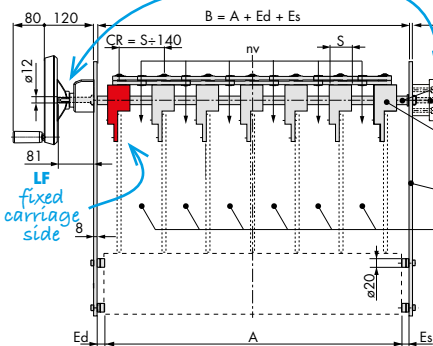
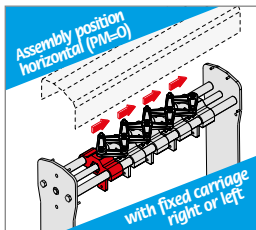
**State of supply:** Complete with carriages, connecting rods, sliding shafts and worm screw, side members and fastening rods, covers (see table). The versions with shaft transmission include the angular idler indicated in the combinations, while the versions with chain drive include the pinion.

**Material:** available for both **dry** and **wet environment** Pg.346

**Characteristics:** M20 worm screw, pitch 2.5 (1 handwheel turn = 2.5 linear mm)

**Standard pack:** 1 piece.

**Combinations:**



### LEGEND







B	side member axial distance
S	carriage width
TT	(transmission type) Pg.351
PP	(bridge position)
LT	(transmission side)
AZ	(drive side)
TC	(carriage type) Pg.350
MC	(carriage assembly)
TF	(side member type) Pg.352
nv	number of tracks (Nc-1)
Nc	number of carriages
CR	theoretical adjustment range (without guide, the adjustment range decreases in relation to the thickness of the guide and the clearance between the product and the guides)
A	machine/belt dimensions
Ed	fastening rod length
Es	

lmax: max. carriage dimensions  
lmin: min. carriage dimensions

X distance of the first carriage from the side member

■ : metric screws (right and left)  
■ : threaded lead nut



Order Code	nv	PM	TC	MC	S	LF	X	B	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€	QUANTITY DISCOUNT (DRY ENVIRONMENT)			
																						Qty	1+	3+	6+
Customisations	number of tracks	assembly position  Pg.349	carriage type  Pg.350	carriage assembly  Pg.349	carriage width	fixed carriage side	distance from the side member	side member axial distance	machine/belt dimensions	right-hand fastening rod length	left-hand fastening rod length	transmission type  Pg.351	bridge position  Pg.351	transmission side	drive side	side member type  Pg.352	side member height	Cover	Environment	Stock	€	QUANTITY DISCOUNT (WET ENVIRONMENT)			
																						Qty	1+	3+	6+
651468	5	O	A	Pd	50	rh	75	1010	780	50	180	C	E	lh	rh	C2	454	yes	dry	▪	1441				
651478	5	O	A	Pd	50	rh	75	1010	780	50	180	C	I	lh	-	C2	454	yes	dry	▪	1441				
	uneven, max 9	O / V	A / B / C	Pd / Ps / Ci / Ce	40 / 50	- / lh / rh	min 30 / max 170	min 320 max 1800	min 320 max 1400	max 200	max 200	A / C	- / I / E	lh / rh	- / lh / rh		min 400 max 1000	yes / no	dry/ wet	▪					

▪ **Products not in stock** minimum order: 1 piece, delivery in 20 days.



## CFPAVC With fixed track central

**Use:** for fast format changeover - based on the product dimensions - of manually or motor-driven packaging lines with fixed central track.

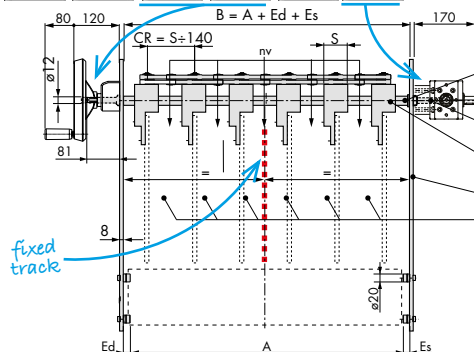
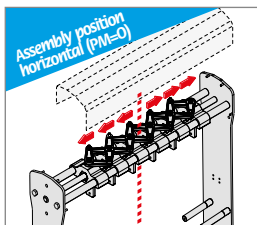
**State of supply:** Complete with carriages, connecting rods, sliding shafts and worm screw, side members and fastening rods, covers (see table). The versions with shaft transmission include the angular idler indicated in the combinations, while the versions with chain drive include the pinion.

**Material:** available for both **dry** and **wet environment** Pg.346

**Characteristics:** M20 worm screw, pitch 2.5 (1 handwheel turn = 2.5 linear mm)

**Standard pack:** 1 piece.

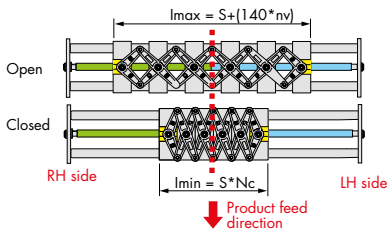
**Combinations:**



fixed track

### LEGEND

B	side member axial distance
S	carriage width
TT	(transmission type) Pg.351
PP	(bridge position)
LT	(transmission side)
AZ	(drive side)
TC	(carriage type) Pg.350
MC	(carriage assembly)
TF	(side member type) Pg.352
nv	number of tracks (Nc-1)
Nc	number of carriages
CR	theoretical adjustment range (without guide, the adjustment range decreases in relation to the thickness of the guide and the clearance between the product and the guides)
A	machine/belt dimensions
Ed	fastening rod length
Es	



lmax: max. carriage dimensions  
lmin: min. carriage dimensions  
■ ■ : metric screws (right and left)  
■ : threaded lead nut



Order Code	nv	PM	TC	MC	S mm	B mm	A mm	Ed mm	Es mm	TT	PP	LT	AZ	TF	H mm	Cover	Environment Pg.346	Stock	€
615818	3	O	A	Pd	50	1166	1166	0	0	A	E	sx	dx	C8	551	si	dry	▪	1418
615838	3	O	A	Pd	50	1166	1166	0	0	A	E	sx	-	C8	551	si	dry	▪	1418
<b>Customisations</b>	even, max 8				40/50	min 320 max 1800	min 320 max 1400	max 200	max 200	A / C	- / I / E	lh / rh	- / lh / rh		min 400 max 1000	yes / no	dry/ wet	▪	
	O / V	A / B / C	Pd/Ps/Ci/Ce																

### QUANTITY DISCOUNT (DRY ENVIRONMENT)

Qty	1+	3+	6+	9+
Discounts	-	-10%	-15%	on request

### QUANTITY DISCOUNT (WET ENVIRONMENT)

Qty	1+	3+	6+	9+
Discounts	-	-5%	-7%	on request

▪ **Products not in stock** minimum order: 1 piece, delivery in 20 days.



## CFPAVI With distance between fixed track centres

**Use:** for fast format changeover - based on the product dimensions - of manually or motor-driven packaging lines with fixed central track.

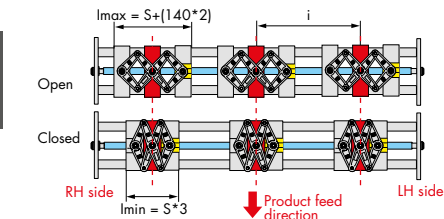
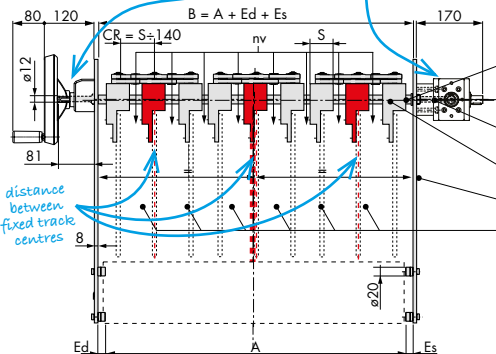
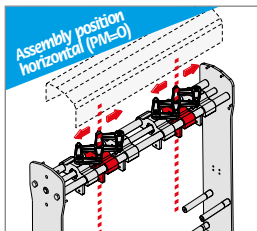
**State of supply:** Complete with carriages, connecting rods, sliding shafts and worm screw, side members and fastening rods, covers (see table). The versions with shaft transmission include the angular idler indicated in the combinations, while the versions with chain drive include the pinion.

**Material:** available for both **dry** and **wet environment** Pg.346

**Characteristics:** M20 worm screw, pitch 2.5 (1 handwheel turn = 2.5 linear mm)

**Standard pack:** 1 piece.

**Combinations:**



### LEGEND

B	side member axial distance
S	carriage width
TT	(transmission type) Pg.351
PP	(bridge position)
LT	(transmission side)
AZ	(drive side)
TC	(carriage type) Pg.350
MC	(carriage assembly)
TF	(side member type) Pg.352
nv	number of tracks (Nc-1)
Nc	number of carriages
CR	theoretical adjustment range (without guide, the adjustment range decreases in relation to the thickness of the guide and the clearance between the product and the guides)
A	machine/belt dimensions
Ed	fastening rod length
Es	

Imax: max. carriage dimensions  
Lmin: min. carriage dimensions

i : distance between track centres (min.280+S)  
■ : metric screws (right and left)  
■ : threaded lead nut



Order Code	nv	PM	TC	MC	S	i	B	A	Ed	Es	TT	PP	LT	AZ	TF	H	Cover	Environment	Stock	€
<b>Customisations</b>	even, max 8	O / V	A / B / C	Pd/Ps/Ci/Ce	40/50		min 320 max 1800	min 320 max 1400	max 200	max 200	A / C	- / I / E	lh / rh	- / lh / rh	min 400 max 1000	yes / no	dry/ wet			
	number of tracks	assembly position	carriage type	carriage assembly	carriage width	distance between track centres	side member axial distance	machine/belt dimensions	right-hand fastening rod length	left-hand fastening rod length	transmission type	bridge position	transmission side	drive side	side member type	side member height				piece

**QUANTITY DISCOUNT (DRY ENVIRONMENT)**

Qty	1+	3+	6+	9+
Discounts	-	-10%	-15%	on request

**QUANTITY DISCOUNT (WET ENVIRONMENT)**

Qty	1+	3+	6+	9+
Discounts	-	-5%	-7%	on request

■ **Products not in stock** minimum order: 1 piece, delivery in 20 days.



2434

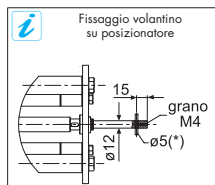
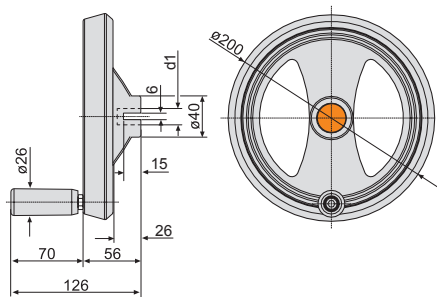
## Removable safety handwheel

**Use:** For manual movement of the format changeover positioner carriages. The notch on the handwheel allows snap-fitting on the 50 pin on the positioner; this characteristic allows fast removal during machine operation preventing accidental format changeovers.

**Material:** polyamide reinforced with glass fibre; insert in galvanised steel with 120 x 26mm-deep hole.

**Standard pack:** 1 piece.

**State of supply:** handwheel with notch for snap-fitting on the positioner shaft by means of a 50 cylindrical pin provided with the positioner.



with notch for snap-fitting

intaglio L=5 per incastro su posizionale tramite spina Ø5 (\*)



### QUANTITY DISCOUNT

Q.ty	1+	5+	10+	20+
Discounts	-	-15%	-25%	on request

Order code	Colour	Weight g	Stock	€ piece
672284	black RAL9005	490	✓	31,95

2422

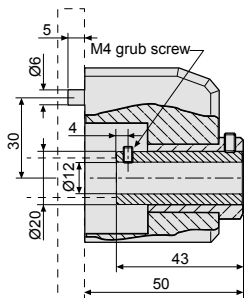
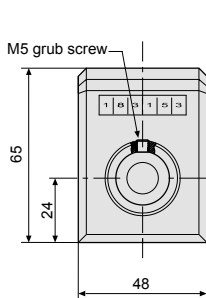
# Revolution counter with adapter for pantograph format changeover

**Use:** fitted on the shaft of the pantograph positioner, it provides the reading of the millimetres of travel.

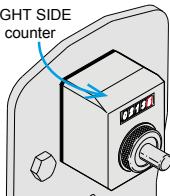
**Material:** technopolymer body; burnished steel bushing with 20ø H7 hole; burnished steel adapter.

**Standard pack:** 1 piece.

**State of supply:** revolution counter complete with M5 threaded grub screw to lock the adapter; adapter complete with M4 threaded grub screw for fastening on the positioner shaft.



RIGHT SIDE  
counter



### QUANTITY DISCOUNT

Qty Discounts	1+	5+	8+	16+
	-			contact us

Order code	Counter	Pitch	Colour	Peso g	Stock	€ pezzo
656754	RIGHT SIDE	1	orange RAL 2004	185	✓	39.12



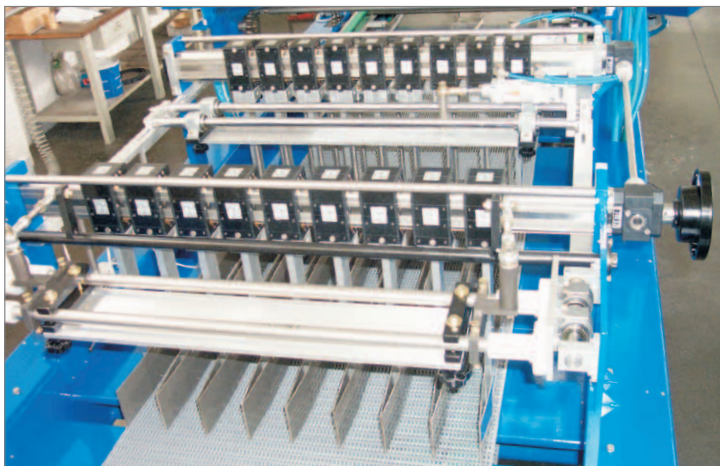
## Comparing the two systems

Format changeover	LINKED CARRIAGES	PANTOGRAPH TYPE
Increased adjustment range		✓
Cheaper		✓
Blade coupling clamps incorporated in the carriage		✓
Blade coupling clamps as accessories	✓	
Complete with plates for machine coupling		✓
Machine coupling clamps as accessories	✓	
Possibility of having travel lines with fixed distance between centres		✓
Possibility of sliding the carriage pack horizontally	✓	
If choosing a fixed carriage, this must be confirmed during ordering (mandatory)		✓
Possibility of choosing a fixed carriage, at any time.	✓	
Cleaner	✓	
More covering frames	✓	





En pantographe



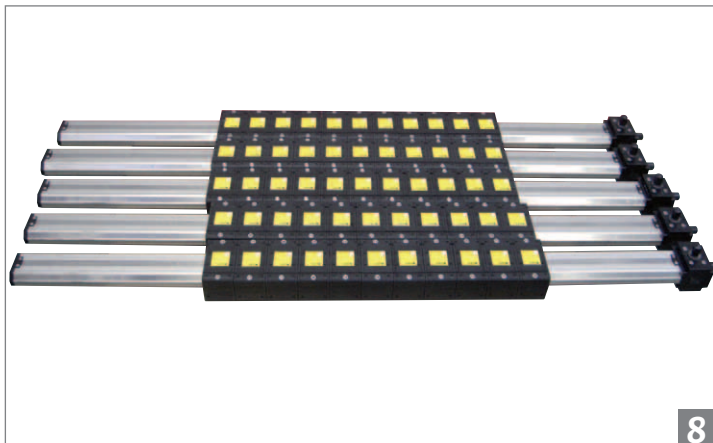
Linked carriages



Download the "technical questionnaire for pantograph positioner bridges" from [www.bettsistemi.com](http://www.bettsistemi.com), fill it in and send it to our Sales Department via fax.







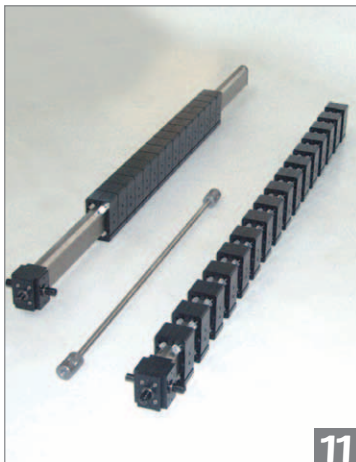
8



9



10



11

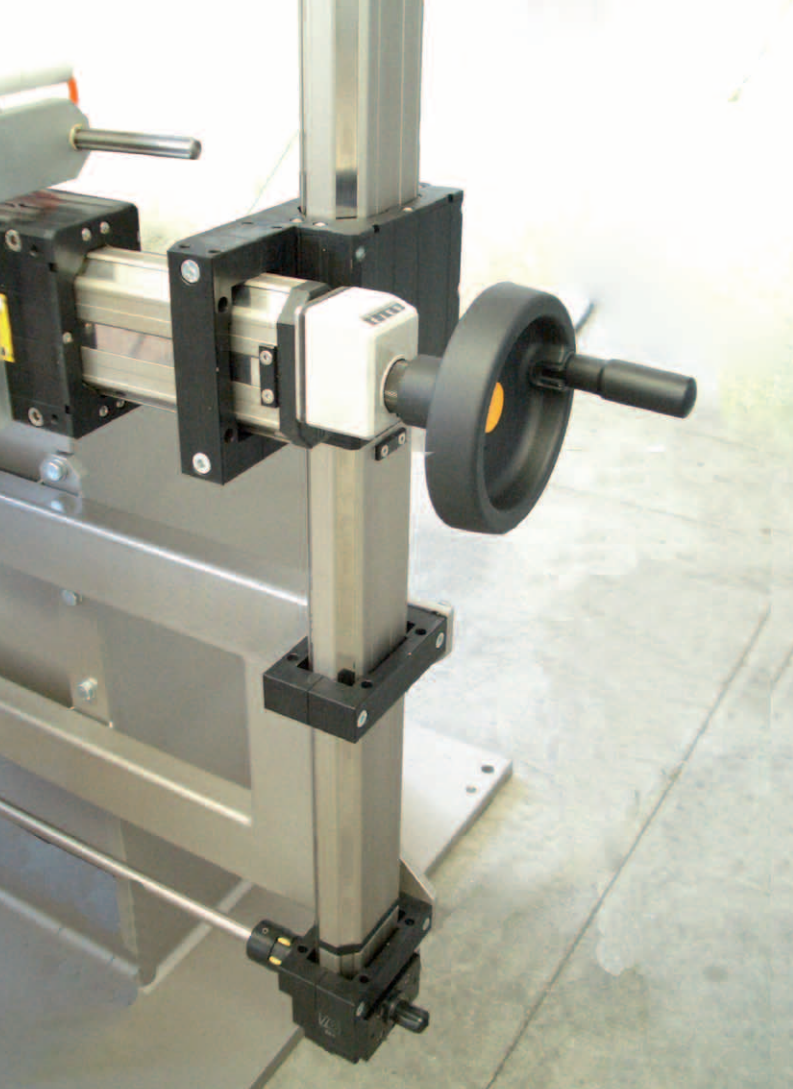


12



13







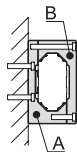
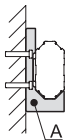
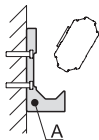
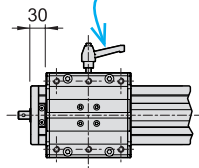
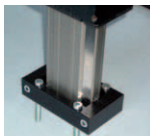
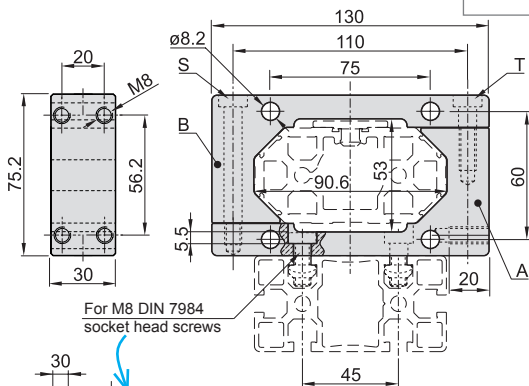
2235

# Fastening bracket for Octagonal sections

**Use:** for bracketing of aluminium positioners with octagonal cross-section, part nos. 2155, 2125, 2247.

**Material:** black anodised aluminium bracket, 1 M8x60 screw and 1 DIN 7984 M8x25 screw in galvanised steel.

**Standard pack:** 2 pieces.



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	S	T	Finish	Weight g	Stock	€ pezzo
621104	M8x60	M8x25	black RAL9005 anodised	443	✓	53,74

**Personalizations:** other finishes on request Pg.214



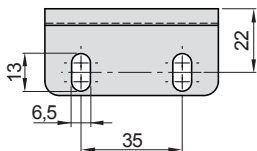
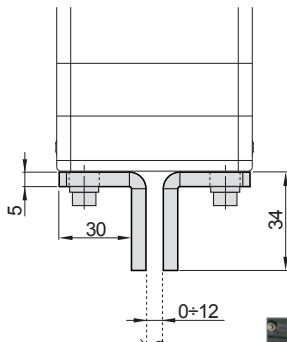
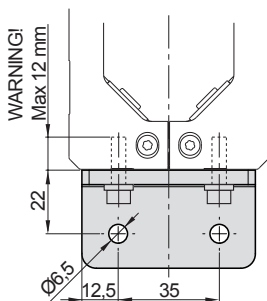
## 2179 Fixed fitting bracket

**Use:** suitable for fitting product containment blades.

**Material:** bracket, 4 screws M6x16 UNI 5931 and 4 washers in stainless steel AISI 304.

**Characteristics:** easy to fit, it allows you to fit blades with a max. thickness of 12 mm. Not adjustable.

**Standard pack:** 8 pieces.



### QUANTITY DISCOUNT

Q.ty Discounts	8+	16+	32+
	-	-5%	on request

Order code	Finish	Weight g	Stock	€ piece
614894	shot peening	350	■	11,04

•Products not in stock minimum order: 8 pieces, delivery in 20 days.



2195

## Fitting bracket

**Use:** suitable for fitting product containment blades, where the blades are not parallel to the clamps (see fitting example).

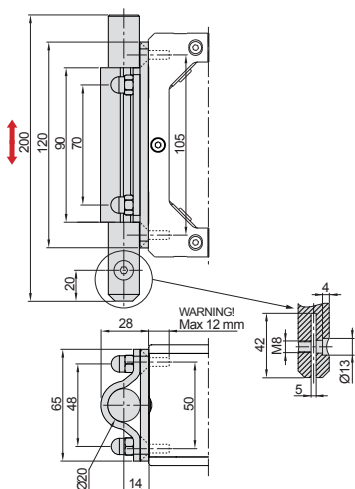
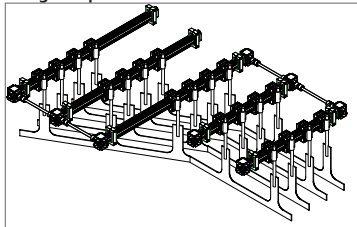
**Material:** bracket, 4 screws M6x16 UNI 5933, 4 M6 blind hexagon nuts UNI 5721, 4 self-anchoring pins M6, blade holder pin Ø20 and screw M8x16 DIN 7984 in stainless steel AISI 304.

**Standard pack:** 8 pieces.

**Warning:** to fit the bracket on carriages, you must drill 4 M6 threaded holes (not provided on standard carriages).



**Fitting example:**



## QUANTITY DISCOUNT

Q.ty	8+	16+	32+
Discounts	-	-5%	on request

Order code	Finish pin	Finish bracket	Weight kg	Stock	€ piece
629877	drawn	shot peening	1,05	■	53,21

•Products not in stock minimum order: 8 pieces, delivery in 20 days.



## 2033 Clamp with locking jaws

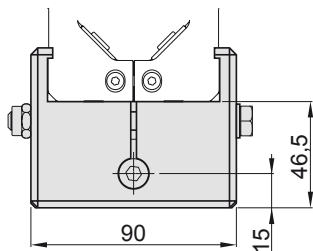
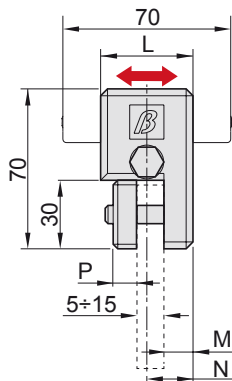
**Use:** suitable for fitting product containment blades.

**Material:** aluminium clamp, AISI 316 stainless steel screws.

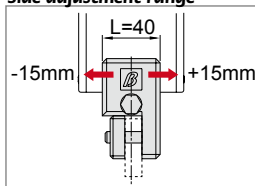
**Characteristics:** easy to fit, it allows blades fitting with max. thickness of 15 mm.

The clamp can translate on the carriage, allowing recovery of any imperfections in blade rectilinearity, thus preventing overloads on the carriage and hence increased torque on the positioner shaft.

**Standard pack:** 8 pieces.



### Side adjustment range



### QUANTITY DISCOUNT

Q.ty	8+	32+	96+
Discounts	-	-45%	on demande

Order code	L mm	M mm	N mm	P mm	Finish	Weight g	Stock	€ piece
620104	40	22	30	20	black RAL9005 anodised	400	■	67,75

■ Products not in stock minimum order: 8 pieces, delivery in 20 days.

## 2284

# Fastening angle with reference notches

**Use:** can be fitted on the positioners Part 2125 and 2155 for fastening to the machine base.

**Material:** painted aluminium, galvanised steel nuts and bolts.

**State of supply:** complete with 8 M8x20 socket head screws and 8 washers.

**Characteristics:** one side of the angle is specially moulded to perfectly match the shape of the positioner beam, thus giving this fastening accessory great rigidity.

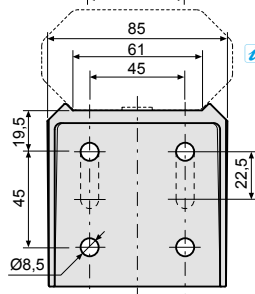
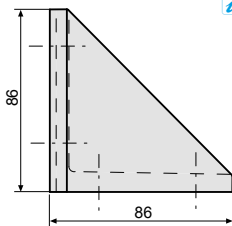
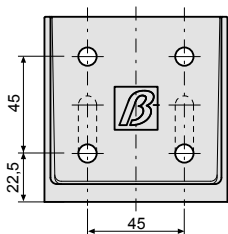
Machining Pg.378

**Combinations**

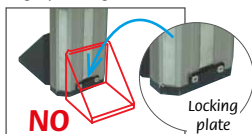


Pg.304

Pg.300



This accessory **CANNOT** be fitted on the locking plate side as it protrudes from the beam and is positioned precisely in correspondence to the angle fastening holes.



Locking plate



Each bracket fitted at the end of the positioner reduces the useful stroke (C1 and/or C2) by 56mm

**Application example:**



Order code	Pack	Colour	Weight g	Stock	€ piece
642634	4 pcs.	black RAL 9005	550		

## 2289

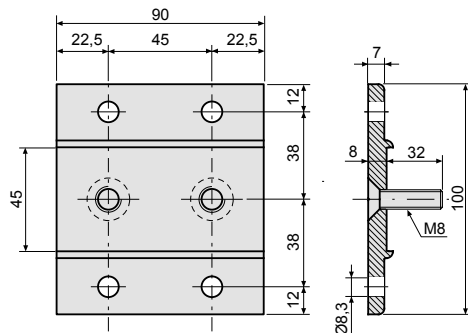
# Bracket flange

**Use:** fitted at the end (side opposite the handwheel) of the positioners Part 2125 and 2155, it is used for bracketing to the machine base or, for Part 2155, for fastening heads of labelling machines (or other devices) to the end of the horizontal axis of the positioner.

**Material** black anodised aluminium, galvanised steel nuts and bolts.

**State of supply** complete with 2 M8x40 hexagon socket countersunk head screws.

**Combinations**



The use of this bracket flange does not reduce the useful stroke (C1 and/or C2) of the positioner.

**Application example:**

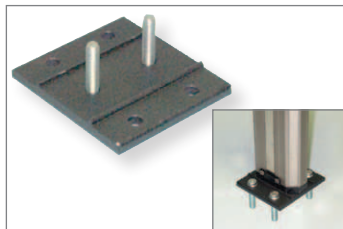


Order code	Pack	Colour	Weight g	Stock	€ piece
643044	1 pz.	nero RAL 9005	200	<input checked="" type="checkbox"/>	

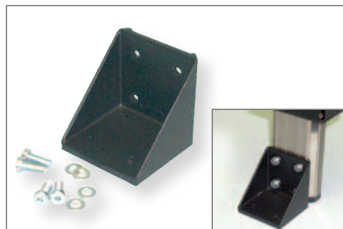


## Additional accessories for octagonal positioners

**2289** Bracket flange



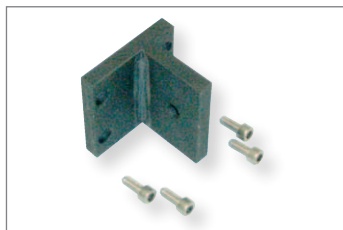
**2284** Fastening angle with reference notches



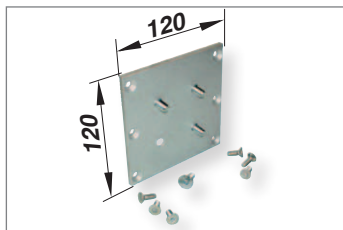
**4119** Plate for fastening positioner carriage in 45x90 profile



**2173** Fitting bracket

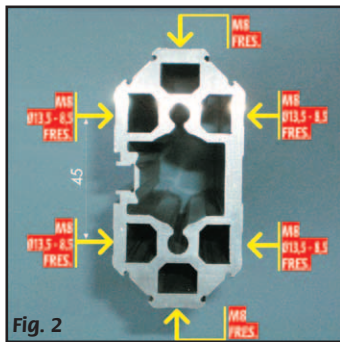
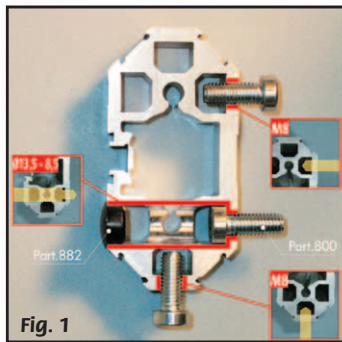


**2285** Plate for fastening on carriage





## Machining for beam fastening with screws



**M8** : M8 drilling and threading of the beam outside. This machining can be done in all the grooves in the beam, in order to fasten the positioner with M8 screws.

**13.5Ø-8.5**: 8.5Ø drilling 13.5Ø and spot-facing for M8 cheese-headed screws. In order to avoid affecting proper functioning of the positioner, this machining can be done only in the grooves on the long sides of the beam (see Fig.2) and at a distance of at least 40 mm from the end of the beam (see Fig.3).



Fig. 3

**MILLING** : milling is performed to open the groove in the beam, to insert the M8 square nut. This can be done in all the grooves in the beam; it is advisable to use the nut with positioning spring (part 1786) as it will remain in place even if the beam is arranged vertically.

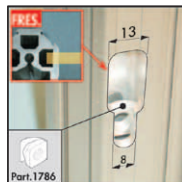


Fig. 4



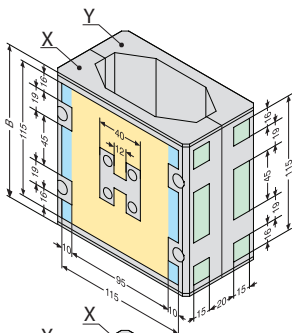
## Depth holes that run on the carriages

Max. permitted depth  
for holes and threads

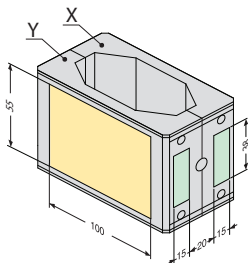
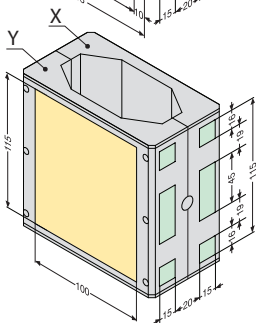
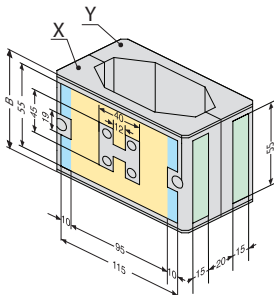
-  9 mm
-  12 mm
-  16 mm

**WARNING**  
the holes or machined parts  
must NOT be through-holes  
(blind holes)

### Carriage B=130



### Carriage B=70





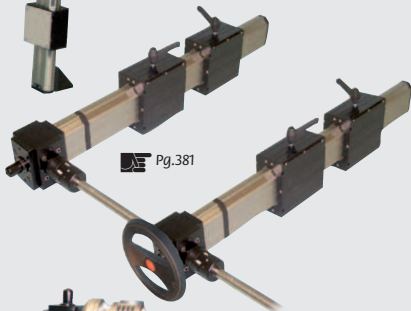
 Pg.381



 Pg.387



 Pg.381



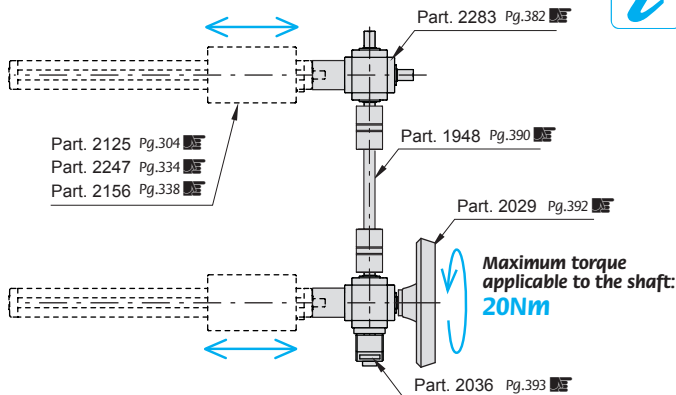
 Pg.381



 Pg.388

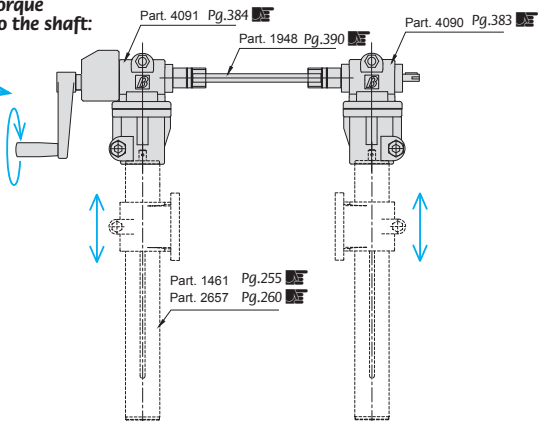


## With octagonal angular idler



## With round angular idler

**Maximum torque applicable to the shaft: 20Nm**





# 2283 3-track angular **octagonal** idler

**Use:** applicable to 2 or more standard positioners with octagonal cross-section when you want to synchronise their movements.

**Material:** aluminium body, steel shafts and gears, anodised aluminium spacer, 2 4x24 flexible pins, 2 M8x80 socket head screws in galvanized steel.

**Maintenance:** not required, lubricated for life.

**Durability:** guaranteed for 20,000 activations.

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).

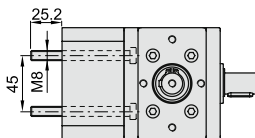
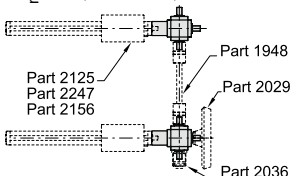
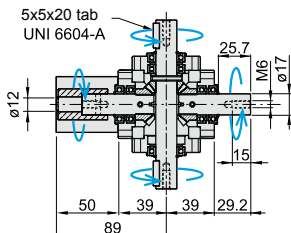
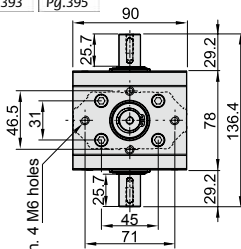
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

technical information Pg.381 .

**Combinations**



**CONTINUOUS OPERATION**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	Computing nom. torque Nm	Finish	Weight kg	Stock	€ piece
642654	20	black anodised	2,3		397,70

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.



4090

2-track angular **round** idler

**Use:** applicable to 2 or more column positioners with round cross-section when you want to synchronise their movements with each other.

**Material:** stainless steel clamps, stainless steel shafts and gears, anodised aluminium spacer, 2 4x24 flexible pins, 2 M8x80 socket head screws in galvanised steel.

**Maintenance:** not required, lubricated for life.

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

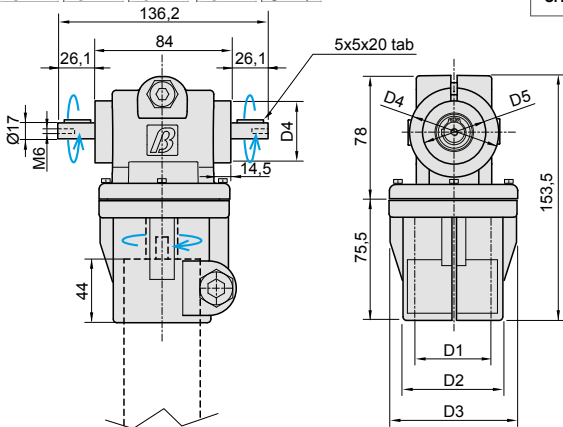
technical information Pg.381

on request, positioners with the idlers already mounted can be supplied.

**Combinations**



CONTINUOUS  
OPERATION



**QUANTITY DISCOUNT**

Q. ty	1+	2+	4+	8+	16+
Discounts	-	-5%	-10%	-20%	on request

Order code	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	Nominal torque transmissible (Nm)	Finish	Weight kg	Stock	€ piece
672247	40,2	66	80	56	40,2	20	shot peening	1,75		263,21
672287	50,3	66	80	56	40,2	20	shot peening	1,70		263,21

**Personalizations** If you wish to have an angular idler fitted to the positioner, specify it at the time of order.

**Personalizations** Other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 20 days.



# 4091 Round angular idler **complete**

**Use:** applicable to 2 or more column positioners with round cross-section when you want to synchronise their movements with each other.

**Material:** aluminium clamps, steel shafts and gears, anodised aluminium spacer, galvanised steel nuts and bolts, 5x20 elastic pin in burnished steel, complete with handle and revolution counter.

**Maintenance:** not required, lubricated for life.

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).

(max 70 rpm; max time: min. 1; on/off ratio=1/60)

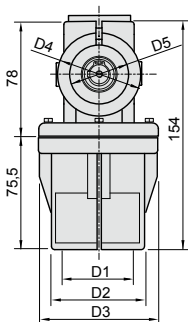
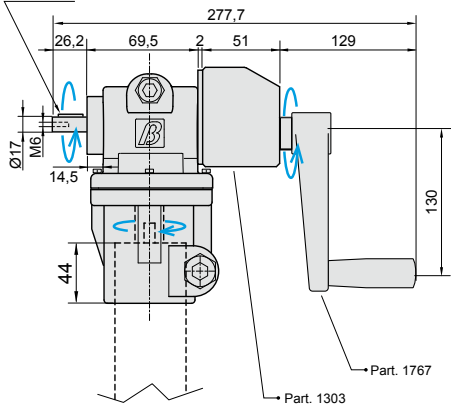
technical information Pg.381

on request, positioners with the idlers already mounted can be supplied.

**Combinations**



Tab 5x5x20



## QUANTITY DISCOUNT

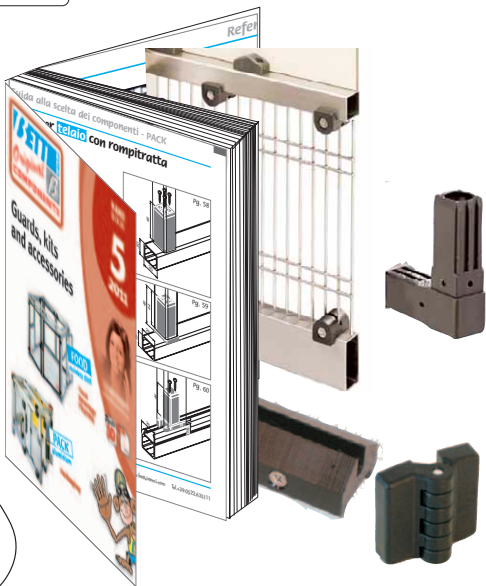
Qty Discounts	1+	2+	4+	8+	16+
	-	-5%	-10%	-20%	on request

Ordre code	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	Nominal torque transmissible (Nm)	Finish	Weight kg	Stock	€ piece
672367	40,2	66	80	56	40,2	20	shot peening	2,20	■	425,56
672407	50,3	66	80	56	40,2	20	shot peening	2,15	■	425,56

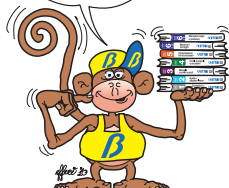
**Personalizations** If you wish to have an angular idler fitted to the positioner, specify it at the time of order.

**Personalizations** Other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 20 days.



Have you  
got all the  
Books?





# 4166 → Round angular idler 90°

**Use:** applicable to 2 or more column positioners, connected with a 90° angle, when you want to synchronise their movements with each other

**Material:** aluminium clamps, steel shafts and gears, anodised aluminium spacer, galvanised steel nuts and bolts, 5x20 elastic pin in bur-nished steel.

**Maintenance:** not required, lubricated for life.

**Characteristics:** possibility of connecting the positioners at different heights, with an adjustment angle up to  $\pm 90^\circ$ .

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation!).

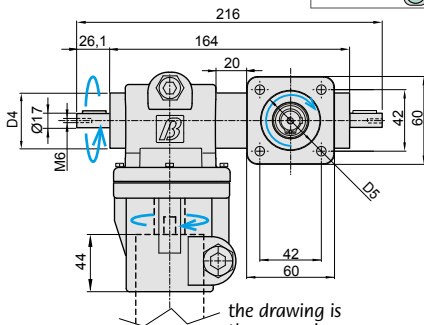
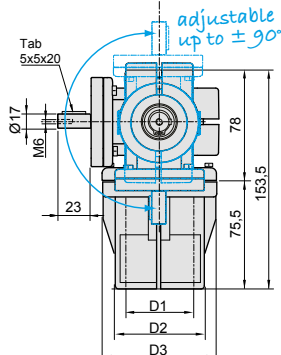
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

on request, positioners with the idlers already mounted can be supplied.

**Combinations**



CONTINUOUS OPERATION



### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+	16+
	-	-5%	-10%	-20%	on request

Order code	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	Version	Nominal torque transmissible (Nm)	Finish	Weight kg	Stock	€ piece
692117	40,2	66	80	40,2	40,2	RH	10	shot peening	-		480,00
692127	40,2	66	80	40,2	40,2	LH	10	shot peening	-		480,00
692137	50,3	66	80	40,2	40,2	RH	10	shot peening	-		480,00
692147	50,3	66	80	40,2	40,2	LH	10	shot peening	-		480,00

**Personalizations** If you wish to have an angular idler fitted to the positioner, specify it at the time of order.

**Personalizations** Other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 20 days.

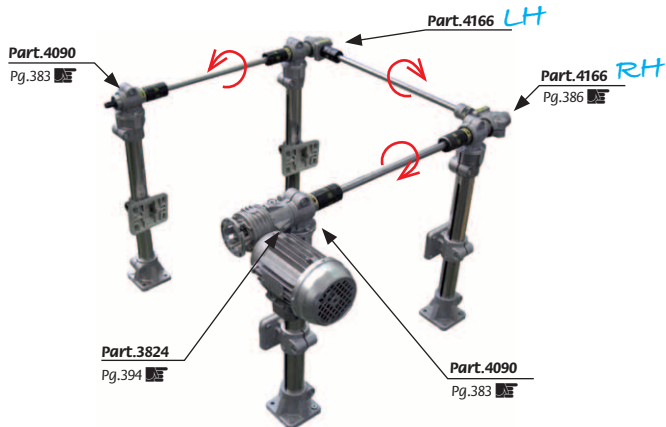


↓ 4166

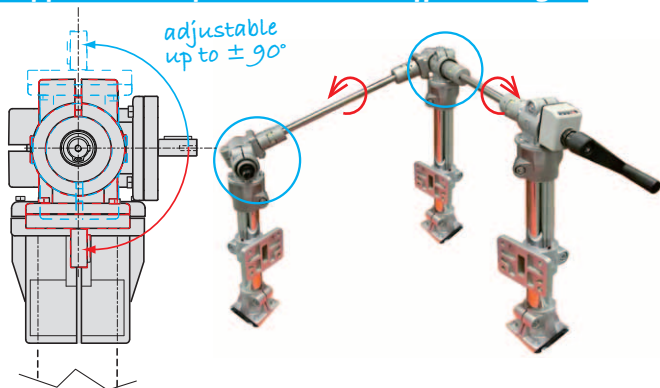
## Round angular idler 90°



For application on positioners with the same height



For application on positioners with different heights



## 4570 → **Round** angular idler with revolution counter and handwheel

**Use:** applicable to 2 or more column positioners when you want to synchronise their movements with each other and you need to activate the positioners staying in lateral position with respect to the positioner line.

**Material:** aluminium clamps, steel shafts and gears, anodised aluminium spacer, galvanised steel nuts and bolts, 5x20 elastic pin in burnished steel. Complete with handwheel and revolution counter.

**Maintenance:** not required, lubricated for life.

**Characteristics:** possibility of connecting the positioners at different heights, with an adjustment angle up to  $\pm 90^\circ$ .

**Standard pack:** 1 piece.

**Operation:** **STEP BY STEP** (NO continuous operation).

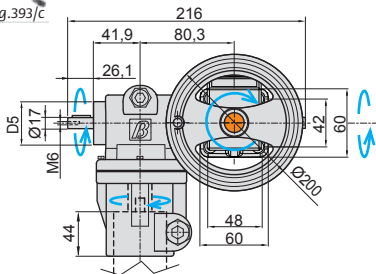
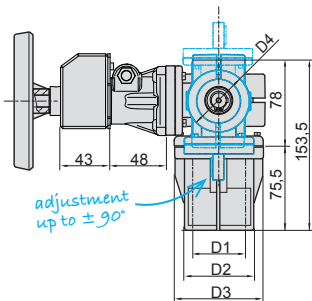
Max. 70 rpm; max time: min. 1; on/off ratio=1/60.

On request, positioners with the idlers already mounted can be supplied.

**Combinations**



CONTINUOUS OPERATION



Application example with Part 4071



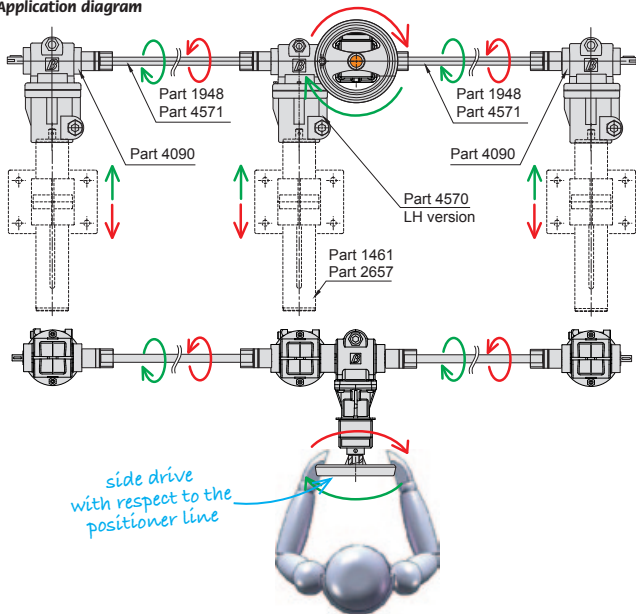
the drawing shows  
the left version

↓ 4570

## Round angular idler

with revolution counter and handwheel

 Application diagram



**QUANTITY DISCOUNT**

Qty Discounts	1+	2+	4+	8+	16+
	-	-5%	-10%	-20%	contact us

Order code	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	Version	Nominal torque transmissible [Nn]	Finish	Weight kg	Stock	€ piece
610759	40,2	66	80	56	40	RH	10	shot peening	3,33	■	640,00
610769	40,2	66	80	56	40	LH	10	shot peening	3,33	■	640,00
610779	50,3	66	80	56	40	RH	10	shot peening	3,28	■	640,00
610789	50,3	66	80	56	40	LH	10	shot peening	3,28	■	640,00

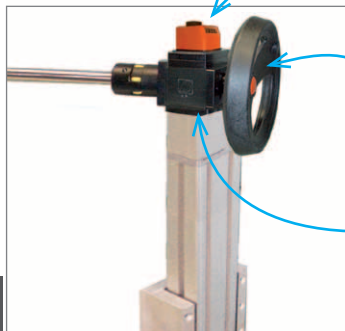
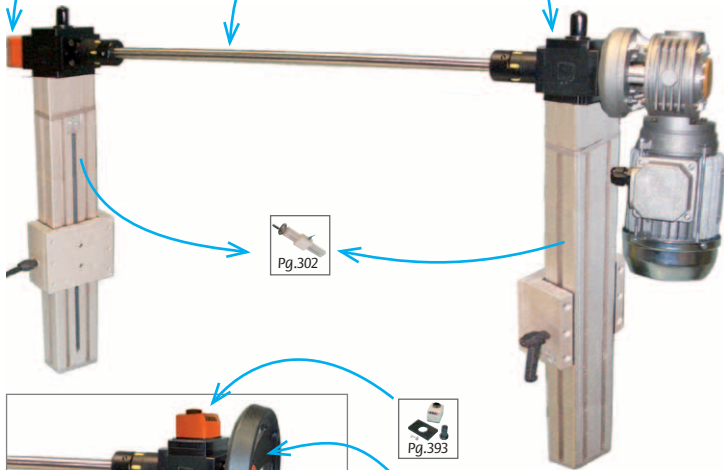
**Personalisations** If you wish to have an angular idler fitted to the positioner, specify it at the time of order.

**Personalisations** Other finishes on request  Pg.214 

**Products not in stock** minimum order: 1 piece, delivery in 20 days (unless stock runs out).



With positioners and angular idler, 45x90 profile





4223

## 3-track angular idler, 45x90 profile

**Use:** applicable to 2 or more standard positioners in 45x90 profile, when their movements needs to be synchronised.

**Material:** stainless steel clamps, stainless steel shafts and gears, anodised aluminium spacer, 2 4x24 flexible pins, 2 M8x80 socket head screws in galvanised steel.

**Maintenance:** not required, lubricated for life.

**Durability:** guaranteed for 20,000 activations.

**Standard pack:** 1 piece.

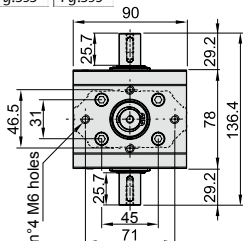
**Operation:** **STEP BY STEP** (NO continuous operation!).  
(max 70 rpm; max time: min. 1; on/off ratio=1/60)

technical information Pg.381

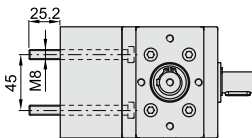
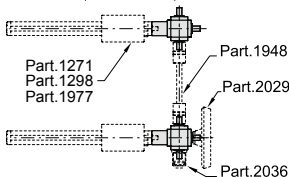
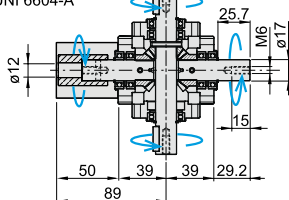
**Combinations**



CONTINUOUS  
OPERATION



5x5x2 tab  
UNI 6604-A



**QUANTITY DISCOUNT**

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	Coupling nominal torque (Nm <sup>9</sup> )	Finish	Weight kg	Stock	€ piece
630227	20	black anodised	2,3		397,70

**Personalizations** other finishes on request Pg.214

**Products not in stock** minimum order 1 piece, delivery in 5 days.



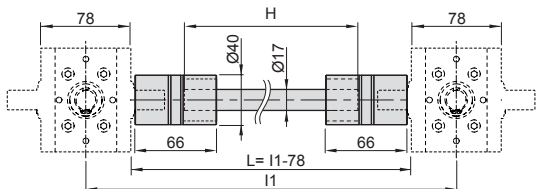
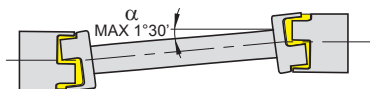
# 1948 → Drive shaft

**Use:** mounted on the angular idler pins, it transmits synchronised and not aligned movement to 2 positioners.

**Material:** stainless steel shaft, 2 aluminium flexible joints.

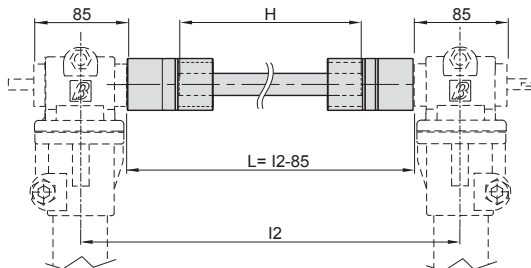
**Standard pack:** 1 piece.

**Combinations**



L = outside joint width

I1 = distance between centres of the two 45x90 octagonal positioners to be connected



L = outside joint width

I2 = distance between centres of the two column positioners to be connected



↓ 1948

## Drive shaft

depending on the idler used (octagonal part 2283 or round part 4091), select the shaft that allows obtaining the desired distance between centres (I1 or I2); if the exact length is not available, order a longer shaft and cut it.

**Example:** desired distance between centres I1 / I2=820 mm

- with octagonal idler part 2283: shaft part 689393, 20cm to be cut off.

689393	840	847	sand-blasted	1.6	-	-
--------	-----	-----	--------------	-----	---	---

- with round idler part 4090 / 4091: shaft part 684033, 3cm to be cut off.

684033	816	823	sand-blasted	1.5	-	-
--------	-----	-----	--------------	-----	---	---

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	I1(Comb. Part.2283) mm	I2(Comb. Part.4090) mm	H mm	Computing nom.		Finish	Weight Kg	Stock	€ piece
				torque Nm	Nm				
609854	260	267	90	11,5	23	shot peening	0,5	■	86,19
689743	650	657	480	11,5	23	shot peening	1,2	■	90,19
683063	700	707	530	11,5	23	shot peening	1,3	■	90,70
608684	730	737	560	11,5	23	shot peening	1,4	■	91,01
676303	800	807	630	11,5	23	shot peening	1,5	■	91,73
684033	816	823	646	11,5	23	shot peening	1,5	■	91,89
689383	835	842	665	11,5	23	shot peening	1,6	■	92,09
689393	840	847	670	11,5	23	shot peening	1,6	■	92,14
689403	849	856	679	11,5	23	shot peening	1,6	■	92,23
609694	855	862	685	11,5	23	shot peening	1,6	■	92,29
676813	900	907	730	11,5	23	shot peening	1,7	■	92,75
684023	904	911	734	11,5	23	shot peening	1,7	■	92,79
676773	1000	1007	830	11,5	23	shot peening	1,9	■	93,78
609894	1100	1107	930	11,5	23	shot peening	2,0	■	94,80
609724	1119	1126	949	11,5	23	shot peening	2,1	■	95,00
609864	1130	1137	960	11,5	23	shot peening	2,1	■	95,11
683753	1150	1157	980	11,5	23	shot peening	2,1	■	95,31
609704	1195	1202	1025	11,5	23	shot peening	2,2	■	95,78
614274	1250	1257	1080	11,5	23	shot peening	2,3	■	96,34
609714	1295	1302	1125	11,5	23	shot peening	2,4	■	96,80
677463	1500	1507	1330	11,5	23	shot peening	2,8	■	98,90
684013	1661	1668	1491	11,5	23	shot peening	3,1	■	100,55
609844	1722	1729	1552	11,5	23	shot peening	3,2	■	101,18
614254	1940	1947	1770	11,5	23	shot peening	3,6	■	103,42

Personalizations other finishes on request Pg.214

•Products not in stock minimum order 1 piece, delivery in 3 days.

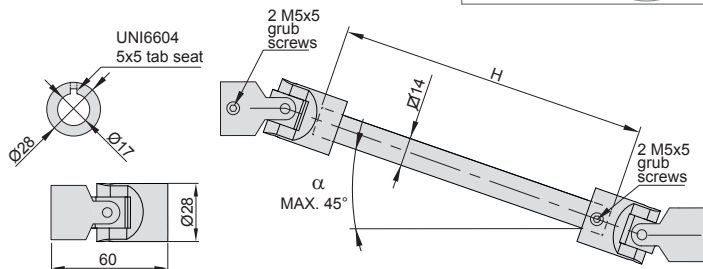
## 4571 → Propeller shaft with cardan joints

**Use:** mounted on the angular idler pins, it transmits synchronised movement to 2 positioners; suitable for connecting positioners not aligned with each other (max misalignment 45°).

**Material** shaft and grub screws in AISI 304 stainless steel; 2 DIN 808-7551 standard cardan joints in C45 steel and pin in hardened steel with hard-wearing sliding bush in casehardened steel.

**Standard pack:** 1 piece.

**Combinations** 



\* Distance between centres (I1 and I2) and shaft length H calculated with propeller shaft with maximum misalignment ( $\alpha=45^\circ$ )

 Pg.395

### QUANTITY DISCOUNT

Qty Discounts	1+	5+	8+	16+
	-1%	-5%	-10%	contact us

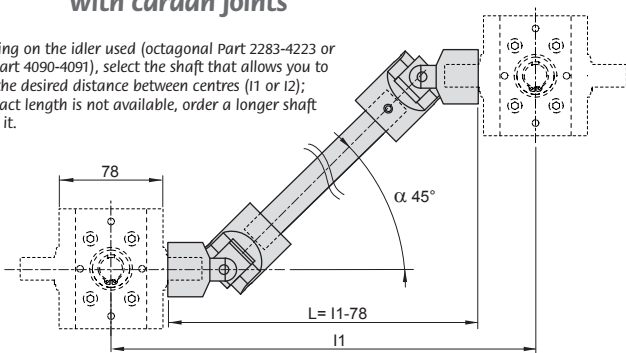
Order code	I1* (combined with Part. 2283-4223) mm	I2* (combined with Part. 4090-4091) mm	H* mm	Nominal torque transmissible Nm	Max torque transmissible Nm	Weight kg	Stock	€ piece
686668	493	500	470	11,5	23	1,06	■	100,81
686678	993	1000	1177	11,5	23	2,14	■	104,00
686688	1493	1500	1884	11,5	23	3,22	■	109,59

**Personalisations** Other finishes on request  Pg.214 

**Products not in stock** 1 piece, delivery in 15 days (unless stock runs out).

## 4571 Propeller shaft with cardan joints

Depending on the idler used (octagonal Part 2283-4223 or round Part 4090-4091), select the shaft that allows you to obtain the desired distance between centres (I1 or I2); if the exact length is not available, order a longer shaft and cut it.

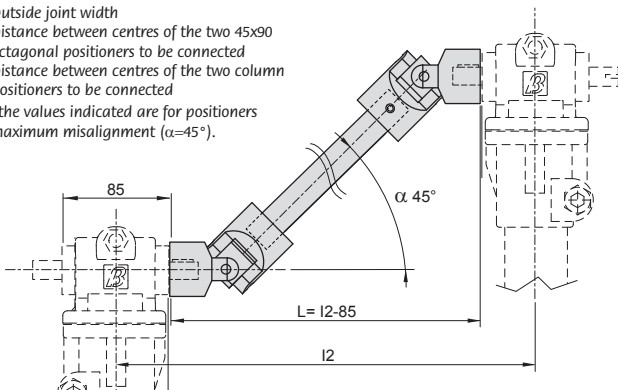


L = Outside joint width

I1 = Distance between centres of the two 45x90 octagonal positioners to be connected

I2 = Distance between centres of the two column positioners to be connected

**Note:** the values indicated are for positioners with maximum misalignment ( $\alpha=45^\circ$ ).



### Maximum torque applicable to the cardan joints

Rpm	10	20	30	40	50	60	70
Torque* Nm	85	82	80	78	73	70	67

\* values with misalignment  $\alpha=10^\circ$ .

For different angles, multiply the torque value given in the table by the correction factor indicated below.

Working angle	5°	10°	15°	20°	25°	30°	35°	40°	45°
Correction factor	1.25	1.00	0.80	0.65	0.55	0.45	0.38	0.30	0.25

Example: at 30 rpm with an angle of 30°, the maximum torque will be  $80 \times 0.45 = 36 \text{ Nm}$ .



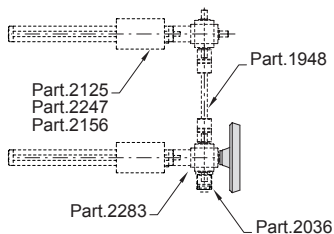
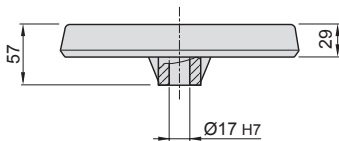
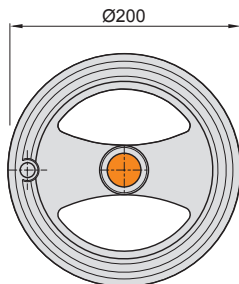
2029

## Handwheel

**Use:** applied to any one of the 3 angular idler shafts, it allows movement of a set of 2 or more positioners connected to each other. One handwheel is sufficient to move the entire set.

**Material** in reinforced polyamide with galvanised steel insert, 1 UNI 5923 M5x8 grub screw in galvanised steel.

**Standard pack:** 1 piece.



on request



## QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+
Discounts	-	-5%	-10%	on request

Order code	Weight g	Stock	€ piece
670143	430	✓	37,29



2036

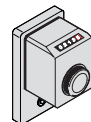
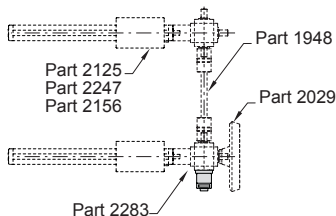
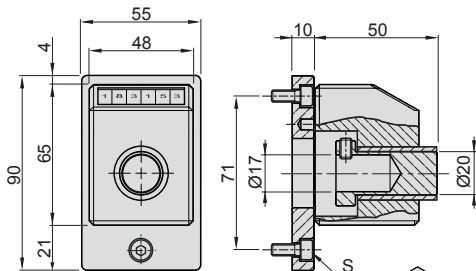
## Revolution counter

**Use:** applied to any one of the 3 angular idler shafts, part 2283, you can read the millimetres of travel.

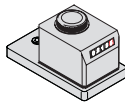
**Material** technopolymer revolution counter, black anodised aluminium plate, burnished steel pin, 2 M6 socket head screws in stainless steel, 2 M5 grub screws in burnished steel.

**Characteristics:** increasing values with clockwise rotation; pitch 4 (1 handwheel turn = 004 on the counter = 4mm).

**Standard pack:** 1 piece.



RIGHT-SIDE counter



WRONG-SIDE counter



677083



643234

## QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	8+	16+
	-	-5%	-10%	on request

Order code	Counter	Pitch	Finish	Weight g	Stock	€ piece
677083	RIGHT SIDE	4	orange RAL2004	352	✓	67,27
643234	WRONG SIDE	4	gray RAL7035	352	■	67,27

■ Products not in stock minimum order 1 piece, delivery in 20 days.

# 4578 Cardan joint

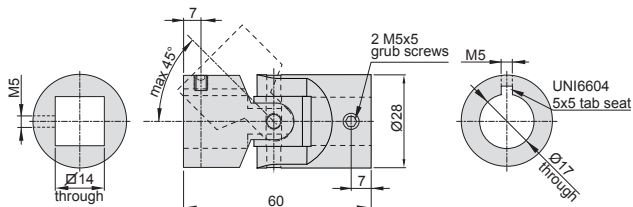
**Use:** fitted on the pins of the angular idlers, it transmits the motion to the propeller shaft; suitable for connecting positioners not aligned with each other (max misalignment 45°).

**Material:** body in C45 steel and pin in hardened steel with hard-wearing sliding bush in casehardened steel, grub screws in stainless steel.

**Characteristics:** DIN808-7551 standard.

**Standard pack:** 2 pieces.

**Combinations**



## Maximum torque applicable to the cardan joints

Rpm	10	20	30	40	50	60	70
Torque* Nm	85	82	80	78	73	70	67

\* values with misalignment  $\alpha = 10^\circ$ .

For different angles, multiply the torque value given in the table by the correction factor indicated below.

Working angle	5°	10°	15°	20°	25°	30°	35°	40°	45°
Correction factor	1.25	1.00	0.80	0.65	0.55	0.45	0.38	0.30	0.25

Example: at 30 rpm with an angle of 30°, the maximum torque will be  $80 \times 0.45 = 36 \text{ Nm}$ .

### QUANTITY DISCOUNT

Qty Discounts	2+	8+	16+	32+
	-1%	-5%	-10%	contact us

Order code	Weight g	Stock	€ piece
686728	170	■	38,40

\*Products not in stock/minimum order: 2 pieces, delivery in 10 days (unless stock runs out).

## 4575

## Safety joint cover for cardan joint



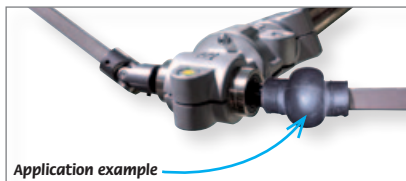
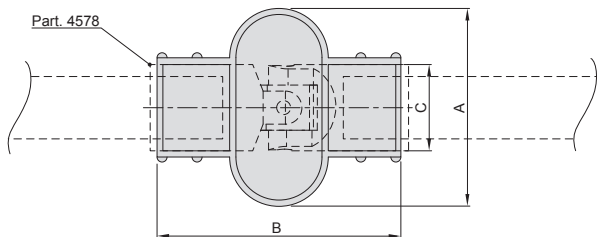
**Use:** for protection of the areas of possible entanglement of the cardan joints.

**Material:** special neoprene rubber.

**Characteristics:** resistant to acids, oils, greases, dust and damp; filled with grease, it ensures constant joint lubrication for a longer life.

**Standard pack:** 2 pieces.

**Combinations:**



### QUANTITY DISCOUNT

Qty Discounts	2+	8+	16+	32+
	-1%	-5%	-10%	contact us

Order code	A mm	B mm	C mm	Weight g	Stock	€ piece
686718	52	56	27,5	40	■	38,40

■ Products not in stock. minimum order: 2 pieces, delivery in 10 days (unless stock runs out).

# 4581 → Carriage with bracket plate guide on positioner

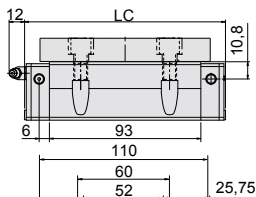
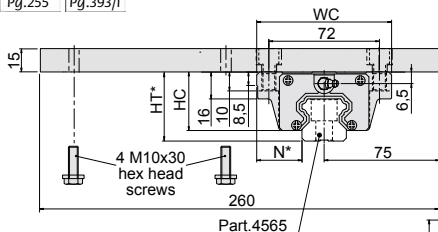
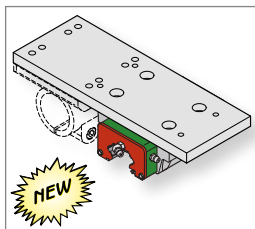
**Use:** particularly suitable in combination with the format changeover positioner (Part 2993) when the weight to be handled by the positioner carriages exceeds their maximum capacity; therefore, combining the ball carriage allows supporting the entire load of the structure leaving only the handling function to the positioner.

**Material:** burnished steel plate, galvanised steel nuts and bolts, anodised aluminium carriage, steel balls.

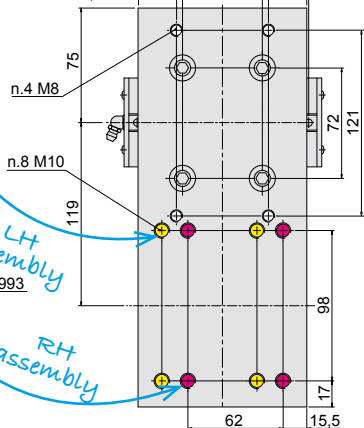
**Standard pack:** 2 pieces.

**State of supply:** complete with 4 UNI EN 24017 M10x30 hex head screws and 4 M10 washers.

**Combinations**

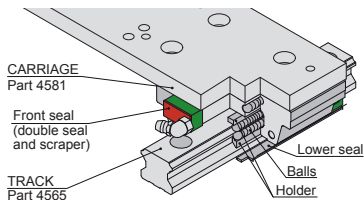
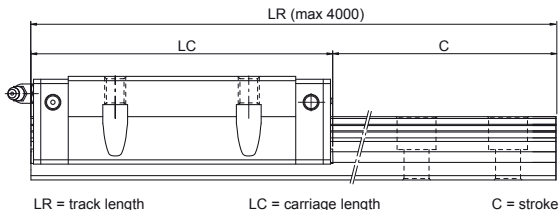


**Application example**  
(complete pg. 401)



## ↓ 4581

# Carriage with bracket plate guide on positioner



Thanks to the structure with four rolling tracks, the linear ball guides have the **same load capacity** in radial direction, in reverse radial direction and in the two lateral directions. Moreover, the circular arch track ensures a large contact surface between the balls and the rolling track, which allows supporting **high permissible loads** and obtaining **high levels of rigidity**.

### Accuracy

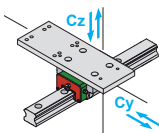
Dimensional tolerance

Height HT	Width N
mm	mm
±0,1	±0,1

Variation (between 2 or more carriages)

Height HT	Width N
mm	mm
0.02	0.03

### Load coefficient

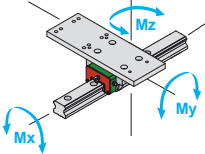


Dynamic

Static

Cy	Cz	Cy	Cz
N	N	N	N
47270	47270	69160	69160

### Static moment



Mx	My	Mz
Nm	Nm	Nm
880	920	920

### QUANTITY DISCOUNT

Qty Discounts	2+	4+	8+	10+
	-	-5%	-10%	contact us

Code order	WC mm	HC mm	LC mm	Weight g	Stock	€ piece
686738	90	36	120,4	1,44	■	153,35

**Personalisations** Sizes on request of the customer, version with greater accuracy

**Products not in stock** minimum order: 2 pieces, delivery in 15 days (unless stock runs out).

## 4565 → Track

**Use:** to construct linear ball guides in combination with the carriage Part 4564; particularly suitable on grinding machines, milling machines, punching machines, lathes, working centres.

**Material:** steel track.

**Characteristics:** high accuracy of travel parallelism (see table, column PP).

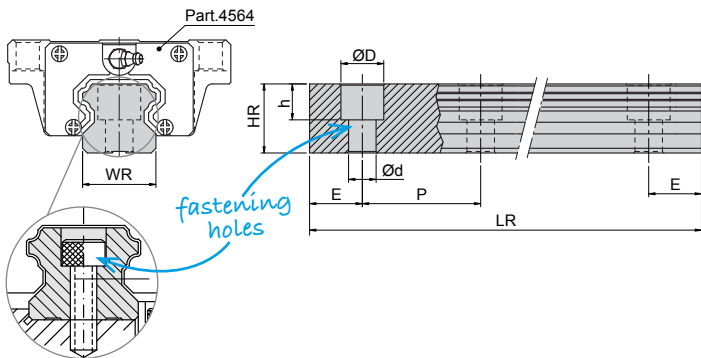
**Standard pack:** 1 piece.

**System characteristics** Pg.226

**Combinations**



Pg.393/g





# ↓ 4565 Track



## \*Manganese phosphate coating

The dark grey manganese phosphate coating has rust-proofing and anti-seizure properties and ensures an even thickness over the entire surface of the part; the thickness of the treatment is between 4µm and 6µm with a surface hardness between 58 HRC and 62 HRC.

The manganese phosphate coating reduces friction between reciprocal sliding surfaces acting on both the parameters that limit friction: lubrication and roughness reduction.

In fact, after only a very short running-in period, the crystals on the sliding surfaces bevel the peaks and make them perfectly specular to each other.

At the same time, the cavities remaining in the phosphate coating act as lubricant reserve.

### QUANTITY DISCOUNT

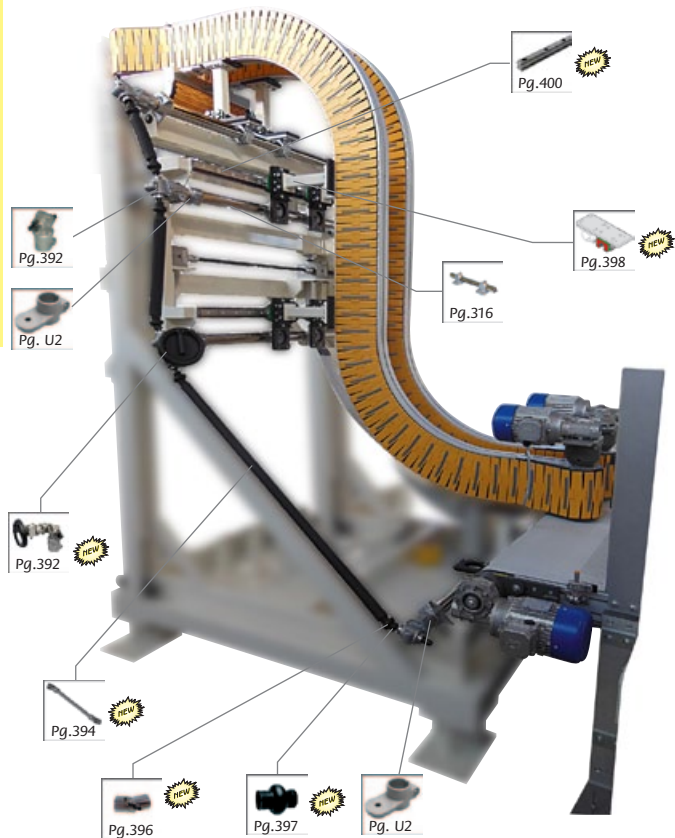
Qty Discounts	1+	2+	5+	10+
	-	-5%	-10%	contact us

Order code	LR mm	WR mm	HR mm	h mm	ØD mm	Ød mm	E mm	P mm	PP µm	Finish	Weight kg	Stock	€ piece
687758	280	28	26	12	14	9	20	80	15	-	1,25	■	45,95
687768	440	28	26	12	14	9	20	80	17	-	1,97	■	68,13
687778	600	28	26	12	14	9	20	80	20	-	2,69	■	81,75
687788	760	28	26	12	14	9	20	80	22	-	3,40	■	103,55
687798	1000	28	26	12	14	9	20	80	24	-	4,47	■	136,25
687808	1640	28	26	12	14	9	20	80	28	-	7,33	■	216,95
687818	2040	28	26	12	14	9	20	80	31	-	9,12	■	267,42
687828	2520	28	26	12	14	9	20	80	33	-	11,26	■	327,98
609869	3000	28	26	12	14	9	20	80	33	-	13,41	■	388,73
617769	280	28	26	12	14	9	20	80	15	phosphated*	1,25	■	57,44
617779	440	28	26	12	14	9	20	80	17	phosphated*	1,97	■	85,16
617789	600	28	26	12	14	9	20	80	20	phosphated*	2,69	■	102,19
617799	760	28	26	12	14	9	20	80	22	phosphated*	3,40	■	129,44
617809	1000	28	26	12	14	9	20	80	24	phosphated*	4,47	■	170,31

**Personalisations** length on request of the customer (max 4000 for the version without surface treatment - max 1200 in the manganese phosphated version).

**\*Products not in stock** minimum order: 1 piece, delivery in 10 days for versions without surface treatment, 15 days for manganese phosphated versions (unless stock runs out).

## Application example

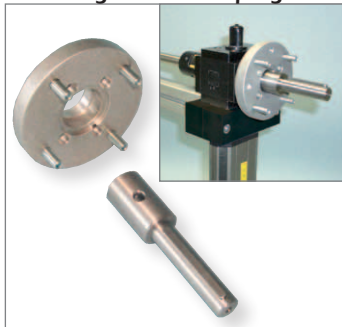




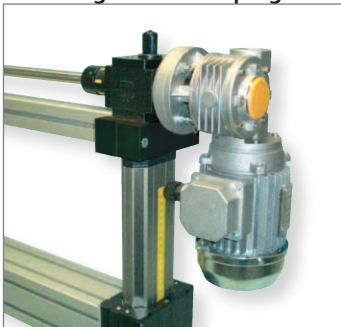


## Additional accessories

**2244** Bonfiglioli MVF 44/F  
gearmotor coupling kit



**4213** Bonfiglioli MVF 44/F  
gearmotor coupling kit





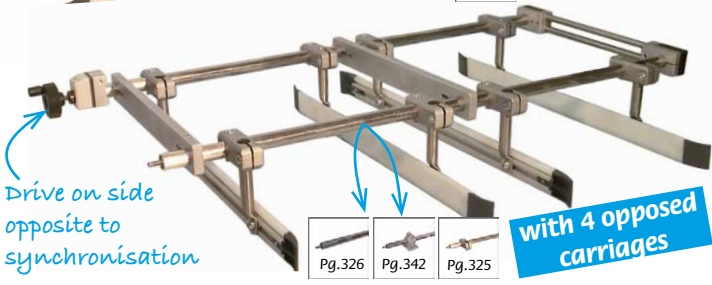
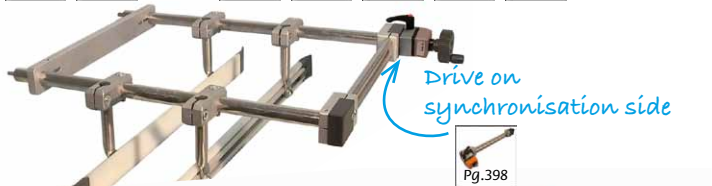
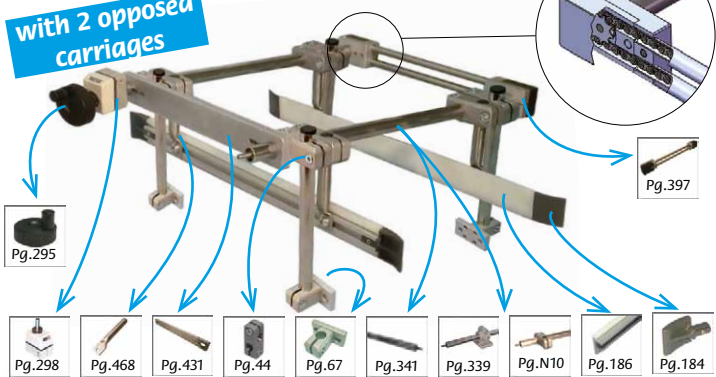
## Manual format change with positioners

**Complete synchronisation kits are available on request**

With positioner columns in **stainless steel**: minimum order: 1 piece, delivery in 15 days.

With positioner columns in **nickel-plated steel**: minimum order: 4 pieces, delivery in 20 days.

**with 2 opposed carriages**



**with 4 opposed carriages**



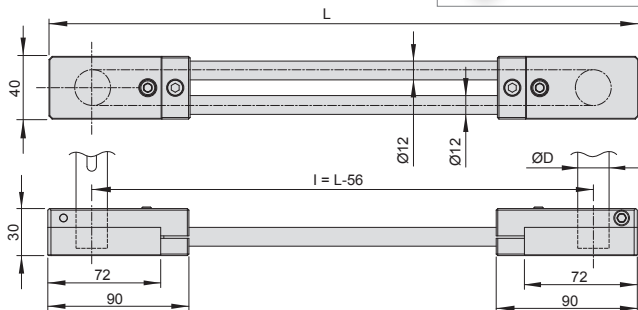
4206

**Idler** synchronisation kit

**Use:** to synchronise carriage movements on two parallel positioners, on the side opposite to the drive.

**Material** aluminium and polyamide heads, ISO 05B-1 pitch 8x3 chain in burnished steel, stainless steel containment tubes, C 45 UNI 7845 steel pinions, galvanised steel nuts and bolts.

**Combinations**



side opposite to drive

Can only be ordered as complete column positioner kits Pg.396

D	L	I	Finish heads	Finish tubes
Ø	mm	mm		
20	372	316	shot peening	brushed
20	668	612	shot peening	brushed
20	908	852	shot peening	brushed

**Personalizations** D Ø18; distance between centres I on customer's request (min. 124 - max. 2000, step 8)



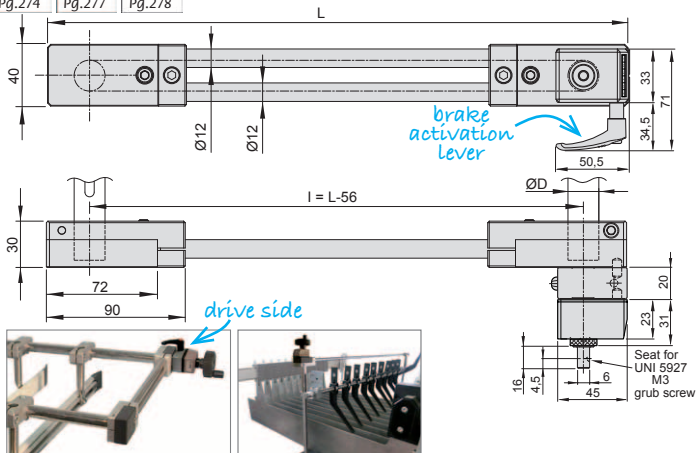
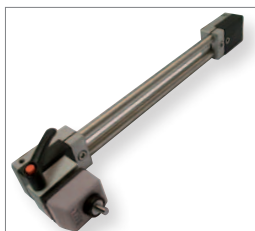
# 4212 Drive synchronisation Kit with brake and revolution counter

**Use:** to synchronise the carriage movements on two parallel positioners, with optional drive.

**Material:** aluminium and polyamide heads, ISO 05B-1 pitch 8x3 chain in burnished steel, stainless steel containment tubes, C 45 UNI 7845 steel pinions, revolution counter in grey RAL 7035 technopolymer, adapter pin in burnished steel, tumbled aluminium brake flange, galvanised steel nuts and bolts.

**Standard pack:** 1 piece.

**Combinations**



**Can only be ordered as complete column positioner kits** Pg.396

D Ø	L mm	I mm	Finish heads	Finish tubes
20	372	316	shot peening	brushed
20	668	612	shot peening	brushed
20	908	852	shot peening	brushed

**Personalizations** D Ø18; distance between centres I on customer's request (min. 124 - max. 2000, step 8)



4207

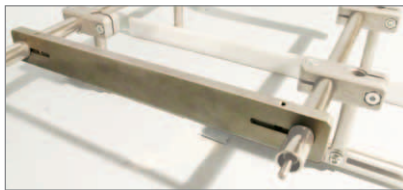
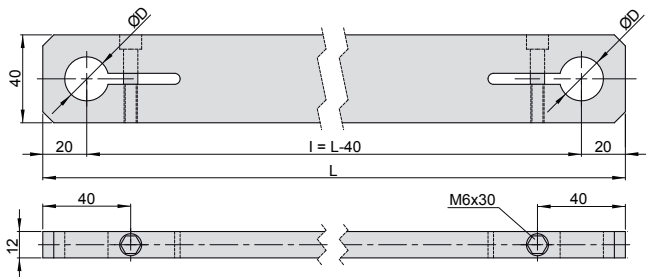
## Spacer bar

**Use:** in combination with synchronisation kit Part 4206 or Part 4212, it is used to maintain the distance between column positioners.

**Material:** aluminium, galvanised steel nuts and bolts.

**Standard pack:** 1 piece.

**Combinations**



Can only be ordered as complete column positioner kits Pg.396

D	L	l	Finish
Ø	mm	mm	
20	356	316	shot peening
20	652	612	shot peening
20	892	852	shot peening

**Personalizations** D Ø18; distance between centres l on customer's request (max. 2000)

## Manual format change with positioners Ø30



Complete synchronisation kits can be made up on request:

- distance between fixed track centres
- maximum product width greater than 140mm

With positioner columns in **stainless steel**: minimum order: 1 piece, delivery in 15 days.

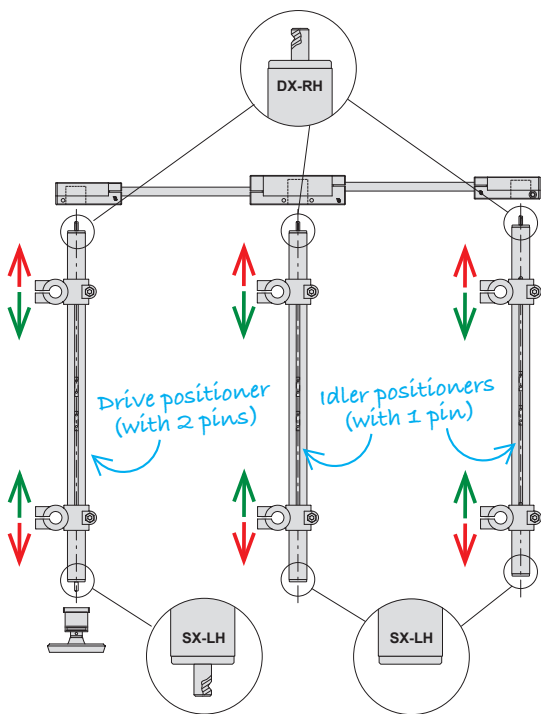
With positioner columns in **nickel-plated steel**: minimum order: 4 pieces, delivery in 20 days.

**with 3 positioners  
with 2 opposed carriages**

drive side opposite to  
synchronisation



## Application diagram of the 3-track synchronisation kit



*drive*

(can be fitted indifferently to one of the 3 positioners on the left-hand thread screw)

*clockwise rotation*  
(carriage closing)

*anticlockwise rotation*  
(carriage opening)

## 4694

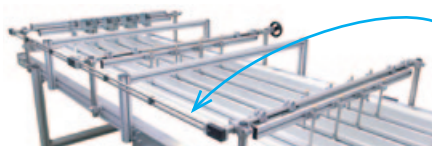
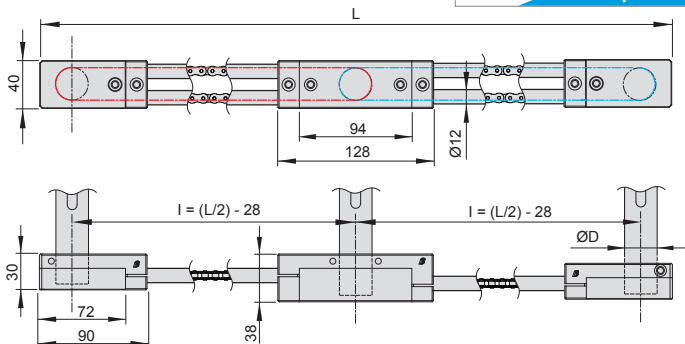
# Idler synchronisation kit

**Use:** to synchronise carriage movements on two parallel positioners, on the side opposite to the drive.

**Material:** aluminium and polyamide heads, ISO 05B-1 pitch 8x3 chain in burnished steel, stainless steel containment tubes, C 45 UNI 7845 steel pinions, galvanised steel nuts and bolts.

**Standard pack:** 1 piece.

**Combinations**

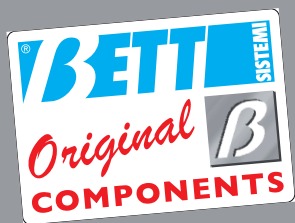


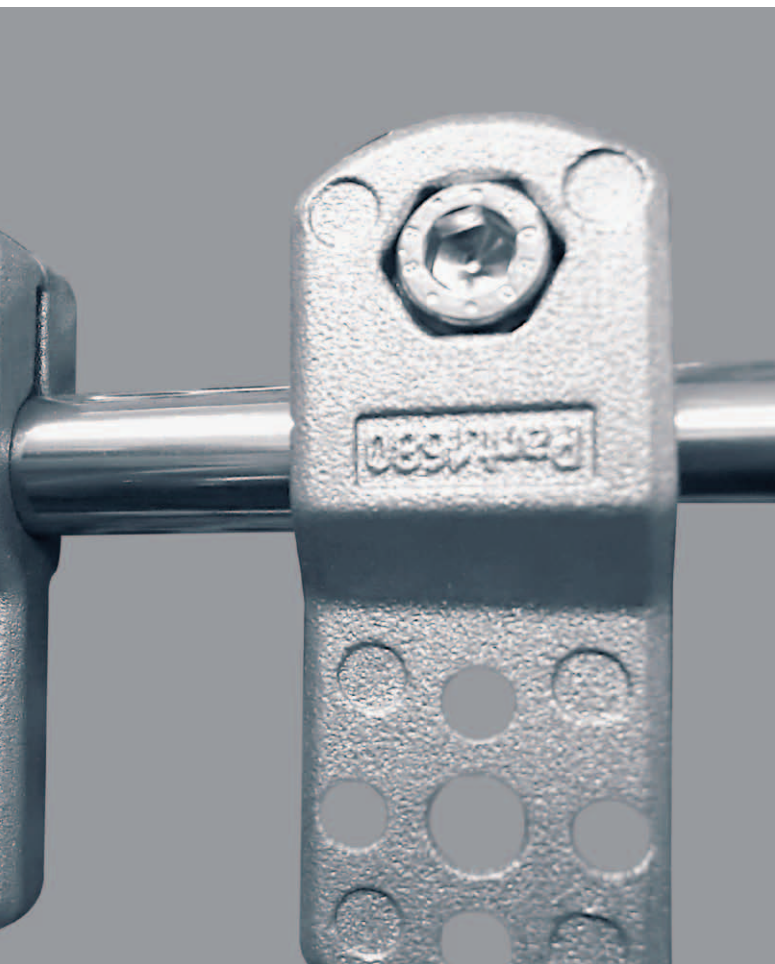
to be used on the side opposite to the drive

Can only be ordered as complete column positioner kits Pg.399/a

D	L	l	Finish heads	Finish tubes
$\varnothing$	mm	mm		
20	372	316	shot peening	brushed
20	668	612	shot peening	brushed
20	908	852	shot peening	brushed

**Personalizations** D  $\varnothing 18$ ;  $\varnothing 20$ ; distance between centres  $l$  on customer's request (min. 124 - max. 2000, step 8).





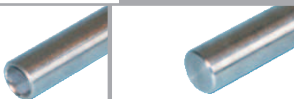


# Combinations



Connection tubes and rods

1 p.404



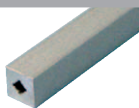
Caps for tubes

1 p.411



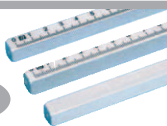
Square rods

1 p.426



Rods with millimetre marking

1 p.420



Labels with millimetre marking

1 p.429



Product containment and conveying accessories

1 p.151



## WARNINGS

The information provided is only intended and provided for component description purposes. It shall not be understood as a statement made by us regarding a specific characteristic of the same component or its suitability for a specific use. The data provided by us **shall not relieve the customers from their responsibility to evaluate, check and consequently use any and all components**. All information is based on the knowledge available at the time of publishing and is not binding. We are not responsible for any incomplete or incorrect information or possible damage resulting therefrom. The products may be subject to modification at any time. **It is therefore advisable to check for updates on our website [www.bettsistemi.com](http://www.bettsistemi.com).**

# 2012 → Steel connection tube

## stainless steel

Use: for connectors.

**Material** TIG welded tube in AISI 304 stainless steel - EN 10217/7 - DIN 11850.

**Standard pack:** 6 metres.

**Combinations**



**Food  
&  
Beverage**

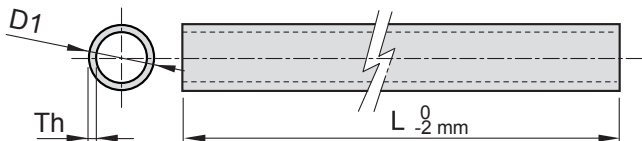


Fig. 1



**WARNING:**

should the tubes become oval, even if within tolerance, it may be difficult to fit them into the connectors. It is advisable to widen the hole by inserting a wedge in the connector slot, to facilitate tube fitting (Fig. 1).

\* Tolerance selected

↓ 2012

## Steel connection tube stainless steel

QUANTITY DISCOUNT

Bars Discounts	1+	2+	4+	8+
	-	-5%	-10%	on request

Order code	D1 Ø	Th	L m	Finish	Weight Kg/m	Stock	€ bar
641317	10 ± 0,07	1	2	Brushed	0,225	✓	10,74
642317	10 ± 0,07	1	3	Brushed	0,225	✓	15,84
641327	* 12 +0,1/-0,05	1	2	Brushed	0,275	✓	11,52
642337	* 12 +0,1/-0,05	1	3	Brushed	0,275	✓	17,01
642347	* 12 +0,1/-0,05	1	6	Brushed	0,275	✓	23,40
641487	14 +0,1/-0,05	1	2	Brushed	0,326	■	12,30
642357	14 +0,1/-0,05	1	3	Brushed	0,326	■	18,18
642377	16 ± 0,1	1,5	2	Brushed	0,545	✓	15,94
642387	16 ± 0,1	1,5	3	Brushed	0,545	✓	23,64
642197	18 ± 0,1	1,5	2	Brushed	0,620	✓	16,98
642207	18 ± 0,1	1,5	3	Brushed	0,620	✓	25,17
641337	20 ± 0,1	1,5	2	Brushed	0,695	■	17,76
642397	20 ± 0,1	1,5	3	Brushed	0,695	■	26,34
690637	25 ± 0,2	1	2	Brushed	0,601	■	16,78
690647	25 ± 0,2	1	3	Brushed	0,601	■	24,66
642227	25 ± 0,2	1,5	2	Brushed	0,883	■	20,96
642237	25 ± 0,2	1,5	3	Brushed	0,883	■	30,90
690657	25 ± 0,2	2	2	Brushed	1,152	■	29,52
690667	25 ± 0,2	2	3	Brushed	1,152	■	43,77
642257	26,9 ± 0,2	1,5	2	Brushed	0,954	■	22,00
642267	26,9 ± 0,2	1,5	3	Brushed	0,954	■	32,46
673307	30 ± 0,2	1	2	Brushed	0,726	■	18,88
690627	30 ± 0,2	1	3	Brushed	0,726	■	27,81
641347	30 ± 0,2	1,2	2	Brushed	0,865	✓	20,68
642417	30 ± 0,2	1,2	3	Brushed	0,865	✓	30,51
673157	40 ± 0,3	1,5	2	Brushed	1,479	■	31,02
673167	40 ± 0,3	1,5	3	Brushed	1,479	■	45,75
673187	40 ± 0,3	2	2	Brushed	1,947	■	35,72
673197	40 ± 0,3	2	3	Brushed	1,947	■	52,77
673217	40 ± 0,3	3	2	Brushed	2,845	■	51,30
673227	40 ± 0,3	3	3	Brushed	2,845	■	76,17
642287	48,3 ± 0,2	1,5	2	Brushed	1,758	✓	34,16
642297	48,3 ± 0,2	1,5	3	Brushed	1,758	✓	50,43
641357	50 ± 0,3	1,5	2	Brushed	1,822	✓	35,18
642427	50 ± 0,3	1,5	3	Brushed	1,822	✓	51,99
641367	50 ± 0,3	2	2	Brushed	2,404	■	42,46
642447	50 ± 0,3	2	3	Brushed	2,404	■	62,91
641377	50 ± 0,3	3	2	Brushed	3,531	✓	58,06
642457	50 ± 0,3	3	3	Brushed	3,531	✓	86,28

Personalizations diameter D1 on request; the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

•Products not in stock minimum order 6 metres, delivery in 10 days.

3292

# Sliding tube in drawn steel

Use: for sliding bushes.

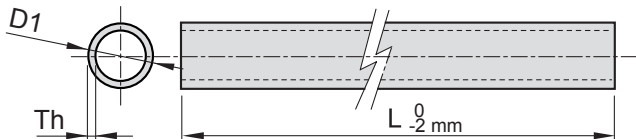
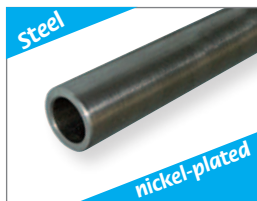
Material ST52 steel / EN 10305-1.

Standard pack: 6 metres.

Combinations



Pg.412



### QUANTITY DISCOUNTS

Bars Discounts	1+	2+	4+	8+
	-	-5%	-10%	on request

Order code	D1 Ø	Th	L m	Finish	Weight Kg/m	Stock	€ barra
621337	30 +0,05/-0,15	5	2	Brushed, not nickel-plated	3,09	■	70,88
641507	30 +0,05/-0,15	5	2	Brushing + electrolytic nickel-plating	3,09	■	104,20
621347	35 +0,05/-0,15	5	2	Brushed, not nickel-plated	3,88	✓	78,38
689206	35 +0,05/-0,15	5	2	Brushing + electrolytic nickel-plating	3,88	■	111,68
621357	40 +0,05/-0,15	4	2	Brushed, not nickel-plated	2,73	✓	76,72
602467	40 +0,05/-0,15	4	2	Brushing + electrolytic nickel-plating	2,73	■	110,02
621367	50 +0,05/-0,15	5	2	Brushed, not nickel-plated	5,78	✓	96,92
641517	50 +0,05/-0,15	5	2	Brushing + electrolytic nickel-plating	5,78	■	130,24
621377	60 +0,05/-0,15	5	2	Brushed, not nickel-plated	7,06	✓	109,06
641527	60 +0,05/-0,15	5	2	Brushing + electrolytic nickel-plating	7,06	■	142,38

**Personalizations** different thicknesses available on request; the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

■ **Products not in stock** 300, minimum order 3 bars; other diameters, minimum order 1 bar, delivery in 15 days.

## 8030

# Connection tube in aluminium

**Use:** for connectors.

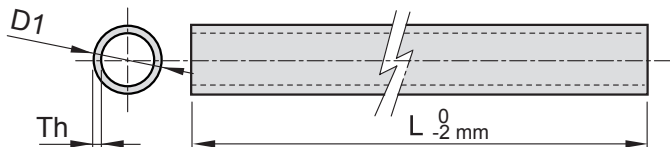
**Material:** aluminium tube.

**Standard pack:** 6 metres.

**Combinations:**



Pg.412



### QUANTITY DISCOUNT

Bars Discounts	1+	3+	5+	10+
	-	-5%	-10%	on request

Order code	D1 Ø	Th	L m	Finish	Weight Kg/m	Stock	€ barra
641387	30 ±0,5	2	2	anodised	0,475	✓	14,74
641947	30 ±0,5	2	3	anodised	0,475	✓	21,78
641397	50 ±0,5	2	2	anodised	0,830	✓	29,42
666515	50 ±0,5	2	3	anodised	0,830	✓	43,86
641407	60 ±0,7	2	2	anodised	0,990	✓	32,72
642547	60 ±0,7	2	3	anodised	0,990	✓	48,81

**Personalizations:** the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

# 4120 Connection tube in iron

**Use:** for connectors.

**Material** welded tube in Fe 360 - EN 10219.

**Standard pack:** 6 metres.

**Combinations** 



Pg.412

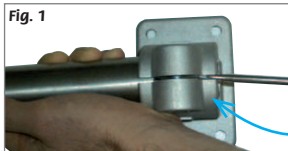
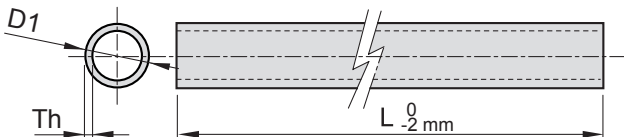
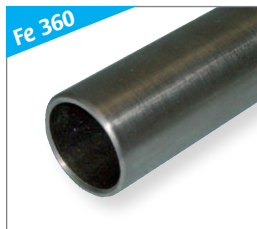


Fig. 1



**WARNING:**


Should the tubes become oval, even if within tolerance, it may be difficult to insert them in the connectors. It is advisable to widen the hole by inserting a wedge in the connector slot to make it easier to insert the tube (Fig. 1).

**QUANTITY DISCOUNT**

Bars	1+	2+	4+	8+
Discounts	-	-5%	-10%	on request

Order code	D1 Ø	Th	L m	Finish	Weight Kg/m	Stock	€ bar
673257	40 ±0,3	2	2	untreated	1,87	■	14,46
673267	40 ±0,3	2	2	galvanised	1,87	■	22,44
673297	40 ±0,3	2	2	chemical nickel-plating	1,87	■	78,42
673277	40 ±0,3	2	3	untreated	1,87	■	20,88

**Personalizations** the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

Other finishes on request  Pg.214 

•Products not in stock minimum order 6 metres, delivery in 15 days.

## 4064 Connection rod in steel

Use: for connectors.

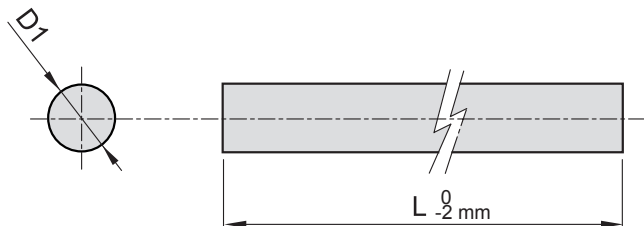
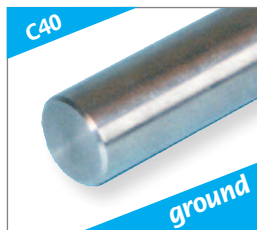
**Material** C40 steel.

**Standard pack:** 6 metres.

**Combinations**



Pg.416



### QUANTITY DISCOUNT

Bars Discounts	1+	2+	4+	8+
	-	-5%	-10%	on request

Order code	D1 Ø	L m	Finish	Weight Kg/m	Stock	€ bar
641417	15 h7	2	ground	1,4	■	13,82
642537	15 h7	3	ground	1,4	■	20,19
641427	25 h7	2	ground	3,9	■	24,24
642477	25 h7	3	ground	3,9	■	35,55

**Personalizations** the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

•Products not in stock minimum order 6 metres, delivery in 15 days.

# 988 Connection rod

## in stainless steel

Use: for connectors.

**Material** AISI 304 stainless steel.

**Standard pack:** 3 metres.

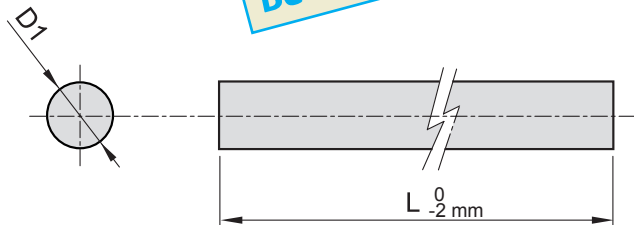
**Combinations**



Pg.416



**Food & Beverage**



### QUANTITY DISCOUNT

Bars Discounts	1+	6+	12+	24+
	-	-5%	-10%	on request

Order code	D1 Ø	L m	Finish	Weight Kg/m	Stock	€ bar
641447	10 h9	3	ground	0,628	■	19,53
650151	12 h9	3	drown	0,950	■	26,04
642497	16 h9	3	drown	1,600	■	55,26
676028	18 h9	3	drown	2,00	■	58,53
641477	20 h9	3	drown	2,513	■	65,61
641497	25 h9	3	ground	3,927	■	84,99

**Personalizations** the tubes can be supplied cut to size and bevelled (€ 3 per cut) and delivered in kits.

•Products not in stock minimum order 3 metres, delivery in 10 days.

## 2013

### Cap for Ø12 mm tube

**Use:** for end capping, part 2012 Ø12.

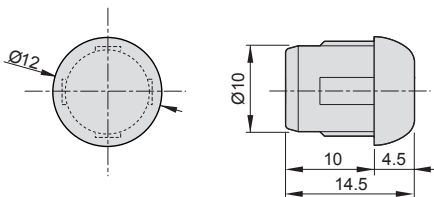
**Material** polyamide.

**Standard pack:** 48 pieces.

**Combinations**



Pg.404



#### QUANTITY DISCOUNT

Q.ty	1+	96+	240+
Discounts	-	-26%	on request

Order code	Finish	Weight g	Stock	€ piece
631372	yellow RAL1006	3	✓	0,39

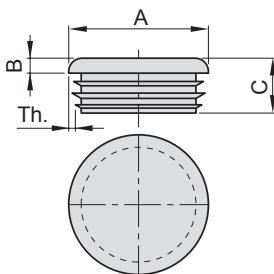
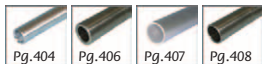
## ILT End cap for tube in mm

Use: for end capping.

**Material** RAL9005 black polyethylene.

**Standard pack:** 200 pieces.

**Combinations** 



### QUANTITY DISCOUNT

Q. ty	1+	10+	50+	200+	400+
Discounts	-	-5%	-10%	-20%	on request

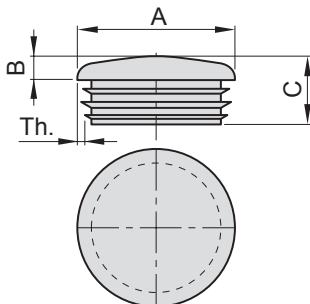
Order code	A Ø	Th. mm	B mm	C mm	Finish	Weight g	Stock	€ pezzo
01ILT10A	10	0,82	3,5	14,5	black RAL9005	0,47	✓	0,11
01ILT12A	12	0,82	3,5	14,5	black RAL9005	0,68	✓	0,11
01ILT14A	14	0,82	5	16,5	black RAL9005	1,06	✓	0,11
01ILT16A	16	0,82	5	16,5	black RAL9005	0,7	✓	0,18
01ILT18A	18	0,82	5	16,5	black RAL9005	1,64	✓	0,20
01ILT20A	20	0,82	5	16,5	black RAL9005	1,95	✓	0,20
01ILT25A	25	1,03	5	16,5	black RAL9005	2,7	✓	0,27
01ILT27A	27	0,83	5	16,5	black RAL9005	2,88	✓	0,29
01ILT30A	30	1,03	5	16,5	black RAL9005	3,44	✓	0,29
01ILT40A	40	1,03	5	16,5	black RAL9005	5,9	✓	0,37
01ILT40B	40	3,05	5	16,5	black RAL9005	5,45	✓	0,34
01ILT50A	50	1,03	5	16,5	black RAL9005	9,7	✓	0,42
01ILT50B	50	2,5-4,5	5	16,5	black RAL9005	7,45	✓	0,42
01ILT50D	50	3,36	5	16,5	black RAL9005	10	✓	0,47
01ILT60A	60	1,03	5	23,5	black RAL9005	16,4	✓	0,53

**1167**

# End cap for tube **in inches**

**Use:** for end-capping.

**Material:** polyamide.

**Standard pack:** 240 pieces, (cod. 630971 pack 12 pcs).

**QUANTITY DISCOUNT**

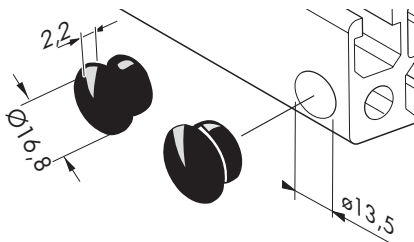
Q. ty	1+	12+	48+	240+	480+
Discounts	-	-5%	-10%	-20%	contact us

Order code	A Ø	Thick. mm	B mm	C mm	Finish	Weight g	Stock	€ piece
606242	3/4 gas (26,9 mm)	1-2	4	15,5	black RAL9005	2	✓	1,13
606232	1" gas (33,7 mm)	1-2	4	15,5	black RAL9005	3	✓	1,22
628023	1" gas (33,7 mm)	1-2	4	15,5	yellow RAL1021	3	✓	1,22
696168	1" gas (33,7 mm)	1-2	5	15,5	blue RAL5015	3	✓	1,22
606222	1/4 gas (42,4 mm)	1-2	5	16,5	black RAL9005	4	✓	1,42
630971	1/2 gas (48,3 mm)	1-2	5	16,5	black RAL9005	8	✓	2,53

# 882 Hole closing caps $\varnothing 13,5$

**Use:** hole capping  $\varnothing 13,5$  (spot-faced holes for plug fastenings).

**Material:** Polyethylene.



### QUANTITY DISCOUNTS

Q.ty Discounts	1+	25+	50+	100+
	-	-10%	-17%	on request

Order code	Pack	Finish	Weight g	Stock	€ piece
68065	50 pieces	black RAL9005	0,5	✓	0,36
615121	50 pieces	gray RAL7016	0,5	✓	0,36
657451	50 pieces	gray RAL7016	0,5	✓	0,36
68055	50 pieces	neutral	0,5	■	0,36

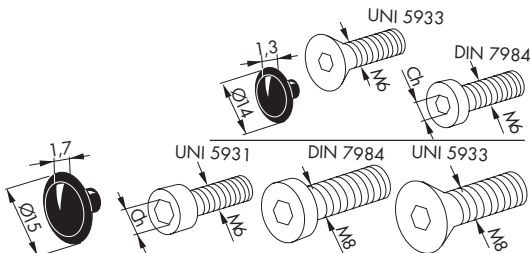
•Products not in stock minimum order 5000 pieces, delivery in 15 days

## 949

# Screw cap

**Use:** screw cap with wrench 4 (M6 DIN 7984 and UNI 5933) and wrench 5 (M8 DIN 7984, UNI 5933 and M6 UNI 5931).

**Material** polyethylene.



### QUANTITY DISCOUNT

Q. ty Discounts	1+	100+	200+	1000+
	-	-10%	-17%	on request

Order code	Pack	Ch	Finish	Weight g	Stock	€ piece
63129	200 pieces	4	black RAL9005	0,2	✓	0,15
661401	200 pieces	4	gray RAL7016	0,2	✓	0,15
661421	200 pieces	4	gray RAL7035	0,2	✓	0,15
691821	200 pieces	4	neutral	0,2	■	0,15
63119	500 pieces	5	black RAL9005	0,3	✓	0,16
661391	500 pieces	5	gray RAL7016	0,3	✓	0,16
661411	500 pieces	5	gray RAL7035	0,3	✓	0,16
691831	500 pieces	5	-	0,3	■	0,16

•Products not in stock minimum order 5000 pieces, delivery in 15 days.

## 3783 Protection cap

**Use:** 1 protects shaft ends or threads against accidental denting (with or without key).

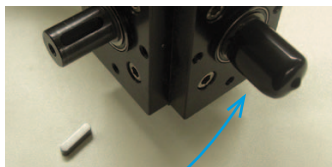
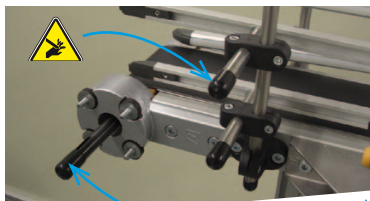
2 holds the tab in place.

3 safety component for the operator.

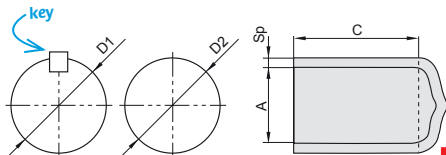
**Material** (PVC) (hardness Shore A = 75; resistance to temperatures between -30° and +100°).

**Standard pack:** 200 pieces.

**Combinations**



protects and holds the tab in place



**QUANTITY DISCOUNT**

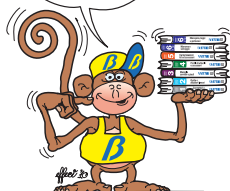
Q.ty	10+	50+	200+	400+
Discounts	-	-10%	-20%	on request

Order code	A Ø	D1 Ø	D2 Ø	Th mm	C mm	Finish	Weight g	Stock	€ pieces
675827	6	6	6	1	12,7	black RAL9005	0,3	▪	0,42
675837	8	8	8	1	19,2	black RAL9005	0,5	▪	0,42
675847	9,9	-	10	1,4	12,7	black RAL9005	0,5	▪	0,42
675857	11,9	-	12	1,4	19,2	black RAL9005	1,0	▪	0,42
664898	11,9	-	12	1,4	19,2	yellow RAL1021	1,0	✓	0,42
675867	14,3	14	14	1,4	25,4	black RAL9005	2,0	▪	0,42
675897	17,5	17	17	1,5	25,4	black RAL9005	3,0	✓	0,42
675877	19,0	18	19	1,5	25,4	black RAL9005	3,0	▪	0,42
675887	25,4	24	25	1,5	25,4	black RAL9005	4,0	▪	0,54

•Products not in stock minimum order 200 pieces, delivery in 5 days



Have you  
got all the  
BOOKS?



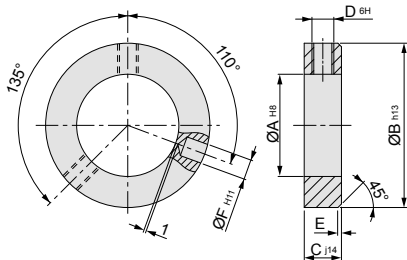
## 4257 → Stop ring

**Use:** fitted on tubes or shafts, it allows creating an end-stop or positioning components/accessories.

**Material:** C45 steel or AISI 304 stainless steel (see table).

**Caratteristiche:** according to the DIN 705 standard.

**Additional uses:** fitted on tubes or shafts, it allows creating an end-stop or positioning components/accessories.



### Application example



## ↓ 4257 Stop ring

### QUANTITY DISCOUNT

Q. ty	10+	25+	50+	100+	200+
Discounts	-	-10%	-20%	-30%	on request

Order code	Pack	A Ø	B Ø	C mm	D mm	E mm	F mm	Material and finish	Weight g	Stock	€ piece
665388	100 pcs	10	20	10	M5	1	3	phosphated steel	16	■	1,27
665418	10 pcs	12	22	12	M6	1,2	4	phosphated steel	22	✓	1,41
665448	100 pcs	14	25	12	M6	1,2	4	phosphated steel	25	■	1,45
665478	100 pcs	15	25	12	M6	1,2	4	phosphated steel	26	■	1,58
665508	100 pcs	17	28	12	M6	1,2	4	phosphated steel	32	■	1,76
665538	100 pcs	20	32	14	M6	1,4	5	phosphated steel	48	■	2,16
665568	50 pcs	25	40	16	M8	1,6	6	phosphated steel	86	■	2,88
665598	50 pcs	30	45	16	M8	1,6	6	phosphated steel	100	■	3,47
665628	10 pcs	50	80	18	M10	1,8	10	phosphated steel	397	✓	8,95
665398	100 pcs	10	20	10	M5	1	3	galvanised steel	16	■	1,27
665428	10 pcs	12	22	12	M6	1,2	4	galvanised steel	22	✓	1,41
665458	100 pcs	14	25	12	M6	1,2	4	galvanised steel	25	■	1,45
665488	10 pcs	15	25	12	M6	1,2	4	galvanised steel	26	■	1,58
665518	100 pcs	17	28	12	M6	1,2	4	galvanised steel	32	■	1,76
665548	100 pcs	20	32	14	M6	1,4	5	galvanised steel	48	■	2,16
665578	10 pcs	25	40	16	M8	1,6	6	galvanised steel	86	✓	2,88
665608	50 pcs	30	45	16	M8	1,6	6	galvanised steel	100	■	3,47
665638	50 pcs	50	80	18	M10	1,8	10	galvanised steel	397	■	8,95
665408	100 pcs	10	20	10	M5	1	3	AISI304 stainless steel	16	■	4,26
665438	100 pcs	12	22	12	M6	1,2	4	AISI304 stainless steel	22	■	4,68
665468	100 pcs	15	25	12	M6	1,2	4	AISI304 stainless steel	26	■	5,26
665498	100 pcs	17	28	12	M6	1,2	4	AISI304 stainless steel	32	■	6,12
665528	100 pcs	20	32	14	M6	1,4	5	AISI304 stainless steel	48	■	7,75
665558	50 pcs	25	40	16	M8	1,6	6	AISI304 stainless steel	86	■	10,47
665588	50 pcs	30	45	16	M8	1,6	6	AISI304 stainless steel	100	■	13,29
665618	50 pcs	50	80	18	M10	1,8	10	AISI304 stainless steel	397	■	41,43

■ Products not in stock minimum order 1 pack, delivery in 10 days.

## 3266 Round rods with millimetre marking Ø12 mm with M8 ends

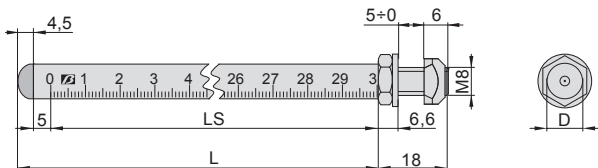
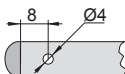
**Use:** in combination with Ø12 holed connectors for fastening and adjusting product containment guides.

**Material:** AISI 303 stainless steel rod, galvanised steel nuts and bolts.

**Characteristics:** millimetre scale for accurate adjustment in format change.

**Standard pack:** 16 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty	1+	5+	10+	16+	48
Discounts	-	-10%	-17%	-22%	on request

Order code	D Ø	LS mm	L mm	Finish	millimetre scale	Weight g	Stock	€ pezzo
688346	12	75	84,5	drown	yes	80	■	17,12
688356	12	95	104,5	drown	yes	107	■	17,33
688366	12	145	154,5	drown	yes	152	■	17,89
688376	12	195	204,5	drown	yes	198	■	18,43
688386	12	295	304,5	drown	yes	288	■	19,52

■ Products not in stock minimum order 16 pieces, delivery in 15 days.



## 1789 → Square rods

**10x10 - 12x12 mm**

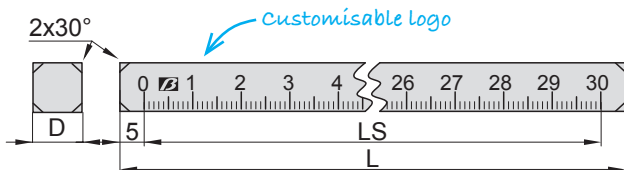
**Use:** in combination with 10/12 holed connectors for construction of sensor holders or product containment guides.

**Material:** Aluminium.

**Characteristics:** millimetre scale for precise adjustment in format change. Square cross-section for axial movements only. Scratchproof treatment.

**Standard pack:** 16 pieces.

**Combinations**



↓ 1789

## Square rods

10x10 - 12x12 mm



### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	16+	48+
	-	-10%	-17%	-22%	on request

Order code	D ∅	LS mm	L mm	Finish	millimetre scale	Weight g	Stock	€ piece
646866	10+0,20/-0,05	150	160	anodised/Scratchproof	yes	43	✓	7,54
676758	10+0,20/-0,05	200	210	anodised/Scratchproof	yes	56	✓	12,31
697652	10+0,20/-0,05	300	310	anodised/Scratchproof	yes	83	✓	7,78
697662	10+0,20/-0,05	600	610	anodised/Scratchproof	yes	164	✓	10,81
697672	10+0,20/-0,05	1200	1210	anodised/Scratchproof	yes	325	✓	15,42
620857	10+0,25/-0	-	160	not anodised	no	43	✓	2,55
620867	* 10+0,25/-0	-	310	not anodised	no	83	✓	3,04
620877	* 10+0,25/-0	-	610	not anodised	no	164	✓	3,86
620887	* 10+0,25/-0	-	1210	not anodised	no	325	✓	5,46
690547	* 10+0,25/-0	-	2000	not anodised	no	537	✓	8,00
690557	* 10+0,25/-0	-	3000	not anodised	no	850	✓	11,07
691097	10+0,25/-0	-	3000	anodised	no	850	✓	16,93
690377	12+0,20/-0,05	150	160	anodised/Scratchproof	yes	62	■	13,63
690387	12+0,20/-0,05	300	310	anodised/Scratchproof	yes	121	■	14,10
690397	12+0,20/-0,05	600	610	anodised/Scratchproof	yes	237	■	15,93
690407	12+0,20/-0,05	1200	1210	anodised/Scratchproof	yes	470	■	20,55
690417	* 12+0,25/-0	-	160	not anodised	no	62	✓	2,70
690427	* 12+0,25/-0	-	310	not anodised	no	121	✓	3,32
690437	* 12+0,25/-0	-	610	not anodised	no	237	✓	4,60
690447	* 12+0,25/-0	-	1210	not anodised	no	470	✓	7,12
690577	* 12+0,25/-0	-	2000	not anodised	no	777	✓	10,46
690587	* 12+0,25/-0	-	3000	not anodised	no	1165	✓	14,56

Personalizations logo (only for versions with \*), millimetre scale (only for versions L≤1200mm)

■ Products not in stock minimum order 48 pieces, delivery in 15 days.

## 3246 Square rods with millimetre marking

### 10x10 mm with M8 ends

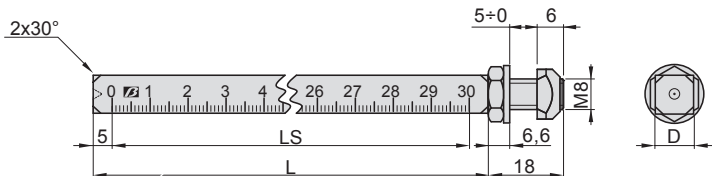
**Use:** in combination with 10x10 holed connectors for fastening and adjusting product containment guides.

**Material:** aluminium rod, galvanised steel nuts and bolts.

**Characteristics:** millimetre scale for accurate adjustment in format change. Square cross-section for axial movements only. Scratchproof treatment.

**Standard pack:** 25 pieces.

**Combinations**



#### QUANTITY DISCOUNT

Q.ty Discounts	1+	5+	10+	16+	48+
	-	-10%	-17%	-22%	on request

Codice ordinazione	D mm	LS mm	L mm	Finish	Millimetre scale	Weight g	Stock	€ piece
687666	10+0,20/-0,05	100	110	anodised/Scratch proof	yes	61	■	19,05
687676	10+0,20/-0,05	150	160	anodised/Scratch proof	yes	87	■	19,19
687686	10+0,20/-0,05	200	210	anodised/Scratch proof	yes	113	■	19,37
687696	10+0,20/-0,05	300	310	anodised/Scratch proof	yes	165	■	19,69

■ Products not in stock minimum order 25 pieces, delivery in 15 days.

## 4208

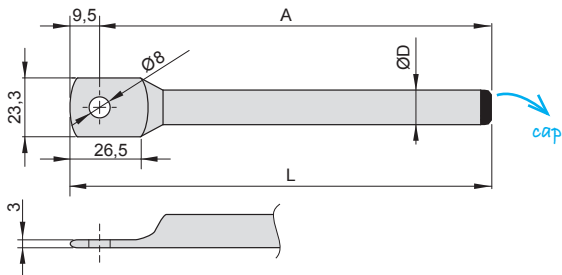
# Guide fastening pin with flat end

**Use:** in combination with cross connector Part 1450, it is used to fasten the product guides.

**Material:** stainless steel; machined from 16Ø tube, 1.5 mm thick with black polyethylene cap.

**Standard pack:** 8 pieces.

**Combinations**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	2+	4+	8+
	-	-5%	-10%	on request

Order code	D Ø	L mm	A mm	Finish	Weight g	Stock	€ piece
629937	16	122	112,50	Brushed	64	■	30,43
629977	16	244	234,5	Brushed	128	■	34,87

**Personalizations** L length on customer's request (max. 500)

**\*Products not in stock** minimum order 8 pieces, delivery in 10 days.

## 2336 Extruded square rod

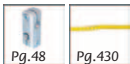
**16x16 mm**

**Use:** in combination with 16Ø holed connectors for construction of sensor holders or product containment guides.

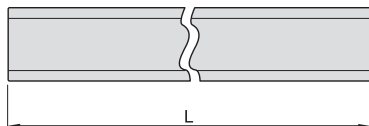
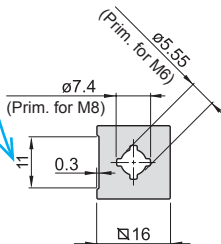
**Material:** Aluminium.

**Standard pack:** 6 pieces.

**Combinations**



millimetre  
label seat



### QUANTITY DISCOUNT

Bars	1+	6+	12+	24+	48+
Discounts	-	-5%	-10%	-15%	on request

Order code	L m	Finish	Weight Kg/m	Stock	€ m
655414	3	anodised	0,6	✓	9,15

2340

# Adjustment square rod 16x16

**Use:** Construction of cross positioners in combination with cross connectors (see part 1450) or single positioners in combination with flange connectors (see part 2355).

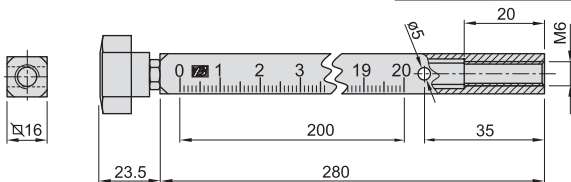
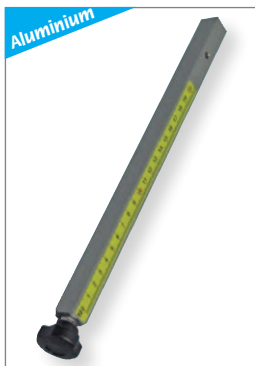
**Material:** aluminium bar, reinforced polyamide knob, label with millimetre marking in destructible vinyl.

**Standard pack:** 2 pieces.

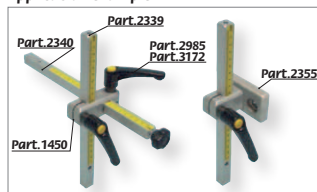
**Combinations**



Pg.48



### Application example



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+	20+
Discounts	-	-5%	-10%	-20%	on request

Order code	L mm	Finish	Weight g	Stock	€ piece
655454	280	anodised	177	✓	25,09

## 2339 Fastening square rod 16x16

**Use:** Construction of cross positioners in combination with cross connectors (see part 1450) or single positioners in combination with flange connectors (see part 2355).

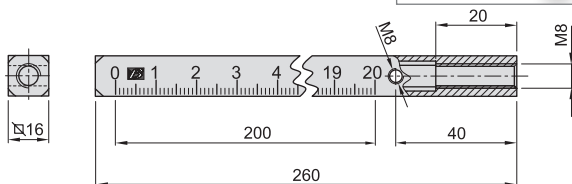
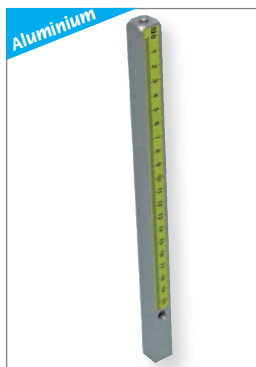
**Material** aluminium bar, label in destructible vinyl.

**Standard pack:** 2 pieces.

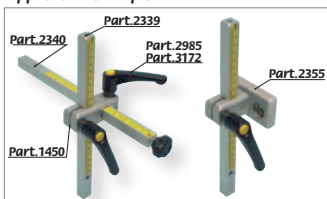
**Combinations**



Pg.48



### Application example



### QUANTITY DISCOUNT

Q.ty	1+	5+	8+	16+	20+
Discounts	-	-5%	-10%	-20%	on request

Order code	L mm	Finish	Weight g	Stock	€ piece
655444	260	anodised	142	<input checked="" type="checkbox"/>	24,11

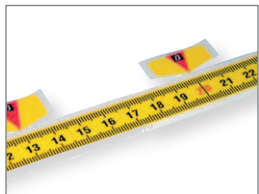
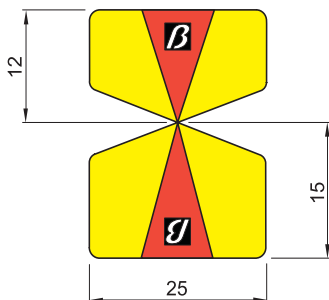
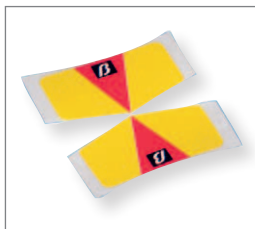
## 2167

## Arrow label

**Use:** used separately as indicator on the label with millimetre marking part 2049; used together, they indicate the matching parts to be assembled; you can write on them with an indelible felt-tip pen, for example, to indicate the correct joining area of dismantlable frames.

**Material** destructible vinyl.

**Standard pack:** 10 pieces.



### QUANTITY DISCOUNT

Q.ty	1+	10+	100+
Discounts	-	-17%	on request

Order code	Weight g	Stock	€ pezzo
699433	-	✓	1,77

## 2049

# Label with millimetre marking

**Use:** adhesive label to be applied on tubes and rods whenever accurate adjustments are required.

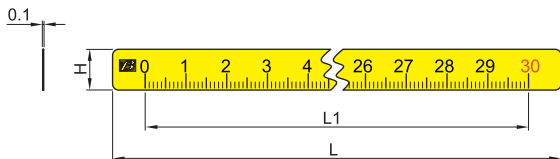
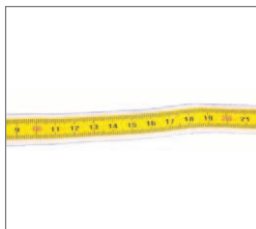
**Material:** destructible vinyl.

**Standard pack:** 10 pieces.

**Combinations**



Pg.429



**In applications on a square rod, part 2336 use part numbers 690607 / 690617 (H=10 mm)**



### QUANTITY DISCOUNT

Q.ty Discounts	1+	10+	100+
	-	-17%	on request

Order code	L mm	L1 mm	H mm	Weight g	Stock	€ pezzo
676763	310	300	15	2	✓	2,65
614464	510	500	15	3	✓	4,43
690607	310	300	10	2	■	3,86
690617	510	500	10	3	■	6,68

**Products not in stock** minimum order: 10 pieces, delivery in 5 days.

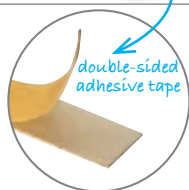
## 4235

# Adhesive millimetre rules

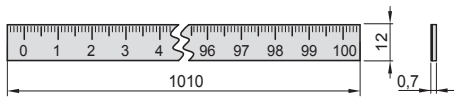
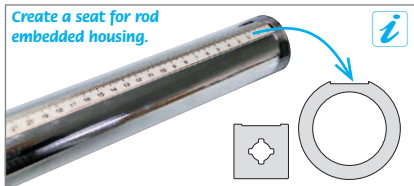
**Use:** applied on profiles, rods and wherever precise adjustments are required.

**Material:** aluminium with double-sided adhesive tape.

**Standard pack:** 4 pieces.



Create a seat for rod embedded housing.

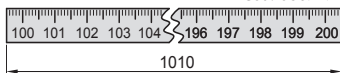
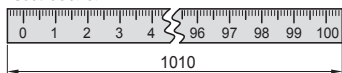


(0,5 aluminium foil  
0,2 double-sided adhesive tape)

Cod. 630737

RH scale direction →

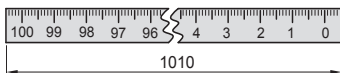
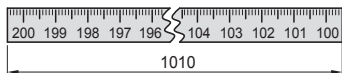
Cod. 630747



Cod. 630767

← LH scale direction

Cod. 630757



### QUANTITY DISCOUNT

Qty Discounts	4+	8+	12+	16+	100+
	-	-5%	-10%	-15%	on request

Code	Scale direction	Scale progression mm	Finish	Weight g	Stock	€ piece
630737	RH	0 - 1000	painted in grey RAL9006	20	■	6,37
630747	RH	1000 - 2000	painted in grey RAL9006	20	■	6,37
630757	LH	0 - 1000	painted in grey RAL9006	20	■	6,37
630767	LH	1000 - 2000	painted in grey RAL9006	20	■	6,37

\*Products not in stock minimum order: 4 pieces, delivery in 5 days

# KanBan



- **In loose parts**

The ideal solution for those who occasionally construct guards or structures and do not want to stock materials.



- **In standard packs**

The ideal solution for those who need to construct many different structures.



- **In kits**

We supply all the components (profiles, panels cut to size) and the disassembled accessories, together with the assembly drawing. This is the ideal solution for those who use their own manpower and do not want to keep needless stock or run the risk of errors during construction, while having the advantage of one supplier.



- **KanBan**

KanBan is a Japanese word that literally means "signboard". This term stands for one of the elements of the Just-in-Time system aimed at replenishing stock as it is used. The KanBan, which shows the type of material used for a specific process, is affixed on a standard container that is reused once it is empty. The real-time supply flow avoids stock-piling and the costs incurred in connection with the use of throwaway packaging.



- **Benefits for the customer**

- Reduced stock
- Fast response to changes in demand
- Reduced packaging costs by using reusable containers
- Energy recovery
- Simplified scheduling
- Lower management costs

- **Agreements and definitions**

- Replenishment area
- Container, container parts, container label with bar code

- **Flows**

- Consumption estimates
- Delivery documents
- Inventory

- **Customer activities**

- Stock monitoring

- **Supplier activities**

- Forecast consumption order management
- Quality management
- Empty container retrieval management
- Stock replenishment management
- Obsolete stock retrieval (standard items)

- **Conclusions**

Over the years, BETT SISTEMI has gained the experience to manage the KanBan supply. For this reason, it is the ideal partner to satisfy your warehouse restocking requirements.

# Consignment Stock



- **Consignment stock**

Using consignment stock, the supplier transfers his goods to the customer, who can use the stock at any time based on his requirements.

Only after the customer has actually used the stock:

- ownership of the goods is transferred from the supplier to the customer
- the supplier issues an invoice for the goods actually used.



- **Benefits for the customer**

- Reduced stock
- Reduced management costs
- Restocking is managed by the supplier
- Payment of actual consumption

- **Agreements and definitions**

- Reserved warehouse area
- Warehouse shelf labelling (barcode)
- Customer and supplier part number matching
- Package, pieces per package, box label bearing the customer's part number in barcode
- Restocking times and procedures



- **Flows**

- Consumption estimates (provisional orders)
- Consignment stock delivery documents
- Withdrawal documents generated through barcode readers
- Withdrawal invoicing
- Inventory



- **Customer activities**

- Stock monitoring
- Withdrawals read with barcode readers
- Managerial control of the consignment stock on the portal made available by the supplier.

- **Customer hardware**

- Personal computer with Internet access

- **Supplier activities**

- Provisional consumption order management
- Quality management
- Service management
- Stock replenishment management
- Obsolete stock retrieval (standard items)

- **Hardware and software provided by the supplier**

- Barcode readers
- Consignment stock portal where the customer manages stock, consumption, invoices due, delivery estimates, etc.

- **Conclusions**

Over the years BETT SISTEMI, has attained the know-how and proper philosophy to manage the consignment stock supply process and is hence the ideal partner to satisfy your warehouse restocking requirements.



# Resistance to chemical agents

Bett Sistemi's components may be used in contact with chemical substances in normal operating conditions.

**Never use acids with pH < 4, bases with pH > 9, and never expose to chlorinated hydrocarbons such as trichloroethylene for long periods of time.**

The following table specifies the resistance of the individual materials to the various chemical agents.

The concentration and form of some of these substances may cause different reactions.

Chemical agent	Material																			
	Anodised Elox aluminium		Galvanised steel		AISI 303 stainless steel		AISI 304 stainless steel		AISI 316 stainless steel		AISI 430F stainless steel		Nickel-plated steel / brass		Resafon®		Adiprene		Shockproof acrylic	
	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C
Vinegar		●		●		●		●		●		●		●		●		●		●
Acetone	50	●		○	50	●	50	●	100	●	100	●		●	100	●		●		○
Acetic acid	20	●		○	20	●	20	●	20	●	20	○		●	5	○	sol. 20	●	10	●
Boric acid	100	●		○	100	●	100	●	100	●	100	●		●	5	○		●		●
Butyric acid	5	●		○	5	●	5	●	5	●	5	●		●	10	○		●		5
Citric acid	5	●		○	5	●	5	●	5	●	5	●		○	10	●		●		●
Hydrochloric acid		○		○		○		○		○		○		●	2,5	●	20	●	40	●
Hydrofluoric acid		○		○		○		○		○		○						40	●	●
Formic acid	5	○		○	5	●	5	●	5	●	5	○		●	90	○		●		○
Phosphoric acid	10	○		○	10	○	10	○	10	●	10	○		○	5	○	20	○	10	●
Lactic acid	5	●		○	5	●	5	●	5	●	5	●		○	10	●		●		10
Nitric acid	10	●		○	10	●	10	●	10	●	10	●		○	10	○	10	○	20	●
Oleic acid	100	●		○	100	●	100	●	100	●	100	●		●				●		●

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available

Material																Chemical agent					
Policarbonato	ABS		Laminato	Poliammide		Polipropilene	Polietilene PE		Polietilene HDPE	Polyurethane	Gomma		Acetalica		PVC						
% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C						
			●		●	●	●				○	●	●	●	●	Vinegar					
	○	○	●	100	●	●	●			○	○	●	5	●	●	Acetone					
20	●	5	●	●	Sol. 10	○	●	10	●	Sol. 10	○	○	5	○	10	●	Acetic acid				
			●	●	Sol. 10	●	40	●	Sat	●	Sat	●	●			●	Boric acid				
	○		●	○	Sat		●			○			○	1	●	Butyric acid					
		10	●	●	Sol. 10	●	●	●		●	●	●	●		●	●	Citric acid				
		10	●	○	Sol. 10	○	Sol. 10	●	37	●	Sol. 30	○	Sol. 10	●	37	○	36	●	Hydrochloric acid		
			○	○	Sol. 40	○	30	●	70	●		65	○	●	3	●	●	Hydrofluoric acid			
30	○	10	●	○	10	○	40	10	●		10	○		10	○	2,5	●	●	Formic acid		
		10	●	○	Sol. 10	○	●	95	●		Sol. 20	●	Sol. 20	●	10	○		●	●	Phosphoric acid	
		10	●	●	Sol. 10	●	Sol. 85	●	●		○	Sol. ●	●	●	85	●	●	●	●	Lactic acid	
			○	10	○	Sol. 20	●	5	●		Sol. 10	○	5	○	25	●	●	●	●	Nitric acid	
	●		●	100	●	●	●	●	●		●	●	●							●	Oleic acid

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available



Chemical agent	Material																			
	Anodised Elox aluminium		Galvanised steel		AISI 303 stainless steel		AISI 304 stainless steel		AISI 316 stainless steel		AISI 430F stainless steel		Nickel-plated steel / brass		Resafon®		Adiprene		Shockproof acrylic	
	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C
Sulphuric acid	10	●		○	10	○	10	○	10	●	10	○		●	30	○			40	●
Tartaric acid	10	●		○	10	●	10	●	10	●	10	●		○				●	50	●
Chlorinated water		○		○		○		○		○		○			5	●				●
Distilled water	10	●		●		●		●		●		●				●				●
Fresh water		●		●		●		●		●		●				●				●
Sea water		●		○		●		●		●		○		●		●				●
Oxygenated water	30	○		○	30	●	30	●	30	●	30	●		●					40 Vol.	●
Turpentine		●		●		●		●		●		●								
Water and soap		●		●		●		●		●		●				●				
Alkylphenol ethoxylate																				
Ethyl alcohol	10	●		●	10	●	10	●	10	●	10	●		●					○	
Methyl alcohol	100	●		○	100	●	100	●	100	●	100	●		●						○
Ammoniac	50	●		○	50	●	50	●	50	●	50	●		○	100	●		●		●
Aniline	3	●		●	3	●	3	●	3	●	3	●								
Benzene	70	●		○	70	●	70	●	70	●	70	●			100	●				
Benzene		●		○		●		●		●		●		●	100	●				●
Benzol		●		○		●		●		●		●		●	100	●		○		○
Non-alcoholic beverages		●		●		●		●		●		●				●				
Beer		●		○		●		●		●		●		●		●				●
Butter		●		●		●		●		●		●		●		●				
Sodium carbonate	5	●		●	5	●	5	●	5	●	5	●			2	●			Sat.	●
Chloroform	100	●		●	100	●	100	●	100	●	100	●		●	100	●				○

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available



		Material														Chemical agent			
		Polycarbonate	ABS	Laminate	Polyamide	Polypropylene	Polyethylene PE	Polyethylene HDPE	Polyurethane	Rubber	Polyacetal	PVC							
%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C		
			10 ●		○ Sol. 10		○ Sol.	● 40	○						● Sol.	○ 40	○	●	Sulphuric acid
			30 ●		○	●	98 ●	●						10 ○	○ Sol.	● 30	○	●	Tartaric acid
					●		10 ○	○						●	●		○ 0.3	●	Chlorinated water
					●		●	●						●	●			●	Distilled water
					●		●	●						●	●			●	Fresh water
			●		●		●	●						○	●		○	●	Sea water
			10 Vol. ●		● Sol. 3		○ 30	●							○ Sol. 80	○	○ 30	●	Oxygenated water
					○			○						○				●	Turpentine
			●		●		●	●						●				●	Water and soap
																		○	Alkylphenol ethoxylate
			96 ●		96 ●	15 ●									○				Ethyl alcohol
			95 ●		●		100 ●	●							○		○	●	Methyl alcohol
			Sol. ○		10 ●		● 30	●							○ Sol.	○ Sol.	● 3	○	Ammoniac
					●		●	●							○			○	Aniline
					●		●	○						○	○			○	Benzene
			○		○		100 ●	○						○	○			○	Benzol
					●		●	●										●	Non-alcoholic beverages
					●		●	●										●	Beer
					● Sol.		●	●							○	●	●	●	Butter
					● Sat.		10 ● Sol. Sat.	●							○ Sol. 10	● Sol.	●	●	Sodium carbonate
			○		○		● Sol. 100.	○							○	○	○	○	Chloroform

● = good resistance; ○ = medium resistance; ○ = poor resistance; - = data not available



# Resistance to chemical agents

Chemical agent	Material																			
	Anodised Elox aluminium		Galvanised steel		AISI 303 stainless steel		AISI 304 stainless steel		AISI 316 stainless steel		AISI 430F stainless steel		Nickel-plated steel / brass		Resafon®		Adiprene		Shockproof acrylic	
	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C	%	23°C
Calcium chloride	10	●		○	10	○	10	○	10	○	10	○		●	5	○				●
Ethyl chloride		●		○		●		●		●		●		●						○
Methylene chloride		●		○		●		●		●		●			100	●				
Sodium chloride	5	●		○	5	●	5	●	5	●	5	●		●	10	●				●
Thinners*		●		●		●		●		●		●		●	100	●				○
Ethyl ether		●		●																○
Petroleum ether		●		●		●		●		●		●		●						○
Formaldehyde	100	●		●	100	●	100	●	100	●	100	●		●				3		●
Glycerine		●		●		●		●		●		●		●				7		●
Food fats		●		●		●		●		●		●			5	●				
Potassium hydroxide																				
Sodium hypochlorite		○		○		○		○				○		●						●
Milk		●		●		●		●		●		●		●		●				
Mercury		●		○		●		●		●		●		●				●		
Food oils		●		●		●		●		●		●		●		●				
Mineral oils		●		●		●		●		●		●		●		●		●		●
Vegetable oils		●		●		●		●		●		●		●		●				
Oxonia																				
Paraffin		●		●		●		●		●		●		●		●				
Petroleum		●		●		●		●		●		●		●		●				

\* standard composition: xylol + toluene

-- raw aluminium ●

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available



Material															Chemical agent	
Polycarbonate	ABS		Laminate	Polyamide		Polypropylene	Polyethylene PE		Polyethylene HDPE	Polyurethane	Rubber	Polyacetal	PVC			
% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C		
			●	10	●	Sol. 50	●	Sat.	●					●	Calcium chloride	
			●	100	●	○	○							○	Ethyl chloride	
		○	●	Sol. 100	●	●	●			○	○	○	○	○	Methylene chloride	
	20	●	●	10	●	Sol. Sat.	●	●		Sol. 10	○	Sol.	●	●	Sodium chloride	
	○	○	●	●	●	○	●	●		○	○	●	○	○	Thinners*	
			●	100	●	●	●	●		○			○	○	Ethyl ether	
			●	Sol. 30	●	Sol. 40	●						●	○	Petroleum ether	
	4	●	●	●	●	●	●	●					●	○	Formaldehyde	
	0	●	●	●	●	●	●	●		○	●	●	●	●	Glycerine	
			●	Sol.	●	Sol. 20	●	●			Sol.	●			Food fats	
				●	●					○				0.01	●	Potassium hydroxide
			●	○	●	●	●				○	○	○		●	Sodium hypochlorite
		●	●	●	●	●	●	●		●	●	●	●		●	Milk
		●	●	●	●	●	●	●		●	●	●	●		●	Mercury
		●	●	●	●	●	●	●		●	●	●	●		●	Food oils
		●	●	●	●	●	●	●		●	●	●	●		●	Mineral oils
			●	●	●	●	●	●		●		●	●		●	Vegetable oils
				1	○	●	●	●			○	○	○	●	●	Oxonia
			●	●	●	●	●	●		●	●	●	●	●	●	Paraffin
			●	●	●	○	○	○		●	●	●	●		●	Petroleum

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available



Chemical agent	Material													
	Anodised Elox aluminium	Galvanised steel	AISI 303 stainless steel	AISI 304 stainless steel	AISI 316 stainless steel	AISI 430F stainless steel	Nickel-plated steel / brass	Resafon®	Adiprene	Shockproof acrylic				
	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C		
Tomato (sauce) pH4	●●													
Brine	○	○						○						
Caustic soda	○	○	●	●	●	●	●	●	●		2	●		
Fruit juices	●	●						●	●			●		
Vegetable juices	●	●	●	●	●	●	●		90	●				
Copper sulphate	5	●	○	5	●	5	●	5	●					
Sodium sulphate	●	○	5	●	5	●	5	●	5	●	10	●		●
Carbon sulphide	10	●	○	●	●	●	●	●		0	●		○	
Carbon tetrachloride	○	○	10	○	10	○	10	○	10	○	●	●	○	○
Iodine dye	○	●							○	●				
Trichloroethylene	●	●	●	●	●	●	●	●	●	●	●	●		
Vaseline	●	●								●	●	●		●
Wine	●	●	●	●	●	●	●	●	●	10	●	●		●
Whisky	100	●	●	●	●	●	●	●	●	0	●	●		○
Xylol	●	●	●	●	●	●	●	●	●	○				

● = good resistance; ● = medium resistance; ○ = poor resistance; - = data not available



Material														Chemical agent			
Polycarbonate	ABS	Laminata	Polyamide	Polypropylene	Polyethylene PE	Polyethylene HDPE	Polyurethane	Rubber	Polyacetal	PVC							
% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C	% 23°C				
				● Sol. 10	52	●								Tomato (sauce) pH4			
				●								●		Brine			
5	○	Sol. 40	●	○		●	25	●		○		●	25	○	Sol. 40	●	Caustic soda
				●		●		●								●	Fruit juices
				● Sol. 10		●	Sol.	●								●	Vegetable juices
				● Sol. 10			Sol.	●		○						●	Copper sulphate
				● Sol. 100				●		10	●					●	Sodium sulphate
	○	○		●		●							○			●	Carbon sulphide
		○		○		●	○	●					○			●	Carbon tetrachloride
				●		●	●		○								Iodine dye
				●		●	●						○				Trichloroethylene
				●		●	●						●				Vaseline
		○		●		●	●						●				Wine
				●		●	○						●				Whisky
				●		○	●			○			○				Xylol

● = good resistance; ◐ = medium resistance; ○ = poor resistance; - = data not available

Part		Part		Part	
346	185	1789	422	2247	336
854	164	1828	186	2247	334
855	58	1829	187	2283	382
882	414	1843	62	2336	426
894	166	1851	206	2339	428
949	415	1883	257	2340	427
984	47	1885	288	2355	67
985	156	1892	289	2359	355
988	410	1897	274	2434	364
1167	413	1907	236	2540	203
1182	123	1916	290	2541	204
1204	158	1917	291	2551	205
1270	298	1918	292	2566	102
1271	302	1920	238	2583	240
1298	332	1924	163	2657	260
1303	279	1925	165	2658	242
1397 <i>Inox</i>	46	1948	390	2795	287
1397	44	1951	258	2944	318
1398	50	1953	267	2983	286
1415	254	1970	263	2984	54
1416	241	1971	243	2985	90
1419	84	1972	262	2988	319
1420 Ø20 Ø30	68	1973	268	2990	317
1420 Ø40	69	1974	247	2991	315
1420 Ø50	70	1975	280	2993	316
1420 Ø60	71	1983	277	2994	314
1450	48	1986	252	3074	160
1456	52	1999	56	3135	190
1461	255	2010	184	3158	285
1467	275	2011	184	3164	162
1599	250	2012	404	3165	39
1650	249	2013	411	3166	38
1651	235	2016	183	3170	161
1679	59	2017	175	3171	169
1679 <i>inox</i>	60	2018	185	3172	91
1680	159	2029	392	3209	170
1689	194	2033	376	3210	172
1690	154	2036	393	3212	173
1690 <i>inox</i>	155	2049	430	3213	174
1697	256	2125	304	3222	226
1702	201	2155	300	3223	230
1703	202	2156	340	3228	224
1707	63	2156	338	3229	228
1712	207	2167	429	3238	41
1764	283	2179	374	3240	73
1767	276	2195	375	3241	42
1789	189	2235	373	3246	424

Part		Part		Part	
3266	420	4088	89	MS CA	128
3270	96	4090	383	MS CB	129
3281	40	4091	384	MS CC	130
3285	100	4115	188	MS FC	131
3286	101	4120	408	MS FL	132
3287	97	4148	278	MS FO	127
3291	103	4155	171	MS OA	121
3292	406	4159	264	MS PA	115
3295	284	4160	281	MS PC	116
3296	78	4161	282	MS PL	117
3297	76	4166	386	MS RA	120
3323	99	4176	244	MS SS	141
3342	261	4177	245	MT AP	124
3697	191	4202	176	PG GU	136
3702	251	4203	79	PM SU	135
3719	307	4204	177	PS GF	133
3720	308	4205	266	PS GR	134
3721	309	4206	397	WP RE	126
3746	72	4207	399		
3783	416	4208	425		
3796	178	4212	398		
3817	265	4223	389		
3824	394	4235	431		
3827	246	4236	146		
3828	98	4242	65		
3842	328	4254	322		
3843	323	4255	325		
3844	321	4257	418		
3845	327	4266	199		
3846	180	4267	197		
3849	326	4270	145		
3851	324	8030	407		
3852	331	CFPA CC	356		
3853	330	CFPA CL	358		
3854	66	CFPA YG	360		
3864	64	CFPA VI	362		
3865	61	ILT	412		
3872	198	MG OI	122		
3873	196	MG OS	118		
4063	75	MM AA	138		
4064	409	MM CA	112		
4079	80	MM CF	110		
4080	77	MM CG	113		
4084	83	MM PF	114		
4085	74	MP 4F	143		
4086	87	MP 6F	142		
4087	88	MP PQ	140		



Resistance to  
chemical agents

# GENERAL CONDITIONS OF SALE

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## 1 – APPLICATION AND ENFORCEABILITY OF THE GENERAL CONDITIONS OF SALE

These general conditions of sale are systematically sent or delivered to purchasers to enable them to transmit their orders. Consequently, passing an order to BETT SISTEMI entails the purchaser's full acceptance of these conditions of sale, with no reservations whatsoever, with the exclusion of any further documents such as catalogues or brochures published by the seller, provided strictly for information purposes and having a purely indicative nature; this shall apply regardless of any provisions to the contrary shown in the client's order forms. Any conditions other than those relating to the specifications of those parts to be made to measure (customised) established by the purchaser shall therefore - unless expressly approved - be unenforceable on the seller, regardless of the time or moment they are communicated.

Only the specifications of the parts to be customised can supplement these general conditions of sale.

Any failure on the part of the seller to enforce any of the following provisions at any time shall not be construed as a waiver of any right at any future time.

## 2 – ORDER

The order must be transmitted by the client in writing to BETT SISTEMI. Any telephone orders shall therefore need to be confirmed in writing by the client within 24 hours of the call. Failure to do so will cause the order not to be taken into consideration. The sales contract will be considered valid and therefore perfected and final only upon acceptance of the order by BETT SISTEMI. As evidence of acceptance by BETT SISTEMI, the latter shall send the client an order confirmation.

Any changes by BETT SISTEMI to the clients' Orders, shown in the confirmation letter sent to the client, shall be considered accepted by the same should the client fail to send any written observations within 24 hours.

Orders for an amount below 40 euros, VAT not included, will not be accepted.

## 3 – CHANGES TO THE ORDER

Any changes or cancellations of the order requested by the client will be taken into consideration only where made in writing, and received prior to dispatch of the products (standard products) or to the start of production (customised or made-to-measure products) and if expressly accepted by BETT SISTEMI via fax, to be sent to the client within 24 hours of the request for change. Should any of the conditions not be complied with, the products initially ordered shall be delivered as originally agreed and shall have to be paid for aforesaid.

## 4 – PRICE

All prices shown in our catalogue are non-inclusive of VAT. Value added tax at the applicable rate and transport expenses shall therefore be added (for orders amounting to less than 80 Euros, VAT excluded).

Unless otherwise agreed, products are sold at the price applicable at the time of the order. The prices for the products mentioned in the catalogue are those applicable at the date of publication of the aforementioned catalogue, shown on the cover. Prices may be changed at any time.

## 5 - DELIVERY - PROCEDURES - TERMS

### A – TERMS

Parts already in stock at the time of order acceptance may be available or dispatched within a maximum time-frame of 72 hours as of our acceptance (payment by bank wire transfer or PayPal); in the case of payments by bank wire transfer, the parts already in stock may be available or dispatched after 72 hours minimum as of our acceptance.

As for parts in the catalogue that are not in stock at the time of acceptance of the order or for special parts, an indication of the lead time will be communicated upon order acceptance.

The estimated delivery terms are purely indicative and may not give rise, under any circumstance, to indemnity claims for delay,

compensation for damages, non-payments or cancellations of open orders, regardless of the causes, gravity and consequences of the delay. BETT SISTEMI shall be relieved from all delivery obligations in the case of force majeure events such as, by way of example and not limited thereto, wars, riots, fire, strikes, natural disasters, impossibility to receive supplies.

## B – DELIVERY

Unless otherwise agreed, the products shall be delivered directly to the client, at the works of BETT SISTEMI in Correggio 42015 (Italy) or to the carrier chosen by BETT SISTEMI or the same client.

Products are sold ex works Correggio 42015 Italy (works of BETT SISTEMI) and they are transported at the risk of the recipient in derogation to the retention of title clause of BETT SISTEMI, shown hereinafter.

Unless otherwise expressly agreed, transport shall be ex-works, at the client's expense, by the carrier chosen by BETT SISTEMI, or failing that, by the carrier chosen by the same client.

Should any damage or failure occur during transport, it will be the client's responsibility to make all the necessary claims and objections within 8 days of receipt of the goods (as shown at the bottom of the sale invoice).

BETT SISTEMI shall be entitled to make partial deliveries.

## C – RECEIPT

Without prejudice to the provisions vis-à-vis the carrier, complaints regarding visible defects or non-conformity of the product delivered, of the product ordered or the dispatch note, shall be made in writing by and not later than thirty days following the arrival of the products, on pain of forfeiture of the same right.

The purchaser shall provide valid grounds to prove the existence of the actual defect or anomaly ascertained. The purchaser shall allow the seller to ascertain the existence of the said defects and to provide a remedy. The purchaser shall refrain from intervening directly or from causing third parties to intervene to that end.

By way of warranty, the only obligation for the seller shall involve the replacement, free of charge, or the repair of the product or the item recognised to be defective through its own service. Products covered by a warranty shall first be submitted to the seller's after-sales service for examination, this department's approval being required for any replacement to be granted. Transport expenses shall be charged to the purchaser if the warranty is not applicable.

## 6 - PAYMENT - METHODS

Our invoices, sent along with the ordered items, can be settled as follows:

- Credit card
- PayPal
- Bank wire transfer or other methods agreed with BETT SISTEMI at the time of order confirmation; the choice of any payment method shall not change the payment due date.

No discounts will be granted for advance payments.

## 7 – LATE PAYMENT OR NON-PAYMENT -

Failure to pay by the due date shall entitle us to charge interests on arrears as provided for by the Italian Legislative Decree 231/02 and to claim the costs incurred for payment collection. In the event of a payment extension, we will apply the monthly interest rate referred to in the aforementioned Legislative Decree to the same extension granted.

## 8 – WARRANTY

# GENERAL CONDITIONS OF SALE

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BETT SISTEMI's products are covered by warranty against any hidden defects or flaws of the products sold under the terms provided for in article 1476 of the Italian Civil Code.

In the event of customised products, BETT SISTEMI undertakes to manufacture products conforming to the specifications given by the client, without however guaranteeing in any way whatsoever its operating nature, which shall be exclusively evaluated by the client. The client is the sole party responsible for the information transmitted to BETT SISTEMI.

As for standard products, BETT SISTEMI guarantees their conformity with the specifications shown in the catalogue. BETT SISTEMI cannot be held responsible and/or the warranty shall not be applicable upon expiry of the terms according to the law and cannot give rise to any indemnity claim.

Any use of the standard products is made on the sole responsibility of the purchaser, who declares to have examined the technical specifications of the products purchased and deems them suitable for his specific intended use.

Should a customised product infringe the rights of third parties, the client agrees to reimburse all costs (for proceedings, indemnification, damage compensation, legal advice and other consulting expenses) which BETT SISTEMI should incur in connection thereof and to take an active part in its defence.

The warranty shall not be applicable if the products sold have been changed or tampered with or if they are used in a manner or in conditions which are improper or inconsistent with their characteristics, intended use or standards applicable (in particular, in the event of use or installation in aircrafts and/or space vehicles for which the said products are absolutely unsuited).

**TRANSFER OF RISK** The moment the goods are delivered at the destination, the risks of improper use of the product, loss, direct or indirect damage shall be borne by the purchaser.

## 9 - RETURNS - PROCEDURES

Any returns of products shall be formally agreed in writing between the seller and the purchaser and sent via fax (0522/635222), e-mail (bsistemi@betsistemi.com), or by registered mail with advice of receipt. Should any products be returned without the aforementioned express agreement, they will be kept at the purchaser's disposal and shall not entitle to any compensation or refunds.

At any rate, returns shall not be accepted after thirty days following receipt of the goods. Expenses and risks related to the products returned shall always be charged to the purchaser. All returns must be sent to our factory. The choice of carrier is at our discretion.

The collection of a product by the seller shall entitle the purchaser to a refund for a period of six months as of the date the right was established. The products to be returned shall be intact and in proper working order, this being an essential condition if the client wishes to exercise the right of withdrawal.

Should there be visible defects or in the event of non-conformity of the products delivered, duly assessed by the seller, the purchaser shall be entitled either to the replacement of the products free of charge or to a refund for those products, at the seller's discretion. The purchaser shall not however be entitled to any indemnification or compensation of any kind.

## 10 - RETENTION OF TITLE

The ownership of standard parts or customised parts shall be transferred only subject to full payment of the price in principal and any accessory costs, it being understood that the payment shall be considered effected on the day the related sums are actually cashed by BETT SISTEMI.

Notwithstanding the provisions set forth in the foregoing paragraph, any and all risks shall be transferred to the client at the time of dispatch or delivery of the goods by BETT SISTEMI (in particular the risk of loss, deterioration and damage caused by the items sent).

Whenever a client sends a device or equipment in order to have a part manufactured, that is to be incorporated into, or that is to complete the aforementioned device or equipment, the client remains the owner thereof, bears the transport costs and the costs for the item to be re-delivered, assumes the risks connected with transport, any adjustment or transformation by BETT SISTEMI and any damage that this may cause.

## 11 – NON-FULFILMENT

In the event that the purchaser does not fulfil even only one of the obligations set out herein, or becomes subject to bankruptcy or insolvency proceedings, requests suspension of payments, liquidates or transfers his activity, his properties are repossessed or sequestered in whole or in part, does not present upon our request guarantees for the balance of the purchase price agreed upon, we reserve the right to recede from the contractual obligation stipulated with the purchaser or to recede from the part of the contract not yet executed, even without resort to legal proceedings, and we shall have the right to re-enter into possession of all the goods already delivered and for which the counterparty has not fully and exactly performed his obligations in relation thereto.

## 12 – SUSPENSION/TERMINATION CONDITIONS

The company undertakes to fulfil the undersigned agreements on condition that the counterparty proves his full and certain solvency in relation to the negotiations to be concluded. Furthermore, the Company shall have the right, at its own discretion, to request the purchaser to provide payment guarantees to the extent requested by the Company and also to suspend execution of the agreement until said requests have been fully satisfied.

## 13 – APPLICABLE LAW

### A – JURISDICTION

Pursuant to art.23 of Council Regulation EC44/2001 of 22 December 2000, the parties mutually agree that any dispute, none excluded nor excepted, relating to the interpretation, execution and termination of this contract shall be exclusively referred to the Italian Judicial Authorities.

### B – TERRITORIAL JURISDICTION

Any dispute, none excluded, relating to the interpretation, execution and termination of this contract, including events of connection, shall be solely ruled upon by the Court of Reggio Emilia, in Italy.

**Dear Customer,**

with the aim of continually improving our services, your opinion is of major importance to us. We would appreciate not only knowing your opinion, but also receiving comments, proposals or suggestions.

This area is dedicated to this. If you wish, you may send us an email to [bsistemi@bettsistemi.com](mailto:bsistemi@bettsistemi.com), or a fax using the attached form, to be sent to +39.0522.635222.

We will be glad to answer your requests and consider your suggestions.

Kind regards

The Management



A handwritten signature in black ink, appearing to read "Bettsistemi". The signature is fluid and cursive, written over a light blue background.

