

















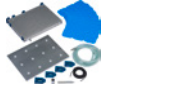





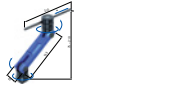


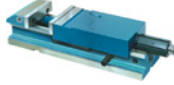


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**ORION®** Reducing sleeves, Morse taper

Clamping Technology

**Application:**  
For clamping tools with morse taper shank.

- Male and female taper polished with pitch accuracy



**Execution:**

- Male and female taper in accordance with DIN 2185
- Fully hardened

**Advantage:**

- No chip impressions
- Maximum concentricity

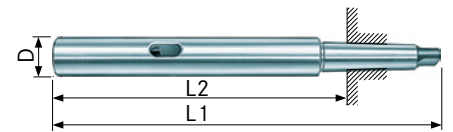
Mount, on machine side	Mount, on tool side	Length (mm)	21102... ID no.		Mount, on machine side	Mount, on tool side	Length (mm)	21102... ID no.	
MK 1	MK 0	80	010	O. R.	MK 4	MK 3	140	043	O. R.
MK 2	MK 1	92	021	O. R.	MK 5	MK 2	156	052	O. R.
MK 3	MK 1	99	031	O. R.	MK 5	MK 3	156	053	O. R.
MK 3	MK 2	112	032	O. R.	MK 5	MK 4	171	054	O. R.
MK 4	MK 1	124	041	O. R.	MK 6	MK 5	218	065	O. R.
MK 4	MK 2	124	042	O. R.					Unit price, €

Prod. group 207

**ORION®** Extension sleeves, Morse taper  
Long version

**Application:**  
For extending drill bits and reamers.

- Male taper, polished



**Execution:**

- Male and female taper in accordance with DIN 2185

- Maximum concentricity

Mount, on machine side	MK 1	MK 1	MK 1	MK 1	MK 1	MK 2	MK 2	MK 2
Mount, on tool side	MK 1	MK 1	MK 1	MK 1	MK 1	MK 2	MK 2	MK 2
Projection length L 2 (mm)	138	188	238	288	338	125	175	225
Cylinder Ø D (mm)	20	20	20	20	20	25	25	25
Length L 1 (mm)	200	250	300	350	400	200	250	300
21107... Ident. No.	120	125	130	135	140	220	225	230
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Mount, on machine side	MK 2	MK 2	MK 2	MK 2	MK 2	MK 3	MK 3	MK 3
Mount, on tool side	MK 2	MK 2	MK 2	MK 2	MK 2	MK 3	MK 3	MK 3
Projection length L 2 (mm)	275	325	375	425	525	156	206	256
Cylinder Ø D (mm)	25	25	25	25	25	32	32	32
Length L 1 (mm)	350	400	450	500	600	250	300	350
21107... Ident. No.	235	240	245	250	260	325	330	335
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Mount, on machine side	MK 3	MK 3	MK 3	MK 3	MK 4	MK 4	MK 4	MK 4
Mount, on tool side	MK 3	MK 3	MK 3	MK 3	MK 4	MK 4	MK 4	MK 4
Projection length L 2 (mm)	306	356	406	506	182.5	232.5	282.5	332.5
Cylinder Ø D (mm)	32	32	32	32	40	40	40	40
Length L 1 (mm)	400	450	500	600	300	350	400	450
21107... Ident. No.	340	345	350	360	430	435	440	445
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

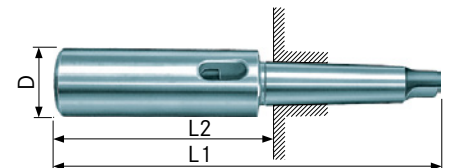
Mount, on machine side	MK 4	MK 4
Mount, on tool side	MK 4	MK 4
Projection length L 2 (mm)	382.5	482.5
Cylinder Ø D (mm)	40	40
Length L 1 (mm)	500	600
21107... Ident. No.	450	460
Unit price, €	O. R.	O. R.

Prod. group 207

**ORION®** Extension sleeves, Morse taper

**Application:**  
For clamping tools with morse taper shank.

- Execution:**
- Male and female taper, polished and hardened, similar to DIN 2187



Mount, on machine side	MK 1	MK 1	MK 2	MK 2	MK 2	MK 3	MK 3	MK 3	MK 3	MK 4	MK 4	MK 4	MK 5	MK 5
Mount, on tool side	MK 1	MK 2	MK 1	MK 2	MK 3	MK 1	MK 2	MK 3	MK 4	MK 3	MK 4	MK 5	MK 4	MK 5
Projection length L 2 (mm)	83	98	85	100	121	81	100	121	146	122.5	147.5	182.5	150.5	182.5
Cylinder Ø D (mm)	20	30	20	30	36	20	30	36	48	36	48	63	48	63
Length L 1 (mm)	145	160	160	175	196	175	194	215	240	240	265	300	300	300
21115... Ident. No.	011	012	021	022	023	031	032	033	034	043	044	045	054	055
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 207

**ORION®** Tapered clamping sleeves

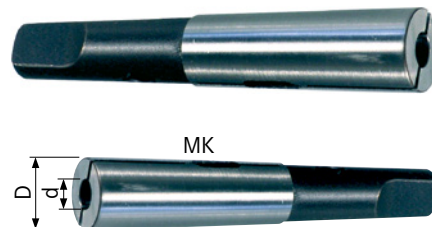
DIN 6329

**Application:**

For holding twist drills and countersinks with a straight shank (h8) in accordance with DIN 6329.

**Execution:**

- Hole and male taper, polished
- Fully hardened
- Not suitable for milling



Adapter, on machine side D	MK 1	MK 1	MK 1	MK 1	MK 1	MK 1	MK 1	MK 1	MK 1
Shank Ø d (mm)	3	3.5	4	4.5	5	5.5	6	6.5	
21150...	Ident. No. 103	106	109	112	115	118	121	124	
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Adapter, on machine side D	MK 1	MK 1	MK 2	MK 2	MK 2	MK 2	MK 2	MK 2	MK 2
Shank Ø d (mm)	7	8	6	7	8	8.5	9	9.5	
21150...	Ident. No. 127	133	203	209	215	218	221	224	
	Unit price, €	O. R.	O. R.	O. R.	(O. R.)	O. R.	O. R.	O. R.	(O. R.)
Adapter, on machine side D	MK 2	MK 2	MK 2	MK 2	MK 3	MK 3	MK 3	MK 3	MK 3
Shank Ø d (mm)	10	10.5	11	12	12	12.5	14	16	
21150...	Ident. No. 227	230	233	239	327	330	339	351	
	Unit price, €	O. R.	O. R.	O. R.	O. R.	(O. R.)	O. R.	O. R.	O. R.

Prod. group 207

**ORION®** Conical clamping sleeves

DIN 6328

**Application:**

For holding screw taps and reamers with a straight shank and square drive.

- Hole and male taper, polished
- Fully hardened
- Not suitable for milling



**Execution:**

- For tools with straight shank and square head in accordance with DIN 6328

Adapter, on machine side D	MK 1	MK 1	MK 1	MK 1	MK 2	MK 2	MK 2	MK 2	MK 2	MK 2	MK 3	MK 3
Shank Ø d (mm)	4.5	6	7	8	6	7	8	9	10	12	14	16
Square width (mm)	3.4	4.9	5.5	6.2	4.9	5.5	6.2	7	8	9	11	12
21155...	Ident. No. 103	109	112	115	203	206	209	212	215	218	303	306
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 207

**ORION®** Ejector drifts for tapered tools with flat tangs

DIN 317

**Application:**

For driving out taper shanks in accordance with DIN 228 with flat tangs.

**Execution:**

- Made of special steel
- Hardened
- Tempered with burnished finish



Suitable for morse taper tools		BUP 0	BUP 1   BUP 2	BUP 3	BUP 4	BUP 5   BUP 6
21160...	Ident. No. 005	010	030	040	050	
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 207

**ORION®** Morse taper arbours  
With morse taper for drill chucks

DIN 238

**Application:**

For holding drill chucks.

**Execution:**

- Hardened and polished
- Drill chuck holders with steep taper, see no. 23272



Drill chuck taper	B 10	B 10	B 12	B 12	B 12	B 16	B 16	B 16	
Morse taper size	MK 1	MK 2	MK 1	MK 2	MK 3	MK 1	MK 2	MK 3	
Min. taper external Ø (mm)	9.4	9.4	11.1	11.1	11.1	14.5	14.5	14.5	
Max. taper external Ø (mm)	10.095	10.095	12.06	12.06	12.06	15.733	15.733	15.733	
<b>21269...</b>	Ident. No. Unit price, €	<b>101</b> O. R.	<b>102</b> O. R.	<b>121</b> O. R.	<b>122</b> O. R.	<b>123</b> O. R.	<b>161</b> O. R.	<b>162</b> O. R.	<b>163</b> O. R.

Drill chuck taper	B 16	B 18	B 18	B 18	B 18	B 18	B 22	B 22	
Morse taper size	MK 4	MK 1	MK 2	MK 3	MK 4	MK 5	MK 2	MK 3	
Min. taper external Ø (mm)	14.5	16.2	16.2	16.2	16.2	16.2	19.8	19.8	
Max. taper external Ø (mm)	15.733	17.78	17.78	17.78	17.78	17.78	21.793	21.793	
<b>21269...</b>	Ident. No. Unit price, €	<b>164</b> O. R.	<b>181</b> O. R.	<b>182</b> O. R.	<b>183</b> O. R.	<b>184</b> O. R.	<b>185</b> O. R.	<b>222</b> O. R.	<b>223</b> O. R.

Drill chuck taper	B 22	
Morse taper size	MK 4	
Min. taper external Ø (mm)	19.8	
Max. taper external Ø (mm)	21.793	
<b>21269...</b>	Ident. No. Unit price, €	<b>224</b> O. R.

Prod. group 207

**RÖHM** Prima drill chuck  
With female thread

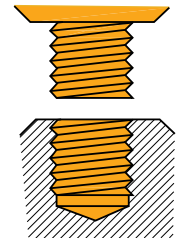


**Application:**  
For holding tools with straight shank.

- Execution:**
- Industrial version for hand-guided machines
  - Jaws hardened

- Body head with keyholes
- Toothed ring drill chuck with key, DIN ISO 10887

- Advantage:**
- For day-to-day industrial applications
  - High clamping force thanks to toothed ring



Thread adapter

Min./max. clamping width	0.5-6.5 mm	0.5-8 mm	0.8-10 mm	0.8-10 mm	1.5-13 mm	1.5-13 mm	3-16 mm	
Connection thread	3/8 " x 24 UNF 3B	3/8 " x 24 UNF 3B	3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	1/2 " x 20 UNF 3B	
Outer Ø (mm)	29.5	29.5	34.5	34.5	42.8	42.8	50	
<b>21292...</b>	Ident. No. Unit price, €	<b>035</b> O. R.	<b>041</b> O. R.	<b>045</b> O. R.	<b>051</b> O. R.	<b>055</b> O. R.	<b>060</b> O. R.	<b>185</b> O. R.

Prod. group 201

<b>Accessories for</b>		<b>21292 035</b>	<b>21292 041</b>	<b>21292 045</b>	<b>21292 051</b>	<b>21292 055</b>	<b>21292 060</b>
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No. Unit price, €	<b>010</b> O. R.	<b>010</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.

<b>Accessories for</b>		<b>21292 185</b>	
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No. Unit price, €	<b>030</b> O. R.

**ORION** Drill chuck with mounting thread  
for clockwise rotation, with toothed ring and key

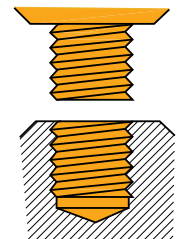


**Application:**  
For holding tools with straight shank.

- Execution:**
- Body head with keyholes
  - Jaws hardened

- With female thread
- Toothed ring drill chuck with key, DIN ISO 10887

- Advantage:**
- Very good value for money
  - High clamping force thanks to toothed ring



Thread adapter

Min./max. clamping width		0.8-10 mm	0.8-10 mm	1.5-13 mm
Connection thread		3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	1/2 " x 20 UNF 3B
Outer Ø (mm)		33.3	33.3	42.4
<b>21293...</b>	Ident. No. Unit price, €	<b>110</b> O. R.	<b>112</b> O. R.	<b>130</b> O. R.

Prod. group 207

<b>Accessories for</b>		<b>21293 110</b>	<b>21293 112</b>	<b>21293 130</b>	
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No. Unit price, €	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.



**Drill chuck with taper chuck**  
for clockwise and anti-clockwise rotation, with toothed ring and key

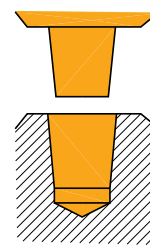


**Application:**  
**No. 21290:** For holding tools with straight shank.  
**No. 21291:** For holding tools with straight shank in pillar and bench drills.

**Execution:**

- Body head with keyholes and jaws, hardened
- Toothed ring drill chuck with key, DIN ISO 10887

- **No. 21291:** Industrial version
- Advantage:**
  - High clamping force thanks to toothed ring
  - **No. 21290:** Very strong and resistant to wear
  - **No. 21291:** For day-to-day industrial applications



Drill chuck cone in accordance with DIN 238

Min./max. clamping width		0.5-6.5 mm	1-13 mm	1-16 mm	5-20 mm	0.5-8 mm	0.8-10 mm	1.5-13 mm
Suitable for taper		B 12	B 16	B 18	B 22	B 10	B 12	B 12
Outer Ø (mm)		29.5	52	56.5	65	29.5	34.5	42.8
<b>21290...</b>	Ident. No.	<b>030</b>	<b>080</b>	<b>170</b>	<b>200</b>	-	-	-
	Unit price, €	O. R.	O. R.	O. R.	O. R.			
<b>21291...</b>	Ident. No.	<b>010</b>	-	-	-	<b>020</b>	<b>030</b>	<b>040</b>
	Unit price, €	O. R.				O. R.	O. R.	O. R.

Prod. group 201

<b>Accessories for</b>			<b>21290 030</b>	<b>21290 080</b>	<b>21290 170</b>	<b>21290 200</b>	<b>21291 010</b>	<b>21291 020</b>
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No.	<b>010</b>	<b>030</b>	<b>030</b>	<b>040</b>	<b>010</b>	<b>010</b>
		Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

<b>Accessories for</b>			<b>21291 030</b>	<b>21291 040</b>
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No.	<b>020</b>	<b>020</b>
		Unit price, €	O. R.	O. R.



**Drill chuck with taper chuck**  
for clockwise and anti-clockwise rotation, with toothed ring and key

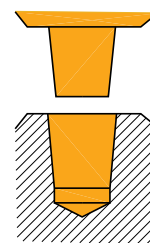


**Application:**  
For holding tools with straight shank.

**Execution:**

- Body head with keyholes
- Jaws hardened

- Toothed ring drill chuck with key, DIN ISO 10887
- Advantage:**
  - Very good value for money
  - High clamping force thanks to toothed ring



Drill chuck cone in accordance with DIN 238

Min./max. clamping width		0.8-10 mm	1-10 mm	1.5-13 mm	3-16 mm	3-16 mm
Suitable for taper		B 12	B 16	B 16	B 16	B 18
Outer Ø (mm)		33.5	42.4	42.4	50	50
<b>21293...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>	<b>042</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 207

<b>Accessories for</b>			<b>21293 010</b>	<b>21293 020</b>	<b>21293 030</b>	<b>21293 040</b>	<b>21293 042</b>
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	Ident. No.	<b>020</b>	<b>020</b>	<b>020</b>	<b>030</b>	<b>030</b>
		Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.



**Supra S drill chuck**  
Keyless clamping

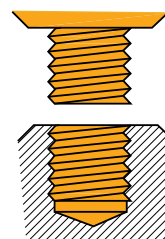


**Application:**  
For clamping and releasing drill bits quickly without a key.

**Execution:**

- Industrial version for hand-guided machines
- Automatic retightening during drilling proportionately to cutting force
- Holder with UNF-3 B female thread

- All parts are replaceable
- Advantage:**
  - No tools required for operation, therefore fast retooling
  - For day-to-day industrial applications
  - Very strong and resistant to wear



Thread adapter

Clamping Technology

Min./max. clamping width		0-8 mm	0-8 mm	0.5-10 mm	0.5-10 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm
Connection thread		3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	1/2 " x 20 UNF 3B	5/8 inch - 16 UNF
Outer Ø (mm)		32	32	35.8	35.8	40.2	40.2	46	46
21302...	Ident. No. Unit price, €	<b>040</b> O. R.	<b>050</b> O. R.	<b>070</b> O. R.	<b>080</b> O. R.	<b>085</b> O. R.	<b>090</b> O. R.	<b>100</b> O. R.	<b>110</b> O. R.

Prod. group 201

**RÖHM** **Supra SK drill chuck with mounting thread**  
Suitable for percussion drilling



**Application:**

Keyless quick clamping chuck for all makes of hammer drill.

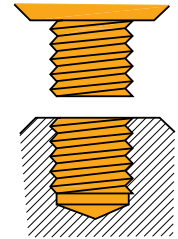
**Execution:**

- Industrial version for hand-guided machines
- Automatic retightening during drilling proportionately to cutting force
- Holder with UNF-3 B female thread

- Chuck sealed to protect against drilling dust and contamination
- Sturdy design as functional components are made of metal
- Easy and quick insertion of drill bit by hand

**Advantage:**

- Sealed to protect against dirt
- Accident-proof thanks to clamping force safety device



Thread adapter

Min./max. clamping width		0.5-10 mm	0.5-10 mm	1-13 mm
Connection thread		3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	1/2 " x 20 UNF 3B
Outer Ø (mm)		40	40	42.8
21303...	Ident. No. Unit price, €	<b>110</b> O. R.	<b>120</b> O. R.	<b>130</b> O. R.

Prod. group 201

**RÖHM** **Extra RV drill chucks with retaining ring**  
with radial locking, keyless, for clockwise and anti-clockwise rotation



**Application:**

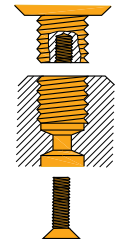
For holding cordless screwdrivers, cordless drills and mains drills; suitable for percussion drilling with multiple edges for assembling and dismantling.

**Execution:**

- Clamping sleeve made from plastic
- With keyless radial locking mechanism

**Advantage:**

- No additional locking required when screwing and drilling, in particular when percussion drilling
- Very ergonomic and user-friendly, equipped with impact guard
- The plastic parts are marked to identify the material, allowing them to be recycled



21308 001-014 with plastic clamping sleeve, materials are labelled so that they can be recycled.

Threaded mount

Min./max. clamping width		1-10 mm	1-10 mm	1.5-13 mm	1.5-13 mm
Connection thread		3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B	3/8 " x 24 UNF 3B	1/2 " x 20 UNF 3B
Outer Ø (mm)		42.7	42.7	42.7	42.7
Suitable for max. machine capacity (W)		550	550	1000	1000
21308...	Ident. No. Unit price, €	<b>001</b> O. R.	<b>002</b> O. R.	<b>013</b> O. R.	<b>014</b> O. R.

Prod. group 201

**RÖHM** Extra RV drill chucks with retaining ring  
Clamping sleeve in metal version



**Application:**

For holding cordless screwdrivers, cordless drills and mains drills; suitable for percussion drilling with multiple edges for assembling and dismantling.

**Execution:**

- Clamping sleeve made from plastic
- With keyless radial locking mechanism

**Advantage:**

- No additional locking required when screwing and drilling, in particular when percussion drilling
- Very ergonomic and user-friendly, equipped with impact guard
- The plastic parts are marked to identify the material, allowing them to be recycled

Min./max. clamping width		1.5-13 mm
Connection thread		1/2" x 20 UNF 3B
Outer Ø (mm)		42.7
Suitable for max. machine capacity (W)		1000
<b>21308...</b>	Ident. No.	<b>015</b>
	Unit price, €	O. R.

Prod. group 201



21308 001-014 with plastic clamping sleeve, materials are labelled so that they can be recycled.



Threaded mount

Clamping Technology

**RÖHM** Supra drill chuck with taper chuck  
Keyless clamping



**Application:**

For clamping and releasing drill bits quickly without a key.

**Execution:**

- Automatic retightening during drilling proportionately to cutting force
- No. 21300:** Heavy-duty industrial version with internal taper chuck in accordance with DIN 238
- No. 21301:**

- Industrial version for hand-guided machines
- With internal taper chuck in accordance with DIN 238
- All parts are replaceable

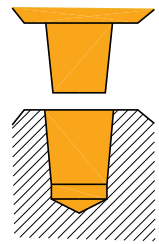
**Advantage:**

- No tools required for operation, therefore fast retooling
- For day-to-day industrial use
- No. 21301:** Very strong and resistant to wear

Min./max. clamping width	0-4 mm	0-6.5 mm	0-6.5 mm	0-8 mm	0-8 mm	0-10 mm	0-10 mm	1-13 mm	3-16 mm
Suitable for taper	B 10	B 10	B 12	B 10	B 12	B 12	B 16	B 16	B 16
Outer Ø (mm)	26	32	32	35.8	35	40.2	40.2	46	51
<b>21300...</b>	Ident. No. <b>010</b>	Ident. No. <b>020</b>	Ident. No. <b>030</b>	Ident. No. <b>040</b>	Ident. No. <b>050</b>	Ident. No. <b>070</b>	Ident. No. <b>080</b>	Ident. No. <b>090</b>	Ident. No. <b>100</b>
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.
<b>21301...</b>	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -	Ident. No. -
	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -	Unit price, € -

Min./max. clamping width	3-16 mm	0-8 mm	0-8 mm	0.5-10 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm
Suitable for taper	B 18	B 10	B 12	B 12	B 12	B 16	B 16	B 18
Outer Ø (mm)	51	32	32	35.8	40.2	40.2	46	46
<b>21300...</b>	Ident. No. <b>110</b>	-	-	-	-	-	-	-
	Unit price, € O. R.	-	-	-	-	-	-	-
<b>21301...</b>	Ident. No. -	Ident. No. <b>040</b>	Ident. No. <b>050</b>	Ident. No. <b>060</b>	Ident. No. <b>085</b>	Ident. No. <b>090</b>	Ident. No. <b>100</b>	Ident. No. <b>110</b>
	Unit price, € -	Unit price, € (O. R.)	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Prod. group 201



Drill chuck cone in accordance with DIN 238

**RÖHM** Supra SK drill chuck with taper chuck  
Suitable for percussion drilling



**Application:**

Keyless quick clamping chuck for all makes of hammer drill.

**Execution:**

- Industrial version for hand-guided machines
- Automatic retightening during drilling proportionately to cutting force
- With internal taper chuck in accordance with DIN 238

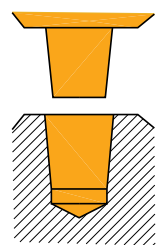
- Chuck sealed to protect against drilling dust and contamination
- Sturdy design as functional components are made of metal
- Easy and quick insertion of drill bit by hand

**Advantage:**

- Sealed to protect against dirt
- Accident-proof thanks to clamping force safety device

Min./max. clamping width		0.5-10 mm	1-13 mm	1-13 mm
Suitable for taper		B 12	B 12	B 16
Outer Ø (mm)		40	42.8	42.8
<b>21303...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>030</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 201



Drill chuck cone in accordance with DIN 238



**ORION®** Drill chuck with taper chuck  
Suitable for percussion drilling

Clamping Technology



**Application:**  
For clamping and releasing drill bits quickly without a key.

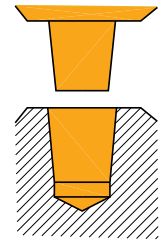
**Execution:**

- Self-clamping
- Industrial version for hand-guided machines

- With internal taper chuck in accordance with DIN 238

**Advantage:**

- No tools required for operation, therefore fast retooling



Drill chuck cone in accordance with DIN 238

Min./max. clamping width	0-8 mm	0-10 mm	0-10 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm
Suitable for taper	B 12	B 12	B 16	B 12	B 16	B 16	B 18
Outer Ø (mm)	32	36	42.5	40.2	40	46	46
<b>21304...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>022</b>	<b>030</b>	<b>032</b>	<b>040</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 207

**RÖHM** Spiro drill chuck  
Precision design



**Application:**  
For clamping and releasing drill bits quickly without a key.

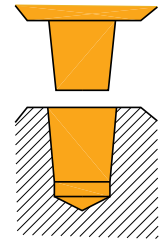
**Execution:**

- Lasting and automatic retightening
- Wear parts hardened

- Particularly suitable for high rotation speeds on drills and drilling equipment
- With internal taper chuck in accordance with DIN 238

**Advantage:**

- High concentricity < 0.05 mm



Drill chuck cone in accordance with DIN 238

Min./max. clamping width	0-6.5 mm	0-6.5 mm	0-10 mm	0-10 mm	1-13 mm	3-16 mm	3-16 mm
Suitable for taper	B 10	B 12	B 12	B 16	B 16	B 16	B 18
Outer Ø (mm)	35	35	43	43	50	55	55
Length closed (mm)	68.6	68.6	90.1	90.1	102.5	106.8	106.8
<b>21305...</b>	Ident. No.	<b>020</b>	<b>030</b>	<b>050</b>	<b>060</b>	<b>070</b>	<b>090</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 201



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LET'S WORK TOGETHER.

**ALBRECHT** Drill chucks  
Präzisions Spannfutter  
Self-clamping for clockwise rotation



**Application:**  
For clamping and releasing drill bits quickly without a key.

**Execution:**  
▪ For extended periods of use with maximum concentricity

- All wear parts are case-hardened, polished and replaceable
- **Ident. No. 015–130, 160–163:** With internal taper chuck in accordance with DIN 238
- **Ident. No. 131, 164:**
  - With internal cone in accordance with DIN 238

- With clamping force safety device to prevent accidental opening of the drill chuck in the event of the working spindle stopping abruptly

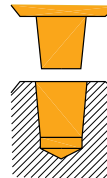
**Advantage:**  
▪ 100% concentricity check using different test pin diameters at various measuring points, based on DIN ISO 10888



Ident. No. 015–100, 130, 160–163  
Type SBF



Ident. No. 131, 164



Drill chuck cone in accordance with DIN 238

Min./max. clamping width	0-1.5 mm	0-3 mm	0-6.5 mm	0-6.5 mm	0-10 mm	0-10 mm	1-13 mm	1-13 mm	
Suitable for taper	B 6	B 10	B 10	B 12	B 12	B 16	B 16	B 16	
Running direction	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	
With clamping force retainer	No	No	No	No	No	No	No	Yes	
Length closed (mm)	37.5	47.5	68	68	91	91	103	103	
Length, open (mm)	35	44	61.5	61.5	80	80	90.5	90.5	
<b>21311...</b>	Ident. No. Unit price, €	<b>015</b> O. R.	<b>030</b> O. R.	<b>063</b> O. R.	<b>065</b> O. R.	<b>103</b> O. R.	<b>100</b> O. R.	<b>130</b> O. R.	<b>131</b> O. R.

Min./max. clamping width	3-16 mm	3-16 mm	3-16 mm	
Suitable for taper	B 18	B 16	B 18	
Running direction	Clockwise rotation	Clockwise rotation	Clockwise rotation	
With clamping force retainer	No	No	Yes	
Length closed (mm)	109	109	109	
Length, open (mm)	95.5	95.5	95.5	
<b>21311...</b>	Ident. No. Unit price, €	<b>160</b> O. R.	<b>163</b> O. R.	<b>164</b> O. R.

Prod. group 209

**ALBRECHT** Drill chuck SBF-plus  
Präzisions Spannfutter  
Self-clamping



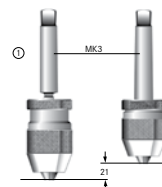
**Application:**  
For clamping and releasing drill bits quickly without a key.

**Execution:**  
▪ Drill chuck SBF-plus, shortened version  
▪ Precision design

- Advantage:**
- Drill chuck and drive arbour form one unit, which means that optimal stability and a minimum concentricity tolerance can be achieved.
  - Particularly advantageous on machines with a small working area thanks to it being 21 mm shorter than the two-part version.



Ident. No. 020, 040–240



Dimensions comparison  
SBF and morse taper arbor (two-piece)  
SBF-plus (one-piece)

Min./max. clamping width	1-13 mm	1-13 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm	3-16 mm	
Morse taper size	MK 2	MK 3	MK 4	-	MK 2	MK 3	MK 4	
Projection length l1 (mm)	85	85	86.5	79	89	89	90	
Running direction	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	
With clamping force retainer	No	No	No	No	No	No	No	
Length closed (mm)	85	85	86.5	79	89	89	90	
<b>21314...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.	<b>160</b> O. R.	<b>220</b> O. R.	<b>230</b> O. R.	<b>240</b> O. R.

Prod. group 209

**ORION®** Drill chuck  
Self-clamping

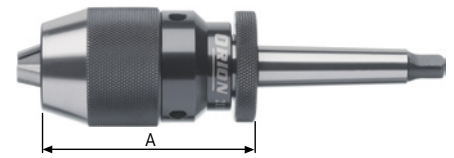


**Application:**

For clamping and releasing drill bits quickly without a key.

**Advantage:**

- Very good value for money



**Execution:**

- Drill chuck and mounting taper form one unit

Min./max. clamping width	1-13 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm	3-16 mm
Morse taper size	MK 2	MK 3	MK 4	MK 2	MK 3	MK 4
Projection length A (mm)	95.5	95.5	98	100.5	100.5	102
<b>21316...</b>	Ident. No. <b>020</b>	Ident. No. <b>030</b>	Ident. No. <b>040</b>	Ident. No. <b>220</b>	Ident. No. <b>230</b>	Ident. No. <b>240</b>
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Prod. group 295

**ORION®** Quick-change tapping chucks  
Shank design with DIN 69871 A steep taper



**Application:**

For thread cutting and thread shaping on NC machines and machining centres.

- **Ident. No. 610-640:** With elastic length compensation, effective under pressure and tension
- **Ident. No. 650-660:** With elastic length compensation, effective under pressure and tension.

- Low tool wear thanks to length compensation

**Notes:**

For requisite pull studs, see no. 23690. For requisite quick-change inserts, see no. 21560-21566.

**Execution:**

- For reverse motion, the direction of rotation of the machine spindle needs to be changed

**Advantage:**

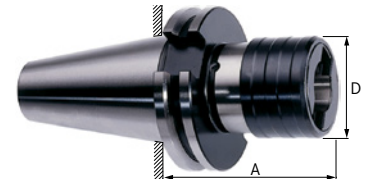
- Fast retooling thanks to quick-change chuck



Ident. No. 620



Ident. No. 650-660  
Ref. no. 21545650-660 HSK-A63



Ident. No. 610-640  
Ref. no. 21545610-640 SK40-SK50

Used sizes	1	1	2	2	1	2
Tool holding device	SK 40	SK 50	SK 40	SK 50	HSK A63	HSK A63
Suitable for screw thread	M3-M12	M3-M12	M6-M20	M6-M20	M3-M12	M6-M20
Pressure length compensation (mm)	9	9	15	15	7.5	10
Tension length compensation (mm)	9	9	15	15	7.5	10
Outer Ø D (mm)	38	38	55	55	41	60
Projection length A (mm)	60	62	100	83	72	110
DIN	-	-	-	-	69893-1	69893-1
ISO	7388-1	7388-1	7388-1	7388-1	-	-
<b>21545...</b>	Ident. No. <b>610</b>	Ident. No. <b>620</b>	Ident. No. <b>630</b>	Ident. No. <b>640</b>	Ident. No. <b>650</b>	Ident. No. <b>660</b>
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Prod. group 295

**ORION®** Quick-change inserts  
Without safety coupling

**Application:**

For use in thread cutting quick-change chuck no. 21545

**Notes:**

Please enquire about any shank diameters, thread sizes, or brands not listed. The DIN no. or shank dimensions (diameter and square) must be indicated on the order form in addition to the thread size.



**Execution:**

- Precise quick-change insert

**Advantage:**

- Increased tool service life

Without safety coupling

	Suitable for DIN371 threads	Suitable for DIN374 threads	Suitable for DIN376 threads	Clamp in depth off screw tap (mm)	Shaft Ø (mm)	Square shank on screw tap	Outer Ø D (mm)	Collar width l3 (mm)	Insertion depth of quick-change socket l4 (mm)	<b>21565...</b> ID no.	
1	-	MF10	-	17	7	5.5	30	7	21.5	<b>130</b>	<b>O. R.</b>
1	-	MF12	M12	17	9	7	30	7	21.5	<b>150</b>	<b>O. R.</b>
1	-	MF14	M14	17	11	9	30	7	21.5	<b>170</b>	<b>O. R.</b>
1	M3	MF5	M3	17	3.5	2.7	30	7	21.5	<b>105</b>	<b>O. R.</b>
1	M4	MF6	M4	17	4.5	3.4	30	7	21.5	<b>110</b>	<b>O. R.</b>
1	M5   M6	MF8	M5	17	6	4.9	30	7	21.5	<b>120</b>	<b>O. R.</b>

	Suitable for DIN371 threads	Suitable for DIN374 threads	Suitable for DIN376 threads	Clamp in depth off screw tap (mm)	Shaft Ø (mm)	Square shank on screw tap	Outer Ø D (mm)	Collar width l3 (mm)	Insertion depth of quick-change socket l4 (mm)	21565... ID no.	
1	M8	-	M8	17	8	6.2	30	7	21.5	140	O. R.
1	M10	-	M10	17	10	8	30	7	21.5	160	O. R.
2	-	MF10	-	30	7	5.5	46	11	35	205	O. R.
2	-	MF12	M12	30	9	7	46	11	35	220	O. R.
2	-	MF14	M14	30	11	9	46	11	35	240	O. R.
2	-	MF16	M16	30	12	9	46	11	35	250	O. R.
2	-	MF14	M18	30	14	11	46	11	35	260	O. R.
2	-	MF20	M20	30	16	12	46	11	35	270	O. R.
2	M5   M6	MF8	M5   M6	30	6	4.9	46	11	35	203	O. R.
2	-	MF24	M24	30	18	14.5	46	11	35	280	O. R.
2	M8	-	M8	30	8	6.2	46	11	35	210	O. R.
2	M10	-	M10	30	10	8	46	11	35	230	O. R.
Unit price, €											

Prod. group 295

## ORION® Quick-change inserts With safety coupling

**Application:**  
For use in thread cutting quick-change chuck no. 21545

**Execution:**

- Precise quick-change insert with adjustable and almost wear-free ball safety coupling for protection against damage when tool becomes blunt or comes into contact with bottom of the hole.

**Notes:**  
Please enquire about any shank diameters and thread sizes, setting tools or brands not listed. The DIN no. or shank dimensions (diameter and square) must be indicated on the order form in addition to the thread size.



With safety coupling

	Suitable for DIN371 threads	Suitable for DIN374 threads	Suitable for DIN376 threads	Clamp in depth off screw tap (mm)	Shaft Ø (mm)	Square shank on screw tap	Outer Ø D (mm)	Collar width l3 (mm)	Insertion depth of quick-change socket l4 (mm)	21566... ID no.	
1	-	MF10	-	17	7	5.5	32	25	21.5	130	O. R.
1	-	MF12	M12	17	9	7	32	25	21.5	150	O. R.
1	-	MF14	M14	17	11	9	32	25	21.5	170	O. R.
1	M3	MF5	M3	17	3.5	2.7	32	25	21.5	105	O. R.
1	M4	MF6	M4	17	4.5	3.4	32	25	21.5	110	O. R.
1	M5   M6	MF8	M5	17	6	4.9	32	25	21.5	120	O. R.
1	M8	-	M8	17	8	6.2	32	25	21.5	140	O. R.
1	M10	-	M10	17	10	8	32	25	21.5	160	O. R.
2	-	MF10	-	30	7	5.5	50	34	35	205	O. R.
2	-	MF12	M12	30	9	7	50	34	35	220	O. R.
2	-	MF14	M14	30	11	9	50	34	35	240	O. R.
2	-	MF16	M16	30	12	9	50	34	35	250	O. R.
2	-	MF18	M18	30	14	11	50	34	35	260	O. R.
2	-	MF20	M20	30	16	12	50	34	35	270	O. R.
2	-	MF24	M24	30	18	14.5	50	34	35	280	O. R.
2	M5   M6	MF8	M5   M6	30	6	4.9	50	34	35	203	O. R.
2	M8	-	M8	30	8	6.2	50	34	35	210	O. R.
2	M10	-	M10	30	10	8	50	34	35	230	O. R.
Unit price, €											

Prod. group 295

## ATORN® Synchronous tapping chuck for machine tools with synchronous control



**Application:**

For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

**Execution:**

- Pitch errors are compensated for with minimal length compensation of 1.0 mm under tension and 0.2 mm under pressure
- Clamping screws to secure against rotation of the clamped screw tap

**Advantage:**

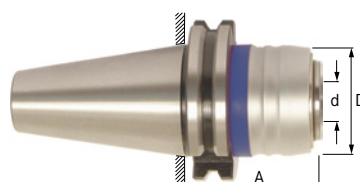
- Increased tool service life
- Secure clamping in quick-change inserts for ER collet chucks

**Notes:**

Collets type ER for thread cutting, no. 21575



Ident. No. 362



Ident. No. 341-352  
Ref. no. 21555 341-362 SK40-SK50 ISO 7388-1



Ident. No. 361  
Ref. no. 21555361-362 HSK-A63 DIN 69893-1

Tool holding device	SK 40	SK 40	SK 50	SK 50	HSK A63	HSK A63	
Used sizes	1	2	1	2	1	2	
Outer Ø D (mm)	43	60	43	60	43	60	
ISO	7388-1	7388-1	7388-1	7388-1	-	-	
Suitable for thread	M3-M12	M6-M20	M3-M12	M3-M20	M3-M12	M6-M20	
DIN	-	-	-	-	69893-1 A	69893-1 A	
Collet type	ER 16	ER 25	ER 16	ER 25	ER 16	ER 25	
Form	AD	AD	AD	AD	A	A	
Insert Ø d (mm)	20	32	20	32	20	32	
Projection length A (mm)	53	90	53	74	64	97	
Pressure length compensation (mm)	0.2	0.2	0.2	0.2	0.2	0.2	
Tension length compensation (mm)	1	1	1	1	1	1	
21555...	Ident. No. Unit price, €	<b>341</b> O. R.	<b>342</b> O. R.	<b>351</b> O. R.	<b>352</b> (O. R.)	<b>361</b> O. R.	<b>362</b> O. R.

Prod. group 225

## ATORN® Synchronous tapping chucks with straight shank

For machine tools with synchronous control



### Application:

For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

### Execution:

- Pitch errors are compensated for with minimal length compensation of 1.0 mm under tension and 0.2 mm under pressure

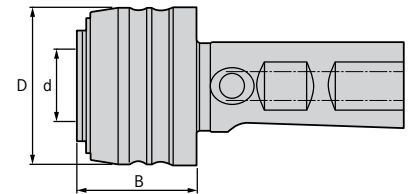
- Clamping screws to secure against rotation of the clamped screw tap

### Advantage:

- Secure clamping in quick-change inserts for ER collet chucks

### Notes:

Collets type ER for thread cutting, no. 21575



Ref. no. 21555361-362 straight shank

Tool holding device	Cylinder shank	Cylinder shank	
Used sizes	1	2	
Adapter Ø d1 (mm)	25	25	
Suitable for thread	M3-M12	M6-M20	
Pressure length compensation (mm)	0.2	0.2	
Tension length compensation (mm)	1	1	
Shaft Ø (mm)	25	25	
Projection length A (mm)	34	56	
Outer Ø D (mm)	43	60	
Insert Ø (mm)	20	32	
21555...	Ident. No. Unit price, €	<b>371</b> O. R.	<b>372</b> O. R.

Prod. group 225

## ATORN® Quick-change insert, 1-part

Accessories for synchronous tapping chuck no. 21555

### Application:

For holding type ER screw tap collets, no. 21575.

### Notes:

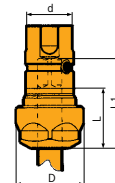
Ref. no. 316/516 with hexagon nut

Used sizes	1	2	
Collet type	ER 16	ER 25	
Min./max. clamping range	2-10 mm	2-16 mm	
Suitable for thread	M3-M12	M6-M20	
Clamp in depth off screw tap (mm)	37	52	
Projection length L (mm)	24	28	
Outer Ø D (mm)	28	42	
Insert Ø d (mm)	20	32	
21556...	Ident. No. Unit price, €	<b>316</b> O. R.	<b>325</b> O. R.

Prod. group 225



Ref. no. 316-325 quick-change inserts, one-piece



**ATORN® Quick-change insert, 2-part**  
Accessories for synchronous tapping chuck no. 21555

**Application:** For holding type ER screw tap collets, no. 21575.  
**Notes:** Ref. no. 316/516 with hexagon nut



Ref. no. 516-525 quick-change inserts, two-piece

Used sizes	Collet type	Min./max. clamping range	Suitable for thread	Clamp in depth off screw tap (mm)	Projection length L (mm)	Outer Ø D (mm)	Insert Ø d (mm)	21556... ID no.	
1	ER 16	2-10 mm	M3-M12	37	55	28	20	516	O. R.
2	ER 25	2-16 mm	M6-M20	52	86	42	32	525	O. R.
								Unit price, €	

Prod. group 225

**ATORN® Combined shell end mill arbours**

ISO 7388-1



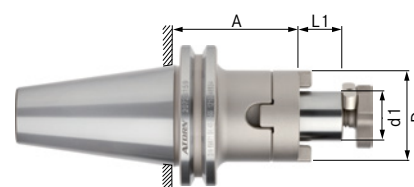
**Application:** For holding shell end mills and single angle milling cutters with longitudinal groove in accordance with DIN 842.

**Execution:**

- Surface nickel-plated to protect against corrosion and dirt
- Alloyed case-hardening steel with tensile strength at core of at least 950 N/mm
- Precision-ground

- Concentricity < 0.005 mm
- With hole for Balluff chip
- Requisite pull studs, no. 23690
- Case-hardened HRC 60 ± 2 (HV 700 ± 50), hardening depth 0.8 ± 0.2 mm

**scope of supply and services:**  
With cutter retaining screw, feather key, and driving ring



Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Version	Short	Short	Short	Short	Short	Medium	Medium	Medium
Form	AD	AD	AD	AD	AD	AD	AD	AD
Arbour Ø d1 (mm)	16	22	27	32	40	16	22	27
Arbour length L1 (mm)	17	19	21	24	27	17	19	21
Projection length A (mm)	55	55	55	60	60	100	100	100
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Outer Ø D (mm)	32	40	48	58	70	32	40	48
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23155... Ident. No.	311	312	313	314	315	321	322	323
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Version	Medium	Medium	Long	Long	Long	Long	Long
Form	AD	AD	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF
Arbour Ø d1 (mm)	32	40	16	22	27	32	40
Arbour length L1 (mm)	24	27	17	19	21	24	27
Projection length A (mm)	100	100	160	160	160	160	160
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Outer Ø D (mm)	58	70	32	40	48	58	70
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23155... Ident. No.	324	325	331	332	333	334	335
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 263

**ATORN® Shell end mill arbour**  
Blade head holder

ISO 7388-1



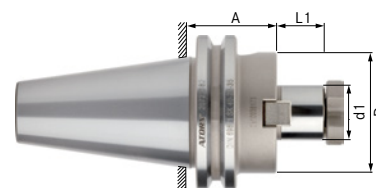
**Application:** With drivers tightly screwed down and diameter of locating face increased to hold blade heads and milling cutters with transverse slot, DIN 1880.

**Execution:**

- Alloyed case-hardening steel with tensile strength at core of at least 800 N/mm<sup>2</sup>
- Case-hardened 60 ± 2 HRC (700 ± 50 HV)

- Nickel-plated, corrosion-resistant and dirt-repellent
- With coolant outlet on front for blade heads with inner coolant supply

**scope of supply and services:**  
With cutter retaining screw



Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Version	Short	Short	Short	Short	Short	Long	Long	Long
Arbour Ø d1 (mm)	16	22	27	32	40	22	27	32
Arbour length L1 (mm)	17	19	21	24	27	19	21	24
Outer Ø D (mm)	38	48	58	78	88	48	58	78
Projection length A (mm)	35	35	40	50	50	100	100	100
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23150...</b>	Ident. No. Unit price, €	<b>311</b> O. R.	<b>312</b> O. R.	<b>313</b> O. R.	<b>314</b> O. R.	<b>315</b> O. R.	<b>321</b> O. R.	<b>322</b> O. R.
							<b>323</b> O. R.	

Tool holding device	SK 40
Version	Long
Arbour Ø d1 (mm)	40
Arbour length L1 (mm)	27
Outer Ø D (mm)	88
Projection length A (mm)	100
Coolant supply	Internal axial
Surface	Nickel-plated
Balancing quality	G 2.5 at 25
<b>23150...</b>	Ident. No. Unit price, €
	<b>324</b> O. R.

Prod. group 263

**ORION®** Shell end mill arbour  
Blade head holder

ISO 7388-1



**Application:**

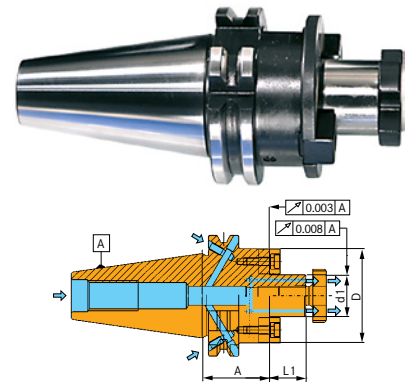
With drivers tightly screwed down and diameter of locating face increased to hold blade heads and milling cutters with transverse slot, DIN 1880.

- Case-hardened 60 ± 2 HRC (700 ± 50 HV)
- With coolant outlet on front for blade heads with inner coolant supply

**Execution:**

- Alloyed case-hardening steel with tensile strength at core of at least 800 N/mm<sup>2</sup>

**scope of supply and services:**  
With cutter retaining screw



Tool holding device	SK 50	SK 50	SK 50	SK 50	SK 50
Version	Short	Short	Short	Short	Short
Arbour Ø d1 (mm)	22	27	32	40	60
Arbour length L1 (mm)	19	21	24	27	40
Outer Ø D (mm)	48	58	78	88	128
Projection length A (mm)	35	40	50	50	70
Coolant supply	Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial
Balancing quality	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
<b>23150...</b>	Ident. No. Unit price, €	<b>631</b> O. R.	<b>632</b> O. R.	<b>633</b> O. R.	<b>634</b> O. R.
					<b>635</b> O. R.

Prod. group 295

**ATORN®** Insert sleeves for Morse taper

ISO 7388-1



**Application:**

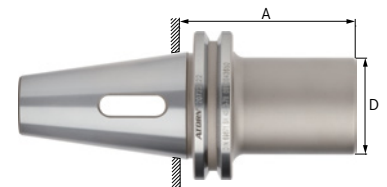
For mounting tools with Morse taper and flat tangs.

- Shank version DIN 69871
- Precision-ground
- Requisite pull studs, no. 23690

**Execution:**

- Case-hardened
- Surface nickel-plated to protect against corrosion and dirt

**Notes:**  
Type ADB on request.



Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Version	Short	Short	Short	Short	Long	Long	Long
Morse taper size	MK 1	MK 2	MK 3	MK 4	MK 2	MK 3	MK 4
Outer Ø D (mm)	25	32	40	48	32	40	48
Form	AD	AD	AD	AD	AD	AD	AD
Projection length A (mm)	50	50	70	95	117	133	156
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23080...</b>	Ident. No. Unit price, €	<b>310</b> O. R.	<b>311</b> O. R.	<b>312</b> O. R.	<b>313</b> O. R.	<b>321</b> O. R.	<b>322</b> O. R.
							<b>323</b> O. R.

Prod. group 263

**ORION®** Insert sleeves for morse taper

ISO 7388-1

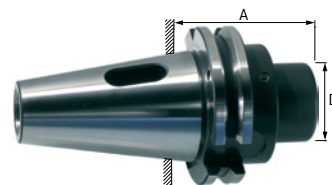


**Application:**  
For mounting tools with morse taper and flat tangs.

- Precision-ground
- Requisite pull studs, no. 23690

**Execution:**  
▪ Case-hardened

**Notes:**  
Bores for type B sealed with set screw on delivery.



Tool holding device		SK 50	SK 50	SK 50	SK 50	SK 50
Version		Short	Short	Short	Short	Short
Morse taper size		MK 1	MK 2	MK 3	MK 4	MK 5
Outer Ø D (mm)		25	32	40	48	63
Form		AD	AD	AD	AD	AD
Projection length A (mm)		45	60	65	95	105
Coolant supply		Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial	Internal axial/internal radial
Concentricity tolerance (mm)		0.008	0.008	0.008	0.008	0.008
Balancing quality		G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
<b>23080...</b>	Ident. No. Unit price, €	<b>630</b> O. R.	<b>631</b> O. R.	<b>632</b> O. R.	<b>633</b> O. R.	<b>634</b> O. R.

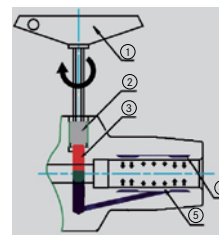
Prod. group 295

Clamping Technology

**i** HYDRO expansion chucks

**Easy tool change in a matter of seconds:**  
Clamping with a HYDRO expansion chuck enables you to clamp and release tools within seconds. Axial length adjustment ensures a high degree of repeatability. Special sealing elements ensure absolute tightness and a high chuck service life. The chamber system filled with hydraulic oil ensures safe and low-vibration clamping. This increases tool service life by a maximum of 4 times. Tools of various diameters can be clamped in a holder by using reducing sleeves.

- Max. rotation speed 40,000 rpm (precision balancing recommended!)
- Optimum temperature of use 20–50°C (higher temperatures on request)
- Axial length adjustment range approx. 10 mm
- Tool clamping damps vibrations due to hydraulic oil-filled chamber system
- **Function:**
- Using the hexagon key ①, the clamping screw ② is screwed in as far as it will go. The pressure pin ③ forces the hydraulic oil into the expansion chamber ④. The pressure thus created causes an even deformation of the expansion sleeve ⑤. The tool shaft is thus clamped precisely, powerfully and centrally.
- **Transferred torques:** (during direct clamping)



**Technical data:**  
▪ Concentricity tolerance < 0.003 mm

Ø	mm	6	8	10	12	14	16	18	20	25	32
Torque	Nm	20	35	45	80	100	130	180	210	350	450

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**ATORN®** High-performance HYDRO expansion chuck DIN 69871 ADB ST  
Short and heavy-duty design

ISO 7388-1

Clamping Technology



**Application:**

For high-precision and centric clamping of milling, drilling and reaming tools – particularly with milling and heavy-duty machining during rough machining.

**Execution:**

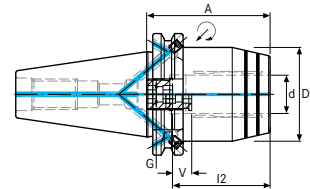
- Shank in accordance with DIN 69871 ADB ST
- Concentricity tolerance <math>< 0.003\text{ mm}</math>
- With axial longitudinal adjustment
- Flexible thanks to use of reducing sleeves
- Very high concentricity (<math>< 3\text{ }\mu\text{m}</math>)
- Coolant pressure up to 80 bar

**Advantage:**

- Sturdy version ideal for HPC+HSC metal cutting
- Damping properties to increase duration of tools and service life of machine spindle
- Very high torque transfer ( $\emptyset 20 = 450\text{ Nm}/\emptyset 32 = 890\text{ Nm}$ )
- All common shanks can be clamped ( $\emptyset$  tolerance h6)
- Vibration-damping effect reduces micro-cracks and improves the workpiece surface



Ident. No. 032



Tool holding device	SK 40	SK 40
Baulänge	Short-heavy	Short-heavy
Clamping $\emptyset$ d (mm)	20	32
ISO	7388-1	7388-1
Form	AD/AF	AD/AF
Projection length A (mm)	64.5	81
Outer $\emptyset$ D (mm)	49	72
Clamping depth I2 (mm)	51	61
Max. adjustment travel V (mm)	10	10
Coolant supply	Internal axial/internal radial	Internal axial/internal radial
Concentricity tolerance (mm)	0.003	0.003
Suitable for thread G	M16 x 1	M16 x 1
Width across flats	8 mm	8 mm
Balancing quality	G 2.5 at 25	G 2.5 at 25
23338...	Ident. No. 020 Unit price, € O. R.	Ident. No. 032 Unit price, € O. R.

Prod. group 263

**ATORN®** HYDRO expansion chuck DIN 69871 AD/B  
Ultra-short as well as short heavy-duty design

ISO 7388-1



**Application:**

For high precision centric clamping of drilling, ream- ing and milling tools.

**Execution:**

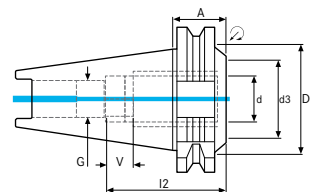
- Concentricity tolerance <math>< 0.003\text{ mm}</math>
- With axial longitudinal adjustment
- Flexible thanks to use of reducing sleeves
- Coolant pressure up to 80 bar

**Advantage:**

- Vibration-damping effect reduces micro-cracks and improves workpiece surfaces
- Damping properties to increase service life of tool and machine spindle
- High torque transfer ( $\emptyset 20 = 400\text{ Nm}/\emptyset 32 = 730\text{ Nm}$ )
- All common shanks can be clamped ( $\emptyset$  tolerance h6)



No. 23338 220



Tool holding device	SK 40	SK 50
Baulänge	Ultra short	Short-heavy
Clamping $\emptyset$ d (mm)	20	32
ISO	7388-1	7388-1
Form	AD/AF	AD/AF
Projection length A (mm)	24.5	81
Outer $\emptyset$ D (mm)	34	72
Clamping depth I2 (mm)	51	61
Max. adjustment travel V (mm)	10	10
Coolant supply	Internal axial/internal radial	Internal axial/internal radial
Concentricity tolerance (mm)	0.003	0.003
Suitable for thread G	M16 x 1	M16 x 1
Width across flats	8 mm	8 mm
Balancing quality	G 2.5 at 25	G 2.5 at 25
23338...	Ident. No. 220 Unit price, € O. R.	Ident. No. 222 Unit price, € O. R.

Prod. group 263

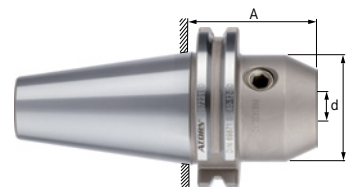
**ATORN®** Weldon surface chucks

ISO 7388-1



**Application:**  
For clamping tools with straight shank and clamping surface in accordance with DIN 1835 B.

**Advantage:**  
▪ Prevents rotation of tool while maintaining high concentricity



- Execution:**
- Case-hardened
  - Precision-ground
  - Nickel-plated (corrosion-resistant and dirt-repellent)

**scope of supply and services:**  
With clamping screw(s)

Tool holding device	Overall length	Clamping Ø d (mm)	Projection length A (mm)	Outer Ø D (mm)	ISO	Coolant supply	Surface	Form	Balancing quality	23330... ID no.
SK 40	Ultra short	16	35	45	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	305 O. R.
SK 40	Ultra short	20	35	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	307 O. R.
SK 40	Ultra short	25	35	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	308 O. R.
SK 40	Short	6	50	25	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	310 O. R.
SK 40	Short	8	50	28	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	311 O. R.
SK 40	Short	10	50	35	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	312 O. R.
SK 40	Short	12	50	42	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	313 O. R.
SK 40	Short	14	50	44	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	314 O. R.
SK 40	Short	16	63	48	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	315 O. R.
SK 40	Short	18	63	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	316 O. R.
SK 40	Short	20	63	52	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	317 O. R.
SK 40	Short	32	65	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	309 O. R.
SK 40	Medium	6	100	25	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	320 O. R.
SK 40	Medium	8	100	28	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	321 O. R.
SK 40	Medium	10	100	35	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	322 O. R.
SK 40	Medium	12	100	42	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	323 O. R.
SK 40	Medium	14	100	44	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	324 O. R.
SK 40	Medium	16	100	48	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	325 O. R.
SK 40	Medium	18	100	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	326 O. R.
SK 40	Medium	20	100	52	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	327 O. R.
SK 40	Medium	40	120	80	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	340 O. R.
SK 40	Medium	25	100	65	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	318 O. R.
SK 40	Medium	32	100	72	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	319 O. R.
SK 40	Long	6	160	25	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	330 O. R.
SK 40	Long	8	160	28	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	331 O. R.
SK 40	Long	10	160	35	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	332 O. R.
SK 40	Long	12	160	42	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	333 O. R.
SK 40	Long	14	160	44	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	334 O. R.
SK 40	Long	16	160	48	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	335 O. R.
SK 40	Long	18	160	50	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	336 O. R.
SK 40	Long	20	160	52	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	337 O. R.
SK 40	Long	25	160	65	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	338 O. R.
SK 40	Long	32	160	72	7388-1	Internal axial	Nickel-plated	AD	G 2.5 at 25	339 O. R.

Prod. group 263

Unit price, €

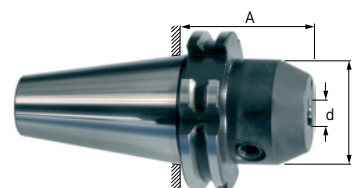
**ORION®** Weldon surface chucks  
With cooling channel along the location hole

ISO 7388-1



**Application:**  
For holding tools with straight shank and lateral clamping surface in accordance with DIN 1835 B (Weldon).

- Taper and tool chuck polished
- Requisite pull studs, no. 23690



- Execution:**
- Case-hardened

**Advantage:**  
▪ Prevents rotation of tool while maintaining high concentricity

Tool holding device	SK 50	SK 50	SK 50	SK 50	SK 50	SK 50
Overall length	Short	Short	Short	Short	Short	Short
Clamping Ø d (mm)	8	10	12	16	20	25
Projection length A (mm)	63	63	63	63	63	80
Outer Ø D (mm)	28	35	42	48	52	65
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF
Balancing quality	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
23330... Ident. No.	931	932	933	934	935	936
Unit price, €	(O. R.)	(O. R.)	O. R.	O. R.	O. R.	(O. R.)

Prod. group 295

Clamping Technology

**ORION®** Milling chuck type OZ

ISO 7388-1

Clamping Technology



**Application:**  
For clamping drill bits on the countersink using type OZ collets.

- Execution:**
- Case-hardened HRC 60-2 (HV 700-50), hardness depth 0.8 mm ± 0.2 mm
  - For collets DIN ISO 10897 (new standard)/DIN 6388 (old standard)
  - With installed and adjustable longitudinal stop screw
  - Burnished

- Collets, OT type, no. 23291 and 23293

**Advantage:**

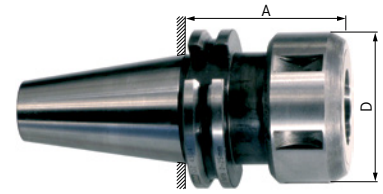
- Type OZ has particularly high torque transfer

**scope of supply and services:**

Milling chuck with clamping nut and longitudinal stop screw.

**Notes:**

Hook wrench no. 52100



DIN 69871 A

Tool holding device		SK 40	SK 40	SK 40
Collet type		OZ	OZ	OZ
ISO		7388-1	7388-1	7388-1
Form		AD	AD	AD
Min./max. clamping range		2-16 mm	2-25 mm	3-32 mm
Outer Ø D (mm)		43	60	72
Projection length A (mm)		70	70	90
Coolant supply		Yes	Yes	Yes
Concentricity tolerance (mm)		0.030	0.030	0.030
Balancing quality		G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
<b>23295...</b>	Ident. No.	<b>610</b>	<b>612</b>	<b>613</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 295

**ATORN®** Collet type ER

ISO 7388-1



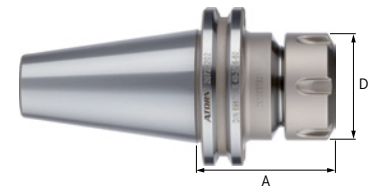
**Application:**  
For clamping tools with straight shank.

- Execution:**
- Alloyed case-hardening steel with tensile strength at core of at least 950 N/mm
  - Surface nickel-plated to protect against corrosion and dirt
  - Precision-ground

- Collet no. 23320
- Requisite pull studs, no. 23690
- Suitable ring profile key in standard design for ER 16 no. 23308 216

**scope of supply and services:**

With clamping nut



Tool holding device		SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Collet type		ER 16	ER 25	ER 32	ER 40	ER 16	ER 25	ER 32	ER 40
ISO		7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1
Form		AD	AD	AD	AD	AD	AD	AD	AD
Min./max. clamping range		1-10 mm	2-16 mm	2-20 mm	3-26 mm	1-10 mm	2-16 mm	2-20 mm	3-26 mm
Outer Ø D (mm)		32	42	50	63	32	42	50	63
Projection length A (mm)		63	60	70	80	100	100	100	100
Coolant supply		Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Concentricity tolerance (mm)		0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Surface		Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Balancing quality		G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23300...</b>	Ident. No.	<b>311</b>	<b>313</b>	<b>314</b>	<b>315</b>	<b>321</b>	<b>323</b>	<b>324</b>	<b>326</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Tool holding device		SK 40	SK 40	SK 40	SK 40
Collet type		ER 16	ER 25	ER 32	ER 40
ISO		7388-1	7388-1	7388-1	7388-1
Form		AD	AD	AD	AD
Min./max. clamping range		1-10 mm	2-16 mm	2-20 mm	3-26 mm
Outer Ø D (mm)		32	42	50	63
Projection length A (mm)		160	160	160	160
Coolant supply		Internal axial	Internal axial	Internal axial	Internal axial
Concentricity tolerance (mm)		0.010	0.010	0.010	0.010
Surface		Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Balancing quality		G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23300...</b>	Ident. No.	<b>331</b>	<b>333</b>	<b>334</b>	<b>335</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 263

**diebold** Collet type ER

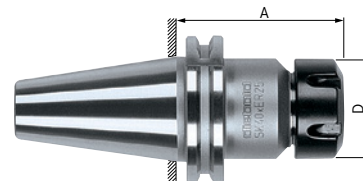
ISO 7388-1



**Application:**  
For clamping tools with straight shank.

- Execution:**
- Alloyed case-hardening steel with tensile strength at core of at least 800 N/mm
  - External and internal cone polished
  - With adjustable longitudinal stop

- Requisite pull studs, no. 23690
- Advantage:**
- For pulling out collets from the chuck using the extraction groove
- scope of supply and services:**  
With clamping nut



DIN 69871 A

Tool holding device	SK 30	SK 30	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
Collet type	ER 32	ER 40	ER 32	ER 40	ER 16	ER 16	ER 20	ER 20
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1
Form	AD	AD	AD	AD	AD	AD	AD	AD
Min./max. clamping range	2-20 mm	3-26 mm	2-20 mm	3-26 mm	0.5-10 mm	0.5-10 mm	1-13 mm	1-13 mm
Outer Ø D (mm)	50	63	50	63	28	28	34	34
Projection length A (mm)	71	80	71	71	71	120	71	120
Coolant supply	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Concentricity tolerance (mm)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Balancing quality	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15	G 2.5 at 15
23300... Ident. No. Unit price, €	500 O. R.	501 (O. R.)	510 O. R.	511 O. R.	512 O. R.	513 (O. R.)	514 O. R.	515 (O. R.)

Tool holding device	SK 40	SK 40
Collet type	ER 25	ER 25
ISO	7388-1	7388-1
Form	AD	AD
Min./max. clamping range	1-16 mm	1-16 mm
Outer Ø D (mm)	42	42
Projection length A (mm)	71	120
Coolant supply	Yes	Yes
Concentricity tolerance (mm)	0.005	0.005
Balancing quality	G 2.5 at 15	G 2.5 at 15
23300... Ident. No. Unit price, €	516 O. R.	517 O. R.

Prod. group 2AB

**ATORN** Precision collet

ISO 7388-1



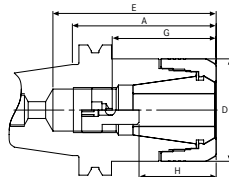
**Application:**  
For clamping tools with straight shanks without loss of concentricity or clamping force up to shank tolerance h10, for economic machining of individual and series parts with extremely high-precision machining results. Ideal for HPC and HSC metal cutting.

- Execution:**
- 30° trapezoidal thread with polished, extra-long double guide with special easy glide coating for lower friction
  - Clamping forces are evenly distributed across the entire cylindrical shell surface and perfect

- surfaces are achieved through the optimally absorbed radial forces
- Precise centring when tightening the clamping nut
- Advantage:**
- Resistant to fluctuations in temperature and fully suitable for drying processes and hard milling up to 200 °C
  - The strengthening of the chuck body over the diameter of the clamping nut creates enormous stability with the optimum interference contour

- Extremely low system concentricity of < 3 µm with 2 µm collets from Fahrion, HP/HPD 23323, unsealed and sealed collets up to 80 bar for IC (without sealing disc)
- Completely surrounded in the chuck cone for optimum stability and even distribution of the clamping forces
- Retention forces are doubled compared to conventional collets

**scope of supply and services:**  
Tool holder including chuck. Please order spanner separately. A torque wrench is recommended



Clamping Technology

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	
Size	HPE 16	HPE 16	HPE 16	HPE 16	HPE 25	HPE 25	HPE 25	HPE 25	
Collet type	ER 16/426E	ER 16/426E	ER 16/426E	ER 16/426E	ER 25/430E	ER 25/430E	ER 25/430E	ER 25/430E	
Min./max. clamping range	1-10 mm	1-10 mm	1-10 mm	1-10 mm	2-16 mm	2-16 mm	2-16 mm	2-16 mm	
Outer Ø D (mm)	30	30	30	30	40	40	40	40	
Projection length A (mm)	70	100	160	200	70	100	160	200	
Insertion depth E (mm)	110	140	200	240	110	113	165	-	
Tightening torque (Nm)	55	55	55	55	85	85	85	85	
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
23361...	Ident. No. Unit price, €	<b>001</b> O. R.	<b>002</b> O. R.	<b>003</b> (O. R.)	<b>004</b> (O. R.)	<b>005</b> O. R.	<b>006</b> O. R.	<b>007</b> (O. R.)	<b>008</b> (O. R.)

Tool holding device	SK 40	SK 40	SK 40	
Size	HPE 32	HPE 32	HPE 32	
Collet type	ER 32/470E	ER 32/470E	ER 32/470E	
Min./max. clamping range	2-20 mm	2-20 mm	2-20 mm	
Outer Ø D (mm)	50	50	50	
Projection length A (mm)	70	100	160	
Insertion depth E (mm)	111	114	135	
Tightening torque (Nm)	140	140	140	
Coolant supply	Internal axial	Internal axial	Internal axial	
Concentricity tolerance (mm)	0.003	0.003	0.003	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
23361...	Ident. No. Unit price, €	<b>009</b> O. R.	<b>010</b> O. R.	<b>011</b> O. R.

Prod. group 263

## ALBRECHT Precision chuck APC

Präzisions Spannfutter

For maximum clamping force and stability and extremely small concentricity tolerance

ISO 7388-1



### Application:

For clamping straight shanks in accordance with DIN 1835 A, B (Weldon) and DIN 6535 type HA, HB and HE up to diameter 20 mm and shank tolerance h6. For milling, drilling, reaming and thread cutting. Can be used for smoothing, heavy-duty machining, HSC and hard machining.

### Execution:

- For maximum clamping force and stability and extremely small concentricity tolerance
- Clamping sleeve with adjustable longitudinal stop
- Tool clamping only in conjunction with coated clamping sleeve (see no. 23332)
- Torque wrench item no. 52223 012 with presetting of 12 Nm

### Advantage:

- Precise and fast tool change on the side using the hexagon key
- More safety when machining thanks to remarkably high retaining torque > 200 Nm (with shank diameter of 12 mm)

### Notes:

Higher rotation speeds on request. Very small concentricity tolerance ≤ 0.003 mm (at 2.5 x D). The tool is clamped in connection with a coated clamping sleeve (see no. 23332) and adjustable longitudinal stop in the clamping sleeve.



Tool holding device	SK 40	
Overall length	Standard	
Model	APC 25	
Min./max. clamping range d	16-32 mm	
Outer Ø D (mm)	63	
Projection length A (mm)	102	
Free length to collar L3 (mm)	83	
Concentricity tolerance (mm)	0.003	
Coolant supply	Internal axial	
Balancing quality	G 2.5 at 20	
23334...	Ident. No. Unit price, €	<b>021</b> (O. R.)

Prod. group 209

<b>Accessories for</b>		<b>23334 021</b>	
<b>23732...</b>	Key for APC precision chucks	Ident. No. Unit price, €	<b>100</b> <b>O. R.</b>

**ATORN®** Shrink-fit chuck ST40  
DIN 69871 coolant supply AD/B

ISO 7388-1



**Application:**

For clamping milling tools and drill bits with straight shank, tolerance h6. Suitable for shrinking on inductive contact and hot air devices.

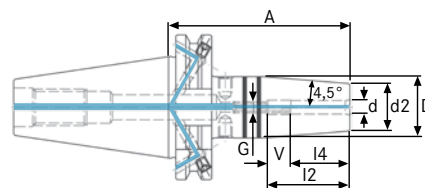
**Execution:**

- Guarantees maximum concentricity < 0.003 mm
- Heat-resistant and high-temperature tool steel 1,600-1,800 N/mm
- Hardness 52 + 2 HRC
- Maximum coolant pressure 80 bar
- Adjustment travel 10 mm, can be adjusted on both sides

- For shrinking and reverse shrinking of cemented carbide and HSS tools
- 4 additional holes for fine balancing
- Hole for Balluff chip

**Advantage:**

- High positioning and repeat accuracy
- Shrink-fit chuck ideal for high rotation speeds
- Slim design, low interference contour
- Very high torque transfer
- Extremely cost-effective



Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	
Clamping Ø d (mm)	3	4	5	6	8	10	12	14	
Tapered Ø d2 (mm)	10	15	15	21	21	24	24	27	
Outer Ø D (mm)	17	22	22	27	27	32	32	34	
Projection length A (mm)	80	80	80	80	80	80	80	80	
Clamping depth L2 (mm)	22	26	30	36	36	41	47	47	
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	
Suitable for thread G	M6	M6	M6	M5	M6	M8 x 1	M10 x 1	M10 x 1	
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23424...</b>	Ident. No. Unit price, €	<b>003</b> O. R.	<b>004</b> O. R.	<b>005</b> O. R.	<b>006</b> O. R.	<b>008</b> O. R.	<b>010</b> O. R.	<b>012</b> O. R.	<b>014</b> O. R.

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	
Clamping Ø d (mm)	16	18	20	25	32	3	4	5	
Tapered Ø d2 (mm)	27	33	33	44	44	10	15	15	
Outer Ø D (mm)	34	42	42	53	53	20	22	22	
Projection length A (mm)	80	80	80	100	100	120	120	120	
Clamping depth L2 (mm)	50	50	52	58	62	-	-	-	
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	
Suitable for thread G	M12 x 1	M12 x 1	M16 x 1	M16 x 1	M16 x 1	-	-	-	
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23424...</b>	Ident. No. Unit price, €	<b>016</b> O. R.	<b>018</b> O. R.	<b>020</b> O. R.	<b>025</b> O. R.	<b>032</b> (O. R.)	<b>103</b> (O. R.)	<b>104</b> (O. R.)	<b>105</b> (O. R.)

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	
Clamping Ø d (mm)	6	8	10	12	14	16	18	20	
Tapered Ø d2 (mm)	21	21	24	24	27	27	33	33	
Outer Ø D (mm)	27	27	32	32	34	34	42	42	
Projection length A (mm)	120	120	120	120	120	120	120	120	
Clamping depth L2 (mm)	36	36	41	47	47	50	50	52	
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	
Suitable for thread G	M5	M6	M8 x 1	M10 x 1	M10 x 1	M12 x 1	M12 x 1	M16 x 1	
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23424...</b>	Ident. No. Unit price, €	<b>106</b> O. R.	<b>108</b> O. R.	<b>110</b> O. R.	<b>112</b> O. R.	<b>114</b> O. R.	<b>116</b> O. R.	<b>118</b> O. R.	<b>120</b> O. R.

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	
Clamping Ø d (mm)	25	32	3	4	5	6	8	10	
Tapered Ø d2 (mm)	44	44	10	15	15	21	21	24	
Outer Ø D (mm)	53	53	20	22	22	27	27	32	
Projection length A (mm)	120	120	160	160	160	160	160	160	
Clamping depth L2 (mm)	58	62	-	-	-	36	36	41	
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	
Suitable for thread G	M16 x 1	M16 x 1	-	-	-	M5	M6	M8 x 1	
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23424...</b>	Ident. No. Unit price, €	<b>125</b> O. R.	<b>132</b> (O. R.)	<b>203</b> (O. R.)	<b>204</b> (O. R.)	<b>205</b> (O. R.)	<b>206</b> O. R.	<b>208</b> O. R.	<b>210</b> O. R.

Clamping Technology

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1
Clamping Ø d (mm)	12	14	16	18	20	25	32	3
Tapered Ø d2 (mm)	24	27	27	33	33	44	44	10
Outer Ø D (mm)	32	34	34	42	42	53	53	20
Projection length A (mm)	160	160	160	160	160	160	160	200
Clamping depth L2 (mm)	47	47	50	50	52	58	62	-
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF
Suitable for thread G	M10 x 1	M10 x 1	M12 x 1	M12 x 1	M16 x 1	M16 x 1	M16 x 1	-
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23424... Ident. No.	<b>212</b>	<b>214</b>	<b>216</b>	<b>218</b>	<b>220</b>	<b>225</b>	<b>232</b>	<b>303</b>
Unit price, €	O. R.	(O. R.)	O. R.	(O. R.)	O. R.	O. R.	(O. R.)	(O. R.)

Tool holding device	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40	SK 40
ISO	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1	7388-1
Clamping Ø d (mm)	4	5	6	8	10	12	14	16
Tapered Ø d2 (mm)	15	15	21	21	24	24	27	27
Outer Ø D (mm)	22	22	27	27	32	32	34	34
Projection length A (mm)	200	200	200	200	200	200	200	200
Clamping depth L2 (mm)	-	-	36	36	41	47	47	50
Form	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF	AD/AF
Suitable for thread G	-	-	M5	M6	M8 x 1	M10 x 1	M10 x 1	M12 x 1
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23424... Ident. No.	<b>304</b>	<b>305</b>	<b>306</b>	<b>308</b>	<b>310</b>	<b>312</b>	<b>314</b>	<b>316</b>
Unit price, €	(O. R.)	(O. R.)	O. R.	O. R.	O. R.	O. R.	(O. R.)	O. R.

Tool holding device	SK 40	SK 40	SK 40	SK 40
ISO	7388-1	7388-1	7388-1	7388-1
Clamping Ø d (mm)	18	20	25	32
Tapered Ø d2 (mm)	33	33	44	44
Outer Ø D (mm)	42	42	53	53
Projection length A (mm)	200	200	200	200
Clamping depth L2 (mm)	50	52	58	62
Form	AD/AF	AD/AF	AD/AF	AD/AF
Suitable for thread G	M12 x 1	M16 x 1	M16 x 1	M16 x 1
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23424... Ident. No.	<b>318</b>	<b>320</b>	<b>325</b>	<b>332</b>
Unit price, €	(O. R.)	O. R.	O. R.	(O. R.)

Prod. group 287

**ATORN® CNC precision short drill chuck**  
With worm gear

ISO 7388-1



**Application:**  
For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

- Remains securely clamped even with sudden spindle stop

**scope of supply and services:**  
Including hexagon key

**Execution:**  
Wear parts hardened and polished

**Notes:**  
Requisite pull studs, no. 23690

**Advantage:**  
High concentricity



Ident. No. 510  
ATORN CNC precision short drill chuck with worm gear transmission

Tool holding device	Min./max. clamping width	Projection length A (mm)	Outer Ø D (mm)	Concentricity tolerance (mm)	Coolant supply	Balancing quality	21329... ID no.
SK 40	1-16 mm	80	50	0.030	Internal axial	G 40 at 7	<b>510 O. R.</b>
SK 50	1-16 mm	80	50	0.030	Internal axial	G 40 at 7	<b>530 O. R.</b>
							Unit price, €

Prod. group 208

**ATORN®** CNC precision short drill chuck  
With spur gear

ISO 7388-1



**Application:**

For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

**Advantage:**

- Remains securely clamped even with sudden spindle stop

**scope of supply and services:**

Including hexagon key

**Execution:**

- Wear parts hardened and polished

**Notes:**

Requisite pull studs, no. 23690

Tool holding device	Min./max. clamping width	Projection length A (mm)	Outer Ø D (mm)	Concentricity tolerance (mm)	Coolant supply	Balancing quality	21329... ID no.
SK 40	0.5-16 mm	90	50	0.020	Internal axial	G 6,3 at 25000	540 O. R.
							Unit price, €

Prod. group 208

**ALBRECHT** Precision short drill chuck AKL  
for clockwise and anti-clockwise rotation

ISO 7388-1



**Application:**

For use on machining centres and CNC machines with tool changer.

- Concentricity tolerance  $\leq 0.03$  mm over entire clamping range
- With worm gear

**scope of supply and services:**

With hexagon key

**Execution:**

- 100% concentricity check using different test pin diameters at various measuring points, based on DIN ISO 10888

**Advantage:**

- Safe, as opening of the chuck during operation or on sudden spindle stop is not possible
- Integrated worm gear ensures high retaining torque  $> 75$  Nm with 13 mm diameter

**Notes:**

For simple and positive-lock clamping of solid carbide drill bits and HSS drill bits, fully hardened shank, drill chucks and diamond-coated clamping jaws also available.

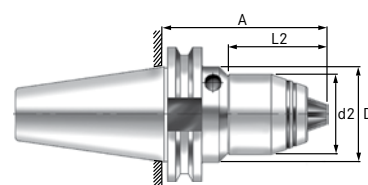
**Ultra type available on request:** Concentricity tolerance  $\leq 0.015$  mm over entire clamping range.



Ident. No. 540



Ident. No. 545-550

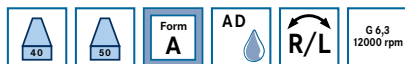


Tool holding device	Min./max. clamping width	Projection length A (mm)	Outer Ø D (mm)	Tapered Ø d2 (mm)	Free length L2 (mm)	Concentricity tolerance (mm)	Coolant supply	Balancing quality	23050... ID no.
SK 30	0.5-10 mm	69	45	38	37.5	0.030	Internal axial	G 40 at 7	530 O. R.
SK 40	0.5-10 mm	69	45	38	37.5	0.030	Internal axial	G 40 at 7	540 O. R.
SK 40	1-16 mm	80	50	-	-	0.030	Internal axial	G 40 at 7	545 O. R.
SK 50	1-16 mm	80	50	-	-	0.030	Internal axial	G 40 at 7	550 O. R.
									Unit price, €

Prod. group 209

**CNC short drill chuck**  
with clamping force amplifier

ISO 7388-1

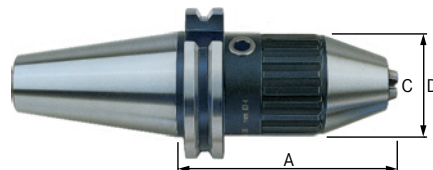


**Application:**

For use on machining centres and CNC milling machines with tool change.

**Advantage:**

- Accident-proof as opening of the chuck during operation or on a sudden spindle stop is not possible



**Execution:**

- Short version
- Precision design
- Easy tool change using hexagon T-handle wrench
- Ident. No. 512-513:** Requisite pull studs, no. 23690

**Notes:**

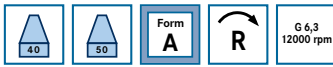
Drill chuck with shank according to DIN 69871 B, with internal coolant supply, on request.

Tool holding device	Min./max. clamping width	Projection length A (mm)	Outer Ø D (mm)	Concentricity tolerance (mm)	Coolant supply	Balancing quality	21318... ID no.
SK 40	1-13 mm	87.5	43	0.040	No	G 6.3 at 12	512 O. R.
SK 40	2.5-16 mm	104.5	56	0.040	No	G 6.3 at 12	513 O. R.
SK 50	1-13 mm	87.5	43	0.040	No	G 6.3 at 12	532 (O. R.)
SK 50	2.5-16 mm	106.5	56	0.040	No	G 6.3 at 12	533 (O. R.)
							Unit price, €

Prod. group 208



**ORION®** Short drill chuck  
Self-clamping



**Application:**  
For drilling and centring tools.

**Execution:**

- Precision design
- Clamping force increases automatically and proportionally to the torque

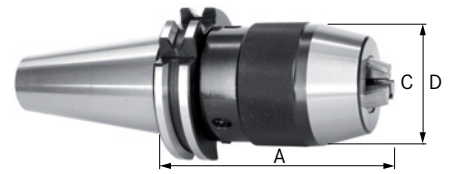
**Advantage:**

- Quick clamping via clamping sleeve, with two clamping surfaces for doubling the clamping force with a spanner

- In the event of a sudden spindle stop, the cutting tool cannot work loose

**scope of supply and services:**  
With special key

**Notes:**  
Requisite pull studs, no. 23690.



Tool holding device	Min./max. clamping width	Projection length A (mm)	Outer Ø D (mm)	Coolant supply	Balancing quality	23050... ID no.
SK 40	1-13 mm	86	50	No	G 6.3 at 12	740 O. R.
SK 40	2.5-16 mm	110	57	No	G 6.3 at 12	745 O. R.
SK 50	3-16 mm	90	57	No	G 6.3 at 12	750 O. R.
						Unit price, €

Prod. group 295

**ORION®** Combined shell end mill arbours



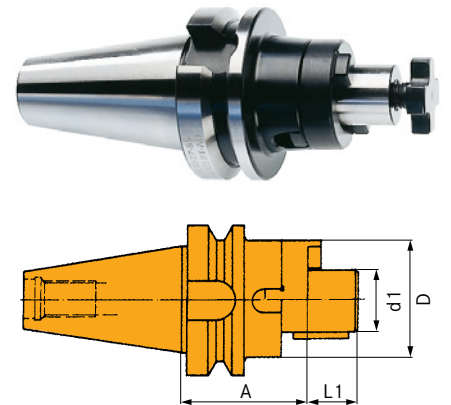
**Application:**  
For holding shell end mills and single angle milling cutters with longitudinal groove in accordance with DIN 842.

**Execution:**

- Alloyed case-hardening steel with tensile strength at core of at least 800 N/mm
- With AD/B coolant outlet on the front

- Precision-ground
- Concentricity < 0.005 mm
- Burnished
- With hole for Balluff chip
- Requisite pull studs, no. 23690

**scope of supply and services:**  
Cutter retaining screw, feather key, and driving ring.



Tool holding device	BT 40	BT 40	BT 40	BT 40	BT 40
Version	Short	Short	Short	Short	Short
Arbour Ø d1 (mm)	16	22	27	32	40
Arbour length L1 (mm)	17	19	21	24	27
Projection length A (mm)	55	55	55	60	60
Outer Ø D (mm)	32	40	48	58	70
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
23155... Ident. No.	711	712	713	714	715
Unit price, €	(O. R.)	(O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 295

**ORION®** Surface chucks (Weldon)

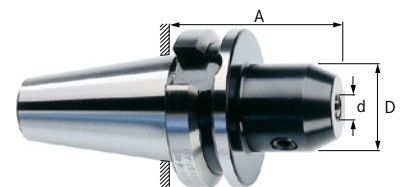


**Application:**  
For clamping tools with straight shank and clamping surface in accordance with DIN 1835 B.

**Execution:**

- Case-hardened
- Shank design, Japanese standard, JIS B 6339 (MAS 403 BT), centric inner cooling.

- Nickel-plated (corrosion-resistant and dirt-repellent)
- Prevents rotation of tool while maintaining high concentricity
- Requisite pull studs, no. 23690



Tool holding device	BT 40	BT 40	BT 40	BT 40	BT 40	BT 40	BT 40	BT 40
ISO	7388-2	7388-2	7388-2	7388-2	7388-2	7388-2	7388-2	7388-2
Form	JD/JF	JD/JF	JD/JF	JD/JF	JD/JF	JD/JF	JD/JF	JD/JF
Version	Short	Short	Short	Short	Short	Short	Short	Short
Clamping Ø d (mm)	6	8	10	12	16	20	25	32
Projection length A (mm)	50	50	63	63	63	63	90	100
Outer Ø D (mm)	25	28	35	42	48	52	63	72
Coolant supply	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial	Internal axial/ internal radial
Balancing quality	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15	G 6.3 at 15
<b>23330...</b>	Ident. No. Unit price, €	<b>710</b> O. R.	<b>711</b> (O. R.)	<b>712</b> (O. R.)	<b>713</b> (O. R.)	<b>714</b> (O. R.)	<b>715</b> (O. R.)	<b>716</b> (O. R.)
								<b>717</b> (O. R.)

Prod. group 295

**ATORN®** CNC precision short drill chuck  
for clockwise and anti-clockwise rotation

ISO 7388-2



**Application:**

For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

- Requisite pull studs, no. 23690

**Advantage:**

- Wear parts hardened and polished for long service life



**Execution:**

- Integrated worm gear ensures high retaining torque
- Remains securely clamped even with sudden spindle stop

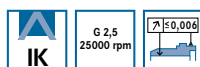
**scope of supply and services:**

Including hexagon key

Tool holding device	Min./max. clamping width	Outer Ø D (mm)	Projection length A (mm)	Concentricity tolerance (mm)	Coolant supply	Balancing quality	<b>21329...</b> ID no.
BT 40	1-16 mm	50	88	0.03	Internal axial	G 40 at 7	<b>710</b> O. R.
							Unit price, €

Prod. group 208

**ATORN®** HYDRO expanding extension  
Flexible adaptation with cylindrical shank



**Application:**

Highly flexible extension for HYDRO expansion and collet. For high precision centric clamping of milling, drilling and reaming tools.

**Advantage:**

- Outstanding damping properties
- Wide clamping range thanks to use of intermediate sleeves
- High torque transfer (Ø 12 = 140 Nm/Ø 20 = 400 Nm/Ø 32 = 730 Nm)
- Very good accessibility thanks to minimal interference contour

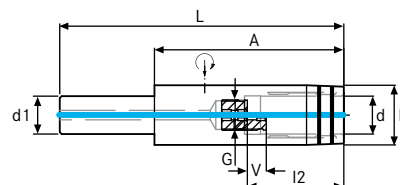


**Execution:**

- Concentricity tolerance ≤ 0.006 mm
- Fast tool change and also axial length adjustment
- Can be clamped with all standard shank diameters (h6)
- Central coolant supply, ICS

**Notes:**

Suitable intermediate bushes, no. 23336.



Clamping Ø d (mm)	12	20	20	20
Shank Ø d1 (mm)	20	20	32	32
Outer Ø D (mm)	25	31.5	31.5	31.5
Length L (mm)	150	150	150	200
Projection length A (mm)	100	100	90	90
Clamping depth l2 (mm)	46	51	51	51
Suitable for thread G	M10 x 1	M16 x 1	M16 x 1	M16 x 1
Width across flats	5 mm	5 mm	5 mm	5 mm
Max. adjustment travel V (mm)	10	10	10	10
Concentricity tolerance (mm)	0.006	0.006	0.006	0.006
Coolant supply	Yes	Yes	Yes	Yes
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23338...</b>	Ident. No. Unit price, €	<b>110</b> O. R.	<b>111</b> O. R.	<b>112</b> (O. R.)
				<b>113</b> O. R.

Prod. group 263

**diebold** Collet extension with internal cooling  
With cylindrical shank, type ER mini



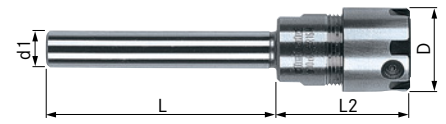
**Application:**  
For clamping tools with straight shank.

- Straight shank made of solid material

**Execution:**

- With straight shank, type ER mini
- Particularly slim design for use in milling chucks as tool extension for deep machining operations where space is restricted

**Notes:**  
Mini ring profile key, no. 23308. Suitable collets, no. 23320.



Collet type		ER 16	ER 16	ER 20
Shank Ø d1 (mm)		10	12	16
Min./max. clamping range		0.5-7 mm	0.5-10 mm	1-13 mm
Outer Ø D (mm)		22	22	28
Shank length L (mm)		60	80	100
Head length L2 (mm)		38	38.5	42.5
23304...	Ident. No.	005	010	020
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 2AB

**diebold** Collet extension with internal cooling  
With cylindrical shank



**Application:**  
For clamping tools with straight shank

- Particularly slim design for use in milling chucks as tool extension for deep machining operations where space is restricted
- Spanner no. 23308 008 and collets 23320

**Execution:**

- With straight shank, type ER standard



Collet type		ER 16	ER 16	ER 16	ER 16	ER 16	ER 20	ER 20	ER 25
Shank Ø d1 (mm)		12	16	16	20	20	20	20	20
Min./max. clamping range		1-10 mm	1-10 mm	1-10 mm	1-10 mm	1-10 mm	1-13 mm	1-13 mm	1-16 mm
Width across flats		25 mm	25 mm	25 mm	25 mm	25 mm	30 mm	30 mm	-
Outer Ø D (mm)		28	28	28	28	28	34	34	42
Shank length L (mm)		80	60	100	50	100	60	100	50
Head length L2 (mm)		36	36	36	30	30	36	36	46
23304...	Ident. No.	130	150	160	162	164	190	200	240
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Collet type		ER 25	ER 25	ER 25
Shank Ø d1 (mm)		20	25	25
Min./max. clamping range		1-16 mm	1-16 mm	1-16 mm
Width across flats		-	-	-
Outer Ø D (mm)		42	42	42
Shank length L (mm)		100	50	100
Head length L2 (mm)		46	46	46
23304...	Ident. No.	250	260	270
	Unit price, €	O. R.	(O. R.)	(O. R.)

Prod. group 2AB

**ALBRECHT** AMC clamping chuck extensions  
With cylindrical shank



**Application:**  
Anywhere where extremely small tools and/or twist drills shall be used in machining zones that are difficult to access.

- Tools are held in the Albrecht APC precision chuck or in standard shrink-fit, hydro-expansion or collet chucks
- Tool clamping only in conjunction with coated clamping sleeve (see no. 23332) and supplied hexagon key
- Straight shank h6

**Execution:**

- With high concentricity for clamping extremely small tools
- Very slim design

**Advantage:**

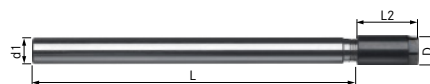
- No special knowledge or devices required when using shrink-fit extensions



Collet type		AMC clamping sleeve	AMC clamping sleeve	AMC clamping sleeve	AMC clamping sleeve
Min./max. clamping range		1-6 mm	1-6 mm	1-6 mm	1-6 mm
Shank Ø d (mm)		14	14	20	20
Length (mm)		100	150	100	150
Coolant supply		Internal axial	Internal axial	Internal axial	Internal axial
23334...	Ident. No.	010	020	030	040
	Unit price, €	(O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 209

**ORION® ERICKSON short chuck system**  
With cylindrical shank



**Application:**  
For use on NC and CNC machining equipment.

- With adjustable longitudinal stop
- Collet no. 23326

**Execution:**

- Min. tensile strength at core 800 N/mm
- Hardened
- Clamping of drill bits on drill heel possible

- Advantage:**
- With straight shank - extremely slim design
  - Very good accessibility in confined spaces

Collet type	DKS	DK 30	DK 30	DK 20	DK 20	DK 10	DK 10	
Shank Ø d1 (mm)	8	12	12	20	20	25	25	
Min./max. clamping width	1-4 mm	1-6.5 mm	1-6.5 mm	1-10 mm	1-10 mm	2.5-14.5 mm	2.5-14.5 mm	
Width across flats	9 mm	13 mm	13 mm	19 mm	19 mm	24 mm	24 mm	
Outer Ø D (mm)	10	14	14	21	21	27	27	
Shank length L (mm)	100	76	140	76	140	76	140	
Head length L2 (mm)	32	36	36	44	44	49	49	
Min. clamp in depth (mm)	20	38	43	41	41	55	55	
Max. clamp in depth (mm)	42	99	105	107	178	107	120	
<b>23325...</b>	Ident. No. Unit price, €	<b>295</b> O. R.	<b>300</b> O. R.	<b>305</b> O. R.	<b>310</b> O. R.	<b>315</b> O. R.	<b>320</b> O. R.	<b>325</b> O. R.

Prod. group 218

Accessories for			<b>23325 295</b>	<b>23325 300</b>	<b>23325 305</b>	<b>23325 310</b>	<b>23325 315</b>	<b>23325 320</b>
<b>23325...</b>	Spare clamping nut for ERICKSON system	Ident. No. Unit price, €	<b>410</b> O. R.	<b>420</b> O. R.	<b>420</b> O. R.	<b>430</b> O. R.	<b>430</b> O. R.	<b>440</b> (O. R.)

Accessories for			<b>23325 325</b>
<b>23325...</b>	Spare clamping nut for ERICKSON system	Ident. No. Unit price, €	<b>440</b> (O. R.)

**ATORN® Universal chuck**  
For clamping micro drill bits and milling tools



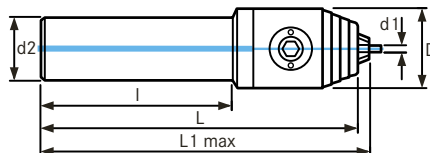
**Application:**  
Extremely flexible extension for HYDRO expansion, shrink-fit and collets. For high precision centric clamping of milling, drilling and reaming tools.

- Chuck with spur gear

**Execution:**

- Speed range up to 60,000 rpm
- Concentricity tolerance < 0.005 mm
- Very wide clamping range

- Advantage:**
- Extremely high retention forces
  - Simple operation from the side
  - Outstanding accessibility thanks to minimal interference contour



Min./max. clamping width	0.20-3.4 mm	0.20-3.4 mm	0.20-3.4 mm	0.20-6.4 mm	0.20-6.4 mm	0.20-6.4 mm	0.20-3.4 mm	0.20-3.4 mm	
Shank Ø d2 (mm)	16	16	16	16	16	16	20	20	
Length l (mm)	50	70	130	110	160	60	72	130	
Outer Ø D (mm)	19	19	19	25	25	25	19	19	
Length L (mm)	80	100	160	150	200	100	100	160	
Max. length L1 (mm)	83	103	163	154	204	104	104	163	
Max. tightening torque (Nm)	2	2	2	4	4	4	2	2	
Torque transmission (Nm)	7	7	7	12	12	12	7	7	
Concentricity tolerance (mm)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23720...</b>	Ident. No. Unit price, €	<b>301</b> (O. R.)	<b>302</b> (O. R.)	<b>303</b> (O. R.)	<b>304</b> (O. R.)	<b>305</b> (O. R.)	<b>306</b> (O. R.)	<b>311</b> O. R.	<b>312</b> (O. R.)

Min./max. clamping width	0.20-3.4 mm	0.20-6.4 mm	0.20-6.4 mm	0.20-6.4 mm	
Shank Ø d2 (mm)	20	20	20	20	
Length l (mm)	52	110	160	60	
Outer Ø D (mm)	19	25	25	25	
Length L (mm)	80	150	200	100	
Max. length L1 (mm)	83	154	204	104	
Max. tightening torque (Nm)	2	4	4	4	
Torque transmission (Nm)	7	12	12	12	
Concentricity tolerance (mm)	0.005	0.005	0.005	0.005	
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23720...</b>	Ident. No. Unit price, €	<b>313</b> (O. R.)	<b>314</b> (O. R.)	<b>315</b> (O. R.)	<b>316</b> O. R.

Prod. group 263



**Hollow shank taper tools**  
For automatic and manual tool change

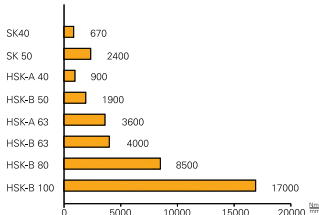
Clamping Technology

The new tool chuck generation HSK-32/40/ 50/63/80/100 types A to F

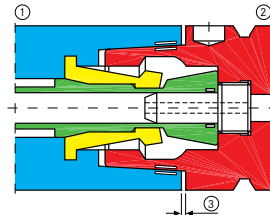
To prepare an offer, we need your spindle size and possible tool chucks.  
**Advantages vis-à-vis steep taper:**

- **High rigidity:** considerably greater bending strength is achieved with the same tool sizes as a result of the support at the collar (flange).
- **Excellent change precision:** the flange attachment facilitates axial positioning precision in the µm range. The form-fit, tight taper tolerance prevents any radial run-out.

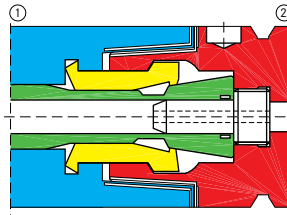
- **Good torque transmission:** the hollow shank taper is held in the receiving spindle so that torque transmission is possible as a result of friction contact. 2 carrier blocks also engage in the slots at the shank end.
- **Ideal for high rotation speeds:** at high rotation speeds the spindle expands due to centrifugal force. This could cause the steep taper to slip in the spindle and jam. This is prevented by the flange. In addition, the clamping elements are pushed outwards by centrifugal force which increases the clamping force.
- **Integrated tool system:** the hollow shank taper was designed for both stationary and rotating tool chucks. This enables the tool holders to be used on milling machines and lathes and as modular tools.



Radial nominal rigidity of various machine tool interfaces



Functional principle of the HSK interface  
Spindle  
Tool  
Free space



Connecting position with locating faces  
Spindle  
Tool



Clamping situation with locating faces

**ATORN® Shell end mill arbours**  
With longitudinal groove to DIN 6357

DIN 69893-1 A

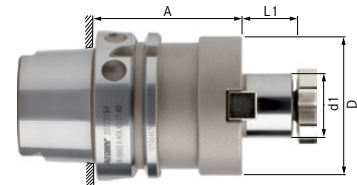


**Application:**  
For holding DIN 841 and 842 shell end mills with transverse groove.

**Execution:**  
▪ With inner channel cooling

- Nickel-plated (corrosion-resistant and dirt-repellent)

**scope of supply and services:**  
With feather key, driving ring and cutter retaining screw



Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Form	A	A	A	A	A	A	A	A
Version	Short	Short	Short	Short	Short	Long	Long	Long
Arbour Ø d1 (mm)	16	22	27	32	40	16	22	27
Arbour length L1 (mm)	17	19	21	24	27	17	19	21
Outer Ø D (mm)	38	48	58	78	88	38	48	58
Projection length A (mm)	50	50	60	60	60	100	100	100
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25							
23744...	Ident. No. 551	Ident. No. 552	Ident. No. 553	Ident. No. 554	Ident. No. 555	Ident. No. 751	Ident. No. 752	Ident. No. 753
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Tool holding device	HSK A63
Form	A
Version	Long
Arbour Ø d1 (mm)	32
Arbour length L1 (mm)	24
Outer Ø D (mm)	78
Projection length A (mm)	100
Surface	Nickel-plated
Coolant supply	Internal axial
Balancing quality	G 2.5 at 25
23744...	Ident. No. 754
	Unit price, € O. R.

Prod. group 263

**ATORN® Combined shell end mill arbour**

DIN 69893-1 A

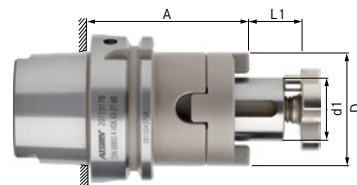


**Application:**  
For holding milling cutters with transverse and longitudinal groove.

**Execution:**  
▪ Case-hardened

- Nickel-plated (corrosion-resistant and dirt-repellent)
- Precision-ground

**scope of supply and services:**  
With feather key, driving ring and cutter retaining screw



Short version

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	
Form	A	A	A	A	A	A	A	A	
Version	Short	Short	Short	Short	Short	Long	Long	Long	
Arbour Ø d1 (mm)	16	22	27	32	40	16	22	27	
Arbour length L1 (mm)	17	19	21	24	27	17	19	21	
Outer Ø D (mm)	32	40	48	58	70	32	40	48	
Projection length A (mm)	60	60	60	60	70	100	100	100	
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
23746...	Ident. No. Unit price, €	551 O. R.	552 O. R.	553 O. R.	554 O. R.	555 O. R.	751 O. R.	752 O. R.	753 O. R.

Tool holding device	HSK A63	HSK A63	
Form	A	A	
Version	Long	Long	
Arbour Ø d1 (mm)	32	40	
Arbour length L1 (mm)	24	27	
Outer Ø D (mm)	58	70	
Projection length A (mm)	100	100	
Surface	Nickel-plated	Nickel-plated	
Coolant supply	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	
23746...	Ident. No. Unit price, €	754 O. R.	755 O. R.

Prod. group 263

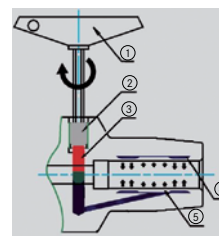
## HYDRO expansion chucks

**Easy tool change in a matter of seconds:**  
Clamping with a HYDRO expansion chuck enables you to clamp and release tools within seconds. Axial length adjustment ensures a high degree of repeatability. Special sealing elements ensure absolute tightness and a high chuck service life. The chamber system filled with hydraulic oil ensures safe and low-vibration clamping. This increases tool service life by a maximum of 4 times. Tools of various diameters can be clamped in a holder by using reducing sleeves.

**Technical data:**

- Concentricity tolerance < 0.003 mm

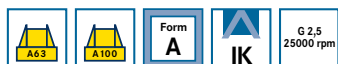
- Max. rotation speed 40,000 rpm (precision balancing recommended!)
- Optimum temperature of use 20–50°C (higher temperatures on request)
- Axial length adjustment range approx. 10 mm
- Tool clamping damps vibrations due to hydraulic oil-filled chamber system
- Function:**
- Using the hexagon key ①, the clamping screw ② is screwed in as far as it will go. The pressure pin ③ forces the hydraulic oil into the expansion chamber ④. The pressure thus created causes an even deformation of the expansion sleeve ⑤. The tool shaft is thus clamped precisely, powerfully and centrally.
- Transferred torques:** (during direct clamping)



Ø	mm	6	8	10	12	14	16	18	20	25	32
Torque	Nm	20	35	45	80	100	130	180	210	350	450

## **ATORN®** High-performance hydro expansion chuck short and heavy-duty design

DIN 69893-1 A



**Application:**

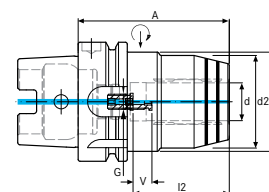
For high precision, centric clamping of milling, drilling and reaming tools – particularly for milling and heavy-duty machining during rough machining.

**Execution:**

- Concentricity tolerance < 0.003 mm
- With axial longitudinal adjustment
- Flexible thanks to use of reducing sleeves
- Coolant pressure up to 80 bar

**Advantage:**

- Damping properties to increase duration of tools and service life of machine spindle
- Very high torque transfer (Ø 20 = 450 Nm/Ø 32 = 890 Nm)
- Vibration-damping effect reduces micro-cracks and improves workpiece surface
- All common shanks can be clamped (Ø tolerance h6)
- Sturdy version ideal for HPC+HSC metal cutting



Tool holding device		HSK A63	HSK A100
Overall length		Short-heavy	Short-heavy
Form		A	A
Clamping Ø d (mm)		20	32
Outer Ø D (mm)		52.5	75
Tapered Ø d2 (mm)		49	70
Projection length A (mm)		80	100
Clamping depth l2 (mm)		51	61
Suitable for thread G		M8 x 1	M8 x 1
Width across flats		3 mm	3 mm
Max. adjustment travel V (mm)		10	10
Coolant supply		Internal axial	Internal axial
Balancing quality		G 2.5 at 25	G 2.5 at 25
23738...	Ident. No. Unit price, €	020 O. R.	032 (O. R.)

Prod. group 263

**ATORN®** High-performance hydro expansion chuck

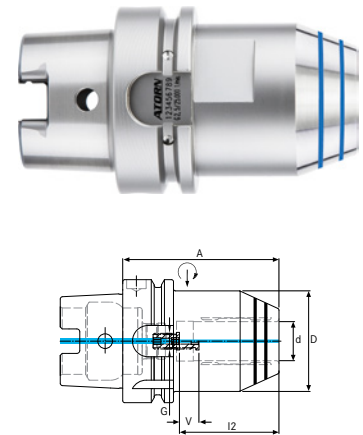
DIN 69893-1 A

Clamping Technology



Tool holding device	HSK A63	
Overall length	Short-heavy	
Form	A	
Clamping Ø d (mm)	20	
Outer Ø D (mm)	52.5	
Projection length A (mm)	80	
Clamping depth I2 (mm)	51	
Suitable for thread G	M8 x 1	
Width across flats	3 mm	
Max. adjustment travel V (mm)	10	
Coolant supply	Internal axial	
Balancing quality	G 2.5 at 25	
<b>23738...</b>	Ident. No.	<b>220</b>
	Unit price, €	O. R.

Prod. group 263



**ATORN®** Weldon surface chucks

DIN 69893-1 A



**Application:**

For holding tools with straight shank and lateral clamping surface in accordance with DIN 1835 B (Weldon).

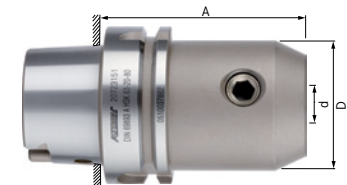
- Nickel-plated (corrosion-resistant and dirt-repellent)
- Coolant transfer pipe no. 23715 required for ICS

**Execution:**

- Case-hardened
- Prevents rotation of tool while maintaining high concentricity

**scope of supply and services:**

With clamping screw(s)



Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Version	Short	Short	Short	Short	Short	Short	Short	Short
Clamping Ø d (mm)	6	8	10	12	14	16	18	20
Projection length A (mm)	65	65	65	80	80	80	80	80
Outer Ø D (mm)	25	28	35	42	44	48	50	52
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23730...</b>	Ident. No.	<b>550</b>	<b>551</b>	<b>552</b>	<b>553</b>	<b>554</b>	<b>555</b>	<b>556</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Version	Short	Short	Short	Medium	Medium	Medium	Long	Long
Clamping Ø d (mm)	25	32	40	6	8	10	6	8
Projection length A (mm)	110	110	125	100	100	100	160	160
Outer Ø D (mm)	65	72	80	25	28	35	25	28
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23730...</b>	Ident. No.	<b>558</b>	<b>559</b>	<b>560</b>	<b>750</b>	<b>751</b>	<b>752</b>	<b>850</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Version	Long	Long	Long	Long	Long	Long
Clamping Ø d (mm)	10	12	14	16	18	20
Projection length A (mm)	160	160	160	160	160	160
Outer Ø D (mm)	35	42	44	48	50	52
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23730...</b>	Ident. No.	<b>852</b>	<b>853</b>	<b>854</b>	<b>855</b>	<b>856</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 263

**ATORN®** Weldon surface chucks  
With cooling channels on side of clamping surfaces

DIN 69893-1 A



**Application:**

For holding tools with straight shank and lateral clamping surface, DIN 1835 B.

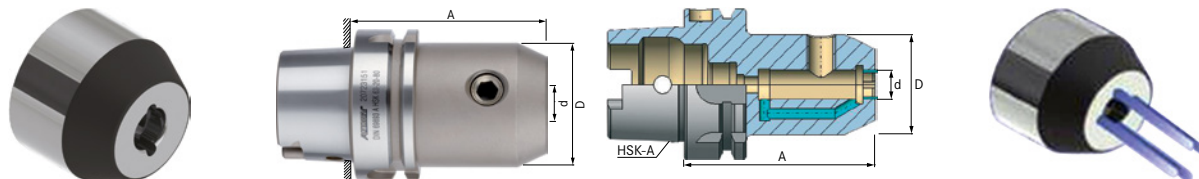
**Execution:**

- Milling cutter support DIN 6359 with cooling channel for clamping surfaces in accordance with DIN 1985 B

- Nickel-plated (corrosion-resistant and dirt-repellent)

**scope of supply and services:**

With clamping screw(s)



2 cooling channels Ø 6-18

Tool holding device	HSK A100	HSK A100	HSK A100	HSK A100	HSK A100	HSK A100	HSK A100	HSK A100
Clamping Ø d (mm)	6	8	10	12	14	16	18	20
Projection length A (mm)	80	80	80	80	80	100	100	100
Outer Ø D (mm)	25	28	35	42	44	48	50	52
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23811...</b>	Ident. No. <b>001</b>	<b>002</b>	<b>003</b>	<b>004</b>	<b>005</b>	<b>006</b>	<b>007</b>	<b>008</b>
	Unit price, €	O. R.	O. R.	O. R.	(O. R.)	O. R.	O. R.	O. R.

Tool holding device	HSK A100	HSK A100	HSK A100
Clamping Ø d (mm)	25	32	40
Projection length A (mm)	100	100	105
Outer Ø D (mm)	65	72	80
Surface	Nickel-plated	Nickel-plated	Nickel-plated
Coolant supply	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23811...</b>	Ident. No. <b>009</b>	<b>010</b>	<b>011</b>
	Unit price, €	(O. R.)	(O. R.)

Prod. group 263

**ATORN®** Indexable insert drill holder  
for indexable insert drill shape E1

DIN 69893-1 A



**Application:**

For clamping TYPE E1 indexable insert drills.

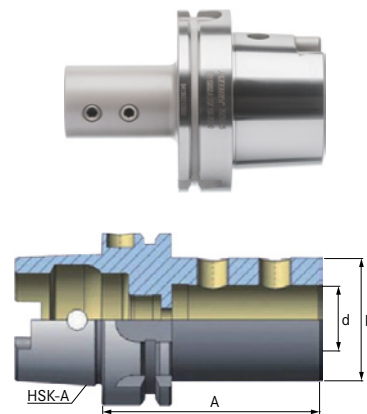
**Execution:**

- Nickel-plated (corrosion-resistant and dirt-repellent)

- Hollow shank taper according to DIN 69893-1, type A

**scope of supply and services:**

With clamping screw(s)



Tool holding device	Form	Clamping Ø d (mm)	Outer Ø D (mm)	Projection length A (mm)	Coolant supply	Surface	Balancing quality	<b>23820...</b>
HSK 100	A	20	40	90	Internal axial	Nickel-plated	G 2.5 at 25	ID no. <b>020</b>
HSK 100	A	25	45	95	Internal axial	Nickel-plated	G 2.5 at 25	<b>025</b> (O. R.)
HSK 100	A	32	52	100	Internal axial	Nickel-plated	G 2.5 at 25	<b>032</b> (O. R.)
HSK 100	A	40	60	110	Internal axial	Nickel-plated	G 2.5 at 25	<b>040</b> (O. R.)
								Unit price, €

Prod. group 263

Clamping Technology



**ATORN® Collet type ER**  
for collet chucks ER/ESX DIN ISO 15488

DIN 69893-1 A

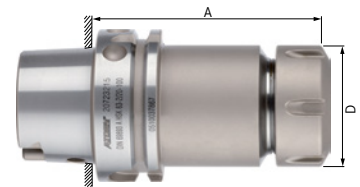


**Application:**  
For clamping tools with straight shank.

- Nickel-plated (corrosion-resistant and dirt-repellent)
- Coolant transfer pipe no. 23715 required for ICS

**Execution:**  
▪ For collets ER/ESX DIN ISO 15488

**scope of supply and services:**  
With clamping nut and longitudinal stop screw.



Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	
Form	A	A	A	A	A	A	A	A	
Version	Short	Short	Short	Short	Long	Long	Long	Long	
Collet type	ER 16	ER 25	ER 32	ER 40	ER 16	ER 25	ER 32	ER 40	
Min./max. clamping range	1-10 mm	2-16 mm	2-20 mm	3-26 mm	1-10 mm	2-16 mm	2-20 mm	3-26 mm	
Outer Ø D (mm)	32	42	50	63	32	42	50	63	
Projection length A (mm)	100	100	100	120	160	160	160	160	
Surface	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	Nickel-plated	
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23725...</b>	Ident. No. Unit price, €	<b>551</b> O. R.	<b>553</b> O. R.	<b>554</b> O. R.	<b>555</b> O. R.	<b>751</b> O. R.	<b>753</b> O. R.	<b>754</b> O. R.	<b>756</b> O. R.

Prod. group 263

**ATORN® Collet type ER**

DIN 69893-1 A



**Application:**  
For clamping tools with straight shank.

- Burnished
- Collet no. 23320
- Ring profile key no. 23308 008-020
- Coolant transfer pipe no. 23715 required for ICS

**Execution:**  
▪ Nickel-plated (corrosion-resistant and dirt-repellent)

Tool holding device	HSK A100	HSK A100	HSK A100	
Form	A	A	A	
Version	Medium	Medium	Medium	
Collet type	ER 25	ER 32	ER 40	
Min./max. clamping range	1-16 mm	2-20 mm	3-26 mm	
Outer Ø D (mm)	42	50	63	
Projection length A (mm)	100	100	120	
Surface	Nickel-plated	Nickel-plated	Nickel-plated	
Coolant supply	Internal axial	Internal axial	Internal axial	
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	
<b>23800...</b>	Ident. No. Unit price, €	<b>025</b> O. R.	<b>032</b> O. R.	<b>040</b> O. R.

Prod. group 263



**ATORN® Precision chuck**

DIN 69893-1 A

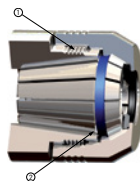
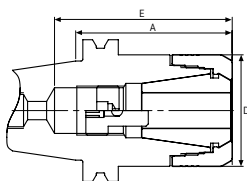


**Application:**  
For clamping tools with straight shanks without loss of concentricity or clamping force up to shank tolerance h10, for economic machining of individual and series parts with extremely high-precision machining results. Ideal for HPC and HSC metal cutting.

- Execution:**
- 30° trapezoidal thread with polished, extra-long double guide with special easy glide coating for lower friction
  - Clamping forces are evenly distributed across the entire cylindrical shell surface and perfect surfaces are achieved through the optimally absorbed radial forces
  - Precise centring when tightening the clamping nut

- Advantage:**
- Resistant to fluctuations in temperature and fully suitable for drying processes and hard milling up to 200 °C
  - The strengthening of the chuck body over the diameter of the clamping nut creates enormous stability with the optimum interference contour
  - Extremely low system concentricity of < 3 µm with 2 µm collets from Fahrion, HP/HPD 23323, unsealed and sealed collets up to 80 bar for IC (without sealing disc)
  - Completely surrounded in the chuck cone for optimum stability and even distribution of the clamping forces
  - Retention forces are doubled compared to conventional collets

**scope of supply and services:**  
Tool holder including chuck. Please order spanner separately. A torque wrench is recommended



Clamping Technology

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Size	HPE 16	HPE 16	HPE 16	HPE 16	HPE 25	HPE 25	HPE 32	HPE 32
Form	A	A	A	A	A	A	A	A
Collet type	ER 16/426E	ER 16/426E	ER 16/426E	ER 16/426E	ER 25/430E	ER 25/430E	ER 32/470E	ER 32/470E
Min./max. clamping range	1-10 mm	1-10 mm	1-10 mm	1-10 mm	2-16 mm	2-16 mm	2-20 mm	2-20 mm
Outer Ø D (mm)	30	30	30	30	40	40	50	50
Projection length A (mm)	55	100	160	200	160	200	70	160
Insertion depth E (mm)	32	71	106	136	128	148	46	129
Max. tightening torque (Nm)	55	55	55	55	85	85	140	140
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm	G 2.5 at 25 rpm
23761...	Ident. No. 001	Ident. No. 002	Ident. No. 003	Ident. No. 004	Ident. No. 006	Ident. No. 007	Ident. No. 008	Ident. No. 010
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € (O. R.)	Unit price, € (O. R.)	Unit price, € O. R.	Unit price, € (O. R.)	Unit price, € O. R.	Unit price, € (O. R.)

Prod. group 263

## ATORN® ATORN shrink-fit chuck HST A-63

DIN 69893-1 A



### Application:

For clamping milling tools and drill bits with straight shank, tolerance h6. Suitable for shrinking on inductive contact and hot air devices.

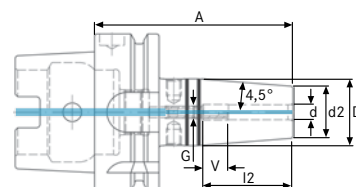
### Execution:

- Guarantees maximum concentricity ≤ 0.003 mm
- Heat-resistant and high-temperature tool steel 1,600-1,800 N/mm<sup>2</sup>
- Hardness 52 + 2 HRC
- Maximum coolant pressure 80 bar
- Adjustment travel 10 mm, can be adjusted on both sides

- For shrinking and reverse shrinking of cemented carbide and HSS tools
- 4 additional holes for fine balancing
- Hole for Balluff chip

### Advantage:

- High positioning and repeat accuracy
- Ideal for high rotation speeds
- Slim design with minimal interference contour
- Very high torque transfer
- Ideally suited for HSC machining



Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	3	4	5	6	8	10	12	14
Projection length A (mm)	80	80	80	80	80	85	90	90
Tapered Ø d2 (mm)	10	15	15	21	21	24	24	27
Outer Ø D (mm)	15	22	22	27	27	32	32	34
Clamping depth l2 (mm)	22	26	30	36	36	41	47	47
Suitable for thread G	M6	M6	M6	M5	M6	M8 x 1	M10 x 1	M10 x 1
Max. adjustment travel V (mm)	10	10	10	10	10	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
23419...	Ident. No. 003	Ident. No. 004	Ident. No. 005	Ident. No. 006	Ident. No. 008	Ident. No. 010	Ident. No. 012	Ident. No. 014
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	16	18	20	25	32	3	4	5
Projection length A (mm)	95	95	100	115	120	120	120	120
Tapered Ø d2 (mm)	27	33	33	44	44	10	15	15
Outer Ø D (mm)	34	42	42	53	53	15	22	22
Clamping depth l2 (mm)	50	50	52	62	62	22	26	30
Suitable for thread G	M12 x 1	M12 x 1	M16 x 1	M16 x 1	M16 x 1	-	-	-
Max. adjustment travel V (mm)	10	10	10	10	10	-	-	-
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>016</b> O. R.	<b>018</b> O. R.	<b>020</b> O. R.	<b>025</b> O. R.	<b>032</b> (O. R.)	<b>103</b> O. R.	<b>105</b> O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	6	8	10	12	14	16	18	20
Projection length A (mm)	120	120	120	120	120	120	120	120
Tapered Ø d2 (mm)	21	21	24	24	27	27	33	33
Outer Ø D (mm)	27	27	32	32	34	34	42	42
Clamping depth l2 (mm)	36	36	41	47	47	50	50	52
Suitable for thread G	M5	M6	M8 x 1	M10 x 1	M10 x 1	M12 x 1	M12 x 1	M16 x 1
Max. adjustment travel V (mm)	10	10	10	10	10	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>106</b> O. R.	<b>108</b> O. R.	<b>110</b> O. R.	<b>112</b> O. R.	<b>114</b> O. R.	<b>116</b> O. R.	<b>120</b> O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	25	32	3	4	5	6	8	10
Projection length A (mm)	120	120	160	160	160	160	160	160
Tapered Ø d2 (mm)	44	44	10	15	15	21	21	24
Outer Ø D (mm)	42	53	15	22	22	27	27	32
Clamping depth l2 (mm)	58	-	-	-	-	36	36	41
Suitable for thread G	M16 x 1	-	-	-	-	M5	M6	M8 x 1
Max. adjustment travel V (mm)	10	10	0	0	0	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>125</b> O. R.	<b>132</b> (O. R.)	<b>203</b> O. R.	<b>204</b> O. R.	<b>205</b> O. R.	<b>206</b> O. R.	<b>210</b> O. R.

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	12	14	16	18	20	25	32	3
Projection length A (mm)	160	160	160	160	160	160	160	200
Tapered Ø d2 (mm)	24	27	27	33	33	44	44	10
Outer Ø D (mm)	32	34	34	42	42	53	53	15
Clamping depth l2 (mm)	47	47	50	50	52	62	62	-
Suitable for thread G	M10 x 1	M10 x 1	M12 x 1	M12 x 1	M16 x 1	M16 x 1	M16 x 1	-
Max. adjustment travel V (mm)	10	10	10	10	10	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>212</b> O. R.	<b>214</b> O. R.	<b>216</b> O. R.	<b>218</b> (O. R.)	<b>220</b> O. R.	<b>225</b> O. R.	<b>232</b> (O. R.)

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	4	5	6	8	10	12	14	16
Projection length A (mm)	200	200	200	200	200	200	200	200
Tapered Ø d2 (mm)	15	15	21	21	24	24	27	27
Outer Ø D (mm)	22	22	27	27	32	32	34	34
Clamping depth l2 (mm)	-	-	36	36	41	47	47	50
Suitable for thread G	-	-	M5	M6	M8 x 1	M10 x 1	M10 x 1	M12 x 1
Max. adjustment travel V (mm)	10	10	10	10	10	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>304</b> (O. R.)	<b>305</b> (O. R.)	<b>306</b> O. R.	<b>308</b> O. R.	<b>310</b> O. R.	<b>312</b> O. R.	<b>314</b> (O. R.)

Tool holding device	HSK A63	HSK A63	HSK A63	HSK A63
Clamping Ø d (mm)	18	20	25	32
Projection length A (mm)	200	200	200	200
Tapered Ø d2 (mm)	33	33	44	44
Outer Ø D (mm)	42	42	53	53
Clamping depth l2 (mm)	50	52	62	62
Suitable for thread G	M12 x 1	M16 x 1	M16 x 1	M16 x 1
Max. adjustment travel V (mm)	10	10	10	10
Concentricity tolerance (mm)	0.003	0.003	0.003	0.003
Coolant supply	Internal axial	Internal axial	Internal axial	Internal axial
Balancing quality	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25	G 2.5 at 25
<b>23419...</b>	Ident. No. Unit price, €	<b>318</b> (O. R.)	<b>320</b> O. R.	<b>325</b> O. R.

Prod. group 287

**ATORN®** CNC precision short drill chuck  
For clockwise and anti-clockwise rotation

DIN 69893-1 A

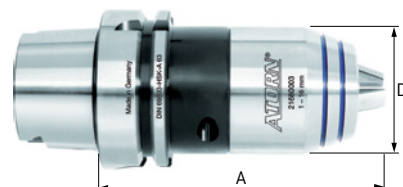


**Application:**  
For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking, thread cutting and also light milling/smoothing tasks.

- Precision chuck with high concentricity, concentricity tolerance 0.03 mm

**Notes:**  
Higher rotation speeds on request.

**Execution:**  
▪ With spur gear



ATORN CNC precision short drill chuck with worm gear transmission

Tool holding device	Min./max. clamping width	Outer Ø D (mm)	Projection length A (mm)	Running direction	Coolant supply	Balancing quality	23721... ID no.	O. R.
HSK A63	1-16 mm	50	100	Clockwise/anti-clockwise rotation	Internal axial	G 40 at 7	050	O. R.
								Unit price, €

Prod. group 208

**ATORN®** CNC precision short drill chuck  
For clockwise and anti-clockwise rotation

DIN 69893-1 A



**Application:**  
For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

- Advantage:**
- Wear parts hardened and polished for long service life
  - Remains securely clamped even with sudden spindle stop

**Execution:**  
▪ Shank in accordance with DIN 69893, HST type A  
▪ Integrated spur gear ensures high retaining torque

**scope of supply and services:**  
Including hexagon key



Tool holding device	Min./max. clamping width	Outer Ø D (mm)	Projection length A (mm)	Running direction	Coolant supply	Balancing quality	21329... ID no.	O. R.
HSK A63	0.5-16 mm	57	109	Clockwise/anti-clockwise rotation	Internal axial	G 6,3 at 25000	542	O. R.
								Unit price, €

Prod. group 208

**ALBRECHT** Precision short drill chuck AKL  
For clockwise and anti-clockwise rotation

DIN 69893-1 A



**Application:**  
For use on machining centres and CNC machines with tool changer.

- Tool clamping is achieved with the hexagon chuck key provided

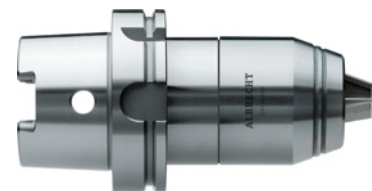
**Execution:**  
▪ Shank in accordance with DIN 69893, HST type A  
▪ Precision version with maximum concentricity tolerance ≤ 0.03 mm  
▪ 100% concentricity tolerance check using different plug gauge diameters at various measuring points, based on DIN ISO 10888

- Advantage:**
- Safe, as opening of the chuck during operation or on sudden spindle stop is not possible.
  - Integrated worm gear ensures high retaining torque > 75 Nm with 13 mm diameter

**Notes:**  
Higher rotation speeds on request.



Ident. No. 060



Ident. No. 065

Tool holding device	Min./max. clamping width	Outer Ø D (mm)	Projection length A (mm)	Clear length (mm)	Running direction	Coolant supply	23722... ID no.	O. R.
HSK A63	0.5-10 mm	38	85	37.5	Clockwise/anti-clockwise rotation	Internal axial	060	O. R.
HSK A63	1-16 mm	50	98	-	Clockwise/anti-clockwise rotation	Internal axial	065	O. R.
								Unit price, €

Prod. group 209

Clamping Technology

**diebold** HST A blanks

DIN 69893-1 A

Clamping Technology



**Application:**  
For manufacture of special tools as required.

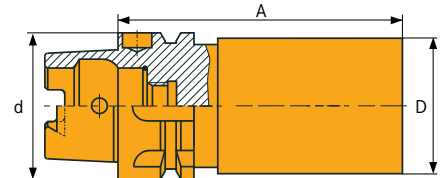
- Straight shank, soft, with allowance of 0.3 mm
- Taper nitride hardened and polished

**Execution:**

- Heat-treated steel with a minimum tensile strength at the core of 1000 N/mm<sup>2</sup>

Tool holding device	HSK A40	HSK A50	HSK A63
Outer Ø D (mm)	40	50	63
Projection length A (mm)	120	150	150
<b>23755...</b>	Ident. No. <b>030</b> Unit price, € (O. R.)	Ident. No. <b>040</b> Unit price, € (O. R.)	Ident. No. <b>050</b> Unit price, € (O. R.)

Prod. group 290



**ATORN®** Pull stud  
With hole for IC



**Application:**  
Matching pull studs for mounting tools and machine tool spindles.

- Case-hardened HRC 58 ± 2
- Pull stud with O-ring (apart from ST 30)

**Execution:**

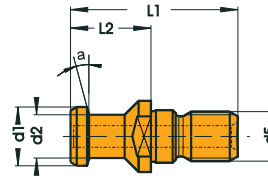
- Material 16MnCr5



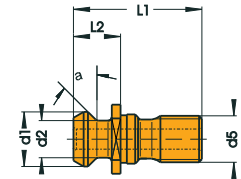
Ident. No. 130-150



Ident. No. 240-250  
ISO 7388II B



Ident. No. 130-150



Ident. No. 240-250

Suitable for tool holding device	Outer Ø d1 (mm)	Pin Ø d2 (mm)	Suitable for thread d5	Length L1 (mm)	Coolant supply	Angle (Degree)	Length of pin L2 (mm)	ISO	7388-1	7388-2 B
								23690... ID no.	23690... ID no.	23690... ID no.
SK 30	13	9	M12	44	Yes	15	24	<b>130</b>	O. R.	-
SK 40	19	14	M16	54	Yes	15	26	<b>140</b>	O. R.	-
SK 50	28	21	M24	74	Yes	15	34	<b>150</b>	O. R.	-
SK 40	18.95	12.95	M16	44.5	Yes	45	16.25	-	-	<b>240</b> O. R.
SK 50	29.1	19.6	M24	65.5	Yes	45	25.55	-	-	<b>250</b> O. R.

Prod. group 263

**ATORN®** Pull stud  
for steep taper to DIN 69871

**Application:**  
Matching pull studs for mounting tools and machine tool spindles.

- Pull stud with O-ring (apart from ST 30)
- Case-hardened HRC 58 ± 2

**Execution:**

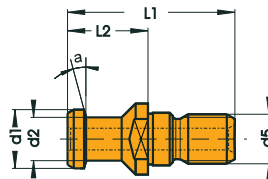
- Material 16MnCr5



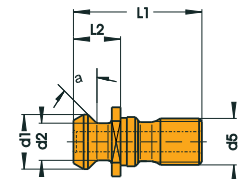
Ident. No. 130-150  
DIN 69872 shape A



Ident. No. 240-250  
ISO 7388II B



Ident. No. 130-150



Ident. No. 240-250

Suitable for tool holding device	Outer Ø d1 (mm)	Pin Ø d2 (mm)	Suitable for thread d5	Length L1 (mm)	Coolant supply	Angle (Degree)	Length of pin L2 (mm)	ISO	7388-1	7388-2 B
								23692... ID no.	23692... ID no.	23692... ID no.
SK 30	13	9	M12	44	No	15	24	<b>130</b>	O. R.	-

Suitable for tool holding device	Outer Ø d1 (mm)	Pin Ø d2 (mm)	Suitable for thread d5	Length L1 (mm)	Coolant supply	Angle (Degree)	Length of pin L2 (mm)	ISO	7388-1	7388-2 B
								23692... ID no.	23692... ID no.	23692... ID no.
SK 40	19	14	M16	54	No	15	26	140 O. R.	-	-
SK 50	28	21	M16	74	No	15	34	150 O. R.	-	-
SK 40	18,95	12,95	M16	44,5	No	45	16,25	-	240 O. R.	-
SK 50	29,1	19,6	M24	65,5	No	45	25,55	-	250 O. R.	-
								Unit price, €		

Prod. group 263

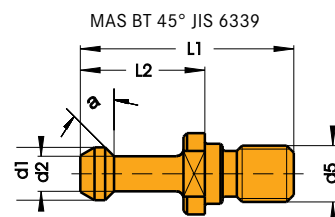
**ATORN® Pull stud**  
for steep taper to JIS B 6339 MAS BT

ISO 7388-2 B



**Application:**  
Matching pull studs for mounting tools and machine tool spindles.

- Execution:**
- Material 16MnCr5
  - Case-hardened HRC 58 ± 2
  - Pull stud with O-ring (apart from ST 30)



Suitable for tool holding device	SK 30	SK 40	SK 50	SK 30	SK 40	SK 50
Outer Ø d1 (mm)	11	15	23	11	15	23
Pin Ø d2 (mm)	7	10	17	7	10	17
Suitable for thread d5	M12	M16	M24	M12	M16	M24
Length L1 (mm)	43	60	85	43	60	85
Coolant supply	Yes	Yes	Yes	No	No	No
Angle (Degree)	45	45	45	45	45	45
Length of pin L2 (mm)	23	35	45	23	35	45
ISO						
23690...	7388-2 B	Ident. No. O. R.	435 O. R.	445 O. R.	455 O. R.	-
23692...	7388-2 B	Ident. No. O. R.	-	-	-	435 O. R.
		Ident. No. O. R.	-	-	-	445 O. R.
		Ident. No. O. R.	-	-	-	455 O. R.

Prod. group 263

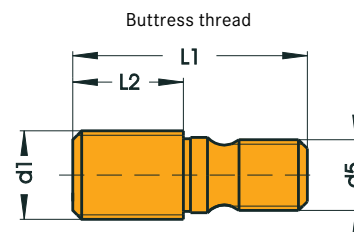
**ATORN® Pull stud**

**Application:**  
For attaching collets

- Execution:**
- Case-hardened

Suitable for tool holding device	SK 40
Suitable for thread d5	M16
Connecting thread d1	S20 x 2
Length L1 (mm)	53
Coolant supply	No
Length of pin L2 (mm)	25
23690...	Ident. No. O. R.
	011 O. R.

Prod. group 263



**ATORN®** Long pull studs  
for combination sleeves DIN 69871 A no. 23082

**Application:**  
For securing collets.

- For DIN 2079 spindle lugs only in conjunction with special sliding blocks



**Execution:**

- For DIN 69871 A combination sleeves, no. 23082

Suitable for tool holding device				SK 40 x MT 2	SK 40 x MT 3	SK 40 x MK 4	SK 40 x MT 2	SK 40 x MT 3	SK 40 x MK 4
Outer Ø d1 (mm)				19	19	19	18.95	18.95	18.95
Suitable for thread d5				M10	M12	M16	M10	M12	M16
Length L1 (mm)				99	102	115	89.4	92.4	105.4
Coolant supply				No	No	No	No	No	No
	DIN	ISO	Ident. No.						
23691...	69872		Ident. No.	<b>502</b>	<b>503</b>	<b>504</b>	-	-	-
			Unit price, €	O. R.	O. R.	O. R.			
23691...		7388B	Ident. No.	-	-	-	<b>515</b>	<b>516</b>	<b>517</b>
			Unit price, €				O. R.	O. R.	O. R.

Prod. group 263

**FAHRION®** Precision collet type GERC – FORM B  
PRAZISION < 5 µm concentricity



**Application:**  
For clamping tools with straight shank.

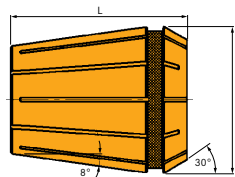
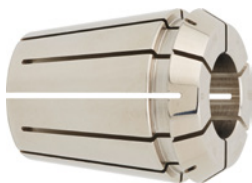
**Execution:**

- For ATORN precision collets and Fahrion CentroP precision collets
- With FAHRION|Protect corrosion protection for longer service life

- Surface super-finished for enhanced retention force

**Advantage:**

- Collets do not need to be replaced as often or can be used for longer for specific applications
- Greater concentricity extends service life of tool



Collet type	426E GERC16-B	426E GERC16-B	430E GERC25-B
Min./max. clamping range	1-10 mm	1-10 mm	1-16 mm
Outer Ø D (mm)	17	17	26
Length L (mm)	27.5	27.5	34
Clamping bypass (mm)	-0.5	-1.0	-0.5
Clamping Ø d (mm)	<b>23322...</b> ID no.	<b>23322...</b> ID no.	<b>23322...</b> ID no.
1	<b>501</b> O. R.	-	<b>521</b> (O. R.)
2	<b>503</b> O. R.	-	<b>523</b> O. R.
3	-	<b>505</b> O. R.	-
4	-	<b>507</b> O. R.	-
5	-	<b>509</b> O. R.	-
6	-	<b>511</b> O. R.	-

Prod. group 235

Collet type	426E GERC16-B	426E GERC16-B	430E GERC25-B
Min./max. clamping range	1-10 mm	1-10 mm	1-16 mm
Outer Ø D (mm)	17	17	26
Length L (mm)	27.5	27.5	34
Clamping bypass (mm)	-0.5	-1.0	-0.5
Clamping Ø d (mm)	<b>23322...</b> ID no.	<b>23322...</b> ID no.	<b>23322...</b> ID no.
7	-	<b>513</b> O. R.	-
8	-	<b>515</b> O. R.	-
9	-	<b>517</b> O. R.	-
10	-	<b>519</b> O. R.	-
	Unit price, €		

**FAHRION®** Precision collet type GERC – FORM B  
PRAZISION < 5 µm concentricity



**Application:**  
For clamping tools with straight shank.

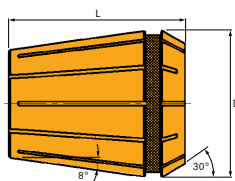
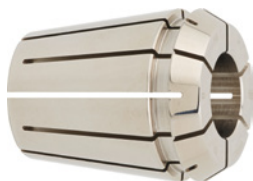
**Execution:**

- For ATORN precision collets and Fahrion CentroP precision collets
- With FAHRION|Protect corrosion protection for longer service life

- Surface super-finished for enhanced retention force

**Advantage:**

- Collets do not need to be replaced as often or can be used for longer for specific applications
- Greater concentricity extends service life of tool



Collet type	430E GERC25-B	470E GERC32-B	472E GERC40-B
Min./max. clamping range	1-16 mm	3-20 mm	3-26 mm
Outer Ø D (mm)	26	33	41
Length L (mm)	34	40	46
Clamping bypass (mm)	-1.0	-1.0	-1.0
Clamping Ø d (mm)	<b>23322...</b> ID no.	<b>23322...</b> ID no.	<b>23322...</b> ID no.
3	<b>525</b> O. R.	<b>555</b> O. R.	<b>590</b> (O. R.)
4	<b>527</b> O. R.	<b>557</b> O. R.	<b>592</b> O. R.
5	<b>529</b> O. R.	<b>559</b> O. R.	<b>594</b> O. R.
6	<b>531</b> O. R.	<b>561</b> O. R.	<b>596</b> O. R.
7	<b>533</b> O. R.	<b>563</b> O. R.	<b>598</b> O. R.
8	<b>535</b> O. R.	<b>565</b> O. R.	<b>600</b> O. R.
9	<b>537</b> O. R.	<b>567</b> O. R.	<b>602</b> O. R.
10	<b>539</b> O. R.	<b>569</b> O. R.	<b>604</b> O. R.
11	<b>541</b> O. R.	<b>571</b> O. R.	<b>606</b> O. R.
12	<b>543</b> O. R.	<b>573</b> O. R.	<b>608</b> O. R.
13	<b>545</b> O. R.	<b>575</b> O. R.	<b>610</b> O. R.
14	<b>547</b> O. R.	<b>577</b> O. R.	<b>612</b> O. R.
15	<b>549</b> O. R.	<b>579</b> O. R.	<b>614</b> O. R.

Prod. group 235

Collet type	430E GERC25-B	470E GERC32-B	472E GERC40-B
Min./max. clamping range	1-16 mm	3-20 mm	3-26 mm
Outer Ø D (mm)	26	33	41
Length L (mm)	34	40	46
Clamping bypass (mm)	-1.0	-1.0	-1.0
Clamping Ø d (mm)	<b>23322...</b> ID no.	<b>23322...</b> ID no.	<b>23322...</b> ID no.
16	<b>551</b> O. R.	<b>581</b> O. R.	<b>616</b> O. R.
2	-	<b>553</b> (O. R.)	-
17	-	<b>582</b> O. R.	<b>618</b> O. R.
18	-	<b>584</b> O. R.	<b>620</b> O. R.
19	-	<b>586</b> O. R.	<b>622</b> O. R.
20	-	<b>588</b> O. R.	<b>624</b> O. R.
21	-	-	<b>626</b> O. R.
22	-	-	<b>628</b> O. R.
23	-	-	<b>630</b> O. R.
24	-	-	<b>632</b> O. R.
25	-	-	<b>634</b> O. R.
26	-	-	<b>636</b> O. R.

Unit price, €

**FAHRION®** Precision collet sets type GERC – FORM B  
PRAZISION < 5 µm concentricity

ISO 15488

**Application:**

For clamping tools with straight shank.

**Execution:**

- For ATORN precision collets and Fahrion CentroP precision collets
- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Advantage:**

- Collets do not need to be replaced as often or can be used for longer for specific applications
- Greater concentricity extends service life of tool

**scope of supply and services:**

In a wooden case



Collet type	426E GERC16-B	430E GERC25-B	470E GERC32-B	472E GERC40-B
Min./max. clamping range	1-10 mm	1-16 mm	3-20 mm	3-26 mm
Outer Ø D (mm)	17	26	33	41
Length L (mm)	27.5	34	40	46
Coolant supply	External	External	External	External
<b>23322...</b>	Ident. No. Set price, €	<b>520</b> O. R.	<b>552</b> O. R.	<b>589</b> O. R.
		<b>637</b> O. R.		

Prod. group 235

**FAHRION®** Precision collet type GERC HP  
PRAZISION < 2 µm concentricity

ISO 15488

**Application:**

For HSC machining with high-precision machining results.

**Execution:**

- HP collets with small concentricity and repeat tolerance of 2 µm (for system tolerance of 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets

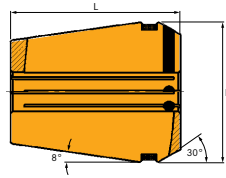
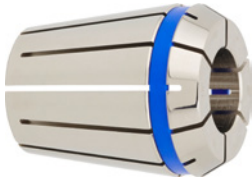
- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications







Collet type	426E GERC16-HP	430E GERC25-HP	470E GERC32-HP
Min./max. clamping range	1-10 mm	1-16 mm	2-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	External	External	External
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
1	<b>501</b> (O. R.)	<b>547</b> (O. R.)	-
2	<b>511</b> O. R.	<b>549</b> O. R.	<b>579</b> (O. R.)
3	<b>521</b> O. R.	<b>551</b> O. R.	<b>581</b> O. R.
3.5	<b>526</b> O. R.	-	-
4	<b>530</b> O. R.	<b>553</b> O. R.	<b>583</b> O. R.
5	<b>532</b> O. R.	<b>555</b> O. R.	<b>585</b> O. R.
6	<b>535</b> O. R.	<b>557</b> O. R.	<b>587</b> O. R.
7	<b>538</b> O. R.	<b>559</b> O. R.	<b>589</b> O. R.
8	<b>541</b> O. R.	<b>561</b> O. R.	<b>591</b> O. R.
9	<b>543</b> O. R.	<b>563</b> O. R.	<b>593</b> O. R.
10	<b>545</b> O. R.	<b>565</b> O. R.	<b>595</b> O. R.

Prod. group 235

Collet type	426E GERC16-HP	430E GERC25-HP	470E GERC32-HP
Min./max. clamping range	1-10 mm	1-16 mm	2-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	External	External	External
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
11	-	<b>567</b> O. R.	<b>597</b> O. R.
12	-	<b>569</b> O. R.	<b>599</b> O. R.
13	-	<b>571</b> O. R.	<b>601</b> O. R.
14	-	<b>573</b> O. R.	<b>603</b> O. R.
15	-	<b>575</b> O. R.	<b>605</b> O. R.
16	-	<b>577</b> O. R.	<b>607</b> O. R.
17	-	-	<b>609</b> O. R.
18	-	-	<b>611</b> O. R.
19	-	-	<b>613</b> O. R.
20	-	-	<b>615</b> O. R.

Unit price, €

**FAHRION®** Precision collet type GERC HPD  
Seal for inner cooling and < 2 µm concentricity

ISO 15488



**Application:**

For HSC machining with high-precision machining results.

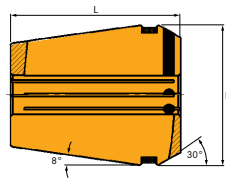
**Execution:**

- HPD with seal for inner coolant supply (can be used up to 120 bar)
- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets

- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications



HPD sealed collet chuck, 2 µm concentricity with IC

Collet type	425E GERC16-HPD	429E GERC25-HPD	469E GERC32-HPD
Min./max. clamping range	1-10 mm	1-16 mm	2-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	Internal axial	Internal axial	Internal axial
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
3	<b>617</b> O. R.	-	-
4	<b>618</b> O. R.	<b>627</b> O. R.	<b>642</b> O. R.
5	<b>619</b> O. R.	<b>628</b> O. R.	<b>643</b> O. R.
6	<b>620</b> O. R.	<b>629</b> O. R.	<b>644</b> O. R.
7	<b>621</b> O. R.	<b>630</b> O. R.	<b>645</b> O. R.
8	<b>622</b> O. R.	<b>631</b> O. R.	<b>646</b> O. R.
9	<b>623</b> O. R.	<b>632</b> O. R.	<b>647</b> O. R.
10	<b>624</b> O. R.	<b>633</b> O. R.	<b>648</b> O. R.
11	-	<b>634</b> O. R.	<b>649</b> O. R.
12	-	<b>635</b> O. R.	<b>650</b> O. R.

Prod. group 235

Collet type	425E GERC16-HPD	429E GERC25-HPD	469E GERC32-HPD
Min./max. clamping range	1-10 mm	1-16 mm	2-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	Internal axial	Internal axial	Internal axial
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
13	-	<b>636</b> O. R.	<b>651</b> O. R.
14	-	<b>637</b> O. R.	<b>652</b> O. R.
15	-	<b>638</b> O. R.	<b>653</b> O. R.
16	-	<b>639</b> O. R.	<b>654</b> O. R.
17	-	-	<b>655</b> O. R.
18	-	-	<b>656</b> O. R.
19	-	-	<b>657</b> O. R.
20	-	-	<b>658</b> O. R.

Unit price, €



**Precision collet type GERC HPDD**  
Seal for ICS and spray nozzle as well as < 2 µm concentricity

ISO 15488



Clamping Technology

**Application:**

For clamping thread cutting tools.

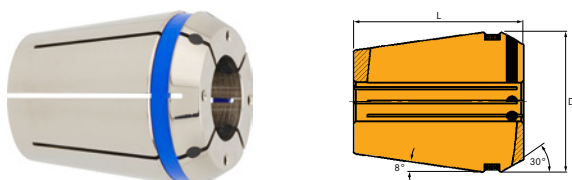
**Execution:**

- HPDD with seal for inner coolant supply (can be used up to 120 bar) and spray nozzle
- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets

- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force
- Only the nominal dimension can be clamped (straight shank with h8)

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications



Collet type	425E GERC16-HPDD	429E GERC25-HPDD	469E GERC32-HPDD
Min./max. clamping range	4-8 mm	4-14 mm	4-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	Inner cooling and spray nozzles	Inner cooling and spray nozzles	Inner cooling and spray nozzles
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
4	<b>660</b> (O. R.)	<b>663</b> (O. R.)	<b>669</b> (O. R.)
6	<b>661</b> (O. R.)	<b>664</b> (O. R.)	<b>670</b> (O. R.)
8	<b>662</b> (O. R.)	<b>665</b> (O. R.)	<b>671</b> (O. R.)
10	-	<b>666</b> (O. R.)	<b>672</b> (O. R.)
12	-	<b>667</b> (O. R.)	<b>673</b> (O. R.)

Collet type	425E GERC16-HPDD	429E GERC25-HPDD	469E GERC32-HPDD
Min./max. clamping range	4-8 mm	4-14 mm	4-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	Inner cooling and spray nozzles	Inner cooling and spray nozzles	Inner cooling and spray nozzles
Clamping bypass (mm)	-0.5	-0.5	-0.5
Clamping Ø d (mm)	<b>23323...</b> ID no.	<b>23323...</b> ID no.	<b>23323...</b> ID no.
14	-	<b>668</b> (O. R.)	<b>674</b> (O. R.)
16	-	-	<b>675</b> (O. R.)
18	-	-	<b>676</b> (O. R.)
20	-	-	<b>677</b> (O. R.)

Unit price, €

Prod. group 235



**Precision collet sets, type GERC HP**  
< 2 µm concentricity

ISO 15488

**Application:**

For HSC machining with high-precision machining results.

**Execution:**

- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets
- With FAHRION|Protect corrosion protection for longer service life

- Surface super-finished for enhanced retention force

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications

**scope of supply and services:**

In a wooden case



Collet type	426E GERC16-HP	429E GERC25-HP	469E GERC32-HP
Min./max. clamping range	3-10 mm	4-16 mm	4-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	External	External	External
Clamping bypass (mm)	-0.5	-0.5	-0.5
<b>23323...</b>	Ident. No. <b>546</b>	Ident. No. <b>578</b>	Ident. No. <b>616</b>
	Set price, € O. R.	O. R.	O. R.

Prod. group 235



**FAHRION®** Precision collet sets, type GERC HPD  
Seal for ICS and < 2 µm concentricity

ISO 15488



**Application:**  
For HSC machining with high precision machining results

- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Execution:**

- HPD with seal for inner coolant supply (can be used up to 120 bar)
- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications

**scope of supply and services:**  
In a wooden case



Collet type	425E GERC16-HPD	429E GERC25-HPD	469E GERC32-HPD
Min./max. clamping range	3-10 mm	4-16 mm	4-20 mm
Outer Ø D (mm)	17	26	33
Length L (mm)	27.5	34	40
Coolant supply	Internal axial	Internal axial	Internal axial
Clamping bypass (mm)	-0.5	-0.5	-0.5
<b>23323...</b>	Ident. No. Set price, €	<b>625</b> (O. R.)	<b>640</b> (O. R.)
		<b>659</b> O. R.	

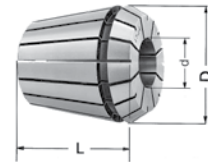
Prod. group 235

**ORION®** Milling chucks, type ER  
for milling chucks no. 23300, 23304, 23305

ISO 15488

**Application:**  
For clamping tools with straight shank.

- Advantage:**
- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
  - Flexing movements of the milling cutters are ruled out



- Execution:**
- Fully hardened and polished
  - Double-conical, slotted on both sides, with extracting groove
  - Suitable for all standard collets of type ER

**Notes:**  
Collets for thread cutting, see no. 21 575

Collet type	ER 11 (4008E)	ER 16/426E	ER 16/426E	Collet type	ER 11 (4008E)	ER 16/426E	ER 16/426E
Min./max. clamping range	1-7 mm	1-10 mm	1-10 mm	Min./max. clamping range	1-7 mm	1-10 mm	1-10 mm
Outer Ø D (mm)	11.5	17	17	Outer Ø D (mm)	11.5	17	17
Length L (mm)	18	27.5	27.5	Length L (mm)	18	27.5	27.5
Coolant supply	No	No	No	Coolant supply	No	No	No
Clamping bypass (mm)	-0.5	-0.5	-1.0	Clamping bypass (mm)	-0.5	-0.5	-1.0
Clamping Ø d (mm)	<b>23320...</b> ID no.	<b>23320...</b> ID no.	<b>23320...</b> ID no.	Clamping Ø d (mm)	<b>23320...</b> ID no.	<b>23320...</b> ID no.	<b>23320...</b> ID no.
1	<b>011</b> O. R.	<b>101</b> O. R.	-	7	<b>017</b> O. R.	-	<b>107</b> O. R.
2	<b>012</b> O. R.	-	<b>102</b> O. R.	8	-	-	<b>108</b> O. R.
3	<b>013</b> O. R.	-	<b>103</b> O. R.	9	-	-	<b>109</b> O. R.
4	<b>014</b> O. R.	-	<b>104</b> O. R.	10	-	-	<b>110</b> O. R.
5	<b>015</b> O. R.	-	<b>105</b> O. R.				
6	<b>016</b> O. R.	-	<b>106</b> O. R.				Unit price, €

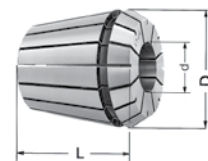
Prod. group 295

**ORION®** Milling chucks, type ER  
for milling chucks no. 23300, 23304, 23305

ISO 15488

**Application:**  
For clamping tools with straight shank.

- Advantage:**
- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
  - Flexing movements of the milling cutters are ruled out



- Execution:**
- Fully hardened and polished
  - Double-conical, slotted on both sides, with extracting groove
  - Suitable for all standard collets of type ER

**Notes:**  
Collets for thread cutting, see no. 21 575

Collet type	ER 20/428E	ER 25/430E	ER 32/470E	ER 40/472E	Collet type	ER 20/428E	ER 25/430E	ER 32/470E	ER 40/472E
Min./max. clamping range	1-13 mm	1-16 mm	3-20 mm	3-26 mm	Min./max. clamping range	1-13 mm	1-16 mm	3-20 mm	3-26 mm
Outer Ø D (mm)	21	26	33	41	Outer Ø D (mm)	21	26	33	41
Length L (mm)	31.5	34	40	46	Length L (mm)	31.5	34	40	46
Coolant supply	No	No	No	No	Coolant supply	No	No	No	No
Clamping bypass (mm)	-1.0	-1.0	-1.0	-1.0	Clamping bypass (mm)	-1.0	-1.0	-1.0	-1.0
Clamping Ø d (mm)	23320... ID no.	23320... ID no.	23320... ID no.	23320... ID no.	Clamping Ø d (mm)	23320... ID no.	23320... ID no.	23320... ID no.	23320... ID no.
2	202 O. R.	252 O. R.	-	-	15	-	265 O. R.	315 O. R.	415 O. R.
3	203 O. R.	253 O. R.	303 O. R.	-	16	-	266 O. R.	316 O. R.	416 O. R.
4	204 O. R.	254 O. R.	304 O. R.	404 O. R.	17	-	-	317 O. R.	417 O. R.
5	205 O. R.	255 O. R.	305 O. R.	405 O. R.	18	-	-	318 O. R.	418 O. R.
6	206 O. R.	256 O. R.	306 O. R.	406 O. R.	19	-	-	319 O. R.	419 O. R.
7	207 O. R.	257 O. R.	307 O. R.	407 O. R.	20	-	-	320 O. R.	420 O. R.
8	208 O. R.	258 O. R.	308 O. R.	408 O. R.	21	-	-	-	421 O. R.
9	209 O. R.	259 O. R.	309 O. R.	409 O. R.	22	-	-	-	422 O. R.
10	210 O. R.	260 O. R.	310 O. R.	410 O. R.	23	-	-	-	423 O. R.
11	211 O. R.	261 O. R.	311 O. R.	411 O. R.	24	-	-	-	424 O. R.
12	212 O. R.	262 O. R.	312 O. R.	412 O. R.	25	-	-	-	425 O. R.
13	213 O. R.	263 O. R.	313 O. R.	413 O. R.	26	-	-	-	426 O. R.
14	-	264 O. R.	314 O. R.	414 O. R.					

Prod. group 295

Unit price, €

## ORION® Collet set type ER for milling chucks no. 23300, 23305

ISO 15488

### Application:

For clamping tools with straight shank.

### Execution:

- For milling chucks no. 23300, 23305
- Double-conical, slotted on both sides, with extracting groove
- Fully hardened and polished
- Suitable for all standard collets of type ER

### Advantage:

- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
- Flexing movements of the milling cutters are ruled out

### scope of supply and services:

In aluminium case



Collet type	ER 16/426E	ER 20/428E	ER 25/430E	ER 32/470E	ER 40/472E
Min./max. clamping range	1-10 mm	2-13 mm	2-16 mm	2-20 mm	3-26 mm
Outer Ø D (mm)	17	21	26	33	41
Length L (mm)	27	31.5	34	40	46
Coolant supply	No	No	No	No	No
Number of pieces in assortment/set	10	12	15	18	23
23320... Ident. No.	116	220	275	332	430
Set price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 295

## ORION® Milling chucks, type ER With female square drive

DIN 6499A

### Application:

For clamping screw tapping tools.

### Execution:

- Suitable for all standard ER collets
- For machines with synchronous feed
- For use in collet no. 22782 and no. 23300

### Advantage:

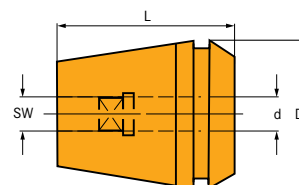
- Female square drive to prevent against twisting on screw taps

### Notes:

Collets, type ER DIN 6499B for cylindrical shanks, see no. 23320



Supplied without screw tap



Clamping Ø d (mm)	Square width SW (mm)	Collet type	Outer Ø D (mm)	Length L (mm)	Coolant supply	21575... ID no.
4.5	3.4	ER 16	17	27.5	No	104 O. R.
4.5	3.4	ER 25	25	34	No	254 O. R.
4.5	3.4	ER 32	32	40	No	304 O. R.
6	4.9	ER 16	17	27.5	No	106 O. R.
6	4.9	ER 25	25	34	No	256 O. R.
6	4.9	ER 32	32	40	No	306 O. R.
7	5.5	ER 16	17	27.5	No	107 O. R.
7	5.5	ER 25	25	34	No	257 O. R.
7	5.5	ER 32	32	40	No	307 O. R.
8	6.2	ER 25	25	34	No	258 O. R.
8	6.2	ER 32	32	40	No	308 O. R.
9	7	ER 25	25	34	No	259 O. R.
9	7	ER 32	32	40	No	309 O. R.
10	8	ER 25	25	34	No	260 O. R.
10	8	ER 32	32	40	No	310 O. R.
11	9	ER 25	25	34	No	261 O. R.



Clamping Ø d (mm)	Square width SW (mm)	Collet type	Outer Ø D (mm)	Length L (mm)	Coolant supply	21575... ID no.
11	9	ER 32	32	40	No	<b>311</b> O. R.
12	9	ER 25	25	34	No	<b>262</b> O. R.
12	9	ER 32	32	40	No	<b>312</b> O. R.
14	11	ER 32	32	40	No	<b>314</b> O. R.
16	12	ER 32	32	40	No	<b>316</b> O. R.
						Unit price, €

Prod. group 218

**ORION® Collets OZ**  
Slotted on one side

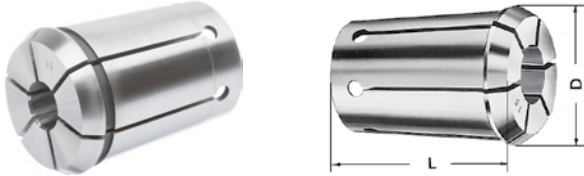
ISO 10897

**Application:**

For clamping tools with straight shank.

**Execution:**

- Suitable for milling chucks no. 23290/23295 and high-speed milling spindles no. 23275
- Clamp bridge up to 0.5 mm below nominal diameter



Ident. No. 144

Collet type	OZ 410E	OZ 444E	OZ 450E
Min./max. clamping range	2-16 mm	2-25 mm	4-32 mm
Outer Ø D (mm)	25.5	35.5	44
Length L (mm)	40	52	60
Clamping bypass (mm)	-1.0	-1.0	-1.0
Clamping Ø d (mm)	<b>23291...</b> ID no.	<b>23291...</b> ID no.	<b>23291...</b> ID no.
2	<b>003</b> O. R.	<b>047</b> O. R.	- -
3	<b>006</b> O. R.	<b>048</b> O. R.	- -
4	<b>009</b> O. R.	<b>051</b> O. R.	<b>116</b> O. R.
5	<b>012</b> O. R.	<b>054</b> O. R.	<b>117</b> O. R.
6	<b>015</b> O. R.	<b>057</b> O. R.	<b>120</b> O. R.
7	<b>018</b> O. R.	<b>060</b> O. R.	- -
8	<b>021</b> O. R.	<b>063</b> O. R.	<b>126</b> O. R.
9	<b>024</b> O. R.	<b>066</b> O. R.	<b>129</b> O. R.
10	<b>027</b> O. R.	<b>069</b> O. R.	<b>132</b> O. R.
11	<b>030</b> O. R.	<b>072</b> O. R.	- -
12	<b>033</b> O. R.	<b>075</b> O. R.	<b>138</b> O. R.
13	<b>036</b> O. R.	<b>078</b> O. R.	<b>141</b> O. R.
14	<b>039</b> O. R.	<b>081</b> O. R.	<b>144</b> O. R.
15	<b>042</b> O. R.	<b>084</b> O. R.	- -
16	<b>045</b> O. R.	<b>087</b> O. R.	<b>150</b> O. R.

Prod. group 218

Collet type	OZ 410E	OZ 444E	OZ 450E
Min./max. clamping range	2-16 mm	2-25 mm	4-32 mm
Outer Ø D (mm)	25.5	35.5	44
Length L (mm)	40	52	60
Clamping bypass (mm)	-1.0	-1.0	-1.0
Clamping Ø d (mm)	<b>23291...</b> ID no.	<b>23291...</b> ID no.	<b>23291...</b> ID no.
17	- -	<b>090</b> O. R.	- -
18	- -	<b>093</b> O. R.	<b>156</b> O. R.
19	- -	<b>096</b> O. R.	<b>159</b> O. R.
20	- -	<b>099</b> O. R.	<b>162</b> O. R.
21	- -	<b>102</b> O. R.	- -
22	- -	<b>105</b> O. R.	- -
23	- -	<b>108</b> O. R.	- -
24	- -	<b>111</b> O. R.	<b>174</b> O. R.
25	- -	<b>114</b> O. R.	<b>177</b> O. R.
26	- -	- -	<b>180</b> O. R.
28	- -	- -	<b>186</b> O. R.
30	- -	- -	<b>192</b> O. R.
32	- -	- -	<b>198</b> O. R.
Unit price, €			

**ORION® Collets OZ**  
Double slotted

ISO 10897

**Application:**

For clamping drill bits and countersinks.

**Notes:**

Version with completely vulcanised slots for internal coolant supply on request.

**Execution:**

- Suitable for milling chucks no. 23290/23295



Ident. No. 099

Collet type	OZ 415E	OZ 462E	OZ 467E	OZ 467E
Min./max. clamping range	2-16 mm	2-25 mm	6-36 mm	6-36 mm
Outer Ø D (mm)	25.5	35.5	44	44
Length L (mm)	40	52	60	60
Clamping bypass (mm)	-0.5	-0.5	-0.5	-1.0
Clamping Ø d (mm)	<b>23293...</b> ID no.	<b>23293...</b> ID no.	<b>23293...</b> ID no.	<b>23293...</b> ID no.
2	<b>001</b> O. R.	<b>010</b> O. R.	- -	- -
2.5	<b>002</b> O. R.	<b>011</b> O. R.	- -	- -
3	<b>004</b> O. R.	<b>013</b> O. R.	- -	- -
3.5	<b>005</b> O. R.	<b>014</b> O. R.	- -	- -
4	<b>007</b> O. R.	<b>016</b> O. R.	- -	- -

Collet type	OZ 415E	OZ 462E	OZ 467E	OZ 467E
Min./max. clamping range	2-16 mm	2-25 mm	6-36 mm	6-36 mm
Outer Ø D (mm)	25.5	35.5	44	44
Length L (mm)	40	52	60	60
Clamping bypass (mm)	-0.5	-0.5	-0.5	-1.0
Clamping Ø d (mm)	<b>23293...</b> ID no.	<b>23293...</b> ID no.	<b>23293...</b> ID no.	<b>23293...</b> ID no.
4.5	<b>008</b> O. R.	<b>017</b> O. R.	- -	- -
5	<b>003</b> O. R.	<b>019</b> O. R.	- -	- -
5.5	<b>006</b> O. R.	<b>020</b> O. R.	- -	- -
6	<b>009</b> O. R.	<b>072</b> O. R.	<b>022</b> O. R.	- -
6.5	<b>012</b> O. R.	<b>075</b> O. R.	- -	- -

Collet type	OZ 415E	OZ 462E	OZ 467E	OZ 467E
Min./max. clamping range	2-16 mm	2-25 mm	6-36 mm	6-36 mm
Outer Ø D (mm)	25.5	35.5	44	44
Length L (mm)	40	52	60	60
Clamping bypass (mm)	-0.5	-0.5	-0.5	-1.0
Clamping Ø d (mm)	23293... ID no.	23293... ID no.	23293... ID no.	23293... ID no.
7	015 O. R.	078 O. R.	-	-
7.5	018 O. R.	081 O. R.	-	-
8	021 O. R.	084 O. R.	028 O. R.	-
8.5	024 O. R.	087 O. R.	-	-
9	027 O. R.	090 O. R.	-	-
9.5	030 O. R.	093 O. R.	-	-
10	033 O. R.	096 O. R.	-	213 O. R.
10.5	036 O. R.	099 O. R.	-	-
11	039 O. R.	102 O. R.	-	-
11.5	042 O. R.	105 O. R.	-	-
12	045 O. R.	108 O. R.	-	225 O. R.
12.5	048 O. R.	111 O. R.	-	-
13	051 O. R.	114 O. R.	-	-
13.5	054 O. R.	117 O. R.	-	-
14	057 O. R.	120 O. R.	-	237 O. R.
15	063 O. R.	126 O. R.	-	243 O. R.
16	069 O. R.	132 O. R.	-	249 O. R.

Prod. group 218

Collet type	OZ 415E	OZ 462E	OZ 467E	OZ 467E
Min./max. clamping range	2-16 mm	2-25 mm	6-36 mm	6-36 mm
Outer Ø D (mm)	25.5	35.5	44	44
Length L (mm)	40	52	60	60
Clamping bypass (mm)	-0.5	-0.5	-0.5	-1.0
Clamping Ø d (mm)	23293... ID no.	23293... ID no.	23293... ID no.	23293... ID no.
14.5	-	123 O. R.	-	-
15.5	-	129 O. R.	-	-
17	-	138 O. R.	-	-
17.5	-	141 O. R.	-	-
18	-	144 O. R.	-	261 O. R.
19	-	150 O. R.	-	-
20	-	156 O. R.	-	273 O. R.
21	-	162 O. R.	-	-
22	-	168 O. R.	-	-
23	-	174 O. R.	-	-
24	-	180 O. R.	-	297 O. R.
25	-	186 O. R.	-	303 O. R.
28	-	-	-	321 O. R.
30	-	-	-	333 O. R.
32	-	-	-	345 O. R.

Unit price, €

**ORION® Collet chuck sets OZ**  
slotted on one side

ISO 10897

**Application:**  
For clamping tools with straight shank.

**scope of supply and services:**  
In aluminium case

**Execution:**  
▪ Suitable for milling chucks no. 23290/23295 and high-speed milling spindles no. 23275

Type		OZ 410 E	OZ 444 E
Min./max. clamping range		2-16 mm	2-25 mm
Outer Ø D (mm)		25.5	35.5
Length L (mm)		40	52
23291...	Ident. No. Set price, €	410 O. R.	444 O. R.

Prod. group 218



**ORION® Collets**  
For ERICKSON system

**Application:**  
For clamping tools with straight shank.

**Execution:**  
▪ For short chuck system ERICKSON sealing cone/sealing cone shank no. 23325  
▪ Multi-range collets for clamping the nominal diameter



Ident. No. 001-002, 004-026, 029-114, 116-207, 209-225



Ident. No. 003  
Ref. no. 23326003, collet chuck DK 30



Ident. No. 028  
Ref. no. 23326028, collet chuck DKS



Ident. No. 115  
Ref. no. 23326115, collet chuck DK 20



Ident. No. 208  
Ref. no. 23326208, collet chuck DK 10

Collet type	DK 30	DKS	DK 20	DK 10
Min./max. clamping range	1-6.5 mm	1-4 mm	1-10 mm	2.5-14.5 mm
Clamping Ø d (mm)	23326... ID no.	23326... ID no.	23326... ID no.	23326... ID no.
1	001 O. R.	020 O. R.	101 O. R.	-
1.25	-	021 O. R.	-	-
1.5	002 O. R.	022 O. R.	102 O. R.	-
1.75	-	023 O. R.	-	-

Collet type	DK 30	DKS	DK 20	DK 10
Min./max. clamping range	1-6.5 mm	1-4 mm	1-10 mm	2.5-14.5 mm
Clamping Ø d (mm)	23326... ID no.	23326... ID no.	23326... ID no.	23326... ID no.
2	003 O. R.	024 O. R.	103 O. R.	-
2.25	-	025 O. R.	-	-
2.5	004 O. R.	026 O. R.	104 O. R.	201 O. R.
3	005 O. R.	028 O. R.	105 O. R.	202 O. R.

Collet type	DK 30	DKS	DK 20	DK 10
Min./max. clamping range	1-6.5 mm	1-4 mm	1-10 mm	2.5-14.5 mm
Clamping Ø d (mm)	<b>23326...</b> ID no.	<b>23326...</b> ID no.	<b>23326...</b> ID no.	<b>23326...</b> ID no.
3.25	-	<b>029</b> O. R.	-	-
3.5	<b>006</b> O. R.	<b>030</b> O. R.	<b>106</b> O. R.	<b>203</b> O. R.
4	<b>007</b> O. R.	<b>032</b> O. R.	<b>107</b> O. R.	<b>204</b> O. R.
4.5	<b>008</b> O. R.	-	<b>108</b> O. R.	<b>205</b> O. R.
5	<b>009</b> O. R.	-	<b>109</b> O. R.	<b>206</b> O. R.
5.5	<b>010</b> O. R.	-	<b>110</b> O. R.	<b>207</b> O. R.
6	<b>011</b> O. R.	-	<b>111</b> O. R.	<b>208</b> O. R.
6.5	<b>012</b> O. R.	-	<b>112</b> O. R.	<b>209</b> O. R.
7	-	-	<b>113</b> O. R.	<b>210</b> O. R.
7.5	-	-	<b>114</b> O. R.	<b>211</b> O. R.
8	-	-	<b>115</b> O. R.	<b>212</b> O. R.
8.5	-	-	<b>116</b> O. R.	<b>213</b> O. R.
9	-	-	<b>117</b> O. R.	<b>214</b> O. R.

Prod. group 218

Collet type	DK 30	DKS	DK 20	DK 10
Min./max. clamping range	1-6.5 mm	1-4 mm	1-10 mm	2.5-14.5 mm
Clamping Ø d (mm)	<b>23326...</b> ID no.	<b>23326...</b> ID no.	<b>23326...</b> ID no.	<b>23326...</b> ID no.
9.5	-	-	<b>118</b> O. R.	<b>215</b> O. R.
10	-	-	-	<b>119</b> O. R.
10.5	-	-	-	<b>217</b> O. R.
11	-	-	-	<b>218</b> O. R.
11.5	-	-	-	<b>219</b> O. R.
12	-	-	-	<b>220</b> O. R.
12.5	-	-	-	<b>221</b> O. R.
13	-	-	-	<b>222</b> O. R.
13.5	-	-	-	<b>223</b> O. R.
14	-	-	-	<b>224</b> O. R.
14.5	-	-	-	<b>225</b> O. R.

Unit price, €

## ORION® Clamping nuts type OZ for milling chucks no. 23285 and 23295

### Execution:

- For milling chucks no. 23285 and 23295

### Notes:

Suitable hook wrench ref. no. 52100060, -090, -100

Clamping nut type		OZ	OZ	OZ
Min./max. clamping range		2-16 mm	2-25 mm	4-32 mm
Clamping nut Ø (mm)		43	60	72
<b>23295...</b>	Ident. No.	<b>916</b>	<b>925</b>	<b>932</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 295



## Clamping nuts, type ER normal version/Mini

### Execution:

- For collets
- No. 23303 clamping nuts, individual and finely balanced
- No. 23308 ring profile key for clamping and loosening

### Notes:

For ER 16 and 20 = normal version, please use our single head wrenches no. 52002 025 or 030



Ident. No. 016-018  
Normal design ER16-ER20, form A



Ident. No. 020-035  
Normal design ER25-ER40, form UM



Ident. No. 116-125  
Clamping nut Mini ER 16-ER 25, form M

Clamping nut type	Min./max. clamping range	<b>23303...</b> ID no.
ER 16	1-10 mm	<b>016</b> O. R.
ER 20	1-13 mm	<b>018</b> O. R.
ER 25	2-16 mm	<b>020</b> O. R.
ER 32	2-20 mm	<b>030</b> O. R.
ER 40	3-26 mm	<b>035</b> O. R.

Prod. group 206

Clamping nut type	Min./max. clamping range	<b>23303...</b> ID no.
ER 16 MINI	1-10 mm	<b>116</b> O. R.
ER 20 MINI	1-13 mm	<b>120</b> O. R.
ER 25 MINI	2-16 mm	<b>125</b> O. R.

Unit price, €

## Clamping nuts, type ER with plain bearings

### Execution:

- For collets
- No. 23303 clamping nuts, individual, finely balanced

- No. 23308 ring profile key for clamping and loosening

Clamping nut type	Min./max. clamping range	<b>23303...</b> ID no.
ER 25	1-16 mm	<b>025</b> O. R.
ER 32	2-20 mm	<b>032</b> O. R.
ER 40	3-26 mm	<b>040</b> O. R.

Unit price, €



With plain bearings ER 25-ER 40

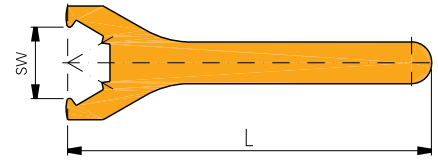
## AMF Spanner for type ER clamping nuts

**Application:**

For tightening and loosening clamping nuts.

Suitable for clamping nut type	ER 16	ER 25	ER 32	ER 40
Length L (mm)	163	203	253	285
<b>23308...</b>	Ident. No. <b>216</b>	<b>008</b>	<b>010</b>	<b>020</b>
	Unit price, € O. R.	O. R.	O. R.	O. R.

Prod. group 206



Ring profile key ER 16-25

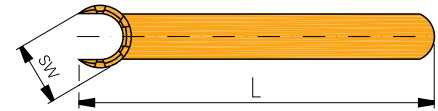
## AMF Ring profile key Mini

**Application:**

For tightening and loosening clamping nuts.

Suitable for clamping nut type	ER 16	ER 20	ER 25
Length L (mm)	115	130	143
<b>23308...</b>	Ident. No. <b>116</b>	<b>120</b>	<b>130</b>
	Unit price, € O. R.	O. R.	O. R.

Prod. group 206



Ring profile key Mini ER 16-25

## AMF Spanner with 1/2" socket

**Application:**

For tightening and loosening clamping nuts.

**Execution:**

- For NC lathes

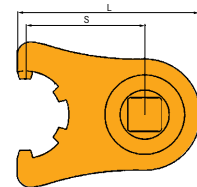
- For controlled tightening of clamping nuts using a torque wrench

**Notes:**

For suitable torque wrenches, see no. 52244 030-040 and 120-130

Suitable for clamping nut type	ER 16	ER 20	ER 32	ER 40
Length L (mm)	69	85	85	85
Length 2 S (mm)	45	60	60	60
<b>23308...</b>	Ident. No. <b>316</b>	<b>325</b>	<b>332</b>	<b>340</b>
	Unit price, € O. R.	O. R.	O. R.	O. R.

Prod. group 206



## AMF Hook wrenches With nose

**Execution:**

- Special steel
- Rounded edges
- With suspension hole

**Advantage:**

- Excellent material strength with low-tension microstructure
- Better resistance to corrosion
- Comfortable to use



Suitable for nut type	Slotted nut DIN 1804   Bearing nut DIN 981	Slotted nut DIN 1804   Bearing nut DIN 981	Slotted nut DIN 1804   Bearing nut DIN 981
Suitable for min./max. nut male thread size	40-42 mm	58-62 mm	68-75 mm
Length (mm)	170	240	240
Thickness (mm)	5	7	7
Surface	Burnished	Burnished	Burnished
<b>52100...</b>	Ident. No. <b>060</b>	<b>090</b>	<b>100</b>
	Unit price, € O. R.	O. R.	O. R.

Prod. group 532



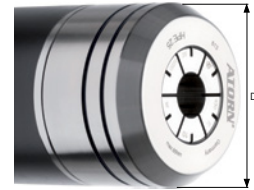
## ATORN® Standard precision clamping nut

**Application:**

For clamping the Atorn precision chuck.

**Execution:**

- Spare parts for the ATORN precision collet no. 23361 001-011 and 23761 001-011



Suitable for clamping nut type		HPE 16	HPE 25	HPE 32
Suitable for collet type		ER 16/426E	ER 25/430E	ER 32/470E
Outer Ø D (mm)		30	40	50
<b>23361...</b>	Ident. No.	<b>101</b>	<b>102</b>	<b>103</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 263

## FAHRION® PRAZISION Torque wrench adapter Accessories for no. 23360, 23361 and 23760 and 23761

**Application:**

For clamping all CENTRO P and ATORN precision collets with standard nuts in accordance with DIN 6499/ISO 15488 (ER/ESX).

**Advantage:**

- For fast and simple clamping without risk of injury
- Conventional clamping nuts can also be used for clamping



**Execution:**

- For torque wrench adapter ref. no. 960, see no. 52244 200-210; for torque wrench adapter ref. no. 962-966, see no. 52244 220-230

Suitable for clamping nut type	Tip size	DRO 30		DRO 40		DRO 42		DRO 50		DRO 63		
		<b>23360...</b> ID no.	O. R.	<b>23360...</b> ID no.	(O. R.)	<b>23360...</b> ID no.	(O. R.)	<b>23360...</b> ID no.	(O. R.)	<b>23360...</b> ID no.	(O. R.)	
HPC 16	9 x 12 mm	<b>960</b>	O. R.	-	-	-	-	-	-	-	-	
HPC 25	14 x 18 mm	-	-	<b>962</b>	(O. R.)	-	-	-	-	-	-	
ER 25	14 x 18 mm	-	-	-	-	<b>964</b>	(O. R.)	-	-	-	-	
HPC 32/ER 32	14 x 18 mm	-	-	-	-	-	-	<b>966</b>	O. R.	-	-	
HPC 40/ER 40	14 x 18 mm	-	-	-	-	-	-	-	-	<b>973</b>	(O. R.)	
											Unit price, €	

Prod. group 235

## ATORN® Intermediate sleeves



**Application:**

For reducing the clamping diameter.

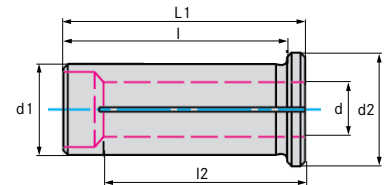
- **Ident. No. 813-855:** Without seal for ICS ref. no. 813-855
- **Ident. No. 903-955:** Sealed for ICS ref. no. 903-955

**Execution:**

- Suitable for all expansion chucks
- Ground



Ident. No. 903-955  
Sealed for IKZ



Chuck clamping Ø d1 (mm)	Clamping Ø d (mm)	Collar Ø d2 (mm)	Insertion depth l2 (mm)	Max. insert depth l (mm)	Length L1 (mm)	Concentricity tolerance (mm)	Coolant supply	<b>23336...</b> ID no.	
12	3	16	29	36	40	0.003	Yes	<b>903</b>	O. R.
12	4	16	29	36	40	0.003	Yes	<b>904</b>	O. R.
12	5	16	29	36	40	0.003	Yes	<b>905</b>	O. R.
12	6	16	36	36	40	0.003	Yes	<b>906</b>	O. R.
12	8	16	37	36	40	0.003	Yes	<b>908</b>	O. R.
20	3	25	28	54	50	0.003	No	<b>813</b>	O. R.
20	4	25	28	54	50	0.003	No	<b>814</b>	O. R.
20	5	25	28	54	50	0.003	No	<b>815</b>	O. R.
20	6	25	36	54	50	0.003	No	<b>816</b>	O. R.
20	8	25	37	54	50	0.003	No	<b>818</b>	O. R.
20	10	25	40	54	50	0.003	No	<b>820</b>	O. R.
20	12	25	45	54	50	0.003	No	<b>822</b>	O. R.
20	14	25	45	54	50	0.003	No	<b>824</b>	O. R.
20	16	25	48	54	50	0.003	No	<b>826</b>	O. R.
20	3	25	28	54	50	0.003	Yes	<b>913</b>	O. R.
20	4	25	28	54	50	0.003	Yes	<b>914</b>	O. R.
20	5	25	28	54	50	0.003	Yes	<b>915</b>	O. R.
20	6	25	36	54	50	0.003	Yes	<b>916</b>	O. R.
20	8	25	37	54	50	0.003	Yes	<b>918</b>	O. R.
20	10	25	40	54	50	0.003	Yes	<b>920</b>	O. R.
20	12	25	45	54	50	0.003	Yes	<b>922</b>	O. R.

Chuck clamping Ø d1 (mm)	Clamping Ø d (mm)	Collar Ø d2 (mm)	Insertion depth l2 (mm)	Max. insert depth l (mm)	Length L1 (mm)	Concentricity tolerance (mm)	Coolant supply	23336... ID no.	O. R.
20	14	25	45	54	50	0.003	Yes	924	O. R.
20	16	25	48	54	50	0.003	Yes	926	O. R.
32	3	36	-	61	63	0.003	No	833	O. R.
32	4	36	-	61	63	0.003	No	834	O. R.
32	5	36	-	61	63	0.003	No	835	O. R.
32	6	36	36	60	64	0.003	No	836	O. R.
32	8	36	37	60	64	0.003	No	838	O. R.
32	10	36	40	60	64	0.003	No	840	O. R.
32	12	36	45	60	64	0.003	No	842	O. R.
32	14	36	46	60	64	0.003	No	844	O. R.
32	16	36	48	60	64	0.003	No	846	O. R.
32	18	36	49	60	64	0.003	No	848	O. R.
32	20	36	50	60	64	0.003	No	850	O. R.
32	25	36	56	60	64	0.003	No	855	O. R.
32	6	36	36	64	60	0.003	Yes	936	O. R.
32	8	36	37	64	60	0.003	Yes	938	O. R.
32	10	36	40	64	60	0.003	Yes	940	O. R.
32	12	36	45	64	60	0.003	Yes	942	O. R.
32	14	36	46	64	60	0.003	Yes	944	O. R.
32	16	36	48	64	60	0.003	Yes	946	O. R.
32	18	36	49	64	60	0.003	Yes	948	O. R.
32	20	36	50	64	60	0.003	Yes	950	O. R.
32	25	36	56	64	60	0.003	Yes	955	O. R.
									Unit price, €

Prod. group 263

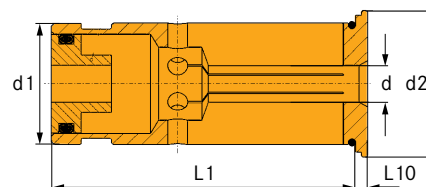
**SCHUNK** Intermediate bushes  
Sealed for IC

**Application:**  
For reducing the clamping diameter.

- Execution:**
- With adjustable longitudinal stop
  - Sealed for internal coolant supply, for reducing the clamping diameter

- Concentricity tolerance with collets is 0.003 mm
- Suitable for all expansion chucks no. 23333, 23335 and 23350

- Advantage:**
- For clamping various shank diameters with a chuck



d (mm)	Chuck clamping Ø d1 (mm)	Collar Ø d2 (mm)	Max. insert depth L1 (mm)	Collar width L10 (mm)	Coolant supply	Concentricity tolerance (mm)	23336... ID no.	O. R.
3	12	19	45	2	Yes	0.003	403	O. R.
4	12	19	45	2	Yes	0.003	404	O. R.
5	12	19	45	2	Yes	0.003	405	O. R.
6	12	19	45	2	Yes	0.003	406	O. R.
8	12	19	45	2	Yes	0.003	408	O. R.
3	20	29	50.5	2	Yes	0.003	503	O. R.
4	20	29	50.5	2	Yes	0.003	504	O. R.
5	20	29	50.5	2	Yes	0.003	505	O. R.
6	20	29	50.5	2	Yes	0.003	506	O. R.
8	20	29	50.5	2	Yes	0.003	508	O. R.
10	20	29	50.5	2	Yes	0.003	510	O. R.
12	20	29	50.5	2	Yes	0.003	512	O. R.
14	20	29	50.5	2	Yes	0.003	514	O. R.
16	20	29	50.5	2	Yes	0.003	516	O. R.
								Unit price, €

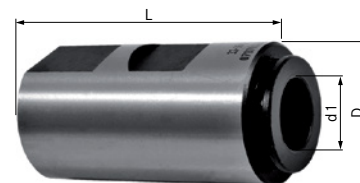
Prod. group 229

**ORION** Screw tap holder with straight shank



**Application:**  
For clamping thread cutting tools.

- Execution:**
- With female square drive to prevent twisting when clamped



Outer Ø D (mm)	Clamping Ø d1 (mm)	Square width (mm)	Length L (mm)	Coolant supply	23329... ID no.	O. R.
16	3.5	2.7	56	Yes	403	O. R.
16	4	3	56	Yes	404	(O. R.)

Outer Ø D (mm)	Clamping Ø d1 (mm)	Square width (mm)	Length L (mm)	Coolant supply	23329... ID no.	
16	4.5	3.4	56	Yes	<b>405</b>	O. R.
16	6	4.9	56	Yes	<b>406</b>	O. R.
20	7	5.5	58	Yes	<b>507</b>	O. R.
20	8	6.2	58	Yes	<b>508</b>	O. R.
20	9	7	58	Yes	<b>509</b>	O. R.
20	10	8	58	Yes	<b>510</b>	O. R.
25	11	9	66	Yes	<b>611</b>	O. R.
25	12	9	66	Yes	<b>612</b>	O. R.
32	14	11	70	Yes	<b>714</b>	O. R.
32	16	12	70	Yes	<b>716</b>	O. R.
32	18	14	70	Yes	<b>718</b>	O. R.
					Unit price, €	

Prod. group 295

### ALBRECHT APC clamping sleeves for APC precision chucks no. 23331, no. 23732

**Application:**  
For clamping tools with straight shank.

- Ground and coated for long service life
- For precision chucks APC no. 23331 and no. 23732

**Execution:**  
▪ Hardened

- Advantage:**
- With fine adjustable longitudinal stop



Ident. No. 102-114  
APC 14



Ident. No. 203-220  
APC 20

Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	23332... ID no.		Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	23332... ID no.	
APC 14	2-14 mm	2	<b>102</b>	(O. R.)	APC 20	2-20 mm	5	<b>205</b>	(O. R.)
APC 14	2-14 mm	3	<b>103</b>	O. R.	APC 20	2-20 mm	6	<b>206</b>	(O. R.)
APC 14	2-14 mm	4	<b>104</b>	O. R.	APC 20	2-20 mm	8	<b>208</b>	O. R.
APC 14	2-14 mm	5	<b>105</b>	O. R.	APC 20	2-20 mm	10	<b>210</b>	O. R.
APC 14	2-14 mm	6	<b>106</b>	O. R.	APC 20	2-20 mm	12	<b>212</b>	O. R.
APC 14	2-14 mm	8	<b>108</b>	O. R.	APC 20	2-20 mm	14	<b>214</b>	O. R.
APC 14	2-14 mm	10	<b>110</b>	O. R.	APC 20	2-20 mm	16	<b>216</b>	O. R.
APC 14	2-14 mm	12	<b>112</b>	O. R.	APC 20	2-20 mm	18	<b>218</b>	O. R.
APC 14	2-14 mm	14	<b>114</b>	O. R.	APC 20	2-20 mm	20	<b>220</b>	O. R.
APC 20	2-20 mm	3	<b>203</b>	(O. R.)					
APC 20	2-20 mm	4	<b>204</b>	(O. R.)					
					Unit price, €				

Prod. group 209

### ALBRECHT APC clamping sleeves, sealed for inner cooling for APC precision chucks no. 23331, no. 23732



**Application:**  
For clamping tools with straight shank

- Ground and coated for long service life

**Execution:**  
▪ Hardened

- Advantage:**
- With fine adjustable longitudinal stop



Ident. No. 223-240  
APC 20 sealed for ICS



Ident. No. 123-134  
APC 14 sealed for ICS

Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	Coolant supply	23332... ID no.		Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	Coolant supply	23332... ID no.	
APC 14	3-14 mm	3	Yes	<b>123</b>	(O. R.)	APC 14	3-14 mm	10	Yes	<b>130</b>	(O. R.)
APC 14	3-14 mm	4	Yes	<b>124</b>	(O. R.)	APC 14	3-14 mm	12	Yes	<b>132</b>	(O. R.)
APC 14	3-14 mm	5	Yes	<b>125</b>	(O. R.)	APC 14	3-14 mm	14	Yes	<b>134</b>	(O. R.)
APC 14	3-14 mm	6	Yes	<b>126</b>	(O. R.)	APC 20	3-20 mm	3	Yes	<b>223</b>	(O. R.)
APC 14	3-14 mm	8	Yes	<b>128</b>	(O. R.)	APC 20	3-20 mm	4	Yes	<b>224</b>	(O. R.)

Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	Coolant supply	23332... ID no.
APC 20	3-20 mm	5	Yes	225 (O. R.)
APC 20	3-20 mm	6	Yes	226 (O. R.)
APC 20	3-20 mm	8	Yes	228 (O. R.)
APC 20	3-20 mm	10	Yes	230 (O. R.)
APC 20	3-20 mm	12	Yes	232 (O. R.)
APC 20	3-20 mm	14	Yes	234 (O. R.)
APC 20	3-20 mm	16	Yes	236 (O. R.)
APC 20	3-20 mm	18	Yes	238 (O. R.)

Prod. group 209

Suitable for jaw chuck	Min./max. clamping range	Clamping Ø (mm)	Coolant supply	23332... ID no.
APC 20	3-20 mm	20	Yes	240 (O. R.)
APC 25	16-32 mm	16	Yes	276 (O. R.)
APC 25	16-32 mm	18	Yes	278 (O. R.)
APC 25	16-32 mm	20	Yes	280 (O. R.)
APC 25	16-32 mm	22	Yes	282 (O. R.)
APC 25	16-32 mm	25	Yes	285 (O. R.)
APC 25	16-32 mm	32	Yes	292 (O. R.)

Unit price, €

## ALBRECHT AMC clamping sleeves



### Application:

For clamping tools with straight shank.

- Ground and coated for long service life
- For AMC clamping chuck extension no. 23334

### Execution:

- Hardened



Ident. No. 401-406



Ident. No. 411  
Sealed for ICS, ref. no. 411-416

Suitable for jaw chuck	Clamping Ø (mm)	Coolant supply	23332... ID no.
AMC	1	-	401 (O. R.)
AMC	2	-	402 (O. R.)
AMC	3	-	403 (O. R.)
AMC	4	-	404 (O. R.)
AMC	6	-	406 O. R.
AMC	1	Internal axial	411 (O. R.)

Prod. group 209

Suitable for jaw chuck	Clamping Ø (mm)	Coolant supply	23332... ID no.
AMC	2	Internal axial	412 (O. R.)
AMC	3	Internal axial	413 (O. R.)
AMC	4	Internal axial	414 (O. R.)
AMC	5	Internal axial	415 (O. R.)
AMC	6	Internal axial	416 (O. R.)

Unit price, €

## Coolant transfer pipe

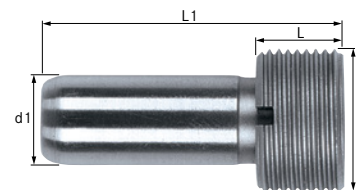
for HSK tool chucks

### Application:

For coolant transfer for HST tool chucks.

Tool holding device	HSK 63	HSK 100
Pipe Ø d1 (mm)	12	16
Thread length L (mm)	11.5	15.5
Length L1 (mm)	36.2	43.6
Suitable for thread g	M18 x 1	M24 x 1.5
23715... Ident. No.	050	070
Unit price, €	O. R.	O. R.

Prod. group 290



## diebold Socket wrench for HST for coolant transfer pipe



### Application:

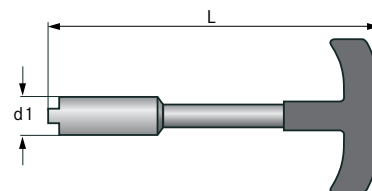
For securing coolant transfer pipe.

### Execution:

- For coolant transfer pipe

Tool holding device	HSK A63	HSK A100
Ø d1 (mm)	16.5	22
Length L (mm)	122	141
23716... Ident. No.	050	070
Unit price, €	O. R.	O. R.

Prod. group 290

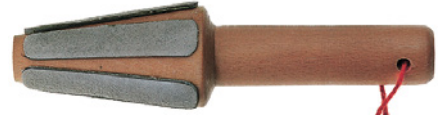


## ORION® Cone cleaner

### Application:

For cleaning tool chucks on machine spindles, tapered sleeves or taper gauges.

- No. 23500 100-23500 130: ST taper shank
- No. 23780: Hollow shank taper (HST) for taper and face



SK

### Execution:

- No. 23500 010-23500 060: MT taper shank

Suitable for tool holding device	23500... ID no.	23780... ID no.	Suitable for tool holding device	23500... ID no.	23780... ID no.
MT 1	010 O. R.	-	SK 60	130 O. R.	-
MT 2	020 O. R.	-	HSK 32/A-C	-	020 O. R.
MT 3	030 O. R.	-	HSK 40/A-C	-	030 O. R.
MT 4	040 O. R.	-	HSK 50/A-C	-	040 O. R.
MT 5	050 O. R.	-	HSK 63/A-C	-	050 O. R.
MT 6	060 O. R.	-	HSK 80/A-C	-	060 O. R.
SK 30	100 O. R.	-	HSK 100/A-C	-	070 O. R.
SK 40	110 O. R.	-			
SK 50	120 O. R.	-			

Unit price, €

Prod. group 206



## Data holders identification with system in tool cabinet

### Application:

For labelling tools.

- Assignment of tools using colour coding possible
- Visually clean tool storage
- Universal holder (VDI) with two powerful magnets

### Advantage:

- Minimization of the set-up time
- Avoiding errors for pre-existing tool compilations
- No additional measurements necessary

### Execution:

- Tool data holder made of plastic



Ident. No. 030-035

Systematic tool identification ① Before – ② After

Material	Plastic		Plastic		Plastic	
	SK 40/HSK 63		SK 50/HSK 100		VDI/ Universal	
Suitable for tool holding device	23698... ID no.		23698... ID no.		23698... ID no.	
Colour	Blue	010 O. R.	020 O. R.	030 O. R.	030 O. R.	030 O. R.
	Yellow	011 O. R.	021 O. R.	031 O. R.	031 O. R.	031 O. R.
	Green	012 O. R.	022 O. R.	032 O. R.	032 O. R.	032 O. R.
	Red	013 O. R.	023 O. R.	033 O. R.	033 O. R.	033 O. R.
	Brown	014 O. R.	024 O. R.	034 O. R.	034 O. R.	034 O. R.
	Grey	015 O. R.	025 O. R.	035 O. R.	035 O. R.	035 O. R.

Unit price, €

Prod. group 206

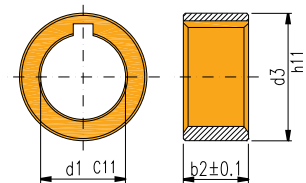
## ORION® Mill arbour rings for milling machine arbours

DIN 2084-1

### Execution:

- Hardened, Vickers hardness at least 590 HV 30 (54 HRC)
- Type B

- Case-hardening steel
- Lathed



Inner Ø d1 (mm)	Outer Ø d3 (mm)	Form	Width (mm)	23140... ID no.	Inner Ø d1 (mm)	Outer Ø d3 (mm)	Form	Width (mm)	23140... ID no.
13	22	B	2	005 O. R.	16	27	B	5	130 O. R.
13	22	B	3	045 O. R.	16	27	B	6	170 O. R.
13	22	B	4	085 O. R.	16	27	B	10	210 O. R.
13	22	B	5	125 O. R.	16	27	B	20	250 O. R.
13	22	B	6	165 O. R.	22	34	B	2	015 O. R.
13	22	B	10	205 O. R.	22	34	B	3	055 O. R.
16	27	B	2	010 O. R.	22	34	B	4	095 O. R.
16	27	B	3	050 O. R.	22	34	B	5	135 O. R.
16	27	B	4	090 O. R.	22	34	B	6	175 O. R.

Inner Ø d1 (mm)	Outer Ø d3 (mm)	Form	Width (mm)	23140... ID no.	O. R.
22	34	B	10	215	O. R.
22	34	B	20	255	O. R.
22	34	B	30	295	O. R.
27	41	B	2	020	O. R.
27	41	B	3	060	O. R.
27	41	B	4	100	O. R.
27	41	B	5	140	O. R.
27	41	B	6	180	O. R.
27	41	B	10	220	O. R.
27	41	B	20	260	O. R.
27	41	B	30	300	O. R.
32	47	B	2	025	O. R.
32	47	B	3	065	O. R.
32	47	B	4	105	O. R.
32	47	B	5	145	O. R.
32	47	B	6	185	O. R.
32	47	B	10	225	O. R.
32	47	B	20	265	O. R.

Inner Ø d1 (mm)	Outer Ø d3 (mm)	Form	Width (mm)	23140... ID no.	O. R.
32	47	B	30	305	O. R.
40	55	B	2	030	O. R.
40	55	B	3	070	O. R.
40	55	B	4	110	O. R.
40	55	B	5	150	O. R.
40	55	B	6	190	O. R.
40	55	B	10	230	O. R.
40	55	B	20	270	O. R.
40	55	B	30	310	O. R.
50	69	B	2	035	O. R.
50	69	B	3	075	O. R.
50	69	B	4	115	O. R.
50	69	B	5	155	O. R.
50	69	B	6	195	O. R.
50	69	B	10	235	O. R.
50	69	B	20	275	O. R.
50	69	B	30	315	O. R.

Prod. group 206

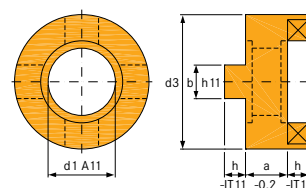
DIN 6366

**ATORN®** Standard design driving rings  
for shell end mill arbours no. 23155-23159 and 23168

**Execution:**

- Hardened, at least 56 HRC
- Parallelism of surfaces a = 0.004 mm, polished

- Case-hardening steel with tensile strength at core of at least 800 N/mm after case hardening



Inner Ø d1 (mm)	Outer Ø d3 (mm)	Follower width a (mm)	Follower height h (mm)	Follower length b (mm)	23200... ID no.	O. R.
16	32	10	5	8	020	O. R.
22	40	12	5.6	10	030	O. R.
27	48	12	6.3	12	040	O. R.
32	58	14	7	14	050	O. R.
40	70	14	8	16	060	O. R.

Prod. group 206

Unit price, €

**AMF** Key  
For shell end mill arbours

**Application:**

For tightening and loosening cutter retaining screws.

**Execution:**

- Heat-treated and welded to at least 1200 N/mm



Suitable for milling cutter mandrel Ø (mm)	13	16	22	27	32	40	50
Length (mm)	160	180	200	225	250	280	315
Head height h (mm)	16	20	25	32	36	40	45
23190... Ident. No.	013	016	022	027	032	040	050
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 206

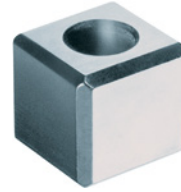
Driving keys

Execution:

- Hardened, at least 56 HRC
- Surfaces polished
- Case-hardening steel with tensile strength at core of at least 800 N/mm after case hardening

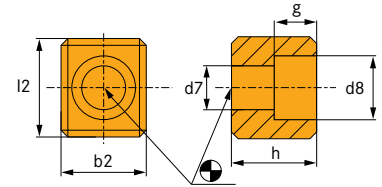
Notes:

Other versions and sizes on request.



Suitable for tool holding device	SK 30	SK 40	SK 50
Width b2 (mm)	15.9	15.9	25.4
Length l2 (mm)	16.5	19.5	26.5
Height H (mm)	16	16	25
Suitable screw ISO 4762	M6 x 16 mm	M6 x 16 mm	M8 x 20 mm
<b>23210...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>030</b> O. R.

Prod. group 206

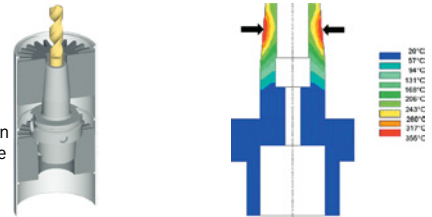


**i** Thermal tensioning of tools

ThermoGrip®

ThermoGrip® stands for the following properties

- Tools can be changed in a matter of seconds thanks to inductive or electrical heating with high energy density
- ThermoGrip® shrink-fit chucks are made of heat-resistant special steel. They have particularly high durability and
- dimensional stability thanks to specialist tempering methods. The shrink-fit procedure is reversible and can be repeated as often as required. ThermoGrip® shrink-fit chucks retain their concentricity, clamping force and elasticity even after more than 5000 shrink-fit cycles
- HSS and HM shafts can be shrink-fit in ThermoGrip® chucks
- When using the ISG 3200 inductive shrinking unit, the shrinking procedure takes a maximum of 10 s
- Only the tip of the tool is heated. This local thermal discharge with minimal heating of the chuck body keeps the cooling time down to < 30 s



**diebold** ThermoGrip® Inductive micro shrinking devices, MS 502

Application:

For shrinking carbide shanks.

- Chuck with narrow geometry, diameter 3-20 mm

Execution:

- For narrow, thin-walled and extremely short shrink-fit chucks
- Also for screwing on standard chucks up to a diameter of 16 mm
- Variable generator output
- Chuck with standard geometry, diameter 3-16 mm

Advantage:

- The tool is cooled down quickly and effectively thanks to the patented air flow.
- Safe and effective overheating protection

scope of supply and services:

Device incl. 1 pair of protective gloves and 1 support plate.



Model	MS 502	
Operating type	Manual	
Nominal voltage (V/AC)	220	
Max. current consumption (A)	16	
Power rating (kW)	3	
Width (mm)	220	
Depth (mm)	350	
Height (mm)	520	
Weight without coolant (kg)	15	
<b>23400...</b>	Ident. No. Unit price, €	<b>021</b> (O. R.)*

Prod. group 226

Product video: use your mobile phone to scan the QR code.

## diebold Inductive shrinking devices, HS 1100

**Application:**

For shrinking HSS and cemented carbide steel shanks in a diameter range of 3-32 mm and 6-32 mm (HSS).

- The horizontal longitudinal adjustment can be retrofitted at any time.
- All shrink-fit chucks from all manufacturers up to a length of 420 mm can be shrunk.

**Execution:**

- It is possible to mount HST40 to HST100 and ST30/BT30 to ST50/BT50 tools thanks to the modular design.
- Integrated removal device for broken tools

**scope of supply and services:**

Device with inductive coil, 5 replacement discs and 1 pair of protective gloves.



Model	HS 1100	
Operating type	Manual	
Nominal voltage (V/AC)	400	
Max. current consumption (A)	16	
Power rating (kW)	11	
Width (mm)	600	
Depth (mm)	600	
Height (mm)	357	
Weight without coolant (kg)	36	
23400...	Ident. No.	022
	Unit price, €	(O. R.)*

Prod. group 226

## ATORN® Tool mounting device 1 system, all options

**Application:**

For mounting and removing tools of all kinds and in up to eight different positions.

- Exchangeable brass inserts to prevent wear on tool shanks

**Execution:**

- Quick-change assembly system for all assembly systems without additional tools
- Effortless and tool-safe assembly of tools
- Can be swivelled and indexed to allow the optimal working position to be reached

**Advantage:**

- Accident-proof and convenient
- Minimal space usage
- Shortens tooling time

**Notes:**

Tool chucks for tool mounting device ref. no. 23912130-550



Swivelling	4 x 90°	8 x 45°
23912...	Ident. No. 010	020
	Unit price, € O. R.	O. R.

Prod. group 280

## ATORN® Tool chuck holder for tool mounting device no. 23910 010-020 1 system, all options

**Application:**

For holding tool mounting device no. 23910 010-020.



Ident. No. 130-150



Ident. No. 240-300



Ident. No. 304-308



Ident. No. 530-550



ISO	7388-2	7388-2	7388-2	-	-	-	26623-1	26623-1
Standard shank design	MAN 6987 1-1   JIS B 6339 MAS BT	MAN 69871-1   JIS B 6339 MAS BT	MAN 69871-1   JIS B 6339 MAS BT	MAN 69880-1	MAN 69880-1	MAN 69880-1	-	-
Suitable for tool holding device	SK 40	SK 50	SK 30	VDI 50	VDI 40	VDI 30	Capto C4	Capto C5
23912...	Ident. No. Unit price, €	<b>140</b> O. R.	<b>150</b> O. R.	<b>130</b> O. R.	<b>550</b> O. R.	<b>540</b> O. R.	<b>530</b> O. R.	<b>304</b> (O. R.)
ISO	26623-1	26623-1	-	-	-	-	-	-
Standard shank design	-	-	MAN 69893-1	MAN 69893-1	MAN 69893-1	MAN 69893-1	MAN 69893-1	-
Suitable for tool holding device	Capto C6	Capto C8	HSK A40	HSK A50	HSK A63	HSK A80	HSK A100	KM 63
23912...	Ident. No. Unit price, €	<b>306</b> O. R.	<b>308</b> O. R.	<b>240</b> O. R.	<b>250</b> O. R.	<b>263</b> O. R.	<b>280</b> O. R.	<b>300</b> O. R.

Prod. group 280

## ORION® 2-D mechanical edge finder for milling and jig boring machines

### Application:

The edge finder is used to accurately determine the edges of workpieces and bore centre points in relation to the working spindle during milling, for example.

- Repeatability of approx. 0.01 mm
- Hard chrome-plated probe head made from anti-magnetic stainless steel

**scope of supply and services:**  
Edge finder in wooden case



Ident. No. 030

### Execution:

- For use with speeds from 400 - 600 rpm

Sensor design	Single 2-D probe	Offset 2-D probe
Clamp in shank Ø (mm)	10	10
Probe head Ø (mm)	10	4/10
Repeat accuracy (mm)	0.01	0.01
23921...	Ident. No. Unit price, €	<b>030</b> O. R.
		<b>050</b> O. R.

Prod. group 227



## ORION® Edge finder spring

### Application:

Spare spring with grooved pin. Accessories ref. no. 23921030-050.

23921...	Ident. No. Unit price, €	<b>500</b> O. R.
----------	-----------------------------	---------------------

Prod. group 227



## ORION® Edge finder with light display and spring feeler tang

### Application:

For precise alignment of workpiece reference surfaces or edges to determine the bore centre points centrally to the working spindle.

### Execution:

- **Ident. No. 005-010:** Functional components are hardened and ground

### Ident. No. 011:

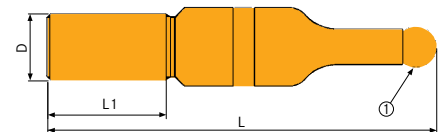
- Functional components are hardened and polished
- With acoustic signal



Ident. No. 005



Ident. No. 010-011



① Spring ball Ø 10,000

Sensor design	2-D	2-D	2-D audible
Clamping shank Ø D (mm)	16	20	20
Probe head Ø (mm)	10	10	10
Clamping length L1 (mm)	35	45	45
Length L (mm)	99	92	119
Reading	Light indicator	Light indicator	Audible light indicator
Repeat accuracy (+/-) (mm)	0.01	0.01	0.01
23923...	Ident. No. Unit price, €	<b>005</b> O. R.	<b>010</b> O. R.
		<b>011</b> O. R.	<b>011</b> O. R.

Prod. group 298

## ORION® Edge finder with light display and spring feeler tang

**Application:**

For precise alignment of workpiece reference surfaces or edges to determine the bore centre points centrally to the working spindle.

**Execution:**

- Functional components are hardened and polished
- Ident. No. 025: With acoustic signal

**Advantage:**

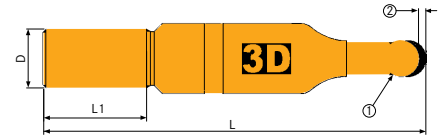
- 3-D model also suitable for moving the workpiece in the Z direction (vertically)



Ident. No. 020-025



Ident. No. 015



- ① Spring ball Ø 10,000
- ② Tracer path approx. 3 mm

Sensor design		3-D	3-D	3-D audible
Probe head Ø (mm)		10	10	10
Clamping shank Ø D (mm)		16	20	20
Clamping length L1 (mm)		35	45	45
Length L (mm)		111	106	131
Reading		Light indicator	Light indicator	Audible light indicator
Repeat accuracy (+/-) (mm)		0.01	0.01	0.01
23923...	Ident. No. Unit price, €	015 O. R.	020 O. R.	025 O. R.

Prod. group 298

## ATORN® 3-D edge finder With dial gauge



**Application:**

Suitable for defining and setting workpiece reference points in all 3 axes (X, Y and Z) on all milling machines and machining centres. The workpiece is measured in any direction with the measuring probe until both indicators are at '0'.

- IP 67 degree of protection: temporary immersion in water possible and dust-proof according to DIN EN 60529

**Advantage:**

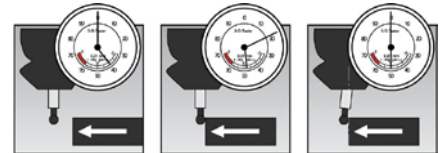
- Metallic housing with very good visibility of readings
- Can be used with all tool and eroding machines
- Easy reading off of actual value

**Execution:**

- Direct path measurement along Z axis, can be used vertically and horizontally, concentricity can be readjusted via 4 screws
- Nominal breaking point on the measuring probe prevents damage to the workpiece or dial gauge

**scope of supply and services:**

Incl. ref. no. 23924004



Housing width (mm)		65	65
Probe head Ø (mm)		4	4
Clamping shank Ø D (mm)		-	20
Meter Ø (mm)		57	57
Scale value (mm)		0.01	0.01
Sensor insert length (mm)		33	33
Tool holding device		SK 40	-
Repeat accuracy (+/-) (mm)		0.01	0.01
IP protection class		IP 67	IP 67
23924...	Ident. No. Unit price, €	020 O. R.	010 O. R.

Prod. group 234

## ATORN® Feeler insert

**Application:**

Replacement probe insert for 3-D edge finder, ref. no. 23924 010-020.

**Execution:**

- Nominal breaking point on measuring probe prevents damage to 3-D edge finder

Probe head Ø (mm)		4	8
Sensor insert length (mm)		33	75
Repeat accuracy (+/-) (mm)		0.01	0.01
23924...	Ident. No. Unit price, €	004 O. R.	008 O. R.

Prod. group 234

Clamping Technology

## ORION® Zero adjustment device with dial gauge

### Application:

The device is placed on the workpiece. Using the machine spindle, the cutting tool is moved up to the probe until the indicator is at zero for the first time. Now the reference dimension for the distance from the workpiece of 100 mm has been reached.

### Execution:

- Height adjustment gauge to determine position of workpiece surface in the Z direction on milling machines and lathes, can also be used horizontally

Scale value (mm)		0.01
Reference dimension (mm)		100
Repeat accuracy (+/-) (mm)		0.01
<b>23931...</b>	Ident. No.	<b>010</b>
	Unit price, €	O. R.

Prod. group 227



## TSCORN Zero adjustment device, mechanical with dial gauge

### Application:

For accurately determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines. The device is placed on the workpiece. It is then moved carefully towards the device with the spindle stationary until the dial gauge shows '0'. The reference dimension of 50 mm is now reached. Allowance has been made for a safety spring travel of approx. 0.5 mm for going beyond the 50 mm.

### Execution:

- Zero point probe for improved guidance, for even more precise determination of the position of the workpiece surface in the Z direction on milling machines and lathes.
- Made of steel
- With dial gauge
- Ident. No. 020:**
  - No. 23932 020, magnetic: in order to also be able to mount the zero adjustment device on the

side, a version with a built-in magnet is available for delivery.

- no. 23932 020 made of stainless steel, probe bolt with two feeler diameters to prevent any tilting of the contact surface, precision-ground, inclined contact surface for the dial gauge, enhanced repeatability.

### scope of supply and services:

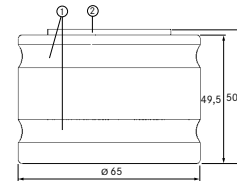
Zero adjustment device in a wooden case with serial number and test certificate



Ident. No. 010



Ident. No. 020



- ① = Gripping grooves
- ② = Spring-mounted button

Version	Steel	Magnetic
Scale value (mm)	0.01	0.01
Reference dimension (mm)	50	50
Repeat accuracy (+/-) (mm)	0.01	0.01
<b>23932...</b>	Ident. No.	<b>020</b>
	Unit price, €	O. R.

Prod. group 227

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**ORION® Zero adjustment device, stainless steel version**  
With dial gauge

**Application:**

For accurately determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines. The device is placed on the workpiece. It is then moved carefully towards the device with the spindle stationary until the dial gauge shows '0'. The reference dimension of 50 mm is now reached. Allowance has been made for a safety spring travel of approx. 0.5 mm for going beyond the 50 mm.

- Made of stainless steel, probe bolt with two feeler diameters to prevent any tilting of the contact surface, precision-ground, inclined contact surface for the dial gauge, enhanced repeatability.
- Zero point probe for improved guidance, for even more precise determination of the position of the workpiece surface in the Z direction on milling machines and lathes.
- Material: stainless steel



**Execution:**

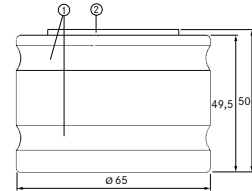
- With dial gauge

**scope of supply and services:**

Zero adjustment device in a wooden case with serial number and test certificate

Scale value (mm)		0.01
Reference dimension (mm)		50
Repeat accuracy (+/-) (mm)		0.005
<b>23934...</b>	Ident. No.	<b>010</b>
	Unit price, €	O. R.

Prod. group 227



① = Gripping grooves  
② = Spring-mounted button

**ORION® Zero adjustment device, optical, 50 mm (magnetic)**

**Application:**

For determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines

60 mm has been reached. Allowance has been made for a safety spring travel of approx. 3 mm for going beyond the 60 mm. A magnetic version can be supplied for horizontal use.

**Execution:**

- The device is placed on the workpiece. The spindle is now moved carefully up to the device. As soon as the LED lights up, the reference dimension of

- Spare batteries, no. 56815 200

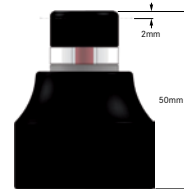
**scope of supply and services:**

Zero point adjustment device with test certificate



Version		Steel	Magnetic
Shaft Ø (mm)		39	39
Probe head Ø (mm)		19	19
Reference dimension (mm)		50	50
Repeat accuracy (+/-) (mm)		0.01	0.01
<b>23933...</b>	Ident. No.	<b>020</b>	<b>030</b>
	Unit price, €	O. R.	O. R.

Prod. group 227



**diebold Test arbours and check mandrels**  
Check mandrels hollow-drilled in stages

**Application:**

For checking concentricity and alignment of machine spindles.

- Material: Case-hardening steel, tensile strength at the core of at least 800 N/mm

**Execution:**

- Concentricity tolerance < 0.003 mm
- Case-hardened, 670 ± 40 HV (56+4 HRC). Taper and shank polished.

**scope of supply and services:**

In wooden box with test report

**Notes:**

- \* With annular groove



Tool holding device	SK 40	SK 50	SK 40
Standard shank design	DIN 69871-1 A	DIN 69871-1 A	DIN 2080
Outer Ø (mm)	40	40	40
Projecting length (mm)	320	320	320
<b>23100...</b>	Ident. No.	<b>510</b>	<b>801</b>
	Unit price, €	O. R.	O. R.

Prod. group 2AB

## diebold Test arbours and check mandrels

**Application:**

For checking concentricity and alignment of machine spindles.

the end of the taper for measurement in 0°, 90°, 180° and 270° positions.

- Material: Case-hardening steel, tensile strength at the core of at least 800 N/mm

**Execution:**

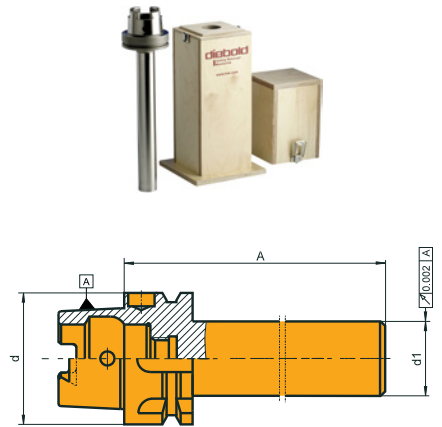
- Concentricity tolerance < 0.003 mm
- Hollow shank taper in accordance with DIN 69893-1 type A, hollow-drilled with 4 grooves on

**scope of supply and services:**

In wooden box with test report

Tool holding device	HSK A40	HSK A50	HSK A63	HSK A80	HSK A100
Outer Ø (mm)	24	32	40	40	40
Projecting length (mm)	180	236	346	346	349
23750...	Ident. No. <b>030</b>	<b>040</b>	<b>050</b>	<b>060</b>	<b>070</b>
	Unit price, € (O. R.)	(O. R.)	O. R.	(O. R.)	O. R.

Prod. group 290



## ORION® Fixed centring points With full point

DIN 806

**Application:**

For centring and supporting long and narrow workpieces on lathes and grinding machines.

- Made of tool steel
- Fully hardened and ground

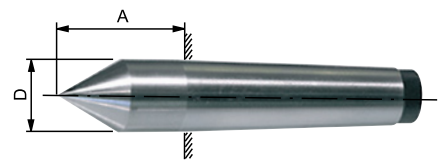
**Execution:**

- Tip angle 60°

**Notes:**  
Centring points in special design on request.

Morse taper size	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	36	44	57.5	70.5
Outer Ø D (mm)	18	24.1	31.6	44.7
22104...	Ident. No. <b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>
	Unit price, € (O. R.)	(O. R.)	O. R.	O. R.

Prod. group 211



## ORION® Fixed centring points Carbide-tipped point

DIN 806

**Application:**

For centring and supporting long and narrow workpieces on lathes and grinding machines.

- Precision-ground

**Execution:**

- Tip angle 60°
- Carbide-tipped

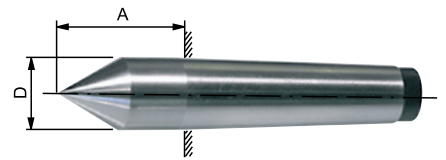
**Advantage:**

- Wear-resistant cemented carbide tip

**Notes:**  
Centring points in special design on request.

Morse taper size	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	36	44	57.5	70.5
Outer Ø D (mm)	18	24.1	31.6	44.7
22107...	Ident. No. <b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>
	Unit price, € (O. R.)	(O. R.)	O. R.	O. R.

Prod. group 211



## ORION® Fixed centring points With half point

DIN 806

**Application:**

For centring and supporting long and narrow workpieces on lathes and grinding machines.

**Advantage:**

- Very good accessibility to workpiece
- Wear-resistant cemented carbide tip

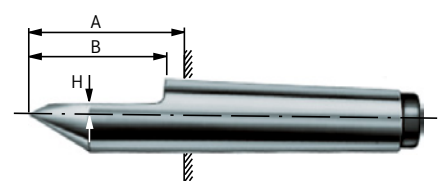
**Execution:**

- Tip angle 60°
- Carbide-tipped
- Precision-ground

**Notes:**  
Centring points in special design on request.

Morse taper size	MK 2	MK 3	MK 4
Programming dimension A (mm)	36	44	57.5
Outer Ø D (mm)	18	24.1	31.6
Flattening length B (mm)	30	38	50
Flattening height H (mm)	4	6	7.5
22109...	Ident. No. <b>020</b>	<b>030</b>	<b>040</b>
	Unit price, € (O. R.)	(O. R.)	(O. R.)

Prod. group 211



**BRUCKNER** Fixed centring points  
 With full 60° point and safety core

DIN 806

**Application:**  
 For centring and supporting long and narrow workpieces on lathes and grinding machines.

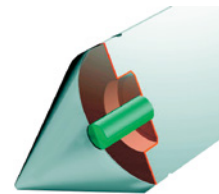
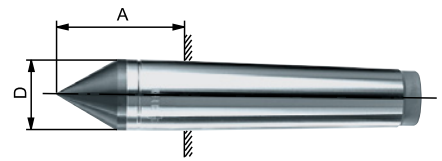
- Post grinding groove marks end of use of centring point
- With safety core

**Execution:**

- Tip angle 60°
- Made from solid carbide
- Concentricity tolerance on cemented carbide ≤ 0.8 µm

**Advantage:**

- Wear-resistant cemented carbide tip
- The safety core prevents the cemented carbide from slipping off with the clamped workpiece, the consequence of which would be major damage.



Safety core

Morse taper size	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	46	69	57.5	70.5
Outer Ø D (mm)	18	24.1	31.6	18
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008
22110...	Ident. No. 020	030	040	050
	Unit price, € O. R.	O. R.	O. R.	O. R.

Prod. group 2AA

Clamping Technology

**BRUCKNER** Fixed centring points  
 With full point

DIN 806

**Application:**  
 For centring and supporting long and narrow workpieces on lathes and grinding machines.

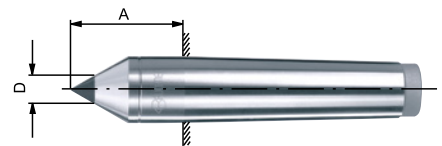
- Carbide-tipped
- Concentricity tolerance on cemented carbide ≤ 0.8 µm
- Precision machining to roughing

**Execution:**

- Tip angle 60°
- Taper hardened and precision-ground

**Advantage:**

- Wear-resistant cemented carbide tip



Morse taper size	MK 1	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	26.5	36	44	57.5	70.5
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008	0.008
22112...	Ident. No. 010	020	030	040	050
	Unit price, € (O. R.)	O. R.	O. R.	O. R.	(O. R.)

Prod. group 2AA

**BRUCKNER** Fixed centring points  
 With half and flattened point

DIN 806

**Application:**  
 For centring and supporting long and narrow workpieces on lathes and grinding machines.

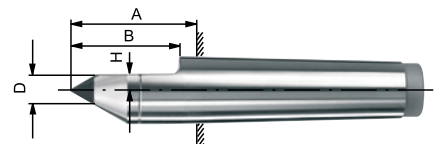
- Carbide-tipped
- Concentricity tolerance on cemented carbide ≤ 0.8 µm

**Execution:**

- Tip angle 60°
- Taper hardened and precision-ground

**Advantage:**

- Very good accessibility to workpieces
- Wear-resistant cemented carbide tip



Morse taper size	MK 1	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	26.5	36	44	57.5	70.5
Flattening length B (mm)	22	30	38	50	63
Flattening height H (mm)	4	4	6	7.5	9.5
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008	0.008
22113...	Ident. No. 010	020	030	040	050
	Unit price, € O. R.	O. R.	O. R.	O. R.	(O. R.)

Prod. group 2AA

**BRUCKNER** Fixed centring points  
 With half and flattened point

DIN 806 HE

**Application:**

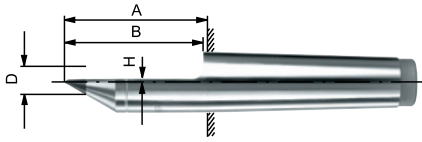
For centring and supporting long and narrow workpieces on lathes and grinding machines.

**Execution:**

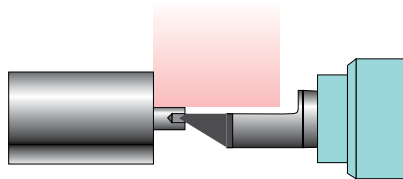
- Tip angle 60°
- Taper hardened and precision-ground

▪ Carbide-tipped

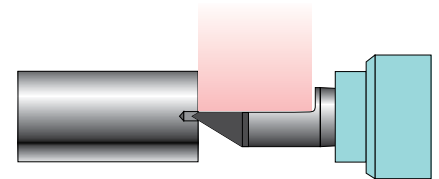
- Concentricity tolerance  $\leq 0.8 \mu\text{m}$
- For flat grinding



No. 22114



Carbide centring tip, extremely flattened and extended for smaller diameters and with short shoulder or surface grinding.



Morse taper size	MK 2	MK 2	MK 3	MK 3	MK 3	MK 4	MK 4	MK 4
Programming dimension A (mm)	46	46	69	69	69	77.5	77.5	77.5
Flattening length B (mm)	40	40	63	63	63	70	70	70
Flattening height H (mm)	1.5	2.5	1.5	2.5	4	1.5	2.5	4
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
<b>22114...</b>	Ident. No. <b>020</b>	<b>021</b>	<b>030</b>	<b>031</b>	<b>032</b>	<b>040</b>	<b>041</b>	<b>042</b>
	Unit price, € (O. R.)	(O. R.)	O. R.	O. R.	(O. R.)	(O. R.)	(O. R.)	O. R.

Prod. group 2AA

**BRUCKNER** Fixed centring points  
 With full point and draw-off nut

DIN 807

**Application:**

For centring workpieces on lathes, grinding machines and radial drilling machines.

▪ Taper fully hardened and precision-ground

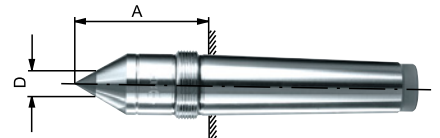
- Carbide-tipped
- Concentricity tolerance  $\leq 0.8 \mu\text{m}$

**Execution:**

- Tip angle 60°
- With thread for draw-off nut

**scope of supply and services:**

Supplied without draw-off nut



Morse taper size	MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)	48	57	72.5	87.5
Nut for removing spindles	M22 x 1.5	M27 x 1.5	M36 x 1.5	M48 x 1.5
Concentricity tolerance (mm)	0.008	0.008	0.008	0.008
<b>22121...</b>	Ident. No. <b>120</b>	<b>130</b>	<b>140</b>	<b>150</b>
	Unit price, € (O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 2AA

**BRUCKNER** Draw-off nut for fixed centring points  
 carbide-tipped, concentricity tolerance  $< 0.8 \mu\text{m}$

**Application:**

Draw-off nut for no. 22121

Morse taper size	MK 2	MK 3	MK 4	MK 5
Nut for removing spindles	M22 x 1.5	M27 x 1.5	M36 x 1.5	M48 x 1.5
<b>22122...</b>	Ident. No. <b>120</b>	<b>130</b>	<b>140</b>	<b>150</b>
	Unit price, € (O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 2AA



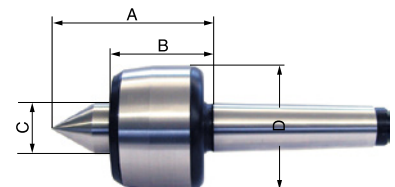
**ORION** Revolving lathe points  
 with extended moving point

**Execution:**

- Tip angle 60°
- Moving point is hardened and can be reground multiple times

**Advantage:**

- Precision roller bearings ensure a high level of concentricity
- Special seal prevents the ingress of dirt and coolant.
- Maintenance-free owing to permanent lubrication



Morse taper size		MK 1	MK 2	MK 3	MK 4	MK 5
Programming dimension for housing B (mm)		43.5	41	48.5	61.5	78.5
Programming dimension A (mm)		60.5	65	79.5	103	129
Concentricity tolerance (mm)		0.01	0.005	0.005	0.005	0.005
Max. workpiece weight (kg)		100	200	500	800	2000
Max. rotation speed (U/min(rpm))		7000	7000	5000	3800	3000
Housing Ø D (mm)		36	45	60	70	90
Point Ø C (mm)		15	20	25	32	40
Angle (Degree)		60	60	60	60	60
<b>22124...</b>	Ident. No. Unit price, €	<b>110</b> O. R.	<b>120</b> O. R.	<b>130</b> O. R.	<b>140</b> O. R.	<b>150</b> O. R.

Prod. group 211

## ROHM Revolving centring points With impact absorption

**Application:**  
For fine turning, rough machining and copying on lathes.

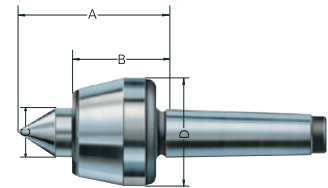
**Execution:**

- Tip angle 60°
- Bearings supported on a spring pack for impact absorption
- Body and moving point are hardened and polished
- Moving point can be reground multiple times

▪ For absorbing impact loads and compensating for linear expansion.

**Advantage:**

- Special seal prevents the ingress of dirt and coolant.
- Precision roller bearings ensure a high level of concentricity
- Maintenance-free owing to permanent lubrication



Morse taper size		MK 1	MK 2	MK 3	MK 3	MK 4	MK 5	MK 6
Programming dimension A (mm)		60.5	65	70.5	79.5	102.5	129	152
Programming dimension for housing B (mm)		43.5	41	43	48.5	61.5	78.5	94.5
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005	0.005	0.005	0.01
Max. workpiece weight (kg)		100	200	400	500	800	2000	3500
Max. rotation speed (U/min(rpm))		7000	7000	6300	5000	3800	3000	2600
Housing Ø D (mm)		36	45	50	60	70	90	105
Point Ø C (mm)		15	20	22	25	32	40	50
Angle (Degree)		60	60	60	60	60	60	60
<b>22126...</b>	Ident. No. Unit price, €	<b>010</b> O. R.	<b>020</b> O. R.	<b>030</b> O. R.	<b>035</b> O. R.	<b>040</b> O. R.	<b>050</b> O. R.	<b>060</b> O. R.

Prod. group 201

## ROHM Revolving centring points With extended moving point

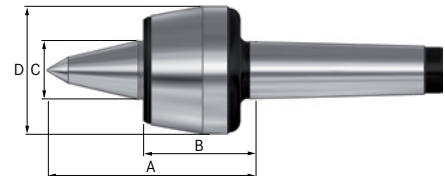
**Application:**  
For fine turning, rough machining and copying on lathes.

**Execution:**

- With extended 60°/30° moving point
- Body and moving point are hardened and polished
- Moving point can be reground multiple times

**Advantage:**

- Special seal prevents the ingress of dirt and coolant.
- Precision roller bearings ensure a high level of concentricity
- Maintenance-free owing to permanent lubrication



Morse taper size		MK 2	MK 3	MK 4	MK 5
Programming dimension A (mm)		75	95.5	114.5	143.5
Programming dimension for housing B (mm)		41	48.5	61.5	78.5
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005
Max. workpiece weight (kg)		140	400	500	1200
Max. rotation speed (U/min(rpm))		7000	3800	3800	3000
Housing Ø D (mm)		45	60	70	90
Point Ø C (mm)		20	25	32	40
<b>22127...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>035</b> O. R.	<b>040</b> O. R.	<b>050</b> O. R.

Prod. group 201

## BRUCKNER Revolving high-performance points With reinforced bearings

**Application:**  
For use in conjunction with conventional turning, CNC turning, rough machining and smoothing.

**Execution:**

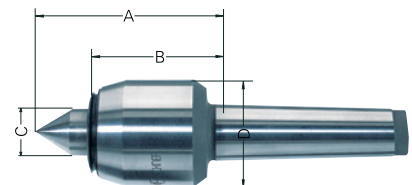
- 60° moving point
- For all turning measures (rough machining, smoothing and fine turning)
- Precision and rough machining of medium-sized components
- Hardened and precision-ground

**Advantage:**

- Long service life
- Concentricity guaranteed with test report
- Maintenance-free owing to permanent lubrication
- Reinforced and hard-wearing precision bearings to absorb radial and axial forces.

**Notes:**

Bokö system revolving high-performance points on request. For grinding and testing with concentricity tolerance of 0.003 mm on request.





Morse taper size		MK 2	MK 3	MK 3	MK 4	MK 4	MK 5	MK 6
Programming dimension A (mm)		82	84	102	102	121	160	179
Programming dimension for housing B (mm)		57	59	67	67	78	100	115
Max. rotation speed (U/min(rpm))		5500	5500	5000	5000	4000	3500	2300
Max. workpiece weight (kg)		280	400	525	700	1000	2000	3500
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005	0.005	0.005	0.005
Housing Ø D (mm)		45	45	58	58	76	95	120
Point Ø C (mm)		20	20	25	25	35	45	58
Angle (Degree)		60	60	60	60	60	60	60
<b>22130...</b>	Ident. No.	<b>020</b>	<b>030</b>	<b>035</b>	<b>040</b>	<b>045</b>	<b>050</b>	<b>060</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 2AA

**RÖHM** **Revolving miniature points**

**Application:**

For mounting and supporting long and projecting lathe parts with centre drill hole to avoid imbalance and to encourage stabilisation.

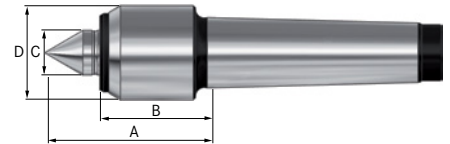
**Execution:**

- Tip angle 60°
- Precision and rough machining of universal components

- Hardened and polished

**Advantage:**

- Particularly favourable where conditions on the lathe are tight
- Precision roller bearings ensure a high level of concentricity



Morse taper size		MK 2	MK 3	MK 4	MK 5
Housing Ø D (mm)		32	34	42	58
Point Ø C (mm)		15	15	20	30
Programming dimension A (mm)		62	62	75.5	106
Programming dimension for housing B (mm)		44	44	50.5	70
Max. workpiece weight (kg)		200	400	800	1600
Max. rotation speed (U/min(rpm))		7000	7000	6300	4300
Concentricity tolerance (mm)		0.005	0.005	0.005	0.01
Angle (Degree)		60	60	60	60
<b>22132...</b>	Ident. No.	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 201

**RÖHM** **Revolving miniature points with extended 60°/30° moving point**

**Application:**

For mounting and supporting long and projecting lathe parts with centre drill hole to avoid imbalance and to encourage stabilisation.

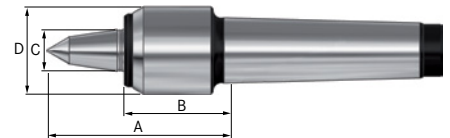
**Execution:**

- With extended 60°/30° moving point

- Body and moving point are hardened and polished

**Advantage:**

- Particularly favourable where conditions on the lathe are tight
- Precision roller bearings ensure a high level of concentricity



Morse taper size		MK 2	MK 3	MK 4	MK 5
Housing Ø D (mm)		32	34	42	58
Point Ø C (mm)		15	15	20	30
Programming dimension A (mm)		73	74	88.5	119
Programming dimension for housing B (mm)		44	44	50.5	70
Max. workpiece weight (kg)		170	340	700	1400
Max. rotation speed (U/min(rpm))		7000	7000	6300	4300
Concentricity tolerance (mm)		0.008	0.008	0.008	0.01
<b>22133...</b>	Ident. No.	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 201

**RÖHM** **Revolving and interchangeable centring points**  
 Without insert

**Application:**

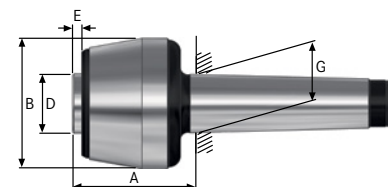
For rough machining and fine turning in general turning operations.

**Execution:**

- Body hardened and polished

**Advantage:**

- Very flexible thanks to interchangeable inserts



Morse taper size G		MK 2	MK 3	MK 3	MK 4	MK 5
Programming dimension A (mm)		45	55	48	67	85
Programming dimension for housing B (mm)		43	58.5	48.5	68.5	88.5
Ø D (mm)		20	25	22	32	40
Step E (mm)		4	5.5	4	5	6
Concentricity tolerance (mm)		0.01	0.01	0.01	0.01	0.01
Max. workpiece weight (kg)		40	150	130	250	650
<b>22144...</b>	Ident. No.	<b>020</b>	<b>030</b>	<b>035</b>	<b>040</b>	<b>050</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 201

## **RÖHM** Ejector for revolving centring points

**Application:**  
For ejecting exchangeable inserts.

**Execution:**  
▪ Hardened and polished



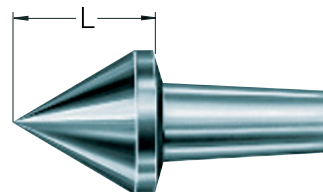
Morse taper size		MK 2	MK 3   MK 4	MK 5
22146...	Ident. No.	020	030	050
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 201

## **RÖHM** Replaceable centring points with 60 degree tip angle Accessories for revolving centring point no. 22144/22145

**Application:**  
For supporting long and narrow workpieces on lathes.

**Execution:**  
▪ Die-forged  
▪ Hardened and polished  
▪ Replaceable inserts for rotating body no. 22144



Centring point, tip angle 60°

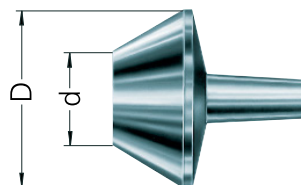
Morse taper size		MK 2	MK 3	MK 4	MK 5
Insertion Ø (mm)		16	24	28	38
Length of tip (mm)		20	27.5	31.5	43
22147...	Ident. No.	002	003	004	005
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 201

## **RÖHM** Replaceable hollow bodies with 60 degree tip angle Accessories for revolving centring point no. 22144/22145

**Application:**  
For supporting long and narrow workpieces on lathes.

**Execution:**  
▪ Die-forged  
▪ Replaceable inserts for rotating body no. 22144  
▪ Hardened and polished



Hollow bodies, tip angle 60°

**Execution:**  
▪ Hollow bodies

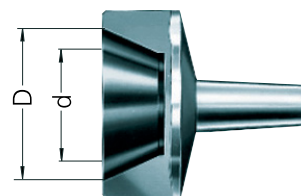
Morse taper size		MK 2	MK 3	MK 4
Point Ø D (mm)		25	45	55
Insertion Ø d (mm)		10	25	30
Length of tip (mm)		21	27	31.5
22147...	Ident. No.	302	303	304
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 201

## **RÖHM** Replaceable centring points, centreless workpiece with 60 degree tip angle, type A Accessories for revolving centring point no. 22144/22145

**Application:**  
For supporting long and narrow workpieces on lathes.

**Execution:**  
▪ Die-forged  
▪ Hardened and polished  
▪ Replaceable inserts for rotating body no. 22144



Workpieces without centre, tip angle 60°, type A

**Execution:**  
▪ Centring points for centreless workpieces

Morse taper size		MK 2	MK 3
Point Ø D (mm)		20	40
Insertion Ø d (mm)		10	25
Length of tip (mm)		18	25
22147...	Ident. No.	402	403
	Unit price, €	O. R.	O. R.

Prod. group 201



**Replaceable centring points, centreless workpiece with 60 degree tip angle, type B**

Accessories for revolving centring point no. 22144/22145

**Application:**

For supporting long and narrow workpieces on lathes.

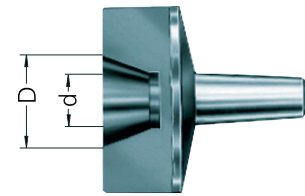
- Die-forged
- Hardened and polished
- Replaceable inserts for rotating body no. 22144

**Execution:**

- Centring points for centreless workpieces

Morse taper size		MK 2	MK 3	MK 4
Point Ø D (mm)		12	18	35
Insertion Ø d (mm)		6	10	20
Length of tip (mm)		12	16	25
<b>22147...</b>	Ident. No. Unit price, €	<b>502</b> O. R.	<b>503</b> O. R.	<b>504</b> (O. R.)

Prod. group 201



Workpieces without centre, tip angle 60°, type B



**Replaceable centring point, extension with 60 degree tip angle**

Accessories for revolving centring point no. 22144/22145

**Application:**

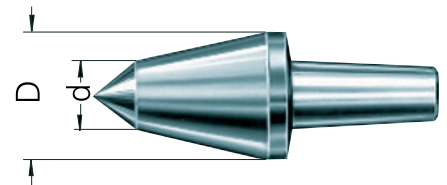
For supporting long and narrow workpieces on lathes.

**Execution:**

- Die-forged
- Hardened and polished
- Replaceable inserts for rotating body no. 22144

Morse taper size		MK 2	MK 3	MK 4	MK 5
Point Ø D (mm)		14	18	26	32
Insertion Ø d (mm)		6	8	12	13
Length of tip (mm)		25	30	43	55
<b>22147...</b>	Ident. No. Unit price, €	<b>602</b> O. R.	<b>603</b> O. R.	<b>604</b> O. R.	<b>605</b> O. R.

Prod. group 201



Extension, tip angle 60°



**Revolving 60° self-centring taper, type 627**

Sharp version

**Application:**

As a centring point for hollow bodies for machining normal workpieces and tubes.

- Fully hardened and polished
- Drive arbour, body and taper

**Advantage:**

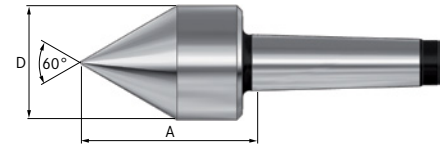
- Maintenance-free owing to permanent lubrication

**Execution:**

- Revolving 60° taper angle

Morse taper size		MK 2	MK 3	MK 4	MK 5
Max. workpiece weight (kg)		200	400	800	1600
Concentricity tolerance (mm)		0.01	0.008	0.008	0.008
Housing Ø D (mm)		42	56	64	78
Programming dimension A (mm)		54	72	92	107
Taper angle (Degree)		60	60	60	60
Shape of marker tip		Pointed	Pointed	Pointed	Pointed
<b>22174...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.	<b>050</b> O. R.

Prod. group 201



**Revolving self-centring taper**

Blunt version, 60° taper angle

**Application:**

For holding hollow bodies and tubes for lathe machining.

- Taper angle 60°
- Self-centring taper and cone shank are fully hardened and precision-ground

**Execution:**

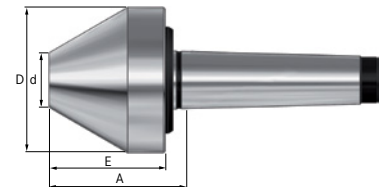
- Body type: blunt taper

**Advantage:**

- Maintenance-free owing to permanent lubrication

Morse taper size	Max. workpiece weight (kg)	Concentricity tolerance (mm)	Programming dimension A (mm)	Housing Ø D (mm)	Point Ø d (mm)	Taper length E (mm)	Taper angle (Degree)	Shape of marker tip	Weight (kg)	<b>22176...</b> ID no.	
MK 2	200	0.008	65	50	20	52	60	Blunt	1.2	<b>020</b>	O. R.
MK 3	400	0.008	77	80	30	64	60	Blunt	2.2	<b>030</b>	O. R.
MK 4	400	0.008	78.5	80	30	64	60	Blunt	2	<b>040</b>	O. R.
MK 4	800	0.008	98	120	30	83	60	Blunt	4.2	<b>045</b>	O. R.
MK 5	800	0.008	99	120	30	83	60	Blunt	2.3	<b>050</b>	O. R.
										Unit price, €	

Prod. group 201



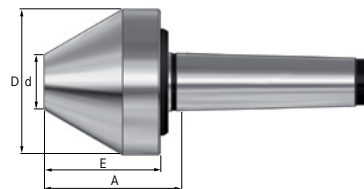
**RÖHM** Revolving self-centring taper  
Blunt version, 75° taper angle

**Application:**  
For holding hollow bodies and tubes for lathe machining.

**Execution:**  
▪ Body type: blunt taper

▪ Taper angle 75°  
▪ Self-centring taper and cone shank are fully hardened and precision-ground

**Advantage:**  
▪ Maintenance-free owing to permanent lubrication



Morse taper size	Max. workpiece weight (kg)	Concentricity tolerance (mm)	Programming dimension A (mm)	Point Ø d (mm)	Housing Ø D (mm)	Taper length E (mm)	Shape of marker tip	Weight (kg)	22176... ID no.	
MK 3	400	0.008	80	20	80	67	Blunt	2.4	130	O. R.
MK 3	600	0.008	85.5	30	120	72	Blunt	4.3	135	O. R.
MK 4	400	0.008	81.5	30	80	83	Blunt	4.5	140	O. R.
MK 4	800	0.008	87	50	120	90	Blunt	9.7	143	O. R.
MK 4	1200	0.01	107	30	170	72	Blunt	5.1	145	O. R.
MK 5	800	0.008	88	30	120	83	Blunt	5.3	150	O. R.
MK 5	1600	0.01	106	50	170	90	Blunt	10.6	155	O. R.

Unit price, €

Prod. group 201

**RÖHM** CoA modular face driver set  
diameter of clamping circle 12-50 mm, turning range 13-100 mm

**Application:**  
For stripping workpieces across the whole length without reclamping.

**Execution:**  
▪ Tip angle 60°  
▪ Max. workpiece weight 100 kg  
▪ Centring point diameters of 6 mm and 12 mm

**Advantage:**  
▪ Fast retooling to different workpiece diameters by changing the driving discs.

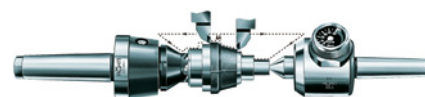
▪ The centring point can be easily reground.  
▪ The driving disc adapts to unevenness of up to 5° angled workpiece faces thanks to the hydraulic pressure compensation of the 3 support pistons.  
▪ The preloaded and axially-adjustable Belleville washer pack balances out unevenness in centre depths.

**scope of supply and services:**  
Included in the wooden box: 1 modular face driver basic body, 4 driving discs for clamping circle Ø 12, 20, 32 and 50 mm



Taper shank size	3		4	
Min. turning range Ø (mm)	13		13	
Max. turning range Ø (mm)	100		100	
Min. clamping circuit Ø (mm)	50		50	
Max. clamping circuit Ø (mm)	12		12	
Direction of rotation	Clockwise rotation		Clockwise rotation	
22208...	Ident. No.	230	240	
	Set price, €	O. R.	O. R.	

Prod. group 204



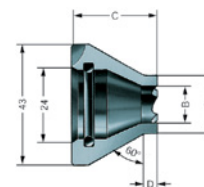
Appropriate centring points on request

**RÖHM** Driving discs, individual  
For CoA modular face driver

**Application:**  
For driving cylindrical components.

**Execution:**  
▪ Driving disc directly meshed

**Notes:**  
Driving discs with interchangeable cemented carbide driving plates on request.



Clamping Ø S (mm)	8	10	12	16	20	25	32	10
Min./max. turning range Ø	9-16 mm	11-20 mm	13-24 mm	17-32 mm	21-40 mm	26-50 mm	33-33 mm	11-20 mm
Suitable tip Ø (mm)	4	4	6	10	12	16	16	4
Hole Ø B (mm)	4.5	4.5	7	11	13	17	22	4.5
Length C (mm)	38	38	36	33	30	30	30	38
Direction of rotation	Anti-clockwise rotation	Anti-clockwise rotation	Anti-clockwise rotation	Anti-clockwise rotation	Anti-clockwise rotation	Anti-clockwise rotation	Anti-clockwise rotation	Clockwise rotation
Step length D (mm)	4	4	4	4	4	8	10	4
22208...	Ident. No.	408	410	412	416	420	425	310
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Clamping Ø S (mm)	8	12	16	20	25	32	
Min./max. turning range Ø	9-16 mm	13-24 mm	17-32 mm	21-40 mm	26-50 mm	33-64 mm	
Suitable tip Ø (mm)	4	6	10	12	16	16	
Hole Ø B (mm)	4.5	7	11	13	17	22	
Length C (mm)	38	36	33	30	30	30	
Direction of rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	Clockwise rotation	
Step length D (mm)	4	4	4	4	8	10	
<b>22208...</b>	Ident. No. Unit price, €	<b>308</b> O. R.	<b>312</b> O. R.	<b>316</b> O. R.	<b>320</b> O. R.	<b>325</b> O. R.	<b>332</b> O. R.

Prod. group 204

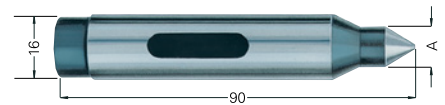
**RÖHM** Individual centring points  
For CoA modular face driver

**Application:**  
For compensating for different workpiece centres.

**Advantage:**  
▪ Suitable for all basic body sizes

**Execution:**  
▪ Tip angle 60°

**Notes:**  
Centring points with head on request.



Suitable tip Ø A (mm)	4	6	10	12	16	
<b>22208...</b>	Ident. No. Unit price, €	<b>604</b> O. R.	<b>606</b> O. R.	<b>610</b> O. R.	<b>612</b> O. R.	<b>616</b> O. R.

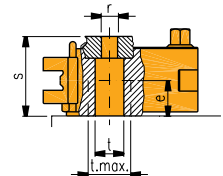
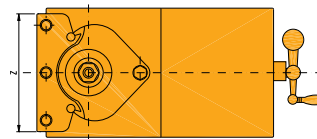
Prod. group 204

**MULTIFIX quick-change steel tool holder**

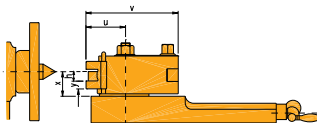
**Application:**  
For holding change tool holders. The selection of the Multifix quick-change steel tool holder and change tool holder depends on the drive output, the tool carriage width and lathe chisel height.

**Advantage:**  
▪ Precision manufacture owing to the high repeat accuracy (0.01 mm)  
▪ Versatile production possibilities (40 tool positions possible)  
▪ Quick and trouble-free height adjustment thanks to adjusting screw  
▪ Extremely flexible due to the modular structure

**Execution:**  
▪ The drill hole in the centring disc must be enlarged to the dimensions of the clamping screw.



Tool holder width  $z \geq$  tool skid width  $l$



Steel holder head size	Aa	A	B	C	D1	
Changeover holder size	AD 16   AD 20	AD 16   AD 20	BD 25   BD 32	CD 32   CD 40   CD 45	D 1   D 40	
Max. drive power of lathe (kW)	1.1	2.2	6.6	13.2	22	
Max. carriage width Z (mm)	80	100	150	180	200	
Steel support y	6.2 mm	9.1 mm   10.1 mm	12 mm   13.5 mm	17 mm   18 mm	20.5 mm	
Drill hole r (mm)	22	10	16	10	16	
Max. hole Ø t (mm)	13	35	40	55	65	
Normal hole Ø t (mm)	12.5	10	32	40	40	
Max. boring depth e (mm)	-	35	45	75	75	
Height s (mm)	36	54	75	105	122	
Max. steel tool holder width v	70 mm	100 mm	150 mm	202 mm	230 mm   234 mm   242 mm	
Max. throat depth/holder width D	30 mm	48 mm	71 mm	102 mm	112 mm   116 mm   124 mm	
<b>22240...</b>	Ident. No. Unit price, €	<b>050</b> O. R.	<b>060</b> O. R.	<b>070</b> O. R.	<b>080</b> O. R.	<b>090</b> (O. R.)

Prod. group 214



**MULTIFIX spare parts for all sizes**

When ordering, please state identification, part No. and MULTIFIX size

<p><b>For MULTIFIX tool holder head</b></p> <p>1 = tension bowl (compl. with eccentric bolt 4) 2 = plunger spring 3 = ram 4 = eccentric bolt with oil dispenser 5 = clamping lever 6 = ring spring 7 = pointer 8 = centring disc 9 = protective cover 10 = central body</p>	<p><b>For MULTIFIX tool change holder</b></p> <p>11 = square head bolt 12 = cylinder head screw 13 = adjusting cap 14 = height adjustment nut 15 = height adjustment screw 16 = socket wrench</p>	<p><b>For MULTIFIX tool change holder J</b></p> <p>17 = clamping screw</p>	<p><b>For MULTIFIX cut-off tool holder</b></p> <p>19 = clamping claw 20 = compression spring 21 = cylinder head screw</p>
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Clamping Technology

**MULTIFIX cut-off change holder A**

**Application:**

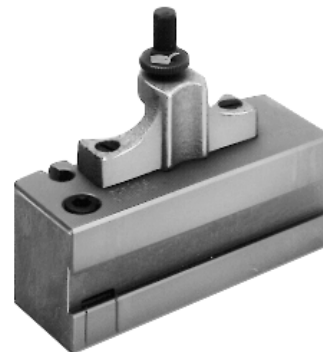
For holding and changing the tool.

**Execution:**

- For matching cutting-off blades no. 17102 - 17106
- For steel tool holder head no. 22240

	Steel holder head size	Ident. No.	Unit price, €
22247...	Aa	005	(O. R.)
22247...	A	010	O. R.
22247...	B	020	O. R.
22247...	C	030	O. R.

Prod. group 214



Change holder A

**MULTIFIX change holder D**

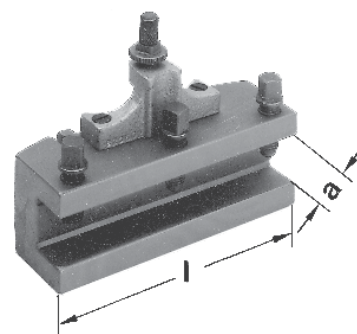
**Application:**

For holding tools.

**Execution:**

- For steel tool holder head no. 22240

		Steel tool holder head size shape	Length L (mm)	Clamping width a (mm)	Ident. No.	Unit price, €
22241...	-	Aa	50	12	010	O. R.
22241...	-	A	75	16	020	O. R.
22241...	-	A	90	16	030	O. R.
22241...	AD 1690	A	75	20	040	O. R.
22241...	AD 2090	A	90	20	050	O. R.
22241...	BD 25120	B	120	25	060	O. R.
22241...	BD 32120	B	140	25	070	O. R.
22241...	BD 25140	B	120	32	080	O. R.
22241...	BD 32140	B	140	32	090	O. R.
22241...	CD 32150	C	150	32	100	O. R.
22241...	CD 40150	C	170	32	110	O. R.
22241...	CD 32170	C	150	40	120	O. R.
22241...	CD 40170	C	170	40	130	O. R.
22241...	CD 45170	C	170	45	140	O. R.



Change holder D

		Steel tool holder head size shape	Length L (mm)	Clamping width a (mm)		
<b>22241...</b>	D1 D 40180	D1	180	40	Ident. No. Unit price, €	<b>150</b> O. R.
<b>22241...</b>	D1 D 50180	D1	180	50	Ident. No. Unit price, €	<b>160</b> O. R.
<b>22241...</b>	D1 D 63180	D1	180	63	Ident. No. Unit price, €	<b>170</b> O. R.

Prod. group 214

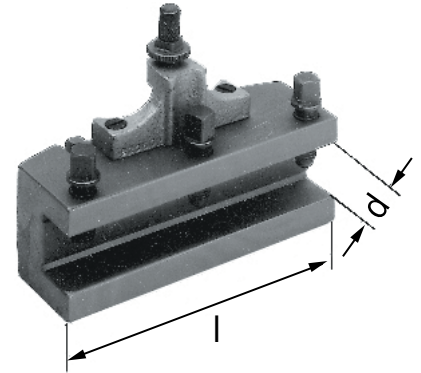
## ORION® Change holder D

**Application:**  
For holding tools.

**Execution:**  
▪ For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)	Clamping width d (mm)		
<b>22251...</b>	BD	B	120	25	Ident. No. Unit price, €	<b>060</b> O. R.
<b>22251...</b>	BD	B	140	25	Ident. No. Unit price, €	<b>070</b> O. R.
<b>22251...</b>	BD 25140	B	120	32	Ident. No. Unit price, €	<b>080</b> O. R.
<b>22251...</b>	BD 32140	B	140	32	Ident. No. Unit price, €	<b>090</b> O. R.

Prod. group 264



## MULTIFIX sleeves

**Application:**  
Accessories for change holder for clamping Morse tapers.

▪ For steel tool holder head no. 22240  
**scope of supply and services:**  
Without KOMET thread steel.

**Execution:**  
▪ BK 230 only for holder BH 30130

		Steel holder head size	Length L (mm)	Clamping Ø (mm)	Morse taper size		
<b>22245...</b>	AL 130	A	82	30	MK 1	Ident. No. Unit price, €	<b>005</b> O. R.
<b>22245...</b>	AL 230	A	82	30	MK 2	Ident. No. Unit price, €	<b>010</b> O. R.
<b>22245...</b>	BK 230	B	130	30	MK 2	Ident. No. Unit price, €	<b>020</b> O. R.
<b>22245...</b>	BL 340	B, C	130	40	MK 3	Ident. No. Unit price, €	<b>030</b> O. R.
<b>22245...</b>	BL 440	B, C	130	40	MK 4	Ident. No. Unit price, €	<b>040</b> O. R.
<b>22245...</b>	CL 350	C	130	50	MK 3	Ident. No. Unit price, €	<b>050</b> O. R.
<b>22245...</b>	CL 450	C	130	50	MK 4	Ident. No. Unit price, €	<b>060</b> O. R.
<b>22245...</b>	CL 550	C	130	50	MK 5	Ident. No. Unit price, €	<b>065</b> O. R.

Prod. group 214

## ORION® Sleeve

**Application:**  
Accessories for change holders.

**Execution:**  
▪ Without KOMET thread steel

		Steel holder head size	Clamping Ø d (mm)	Morse taper size		
<b>22255...</b>	BL 340	B, C	40	MK 3	Ident. No. Unit price, €	<b>030</b> O. R.
<b>22255...</b>	BL 440	C, B	40	MK 4	Ident. No. Unit price, €	<b>040</b> O. R.

Prod. group 264



**MULTIFIX vee block P****Application:**

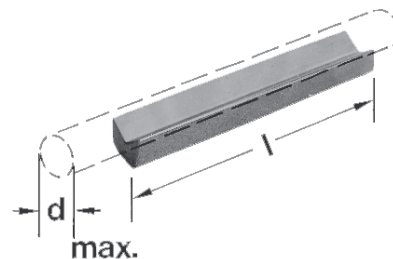
Accessories for change holders.

**Execution:**

- For matching cutting-off blades no. 17102 - 17106
- For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)	Max. clamping $\varnothing$ d (mm)	Ident. No.	
22249...	AP 1485	A	85	14	Ident. No.	010
					Unit price, €	O. R.
22249...	BP 20130	B	130	20	Ident. No.	020
					Unit price, €	O. R.
22249...	CP 25160	C	160	25	Ident. No.	030
					Unit price, €	O. R.
22249...	CP 32160	C	160	32	Ident. No.	040
					Unit price, €	O. R.
22249...	D1 P 40180	D1	180	40	Ident. No.	050
					Unit price, €	O. R.

Prod. group 214



Vee block P

**MULTIFIX change holder H****Application:**

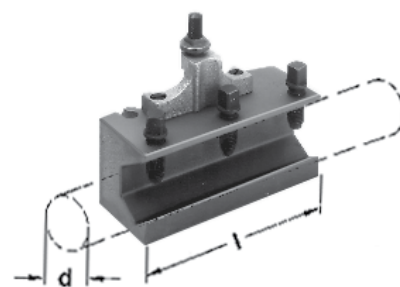
For holding tools with straight shank.

**Execution:**

- For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)	Clamping $\varnothing$ d (mm)	Ident. No.	
22242...	AaH 1250	Aa	50	12	Ident. No.	010
					Unit price, €	O. R.
22242...	AH 2085	A	85	20	Ident. No.	020
					Unit price, €	O. R.
22242...	BH 30130	B	130	30	Ident. No.	030
					Unit price, €	O. R.
22242...	CH 40160	C	160	40	Ident. No.	040
					Unit price, €	O. R.
22242...	CH 50160	C	160	50	Ident. No.	050
					Unit price, €	O. R.
22242...	D1 H 63180	D1	180	63	Ident. No.	060
					Unit price, €	O. R.

Prod. group 214



Change holder H

**MULTIFIX change holder J****Application:**

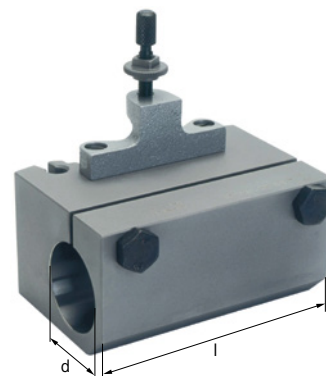
For holding tools with straight shank.

**Execution:**

- No. 22243 010/020 side slot and no. 22243 030/040/050/070 upper slot.
- For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)	Clamping $\varnothing$ d (mm)	Ident. No.	
22243...	AaJ 1550	Aa	50	15	Ident. No.	010
					Unit price, €	O. R.
22243...	AJ 3080	A	80	30	Ident. No.	020
					Unit price, €	O. R.
22243...	BJ 40120	B	120	40	Ident. No.	030
					Unit price, €	O. R.
22243...	CJ 40160	C	160	40	Ident. No.	040
					Unit price, €	O. R.
22243...	CJ 50160	C	160	50	Ident. No.	050
					Unit price, €	O. R.
22243...	D1 J 63180	D1	180	63	Ident. No.	070
					Unit price, €	O. R.

Prod. group 214



Change holder J



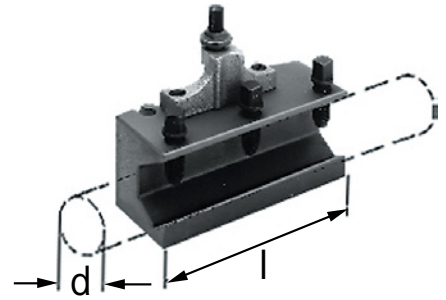
## ORION® Change holder H

**Application:**  
For holding tools.

**Execution:**  
▪ For steel tool holder head no. 22240  
▪ For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)		
22252...	BH 30130	B	130	Ident. No. Unit price, €	<b>030</b> O. R.

Prod. group 264



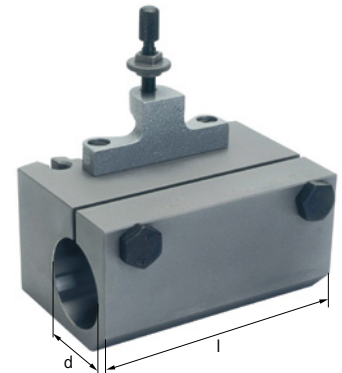
## ORION® Change tool holder J

**Application:**  
For holding tools.

**Execution:**  
▪ For steel tool holder head no. 22240

		Steel holder head size	Length l (mm)		
22253...	BJ 40120	B	120	Ident. No. Unit price, €	<b>030</b> O. R.

Prod. group 264



Change holder J

## 3-jaw lathe chuck, spiral ring chuck Hand chuck

DIN 6350-1

**Application:**  
For clamping workpieces and tools on lathes. To achieve the requisite clamping force, the lathe chuck must be lubricated regularly.

**Execution:**  
▪ Spiral ring chuck made of steel alloy  
▪ High quality steel, die-forged, hardened and polished  
▪ Balanced with a high level of concentricity  
▪ CUSHMANN system

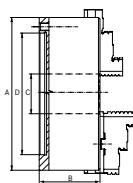
▪ Centric clamping

**scope of supply and services:**

1 safety ejector key, with matching fastening screws, 1 set of hard and one-piece drilling jaws, 1 set of hard and one-piece turning jaws for each lathe chuck

**Notes:**

Chucks with different diameters and other short taper adapters on request.



Outer Ø A (mm)	Through-bore C (mm)	Centring Ø D (mm)	Centring depth (mm)	Height without jaws B (mm)	Weight (kg)	Material	22386... ID no.	
80	16	56	3	44	1.5	Steel	<b>300</b>	O. R.
100	20	70	3	50	2.8	Steel	<b>305</b>	O. R.
125	35.5	95	4	59.5	5	Steel	<b>310</b>	O. R.
160	42	125	4	68	10	Steel	<b>315</b>	O. R.
200	55	160	4	78	17.5	Steel	<b>320</b>	O. R.
250	76	200	5	89	29	Steel	<b>325</b>	O. R.
315	103	260	5	97.2	50	Steel	<b>330</b>	(O. R.)
400	136	330	5	109	85	Steel	<b>335</b>	(O. R.)

Unit price, €

Prod. group 221



## Block jaws

### Single-piece and unstepped

#### Application:

For clamping workpieces on jaw chucks. Soft jaws for extracting.

#### Execution:

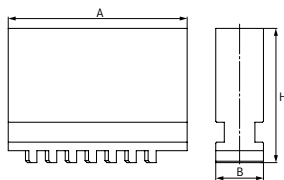
- Single-piece
- Steel that can be hardened

#### Advantage:

- Ideal for clamping on machined surfaces
- High precision by unscrewing the jaws in the chuck

#### scope of supply and services:

All sets have 3 pieces



For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	Version	22391... ID no.	
80 mm	32	11	28	Unhardened	100	O. R.
100 mm	42	15	32	Unhardened	105	O. R.
125 mm	51	20	40	Unhardened	110	O. R.
160 mm	70	20	53	Unhardened	115	O. R.
200 mm	85	25	54	Unhardened	120	O. R.
250 mm	105	28	63	Unhardened	125	O. R.
315 mm	125	32	73	Unhardened	130	O. R.
400 mm	145	36	92	Unhardened	135	(O. R.)
						Set price, €

Prod. group 221



## Plain jaw set

#### Application:

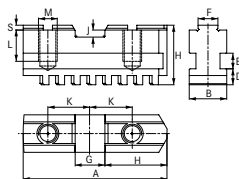
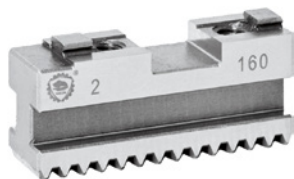
Carrier jaw for mounting reverse top jaws or unstepped interchangeable jaw grips.

#### Execution:

- Hardened

#### scope of supply and services:

All sets have 3 pieces, including the screws



For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22412... ID no.	
125 mm	54	20	28	100	O. R.
160 mm	65	20	29	105	O. R.
200 mm	79	25	33	110	O. R.
250 mm	92	28	36	115	O. R.
315 mm	110	32	40	120	(O. R.)
400 mm	130	36	49	125	(O. R.)
					Set price, €

Prod. group 221



## Interchangeable jaw grips

### Unstepped

#### Application:

For screwing onto plain jaws.

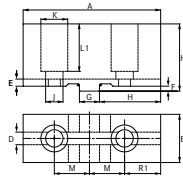
#### Execution:

- Soft

- Can be hardened
- For Bison no. 22386300-335

#### scope of supply and services:

All sets have 3 pieces



For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	Version	22416... ID no.	
125 mm	64	22	38.5	Unhardened	<b>100</b>	O. R.
160 mm	78	25	41.5	Unhardened	<b>105</b>	O. R.
200 mm	90	27	43.5	Unhardened	<b>110</b>	O. R.
250 mm	106	32	51.5	Unhardened	<b>115</b>	O. R.
315 mm	120	37	55.5	Unhardened	<b>120</b>	O. R.
400 mm	140	42	64.5	Unhardened	<b>125</b>	(O. R.)
						Set price, €

Prod. group 221

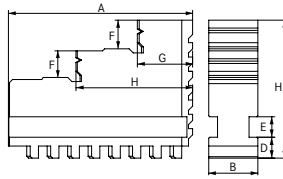
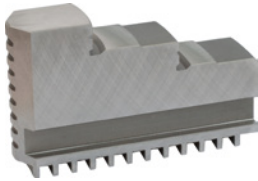
 **Reversible jaws**  
 Single-piece

**Application:**  
 For clamping workpieces and tools on lathes.

▪ Outwardly stepped

**Execution:**  
 ▪ Hardened

**scope of supply and services:**  
 All sets have 3 pieces



For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22389... ID no.	
160 mm	70	20	53	<b>365</b>	O. R.
125 mm	51	20	40	<b>360</b>	O. R.
200 mm	85	25	54	<b>370</b>	O. R.
250 mm	105	28	63	<b>375</b>	O. R.
315 mm	125	32	73	<b>380</b>	(O. R.)
400 mm	145	36	92	<b>385</b>	(O. R.)
100 mm	42	15	32	<b>355</b>	(O. R.)
80 mm	32	11	28	<b>350</b>	O. R.
					Set price, €

Prod. group 221

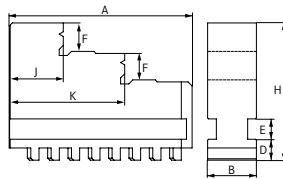
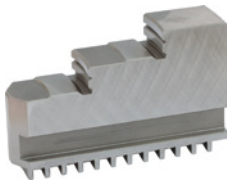
 **Reversible jaws**  
 Single-piece

**Application:**  
 For clamping workpieces and tools on lathes.

▪ Inwardly stepped

**Execution:**  
 ▪ Hardened

**scope of supply and services:**  
 All sets have 3 pieces



For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22389... ID no.	
80 mm	32	11	28	<b>300</b>	O. R.
100 mm	42	15	32	<b>305</b>	O. R.
125 mm	51	20	40	<b>310</b>	O. R.
160 mm	70	20	53	<b>315</b>	O. R.
200 mm	85	25	54	<b>320</b>	O. R.
400 mm	145	36	92	<b>335</b>	(O. R.)
					Set price, €

Prod. group 221



## ZS 3-jaw lathe chuck, spiral ring chuck

Hand chuck

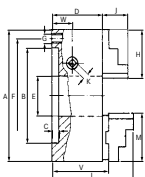
DIN 6350-1

### Application:

For clamping workpieces and tools on lathes. For successful use in areas that require high clamping force, high concentricity and very good repeat clamping accuracy.

### Execution:

- Spiral ring chuck made of steel alloy
- High quality steel, die-forged, hardened and polished
- One-piece jaws
- For cylindrical self-centring adapter in accordance with DIN 6350-1
- No. 22386 3-jaw lathe chuck, steel body ZS



- Centric clamping

### Advantage:

- Workpieces with different clamping diameters can be clamped very quickly and without repositioning the jaws.

### scope of supply and services:

1 set of outwardly-stepped jaws mounted in a chuck, 1 set of inwardly-stepped jaws, 1 spanner, fastening screws

### Notes:

Chucks with different diameters on request.

Outer Ø A (mm)	Max. clamping range Ø (mm)	Through-bore E (mm)	Centring Ø B (mm)	Height with jaws L (mm)	Hole circle Ø F (mm)	Weight (kg)	22386... ID no.
80	80	19	56	53.5	67	-	010 O. R.
100	100	20	70	68	83	-	020 O. R.
125	125	32	95	78.5	108	-	030 O. R.
160	160	42	125	91	140	-	040 O. R.
200	200	55	160	106	176	-	050 O. R.
250	250	76	200	122	224	25.7	060 (O. R.)
315	315	103	200	141	286	44.2	070 (O. R.)*

Unit price, €

Prod. group 203



## 3-jaw lathe chuck ZS, flat spiral chuck

Hand chuck

ISO 702-3

### Application:

For clamping workpieces and tools on lathes.

### Execution:

- Spiral ring chuck made of steel alloy
- High quality steel, die-forged, hardened and polished
- One-piece jaws
- For short tapered bayonet fastening in accordance with DIN ISO 702-3 (DIN 55027)
- **Ident. No. 250–275:** To achieve the requisite clamping force, the lathe chuck must be lubricated regularly.

### Advantage:

- Workpieces with different clamping diameters can be clamped very quickly and without repositioning the jaws.

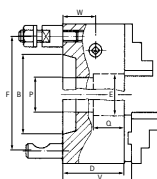
### scope of supply and services:

With 1 set of drilling jaws (mounted in chuck), 1 set of turning jaws, 1 spanner, 1 set stud bolts and flanged nuts.

### Notes:

**Ident. No. 235–245:** To achieve the requisite clamping force, the lathe chuck must be lubricated regularly.

**Ident. No. 250–275:** Chucks with different diameters and other short taper adapters on request.



Ident. No. 235–245  
DIN ISO 702-3

Outer Ø A (mm)	Max. clamping range Ø (mm)	Through-bore P (mm)	Taper shank size	Height without jaws D (mm)	Hole circle Ø F (mm)	Max. taper Ø B (mm)	Weight (kg)	22386... ID no.
125	125	32	4	69	85	63.5	5.5	235 (O. R.)
160	160	42	5	66	104.8	82.5	8.5	245 O. R.
200	200	55	5	74.5	104.8	82.5	15.5	250 O. R.
200	200	55	6	74.5	133.4	106.4	15.5	255 O. R.
250	250	76	6	83	133.4	106.4	30	260 O. R.
250	250	76	8	83	171.4	139.7	30	265 (O. R.)
315	315	103	8	96	171.4	139.7	50	275 (O. R.)*

Unit price, €

Prod. group 203

**RÖHM** ZS 3-jaw lathe chuck, spiral ring chuck  
 Hand chuck

ISO 702-2

Clamping Technology

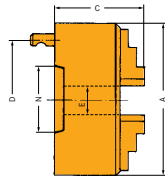
**Application:**  
 For clamping workpieces and tools on lathes.

- Execution:**
- Spiral ring chuck made of steel alloy
  - High quality steel, die-forged, hardened and polished
  - One-piece jaws
  - Centric clamping

- Advantage:**
- Workpieces with different clamping diameters can be clamped very quickly and without repositioning the jaws.

**scope of supply and services:**  
 With 1 set of drilling jaws (mounted in chuck), 1 set of turning jaws, 1 spanner, 1 set of stud bolts with camlock (for DIN 55029 short taper).

**Notes:**  
 Chucks with different diameters and other short taper adapters on request.



Outer Ø A (mm)	Max. clamping range Ø (mm)	Taper shank size	Through-bore E (mm)	Hole circle Ø D (mm)	Max. taper Ø N (mm)	Height with jaws C (mm)	Weight (kg)	22386... ID no.
160	160	4	42	82.5	63.5	109	10	241 (O. R.)
200	200	6	55	133.4	106.4	121	17	560 (O. R.)
250	250	6	76	133.4	106.4	140	30.60	570 (O. R.)
								Unit price, €

Prod. group 203

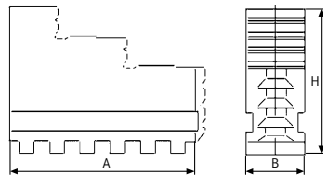
**RÖHM** Reversible jaws DB  
 Single-piece

**Application:**  
 For clamping workpieces and tools on lathes.

- Execution:**
- Hardened

- Inwardly stepped
- Grinding down in chuck necessary to achieve precise concentricity.

**scope of supply and services:**  
 No. 22389 set = 3 pieces



Turning jaw, hardened

For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22389... ID no.
80 mm	37	12	26	010 (O. R.)
100 mm	48	14	33.5	020 (O. R.)
160 mm	61	18	47.5	040 O. R.
200 mm	69	20	53.5	050 O. R.
250 mm	90	24	67.5	060 O. R.
315 mm	130	34	79.5	070 (O. R.)
				Set price, €

Prod. group 203

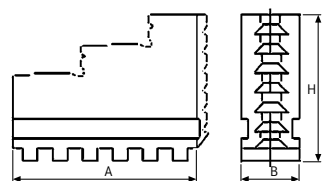
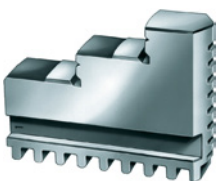
**RÖHM** Reversible jaws BB  
 for 3-jaw lathe chuck

**Application:**  
 For clamping workpieces and tools on lathes.

- Execution:**
- Hardened

- Outwardly stepped
- Grinding down in chuck necessary to achieve precise concentricity.

**scope of supply and services:**  
 All sets have 4 pieces



Drilling jaw, hardened

For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22389... ID no.	
80 mm	37	12	26	510	O. R.
100 mm	48	14	33.5	520	(O. R.)
125 mm	52	18	41.5	530	O. R.
160 mm	61	18	47.5	540	O. R.
200 mm	69	20	53.5	550	O. R.
250 mm	90	24	67.5	560	O. R.
315 mm	130	34	79.5	570	O. R.
				Set price, €	

Prod. group 203



## Block jaws

### Single-piece and unstepped BL

**Application:**

For clamping workpieces on jaw chucks. Soft jaws for extracting.

**Execution:**

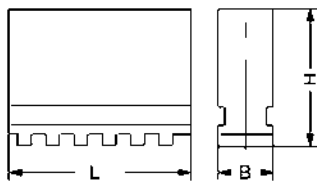
- Material 16MnCr 5
- Steel that can be hardened

**Advantage:**

- Ideal for clamping on machined surfaces
- High precision by unscrewing the jaws in the chuck

**scope of supply and services:**

All sets have 3 pieces



Non-stepped block jaw, soft, can be hardened

For chuck Ø	Length A (mm)	Width B (mm)	Height H (mm)	22391... ID no.	
80 mm	37	12	26	010	O. R.
100 mm	48	14	33.5	020	O. R.
125 mm	52	18	41.5	030	O. R.
160 mm	61	18	47.5	040	O. R.
200 mm	69	20	53.5	050	O. R.
250 mm	90	24	67.5	060	O. R.
315 mm	130	34	79.5	070	O. R.
				Set price, €	

Prod. group 203



## GB plain jaw set

### for 3-jaw lathe chuck

**Application:**

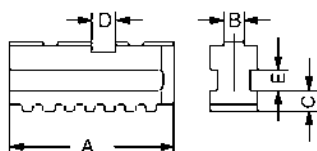
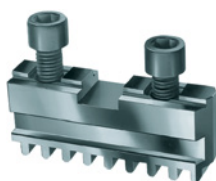
Carrier jaw for mounting reverse top jaws or unstepped interchangeable jaw grips.

**Execution:**

- Hardened

**scope of supply and services:**

All sets have 3 pieces, including the screws



Plain jaw, hardened

For chuck Ø	Length A (mm)	Jaw width * (mm)	Width B (mm)	22412... ID no.	
100 mm	46	14	7.94	020	(O. R.)
125 mm	55	18	7.94	030	O. R.
160 mm	65	18	7.94	040	O. R.
200 mm	78	20	7.94	050	O. R.
250 mm	92	24	12.7	060	O. R.
315 mm	108	34	12.7	070	O. R.
				Set price, €	

Prod. group 203

**RÖHM** Interchangeable jaw grips  
 Unstepped AB

Clamping Technology

**Application:**  
 For screwing onto plain jaws.

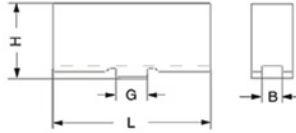
**Execution:**

- Soft
- Can be hardened

**Advantage:**

- Retroactive machining possible as well as adaptation of shape to workpieces

**scope of supply and services:**  
 All sets have 3 pieces



Non-stepped interchangeable jaw grip,  
 soft, can be hardened

For chuck Ø	Length L (mm)	Jaw width * (mm)	Width B (mm)	Height H (mm)	Bar width G (mm)	22416... ID no.		
125 mm	62	26.5	7.96	38	12.68	<b>030</b>	O. R.	
160 mm	74	28.5	7.96	42	12.68	<b>040</b>	O. R.	
200 mm	87	30.5	7.96	43	12.68	<b>050</b>	O. R.	
250 mm	103	36.5	12.72	53	19.03	<b>060</b>	O. R.	
315 mm	120	42.5	12.72	58	19.03	<b>070</b>	O. R.	
400 mm	137	42.5	12.72	65	19.03	<b>080</b>	O. R.	
							Set price, €	

Prod. group 203

**ORION®** Scroll chuck

**Application:**  
 Suitable for individual or series parts for small workpieces with thin walls as well as for use as a workpiece holder on drilling and grinding machine tables.

**Execution:**

- Steel body
- Jaws are case-hardened and reversible
- Ref. no. 010/020 with 3 jaws, ref. no. 040 with 6 jaws.

- Chuck with soft jaws
- Chuck with collet holder or Morse taper shank
- Centric clamping

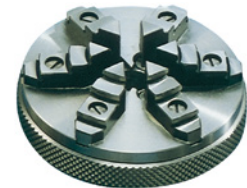
**Notes:**  
 Chucks available as 3-jaw or 6-jaw design, also corrosion-protected. Chucks with aluminium body available; quote on request.

Outer Ø (mm)		57	72	102
Max. clamping range Ø (mm)		55	70	100
Clearance hole (mm)		8	8	10
Height without jaws (mm)		13.5	15.7	21
<b>22380...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>040</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 220



Ident. No. 010-020



Ident. No. 040

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**3-jaw tapered rod lathe chuck ROTA S plus 2.0**  
Hand chuck

DIN 6350-1

**Application:**

For clamping rotationally-symmetrical components.

**Execution:**

- With jaw safety device for high operating safety
- Hand chuck with tapered rod drive for lasting high clamping force
- Quick-acting jaw change system for quick and comfortable jaw change
- 3-jaw chucks in the size range 160 - 315 mm
- For cylindrical self-centring adapter DIN 6350-1
- With large through-bore
- Chuck body surface hardened

**Advantage:**

- With visible indicator pin for high operating safety

- Indicator pin attached optimally around the circumference of the chuck, improved lubrication system for permanently high clamping forces, with modular protective sleeves or depth stop for optimal adaptation to the clamping task.
- Manual clamping mandrel, driven via the chuck clamping jaws, which means that small internal diameters can also be clamped with a high degree of precision.
- Spray edge for coolant protection
- Long service life

**scope of supply and services:**

1 set of non-divided stepped jaws ground down to the chuck, 1 actuator wrench, 1 set of fastening screws



Outer Ø (mm)	160	200	250	315
Min./max. external clamping width	6-163 mm	7-207 mm	7-248 mm	14-333 mm
Min./max. internal clamping width	62-176 mm	7-217 mm	90-254 mm	92-325 mm
Clearance hole (mm)	42	52	62	92
Centring Ø (mm)	145	185	235	300
Pitch circle Ø (mm)	105	105	115	180
Height without jaws (mm)	69.1	88.1	99.1	118.7
<b>22425...</b>	Ident. No. <b>300</b> Unit price, € (O. R.)	Ident. No. <b>301</b> Unit price, € (O. R.)	Ident. No. <b>302</b> Unit price, € (O. R.)	Ident. No. <b>303</b> Unit price, € (O. R.) <sup>+</sup>

Prod. group 222

**3-jaw tapered rod lathe chuck ROTA S plus 2.0**  
Hand chuck

ISO 702-3

**Application:**

For clamping rotationally-symmetrical components.

**Execution:**

- With jaw safety device for high operating safety
- Hand chuck with tapered rod drive for lasting high clamping force
- Quick-acting jaw change system for quick and comfortable jaw change
- 3-jaw chucks in the size range 160 - 315 mm
- For short tapered bayonet fastening, DIN ISO 702-3 (DIN 55027)
- With large through-bore
- Chuck body surface hardened

**Advantage:**

- With visible indicator pin for high operating safety

- Indicator pin attached optimally around the circumference of the chuck, improved lubrication system for permanently high clamping forces, with modular protective sleeves or depth stop for optimal adaptation to the clamping task.
- Manual clamping mandrel, driven via the chuck clamping jaws, which means that small internal diameters can also be clamped with a high degree of precision.
- Spray edge for coolant protection
- Long service life

**scope of supply and services:**

1 set of plain jaws and hard interchangeable jaw grips ground down to the chuck, 1 actuator wrench, 1 set of stud bolts and collar nuts.



Size	160	160	160	200	200	200	200	250
Outer Ø (mm)	165	165	165	205	205	205	205	256
Min./max. external clamping width	6-163 mm	6-163 mm	6-163 mm	7-207 mm	7-207 mm	7-207 mm	7-207 mm	9-248 mm
Min./max. internal clamping width	62-176 mm	62-176 mm	62-176 mm	-	71-217 mm	71-217 mm	71-217 mm	90-254 mm
Clearance hole (mm)	42	42	42	52	52	52	52	62
Tapered bolt Ø (mm)	63.5	82.5	106.3	63.5	82.5	106.3	139.7	82.5
Taper shank size	4	5	6	4	5	6	8	5
<b>22426...</b>	Ident. No. <b>310</b> Unit price, € (O. R.)	Ident. No. <b>311</b> Unit price, € (O. R.)	Ident. No. <b>312</b> Unit price, € (O. R.)	Ident. No. <b>313</b> Unit price, € (O. R.)	Ident. No. <b>314</b> Unit price, € (O. R.)	Ident. No. <b>315</b> Unit price, € (O. R.)	Ident. No. <b>316</b> Unit price, € (O. R.)	Ident. No. <b>317</b> Unit price, € (O. R.) <sup>+</sup>

Size	250	250	315	315	315
Outer Ø (mm)	256	256	323	323	323
Min./max. external clamping width	9-248 mm	9-248 mm	14-333 mm	14-333 mm	14-333 mm
Min./max. internal clamping width	90-254 mm	90-254 mm	92-325 mm	92-325 mm	92-325 mm
Clearance hole (mm)	52	62	92	92	92
Tapered bolt Ø (mm)	106.3	139.7	106.3	106.3	139.7
Taper shank size	6	8	6	8	11
<b>22426...</b>	Ident. No. <b>318</b> Unit price, € (O. R.) <sup>+</sup>	Ident. No. <b>319</b> Unit price, € (O. R.) <sup>+</sup>	Ident. No. <b>320</b> Unit price, € (O. R.) <sup>+</sup>	Ident. No. <b>321</b> Unit price, € (O. R.) <sup>+</sup>	Ident. No. <b>322</b> Unit price, € (O. R.) <sup>+</sup>

Prod. group 222





**Interchangeable jaw grips**  
 Unhardened

**Application:**

Soft clamping jaws for clamping on power chucks, for machining and matching to the workpiece to be machined.

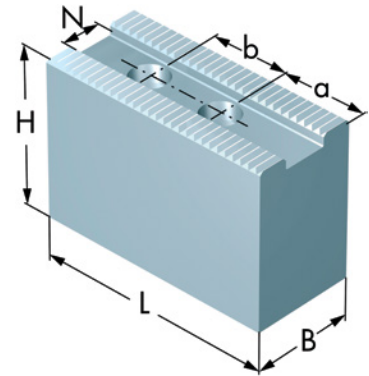
- Made from steel 16 MnCr S 5

**scope of supply and services:**  
 3 pieces in a set

**Execution:**

- With ground groove and pointed teeth 1/16 inch x 90°
- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks

**Notes:**  
 Other dimensions, segment jaws, reversible top jaws, claw jaws and special jaws on request. Hardening instructions can be made available on request.



For chuck Ø	130 mm	160 mm	160 mm   175 mm	200 mm	250 mm	
Slot width N (mm)	12	17	14	17	21	
Distance to hole a (mm)	10	15	15	25	30	
Hole distance b (mm)	16	22	20	22	28	
Length L (mm)	55	70	68	90	120	
Width B (mm)	30	40	35	40	50	
Height H (mm)	38	60	60	60	80	
Suitable cheese-head screw	M8	M12	M10	M12	M16	
Toothing	1/16 inch x 90°	1/16 inch x 90°	1/16 inch x 90°	1/16 inch x 90°	1/16 inch x 90°	
Version	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	
<b>22670...</b>	Ident. No. Set price, €	<b>130</b> O. R.	<b>160</b> O. R.	<b>165</b> (O. R.)	<b>200</b> O. R.	<b>250</b> O. R.

Prod. group 224



**Interchangeable jaw grips**  
 Unhardened

**Application:**

Soft clamping jaws for clamping on power chucks, for machining and matching to the workpiece to be machined.

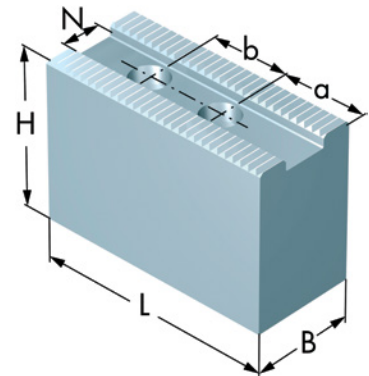
- Made from steel 16 MnCr S 5

**scope of supply and services:**  
 3 pieces in a set

**Execution:**

- With ground groove and pointed teeth 1/16 inch x 90°
- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks

**Notes:**  
 Other dimensions, segment jaws, reversible top jaws, claw jaws and special jaws on request. Hardening instructions can be made available on request.



For chuck Ø	135 mm	165 mm	210 mm	254 mm	315 mm	
Slot width N (mm)	10	12	14	16	21	
Distance to hole a (mm)	13	15	24	30	39	
Hole distance b (mm)	14	20	25	30	30	
Length L (mm)	55	72	95	110	129	
Width B (mm)	25	32	35	42	60	
Height H (mm)	32	32	40	42	60	
Suitable cheese-head screw	M8	M10	M12	M12	M16	
Version	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	
<b>22671...</b>	Ident. No. Set price, €	<b>135</b> O. R.	<b>165</b> O. R.	<b>210</b> O. R.	<b>254</b> O. R.	<b>315</b> O. R.

Prod. group 224



**Stepped jaws**  
 Hardened

**Application:**

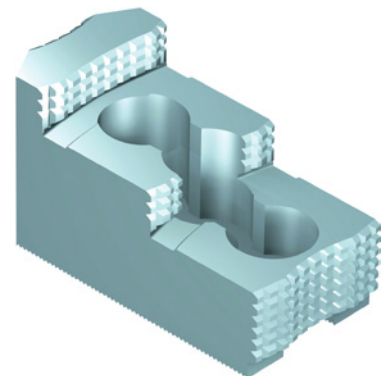
Clamping jaws for clamping on power chucks for external and internal clamping of workpieces.

- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks
- Made from steel 16 MnCr 5

**Execution:**

- With ground groove and 1.5 mm x 60° teeth, made of steel 16 MnCr 5

**scope of supply and services:**  
 3 pieces in a set



For chuck Ø	160 mm	200 mm	250 mm	315 mm	
Length L (mm)	67	87	101.5	128	
Width B (mm)	28	35	40	50	
Height H (mm)	36	51	54	62	
Slot width N (mm)	12	14	16	21	
Suitable cheese-head screw	M10	M12	M12	M16	
<b>22674...</b>	Ident. No. Set price, €	<b>160</b> O. R.	<b>200</b> O. R.	<b>250</b> O. R.	<b>315</b> (O. R.)

Prod. group 224



**Sliding blocks/ fixed T-nuts**

suitable for interchangeable jaw grips no. 22670, 22671, 22672, 22674, for power chuck: SCHUNK, FORKARDT and SMW/Autoblock

**Application:**

For clamping tools or workpieces to the workbench.

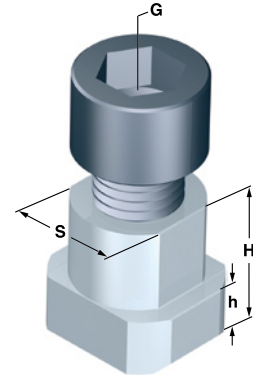
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

**Execution:**

- Suitable for interchangeable jaw grips no. 22670, 22671, 22672 and 22674 for power chucks SCHUNK, FORKARDT and SMW/Autoblock

Slot width S (mm)		12	17	21	25.5
Height H (mm)		17.2	23	27	29
Step height h (mm)		7	9	11	11
Thread dimension		M8	M12	M16	M20
<b>22681...</b>	Ident. No.	<b>012</b>	<b>017</b>	<b>021</b>	<b>025</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 224



**Sliding blocks/ fixed T-nuts**

**Offset**

**Application:**

For clamping tools or workpieces to the workbench.

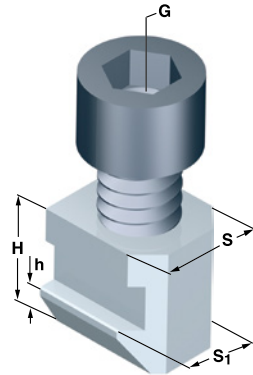
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

**Execution:**

- Compatible with interchangeable jaw grips for power chucks SCHUNK and SMW/Autoblock, offset with chamfer

Height H (mm)		18.5	20.5	26.5
Slot width S (mm)		14	17	21
Step height h (mm)		6.5	7.5	10
Thread dimension		M10	M12	M16
<b>22681...</b>	Ident. No.	<b>114</b>	<b>117</b>	<b>121</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 224



**Combination sliding blocks**

**Application:**

For clamping tools or workpieces to the workbench.

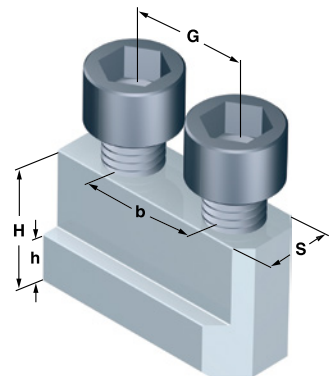
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

**Execution:**

- Compatible with interchangeable jaw grips no. 22670, 22671, 22672 and 22674 for power chucks SCHUNK ROTA NCK and KITAGAWA

Slot width S (mm)		12	14	16
Height H (mm)		18.5	20.5	21.5
Step height h (mm)		7.5	8.5	8.5
Hole spacing b (mm)		20	25	30
Thread dimension		M10	M12	M16
<b>22681...</b>	Ident. No.	<b>212</b>	<b>214</b>	<b>216</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 224



**ORION® Workpiece stop**

Clamping Technology

**Application:**

For clamping short parts on lathe chucks.

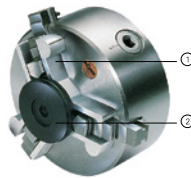
**Execution:**

- Fastened with 3 magnets that are built into the limit stop by simply placing on the lathe chuck body.

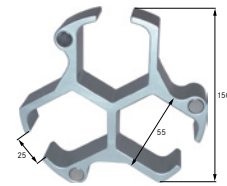
- Stop is coloured blue
- Contact surfaces are polished
- Material: aluminium



Ident. No. 015



1 = Workpiece stop  
 2 = Workpiece



Workpiece stop

Workpiece stopper height		15 mm	20 mm	25 mm	30 mm	35 mm
Min. jaw width (mm)		25	25	25	25	25
Max. jaw width (mm)		55	55	55	55	55
For min./max. workpiece Ø		15-130 mm	15-130 mm	15-130 mm	15-130 mm	15-130 mm
<b>22474...</b>	Ident. No. Unit price, €	<b>015</b> O. R.	<b>020</b> O. R.	<b>025</b> O. R.	<b>030</b> O. R.	<b>035</b> O. R.

Prod. group 264

**ORION® Workpiece stop set**

**Application:**

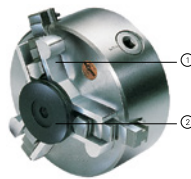
For clamping short parts on lathe chucks.

**Execution:**

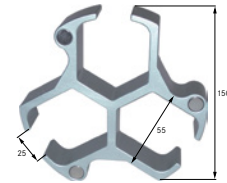
- Fastened with 3 magnets that are built into the limit stop by simply placing on the lathe chuck body.
- Stop is coloured blue

- Contact surfaces are polished
- Material: aluminium

**scope of supply and services:**  
 Complete set in wooden case



1 = Workpiece stop  
 2 = Workpiece



Workpiece stop

Workpiece stopper height		15 mm   20 mm   25 mm   30 mm   35 mm
Min. jaw width (mm)		25
Max. jaw width (mm)		55
For min./max. workpiece Ø		15-130 mm
<b>22474...</b>	Ident. No. Set price, €	<b>100</b> O. R.

Prod. group 264

**ORION® Pressure collets type 161 E and 173 E**  
 Clamp bridge rising in 1 mm increments

**Application:**

Collets of type 161 E and 173 E with clamp bridge rising in 1 mm increments for clamping cylindrical workpieces.

**Notes:**

Collets for square and hexagonal workpieces on request.

Min. clamping range (mm)		3	3
Max. clamping range (mm)		26	42
Clamping range increasing by		0.5 mm	1 mm
Collet type		161E	173E
<b>22366...</b>	Ident. No. Unit price, €	<b>010</b> (O. R.)	<b>020</b> (O. R.)

Prod. group 250

**ATORN®** Permanent magnet clamping plates  
With particularly narrow transverse pole pitch

**Application:**

For high-precision grinding and eroding work.

**Execution:**

- Double Neodym magnetic system generates an adhesive force of up to 110 N/cm

- Universal clamping of extremely small, thin and large workpieces
- Very sturdy structure with solid basic body and solid pole plate
- No deformation during switching operation due to special switch method
- Sealed against coolant and dielectric

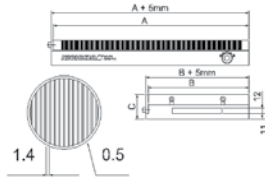
- Easy switching using hexagon key

**scope of supply and services:**

2 limit stop strips, 2 adjustable clamps and hexagon key, operating instructions.

**Notes:**

Other sizes available on request.



Clamping surface length A (mm)	150	175	200	250	350	400	
Magnet width B (mm)	150	100	100	150	150	200	
Magnetic field height (mm)	6	6	6	6	6	6	
Height (mm)	51	49	49	51	51	51	
Pole pitch ST/NE	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	
Pole plate thickness (mm)	20	20	20	20	20	20	
Wear of pole surface (mm)	8	8	8	8	8	8	
Weight (kg)	9	7	8	15	22	35	
24314...	Ident. No. Unit price, €	150 O. R.	175 O. R.	200 O. R.	250 O. R.	350 O. R.	400 O. R.†

Prod. group 280

**SAV** WALKER HAGOU **NEOMILL permanent magnet clamping plates**

**Application:**

For milling tasks.

**Execution:**

- With narrow transverse pole pitch
- High adhesive force up to 150 N/cm thanks to double Neodym magnetic system

- The pole pitch allows universal clamping, even for workpieces with rough or uneven contact surface
- Adhesive force for workpiece thickness from 6 mm
- Maximum stability due to one-piece housing and solid pole plate
- Easy to switch on/off using hexagon key

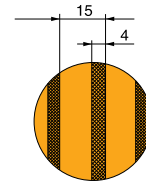
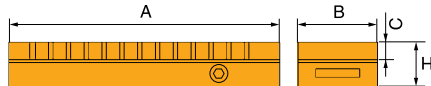
- Sealed against dirt and coolant

**scope of supply and services:**

With hexagon key, clamping plates, operating instructions.

**Notes:**

Other dimensions on request.



Clamping surface length A (mm)	250	600	500	400	350	300	
Magnet width B (mm)	150	300	200	200	150	200	
Magnetic field height (mm)	12	12	12	12	12	12	
Height (mm)	57	64	60	60	57	60	
Pole pitch ST/NE	3/11 mm	11/3 mm	11/3 mm	11/3 mm	11/3 mm	3/11 mm	
Pole plate thickness (mm)	20	23	23	23	20	23	
Wear of pole surface (mm)	5	5	5	5	5	5	
Weight (kg)	17	67	44	35	24	26	
24341...	Ident. No. Unit price, €	110 O. R.	170 (O. R.)†	160 (O. R.)†	150 O. R.†	120 (O. R.)	140 O. R.

Prod. group 230

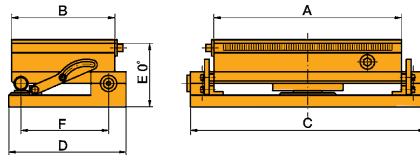
## ATORN® Sine bar with permanent magnet clamping plate

### Application:

For highly precise angle grinding, eroding work and measurements.

### Execution:

- For very small to large workpieces
- Precision-ground steel base plate, 60 HRC hardened



- Angle setting with gauge blocks
- Repeatability 10"
- Clamping through retaining shears and upper guide shells
- Parallelism tolerance 0.010/100 mm
- Sealed against dirt and coolant

### scope of supply and services:

With 2 limit stop strips, spanner, operating instructions.

### Notes:

Delivered ex-works, postage and packaging excluded.

Support plate length A (mm)		140	175	250	350	450
Support plate width B (mm)		70	100	150	150	150
Base length C (mm)		170	215	290	390	490
Base width D (mm)		100	115	165	165	150
Height E (mm)		68	77	79	87	87
Pole pitch ST/NE		1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm	1.4/0.5 mm
Magnetic field height (mm)		6	6	6	6	6
Nominal adhesive strength (N/cm <sup>2</sup> )		100	100	100	100	100
Roll distance (mm)		55	85	135	135	135
<b>24351...</b>	Ident. No.	<b>210</b>	<b>215</b>	<b>235</b>	<b>245</b>	<b>250</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	(O. R.) <sup>+</sup>

Prod. group 280

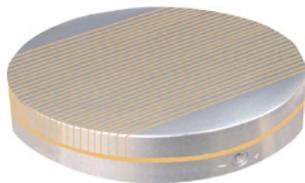
## SAV Permanent magnet round chuck NEOMICRO With particularly narrow transverse pole pitch

### Application:

The micro pole pitch of this magnetic clamping plate makes it possible to clamp medium-sized as well as very small and thin turning, grinding and eroding parts.

### Execution:

- Powerful magnetic system with Neodym magnets and low magnetic field height of 8 mm



- The infinitely variable adjustment of the adhesive force simplifies alignment of the workpiece
- Machining on both sides at the centre of the pole plate is possible with dimension J

### Advantage:

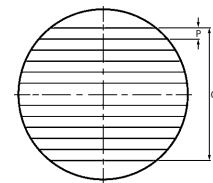
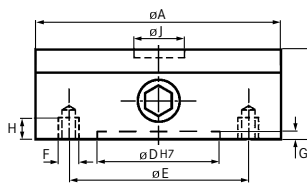
- The low magnetic field height is ideal for clamping very thin and small workpieces from a diameter of

150, nominal adhesive force 100 N/cm<sup>2</sup> (where A = Ø 100: 70 N/cm<sup>2</sup>)

- The pole plate can also include holes for driving pins and centring aids
- Low profile and low weight

### Notes:

Available on request with flange and up to 500 mm diameter



Clamping plate Ø A (mm)		100	150	200	250	300
Height B (mm)		50	57	57	57	62
Centring Ø (H7) D (mm)		90	125	100	200	250
Centring depth G (mm)		4	4	4	4	4
Hole circle Ø E (mm)		85	142	180	232	285
Magnetically active length C (mm)		77	117	154	192	227
Pole pitch ST/NE P		0.5/1.4 mm	0.5/1.4 mm	0.5/1.4 mm	0.5/1.4 mm	0.5/1.4 mm
Wear of pole surface (mm)		5	5	5	5	5
Machining of pole panel, Ø x depth H		20 x 14 mm	24 x 5 mm	200 x 5 mm	250 x 5 mm	300 x 5 mm
Fixing thread F		M8	M8	M8	M8	M8
Max. rotation speed (U/min(rpm))		780	230	600	500	450
Magnetic field height (mm)		8	8	8	8	8
Nominal adhesive strength (N/cm <sup>2</sup> )		70	100	100	100	100
Weight (kg)		3	9	15	20	31
<b>24367...</b>	Ident. No.	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
	Unit price, €	O. R.	(O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 230



**FERROMAX permanent magnet round chucks**  
with parallel pole pitch

**Application:**

Suitable for clamping large and small workpieces. For use on lathes and grinding machines, dividing and tracer divider devices. For workpieces with min. dimensions of Ø 20mm and a thickness of 8 mm upwards

**Execution:**

- High-performance Neodym magnetic system with low magnetic field height of 8 mm for workpieces from a thickness of 8 mm
- Integrated concentric grooves simplify workpiece centring
- Die clamping surfaces can be machined down to a depth of 6 mm (wear of pole surface)

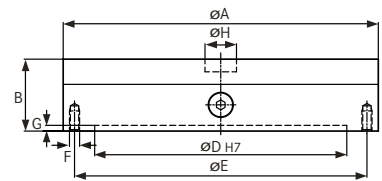
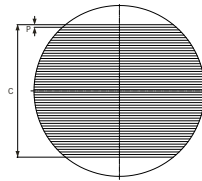
- Centre drilling is possible at the centre, see table

**Advantage:**

- Compact design and hence low weight
- Nominal adhesive force of 150 N/cm<sup>2</sup>

**Notes:**

Available on request with flange and up to 500 mm diameter



Clamping plate Ø A (mm)		200	250	300	350	400
Height B (mm)		57	57	62	62	67
Centring Ø D (mm)		150	200	250	300	300
Centring depth G (mm)		4	4	4	5	5
Hole circle Ø E (mm)		180	232	285	334	350
Fixing thread F		M8	M8	M8	M8	M10
Magnetically active length C (mm)		146	198	228	288	318
Pole pitch ST/NE P		8/3 mm	12/3 mm	12/3 mm	12/3 mm	12/3 mm
Max. rotation speed (U/min(rpm))		600	500	450	400	350
Wear of pole surface (mm)		6	6	6	6	6
Magnetic field height (mm)		10	10	10	10	10
Nominal adhesive strength (N/cm <sup>2</sup> )		120	150	150	150	150
Weight (kg)		13	20	31	43	60
24371...	Ident. No. Unit price, €	200 O. R.	250 O. R.	300 (O. R.)	350 (O. R.) <sup>+</sup>	400 (O. R.) <sup>+</sup>

Prod. group 230



**NEOSTAR permanent magnet round chucks**  
with radial pole pitch

**Application:**

For lathes and grinding machines.

- Suitable for clamping annular-shaped workpieces
- High clamping force thanks to Neodym magnet system
- Balanced design
- Suitable for high rotation speeds

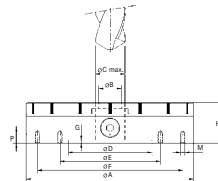
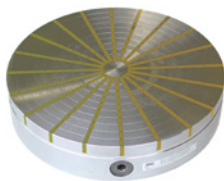
- Infinitely variable adjustment of adhesive force
- A through-hole 'C' can be made in the centre

**Execution:**

- With radial pole pitch

**Notes:**

Delivered ex-works, postage and packaging excluded.



Clamping plate Ø A (mm)		350	300	250	200	150	400
Height H (mm)		73	73	70	57	57	75
Centring Ø D (mm)		170	150	80	60	50	200
Magnet-free zone B (mm)		40	40	30	28	20	40
Through-bore max. C (mm)		58	58	50	30	24	58
Large hole circle F (mm)		300	260	220	180	120	340
Fixing thread M		M8	M8	M6	M6	M6	M8
Small hole circle E (mm)		220	180	140	110	80	260
Pole plate thickness (mm)		18	18	18	18	18	18
Wear of pole surface (mm)		5	5	5	5	5	10
Number of magnetic terminals (PCS)		20	16	16	12	10	20
Nominal adhesive strength (N/cm <sup>2</sup> )		100	100	100	100	100	100
Weight (kg)		49	30	20	13	7	75
24376...	Ident. No. Unit price, €	350 (O. R.) <sup>+</sup>	300 (O. R.) <sup>+</sup>	250 O. R.	200 O. R.	150 O. R.	400 (O. R.) <sup>+</sup>

Prod. group 230

Clamping Technology

## ATORN® Slotted vacuum plate sets

With Venturi nozzle for dry machining

### Application:

Ideal for light machining tasks such as milling or drilling - e.g. printed circuit boards or electronic components - or also engraving. It is thus also possible to securely clamp workpieces that are much smaller than the clamping surface of the vacuum plate. From larger material sections, workpieces that are no larger than the size of a postage stamp can be cut out by milling. Individual adaptation to the geometry of the part allows reliable clamping of almost all conceivable workpiece geometries.

### Execution:

- The narrowing of the cross section within the Venturi pipe causes a vacuum here, which draws the air in.
- Distance between slots 5 mm
- All slotted vacuum plates can also be connected also to conventional vacuum pump no. 24501 110 or no. 24501 120.
- The noise level is just 57 db (A).
- Vacuum generation through compressed air vacuum ejector: max. vacuum approx. 5-6 bar. End vacuum of up to 87% depending on conditions of use. Air consumption approx. 90 l/min.

### Advantage:

- High process reliability
- Can be adapted individually to the geometry of the part
- Low-cost entry-level set
- High max. vacuum at approx. 5-6 bar
- Venturi technology requiring little maintenance

### scope of supply and services:

1 matching vacuum grid plate with a width of 1 mm, distance between centres 5 mm, including compressed air vacuum ejector. Mounting grooves and height-adjustable stop plates. 4 adjustable clamps per slot width = 14 mm, 1 hose connection for quick-release coupling and 3 m plastic hose, 1 suitable brown rubber adapter mat, 1 black rubber adapter mat, including silencer and shut-off valve, 1 connection for conventional vacuum pump

### Notes:

Conversion set for wet machining included in scope of delivery. A vacuum pump is also needed for wet machining.



Model		SV 1	SV 2	SV 3
Vacuum plate length L (mm)		300	400	600
Vacuum plate width B (mm)		200	300	400
Vacuum plate height H (mm)		32.5	32.5	32.5
Average slot spacing (mm)		5	5	5
Vacuum panels, can be linked		No	No	No
<b>24503...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>030</b>
	Set price, €	O. R.	O. R.	O. R.

Prod. group 234

## ATORN® Rubber adapter mat

Brown

### Application:

Outstanding coefficient of friction offers particularly good resistance to shifting forces encountered during machining. The height tolerance of the rubber adapter mat is ± 0.1 mm.

### Execution:

- For vacuum slotted plates with and without Venturi nozzles
- The material can be reduced through milling.
- For use on vacuum slotted plate

Colour		Brown	Brown
Length (mm)		300	600
Width (mm)		200	400
Thickness (mm)		3	3
Thickness tolerance of adapter mat (+/-) (mm)		0.1	0.1
<b>24505...</b>	Ident. No.	<b>010</b>	<b>050</b>
	Unit price, €	O. R.	O. R.

Prod. group 234



Ref. no. 24505 010 and 050  
Outstanding friction coefficient offers particularly good resistance against any displacement forces during machining. The height tolerance of the rubber adapter mat is ± 0.1 mm.

**ATORN® Rubber adapter mat**  
black**Application:**

The rubber adapter mats can be face-milled, thereby allowing significantly greater plane-parallelism.

**Execution:**

- For vacuum slotted plates with and without Venturi nozzles

- Suitable for face milling
- Made from synthetic elastomer

**Advantage:**

- Can be milled down to 1.5 mm without experiencing vacuum loss, height tolerance  $\pm 0.02$  mm



Colour		Black	Black	Black
Length (mm)		300	400	600
Width (mm)		200	300	400
Thickness (mm)		3	3	3
Thickness tolerance of adapter mat (+/-) (mm)		0.02	0.02	0.02
<b>24505...</b>	Ident. No.	<b>020</b>	<b>040</b>	<b>060</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 234

Ref. no. 24505 020, 040 and 060  
Made from synthetic elastomer. These mats can be face-milled, thereby allowing significantly greater plane-parallelism. The rubber adapter mat can be milled up to a depth of 1.5 mm without vacuum loss. Height tolerance  $\pm 0.02$  mm

**ATORN® Adhesive rubber mat****Application:**

With its high friction coefficient, the blue adhesive rubber mat provides added strength to prevent the workpiece from slipping during machining (height tolerance  $\pm 0.02$  mm).

**Execution:**

- For vacuum slotted plates with and without Venturi nozzles
- The material can be reduced through milling
- For use on vacuum slotted plate

Colour		Blue
Length (mm)		2000
Width (mm)		400
Thickness (mm)		1
Thickness tolerance of adapter mat (+/-) (mm)		0.02
<b>24502...</b>	Ident. No.	<b>070</b>
	Unit price, €	O. R.

Prod. group 234



Ref. no. 24502 070  
With its high friction coefficient, the blue adhesive rubber mat provides added strength to prevent the workpiece from slipping (height tolerance  $\pm 0.02$  mm).

**WITTE Maintenance set****Application:**

Maintenance set for modular vacuum assemblies, no. 24501100.

**Execution:**

- Maintenance set for 2 maintenance intervals

<b>24501...</b>	Ident. No.	<b>115</b>
	Set price, €	(O. R.)

Prod. group 233

**ORION® Dividers****Application:**

For horizontal and vertical milling, drilling, finishing and marking.

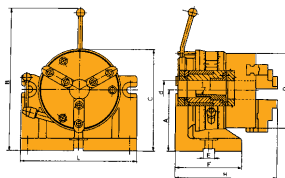
**Execution:**

- Body made from cast iron, dividing disc made of steel, hardened and polished, concentricity



tolerance of spindle: 0.02 mm, straightness tolerance of housing: 0.02 mm.

- Direct division: via dividing plate with 24 positions for dividing 2-3-4-6-8-12-24
- Graduation via scale and adjustable vernier scale, scale interval: 1°

**scope of supply and services:**

Divider with 3-jaw chuck made of cast iron with sliding blocks

**Notes:**

Delivered ex-works, postage and packaging excluded.



Point height (mm)		100	125	160	200
Dividing device height C (mm)		167.5	210	265	330
Locking arm height B (mm)		254	301	382	469
Lathe chuck Ø D (mm)		125	160	200	250
Through-bore d (mm)		26.5	42	55	76
Basic body width F (mm)		130	140	160	180
Width H (mm)		186	205	228	256
Length L (mm)		215	245	300	340
For groove width E (mm)		14	14	18	18
Morse taper size		-	MK 3	MK 4	MK 4
Weight (kg)		17.6	32.2	55.3	86.5
<b>25 124...</b>	Ident. No. Unit price, €	<b>100</b> O. R.	<b>125</b> O. R.†	<b>160</b> (O. R.)†	<b>200</b> (O. R.)†

Prod. group 270

**AMF** Adjustable clamps

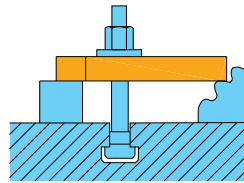
DIN 6314

**Execution:**

- Heat-treated steel
- Painted

**Notes:**

Other sizes on request.



Slot width (mm)	6.6	9	11	14	14	18	18	22	
Length (mm)	50	60	80	100	125	125	160	160	
Slot length (mm)	20	22	30	40	50	45	65	60	
Clamping shoe width (mm)	20	25	30	40	40	50	50	60	
Clamping shoe height	10 mm	12 mm	15 mm	20 mm	20 mm	25 mm	25 mm	30 mm	
Suitable cheese-head screw DIN 912	M6	M8	M10	M12   M14	M12   M14	M16   M18	M16   M18	M20   M22	
<b>26 120...</b>	Ident. No. Unit price, €	<b>010</b> O. R.	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.	<b>050</b> O. R.	<b>060</b> O. R.	<b>070</b> O. R.	<b>080</b> O. R.

Slot width (mm)	22	26	26	33	
Length (mm)	200	200	250	250	
Slot length (mm)	80	80	105	100	
Clamping shoe width (mm)	60	70	70	80	
Clamping shoe height	30 mm	30 mm	35 mm	40 mm	
Suitable cheese-head screw DIN 912	M20   M22	M24	M24	M30	
<b>26 120...</b>	Ident. No. Unit price, €	<b>090</b> O. R.	<b>100</b> O. R.	<b>110</b> O. R.	<b>120</b> (O. R.)

Prod. group 260

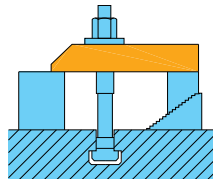
**AMF** Forked clamps  
Angled

**Execution:**

- Heat-treated steel
- Painted

**Notes:**

Other sizes on request



Slot width (mm)	9	11	14	14	14	18	18	18	
Length (mm)	80	100	125	160	200	160	200	250	
Clamping shoe width (mm)	25	31	38	38	38	48	48	48	
Clamping shoe height	15 mm	20 mm	25 mm	25 mm	25 mm	30 mm	30 mm	40 mm	
Suitable cheese-head screw DIN 912	M8	M10	M12   M14	M12   M14	M12   M14	M16   M18	M16   M18	M16   M18	
<b>26 125...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.	<b>050</b> O. R.	<b>060</b> O. R.	<b>070</b> O. R.	<b>080</b> O. R.	<b>090</b> O. R.

Slot width (mm)	22	22	22	26	26	26	33	33
Length (mm)	200	250	315	200	250	315	250	315
Clamping shoe width (mm)	52	62	62	66	66	66	74	74
Clamping shoe height	40 mm	40 mm	40 mm	40 mm	40 mm	40 mm	50 mm	50 mm
Suitable cheese-head screw DIN 912	M20   M22	M20   M22	M20   M22	M24	M24	M24	M30	M30
26 125...	Ident. No. 100	110	120	130	140	150	160	170
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)	(O. R.)

Slot width (mm)	33	
Length (mm)	400	
Clamping shoe width (mm)	74	
Clamping shoe height	50 mm	
Suitable cheese-head screw DIN 912	M30	
26 125...	Ident. No. 180	
	Unit price, €	O. R.

Prod. group 260

**AMF** Forked clamps  
With round clamping face

DIN 6315 C

**Execution:**

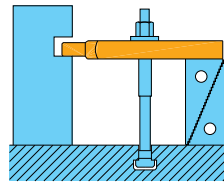
- Heat-treated steel

- Painted

- With round clamping face

**Notes:**

Other sizes on request.



Slot width (mm)	11	14	14	18	18	22	22	26	26
Length (mm)	125	160	200	200	250	250	315	250	315
Clamping shoe width (mm)	30	40	40	50	50	60	60	70	70
Clamping shoe height	20 mm	25 mm	25 mm	30 mm	30 mm	40 mm	40 mm	40 mm	40 mm
Suitable cheese-head screw DIN 912	M10	M12   M14	M12   M14	M16   M18	M16   M18	M20   M22	M20   M22	M24	M24
Ratio (mm)	16	20	20	24	24	30	30	38	38
26 130...	Ident. No. 030	040	050	060	070	080	090	100	110
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)

Prod. group 260

**AMF** Forked clamps  
With nose

DIN 6315GN

**Execution:**

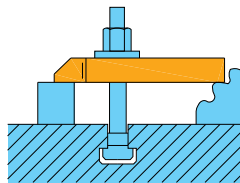
- Heat-treated steel

- Painted

- With nose

**Notes:**

Other sizes on request.



Slot width (mm)	9	11	14	14	18	18	22	22	26	26
Length (mm)	100	125	160	200	200	250	250	315	250	315
Clamping shoe width (mm)	30	30	40	40	50	50	60	60	70	70
Clamping shoe height	15 mm	20 mm	25 mm	25 mm	30 mm	30 mm	40 mm	40 mm	40 mm	40 mm
Suitable cheese-head screw DIN 912	M8	M10	M12   M14	M12   M14	M16   M18	M16   M18	M20   M22	M20   M22	M24	M24
26 132...	Ident. No. 020	030	040	050	060	070	080	090	100	110
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260

**AMF** Adjustable clamps  
With stepped teeth

DIN 6314 Z

**Execution:**

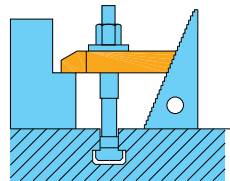
- Heat-treated steel
- Painted

With stepped teeth

- Only in conjunction with packing blocks, no. 26150-26151

**Notes:**

Aluminium alloy version and other sizes on request.



Slot width (mm)		9	9	11	11	14	14	18	18	22	26
Length (mm)		60	100	80	125	100	160	125	200	160	200
Clamping shoe width (mm)		25	25	30	30	40	40	50	50	60	70
Clamping shoe height		12 mm	12 mm	15 mm	15 mm	20 mm	20 mm	25 mm	25 mm	30 mm	30 mm
Suitable cheese-head screw DIN 912		M8	M8	M10	M10	M12   M14	M12   M14	M16   M18	M16   M18	M20   M22	M24
<b>26136...</b>	Ident. No.	<b>020</b>	<b>025</b>	<b>030</b>	<b>035</b>	<b>040</b>	<b>045</b>	<b>050</b>	<b>055</b>	<b>060</b>	<b>070</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)

Prod. group 260

**AMF** Adjustable clamps  
Depressed centre

DIN 6316

**Execution:**

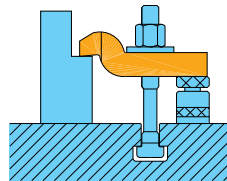
- Heat-treated steel

Painted

- Single depressed centre

**Notes:**

Aluminium alloy version and other sizes on request.



Slot width (mm)		6.6	9	11	14	18	18	22	22	26	26
Length (mm)		60	80	100	125	125	160	160	200	200	250
Clamping shoe width (mm)		20	25	30	40	50	50	60	60	70	70
Clamping shoe height		10-20 mm	12-25 mm	15-30 mm	20-40 mm	25-50 mm	25-50 mm	30-60 mm	30-60 mm	35-70 mm	35-70 mm
Suitable cheese-head screw DIN 912		M6	M8	M10	M12   M14	M16   M18	M16   M18	M20   M22	M20   M22	M24	M24
<b>26138...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>	<b>060</b>	<b>070</b>	<b>080</b>	<b>090</b>	<b>100</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260

**AMF** Adjustable clamps  
Angled

**Application:**

For clamping workpieces.

Made from heat-treated steel

- Painted

**Execution:**

- With support screw

For table grooves according to DIN 650		10 mm	12 mm	14 mm	16 mm	18 mm
Min. clamping range (mm)		8	10	10	13	13
Max. clamping range (mm)		-	40	38	48	46
Suitable screw DIN 787		M10 x 80 mm	M12 x 100 mm	M12 x 100 mm	M16 x 125 mm	M18 x 125 mm
Span iron length (mm)		80	100	100	125	125
Span iron width (mm)		30	40	40	50	50
<b>26221...</b>	Ident. No.	<b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260



## AMF Adjustable clamps

### Depressed centre

**Application:**  
For clamping workpieces.

- Made from heat-treated steel
- Painted

**Execution:**

- With support screw

For table grooves according to DIN 650	10 mm	12 mm	14 mm	16 mm	18 mm
Min. clamping range (mm)	22	28	28	36	36
Max. clamping range (mm)	46	58	56	71	69
Suitable screw DIN 787	M10 x 80 mm	M12 x 100 mm	M12 x 100 mm	M16 x 125 mm	M16 x 125 mm
Span iron length (mm)	100	125	125	160	160
Span iron width (mm)	30	40	40	50	50
<b>26222...</b>	Ident. No. <b>010</b> Unit price, € O. R.	Ident. No. <b>020</b> Unit price, € O. R.	Ident. No. <b>030</b> Unit price, € O. R.	Ident. No. <b>040</b> Unit price, € O. R.	Ident. No. <b>050</b> Unit price, € O. R.

Prod. group 260



## AMF Support screw, spare parts

### Accessories for ref. no. 26221 and 26222

**Application:**  
For clamping workpieces.

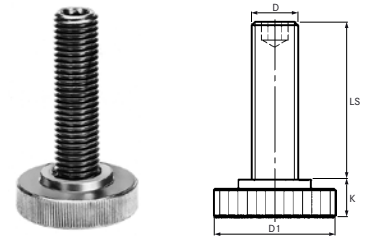
- Made from heat-treated steel
- Painted

**Execution:**

- With support screw

Version	Tempered	Tempered	Tempered
Suitable for thread D	M10	M12	M16
Thread dimension D	M10	-	-
Thread length LS (mm)	39	49	55
Length K (mm)	8	10	13
Screw length (mm)	47	59	68
Ø D1 (mm)	30	36	42
Screwing-property class	8,8	8,8	8,8
<b>26222...</b>	Ident. No. <b>110</b> Unit price, € O. R.	Ident. No. <b>112</b> Unit price, € O. R.	Ident. No. <b>116</b> Unit price, € O. R.

Prod. group 260



Ident. No. 110

## AMF Adjustable clamps

### Infinitely adjustable

**Application:**  
For clamping workpieces. It is designed to withstand extremely high loads and is particularly suitable for clamping cutting tools and punches.

- Made of steel

**Advantage:**

- The infinitely variable adjustable clamp quickly spans various clamping heights without any additional support and requires little space on the machine table.

**Execution:**

- Tempered and galvanised

For table grooves according to DIN 650	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
Min./max. clamping height h	0-50 mm	0-50 mm	0-75 mm	0-75 mm	0-85 mm	0-85 mm
Adjustable clamp length L (mm)	140	140	140	140	175	175
Adjustable clamp width b (mm)	50	50	50	50	60	60
<b>26223...</b>	Ident. No. <b>010</b> Unit price, € O. R.	Ident. No. <b>020</b> Unit price, € O. R.	Ident. No. <b>030</b> Unit price, € O. R.	Ident. No. <b>040</b> Unit price, € O. R.	Ident. No. <b>065</b> Unit price, € O. R.	Ident. No. <b>070</b> Unit price, € O. R.

Prod. group 260





## Adjustable clamps

Short and infinitely adjustable with U-piece

**Application:**  
For clamping workpieces.

- Infinitely adjustable

**Execution:**

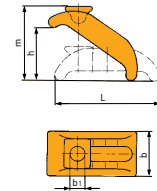
- With U-piece
- Suitable for tough conditions, e.g. on presses
- Tempered
- Galvanised and blue passivated

**scope of supply and services:**

With U-piece, though without clamping screw

**Notes:**

Please order clamping screw separately, see no. 26200.



For table grooves according to DIN 650	12 mm   14 mm	16 mm   18 mm	20 mm   22 mm	24 mm   28 mm
Min./max. clamping height h	30-55 mm	42-84 mm	50-100 mm	54-111 mm
Adjustable clamp length L (mm)	88	130	140	174
Adjustable clamp width b (mm)	38	56	66	76
Hole Ø b1 (mm)	13	18	22	26
Suitable screw DIN 787	M12 x 100 mm	M16 x 160 mm	M20 x 200 mm	M24 x 200 mm
Slot nut width of clamping screw	12 mm   14 mm	16 mm   18 mm	20 mm   22 mm	24 mm   28 mm
Height (mm)	55	84	100	111
<b>26225...</b>	Ident. No. <b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>
	Unit price, € O. R.	O. R.	O. R.	O. R.

Prod. group 260



## Clamps

**Execution:**

- Heat-treated steel
- Painted
- With self-locking trapezoidal thread spindle and end safety device.

- With flat support

**Notes:**

For attachments see no. 26161.



Min. support plate height (mm)	38	42	50	70	100	140	190
Max. support plate height (mm)	50	52	70	100	140	210	300
Head Ø (mm)	31	50	50	50	68	70	80
Load-carrying capacity (kg)	1500	6000	6000	6000	10000	17000	35000
Centring Ø (mm)	12	12	12	12	12	12	12
<b>26157...</b>	Ident. No. <b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>	<b>060</b>	<b>070</b>
	Unit price, € O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260



## Clamps

With magnetic base

**Execution:**

- Heat-treated steel
- Painted
- With self-locking trapezoid spindle and end safety device
- With flat support

- Centring hole Ø12 mm

**Advantage:**

- Durable and precise positioning of workpiece thanks to permanent magnet in the base.



Min. support plate height (mm)	52	60	80
Max. support plate height (mm)	62	80	110
Head Ø (mm)	50	50	50
Load-carrying capacity (kg)	6000	6000	6000
Centring Ø (mm)	12	12	12
<b>26157...</b>	Ident. No. <b>120</b>	<b>130</b>	<b>140</b>
	Unit price, € O. R.	O. R.	O. R.

Prod. group 260

## AMF Clamps with locknut

**Execution:**

- Spindle made from heat-treated steel
- Basic body painted
- Spindle head burnished
- With locknut
- Clamps without support

**Advantage:**

- Swivel mounted ball minimises contact friction
- No transfer of rotational forces to the workpiece through spindle movement.

Min. support plate height (mm)		100	140	200	320
Max. support plate height (mm)		140	200	320	550
Width across flats SW		46 mm	46 mm	46 mm	46 mm
Load-carrying capacity (kg)		6000	6000	4000	2500
Spindle Ø (mm)		30	30	30	30
26160...	Ident. No.	010	020	030	040
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 260



## AMF Heavy-duty clamps with locking screw

**Execution:**

- Spindle made from heat-treated steel
- Basic body painted
- Spindle head burnished
- With locking screw, heavy-duty version
- Clamps without support

**Advantage:**

- Swivel mounted ball minimises contact friction
- No transfer of rotational forces to the workpiece through spindle movement.

Min. support plate height (mm)		290	290	430
Max. support plate height (mm)		470	460	750
Width across flats SW		65 mm	65 mm	65 mm
Load-carrying capacity (kg)		6000	6000	5000
Spindle Ø (mm)		40	40	40
26160...	Ident. No.	050	060	070
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 260



## AMF Spherical adapter

For clamps ref. no. 26160 and 26157

**Application:**

For infinitely adjustable support of adjustable clamps.

**Execution:**

- Interchangeable spherical adapter
- Hardened steel with burnished finish

26161...	Ident. No.	010
	Unit price, €	O. R.

Prod. group 260



No. 26161 010, no. 26161 020

## AMF Vee block attachment

For clamps ref. no. 26160 and 26157

**Application:**

For infinitely adjustable support of adjustable clamps.

**Execution:**

- Interchangeable vee block adapter
- Hardened steel with burnished finish

26161...	Ident. No.	020
	Unit price, €	O. R.

Prod. group 260



No. 26161 010, no. 26161 020



## Adapter with sphere

For clamps ref. no. 26160 and 26157

### Application:

This sturdy element is suitable for supporting and aligning cast and forged workpieces. Can be used on AMF clamps.

### Execution:

- Hardened steel with burnished finish
- Adapter with rotating sphere
- Adapter with sphere
- Sphere hardened



Max. support plate force (kN)		30
26161...	Ident. No.	<b>030</b>
	Unit price, €	O. R.

Prod. group 260



## Stepped brackets

### Execution:

- Special cast iron
- For 14 mm bench grooves
- Fine detent steps enables quick adaptation
- Up to 195 mm workpiece height

### Advantage:

- Ready for use in no time
- Fine detent steps enables quick adaptation
- Ready for use in no time
- Requires little space on the machine table



Clamping height (mm)		0	15	30	60	120
Clamping height 2 (mm)		45	45	75	135	195
Groove height (mm)		0.75	0.75	1.25	2.5	2.5
26233...	Ident. No.	<b>005</b>	<b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260



## Deep clamping jaws, 'Bulle' model

### Application:

For clamping with draw-down effect.

### Execution:

- Tempered
- With burnished finish
- Wedge effect in forward and downward direction

### Advantage:

- No protruding clamping screws
- Clamps at every angle to the groove

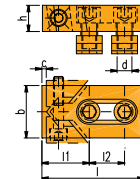
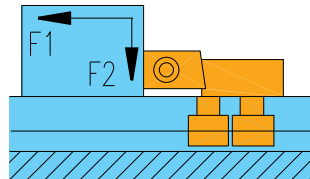
### scope of supply and services:

The deep clamping jaws are supplied with fastening screws, sliding blocks and a DIN ISO 2936 hexagon

screwdriver.

### Notes:

Can also be supplied for groove widths of 20, 24 and 30 mm. Prices on request.



Suitable for groove width (mm)		12	14	16	18	22	28
Length L (mm)		80	80	100	100	140	140
Width b (mm)		40	40	50	50	78	78
Overall height of pull-down jaw h (mm)		20	20	25	25	30	30
Clamping force F1 (kN)		16	22	32	36	36	40
Clamping force F2 (kN)		0.6	0.9	1.2	1.4	1.4	1.6
Suitable screw ISO 4762		M10	M12	M14	M16	M20	M24
26140...	Ident. No.	<b>020</b>	<b>030</b>	<b>040</b>	<b>050</b>	<b>060</b>	<b>070</b>
	Set price, €	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)

Prod. group 260

**AMF** Flat clamp, 'Mini-Bulle' model

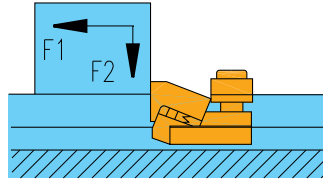
**Execution:**

- With burnished finish
- For flat workpieces
- Wedge effect in forward and downward direction



**Advantage:**

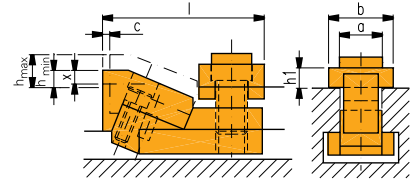
- The wedge effect of the clamping jaws causes the workpiece to be pressed down firmly and securely onto the machine table. The horizontal forces are absorbed by a screw fitting the size of the



slot, which provides for perfect clamping without damaging the table.

**scope of supply and services:**

With fastening screw and T-handle wrench



Suitable for groove width (mm)		12	14	16	18	22
Length l (mm)		52	55	68	71	89
Width b (mm)		18	22	25	28	35
Clamping force F1 (kN)		5	5.5	8	9	16
Clamping force F2 (kN)		0.6	0.7	0.9	1	1.9
Clamping width c (mm)		1.8	1.8	2.5	2.5	3
<b>26141...</b>	Ident. No. Set price, €	<b>010</b> O. R.	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.	<b>050</b> (O. R.)

Prod. group 260

**AMF** Stepped clamps

DIN 6318

**Application:**

For supporting adjustable clamps.

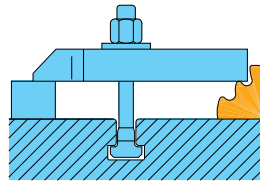


**Execution:**

- Machine casting
- Painted

- Contact surface and step face-milled

- With clamping stages, each with a height difference of 7.5 mm



Height (mm)		230	50	95	140	185
Min. step height (mm)		192.5	12.5	57.5	102.5	147.5
Width (mm)		110	42.5	95	100	105
<b>26145...</b>	Ident. No. Unit price, €	<b>050</b> O. R.	<b>010</b> O. R.	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> (O. R.)

Prod. group 260

**AMF** Packing blocks

**Application:**

For supporting adjustable clamps.

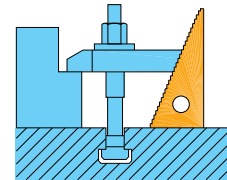
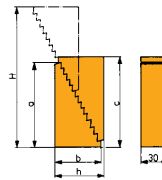


**Execution:**

- Heat-treated steel
- Painted

- Packing blocks can be combined with adjustable clamps

- Step height: vertical 4.65 mm, horizontal 2.3 mm



Size		1	2	3
Min. support plate height a (mm)		23	39	71
Max. support plate height H (mm)		51	107	208
Width b (mm)		19	35.5	68
Height C (mm)		30	30	30
<b>26150...</b>	Ident. No. Unit price, €	<b>110</b> O. R.	<b>120</b> O. R.	<b>130</b> O. R.

Prod. group 260

Clamping Technology



**AMF** Packing block set

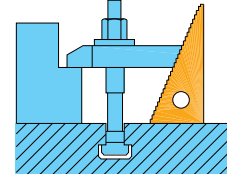
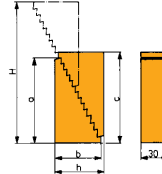
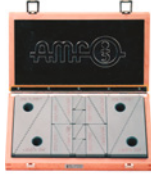
Clamping Technology

**Application:**  
For supporting adjustable clamps.

- Painted
- Packing blocks can be combined with adjustable clamps

**scope of supply and services:**  
8 x size 1, 8 x size 2, 4 x size 3, in sturdy wooden case, support height 22-208 mm

**Execution:**  
▪ Heat-treated steel



Delivery

Size	Min. support plate height (mm)	Max. support plate height (mm)	26151... ID no.
1. 2. 3	23	208	010 O. R.
			Set price, €

Prod. group 260

**AMF** Clamping tool assortments  
Basic assortment

**Application:**  
For conventional clamping on machine tables with T-grooves, ideal for toolmaking.

- Rolled thread
- T-slot screws heat-treated

**Execution:**  
▪ All parts made of heat-treated steel

**scope of supply and services:**  
In environmentally-friendly transport case

Suitable for groove width (mm)		14
Suitable for thread		M12
Tension force (kN)		20
Clamping height (mm)		165
Weight (kg)		10
26152...	Ident. No.	140
	Set price, €	O. R.

Prod. group 260



Other sizes available

**AMF** Clamping tool assortments  
Basic assortment

**Application:**  
Ideal for toolmaking, manufacture and training equipment, consisting of the clamping tools most commonly required for conventional clamping on machine plates with T-grooves

- Rolled thread
- T-slot screws heat-treated

**Execution:**  
▪ All parts made of heat-treated steel

**scope of supply and services:**  
In environmentally-friendly transport case

Suitable for groove width (mm)		16
Suitable for thread		M14
Tension force (kN)		28
Clamping height (mm)		195
Weight (kg)		11.1
26152...	Ident. No.	160
	Set price, €	O. R.

Prod. group 260



Other sizes available

**AMF** Clamping tool assortment in box

**Application:**  
This assortment contains all of the requisite elements for quick clamping of workpieces or equipment on T-groove tables.

- Execution:**
- All parts made of heat-treated steel

**scope of supply and services:**  
Assortment in wooden case



Suitable for groove width	10	12	14	16	16	18	22	
Thread dimension	M10	M12	M12	M14	M16	M16	M20	
Min. clamping height with 2 clamping points (mm)	2	2	2	2	2	2	2	
Max. clamping height with 2 clamping points (mm)	230	270	270	270	270	270	270	
Min. clamping height with 4 clamping points (mm)	2	2	2	2	2	2	2	
Max. clamping height with 4 clamping points (mm)	140	160	160	160	160	160	160	
Wooden box length (mm)	355	460	460	510	510	510	480	
Wooden box width (mm)	270	330	330	330	415	415	528	
Wooden box height (mm)	47	50	50	50	50	50	50	
Weight (kg)	9.2	14.3	14.6	18.5	21.5	21.5	24.5	
Number of DIN 787 T-slot screws	2 x 40 mm   4 x 63 mm   4 x 100 mm	2 x 50 mm   4 x 80 mm   4 x 125 mm	2 x 50 mm   4 x 80 mm   4 x 125 mm	2 x 63 mm   4 x 100 mm   4 x 160 mm	4 x 100 mm   4 x 160 mm	2 x 63 mm   4 x 100 mm   4 x 160 mm	4 x 125 mm   4 x 200 mm	
Number of DIN 6379 stud bolts (extension pin)	4 x 80 mm	4 x 100 mm	4 x 100 mm	4 x 100 mm	4 x 100 mm	4 x 100 mm	4 x 100 mm	
Number of DIN 6330 B high nuts (PCS)	6	6	6	6	4	4	4	
Number of DIN 6340 discs (PCS)	4	4	4	-	-	-	-	
Number of rounded washers and ball sockets DIN 6319 G (PCS)	6	6	6	6	6	6	6	
Number of extension nuts (PCS)	4	4	4	4	4	4	4	
<b>26153...</b>	Ident. No. Unit price, €	<b>010</b> O. R.	<b>012</b> O. R.	<b>014</b> O. R.	<b>015</b> O. R.	<b>016</b> (O. R.)	<b>018</b> O. R.	<b>022</b> (O. R.)

Prod. group 260

## AMF Clamping screw sets for T-slots

**Execution:**

- Tempered
- Strength class 8 or 10

- Different clamping heights can be set as required using extension nuts and studs (extension studs).



Suitable for groove width (mm)	10	12	14	16	16	18	22	
Thread dimension	M10	M12	M12	M14	M16	M16	M20	
Number of DIN 787 T-slot screws	2 x M10 x 40 mm   4 x M10 x 63 mm   4 x M10 x 100 mm	2 x M12 x 50 mm   4 x M12 x 80 mm   4 x M12 x 125 mm	2 x M12 x 50 mm   4 x M12 x 80 mm	2 x M14 x 63 mm   4 x M14 x 100 mm	2 x M16 x 63 mm   4 x M16 x 100 mm   4 x M16 x 160 mm	2 x M16 x 63 mm   4 x M16 x 100 mm	2 x M20 x 80 mm   4 x M20 x 125 mm	
Number of DIN 6379 stud bolts (extension pin)	4 x M10 x 50 mm   4 x M10 x 80 mm   4 x M10 x 200 mm	4 x M12 x 63 mm   4 x M12 x 100 mm   4 x M12 x 200 mm	4 x M12 x 63 mm   4 x M12 x 100 mm   4 x M12 x 125 mm   4 x M12 x 200 mm	4 x M14 x 63 mm   4 x M14 x 100 mm   4 x M14 x 160 mm   4 x M14 x 250 mm	4 x M16 x 80 mm   4 x M16 x 125 mm   4 x M16 x 250 mm	4 x M16 x 80 mm   4 x M16 x 125 mm   4 x M16 x 160 mm	4 x M20 x 80 mm   4 x M20 x 125 mm   4 x M20 x 200 mm   4 x M20 x 315 mm	
Number of DIN 508 slots (PCS)	-	-	4	4	-	4	4	
Number of DIN 6330 B high nuts (PCS)	4	4	4	4	4	4	4	
Number of extension nuts (PCS)	4	4	4	4	4	4	4	
Wooden box length (mm)	254	278	278	317	339	339	358	
Wooden box width (mm)	188	234	234	239	294	294	342	
Wooden box height (mm)	32	36	36	44	48	48	56	
<b>26209...</b>	Ident. No. Set price, €	<b>100</b> O. R.	<b>120</b> O. R.	<b>140</b> O. R.	<b>160</b> O. R.	<b>165</b> (O. R.)	<b>180</b> O. R.	<b>220</b> O. R.

Prod. group 260

AMF  **Sturdy clamping jaws**

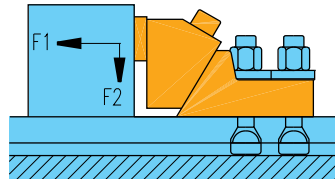
Clamping Technology

**Application:**  
For lateral clamping of tall workpieces with draw-down force.

- Execution:**
- Tall design with precise prism guide
  - Basic body made of malleable iron

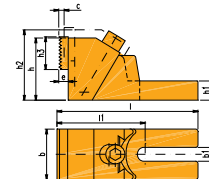


- Clamping jaws made of case-hardening steel, reversible
- Clamping jaws with smooth side for machined workpieces and knurled side for rough clamping surfaces



- Advantage:**
- The specified clamping forces are achieved with optimal fastening screws and the maximum permissible torque.

**Notes:**  
To fix the sturdy clamping jaws on the machine table, we recommend the use of two clamping screws.



Suitable T-groove width	12 mm   14 mm   16 mm   18 mm	20 mm   22 mm   24 mm   28 mm   30 mm
Min./max. clamping force F1	8-28 kN	
Min./max. clamping force F2	1.2-4.2 kN	
Length l (mm)	179	
Clamping jaw height h3 (mm)	40	
Clamping jaw height h (mm)	85	
Height H2 (mm)	99	
Width b (mm)	65	
<b>26 178...</b>	Ident. No. <b>010</b>	<b>020</b>
	Unit price, € O. R.	O. R.

Prod. group 260

AMF  **'Herkules' straightening wedges**

**Application:**  
For vertical alignment of complex castings or forgings on machine tools, fine adjustment.

- Execution:**
- Tempered
  - With burnished finish

- Advantage:**
- The straightening wedge can be adjusted slightly at a load of maximum 1/3 F with just hand force.
  - The simple and sturdy design ensures a long service life.

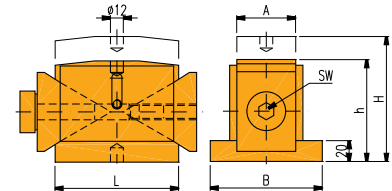
- The fine machined wedge surfaces allow careful and precise adjustment, which means that 0.1 mm can be adjusted with ease, either with a knurled thumb screw or with a hexagon screwdriver.
- The double wedge effect results in a large travel and precise vertical movement without lateral offset.

**Notes:**  
For attachments see no. 26161.



Size	125	63
Min. support plate height h (mm)	100	50
Max. support plate height H (mm)	125	63
Wedge block width A (mm)	60	40
Support plate width B (mm)	115	40
Support plate length L (mm)	125	63
Width across flats	24 mm	13 mm
Height adjustment per revolution (mm)	1.16	0.86
Tension force (kN)	100	40
Weight (kg)	8.6	1.3
<b>26 170...</b>	Ident. No. <b>125</b>	<b>063</b>
	Unit price, € O. R.	O. R.

Prod. group 260



INGENIEURBÜRO THIERMANN  **XPA clamping mandrels**  
For through-bores

**Application:**  
For clamping workpieces.

- Execution:**
- Made of structural steel
  - 5-side machining possible
  - Multiple clamping possible

- Advantage:**
- The diameter of the fastening flange is concentric to the clamping diameter, thus ensuring excellent repeat accuracy
  - Space-saving
  - Easily machinable owing to structural steel design
  - Easy to use
  - Can be automated on request



Grip height (mm)	Flange Ø (mm)	Min. clamping Ø (mm)	Max. clamping Ø (mm)	Suitable cheese-head screw DIN 912	Tension force (kN)	<b>26221...</b> ID no.
16	29.72	7.2	12.4	M4	4.2	<b>100</b> O. R.
19	31.5	12.2	14.2	M6	8.5	<b>101</b> O. R.
19	37.5	13.5	20	M8	11.1	<b>102</b> O. R.

Grip height (mm)	Flange Ø (mm)	Min. clamping Ø (mm)	Max. clamping Ø (mm)	Suitable cheese-head screw DIN 912	Tension force (kN)	26221... ID no.
22.2	50	18	27	M10	20	103 O. R.
25.4	56	25.4	35.3	M12	26.3	104 O. R.
31.8	75.5	29.3	51	M16	44.5	105 O. R.
						Unit price, €

Prod. group 278



### Eccentric tensioning clamp For T-grooves

**Application:**

For clamping workpieces directly on the machine table.

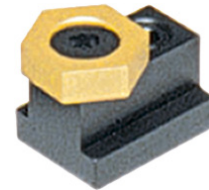
**Execution:**

- Body and eccentric screw hardened and tempered, 10.9

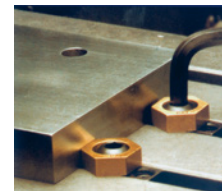
- Hexagonal disc, made of brass

**Advantage:**

- Quick and uncomplicated
- Compact dimensions allow several workpieces to be clamped



Ident. No. 204



T-slot width (mm)	8	10	10	14	16	18	20	22
Hexagonal disc height (mm)	4.8	4.8	4.8	6.4	9.5	9.5	12.7	12.7
Width across flats	16 mm	16 mm	21 mm	21 mm	25 mm	25 mm	30 mm	30 mm
Tension force (kN)	3.4	3.4	3.6	9	18	18	27	27
Clamping clip material	Brass	Brass	Brass	Brass	Brass	Brass	Brass	Brass
26222... Ident. No.	201	202	203	204	205	206	207	208
Price/pair, €	O. R.	(O. R.)	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 278



### Pitbull tensioning clamps

**Application:**

For clamping workpieces.

**Execution:**

- Clamp with blunt edge

- Pitbull tensioning clamps for fixture plates

**Advantage:**

- Space-saving, ideal for multiple clamping
- Compact design allows machining on multiple sides

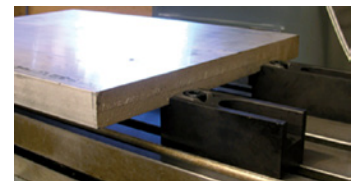
- Secure clamping thanks to high clamping force
- Strong pull-down force, which enables precise machining
- Thanks to its low height, no troublesome edges for tools



Ident. No. 301, 303, 305, 307  
Steel tensioning clamp



Ident. No. 302, 304, 306  
Brass tensioning clamp



Size	1	2	3	4	5	7	6	8
Length (mm)	9.5	9.5	12.7	12.7	19.05	25.4	19.05	38.10
Width (mm)	9.5	9.5	12.7	12.7	19.1	25.4	19.10	38.1
Tension force (kN)	2.8	0.9	6.6	1.8	16	26	4.2	50
Clamping clip material	Steel	Brass	Steel	Brass	Steel	Steel	Brass	Steel
Number of pieces in assortment / set (PCS)	8	8	8	8	6	4	6	2
26222... Ident. No.	301	302	303	304	305	307	306	308
Set price, €	(O. R.)	(O. R.)	O. R.	O. R.	O. R.	O. R.	(O. R.)	(O. R.)

Prod. group 278



### Power Grip stretch film

**Application:**

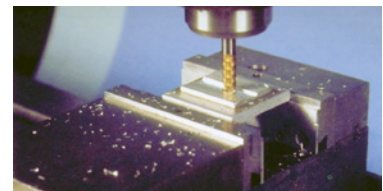
For clamping unstable workpieces that otherwise cannot be clamped due to their shape.

**Execution:**

- Particularly suitable for thin, unstable items that would become deformed or damaged if clamped in the normal way.
- Made of special composite
- Up to 200 N/cm possible

**Advantage:**

- Connects to steel, non-ferrous metals, glass, wood and most plastics.
- 0.0125 mm thick holding medium for precise clamping
- Enables 5-sided machining
- Reduces fixture costs
- Ideal for small batch sizes



Version		Power roller	Super roller
Film length (mm)		1500	1500
Film width (mm)		300	250
Min./max. retaining force (depending on support plate surface)		30-200 N	30-200 N
<b>26223...</b>	Ident. No. Unit price, €	<b>100</b> O. R.	<b>105</b> O. R.

Prod. group 278

**AMF** Washers

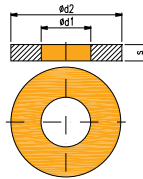
DIN 6340

**Application:**

For transferring clamping forces in cases where clamping elements need to adapt to uneven clamping surfaces.

**Execution:**

- Washers, tempered, 350 + 80 HV 30



Suitable cheese-head screw DIN 912	M10	M12	M14	M16	M18	M20	M22	M24	
Suitable for screw	3/8 inch	1/2 inch	-	5/8 inch	-	3/4 inch	7/8 inch	7/8 inch	
Outer Ø d2 (mm)	28	35	40	45	45	50	50	60	
Inner Ø d1 (mm)	10.5	13	15	17	19	21	23	25	
Max. washer height s (mm)	4	5	5	6	6	6	8	8	
<b>26208...</b>	Ident. No. Unit price, €	<b>100</b> O. R.	<b>120</b> O. R.	<b>140</b> O. R.	<b>160</b> O. R.	<b>180</b> O. R.	<b>200</b> O. R.	<b>220</b> O. R.	<b>240</b> O. R.

Suitable cheese-head screw DIN 912	M27	M30	M36	M8	
Suitable for screw	1 1/16 inch	1 1/8 inch	1 1/4 inch	5/16 inch	
Outer Ø d2 (mm)	68	68	68	23	
Inner Ø d1 (mm)	28	31	38	8.4	
Max. washer height s (mm)	10	10	12	4	
<b>26208...</b>	Ident. No. Unit price, €	<b>270</b> (O. R.)	<b>300</b> O. R.	<b>360</b> (O. R.)	<b>080</b> O. R.

Prod. group 260

**AMF** Conical washers  
case-hardened and phosphatised

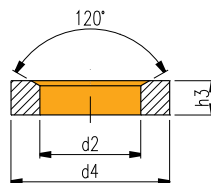
DIN 6319 D

**Application:**

For transferring clamping forces in cases where clamping elements need to adapt to uneven clamping surfaces. For use only on drill holes, not on slots.

**Execution:**

- Case-hardened and phosphatised
- Only use when the conical washer is fully in contact.



Suitable cheese-head screw DIN 912	M8	M10	M12	M14	M16	M20	
Inner Ø d2 (mm)	9.6	12	14.2	16.5	19	23.2	
Outer Ø d4 (mm)	17	21	24	28	30	36	
Height H3 (mm)	3.5	4.2	5	5.6	6.2	7.5	
<b>26208...</b>	Ident. No. Unit price, €	<b>612</b> O. R.	<b>614</b> O. R.	<b>616</b> O. R.	<b>618</b> O. R.	<b>620</b> O. R.	<b>622</b> O. R.

Prod. group 260



**Conical washers**  
pressed, hardened and tempered

DIN 6319 G

**Application:**

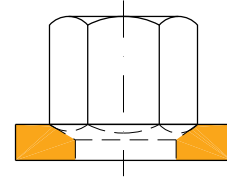
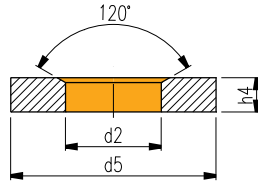
For transferring clamping forces in cases where clamping elements need to adapt to uneven clamping surfaces.

**Execution:**

- Stamped, pressed and tempered

**Advantage:**

- Thanks to the large diameter, these are particularly ideal for clamping via the slot in the case of clamps.



Suitable cheese-head screw DIN 912	M8	M10	M12	M14	M16	M20
Inner Ø d2 (mm)	9.6	12	14.2	16.5	19	23.2
Outer Ø d4 (mm)	24	30	36	40	44	50
Height H3 (mm)	5	5	6	6	7	8
<b>26208...</b>	Ident. No. <b>712</b>	<b>714</b>	<b>716</b>	<b>718</b>	<b>720</b>	<b>722</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260



**Spherical washers**

DIN 6319 C

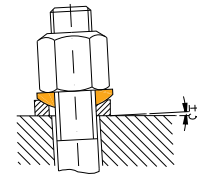
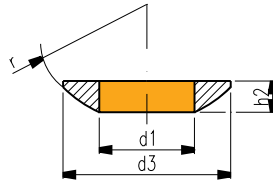
**Application:**

For transferring clamping forces in cases where

clamping elements need to adapt to uneven clamping surfaces.

**Execution:**

- Case-hardened and phosphatised



Suitable cheese-head screw DIN 912	M8	M10	M12	M14	M16	M20
Outer Ø d3 (mm)	17	21	24	28	30	36
Inner Ø d1 (mm)	8.4	10.5	13	15	17	21
Max. washer height h2 (mm)	3.2	4	4.6	5	5.3	6.3
Radius r (mm)	12	15	17	22	22	27
<b>26208...</b>	Ident. No. <b>512</b>	<b>514</b>	<b>516</b>	<b>518</b>	<b>520</b>	<b>522</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260



**Hexagon nuts**

**Application:**

For clamping workpieces.

- Strength class 10

- Ref. no. 008-030 with collar, turned and milled

**Execution:**

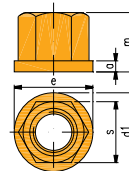
- Tempered



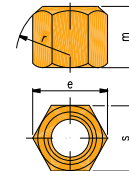
Ident. No. 008-030  
With collar 008-030



Ident. No. 080-300  
Without collar 080-300



Ident. No. 008-030  
With collar 008-030



Ident. No. 080-300  
Without collar 080-300

Thread dimension	M8	M10	M10	M12	M12	M14	M14
Width across flats S	13 mm	17 mm	16 mm	19 mm	18 mm	22 mm	21 mm
Corner dimensions e (mm)	14.4	18.9	17.8	21.1	20	24.5	23.4
Height m (mm)	12	15	15	18	18	21	21
Collar height a (mm)	3.5	4	4	4	4	4.5	4.5
Collar Ø d1 (mm)	18	22	22	25	25	28	28
<b>26206...</b>	With collar	Ident. No. <b>008</b>	<b>010</b>	<b>011</b>	<b>012</b>	<b>013</b>	<b>014</b>
		Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.
<b>26206...</b>	Without collar	Ident. No. <b>080</b>	<b>100</b>	<b>101</b>	<b>120</b>	<b>121</b>	<b>140</b>
		Unit price, €	O. R.	O. R.	O. R.	O. R.	-

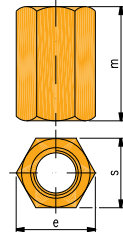
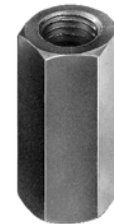
Thread dimension			M16	M18	M20	M22	M24	M30
Width across flats S			24 mm	27 mm	30 mm	34 mm	36 mm	46 mm
Corner dimensions e (mm)			26.8	30.1	33.5	37.7	40	51.3
Height m (mm)			24	27	30	33	36	45
Collar height a (mm)			5	5	6	6	6	8
Collar Ø d1 (mm)			31	34	37	40	45	58
<b>26206...</b>	With collar	Ident. No. Unit price, €	<b>016</b> O. R.	<b>018</b> O. R.	<b>020</b> O. R.	<b>023</b> O. R.	<b>024</b> O. R.	<b>030</b> O. R.
<b>26206...</b>	Without collar	Ident. No. Unit price, €	<b>160</b> O. R.	<b>180</b> O. R.	<b>200</b> O. R.	<b>220</b> O. R.	<b>240</b> O. R.	<b>300</b> O. R.

Prod. group 260

**AMF** Extension nuts

**Application:**  
For clamping workpieces.

- Strength class 10
- Flat on both sides



**Execution:**  
▪ Tempered

Thread dimension		M8	M10	M12	M12	M14	M14	M16	M20	M24	M30
Width across flats S		13 mm	17 mm	19 mm	18 mm	22 mm	21 mm	24 mm	30 mm	36 mm	46 mm
Corner dimensions e (mm)		14.4	18.9	20	21.1	24.5	23.4	26.8	33.5	40	51.3
Height m (mm)		24	30	36	36	42	42	48	60	72	90
<b>26207...</b>	Ident. No. Unit price, €	<b>080</b> O. R.	<b>100</b> O. R.	<b>120</b> O. R.	<b>121</b> O. R.	<b>140</b> O. R.	<b>141</b> O. R.	<b>160</b> O. R.	<b>200</b> O. R.	<b>240</b> O. R.	<b>300</b> O. R.

Prod. group 260

**AMF** Nuts  
For T-grooves

**Application:**  
For clamping in T-grooves.

- Execution:**
- Ref. no. 010- 130 tempered, strength class 10
  - Ref. no. 220- 310 tempered, strength class 10, long form

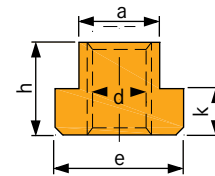
- Ref. no. 720- 810 nut blanks made of heat-treated steel 0.35-0.45% C, without thread, for self-manufacture of nuts with non-standard thread.



Ident. No. 010-130  
Standard



Ident. No. 220-310  
Long Shape



Ident. No. 010-130  
Ref. no. 010-310

DIN	508	508	-	508	-	508	-	508	
Nominal dimension of groove (mm)	6	8	8	10	10	12	12	14	
Sliding block width a (mm)	5.7	7.7	7.7	9.7	9.7	11.7	11.7	13.7	
Thread dimension d	M5	M6	M6	M8	M8	M10	M10	M12	
Length e (mm)	10	13	13	15	15	18	18	22	
Height H (mm)	8	10	10	12	12	14	14	16	
Sliding block height k (mm)	4	6	6	6	6	7	7	8	
<b>26195...</b>	Ident. No. Unit price, €	<b>010</b> O. R.	<b>020</b> O. R.	<b>220</b> O. R.	<b>030</b> O. R.	<b>230</b> O. R.	<b>040</b> O. R.	<b>240</b> O. R.	<b>050</b> O. R.

DIN	-	508	-	508	-	508	-	508	
Nominal dimension of groove (mm)	14	16	16	18	18	20	20	22	
Sliding block width a (mm)	13.7	15.7	15.7	17.7	17.7	19.7	19.7	21.7	
Thread dimension d	M12	M14	M14	M16	M16	M18	M18	M20	
Length e (mm)	22	25	25	28	28	32	32	35	
Height H (mm)	16	18	18	20	20	24	24	28	
Sliding block height k (mm)	8	9	9	10	10	12	12	14	
<b>26195...</b>	Ident. No. Unit price, €	<b>250</b> O. R.	<b>060</b> O. R.	<b>260</b> O. R.	<b>070</b> O. R.	<b>270</b> O. R.	<b>080</b> O. R.	<b>280</b> O. R.	<b>090</b> O. R.

DIN	-	508	508	-	508	
Nominal dimension of groove (mm)	22	24	28	28	36	
Sliding block width a (mm)	21.7	23.7	27.7	27.7	35.6	
Thread dimension d	M20	M22	M24	M24	M30	
Length e (mm)	35	40	44	44	54	
Height H (mm)	28	32	36	36	44	
Sliding block height k (mm)	14	16	18	18	22	
<b>26195...</b>	Ident. No. Unit price, €	<b>290</b> O. R.	<b>100</b> O. R.	<b>110</b> O. R.	<b>310</b> O. R.	<b>130</b> O. R.

Prod. group 260

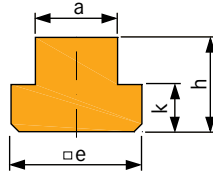
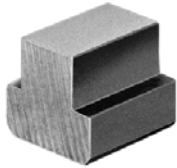
**AMF** Blanks

**Application:**  
For clamping in T-grooves.

**Execution:**  
▪ Ref. no. 010- 130 tempered, strength class 10

- Ref. no. 220- 310 tempered, strength class 10, long form
- Ref. no. 720- 810 nut blanks made of heat-treated steel 0.35-0.45% C, without thread, for self-manufacture of nuts with non-standard thread.

**Notes:**  
Ref. no. 26195060 and 26195100 do not correspond to DIN 508



Nominal dimension of groove (mm)	8	10	12	14	16	18	20	22	24	28
Sliding block width a (mm)	7.7	9.7	11.7	13.7	15.7	17.7	19.7	21.7	23.7	27.7
Height H (mm)	10	12	14	16	18	20	24	28	32	36
Length e (mm)	13	15	18	22	25	28	32	35	40	44
Sliding block height k (mm)	6	6	7	8	9	10	12	14	16	18
26195...	Ident. No. 720	730	740	750	760	770	780	790	800	810
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)	O. R.

Prod. group 260

**AMF** Quick-action clamping nuts  
Without collar

**Application:**  
For clamping workpieces.

**Execution:**  
▪ Tempered  
▪ Strength class 6

**Advantage:**  
▪ Shortening of assembly or clamping times thanks to easy spanning of long screw threads and clamping spindles.



Thread dimension d	M6	M8	M10	M12	M16	M20
Height H (mm)	9	10.5	12.5	15	16	22
Width across flats	16 mm	19 mm	22 mm	27 mm	34 mm	41 mm
26206...	Ident. No. 706	708	710	712	716	720
	Unit price, €	(O. R.)	O. R.	O. R.	O. R.	O. R.

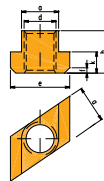
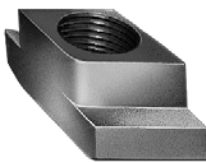
Prod. group 260

**AMF** Nuts  
For 'Rhombus' T-grooves

**Application:**  
For inserting sliding block from above through the neck of the T-groove.

**Execution:**  
▪ Tempered  
▪ The reduced contact surface in the T-groove results in a lower load capacity compared with comparable DIN 508 sizes.

**Notes:**  
Aluminium version on request.



Nominal dimension of groove (mm)	12	14	16	18	20	22	28	28
Sliding block width a (mm)	11.7	13.7	15.7	17.7	19.7	21.7	27.7	27.7
Thread dimension d	M10	M12	M14	M16	M16	M20	M20	M24
Height H (mm)	14	16	18	20	24	28	36	36
Sliding block height k (mm)	7	8	9	10	12	14	18	18
Length e (mm)	18	22	25	28	32	35	44	44
Screwing-property class	8	8	6	6	8	6	8	6
26194...	Ident. No. 010	020	030	040	050	070	075	080
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260

Clamping Technology



**AMF** Fixed sliding blocks

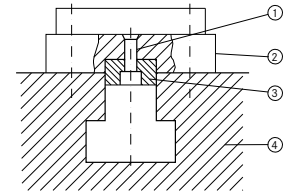
Clamping Technology

**Application:**  
For positioning tools on jigs.

▪ C 15 case case-hardened, therefore short alignment times

**Execution:**  
▪ Ground precisely around circumference

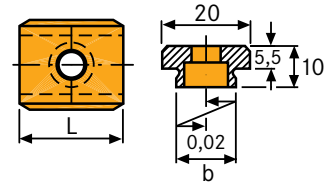
**Notes:**  
Screws are not supplied. Other sizes and flat sliding blocks on request.



① Screw  
② Device  
③ Sliding block  
④ Machine table

Nominal size of groove b (mm)		12	14	16	18
Length L (mm)		22	25	25	25
Width (mm)		20	20	20	20
Slot nut height (mm)		10	10	10	10
<b>26196...</b>	Ident. No.	<b>112</b>	<b>114</b>	<b>116</b>	<b>120</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 260



**AMF** Loose sliding blocks

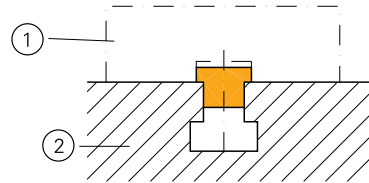
DIN 6323

**Application:**  
For positioning tools on jigs.

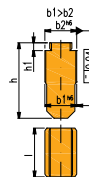
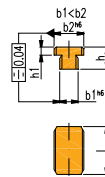
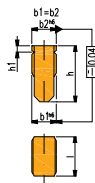
▪ Ref. no. 212 for small machines = jig groove 12 mm  
▪ Ref. no. 312-322 for small machines = jig groove 20 mm

**Advantage:**  
▪ When transporting the device, there are no sliding blocks protruding from underneath to cause a problem and the machine table cannot be damaged.

**Execution:**  
▪ C 15 case-hardened and polished




① = Device  
② = Machine table



Slot size on machine b1 (mm)		12	12	14	16	18	22
Slot size on device b2 (mm)		12	20	20	20	20	20
Height H (mm)		28,6	14	14	14	14	50,5
Step height h1 (mm)		5,5	5,5	5,5	5,5	5,5	-
Length l (mm)		20	32	32	32	32	40
<b>26196...</b>	Ident. No.	<b>212</b>	<b>312</b>	<b>314</b>	<b>316</b>	<b>318</b>	<b>322</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260

AMF  T-slot screws

DIN 787

**Application:**

For clamping workpieces on machine tables.

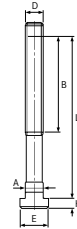
**Execution:**

- Tempered
- Rolled thread
- Forged

- With milled groove guide
- M8 to M12, strength class 10.9
- M16 to M24, strength class 8.8

**Notes:**

Length without head in mm. Other lengths and groove widths available on request.



Thread dimension	M10	M10	M10	M10	M10	M10	M10	M12	
Length L (mm)	40	50	63	80	100	125	160	50	
Outer Ø A (mm)	9.7	9.7	9.7	9.7	9.7	9.7	9.7	11.7	
Head length E (mm)	15	15	15	15	15	15	15	18	
Head height k (mm)	6	6	6	6	6	6	6	7	
Thread length B (mm)	30	30	45	50	60	75	-	-	
26200...	Ident. No.	<b>215</b>	<b>220</b>	<b>225</b>	<b>230</b>	<b>235</b>	<b>240</b>	<b>245</b>	<b>320</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M12	M12	M12	M12	M12	M12	M12	M12	
Length L (mm)	63	80	100	125	160	200	250	50	
Outer Ø A (mm)	11.7	11.7	11.7	11.7	11.7	11.7	11.7	13.7	
Head length E (mm)	18	18	18	18	18	18	18	22	
Head height k (mm)	7	7	7	7	7	7	7	8	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>325</b>	<b>330</b>	<b>335</b>	<b>340</b>	<b>345</b>	<b>350</b>	<b>355</b>	<b>420</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	(O. R.)	O. R.	O. R.
Thread dimension	M12	M12	M12	M12	M12	M12	M12	M16	
Length L (mm)	63	80	100	125	160	200	250	63	
Outer Ø A (mm)	13.7	13.7	13.7	13.7	13.7	13.7	13.7	15.7	
Head length E (mm)	22	22	22	22	22	22	22	25	
Head height k (mm)	8	8	8	8	8	8	8	9	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>425</b>	<b>430</b>	<b>435</b>	<b>440</b>	<b>445</b>	<b>450</b>	<b>455</b>	<b>525</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M16	M16	M16	M16	M16	M16	M16	M16	
Length L (mm)	80	100	125	160	200	250	63	80	
Outer Ø A (mm)	15.7	15.7	15.7	15.7	15.7	15.7	17.7	17.7	
Head length E (mm)	25	25	25	25	25	25	28	28	
Head height k (mm)	9	9	9	9	9	9	10	10	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>530</b>	<b>535</b>	<b>540</b>	<b>545</b>	<b>550</b>	<b>555</b>	<b>625</b>	<b>630</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M16	M16	M16	M16	M16	M20	M20	M20	
Length L (mm)	100	125	160	200	250	80	100	125	
Outer Ø A (mm)	17.7	17.7	17.7	17.7	17.7	19.7	19.7	19.7	
Head length E (mm)	28	28	28	28	28	32	32	32	
Head height k (mm)	10	10	10	10	10	12	12	12	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>635</b>	<b>640</b>	<b>645</b>	<b>650</b>	<b>655</b>	<b>730</b>	<b>735</b>	<b>740</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M20	M20	M20	M20	M20	M20	M20	M20	
Length L (mm)	160	200	250	80	100	125	160	200	
Outer Ø A (mm)	19.7	19.7	19.7	21.7	21.7	21.7	21.7	21.7	
Head length E (mm)	32	32	32	35	35	35	35	35	
Head height k (mm)	12	12	12	14	14	14	14	14	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>745</b>	<b>750</b>	<b>755</b>	<b>830</b>	<b>835</b>	<b>840</b>	<b>845</b>	<b>850</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M20	M24	M24	M24	M24	M24	M24	M24	
Length L (mm)	250	100	125	160	200	250	125	160	
Outer Ø A (mm)	21.7	23.7	23.7	23.7	23.7	23.7	27.7	27.7	
Head length E (mm)	35	40	40	40	40	40	44	44	
Head height k (mm)	14	16	16	16	16	16	18	18	
Thread length B (mm)	-	-	-	-	-	-	-	-	
26200...	Ident. No.	<b>855</b>	<b>935</b>	<b>940</b>	<b>945</b>	<b>950</b>	<b>955</b>	<b>965</b>	<b>970</b>
	Unit price, €	O. R.	(O. R.)	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension	M24	M24	M8	M8	M8	M8	M8	M8	
Length L (mm)	200	250	32	40	50	63	80	100	
Outer Ø A (mm)	27.7	27.7	7.7	7.7	7.7	7.7	7.7	7.7	
Head length E (mm)	44	44	13	13	13	13	13	13	
Head height k (mm)	18	18	6	6	6	6	6	6	
Thread length B (mm)	-	-	-	-	35	45	50	60	
26200...	Ident. No.	<b>975</b>	<b>980</b>	<b>110</b>	<b>115</b>	<b>120</b>	<b>125</b>	<b>130</b>	<b>135</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

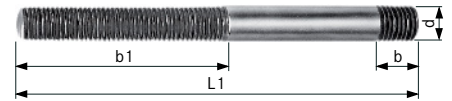
Prod. group 260

AMF Studs

Clamping Technology

- Execution:**
- Tempered
  - Rolled thread

**Notes:**  
Other lengths and threads available on request.



Thread dimension d	M10	M10	M10	M10	M10	M12	M12	M12
Thread length b (mm)	13	13	13	13	13	15	15	15
Thread length 2 (metric thread) b1 (mm)	25	50	75	100	125	25	32	50
Length L1 (mm)	50	80	125	160	200	50	63	80
26197... Ident. No.	<b>100</b>	<b>102</b>	<b>104</b>	<b>105</b>	<b>106</b>	<b>110</b>	<b>120</b>	<b>121</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension d	M12	M12	M12	M12	M14	M14	M14	M14
Thread length b (mm)	15	15	15	15	17	17	17	17
Thread length 2 (metric thread) b1 (mm)	63	75	100	125	32	63	100	160
Length L1 (mm)	100	125	160	200	63	100	160	250
26197... Ident. No.	<b>122</b>	<b>124</b>	<b>125</b>	<b>126</b>	<b>140</b>	<b>142</b>	<b>144</b>	<b>146</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension d	M16	M16	M16	M16	M16	M16	M16	M20
Thread length b (mm)	19	19	19	19	19	19	19	19
Thread length 2 (metric thread) b1 (mm)	32	50	63	75	100	125	160	180
Length L1 (mm)	63	80	100	125	160	200	250	315
26197... Ident. No.	<b>150</b>	<b>160</b>	<b>161</b>	<b>162</b>	<b>164</b>	<b>165</b>	<b>166</b>	<b>168</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension d	M20	M20	M20	M20	M20	M20	M20	M20
Thread length b (mm)	27	27	27	27	27	27	27	27
Thread length 2 (metric thread) b1 (mm)	32	70	100	125	160	200	250	315
Length L1 (mm)	80	125	160	200	250	315	400	500
26197... Ident. No.	<b>200</b>	<b>202</b>	<b>203</b>	<b>204</b>	<b>206</b>	<b>208</b>	<b>209</b>	<b>210</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension d	M24	M24	M24	M24	M24	M24	M24	M24
Thread length b (mm)	35	35	35	35	35	35	35	35
Thread length 2 (metric thread) b1 (mm)	45	70	100	125	160	200	250	315
Length L1 (mm)	100	125	160	200	250	315	400	500
26197... Ident. No.	<b>240</b>	<b>241</b>	<b>242</b>	<b>243</b>	<b>244</b>	<b>245</b>	<b>246</b>	<b>247</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.
Thread dimension d	M24	M6	M6	M8	M8	M8	M8	M8
Thread length b (mm)	35	9	9	11	11	11	11	11
Thread length 2 (metric thread) b1 (mm)	315	30	50	20	40	63	75	100
Length L1 (mm)	630	50	80	40	63	100	125	160
26197... Ident. No.	<b>248</b>	<b>062</b>	<b>064</b>	<b>080</b>	<b>082</b>	<b>084</b>	<b>085</b>	<b>086</b>
Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 260

AMF Vertical quick-action clamp  
With horizontal base

**Application:**  
For quick clamping of workpieces.

- Galvanised and passivated
- With red oil-resistant plastic handle
- Case-hardened and lubricated bearing bushes

**scope of supply and services:**  
With thrust bolt and protective cap

- Execution:**
- With open support arm

**Notes:**  
Size 0-4 also available in stainless steel.

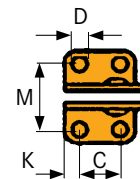
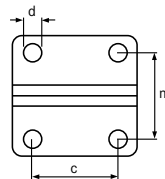


Illustration may be different

Size		0	1	2	3	4	5
Hole spacing c (mm)		-	16	20	20	32	45
Min./max. hole spacing c		8.5-13.5 mm	22.5-26 mm	23-31 mm	-	43.5-46.5 mm	45-50 mm
Hole spacing M (mm)		23	16	20	32.5	46.5	-
Min./max. distance between centre and drill M		-	22.5-26 mm	23-31 mm	-	43.5-46.5 mm	45-50 mm
Hole $\varnothing$ d (mm)		4.5	4.5	5.5	7.5	8.6	8.5
Clamping height h (mm)		18	19	23	33	42.5	55.8
Retention force F1 (N)		500	600	800	1200	1700	3000
Max. tensile force F2 (N)		700	1100	1200	2500	3000	5000
Height H1 (mm)		81	98.5	139.5	186	221	281
Length, open L2 (mm)		50	59	89	112	130	195
Length, clamped L1 (mm)		49	61	78	112	141	185
Thumbscrew size		M4 x 25 mm	M5 x 30 mm	M6 x 35 mm	M8 x 45 mm	M8 x 65 mm	M12 x 80 mm
26212...	Ident. No. Unit price, €	005 O. R.	010 O. R.	020 O. R.	030 O. R.	040 O. R.	050 O. R.

Prod. group 260

**ORION® Vertical quick-action clamp**  
With horizontal base

**Application:**

For quick clamping of workpieces.

**Execution:**

- With open support arm
- Galvanised and passivated
- With red oil-resistant plastic handle

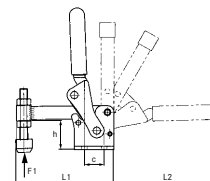
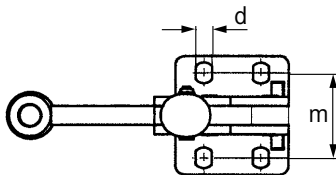
- Case-hardened and lubricated bearing bushes

**scope of supply and services:**

With thrust bolt and protective cap



Ident. No. 810



Size		1	2	3	4	5
Hole spacing M (mm)		23.8	27	31.8	45.3	45.2
Hole $\varnothing$ d (mm)		4.4	5.2	7.2	8.7	8.7
Clamping height h (mm)		19	22.7	31.8	44	51
Retention force F1 (N)		500	910	2270	3400	4500
Height H1 (mm)		77	97.3	140	202	225
Length, clamped L1 (mm)		51.4	64	139.7	141.1	176.2
26212...	Ident. No. Unit price, €	810 O. R.	820 O. R.	830 O. R.	840 O. R.	850 O. R.

Prod. group 264

**AMF® Vertical clamp**  
Heavy-duty

**Application:**

For quick clamping of workpieces.

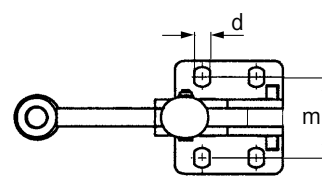
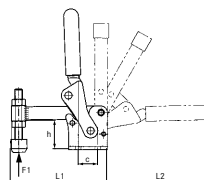
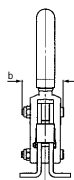
- Hardened, polished and permanently lubricated studs
- burnished steel, lever arm made of steel casting
- With red oil-resistant plastic handle

**Execution:**

- With horizontal base
- Reamed and case-hardened bearing bushes

**scope of supply and services:**

With tempered and galvanised thrust bolt



Size		2	4
Hole spacing M (mm)		32	45
Hole $\varnothing$ d (mm)		7.1	8.5
Clamping height h (mm)		25	44
Retention force F1 (kN)		2.5	5
Length, open L2 (mm)		94	160
Length, clamped L1 (mm)		85	146
Thumbscrew size		M6 x 50 mm	M12 x 80 mm
26212...	Ident. No. Unit price, €	520 O. R.	540 (O. R.)

Prod. group 260

**AMF** Vertical quick-action clamp  
With angular base

**Application:**  
For quick clamping of workpieces.

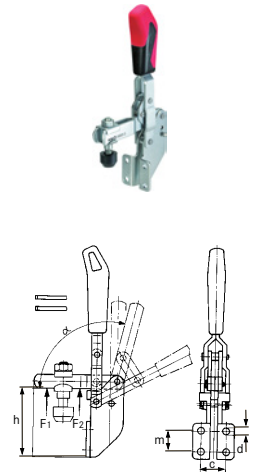
- Execution:**
- With open support arm
  - Galvanised and passivated
  - Rivet made of stainless steel

- With red oil-resistant plastic handle
- scope of supply and services:**  
With tempered and galvanised thrust bolt

**Notes:**  
Stainless steel version (size 2) on request.

Size	1	2	3
Hole spacing c (mm)	20	25.5	28.5
Hole spacing M (mm)	14	20	24
Hole Ø d (mm)	4.5	6.1	6.5
Clamping height h (mm)	45	60	71
Retention force F1 (N)	800	1000	1400
Max. tensile force F2 (N)	1100	1200	2500
Height H1 (mm)	125	167	223
Thumbscrew size	M5 x 30 mm	M6 x 35 mm	M8 x 45 mm
<b>26213...</b>	Ident. No. <b>010</b>	Ident. No. <b>020</b>	Ident. No. <b>030</b>
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Prod. group 260



**AMF** Horizontal quick-action clamp

**Application:**  
For quick clamping of workpieces.

- Execution:**
- With open support arm and horizontal base

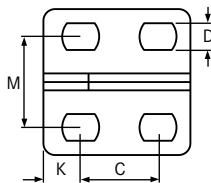
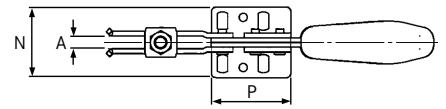
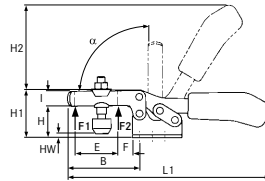
- Galvanised and passivated
- With red oil-resistant plastic handle
- Case-hardened and lubricated bearing bushes

**scope of supply and services:**  
With thrust bolt and protective cap

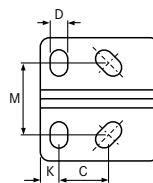
**Notes:**  
Also available with vertical base. Quotation and detailed brochure on request. Pneumatic unit for automatic operation on request. Size 0-4 also available in stainless steel.



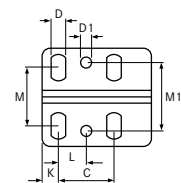
Ident. No. 010-040  
Illustration may be different



Ident. No. 005  
Size 0



Ident. No. 010  
Size 1



Ident. No. 020-040  
Sizes 2, 3, 4

Size	0	1	2	3	4
Hole spacing c (mm)	-	-	26	25.7	41
Min./max. hole spacing c	11.5-15.5 mm	13-14.5 mm	-	-	-
Min./max. distance between centre and drill m	-	18-21.5 mm	19.5-29.5 mm	22-31.8 mm	29-43 mm
Hole spacing m (mm)	16	-	-	-	-
Hole Ø d (mm)	4.6	5.2	5.6	6.5	8.5
Clamping height H1 (mm)	14.5	19	24	32	45
Retention force F1 (N)	250	800	1000	1800	2000
Max. tensile force F2 (N)	400	1100	1200	2500	3000
Height H (mm)	23	30	45	48.5	75
Length L (mm)	79	120	162	206	287
Thumbscrew size	M4 x 25 mm	M5 x 30 mm	M6 x 35 mm	M8 x 45 mm	M8 x 65 mm
<b>26215...</b>	Ident. No. <b>005</b>	Ident. No. <b>010</b>	Ident. No. <b>020</b>	Ident. No. <b>030</b>	Ident. No. <b>040</b>
	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.	Unit price, € O. R.

Prod. group 260

**Pneumatic horizontal quick-action clamp**  
with horizontal cylinder attachment**Application:**

For quick and secure clamping on machine tables and appliances.

**Execution:**

- With horizontal cylinder attachment
- With double-acting FESTO pneumatic cylinders

- Clamp galvanised and passivated
- Case-hardened and lubricated bearing bushes
- Rivet made of stainless steel
- Magnetic piston for detecting end stop
- Throttle holes for curbed speed

Size	2	3	4	
Hole spacing c (mm)	20	20	32	
Hole spacing m (mm)	27	32	45	
Hole Ø d (mm)	5.5	7.5	8.5	
Clamping height H1 (mm)	26	36	45.5	
Retention force F1 (N)	1000	1400	2000	
Max. tensile force F2 (N)	1200	2500	3000	
Height H (mm)	104	152	189	
Length L (mm)	214	257	314	
Compressed air connection R	M5	G 1/8 inch	G 1/8 inch	
Thumbscrew size	M6 x 35 mm	M8 x 45 mm	M8 x 65 mm	
<b>26215...</b>	Ident. No. Unit price, €	<b>200</b> (O. R.)	<b>210</b> O. R.	<b>250</b> O. R.

Prod. group 260



Illustration may be different

**ORION® Horizontal quick-action clamp****Application:**

For quick clamping of workpieces.

**Execution:**

- With open support arm and horizontal base
- Galvanised and passivated
- With red oil-resistant plastic handle
- Case-hardened and lubricated bearing bushes

**scope of supply and services:**

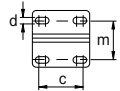
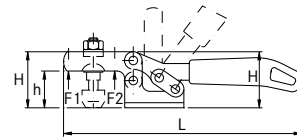
With thrust bolt and protective cap

**Notes:**

Also available with vertical base. Detailed brochure on request. Stainless steel version on request.

Size	0	1	2	3	4	
Hole spacing c (mm)	15.9	22	34	37	50.5	
Hole spacing m (mm)	15.9	27.8	24	30	37	
Hole Ø d (mm)	4.4	5.2	8.5	10.5	11	
Clamping height H1 (mm)	10	25.4	23.5	36.5	38.1	
Retention force F1 (N)	270	900	2500	2800	5000	
Height H (mm)	18	38.1	37.5	56.5	58.1	
Length L (mm)	79	142	189	279	279	
<b>26215...</b>	Ident. No. Unit price, €	<b>805</b> O. R.	<b>810</b> O. R.	<b>820</b> O. R.	<b>830</b> O. R.	<b>840</b> O. R.

Prod. group 264



Size 0-1

**Horizontal quick-action clamp**  
with open retaining arm and angular base**Application:**

For quick and secure clamping on machine tables and appliances.

**Execution:**

- With open retaining arm and angular base
- Galvanised and passivated

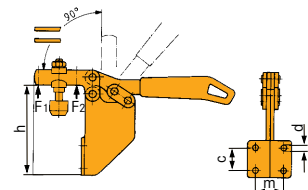
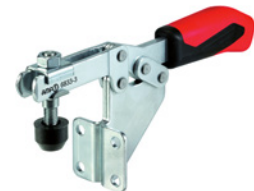
- With red oil-resistant plastic handle
- Case-hardened and lubricated bearing bushes
- Rivet made of stainless steel

**scope of supply and services:**

With tempered and galvanised thrust bolt

Size	2	3	
Hole spacing c (mm)	20	24	
Hole spacing m (mm)	25.5	28.5	
Hole Ø d (mm)	5.6	6.8	
Clamping height H1 (mm)	73	70	
Retention force F1 (N)	1000	1800	
Max. tensile force F2 (N)	1200	2500	
Height H (mm)	94	86.5	
Length L (mm)	162	206	
Thumbscrew size	M6 x 35 mm	M8 x 45 mm	
<b>26216...</b>	Ident. No. Unit price, €	<b>020</b> O. R.	<b>030</b> O. R.

Prod. group 260



**AMF** Pneumatic horizontal quick-action clamp  
with vertical cylinder structure

Clamping Technology

**Application:**  
For quick and secure clamping on machine tables and appliances.

- Case-hardened and lubricated bearing bushes
- Rivet made of stainless steel
- Magnetic piston for detecting end stop
- Throttle holes for curbed speed

**Execution:**

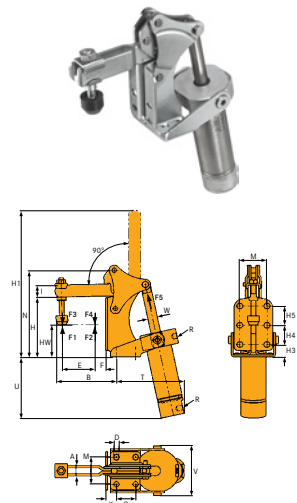
- With vertical cylinder structure
- With double-acting FESTO pneumatic cylinder
- Clamp galvanised and passivated

**Advantage:**

- Space-saving thanks to angled shape

Size	2	3	4
Hole spacing c (mm)	12.5	16	32
Hole spacing m (mm)	27	25.4	45
Hole Ø d (mm)	5.5	6.5	8.5
Clamping height H1 (mm)	65	72	100
Retention force F1 (N)	1000	1400	2000
Max. tensile force F2 (N)	1200	2500	3000
Height H (mm)	143	184	244
Compressed air connection R	M5	G 1/8 inch	G 1/8 inch
Thumbscrew size	M6 x 35 mm	M8 x 45 mm	M8 x 65 mm
<b>26216...</b>	Ident. No. <b>110</b> Unit price, € (O. R.)	Ident. No. <b>120</b> Unit price, € (O. R.)	Ident. No. <b>130</b> Unit price, € (O. R.)

Prod. group 260



**AMF** Push rod clamp

**Application:**  
For quick and secure clamping on machine tables and appliances.

**Advantage:**

- Handle can be adjusted at any angle to the base surface

**Execution:**

- Compression and tension clamp with small angular base
- Individual parts galvanised
- Long push rod version
- Case-hardened and lubricated bearing bushes
- With red oil-resistant plastic handle

**scope of supply and services:**

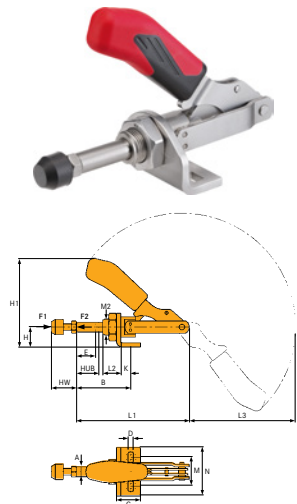
With thrust bolt and protective cap

**Notes:**

Other models available. Detailed brochure on request.

Size	0	1	3
Min. hole spacing e (mm)	16	16	29.5
Max. hole spacing e (mm)	-	19.5	42.5
Hole Ø d (mm)	4.5	4.5	6.5
Clamping stroke (mm)	16	20	32
Retaining force (N)	800	1000	2500
Clamping height h (mm)	12	15	25
Length L1 (mm)	120.5	165	267.5
Angled base width k (mm)	25	30	60
Height H (mm)	49.3	60.5	108
Thumbscrew size	M4 x 20 mm	M4 x 20 mm	M8 x 35 mm
<b>26217...</b>	Ident. No. <b>005</b> Unit price, € (O. R.)	Ident. No. <b>010</b> Unit price, € (O. R.)	Ident. No. <b>030</b> Unit price, € (O. R.)

Prod. group 260



Ident. No. 005

**AMF** Push rod clamp

**Application:**  
For quick and secure clamping on machine tables and appliances.

- Case-hardened and lubricated bearing bushes
- With red oil-resistant plastic handle
- Rivet made of stainless steel

**Execution:**

- Compression and tension clamp - short model
- Galvanised and passivated
- Fitting screws tempered
- Long push rod version

**scope of supply and services:**

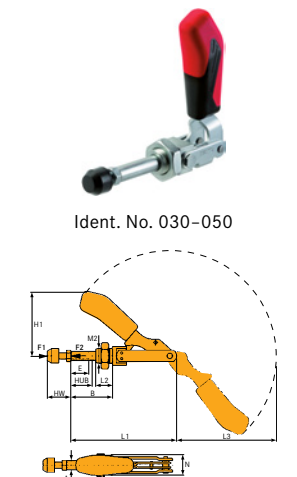
With tempered and galvanised thrust bolt

**Notes:**

Stainless steel version on request.

Size	2	3	5
Clamping stroke (mm)	21.5	40	67
Retaining force (N)	1000	2500	4000
Clamping height h (mm)	73	-	123
Length L1 (mm)	136.5	223	310
Min./max. adjustment range HW	17-25 mm	22-35 mm	30-50 mm
Height H (mm)	85.5	108	129.5
Thumbscrew size	M6 x 25 mm	M8 x 35 mm	M12 x 50 mm
<b>26218...</b>	Ident. No. <b>020</b> Unit price, € (O. R.)	Ident. No. <b>030</b> Unit price, € (O. R.)	Ident. No. <b>050</b> Unit price, € (O. R.)

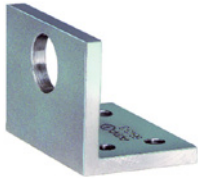
Prod. group 260



Ident. No. 030-050

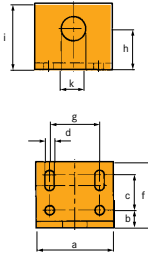
**AMF** **Sturdy angle base**  
accessories for push rod clamp

**Application:**  
For securing the push rod clamp.

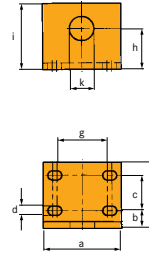


**Execution:**  
▪ Enhances areas of application thanks to greater clamping height

▪ For installation in fixtures  
**Notes:**  
Stainless steel version on request.



Ident. No. 520  
Ref. no. 26218520



Ident. No. 530-550  
Ref. no. 26218530-540

Size	2	3	5
Width a (mm)	60	65	70
Max. depth f (mm)	40	44	60
Location hole Ø K (mm)	16.2	20.2	24
Distance between centre and drill hole h (mm)	24	33	37
Distance b (mm)	11	14.5	17
Hole spacing c (mm)	18	19	32
Hole spacing g (mm)	40	44	60
<b>26218...</b>	Ident. No. <b>520</b> Unit price, € O. R.	<b>530</b> O. R.	<b>550</b> O. R.

Prod. group 260

**AMF** **Pull clamps (under tension)**

**Application:**  
For quick and secure clamping on machine tables and appliances.

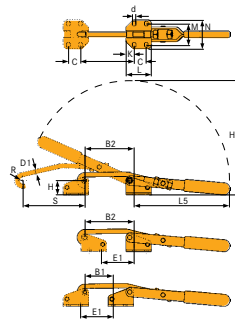
**Execution:**  
▪ With elbow lever transmission

- Galvanised and passivated
- Hooks and clamping sleeve tempered
- Rivet made of stainless steel
- Case-hardened and lubricated bearing bushes
- With red oil-resistant plastic handle

▪ The self-locking feature in the clamped position prevents the clamp from opening as a result of machining forces.  
**Notes:**  
Stainless steel version on request.



Pull clamp



Size	1	3	5
Max. tensile force (kN)	1	1.5	2.5
Height H2 (mm)	111	181	282
Length L1 (mm)	148	242	320
Hole Ø G (mm)	4.5	5.5	11.2
Min./max. long hole spacing M	26-30 mm	31.5-35.5 mm	55.5-63 mm
Hole spacing C (mm)	19	19	29
Min./max. clamping width B1	16-23 mm	32-44 mm	26-44 mm
Min./max. clamping width B2	35-42 mm	65-77 mm	57-71 mm
Min./max. distance between baseplate fastenings E1	17-24 mm	39-51 mm	27-42 mm
Boom arm length L1 (mm)	62.6	123.5	189.5
Distance between centre and drill hole K (mm)	6	13	13
Boom arm length S (mm)	45	98	147
Width N (mm)	40	45	85
Counter-holder height H (mm)	22.7	22.7	49.1
Max. adjustment range (mm)	8	12	14
<b>26219...</b>	Ident. No. <b>110</b> Unit price, € O. R.	<b>130</b> O. R.	<b>150</b> O. R.

Prod. group 260

Clamping Technology



**AMF** Counter-holder for pull clamp (under tension)  
Accessories for no. 26219 110-150

Clamping Technology

**Application:**

For quick and secure clamping on machine tables and appliances.

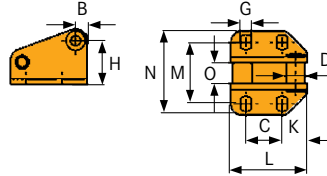
**Execution:**

- With elbow lever transmission
- Galvanised and passivated
- Hooks and clamping sleeve tempered
- Rivet made of stainless steel

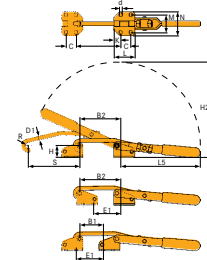
- Case-hardened and lubricated bearing bushes
- With red oil-resistant plastic handle
- The self-locking feature in the clamped position prevents the clamp from opening as a result of machining forces.



Counter holder



Counter holder



Size	1	3	5
Distance between centre and drill hole B (mm)	6	6	12
Distance between centre and drill hole 2 B (mm)	6	13	13
Long hole spacing C (mm)	19	19	29
Distance D (mm)	8	10	15
Long hole width G (mm)	4.5	5.5	11.2
Counter-holder height H (mm)	22.7	22.7	49.1
Length L (mm)	31	40	55
Min./max. long hole spacing M	26.0-30.0 mm	31.3-35.8 mm	56.5-64 mm
Width N (mm)	40	45	86
Slot width O (mm)	6.9	10.9	13.8
<b>26219...</b>	Ident. No. <b>210</b> Unit price, € O. R.	<b>230</b> O. R.	<b>250</b> O. R.

Prod. group 260

**AMF** Horizontal pull clamp  
Complete with counter-holder

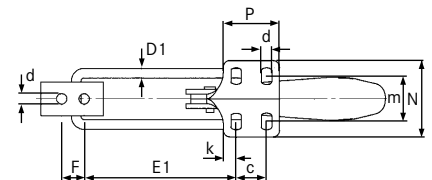
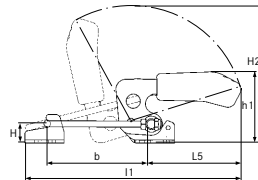
**Application:**

For quick and secure clamping on machine tables and appliances.

**Execution:**

- Galvanised and passivated
- Hook tempered

- Case-hardened and lubricated bearing bushes
- Rivet made of stainless steel
- Oil-resistant handle with large handle surface and soft components



Version	Horizontal	Horizontal	Horizontal
Size	2	3	4
Max. tensile force (kN)	1.6	3.2	7
Height H2 (mm)	99	135.5	171.5
Min./max. clamping width B1	42-76 mm	53.5-101 mm	66-130 mm
Hole spacing C (mm)	13	19	32
Hole Ø d (mm)	5.2	6.5	8.5
Min./max. distance between baseplate fastenings e	38-72 mm	48.6-96 mm	59-123 mm
Counter-holder height H (mm)	12	19	26
Overall height of lower handle H1 (mm)	99	133.5	171.5
Distance between centre and drill hole k (mm)	6.4	8	9.5
Min./max. long hole spacing m	19.5-23.5 mm	24.5-32 mm	35-46 mm
Min./max. length l1	125-159 mm	169-216 mm	209-273 mm
Base width P (mm)	26	35	53.5
Width N (mm)	38	48	64.3
<b>26219...</b>	Ident. No. <b>310</b> Unit price, € O. R.	<b>320</b> O. R.	<b>330</b> O. R.

Prod. group 260



**Vertical pull clamp**  
Complete with counter-holder

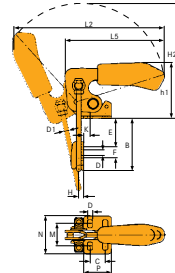
**Application:**

For quick and secure clamping on machine tables and appliances.

**Execution:**

- Galvanised and passivated
- Hook tempered

- Case-hardened and lubricated bearing bushes
- Rivet made of stainless steel
- Oil-resistant handle with large handle surface and soft components



Version		Perpendicular	Perpendicular	Perpendicular
Size		2	3	4
Max. tensile force (kN)		1.6	3.2	7
Height H2 (mm)		99	136	168
Min./max. clamping width B1		24-49 mm	34.5-64 mm	43-81 mm
Hole spacing C (mm)		13	19	32
Hole Ø d (mm)		5.2	6.5	8.5
Min./max. distance between baseplate fastenings e		5-30 mm	7-36 mm	9-47 mm
Counter-holder height H (mm)		4.5	6	8
Overall height of lower handle H1 (mm)		47	70	94.5
Distance between centre and drill hole k (mm)		6.4	8	9.5
Min./max. long hole spacing m		19.5-23.5 mm	24.5-32 mm	35-46 mm
Min./max. length l1		91-158 mm	125-190 mm	151-239 mm
Base width P (mm)		26	35	53.5
Width N (mm)		38	48	64.5
<b>26219...</b>	Ident. No.	<b>410</b>	<b>420</b>	<b>430</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 260



**Combination clamps**  
compression and tension clamp – short type

**Application:**

For quick and secure clamping on machine tables and appliances.

- Rivets made of stainless steel, running inside case-hardened bearing bushes
- Ergonomic, oil-resistant handle with large handle surface

- Retracted clamping arm, thereby simplifying workpiece removal; sturdy design
- Robust and stable construction

**Execution:**

- Compression and tension clamp - short model
- Galvanised and passivated

**Advantage:**

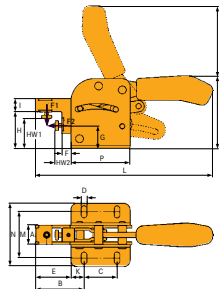
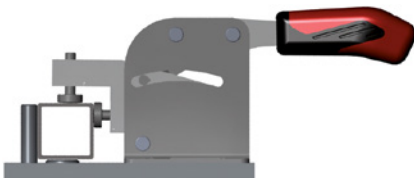
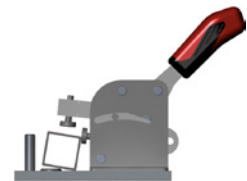
- Positioning and clamping in one work step

**scope of supply and services:**

With two thrust screws.

**Notes:**

Stainless steel version on request.



Size	1	2	3
Retention force F1 (kN)	1000	2000	3000
Retention force F2 (kN)	1000	2000	3000
Clamping head width A (mm)	17	19.5	29
Length B (mm)	33	56	74
Hole Ø D (mm)	5.5	6.5	8.5
Distance between baseplate fastenings E (mm)	15	32	37
Clamping height H (mm)	36	46	55.5
Adjustable clamp length G (mm)	22	28	34
Overall height of lower handle H1 (mm)	74	94	110
Overall height of upper handle H2 (mm)	136	181	216
Clamping head height I (mm)	12	16	20
Distance between centre and drill hole K (mm)	7.5	12.5	20
Length L (mm)	150	219	270
Min./max. hole spacing M	34.5-39.5 mm	48.5-61.5 mm	60-80 mm
Base width P (mm)	55	75	90
Width N (mm)	53	75	96
26231...	Ident. No. Unit price, €	<b>010</b> (O. R.)	<b>020</b> (O. R.)
		<b>030</b> (O. R.)	

Prod. group 260

**AMF** Power clamp  
Moveable

**Application:**

For quick and secure clamping on machine tables and appliances.

**Execution:**

- Use in T-grooves of 14-28 mm and on M12 and M16 grid plates.

- Sturdy clamping element made from alloyed tempered steel for variable clamping heights on movable basic element.
- Four different thrust-piece variants

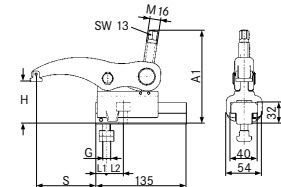
**Advantage:**

- Low-wear thanks to two joints



Slot width G (mm)	16	18
Min./max. clamping height H	0-63 mm	0-63 mm
Min./max. boom arm length S	32-97 mm	32-97 mm
Distance L1 (mm)	16	20
Distance 2 L2 (mm)	25	30
26242...	Ident. No. Unit price, €	<b>020</b> (O. R.)
		<b>030</b> (O. R.)

Prod. group 260



**KOPAL** BLOC BRIDE clamping unit

**Application:**

For use on machine tools for drilling, milling, thread cutting and countersinking.

**Execution:**

- Stepless and simple adjustment of clamping height
- Clamping force infinitely variable up to 16 kN depending on stability and machining of workpiece (distortion-free clamping).
- Simultaneous clamping of the workpiece and fixing of the clamping unit to any point on the table by turning the spanner.
- Adjusts to shape of workpiece surface using interchangeable function shoes.

- Base elements without spanner

**Advantage:**

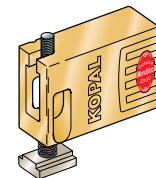
- Exchangeable T-shaped sliding blocks with compression spring for each groove width for fast assembly of the clamping unit.
- Interchangeable lever arms, short and long version, for good access to workpiece.

**Notes:**

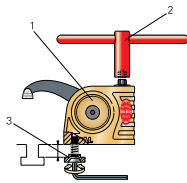
Complete clamping set on request.



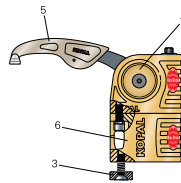
No. 26245 010-020



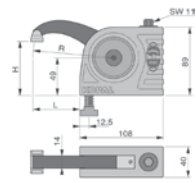
6 Height support



1 Basic element 2 Spanner



5 Extension arm



Max. left arm depth (mm)	33	61
Max. right arm depth (mm)	77	105
Min./max. clamping height	0-80 mm	8-102 mm
26245...	Ident. No. 010 Unit price, € O. R.	020 O. R.

Prod. group 265

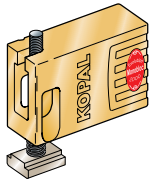
**KOPAL** Height adapter BLOC BRIDE

**Application:**

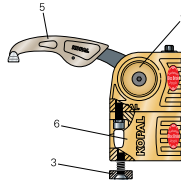
For increasing height of BLOC BRIDE clamping units.

**Execution:**

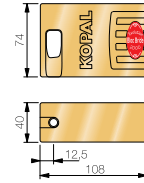
- Height adapter



6 Height support



5 Extension arm



Ref. no. 26245074

26245...	Ident. No. 074 Unit price, € O. R.
----------	---------------------------------------

Prod. group 265

**KOPAL** Replacement clamping shoe  
Accessories for BLOC BRIDE clamping unit

**Application:**

Replacement clamping shoe

**Execution:**

- For no. 26245 010 and 020

26245...	Ident. No. 001 Unit price, € O. R.
----------	---------------------------------------

Prod. group 265

**KOPAL** Sliding blocks  
Accessories for clamping unit and height adapter BLOC BRIDE

**Application:**

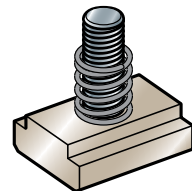
For fastening the clamping unit and the height adapter.

**Execution:**

- For clamping unit and height adapter
- With countersink, including compression spring and fixing screw M10 DIN ISO 1479

Suitable for groove width (mm)	12	14	16	18
Screw length (mm)	40	40	40	45
26245...	Ident. No. 212 Unit price, € O. R.	214 O. R.	216 O. R.	218 O. R.

Prod. group 265



**KOPAL** Extension arm  
Accessories for BLOC BRIDE clamping unit

**Application:**

Extension arm

**Execution:**

- Extends the overhang by 90 mm

26245...	Ident. No. 300 Unit price, € O. R.
----------	---------------------------------------

Prod. group 265





### Longitudinal bridge

Accessories for BLOC BRIDE clamping unit

26245...	Ident. No. Unit price, €	305 O. R.
----------	-----------------------------	--------------

Prod. group 265



### Transverse bridge

Accessories for BLOC BRIDE clamping unit

26245...	Ident. No. Unit price, €	310 O. R.
----------	-----------------------------	--------------

Prod. group 265



### Longitudinal vee block

Accessories for BLOC BRIDE clamping unit

26245...	Ident. No. Unit price, €	315 O. R.
----------	-----------------------------	--------------

Prod. group 265



### Transverse vee block

Accessories for BLOC BRIDE clamping unit

26245...	Ident. No. Unit price, €	320 O. R.
----------	-----------------------------	--------------

Prod. group 265



### Function shoe set

Accessories for BLOC BRIDE clamping unit

**Application:**

Function shoe set comprises ref. no. 26245 305,

310, 315, 320

26245...	Ident. No. Set price, €	400 O. R.
----------	----------------------------	--------------

Prod. group 265

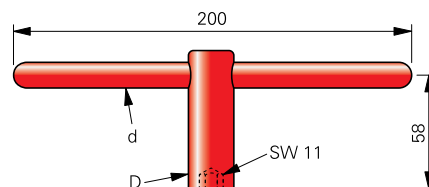


**Spanner**  
For BLOC BRIDE clamping unit

**Application:**  
Spanner

26245...	Ident. No. Unit price, €	500 O. R.
----------	-----------------------------	--------------

Prod. group 265



Clamping Technology

**ATORN®** Magnetic parallel rest sets

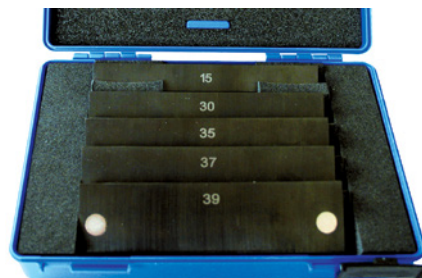
**Application:**  
For packing underneath workpieces.

- Execution:**
- Height tolerance  $\pm 0.01$
  - Rest pairs made of hardened tool steel with approx. 62 HRC
  - Surfaces burnished
  - Width 2.5 mm, which makes drilling close to the vice jaws possible

**Advantage:**  
▪ Magnetic parallel rests for fast set-up time

**scope of supply and services:**  
In plastic case, 5 rest pairs each

**Notes:**  
Individual parallel rests are also available upon request.



Parallel rest length (mm)	100	125	160	
Parallel rest height	20 mm   27 mm   29 mm   31 mm   32 mm	15 mm   30 mm   35 mm   37 mm   39 mm	22 mm   30 mm   37 mm   42 mm   47 mm	
Parallel rest width (mm)	2.5	2.5	2.5	
26255...	Ident. No. Set price, €	100 O. R.	125 O. R.	160 O. R.

Prod. group 281



**Parallel rest pairs**  
made from steel, case-hardened, finely ground in pairs and true-to-angle

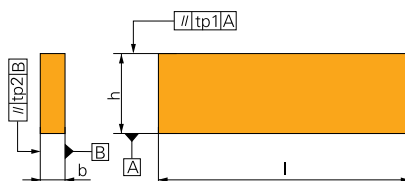
DIN 7168

**Application:**  
For parallel support of workpieces in machine vices, marking-off plates or machine tools during drilling, grinding, milling, planing, marking off and measuring; particularly suitable for supporting in machine vices, marking-off plates or machine tools.

- Execution:**
- Made of steel
  - In pairs, tolerance IT 5, nominal dimensions to DIN ISO 2768-1, tolerance class m
  - Case-hardened, finely polished in pairs and true-to-angle

**scope of supply and services:**  
In wooden holder

**Notes:**  
Numerous aligned pairs are available on request.



Parallel rest length L (mm)	Parallel rest width b (mm)	Parallel rest height h	Alignment tolerance, width (mm)	Alignment tolerance, height (mm)	26257... ID no.	O. R.
63	2.5	8 mm	0.004	0.006	208	O. R.
63	3.2	10 mm	0.005	0.006	210	O. R.
63	4	12 mm	0.005	0.008	212	O. R.
63	5	16 mm	0.005	0.008	216	O. R.
63	6.3	20 mm	0.006	0.009	220	O. R.
100	4	12 mm	0.005	0.008	312	O. R.
100	5	16 mm	0.005	0.008	316	O. R.
100	6.3	20 mm	0.006	0.009	320	O. R.
100	8	25 mm	0.006	0.009	325	O. R.
100	10	32 mm	0.006	0.011	332	O. R.
100	12	40 mm	0.008	0.011	340	O. R.
160	10	32 mm	0.006	0.011	432	O. R.
160	8	25 mm	0.006	0.009	425	O. R.
160	12	40 mm	0.008	0.011	440	O. R.
160	16	50 mm	0.008	0.011	450	(O. R.)

Prod. group 260

Price/pair, €

## Parallel rest set in precision design

DIN ISO 2768 IT 5

**Application:**  
Parallel rest set in precision design

**scope of supply and services:**  
In wooden case with 14 pairs of packing pieces.

- Execution:**
- Made from hardened steel, parallelism and dimensional tolerance of 0.004 mm.
  - Finely polished in pairs. Narrow longitudinal surfaces are flat, parallel and machined with precise dimensions.

**Notes:**  
Calibration on request



Parallel rest length (mm)	150	
Parallel rest width (mm)	10	
Parallel rest height	14 mm   16 mm   18 mm   20 mm   22 mm   24 mm   26 mm   28 mm   30 mm   32 mm   35 mm   40 mm   45 mm   50 mm	
35221...	Ident. No. Set price, €	010 O. R.

Prod. group 353

## ORION® Parallel rest sets

**Application:**  
For parallel support of workpieces in machine vices, on machine tools or on marking-off plates.

- Height tolerance within a 0.01 mm pair
- Hardened and polished
- In pairs, tolerance IT 5, nominal width to DIN ISO 2768-1, tolerance class m

- Execution:**
- Made of steel
  - The different dimensions create a multitude of combination possibilities.

**scope of supply and services:**  
In wooden case with 14 pairs of packing pieces.



Parallel rest length (mm)	150		150	
Parallel rest width (mm)	10		10	
Parallel rest height	14 mm   16 mm   18 mm   20 mm   22 mm   24 mm   26 mm   28 mm   30 mm   32 mm   35 mm   40 mm   45 mm   50 mm		14 mm   16 mm   18 mm   20 mm   22 mm   24 mm   26 mm   28 mm   30 mm   32 mm   35 mm   40 mm   45 mm   50 mm	
Nominal tolerance, height 14-30 mm	-		+/- 0.020 mm	
Pair tolerance	0.01 mm		0.01 mm	
26256...	Ident. No. Set price, €	010 O. R.	020 O. R.	

Prod. group 264

## ORION® Parallel rest sets

**Application:**  
For parallel support of workpieces in machine vices, on machine tools or on marking-off plates.

- Execution:**
- In pairs, tolerance IT 5, nominal width to DIN ISO 2768-1, tolerance class m

Composition of set	Width x height: 2 x 5 2 x 10 2 x 15 2 x 20 3 x 6 3 x 11 3 x 16 3 x 21 4 x 7 4 x 12 4 x 17 4 x 22,5 x 8 5 x 23 6 x 9 6 x 14,6 x 19 6 x 24	Width x height: 8 x 11 8 x 16 8 x 21 8 x 26 8 x 31 8 x 36 10 x 13 10 x 18 10 x 23 10 x 28 10 x 33 10 x 38 12 x 15 12 x 20 12 x 25 12 x 30 12 x 35 12 x 40 14 x 17 14 x 22 14 x 27 14 x 32 14 x 27 14 x 32 14 x 37 14 x 42	Width x height: 8 x 11 8 x 16 8 x 21 8 x 26 8 x 31 8 x 36 10 x 13 10 x 18 10 x 23 10 x 28 10 x 33 10 x 38 12 x 15 12 x 20 12 x 25 12 x 30 12 x 35 12 x 40 14 x 17 14 x 22 14 x 27 14 x 32 14 x 27 14 x 32 14 x 37 14 x 42
Min. set height (mm)	2	8	8
Max. set height (mm)	24	42	42
Parallel rest length (mm)	100	125	150
Pair tolerance	IT 5	IT 5	IT 5
26254...	Ident. No. Set price, €	010 O. R.	020 O. R.
		030 O. R.	

Prod. group 264





**Parallel rest sets**  
Corrugated

DIN 7168

**Execution:**

- In pairs, tolerance IT 5, nominal dimensions to DIN ISO 2768-1, tolerance group m.
- Hardened and tempered spring steel
- Precision-ground
- Parallelism tolerance +/- 0.004 mm

**Advantage:**

- No chips
- Parallelism of clamped workpiece is not impaired
- Several flat or single thin workpieces can be clamped easily.

**scope of supply and services:**

In wooden box



Parallel rest length (mm)		110		110	
Parallel rest width (mm)		0.3		0.3	
Parallel rest height		9 mm   11 mm   13 mm   15 mm   17 mm   19 mm   21 mm   23 mm		25 mm   27 mm   29 mm   31 mm   33 mm   35 mm   37 mm   39 mm	
<b>26258...</b>	Ident. No. Set price, €	<b>110</b> O. R.		<b>120</b> O. R.	

Prod. group 260

**ORION®** Angle plates  
made from grey cast iron

**Application:**

For attaching a workpiece perpendicular to the base on which the angle plate is standing.

- Squareness tolerance 0.04/100 mm
- With machined clamping surfaces and reinforcement ribs

**Execution:**

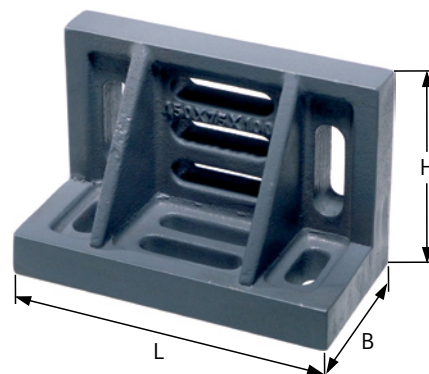
- Made from grey cast iron
- Lightweight and sturdy design

**Notes:**

Other sizes on request. Delivered ex-works, postage and packaging excluded.

Length L (mm)	150	200	275	400	
Width B (mm)	75	100	150	225	
Height H (mm)	100	150	200	300	
Weight (kg)	-	-	15	45	
<b>26260...</b>	Ident. No. Unit price, €	<b>010</b> O. R.	<b>020</b> O. R.	<b>030</b> O. R.	<b>040</b> O. R.

Prod. group 264



**STOLLE** Angle box

**Application:**

For clamping workpieces.

- Squareness tolerance in accordance with DIN 875, accuracy level 2, end faces are cleanly milled

**Execution:**

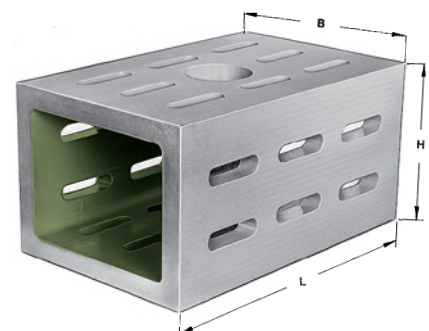
- Made from cast iron
- With slots
- Can be used as parallel elements

**Notes:**

Other sizes on request. Delivered ex-works, postage and packaging excluded.

Length L (mm)	250	300	500	
Width B (mm)	150	200	300	
Height H (mm)	100	150	250	
Slot width (mm)	18	18	22	
Weight (kg)	10	20	85	
<b>26302...</b>	Ident. No. Unit price, €	<b>010</b> (O. R.)	<b>020</b> (O. R.)	<b>040</b> (O. R.)

Prod. group 267





## EFFBE Elastic machine mounting elements for erecting machines without foundations and floor anchorings

### Application:

The elements prevent the transfer of machine vibrations and impacts to the floor and building.

### Execution:

- For erecting machines without foundations and floor anchor points
- Insulated against vibrations
- Non-slip
- Resistant to oil and ageing
- Without anchor points
- Number of fastening holes = number of elements
- Height-adjustable
- Machine weight divided by the number of mounts to be supported = weight per mount

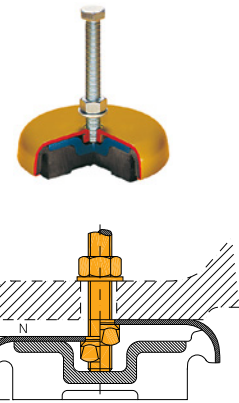
- Elements are selected according to the load table
- Insulated against structure-borne noise and impact-absorbing

### Advantage:

- Long service life and easy to mount
- Building damage cancelled out through vibration
- Structure-borne noise can spread

### Notes:

Please ask for advice for solutions to complex problems in relation to vibration, in particular with pressing. Note: \* Higher number of strokes, different lengths available on request.



Size	1	3	5	6
Height H (mm)	25	32	35	39
Adjustment travel of levelling range N (mm)	15	20	20	20
Thread dimension	M10	M12	M16 x 1.5	M20 x 1.5
Screw length (mm)	80	90	100	120
Load-carrying capacity per element for presses in general with stroke speed up to 100/min (kg)	450	1000	2000	3000
Load-carrying capacity per element for lathes (kg)	220	420	1000	2000
Load-carrying capacity per element for milling machines (kg)	300	600	1500	2800
Load-carrying capacity per element for surface grinders (kg)	220	420	1000	2000
Load-carrying capacity per element for machinery in general (kg)	480	1200	3000	4000
Max. static loading (kg)	600	2000	4000	5500
26400...	Ident. No. 010 Unit price, € O. R.	030 O. R.	052 O. R.	060 O. R.

Prod. group 265

## EFFBE Levelling shoes, capable of withstanding high loads Extremely lightweight

### Application:

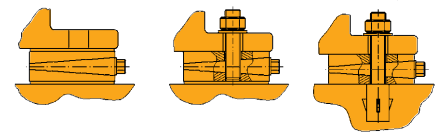
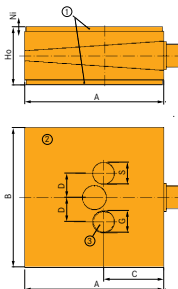
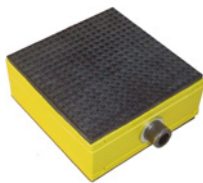
For machines with no means of fixing or machines that require particularly rigid erection. Adjustment is facilitated by a wedge using a lateral set screw.

### Execution:

- With anti-skid protection and attenuation lining for anchor-free erection
- Cermalan multi-component material

### Notes:

Other sizes for higher load in screw-on or screw-in versions available.



Without fastening

Model	H 57	H 50
Levelling shoe length A (mm)	115	115
Levelling shoe width B (mm)	200	115
Levelling shoe height Ho (mm)	56	40
Adjustment travel (+/-) Ni (mm)	4	4
Width across flats	14 mm	10 mm
Max. load-carrying capacity per element (kg)	10000	2800
26404...	Ident. No. 040 Unit price, € (O. R.)	030 O. R.

Prod. group 265

## ATORN® Workpiece stop

Adjustable on five axes

**Application:**  
For use on drilling and milling machines.

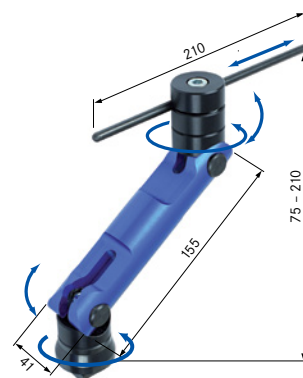
- For T-shaped sliding blocks with M8 thread

**Execution:**  
▪ Flexible and sturdy and quick to adjust

26111...	Ident. No.	020
	Unit price, €	O. R.

Prod. group 281

**scope of supply and services:**  
With T-shaped sliding blocks, 12 and 14 mm



## AMF T-slot nuts

For workpiece stop

**Application:**  
For use on drilling and milling machines.

For slot width (mm)		18	16	14	12
Connection thread		M8	M8	M8	M8
26195...	Ident. No.	067	057	048	039
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 260



Standard

## RÖHM Precision vices

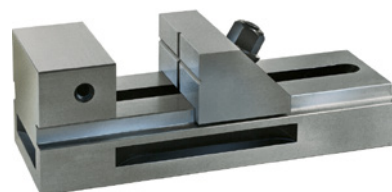
Operated with hexagon socket key

**Application:**  
For horizontal, vertical and lateral grinding, inspection and eroding tasks.

- With quick adjustment
- Squareness tolerance 0.005 mm/100 mm
- Ref. no. 010- 030, parallelism tolerance 0.005 mm/100 mm

**Execution:**  
▪ Made of alloyed tool steel  
▪ Hardened and precision-ground

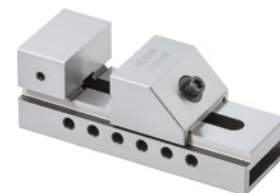
**Notes:**  
Type PLF with clamping screw on upper side



Ident. No. 020-030

Model		Type PLF with top clamping screw	Type PLF with top clamping screw	Type PLF with top clamping screw
Prism countersunk horizontally and vertically		Yes	Yes	Yes
Jaws width (mm)		50	73	100
Jaws height (mm)		25	35	45
Span (mm)		65	100	125
Height (mm)		50	67	90
Body length (mm)		140	190	245
28600...	Ident. No.	010	020	030
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 202



Ident. No. 010

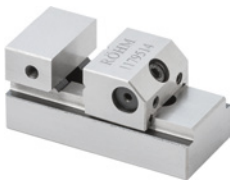
## RÖHM Precision vices

Operated with hexagon socket key

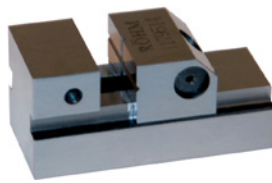
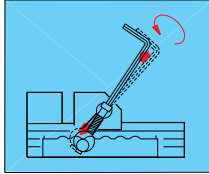
**Application:**  
For horizontal, vertical and lateral grinding, inspection and eroding tasks.

- Hardened and precision-ground
- With quick adjustment
- Squareness tolerance 0.005 mm/100 mm
- Ref. no. 110- 150, parallelism tolerance 0.002 mm/100 mm

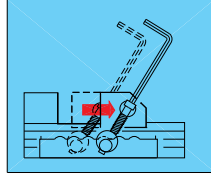
**Execution:**  
▪ Made of alloyed tool steel



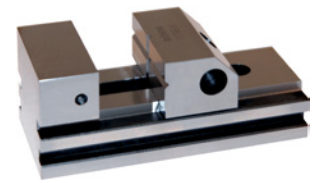
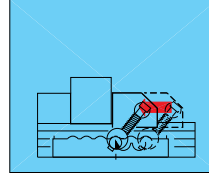
Ident. No. 110



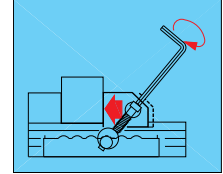
Ident. No. 120



Ident. No. 130



Ident. No. 140-150



Model	Type PL-S with quick adjustment	Type PL-S with quick adjustment	Type PL-S with quick adjustment	Type PL-S with quick adjustment	Type PL-S with quick adjustment
Prism countersunk horizontally	Yes	Yes	-	-	Yes
Prism countersunk horizontally and vertically	-	-	Yes	Yes	-
Jaws width (mm)	34	45	70	90	120
Jaws height (mm)	15	20	30	40	40
Span (mm)	25	50	80	120	150
Height (mm)	35	45	62	80	90
Body length (mm)	75	110	160	210	280
<b>28600...</b>	Ident. No. <b>110</b>	Ident. No. <b>120</b>	Ident. No. <b>130</b>	Ident. No. <b>140</b>	Ident. No. <b>150</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 202

**RÖHM** Precision vices  
Actuated via trapezoidal spindle

**Application:**  
For horizontal, vertical and lateral grinding and inspection tasks.

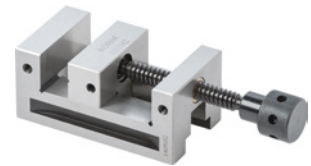
- Execution:**
- Made of alloyed tool steel
  - Hardened and precision-ground

- Squariness tolerance 0.005 mm/100 mm, parallelism tolerance 0.002 mm/100 mm
- Horizontal and vertical ground vee block

**Notes:**  
Mini precision vices, no. 47000

Model	PL-G 60	PL-G 73	PL-G 88
Prism countersunk horizontally and vertically	Yes	Yes	Yes
Jaws width (mm)	60	73	88
Jaws height (mm)	25	35	40
Span (mm)	55	100	125
Height (mm)	50	74	88
Body length (mm)	110	210	250
<b>28604...</b>	Ident. No. <b>060</b>	Ident. No. <b>073</b>	Ident. No. <b>088</b>
	Unit price, €	O. R.	O. R.

Prod. group 202



Ident. No. 060  
Ref. no. 28604060



Ident. No. 073  
Ref. no. 28604073

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**RÖHM** Precision sine bar vices  
actuation via trapezoidal spindle

**Application:**  
For grinding and inspection tasks.

**Execution:**

- Made of alloyed tool steel
- Hardened and precision-ground
- Precise angular adjustment achieved using gauge blocks (see no. 32050 onwards)
- **Ident. No. 010-020:**
  - Squareness tolerance 0.005 mm/100 mm and parallelism tolerance 0.002 mm/100 mm
  - Setting range 0-45 degrees

- Bearing and locating bolts hardened and polished with a tolerance of 0.001 mm
- The clamp can be positively locked in any angle
- **Ident. No. 100:**
  - Squareness tolerance 0.005 mm/100 mm, parallelism tolerance 0.002 mm/100 mm
  - Setting range 360° and 2 x 60°
  - 2-dimensional angular adjustment via 3' vernier scale
  - A fine set screw on the bottom part allows precise angular adjustment
  - The clamps can be positively locked in any angle



Ident. No. 010-020  
No. 28620 010-020



Ident. No. 100  
No. 28620 100

Model	PS-SV 70	PS-SV 90	PS-ZD 70
Prism countersunk horizontally	Yes	Yes	Yes
Jaws width (mm)	70	90	70
Jaws height (mm)	30	40	30
Span (mm)	80	120	80
Height (mm)	93	113	137
Body length (mm)	160	210	160
<b>28620...</b>	Ident. No. <b>010</b> Unit price, € (O. R.)	Ident. No. <b>020</b> (O. R.)	Ident. No. <b>100</b> (O. R.)

Prod. group 202

**ATORN**® Drill quick-action clamping vices

**Application:**  
For quick and safe clamping, in particular for workpiece series machining; can be used with guide rails; clamping on base and side; also suited for light milling tasks.

**Execution:**

- One-handed operation
- Special cast iron body
- Flat and sturdy design

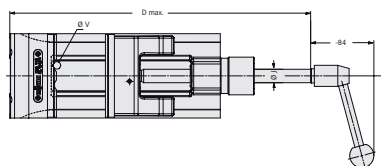
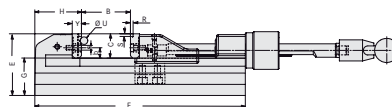
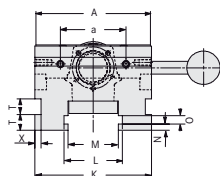
- Max. clamping force 10 kN
- Positive locking engagement
- Large clamping range

**Advantage:**

- Quick jaw adjustment and clamping with just one lever

**scope of supply and services:**

Vice incl. guide rails and fastening material.



Jaw width A (mm)	110	135
Clamping width B (mm)	130	160
Jaw height C (mm)	32	40
Jaw thickness Y (mm)	12	16
Body length F (mm)	280	328
Max. length L1 (mm)	465	545
Body width K (mm)	112	137
Clamping height G (mm)	50	50
Height E (mm)	82	90
Slot opening L (mm)	56	56
Weight (kg)	12.5	19
<b>28671...</b>	Ident. No. <b>110</b> Unit price, € (O. R.)	Ident. No. <b>135</b> (O. R.)

Prod. group 280

**ORION**® Drill vices

**Application:**  
For light machining tasks.

**Execution:**

- Made from grey cast iron

- Precise clamping thanks to long flat rail guide
- Jaws with steps and vee blocks
- Horizontal and vertical vee blocks for round material in fixed jaw



Jaws width (mm)	60	80	100	120	150	
Span (mm)	70	80	115	155	185	
Jaws height (mm)	25	25	30	40	45	
Max. length (mm)	160	190	240	300	355	
Body width (mm)	130	150	200	230	260	
Body height (mm)	47	52	67	82	100	
Chip flute width (mm)	9	9	12	12	15	
Min. flute spacing (mm)	90	110	145	180	200	
Max. flute spacing (mm)	105	125	160	195	215	
Weight (kg)	2.5	4	9	16	24	
<b>28665...</b>	Ident. No.	<b>060</b>	<b>080</b>	<b>100</b>	<b>120</b>	<b>150</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 282

## ROHM Drilling machine vices BOF

### Application:

Secure clamping and fixing of workpieces on drills and measuring machines.

### Execution:

- Made from grey cast iron
- Means of attachment on side and front face

- Long guide of moving jaws also in external clamping range
- Both jaws with contact surface for clamping flat workpieces
- Clamping jaws are reversible, one side is smooth or has longitudinal and lateral vee blocks, and the other side is knurled and polished on both sides



Jaws width (mm)	90	110	135	160	
Span (mm)	90	130	160	220	
Jaws height (mm)	25	32	40	50	
Body length (mm)	195	315	365	445	
Length, open (mm)	356	470	550	692	
Height (mm)	60	72.5	80.5	95.5	
Clamping flute length (mm)	125	85	100	120	
Chip flute width (mm)	14	17	17	17	
Weight (kg)	5.5	9.5	13.5	25	
<b>28681...</b>	Ident. No.	<b>090</b>	<b>110</b>	<b>135</b>	<b>160</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.

Prod. group 203

## ORION® Drill vices

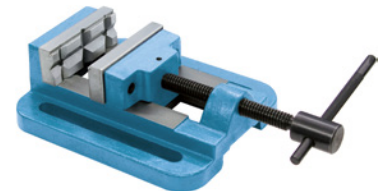
### Application:

Secure clamping and fixing of workpieces on drills and measuring machines.

### Execution:

- Basic body made of grey cast iron
- Universal means of attachment thanks to clamping slots and elongated holes

- Fixed clamping jaws with vee blocks
- Both jaws with step for clamping flat workpieces
- Ref. no. 200 with 3 clamping possibilities, horizontal, vertical and lateral
- Jaws and spindle burnished



Ident. No. 063-140

Jaws width (mm)	63	80	100	120	140	100	
Span (mm)	65	85	92	110	150	93	
Vice width (mm)	105	142	150	176	220	155	
Jaws height (mm)	25	30	30	30	40	30	
Base body length (mm)	125	142	150	176	220	155	
Body length (mm)	125	-	170	222	300	185	
Height (mm)	43	64	65	63	85	63	
Clamping flute length (mm)	53	72	163	190	225	45	
Chip flute width (mm)	12.5	14	14	14	14	15	
Weight (kg)	-	5	7	11	12.5	-	
<b>28660...</b>	Ident. No.	<b>063</b>	<b>085</b>	<b>100</b>	<b>120</b>	<b>140</b>	<b>200</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	O. R.	O. R.

Prod. group 282



Ident. No. 200



### Machine vices RS

Manual mechanical clamping system without power transmission

**Application:**

For drilling and milling.

- For matching swivel bases, see no. 28881
- For additional jaws, see no. 28882-28889
- Vice body and swivel bases are provided for precision alignment with 20H7 longitudinal slots

**Execution:**

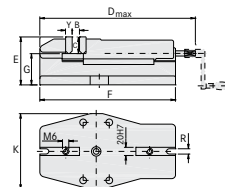
- Special cast iron
- Spindle protected against dirt and chippings
- Hardened clamping jaws are reversible, one side is smooth and the other side is knurled

**Notes:**  
Transverse grooves on request



Jaw width A (mm)		113	135	160	200
Span (mm)		105	125	145	185
Jaw height C (mm)		31.6	39.6	49.6	62.6
Jaw thickness Y (mm)		12	16	16	20
Body length F (mm)		300	365	410	460
Max. length D (mm)		423	510	575	675
Clamping height G (mm)		58	64	70	82
Height E (mm)		90	104	120	145
Body width K (mm)		160	200	240	280
Slot width R (mm)		14	14	18	22
<b>28710...</b>	Ident. No.	<b>110</b>	<b>135</b>	<b>160</b>	<b>200</b>
	Unit price, €	O. R.	O. R.	O. R.*	(O. R.)*

Prod. group 203



Clamping Technology



### MSR machine vices

Manual clamping system, mechanical without power transmission

**Application:**

For milling machines and machining centres.

- Rough adjustment of clamping range using rigging pins
- 4 adjustable clamps are required for optimal clamping

**Execution:**

- Made of alloyed steel
- Guides hardened (60 HRC) and polished
- Clamping repeatability precision 0.02 mm
- Aligned on the machine table via longitudinal and transverse grooves 20H7

**scope of supply and services:**  
With spanner and workpiece limit stop.



Jaw width A (mm)		125	150
Span (mm)		150	300
Jaw height C (mm)		32	40
Body length F (mm)		345	520
Height E (mm)		80	100
Body width K (mm)		95	125
Max. tension force (kN)		30	50
Clamping repeatability (mm)		0.02	0.02
Weight (kg)		12.7	29.5
<b>28720...</b>	Ident. No.	<b>120</b>	<b>150</b>
	Unit price, €	O. R.	O. R.*

Prod. group 203



### Adjustable clamps

For MSR machine vices

**Application:**

For milling machines and machining centres.

- 4 adjustable clamps are required for optimal clamping

**Execution:**

- Made of alloyed steel

**scope of supply and services:**  
With spanner and workpiece limit stop

Jaws width (mm)	125	125	125	125	150	150	150	150
For slot width (mm)	12	14	16	18	12	14	16	18
<b>28722...</b>	Ident. No.	<b>112</b>	<b>114</b>	<b>116</b>	<b>118</b>	<b>212</b>	<b>214</b>	<b>216</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	(O. R.)	O. R.	O. R.

Prod. group 203



**RÖHM** UZ machine vices  
Centric clamping

Clamping Technology

**Application:**

Particularly suitable for use on conventional machine tools. For milling and planing all kinds of shapes, slots and grooves.

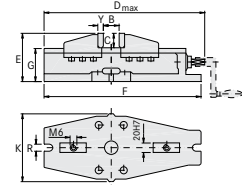
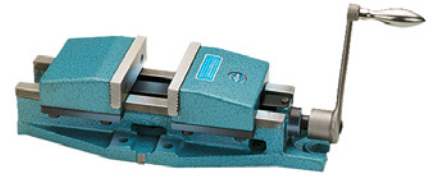
**Execution:**

- Low design, made of special cast iron
- For precision alignment, the vice body and swivel plate feature 20 H 7 longitudinal slots; the others are fluted

- Manual clamping system, mechanical without power transmission
- Spindle covered in working area
- Hardened clamping jaws

**Notes:**

For additional jaws, see no. 28882-28889. No. 28717 swivel plates available on request.



Jaw width A (mm)		113	135	160
Clamping width B (mm)		110	140	180
Jaw height C (mm)		31.6	39.6	49.6
Jaw thickness Y (mm)		12	16	16
Clamping height G (mm)		61	65.5	74
Height E (mm)		93.5	106	124.5
Body width K (mm)		132	152	180
Body length F (mm)		344	394	480
Max. length D (mm)		358	408	495
Slot width R (mm)		13	13	17
<b>28750...</b>	Ident. No.	<b>110</b>	<b>135</b>	<b>160</b>
	Unit price, €	O. R.	O. R.	(O. R.)

Prod. group 203

**kesel** Machine vice Bull  
mechanical/pneumatic

**Application:**

For clamping workpieces on NC machines.

**Execution:**

- Body made of GGG 60 spheroidal graphite iron
- Guideway hardened and polished
- Optionally available with stepped jaws for maximum clamping widths (at extra cost), size 125 mm (0-350 mm)
- Clamping repeatability of 0.01 mm with constant clamping force
- **Ident. No. 125:** Alignment on the machine table: longitudinally and transversely via grooves 20 H7 and sliding blocks no. 26196
- **Ident. No. 225:**
  - Clamping force 40 kN (at max. 6.5 bar compressed air), 5 kN (at min. 1 bar compressed air)

- Alignment on the machine table, longitudinally and transversely via grooves 20 H7 and sliding blocks no. 26196
- Pneumatic version ref. no. 225
- Power build-up by introducing compressed air in the single-acting pneumatic pistons

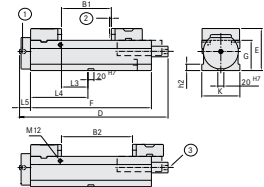
**Advantage:**

- Quick adjustment of the clamping range
- Dirt-resistant
- **Ident. No. 225:** No additional assembly required

**scope of supply and services:**

**Ident. No. 125:** With standard jaws and 4 adjustable clamps

**Ident. No. 225:** With standard jaws and 4 adjustable clamps.



- ① Air port G 1/8"
- ② Lift 3.5 mm
- ③ Hexagon socket 1/2"

Jaw width A (mm)		125	125
Min./max. clamping width B1		0-165 mm	0-165 mm
Min./max. clamping width for reversible step jaws B2		40-240 mm	80-240 mm
Clamping height G (mm)		100	100
Height E (mm)		140	140
Body length F (mm)		400	400
Length D (mm)		456	494
Clamping force build-up		Mechanical	Pneumatic
Tension force (kN)		40	40
Compressed air supply (bar)		-	6.5
Max. tightening torque (Nm)		100	-
Weight (kg)		30	35
<b>28730...</b>	Ident. No.	<b>125</b>	<b>225</b>
	Unit price, €	(O. R.)*	(O. R.)*

Prod. group 281

**kesel® Machine vice**  
Adjustable on 3 levels, 1 x 360°, 2 x 90°

**Application:**  
For grinding (WZ grinding machine) and light milling and drilling where workpieces are to be machined on different planes in one chucking.

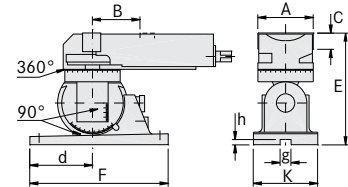
- Guides and spindles are largely protected against swarf
- Groove width 20H7

**Execution:**  
▪ More intensive machining also possible

- Advantage:**
- High stability and vibration-free work assured

Jaw width A (mm)		80
Clamping width B (mm)		90
Jaw height C (mm)		25
Body length F (mm)		235
Body width K (mm)		116
Height E (mm)		163
Max. length (mm)		325
<b>28745...</b>	Ident. No.	<b>080</b>
	Unit price, €	O. R.

Prod. group 281



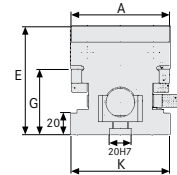
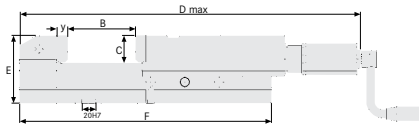
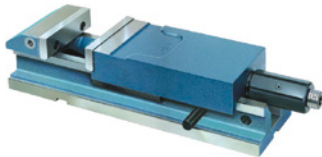
**ATORN® High-pressure machine vices**  
Mechanical/hydraulic

**Application:**  
For individual and series production on drilling and milling machines.

- Rough adjustment of clamping range using rigging pins
- Pretensioning facility for elastic parts (stacked mounting)
- Guideways hardened and polished

**Execution:**  
▪ Mechanical-hydraulic clamping system with mechanical pretensioning via hand crank  
▪ Body die-forged from steel  
▪ Aligned on the machine table via grooves and sliding blocks, no. 26196

**scope of supply and services:**  
With 1 set of standard jaws (1 side smooth, 1 side grooved) and hand crank.



Jaw width A (mm)	90	125
Min./max. clamping width B	0-150 mm	0-220 mm
Jaw height C (mm)	39.6	39.6
Jaw thickness Y (mm)	15.6	15.6
Clamping height G (mm)	59	70
Height E (mm)	99	112
Body length F (mm)	370	460
Max. length D (mm)	551	683
Tension force (kN)	25	40
<b>28832...</b>	Ident. No.	<b>092</b>
	Unit price, €	O. R.
		<b>127</b>
		O. R.*

Prod. group 281

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Clamping Technology



**ATORN®** High-pressure machine vices  
Mechanical-mechanical clamping system with power transmission

Clamping Technology

**Application:**

For NC machines, machining centres in tool manufacture, mould making jog manufacturing and serial production.

**Execution:**

- With stepped jaws, reversible
- Mechanical-mechanical clamping system with power transmission via elbow joint with hand crank
- Clamping force can be pre-set via limit stop
- Body made of GGG cast iron
- Rough adjustment of clamping range by offsetting the jaws on the clamping slide

- Clamping repeatability of 0.01 mm with constant clamping force
- Guideways hardened and polished

**Advantage:**

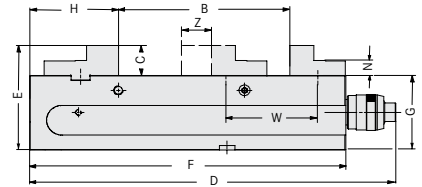
- Chip guard prevents chips penetrating inside the body
- Largely maintenance-free

**scope of supply and services:**

With stepped jaws and regulator

**Notes:**

Angled gear on request. Delivered ex-works, post-age and packaging excluded.



Jaw width A (mm)		125	160
Min./max. clamping width B		0-216 mm	0-320 mm
Min./max. clamping width for reversible step jaws		97-312 mm	131-451 mm
Jaw height C (mm)		40	50
Body length F (mm)		400	530
Clamping height G (mm)		100	115
Length D (mm)		463	618
Height E (mm)		140	165
Travel of slide Z (mm)		109	117
Adjustment range 2 W		1 x 108 mm	2 x 102.5 mm
Tension force (kN)		40	60
<b>28874...</b>	Ident. No.	<b>125</b>	<b>160</b>
	Unit price, €	O. R.*	(O. R.)*

Prod. group 280

**ROEMHELD** NC high-pressure machine vices  
HILMA • STARK

**Application:**

Particularly suitable for use on vertical machining centres, in tool manufacture, mould making and jig manufacturing, and in production.

**Execution:**

- Mechanical-hydraulic clamping system
- Clamping force infinitely variable or with pre-selection of clamping force (option)
- Body made from steel
- Rough adjustment of clamping range via rigging pins, fine adjustment with hand crank
- Clamping repeatability of 0.01 mm with constant clamping force
- Guideways hardened and polished

**Advantage:**

- Spindle and power transmission integrated into sliding body for protection
- Tapped holes on both sides of the fixed jaw for precision limit stops
- Longitudinal or transverse groove for quick positioning of 4 x 20 H7

**scope of supply and services:**

Supplied with interchangeable hardened jaws (1 side smooth, 1 side grooved) and with hand crank.

**Notes:**

On request: version with manometer (actual value display). Jaws, no. 28864, can also be used on these machine vices. Hydraulic-hydraulic clamping system via hydraulic assembly available on request.

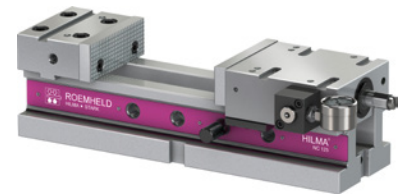
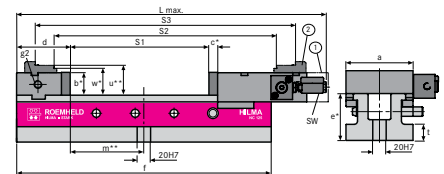


Image with clamping force display



Jaw width a (mm)		100	125	160
Min./max. clamping width S1		0-205 mm	0-225 mm	0-309 mm
Clamping width of attachment step jaws S3 (mm)		386	431	573
Jaw thickness c (mm)		13	15	18
Jaw height b (mm)		34	45	54
Clamping height G (mm)		70	82	95
Height e (mm)		114	127	140
Body length f (mm)		380	430	550
Max. length L (mm)		464	526	684
Step jaw height (mm)		45	58	70
Step jaw height 2 (mm)		40	53	65
Step t (mm)		24	27	27
Thread dimension g2		M12	M12	M20
Tension force (kN)		25	40	50
Width across flats		14 mm	17 mm	19 mm
Clamping repeatability (mm)		0.01	0.01	0.01
Weight (kg)		18.5	31.5	58.5
<b>28848...</b>	Ident. No.	<b>101</b>	<b>126</b>	<b>161</b>
	Unit price, €	(O. R.)	O. R.*	O. R.*

Prod. group 283

**ROEMHELD EL high-pressure machine vices**  
Mechanical/hydraulic

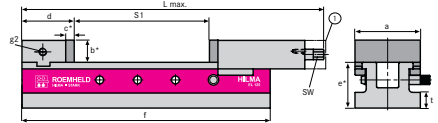
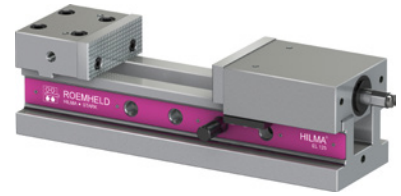
**Application:**  
For tool manufacture, mould making and jig manufacturing, and in production.

- Execution:**
- Mechanical-hydraulic clamping system with hand crank
  - Clamping force infinitely variable or with pre-selection of clamping force
  - Body made from steel
  - Guideways hardened and polished
  - Rough adjustment of clamping range using rigging pins

- Clamping repeatability of 0.01 mm with constant clamping force

- Advantage:**
- Spindle and power transmission integrated into sliding body for protection
  - Tapped holes on both sides of fixed jaw for work-piece stop

**scope of supply and services:**  
Supplied with interchangeable hardened jaws (1 side smooth, 1 side grooved) and with hand crank.



Jaw width a (mm)	100	125	160
Min./max. clamping width S1	0-205 mm	0-225 mm	0-309 mm
Jaw thickness c (mm)	13	15	18
Jaw height b (mm)	34	45	54
Clamping height G (mm)	70	82	95
Height e (mm)	114	127	140
Body length f (mm)	380	430	550
Max. length L (mm)	464	526	684
Step t (mm)	24	27	27
Thread dimension g2	M12	M12	M20
Tension force (kN)	25	40	50
Width across flats	14 mm	17 mm	19 mm
Clamping repeatability (mm)	0.01	0.01	0.01
<b>28862...</b>	Ident. No. <b>101</b>	<b>126</b>	<b>161</b>
	Unit price, € (O. R.)	O. R.	O. R.

Prod. group 283

**ROEMHELD Replaceable jaw**  
for no. 28848 and 28862

**Application:**  
**No. 28850:** For clamping workpieces whose surfaces are to be protected from damage.

**No. 28853:** For clamping workpieces without underlay.

- Execution:**
- **No. 28850:**

- Interchangeable jaw, smooth
- For no. 28848 and 28862
- **No. 28853:** Interchangeable jaw with step

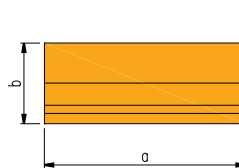
**Notes:**  
Interchangeable jaws and with roller on request.



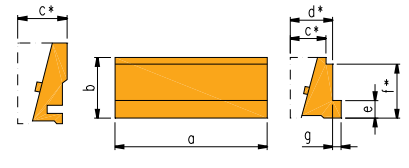
No. 28850  
No. 28850



No. 28853  
No. 28853



No. 28850



No. 28853

Jaw width a (mm)	Jaw design	Jaw thickness c (mm)	Jaw height b (mm)	Step length Y (mm)	Bar width g (mm)	Step height e (mm)	Step length f (mm)	<b>28850...</b> ID no.	<b>28853...</b> ID no.
100	Smooth	21	34	-	-	-	-	<b>100</b> (O. R.)	-
125	Smooth	26	45	-	-	-	-	<b>125</b> O. R.	-
160	Smooth	31	54	-	-	-	-	<b>160</b> (O. R.)	-
100	With steps	21	34	25	4	10	29	-	<b>100</b> (O. R.)
125	With steps	26	45	30	5	13	39	-	<b>125</b> O. R.
160	With steps	31	54	35	5	15	45	-	<b>160</b> (O. R.)
									Unit price, €

Prod. group 283

**ROEMHELD Adjustable clamps**  
for no. 28848, 28862

**Application:**  
For mechanical attachment of various fixed bodies.

- Execution:**
- For no. 28848 and 28862

Jaw width A (mm)	100	125	160
Height H (mm)	24	27	27
Suitable cheese-head screw DIN 912	M12 x 45 mm	M12 x 45 mm	M16 x 50 mm
<b>28857...</b>	Ident. No. <b>010</b>	<b>025</b>	<b>060</b>
	Set price, € (O. R.)	O. R.	O. R.

Prod. group 283



Clamping Technology

**ROEMHELD** Interchangeable stepped jaws  
accessories for no. 28848 and 28862

Clamping Technology

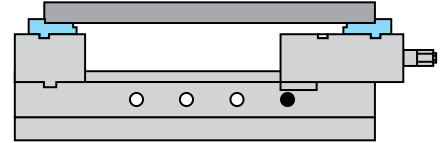
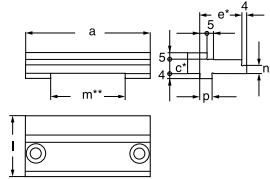
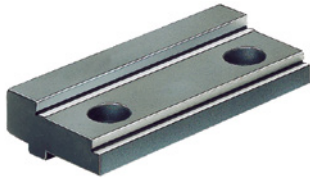
**Application:**  
**Ident. No. 310–320:** For achieving large clamping widths during assembly on slides.  
**Ident. No. 321–331:** For achieving large clamping

widths during assembly of fixed jaw.

**Execution:**  
▪ **Ident. No. 310–320:** For slides (drawing m\*\*)

▪ **Ident. No. 321–331:** For fixed jaw (drawing without m\*\*) )

**scope of supply and services:**  
Including fastening screws.



Jaw width A (mm)		100	100	125	125	160	160
Suitable for		Carriage	Fixed jaws	Carriage	Fixed jaws	Carriage	Fixed jaws
Jaw height C (mm)		48	48	58	58	64	64
Jaw thickness Y (mm)		11.5	11.5	14	14	17	17
Step length e (mm)		34	34	40	40	43	43
Step height h (mm)		6	6	6	6	6	6
Slot width m (mm)		60	-	65	-	88	-
Nominal slot size (h6) p (mm)		10	10	12	12	18	18
<b>28848...</b>	Ident. No.	<b>310</b>	<b>311</b>	<b>320</b>	<b>321</b>	<b>330</b>	<b>331</b>
	Unit price, €	(O. R.)	(O. R.)	O. R.	O. R.	O. R.	O. R.

Prod. group 283

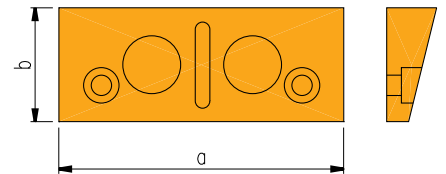
**ROEMHELD** Plain jaws  
With permanent magnets

**Application:**  
For mounting quick-change pull-down clamping inserts.

**Execution:**  
▪ For no. 28848 and 28862  
▪ With permanent magnet

Jaw width a (mm)		100	125	160
Jaw height b (mm)		34	45	54
<b>28849...</b>	Ident. No.	<b>100</b>	<b>125</b>	<b>160</b>
	Unit price, €	(O. R.)	O. R.	(O. R.)

Prod. group 283



**kesel** CNC high-pressure machine vices

**Application:**  
CNC high-pressure clamp with consistent length for use of high-precision components on machining centres.

▪ Alignment on the machine table, longitudinally and transversely via grooves 20 H7 and sliding blocks no. 26196

**Execution:**

- Mechanical-hydraulic clamping system with hand crank
- Clamping force adjustable in 8 steps/5 kN-steps
- Clamping repeatability of 0.01 mm with constant clamping force
- Body made of GGG 60 spheroidal graphite iron
- Guideways hardened and polished
- Lateral surfaces and front face milled

**Advantage:**

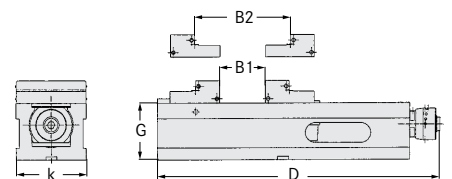
- Suitable for zero point clamping system
- Spindle protected from dirt and swarf

**scope of supply and services:**

With 1 set of reversible jaws, hand crank, 4 adjustable clamps and operating instructions.

**Notes:**

Further information and quotations available on request.



Version		Horizontal insert	Horizontal/vertical/lateral use	Horizontal insert	Horizontal/vertical/lateral use
Jaw width A (mm)		125	125	160	160
Min./max. clamping width B1		0-201 mm	0-201 mm	0-289 mm	0-289 mm
Min./max. clamping width for reversible step jaws B2		91-301 mm	91-301 mm	113-402 mm	113-402 mm
Jaw height C (mm)		40	40	50	50
Clamping height G (mm)		100	100	115	115
Height E (mm)		140	140	165	165
Body length F (mm)		445	445	580	580
Length D (mm)		499	499	655	655
Clamping force build-up		Mechanical/hydraulic	Mechanical/hydraulic	Mechanical/hydraulic	Mechanical/hydraulic
Tension force (kN)		40	40	60	60
<b>28812...</b>	Ident. No. Unit price, €	<b>125</b> (O. R.) <sup>+</sup>	<b>126</b> (O. R.) <sup>+</sup>	<b>160</b> (O. R.) <sup>+</sup>	<b>161</b> (O. R.) <sup>+</sup>

Prod. group 281

## High-pressure machine vice RKE

### Application:

For NC machines, machining centres in tool manufacture, mould making jog manufacturing and serial production.

### Execution:

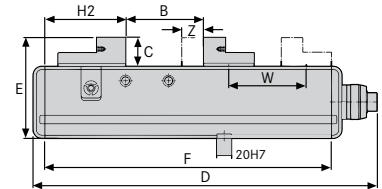
- Sturdy steel basic body
- All guides are hardened and polished on all sides
- Central grease nipple for simple lubrication of guides and spindle thread
- Functional surfaces polished
- Drive spindle with preset clamping force via stop
- Clamping surface for adjustable clamps
- Clamping repeatability of 0.01 mm with constant clamping force

- Ident. No. 092:** Ref. no. 092 horizontal insert, mechanical-hydraulic clamping system with hand crank
- Ident. No. 125-200:** Ref. no. 125-200, mechanical-mechanical insert with power transmission via elbow joint with hand crank

### Advantage:

- Optimised design for better chip removal
- Reliable chip removal prevents chips penetrating inside the body

**scope of supply and services:**  
RKE vice with stepped jaws



Jaw width A (mm)	92	125	160	200	
Min. clamping width (mm)	71	97	131	131	
Max. clamping width (mm)	138	216	320	315	
Max. clamping width for reversible step jaws 2 (mm)	208	312	451	451	
Jaw height C (mm)	32	40	50	60	
Clamping height G (mm)	80	100	115	115	
Height E (mm)	112	140	165	175	
Body length F (mm)	276	400	530	530	
Max. length L1 (mm)	346	479	634	634	
Tension force (kN)	25	40	60	60	
Travel stroke of gate valve (mm)	70	109	117	117	
Offset range 2	1 x 68 mm	1 x 108 mm	2 x 102.5 mm	2 x 102.5 mm	
Weight (kg)	15	41	75	85	
<b>28878...</b>	Ident. No. Unit price, €	<b>092</b> (O. R.)	<b>125</b> (O. R.) <sup>+</sup>	<b>160</b> (O. R.) <sup>+</sup>	<b>200</b> (O. R.) <sup>+</sup>

Prod. group 284

## Simple adjustable clamps for T-groove Suitable for high-pressure machine vices no. 28872, 28873, 28878 and 28874

### Application:

For front and side fixing.

T-slot width (mm)	12	14	16	18	
<b>28873...</b>	Ident. No. Unit price, €	<b>212</b> O. R.	<b>214</b> O. R.	<b>216</b> O. R.	<b>218</b> O. R.

Prod. group 203



## Smooth pull-down jaws Accessories for high-pressure machine vices no. 28812 to no. 28834

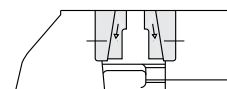
### Application:

Are replaced for standard jaws. For clamping with

draw-down effect.

Jaws width (mm)	90	125	160	
<b>28835...</b>	Ident. No. Set price, €	<b>092</b> (O. R.)	<b>127</b> (O. R.)	<b>161</b> (O. R.)

Prod. group 281



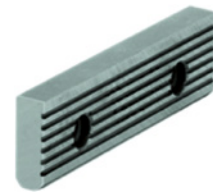
**RÖHM** Normal jaw SGN  
Jaws, screw-on type

**Application:**  
Accessories for high-pressure machine vices, no. 28880.

**Execution:**  
▪ One side grooved  
▪ Hardened and polished

Jaws width (mm)		113	135	160
<b>28885...</b>	Ident. No. Unit price, €	<b>010</b> (O. R.)	<b>035</b> (O. R.)	<b>060</b> (O. R.)

Prod. group 203



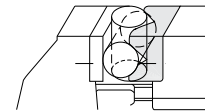
**kesel** Prism jaw  
Accessories for high-pressure machine vices no. 28812 to no. 28832

**Application:**  
For clamping round workpieces.

**Execution:**  
▪ Clamping workpieces horizontally and vertically

Jaw width A (mm)		125	160
Min./max. horizontal clamping Ø		15-42 mm	18-50 mm
Min./max. vertical clamping Ø		15-42 mm	18-50 mm
<b>28833...</b>	Ident. No. Unit price, €	<b>125</b> O. R.	<b>160</b> (O. R.)

Prod. group 281



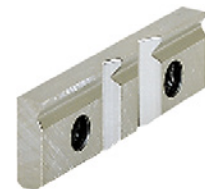
**RÖHM** Prism jaw SPR  
Jaws, screw-on type

**Application:**  
Accessories for high-pressure machine vices, no. 28880.

**Execution:**  
▪ Hardened and polished  
▪ For combination with normal jaw

Jaw width A (mm)		113	135	160
Min./max. horizontal clamping Ø		3-13 mm	4-20 mm	5-29 mm
Min./max. vertical clamping Ø		5-32 mm	6-40 mm	7-48 mm
<b>28886...</b>	Ident. No. Unit price, €	<b>110</b> (O. R.)	<b>135</b> O. R.	<b>160</b> O. R.

Prod. group 203

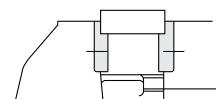


**kesel** Stepped jaws  
Accessories for high-pressure machine vices no. 28812 to no. 28835

**Application:**  
For clamping parallel workpieces without rest.

Jaws width (mm)		125	160
Groove height (mm)		6	8
Step depth (mm)		3	5
<b>28834...</b>	Ident. No. Set price, €	<b>125</b> O. R.	<b>160</b> (O. R.)

Prod. group 281



**ATORN®** Support jaws with pendulum jaw**Application:**

For flexible clamping of unmachined part.

- The stepped jaws are exchanged for the support jaws

**Execution:**

- Suitable for high pressure vices no. 28878, 28873 and 28874

Jaws width (mm)		125
28874...	Ident. No.	228
	Set price, €	O. R.

Prod. group 280

**ATORN®** Claw insert**Application:**

For flexible clamping of unmachined part.

- The stepped jaws are exchanged for these supporting jaws

**Execution:**

- Suitable for high pressure vices no. 28878, 28873 and 28874

28874...	Ident. No.	230
	Unit price, €	O. R.

Prod. group 280

**ATORN®** Stepped jaws, raised**Application:**

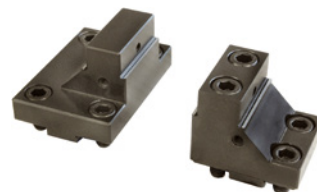
For flexible clamping of unmachined part.

**Execution:**

- Suitable for high pressure vices no. 28878, 28873 and 28874

Jaws width (mm)		125
28874...	Ident. No.	250
	Set price, €	O. R.

Prod. group 280

**RÖHM** Workpiece stop**Application:**

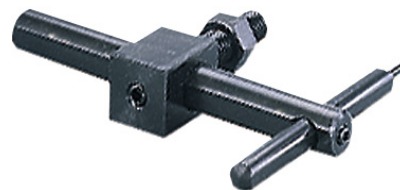
Accessories for high-pressure machine vices, no. 28880.

**Execution:**

- No. 28880 workpiece stop, adjustable, for screwing onto machine vice
- For clamping workpieces precisely in position

28889...	Ident. No.	010
	Unit price, €	O. R.

Prod. group 203



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LET'S WORK TOGETHER.

**RÖHM** CLIPARC set for RKE Basic  
Precision workpiece contact strips

Clamping Technology

**Application:**  
The precision supports with the Cliparc system remain in the set position during machining and as the machine vice is opened.

**Execution:**

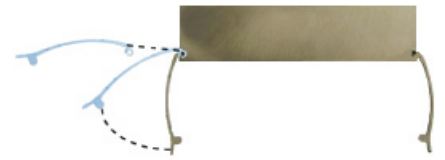
- Parallelism less than 0.005 mm
- Insert the Cliparc clamping bracket in the supports and click into the vice

▪ "Cliparc" workpiece contact strips suitable for RÖHM type RKE-L/RKE/RKG-L

**Advantage:**

- No assembly tool required
- No time-consuming repositioning required

**scope of supply and services:**  
Set in wooden box with 10 different strip pairs and 4 clamping brackets.



Ident. No. 302



For NC vice	RKE 92	RKE 125	RKE 160
Height (mm)	48	68	83
Vice width (mm)	92	125	160
Composition of set	10, 16, 18, 20, 23, 25, 26, 27, 28, 29	10, 15, 20, 25, 28, 30, 33, 35, 36, 37	10, 15, 20, 25, 30, 35, 40, 43, 45, 47
	mm	mm	mm
<b>28876...</b>	Ident. No. <b>301</b> Unit price, € (O. R.)	Ident. No. <b>302</b> Unit price, € (O. R.)	Ident. No. <b>303</b> Unit price, € (O. R.)

Prod. group 203

**RÖHM** CLIPARC clamping bracket sets

**Application:**  
Spare parts for CLIPARC support strips.

**scope of supply and services:**  
4 in a set

For NC vice	RKE 92	RKE 125	RKE 160
Height (mm)	48	68	83
<b>28876...</b>	Ident. No. <b>304</b> Unit price, € (O. R.)	Ident. No. <b>305</b> Unit price, € (O. R.)	Ident. No. <b>306</b> Unit price, € (O. R.)

Prod. group 203

**ATORN**® 5-axis machine compact vice  
Mechanical-mechanical clamping system

**Application:**  
For machining unmachined parts and/or the sixth side for 3-5 axis machining centres.

**Execution:**

- Compact design, optimum accessibility for 5-sided machining
- Sturdy basic body made of GJS-600 spheroidal graphite iron
- Patented quick adjustment of the clamping width
- Re-clamping spring washer package
- Stepped jaws with snap-in device for snap-in bars

**Advantage:**

- Very low clamping force loss when clamping close to edges
- Dirt-resistant thanks to encapsulated spindle
- Secure retention forces

**scope of supply and services:**  
Without jaws, including 4 adjustable clamps

**Notes:**  
Torque wrench required (1/2 inch square drive)



Jaw width A (mm)		125
Min./max. clamping width		0-78 mm
Min./max. clamping width for reversible step jaws		0-166 mm
Min./max. clamping width with gripping/swing jaw		10-190 mm
Clamping height G (mm)		175
Body height E (mm)		100
Body length F (mm)		250
Length L1 (mm)		273
Clamp in depth (mm)		8
Tightening torque (Nm)		105
Tension force (kN)		40
Travel stroke of gate valve (mm)		18
<b>28741...</b>	Ident. No. <b>125</b> Unit price, € (O. R.)	

Prod. group 280

## ATORN® Stepped jaws

### Clamping jaws/accessories for 28741125 and 28730 125 and 225

**Application:**  
For clamping parallel workpieces.

- Hardened and polished
- With clip-in device

**Execution:**

- For 5-axis compact machine vices no. 28741 125 and no. 28730 125 and 225

Jaw width A (mm)		125
Jaw thickness Y (mm)		78/78
Jaw height C (mm)		39.5
Min. clamping width for reversible step jaws (mm)		0
Max. clamping width for reversible step jaws (mm)		166
28741...	Ident. No. Set price, €	215 O. R.

Prod. group 280



## ATORN® Grip jaws

### Clamping jaws/accessories for 28741125 and 28730 125 and 225

**Application:**  
For flexible workpiece clamping, for a wide range of machining processes.

- Hardened and polished
- With 4 grip inserts and 4 contact sleeves

**Execution:**

- For 5-axis compact machine vices no. 28741 125 and no. 28730 125 and 225

**scope of supply and services:**  
Supplied with 2x grip inserts and 2x contact elements

Jaw width A (mm)		160
Jaw thickness Y (mm)		78/105
Jaw height C (mm)		25
Min. clamping width with gripping jaws (mm)		10
Max. clamping width with gripping jaws (mm)		190
28741...	Ident. No. Set price, €	235 (O. R.)

Prod. group 280



## ATORN® Grip jaws, pendulum jaws

### Clamping jaws/accessories for 28741125 and 28730 125 and 227

**Application:**  
For clamping non-parallel workpieces, cast parts and moulded workpieces.

- Cemented carbide grip insert
- With 2 grip inserts

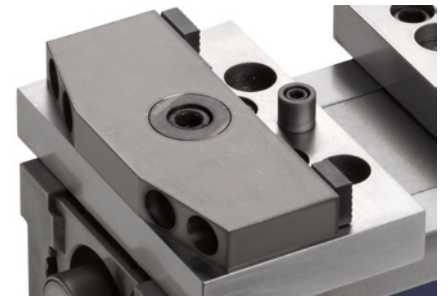
**Execution:**

- Movable jaw
- Hardened and polished

**scope of supply and services:**  
Supplied with 2 x cemented carbide grip inserts

Jaw width A (mm)		156
Jaw thickness Y (mm)		62
Jaw height C (mm)		20
Min. clamping width for reversible step jaws (mm)		6
Max. clamping width for reversible step jaws (mm)		156
28741...	Ident. No. Unit price, €	245 (O. R.)

Prod. group 280



## ATORN® Clamping jaws/accessories

### for 5-axis compact machine vice no. 28741 125

**Application:**

**Ident. No. 250:** For expanding the clamping width to max. 228 mm.

**Ident. No. 251:** For expanding the clamping width.

**Ident. No. 252-253:** For firmer hold of workpieces on the step (4.5 mm deep, 2.5 mm wide).

**Ident. No. 254-255:** Secure and sturdy hold even where compressed air is used.

▪ **Ident. No. 250-253:** For 5-axis machine compact vice no. 28741 125

▪ **Ident. No. 251:** For narrow components

▪ **Ident. No. 252-253:** Stepped jaws

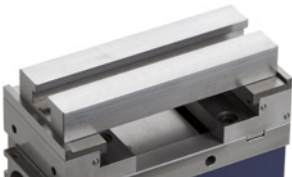
▪ **Ident. No. 254-255:** Stepped bars are clicked in by hand without tools

**Advantage:**

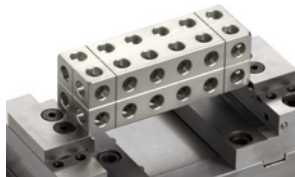
▪ **Ident. No. 254-255:** Prevents chips from entering underneath the stepped bar

**Execution:**

- For screwing onto stepped jaws



Ident. No. 250



Ident. No. 251



Ident. No. 252-253



Ident. No. 254-255



Type description	Screw-on jaws   large clamping width	Screw-on jaws for narrow workpieces	Screw-on grip jaws	Stepped bars for clipping on	Screw-on grip jaws	Stepped bars for clipping on
Jaw width A (mm)	125	60	125	125	125	125
Jaw thickness Y (mm)	45	45	6.4	-	5	-
Jaw height C (mm)	15	15	39.5	15	19.5	35
Min. clamping width (mm)	75	7	5	10	39	10
Max. clamping width (mm)	228	156	70	166	160	166
<b>28741...</b>	Ident. No. <b>250</b> Set price, € (O. R.)	-	-	-	-	-
<b>28741...</b>	Ident. No. Price/pair, €	<b>251</b> (O. R.)	<b>252</b> O. R.	<b>255</b> (O. R.)	<b>253</b> (O. R.)	<b>254</b> (O. R.)

Prod. group 280



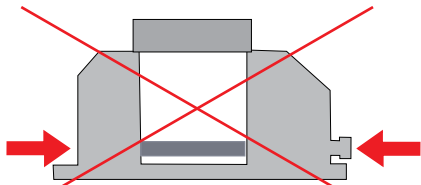
### 3- and 5-axis machine vices

For 3 and 5-side machining in a single clamping set-up

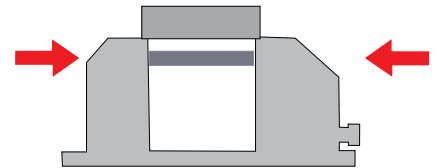
#### High tensile force (up to 52 kN) which is not lost by bending.

The low standard clamping depth of 8 mm enables improved and smooth 5-sided machining. Clamping widths of any size can be set by moving the two jaws. Width is only limited by the size of the machine table.

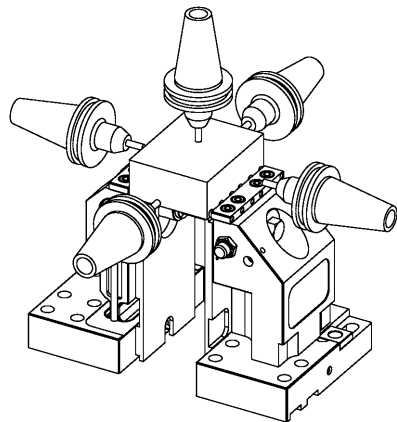
- Clamps raw parts, machined parts, round and irregularly shaped parts
- Form-fit clamping without pre-stamping
- a 3 or 5 AX 100 can be mounted on T-slot plates and tables, on hole grid plates and your own devices



The tensile force of 52 kN is generated where it is needed. This is achieved by the installation of a draw bar directly below the workpiece support.



- Clamping jaws do not expand under load
- No clamping of machine table
- Extreme rigidity allows maximum cutting forces



5 AX 100



## ATORN® 3-axis machine vice, complete 3 AX 100 set

High pulling force up to 52 kN

#### Application:

For clamping unmachined parts, machined parts, round and irregularly shaped parts.

#### Execution:

- Movable and fixed clamping jaw
- Clamping width adjustable via extension shaft, threaded spindle and spindle nut
- Form-fit clamping without pre-stamping
- Any clamping width possible, restricted only by the size of the machine table

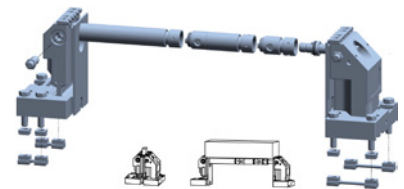
- Clamping depth 3 mm with support strips, ref. no. 28758 196

#### Advantage:

- Allows extremely high cutting forces thanks to extremely rigid design

#### scope of supply and services:

Supplied complete, without stop set



Model	Jaws width (mm)	Groove width (mm)	Clamp in height (mm)	Clamp in depth (mm)	Min. clamping width (mm)	Max. clamping width (mm)	Tightening torque (Nm)	Tension force (kN)	<b>28758...</b> ID no.
3 AX 100	100	14	100	8	22	440	120	22	<b>014</b> O. R.
3 AX 100	100	18	100	8	22	440	120	22	<b>016</b> O. R.
									Set price, €

Prod. group 280

## ATORN® 5-axis machine vice, complete 5 AX 100 set

High pulling force up to 52 kN

**Application:**  
For clamping unmachined parts, machined parts, round and irregularly shaped parts.

- Clamping depth 3 mm with support strips, ref. no. 28758 196

**Execution:**

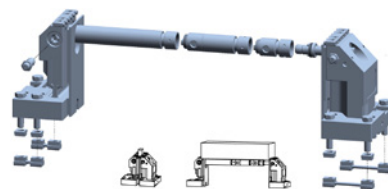
- Clamping width adjustable via extension shaft, threaded spindle and spindle nut
- Form-fit clamping without pre-stamping
- Any clamping width possible, restricted only by the size of the machine table

**Advantage:**

- Allows extremely high cutting forces thanks to extremely rigid design

**scope of supply and services:**

Supplied complete, without stop set



Model	Jaws width (mm)	Groove width (mm)	Clamp in height (mm)	Clamp in depth (mm)	Min. clamping width (mm)	Max. clamping width (mm)	Tightening torque (Nm)	Tension force (kN)	28758... ID no.	O. R.
5 AX175	100	14	175	8	22	440	120	52	021	O. R.
5 AX175	100	18	175	8	22	440	120	52	022	O. R.
										Set price, €

Prod. group 280

## ATORN® Extension shaft 480 mm

Suitable for 3AX and 5AX

**Application:**  
For expanding the clamping width so that larger workpieces can be clamped.

**scope of supply and services:**  
Extension shaft with union nut

**Execution:**

- Extension shaft with union nut

Length of extension shaft (mm)	480
28758... Ident. No.	630
Unit price, €	O. R.

Prod. group 280



Extension shaft, freely extendable

## ATORN® Base plates

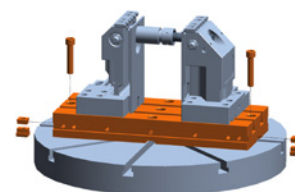
Suitable for 3AX and 5AX

**Application:**  
For attaching a 3- or 5-axis clamp.

**Notes:**  
T-groove plate, 400 mm, with NP pin hole (length x width x height 400 x 160 x 50) on request

Groove width (mm)	T slot spacing (mm)	Length (mm)	Width (mm)	Height (mm)	28758... ID no.	O. R.
14	63	400	160	50	091	(O. R.)
						Set price, €

Prod. group 280



## ATORN® Set for elevations

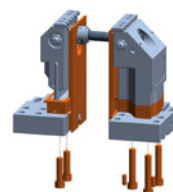
suitable for 3AX and 5AX

**Application:**  
**Ident. No. 180-181:** For increasing the height of the vice ref. no. 28758021-022.

**Ident. No. 190-192:** For increasing the height of the vice ref. no. 28758014-018.

Model	3AX	3AX	5AX	5AX	5AX
Height (mm)	25	50	25	50	75
Clamp in height (mm)	125	150	200	225	250
Clamp in depth (mm)	8	8	8	8	8
28758... Ident. No.	180	181	190	191	192
Set price, €	(O. R.)	(O. R.)	(O. R.)	(O. R.)	(O. R.)

Prod. group 280



## ATORN® Support strips for clamping depth 3 mm

suitable for 3AX and 5AX

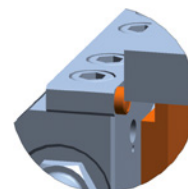
**Application:**  
For clamping workpieces with a clamping depth of 3 mm.

**Execution:**

- Ident. No. 195:** For ref. no. 28758021-022
- Ident. No. 196:** For ref. no. 28758014-018

Model	3 AX	5 AX
Clamp in height (mm)	105	180
Clamp in depth (mm)	3	3
28758... Ident. No.	195	196
Set price, €	(O. R.)	(O. R.)

Prod. group 280



## ATORN® Pull-down jaws suitable for 3AX and 5AX

**Application:**  
Pull-down jaws

**Execution:**  
▪ Hardened and polished



Jaw design	Smooth	
Jaws width (mm)	100	
Clamp in depth (mm)	8	
<b>28758...</b>	Ident. No.	<b>432</b>
	Price/pair, €	O. R.

Prod. group 280

## ATORN® Round clamping heads suitable for 3AX and 5AX

**Application:**  
For clamping round workpieces.

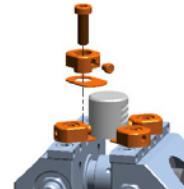
**scope of supply and services:**  
4 round clamping heads with clamping screws

**Execution:**

- For suitable torque wrench 20-200 Nm, see no. 52244

<b>28758...</b>	Ident. No.	<b>501</b>
	Set price, €	O. R.

Prod. group 280



From Ø 30 mm to Ø 200 mm

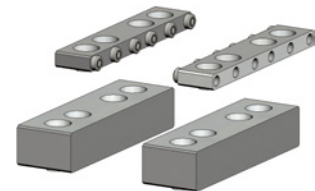
## ATORN® Clamping jaws suitable for 3AX and 5AX

**Application:**  
**Ident. No. 412:** For clamping workpieces.

**Ident. No. 422:** For adapting the clamping jaws to the workpiece contour.

- **Ident. No. 422:** Alloyed steel, can be bonded

**Notes:**  
Cheese head screws DIN 6912 M8



**Execution:**

- **Ident. No. 412:** Untreated special steel

Jaw design		Standard jaw	Soft steel jaws
Jaws width (mm)		100	100
Clamp in depth (mm)		8	8
<b>28758...</b>	Ident. No.	<b>412</b>	<b>422</b>
	Unit price, €	O. R.	O. R.

Prod. group 280

## ATORN® Pins suitable for 3AX and 5AX

**Application:**  
Pins are used in the standard jaws.

**Execution:**  
▪ Accessories for standard jaw ref. no. 28758412



Jaw design		Smooth	4-mm ring cutter	6-mm ring cutter
Clamp in depth (mm)		8	8	8
<b>28758...</b>	Ident. No.	<b>510</b>	<b>523</b>	<b>525</b>
	Unit price, €	O. R.	O. R.	O. R.

Prod. group 280

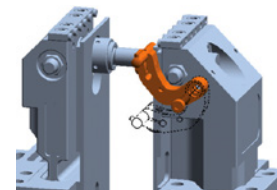
## ATORN® Stop suitable for 3AX and 5AX

**Application:**  
Workpiece stop for ref. no. 28758.

**Execution:**  
▪ Stop, can be swivelled away

<b>28758...</b>	Ident. No.	<b>220</b>
	Unit price, €	O. R.

Prod. group 280





### Compact 5-axis clamp NEW INTELLIGENT CLAMPING CONCEPT

**Application:**

New system for optimal machining of complex workpieces on modern 5-axis machines.

**Execution:**

- Clamping width 20 to 320 mm (option of extending as required)
- Clamping depth can be adjusted from 3 to 20 mm thanks to support strips
- Workpiece always centres itself in the middle thanks to the symmetrical design
- Pull-down function on both sides of clamping jaws (always)

- Optimal fine adjustment of clamping jaws to the workpiece
- Can be clamped on round tables

**Advantage:**

- Thanks to optimal access to the workpiece, short standard tools can be used
- Intelligent clamping technology increases rigidity of clamping for extremely high cutting and feed forces
- Very high pulling force (clamping force) 52 kN
- Tool costs are reduced considerably

**scope of supply and services:**

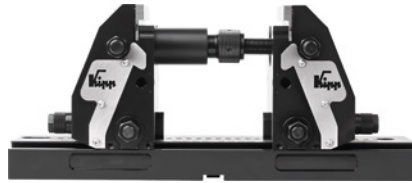
1 x adapter shaft with 60 mm union nut, 1 x adapter shaft with 120 mm union nut, 1 x extension shaft with 60 mm union nut, 2 x screws for adjustment of extensions shafts, 2 x complete jaws (with smooth clamping jaw), 2 x M10 clamping nuts (WAF19) for clamping the clamping jaws, 2 x knurled screws for fine adjustment of the jaws, 1 x base plate L=400 mm, 2 x pluggable positioning blocks (on base plate)

**Notes:**

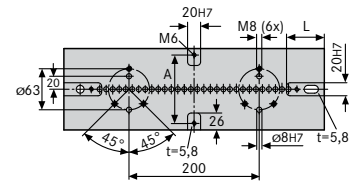
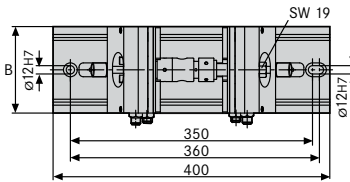
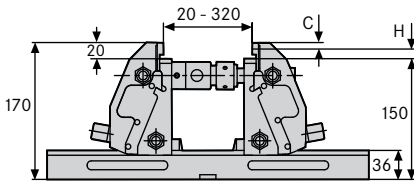
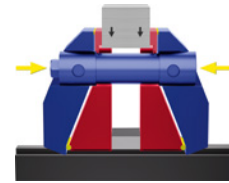
Clamping depth dependent on use of support strip (accessories) ref. no. 28759212-257



Ident. No. 090



Ident. No. 125



Jaws width (mm)		90	125
Min./max. clamping width		20-320 mm	20-320 mm
Jaws height (mm)		20	20
Clamp in height (mm)		150	150
Base plate height (mm)		36	36
Height (mm)		170	170
Body length (mm)		400	400
Width across flats		19 mm	19 mm
Tightening torque (Nm)		120	120
Max. tensile force (kN)		52	52
<b>28759...</b>	Ident. No.	<b>090</b>	<b>125</b>
	Unit price, €	(O. R.)	(O. R.)

Prod. group 266



### Support strip for compact 5-axis clamp

**Application:**

The support strips are suitable for adjusting the clamping height of the compact 5-axis clamp.

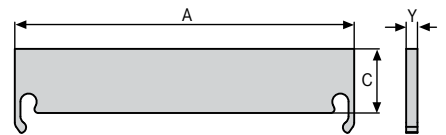
**Execution:**

- Support strips remain in the set position during machining and when opening the machine vice

- Tool steel
- Hardened and untreated

**Advantage:**

- Clicking in of the support strips close to the edge on the compact 5-axis clamp



Length A (mm)	90	90	125	125
Jaw thickness Y (mm)	3	3	3	3
Height C (mm)	12	17	12	17
Clamp in depth (mm)	8	3	8	3
<b>28759...</b>	Ident. No.	<b>212</b>	<b>217</b>	<b>252</b>
	Price/pair, €	(O. R.)	(O. R.)	(O. R.)

Prod. group 266

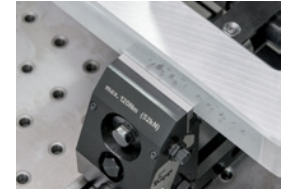
## Smooth clamping jaws

**Application:**  
Replacement jaws for Kipp compact 5-axis clamp.

**Execution:**  
▪ Tool steel

Length A (mm)		90	125
Jaw thickness Y (mm)		8	8
Height C (mm)		35	35
Clamp in depth (mm)		20	20
<b>28759...</b>	Ident. No. Unit price, €	<b>091</b> (O. R.)	<b>126</b> (O. R.)

Prod. group 266



## Clamping jaws with pins

**Application:**  
Replacement jaws for Kipp compact 5-axis clamp.  
For positive-lock clamping without pre-embossing,  
e.g. unmachined parts, heavy-duty machining, cast  
parts, etc.

**Execution:**  
▪ Jaw and pins made of tool steel  
▪ Jaw hardened and untreated  
▪ Pins with 6 mm ring cutter

Jaw thickness Y (mm)		8	8
Length A (mm)		90	125
Height C (mm)		35	35
Clamp in depth (mm)		20	20
<b>28759...</b>	Ident. No. Unit price, €	<b>093</b> (O. R.)	<b>128</b> (O. R.)

Prod. group 266



## Pins with 6 mm ring cutter

**Application:**  
Replacement pins for clamping jaws with pins  
28759093 and 128.

**Execution:**  
▪ Hardened and burnished  
▪ Assembled by pressing in

Ring cutter Ø (mm)		6
<b>28759...</b>	Ident. No. Unit price, €	<b>130</b> (O. R.)

Prod. group 266



## ATORN® 5-axis machine centre clamping device

**Application:**  
For secure and vibration-free clamping at very high  
cutting and feed forces on medium-sized 5-axis  
machines.

▪ With flushing technology to clean the spindle  
chamber  
▪ Clamping repeatability < 0.003 mm

▪ For universal use

**scope of supply and services:**  
Centre clamping device without jaws, including 3/8  
inch socket wrench insert and knurled wheel

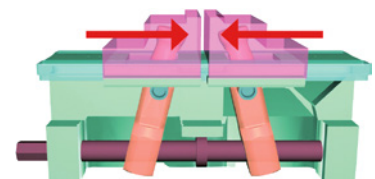
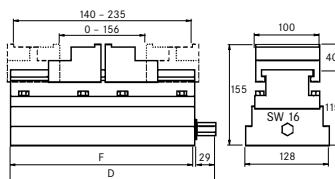
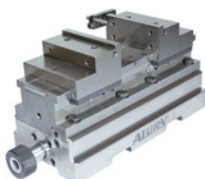
**Execution:**

- Centring fixture with fine adjustment at the table  
centre for the extremely high precision on the  
workpiece
- All function faces hardened and precision-ground
- Very large clamping range (0-235 mm) for a short  
design length

**Advantage:**

- Optimum transmission of force in the clamping  
jaws via toggle system
- Each workpiece can be firmly clamped across the  
whole clamping length with precise apportioning  
of force
- Easy replacement of jaws

**Notes:**  
Recommended torque screwdriver no. 52244 110,  
see .



Jaw width A (mm)	100
Min./max. clamping width	0-235 mm
Body length F (mm)	280
Height H (mm)	155
Max. length D (mm)	312
Tightening torque (Nm)	110
Tension force (kN)	56
Repeat accuracy (mm)	0.003
<b>28790...</b>	Ident. No. <b>100</b>
	Unit price, € (O. R.)

Prod. group 280

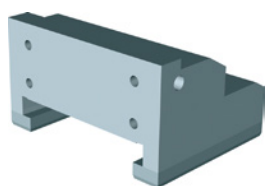
## ATORN® Clamping jaws accessories for ref. no. 28790 100

**Application:**

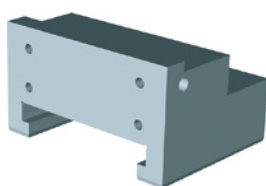
- Ident. No. 301–302:** For clamping workpieces.
- Ident. No. 303–304:** For clamping non-parallel workpieces, cast parts and moulded workpieces.
- Ident. No. 310–311:** For parallel clamping of workpieces made of steel and cast iron.
- Ident. No. 312:** For adapting the clamping jaws to the workpiece contour.
- Ident. No. 313:** For clamping round workpieces.
- Ident. No. 314:** For better adhesion to workpiece.

**Execution:**

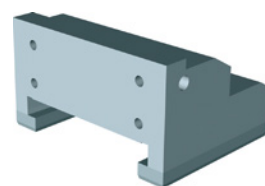
- Accessories for ref. no. 28790
- **Ident. No. 301:** For clamping width 0 - 156 mm
- **Ident. No. 301, 310:** Hardened and polished
- **Ident. No. 301–302:** Precision-ground
- **Ident. No. 302:**
  - Side stop
  - For clamping width 0-235 mm, can be used on both sides
- **Ident. No. 303:** Guides and clamping surfaces
- **Ident. No. 303–304:** Adjustment angle  $\pm 2^\circ$
- **Ident. No. 304:** Including interchangeable thrust pieces as required (ref. no. 305-307) and 1 grooved jaw ref. no. 314
- **Ident. No. 310–311:** Clamping depth 4 mm
- **Ident. No. 311–312:** For screwing on
- **Ident. No. 312:**
  - Can be hardened
  - For making shaped jaws
- **Ident. No. 313:**
  - Clamping range diameter 10-30 mm
  - 1 horizontal and vertical prism
- **Ident. No. 314:** Rear side polished flat



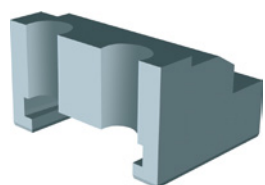
Ident. No. 301



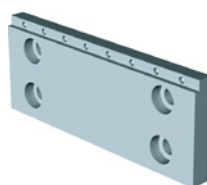
Ident. No. 302



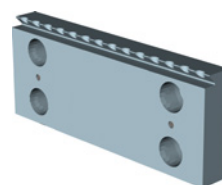
Ident. No. 303



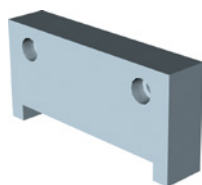
Ident. No. 304



Ident. No. 310



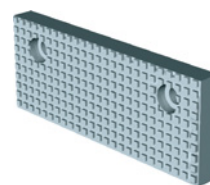
Ident. No. 311



Ident. No. 312



Ident. No. 313



Ident. No. 314

Type	Standard clamping jaw	Clamping jaw with step   polished	Pendulum jaw	Double pendulum jaw	Grip jaw with step	Soft steel jaw	Prism jaw	Grooved jaw
Min./max. clamping range Ø	-	-	-	-	-	-	10-30 mm	-
Min./max. clamping width	0-156 mm	0-235 mm	-	-	-	-	-	-
Length (mm)	100	100	100	100	100	100	100	100
Jaws thickness (mm)	80	80	80	80	10	20	30	10
Height (mm)	50	50	50	50	40	48	40	50
<b>28790...</b>	Ident. No. <b>301</b> Price/pair, € (O. R.)	<b>302</b> (O. R.)	-	-	<b>310</b> (O. R.) <b>311</b> (O. R.)	<b>312</b> (O. R.)	-	<b>314</b> (O. R.)
<b>28790...</b>	Ident. No. Unit price, €	-	<b>303</b> (O. R.)	<b>304</b> (O. R.)	-	-	<b>313</b> (O. R.)	-

Prod. group 280

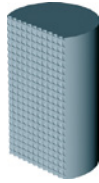
## ATORN® Thrust pieces, pointed and grooved

**Application:**

For use in pairs in double pendulum jaw ref. no. 28790304

**Execution:**

- Hardened and polished
- Accessories for ref. no. 28790



Ident. No. 305



Ident. No. 306



Ident. No. 307

Jaw design		Grooved tip	Flat grooves	Flat
<b>28790...</b>	Ident. No. Price/pair, €	<b>305</b> (O. R.)	<b>306</b> (O. R.)	<b>307</b> (O. R.)

Prod. group 280

## ATORN® Tool stop

**Execution:**

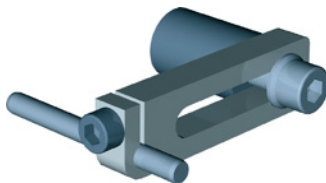
- **Ident. No. 308:** Attached to clamp on side by magnetic means
- **Ident. No. 309:** Screwed to side of clamp

- **Ident. No. 315:** Unhardened

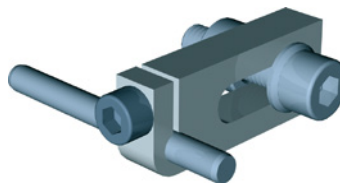
- **Ident. No. 315–316:** Height to customer requirement
- **Ident. No. 316:** Hardened

**Notes:**

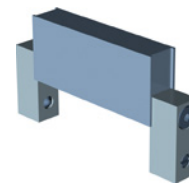
**Ident. No. 315–316:** Please indicate height when ordering.



Ident. No. 308



Ident. No. 309



Ident. No. 315–316

Length (mm)			-	100
<b>28790...</b>	Workpiece stop, magnetised	Ident. No. Unit price, €	<b>308</b> (O. R.)	-
<b>28790...</b>	Workpiece stop, screwed	Ident. No. Unit price, €	<b>309</b> (O. R.)	-
<b>28790...</b>	Workpiece support, unhardened	Ident. No. Price/pair, €	-	<b>315</b> (O. R.)
<b>28790...</b>	Workpiece support, hardened	Ident. No. Price/pair, €	-	<b>316</b> (O. R.)

Prod. group 280

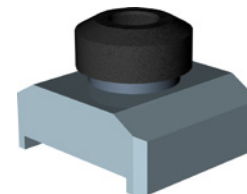
## ATORN® Collet holder

**Application:**

For clamping round components on the centre clamping device.

**Execution:**

- For collets type ER 40
- Accessories for ref. no. 28790



Collet type	ER 40
Min. clamping range (mm)	3
Max. clamping range (mm)	26
<b>28790...</b>	Ident. No. Unit price, €
	<b>317</b> (O. R.)

Prod. group 280

## ATORN® Mechanical centre clamping devices

For the ATORN jaw quick-change system (click system)

### Application:

Ideal for 5-sided machining or as an economical solution in conjunction with palletising and automation systems.

### Execution:

- Sturdy steel version
- Centring and repeat accuracy 0.02 mm
- Basic body hardened and polished
- Wear-resistant and nitrided spindle
- For tightening centre clamping devices from left and right

### Advantage:

- The clamp can also be set-up linearly thanks to the precise grinding height
- Matching jaw quick-change system ref. no. 28892 offers a wide range of jaw widths and means of clamping

- Spindle and spindle nut protected against dirt and damage by sturdy chip guard and scraper
- Compact design for high clamping force

### scope of supply and services:

Basic body with plain jaw set for ATORN click system, without interchangeable jaw grips or ejector.

### Notes:

Suitable ATORN interchangeable jaw grips for jaw quick-change system item no. 28892 in aluminium or steel. For corresponding tightening torque: Torque wrench 3/8" 10-100 Nm, order no. 52240120, hexagon socket wrench insert 1/2", WAF 15, order no. 58580150. Ratchet combination spanner ref. no. 52044215. Matching adjustable clamp ref. no. 28791 130



Size	2	3
Jaw width A (mm)	90	125
Min./max. clamping width	0-96 mm	0-152 mm
Min./max. clamping width for reversible step jaws	65-180 mm	80-250 mm
Max. length D (mm)	180	250
Body height E (mm)	45	66
Tightening torque (Nm)	80	100
Tension force (kN)	30	40
Repeat accuracy (mm)	0.02	0.02
28791...	Ident. No. 090 Unit price, € O. R.	125 O. R.

Prod. group 281

## RÖHM 5-axis machine centre clamping device RKZ-M

for 5-sided machining, centric clamping

### Application:

For use on NC machines, particularly for 5-side machining.

### Execution:

- Centric clamping
- Mechanical clamping
- As a result of centric clamping, each workpiece has the same centre position
- Clamping precision and repeatability  $\pm 0.02$  mm

- Compact design
- Steel basic body is hardened on all sides

### scope of supply and services:

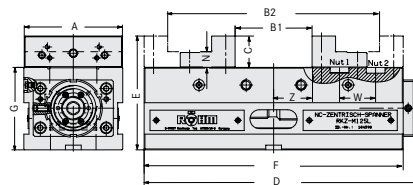
With hand crank

### Notes:

Quotation on request: Special prism jaw version.\*  
With elevated stepped interchangeable jaw grips.



Ident. No. 050-092, 126



Jaw width A (mm)	50	70	92	125	125
Span (mm)	39	58	76	97	97
Min./max. clamping width of slot reversible jaws B1	36-75 mm	48-106 mm	70-146 mm	78-138 mm	81-177 mm
Min./max. clamping width of slot 2 reversible jaws B2	72-111 mm	95-153 mm	132-208 mm	172-269 mm	172-269 mm
Jaw height C (mm)	20	25	32	60	40
Body length F (mm)	140	190	260	330	330
Max. length D (mm)	157	209	283	353	353
Max. height E (mm)	75	95	117	165	165
Body height G (mm)	55	70	85	105	105
Tightening torque (Nm)	150	150	150	150	150
Tension force (kN)	20.5	30	39	49.5	49.5
28760...	Ident. No. 050 Unit price, € (O. R.)	070 (O. R.)	092 (O. R.)	125 (O. R.) <sup>+</sup>	126 (O. R.) <sup>+</sup>

Prod. group 284



**ATORN®** Jaw quick-change system  
 Suitable plain jaws for many vices

Clamping Technology

**Application:**

Plain jaws for holding interchangeable jaw grips made of high-strength aluminium and stainless steel.

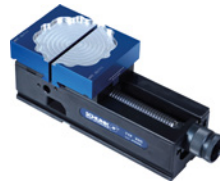
**Execution:**

- For the ATORN click system

- The concept of holding, guiding and locking offers the highest level of production safety
- Interchangeable jaw grips are available in many widths

**Advantage:**

- Considerably shorter set-up times thanks to quick change of the interchangeable jaw grips (less than 30 seconds)
- Large range and a large number of combination options facilitate almost any clamping task
- Very flexible as the system can be adapted to all common vices



For vice type	Size	Jaws width (mm)	Plain jaw	
			28892... ID no.	(O. R.)
Atorn MM-G 125	3	125	018	(O. R.)
Allmatic Centro Grip	3	125	001	(O. R.)
Allmatic Duo Plus mech. all models	3	125	003	(O. R.)
Allmatic LC/TC up to April 98	3	125	006	(O. R.)
Allmatic LC/TC from May 98 1	3	125	007	O. R.
Allmatic T-Rex (14 mm slot)	3	125	013	(O. R.)
Allmatic T-Rex (XL)	3	125	014	(O. R.)
Allmatic Titan	3	125	015	(O. R.)
Arnold Arno NC Twin	3	125	017	(O. R.)
Fresmak Arnold MB2	3	125	019	(O. R.)
Fresmak Arnold Twin	2	90	021	(O. R.)
Fresmak Arnold Twin	3	125	022	(O. R.)
Garant NC-LC	3	125	023	(O. R.)
Garant NC-TC	3	125	024	(O. R.)
Gressel Centrinios	2	65	027	(O. R.)
Gressel Centrinios	2	100	028	(O. R.)
Gressel Duogrip all types	3	100	029	(O. R.)
Gressel Duogrip all types	3	125	030	(O. R.)
Gressel Grepos 5X	3	125	031	(O. R.)
Gripos all types	3	100	032	(O. R.)
Gripos all types	3	125	033	(O. R.)
Hilma CS	2	80	040	(O. R.)
Hilma DCS	2	80	041	(O. R.)
Hilma DS/TS	2	100	042	(O. R.)
Hilma DS/TS	3	125	043	(O. R.)
Hilma KNC	3	125	046	(O. R.)
Hilma KNC	4	160	047	(O. R.)
Hilma SCS	2	80	048	(O. R.)
Hilma SCS	3	120	049	(O. R.)
Röhm KZS all types	2	80	052	(O. R.)
Röhm KZS all types	3	125	053	(O. R.)
Röhm RKD all types	3	125	057	(O. R.)
Röhm RKE/RKG all types	3	125	058	(O. R.)
Röhm RKE 160	4	160	059	(O. R.)
Röhm RKZ all types	3	125	061	(O. R.)
Schunk KSP-250 KSH-250 all types	3	125	076	(O. R.)

Set price, €

Prod. group 281

**ATORN®** Ejector for jaw quick-change system

**Application:**

For lifting out interchangeable jaw grips from plain jaws.

**Advantage:**

- Ejector suitable for all systems

28892...	Jaw quick-change system	Ident. No. Unit price, €	000 O. R.
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Prod. group 281

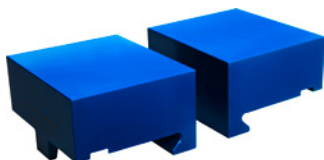


Quick-change system for jaws (click system)

**ATORN® Interchangeable jaw grips, aluminium**  
 Suitable for ATORN jaw quick-change system

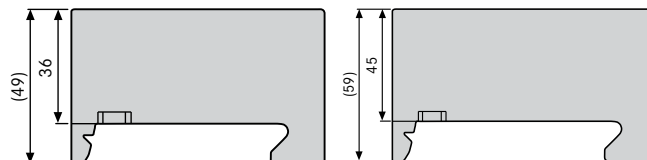
**Application:**  
 For optimum adaptation of workpiece contour and clamping surface

- Execution:**
- Soft, machinable interchangeable jaw grips
  - Interchangeable jaw grips made of high-strength aluminium
  - For the ATORN click system



- Advantage:**
- Interchangeable jaw grips are available in many widths
  - By milling down the old clamping contours, the interchangeable jaw grips can be used over and again

**Notes:**  
 System size of plain jaw and interchangeable jaw grips must be the same



Size 2

Size 4

Size	Jaws width (mm)	Aluminium interchangeable jaw grip ID no.
2	65	242 (O. R.)
2	70	243 (O. R.)
2	80	244 (O. R.)
2	90	245 (O. R.)
2	100	246 (O. R.)
2	125	247 (O. R.)
2	160	248 (O. R.)
2	180	249 (O. R.)
3	80	250 (O. R.)
3	90	251 (O. R.)
3	100	252 (O. R.)
3	125	253 (O. R.)
3	140	254 (O. R.)
3	160	255 (O. R.)

Size	Jaws width (mm)	Aluminium interchangeable jaw grip ID no.
3	180	256 (O. R.)
3	200	257 (O. R.)
3	225	258 (O. R.)
3	250	259 (O. R.)
4	80	260 (O. R.)
4	100	261 (O. R.)
4	125	262 (O. R.)
4	160	263 (O. R.)
4	200	264 (O. R.)
4	250	265 (O. R.)
4	300	266 (O. R.)
4	400	267 (O. R.)

Prod. group 281

**ATORN® Interchangeable jaw grips, steel**  
 Suitable for ATORN jaw quick-change system

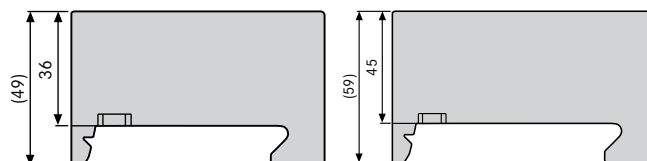
**Application:**  
 For optimum adaptation of workpiece contour and clamping surface

- Execution:**
- Soft, machinable interchangeable jaw grips
  - Interchangeable jaw grips made of case-hardening steel
  - For the ATORN click system



- Advantage:**
- Interchangeable jaw grips are available in many widths
  - By milling down the old clamping contours, the interchangeable jaw grips can be used over and again

**Notes:**  
 System size of plain jaw and interchangeable jaw grips must be the same



Size 2

Size 4

Size	Jaws width (mm)	Steel interchangeable jaw grip ID no.
2	65	271 (O. R.)
2	70	272 (O. R.)
2	80	273 (O. R.)
2	90	274 (O. R.)
2	100	275 (O. R.)
2	125	276 (O. R.)
2	160	277 (O. R.)
2	180	278 (O. R.)
3	80	279 (O. R.)
3	90	280 (O. R.)
3	100	281 (O. R.)
3	125	282 (O. R.)
3	140	283 (O. R.)
3	160	284 (O. R.)

Size	Jaws width (mm)	Steel interchangeable jaw grip ID no.
3	180	285 (O. R.)
3	200	286 (O. R.)
3	225	287 (O. R.)
3	250	288 (O. R.)
4	80	289 (O. R.)
4	100	290 (O. R.)
4	125	291 (O. R.)
4	160	292 (O. R.)
4	200	293 (O. R.)
4	250	294 (O. R.)
4	300	295 (O. R.)
4	400	296 (O. R.)

Prod. group 281

Clamping Technology

**ATORN® Interchangeable stepped jaw, steel**  
 Stepped jaws, hardened

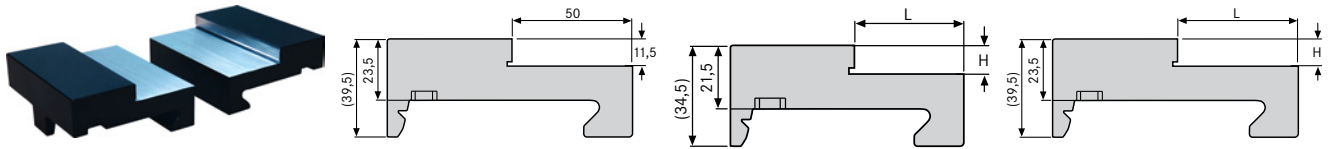
Clamping Technology

**Execution:**

- Case-hardening steel, hardened

- Smooth clamping surface

- For the ATORN click system



Size 3

Size	Jaws width (mm)	Step length L (mm)	Step height H (mm)	Interchangeable stepped jaw, hardened 28892... ID no.
2	65	37.5	9.50	<b>298</b> (O. R.)
2	80	37.50	9.50	<b>299</b> (O. R.)
2	90	37.50	9.50	<b>300</b> (O. R.)
3	100	50	11.50	<b>301</b> (O. R.)

Size	Jaws width (mm)	Step length L (mm)	Step height H (mm)	Interchangeable stepped jaw, hardened 28892... ID no.
3	125	50	11.50	<b>302</b> (O. R.)
4	160	65	14.50	<b>303</b> (O. R.)
4	200	65	14.50	<b>304</b> (O. R.)

Unit price, €

Prod. group 281

**ATORN® Grip insert**  
 Suitable for the ATORN jaw quick-change system (click system)

**Execution:**

- Penetrate the grip inserts optimally

- Vibrations caused during machining are absorbed optimally
- Service life of the tools used is increased significantly by using grip inserts

**Advantage:**

- High transfer of clamping forces with low clamping depth protects material resources



ATORN grip insert M4 x 8	ATORN grip insert M5 x 10	ATORN grip insert M6 x 12	ATORN grip insert M8 x 16	ATORN grip insert M10 x 20	ATORN grip insert M12 x 24
28892... ID no.	28892... ID no.	28892... ID no.	28892... ID no.	28892... ID no.	28892... ID no.
<b>305</b> (O. R.)	<b>307</b> (O. R.)	<b>309</b> (O. R.)	<b>311</b> (O. R.)	<b>313</b> (O. R.)	<b>315</b> (O. R.)

Set price, €

Prod. group 281

**ATORN® ATORN clamping jaw with positioning pins**

**Application:**

The ATORN clamping jaw system with positioning pins renders complicated and time-consuming clamping devices superfluous.

**Execution:**

- Positioning pins are retracted and ejected mechanically
- High-quality tool steel, gas-nitrided (hardened)
- Repeat accuracy ± 0.01mm
- Laser-marked clamping jaw for clamping depth and clamping width

**Advantage:**

- Patented mechanical system that moves all pins into position at the press of the thumb (Fig. 1+2)
- By pushing away the pins that are not needed (Fig. 3), almost all contact and clamping positions can be achieved
- Marking of clamping depth and clamping width on clamping jaw makes it easier to position the workpiece
- A practical, fast and uncomplicated way to lock the position of workpieces in seconds, rendering complicated and timely clamping devices superfluous



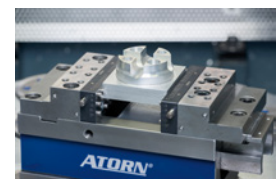
III.1



III. 2



III. 3



Jaw type			Solid 125	Movable 125	Solid 160	Movable 160
26111...	Suitable jaws for: Allmatic 3020/125Basic, 1020/125 HD125 1001/125 HD125 swivel plate, 2013/125 LC mech.	Ident. No. Unit price, €	<b>301</b> O. R.	<b>302</b> O. R.	-	-
26111...	Suitable jaws for: Allmatic 3020/160Basic, 1020/160 HD160 10 2013/160 LC mech.	Ident. No. Unit price, €	-	-	<b>303</b> O. R.	<b>304</b> O. R.
26111...	Suitable jaws for: Hilma NC 125 ref. no. 28848 126 NC 125H, EL 125 ref. no. 28862 126 KNC 125	Ident. No. Unit price, €	<b>305</b> O. R.	<b>306</b> O. R.	-	-
26111...	Suitable jaws for: Hilma NC 160 ref. no. 28848 161 NC 160H, EL 160 ref. no. 28862 161 KNC 160	Ident. No. Unit price, €	-	-	<b>307</b> O. R.	<b>308</b> O. R.
26111...	Suitable jaws for: ATORN ref. no. 28741 125 Kesel CNC 125 ref. no. 28812 125 Bull pneumatic 125 ref. no. 28730 225 Bull 125 mechanical, ref. no. 28730 125 ARNO 125 Röhmm: RKE 125 28878 125 RKE-U125 RKE-UL125 RKG-L125 RKE-LV125	Ident. No. Unit price, €	<b>309</b> O. R.	<b>310</b> O. R.	-	-
26111...	Suitable jaws for: ATORN ref. no.28874 160 Kesel CNC 160 ref. no. 28812 160 Bull pneumatics 160 ARNO 160 Bull 160 mechanical, Röhmm: RKE ref. no.160 28878 160 RKE-U160 RKE-UL160 RKG-L160 RKE-LV 160	Ident. No. Unit price, €	-	-	<b>311</b> O. R.	<b>312</b> O. R.

Prod. group 281

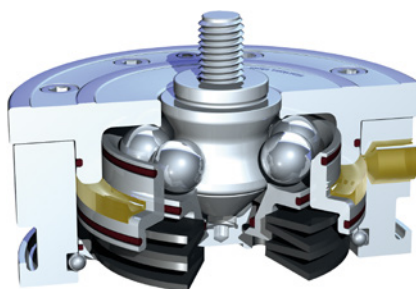
## Zero point clamping system

Take your time and calculate yourself.

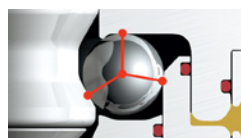
### Rapid return on investment

Using the **ATORN** zero point clamping system reduces set-up times by up to 90%. Prevents high machine downtime, minimises set-up times

and saves you money. Large potential savings across all process costs ensure rapid return on investment and ensure your competitive capacity. Sample calculation of a customer without and with the **ATORN** zero point clamping system:



No canting



Three-stroke principle: no shearing load on balls



High holding / pull-in / wear forces



Stainless steel: no corrosion



Large ball  $\phi$ : 78% more ball surface



Large clutch movement: Pre-positioning of 12 mm sufficient



Fluid feeding: fewer supply holes



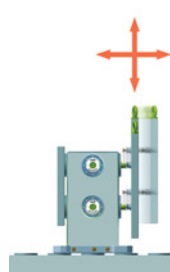
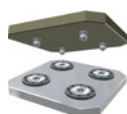
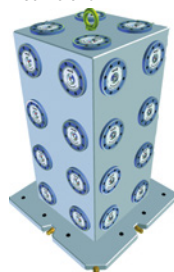
Process-reliable safety system



No ball cage: Balls can reposition continuously



Positive locking: optimum holding forces



Process	Without zero point clamping system	With <b>ATORN</b> zero point clamping system
Machine costs	EUR 80/h	EUR 80/h
Number of set-up processes per day	3x	3x
Set-up time per process	60 min.	1.5 min.
Set-up time per day	180 min. (3 h)	4.5 min. (0.075 h)
Set-up costs per day	EUR 240	EUR 6
Annual set-up costs on the basis of 240 working days	EUR 57,600	EUR 1,440
Annual savings		EUR 56,160

**ENERPAC** Hydraulic pressure cylinder RC

**Execution:**

- Single-acting cylinder
- Model RC 50 with stationary thrust piece, all other cylinders with interchangeable, grooved thrust piece.
- Operating pressure of 700 bar
- With spring return
- With scraper ring (apart from model RC 50)

- Hard-chromed piston rod
- With fastening thread on cylinder head (apart from mod. RC 50)

**Advantage:**

- For universal use
- Retaining ring prevents piston rod from being pushed out



Ident. No. 015-070



Ident. No. 010

Model	Max. compressive force (kN)	Lift height (mm)	Oil capacity (cm <sup>3</sup> )	Overall height, retracted (mm)	Outer Ø (mm)	Weight (kg)	29501... ID no.	
-	44.8	16	10	41	58	0.8	<b>010</b>	O. R.
RC 51	44.8	25	16	110	38	0.9	<b>015</b>	O. R.
RC 53	44.8	76	49	165	38	1.3	<b>020</b>	O. R.
RC 55	44.8	127	81	216	38	1.7	<b>030</b>	O. R.
RC 101	101.7	25	36	90	57	1.7	<b>035</b>	O. R.
RC 102	101.7	51	78	121	57	2.2	<b>040</b>	O. R.
RC 104	101.7	105	152	171	57	2.9	<b>045</b>	O. R.
RC 106	101.7	155	224	247	57	4.4	<b>050</b>	O. R.
RC 1010	101.7	257	371	349	57	6	<b>060</b>	(O. R.)
RC 1014	101.7	356	514	451	57	7.1	<b>062</b>	(O. R.)
RC 251	232.3	25	83	140	85	5.2	<b>064</b>	(O. R.)
RC 252	232.3	51	169	165	85	6.2	<b>065</b>	(O. R.)
RC 254	232.3	101	337	216	85	8.1	<b>067</b>	(O. R.)
RC 256	232.3	159	528	273	85	10.2	<b>070</b>	(O. R.)

Unit price, €

Prod. group 258

Accessories for			29501 010	29501 015	29501 020	29501 030	29501 035	29501 040
<b>29739...</b>	Manometer	Ident. No. Unit price, €	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	-
<b>29501...</b>	Cylinder base For hydraulic pressure cylinder RC	Ident. No. Unit price, €	-	-	-	-	<b>210</b> (O. R.)	<b>210</b> (O. R.)

Accessories for			29501 045	29501 050	29501 060	29501 062	29501 064	29501 065
<b>29739...</b>	Manometer	Ident. No. Unit price, €	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	<b>020</b> O. R.	-	-
<b>29501...</b>	Cylinder base For hydraulic pressure cylinder RC	Ident. No. Unit price, €	<b>210</b> (O. R.)	<b>210</b> (O. R.)	<b>210</b> (O. R.)	<b>210</b> (O. R.)	<b>225</b> (O. R.)	<b>225</b> (O. R.)

Accessories for			29501 067	29501 070
<b>29739...</b>	Manometer	Ident. No. Unit price, €	<b>030</b> (O. R.)	<b>030</b> (O. R.)
<b>29501...</b>	Cylinder base For hydraulic pressure cylinder RC	Ident. No. Unit price, €	<b>225</b> (O. R.)	<b>225</b> (O. R.)

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### Hydraulic pressure cylinder RSM (flat) for RC hydraulic pressure cylinders

**Execution:**

- Single-acting cylinder
- Extra flat
- With spring return and scraper ring
- Operating pressure of 700 bar
- Bronzed piston rod

- Pressure cylinder RSM 50 is equipped with coupling sleeve AR 400.

**Advantage:**

- Retaining ring prevents piston rod from being pushed out

Model	RSM 50	RSM 100	RSM 200	RSM 300	RSM 500	RSM 750	RSM 1000
Max. compressive force (kN)	45	101	200	293	435	718	888
Lift height (mm)	6.4	11	11	12	16	16	16
Oil capacity (cm <sup>3</sup> )	4	18	32	55	99	164	203
Overall height, retracted (mm)	32	43	51	58	66	79	85
Outer Ø (mm)	60	81	100	115	140	165	176
Weight (kg)	1	1.4	3.1	4.5	6.8	11.3	14.5
<b>29521...</b>	Ident. No. <b>005</b>	<b>010</b>	<b>020</b>	<b>030</b>	<b>050</b>	<b>075</b>	<b>100</b>
	Unit price, €	O. R.	O. R.	(O. R.)	O. R.	(O. R.)	(O. R.)

Prod. group 258



Ident. No. 010-100



Ident. No. 005

Clamping Technology



### Hydraulic short stroke cylinder RCS

**Execution:**

- Single-acting cylinder
- Without fastening thread on cylinder head and piston rod
- Operating pressure of 700 bar
- With spring return and scraper ring
- Stripping ring
- Piston rod with nickel plating
- Model RCS 1002 with carry handle

- For RCS 101-502 models, the coupling sleeve is inserted at an angle of 5°.

**Advantage:**

- Retaining ring prevents piston rod from being pushed out

**scope of supply and services:**

With grooved thrust piece.



Model	RCS 101	RCS 201	RCS 302	RCS 502	RCS 1002
Max. compressive force (kN)	102	200	293	435	888
Lift height (mm)	38	44	62	60	57
Oil capacity (cm <sup>3</sup> )	55	129	261	373	722
Overall height, retracted (mm)	88	98	117	123	142
Outer Ø (mm)	70	92	101	124	165
Weight (kg)	4.1	5	6.8	10.9	22.7
<b>29511...</b>	Ident. No. <b>020</b>	<b>040</b>	<b>050</b>	<b>060</b>	<b>070</b>
	Unit price, €	O. R.	O. R.	(O. R.)	(O. R.)

Prod. group 258

Accessories for		29511 020	29511 040	29511 050	29511 060	29511 070
<b>29739...</b>	Manometer	Ident. No. <b>020</b>	<b>020</b>	<b>040</b>	<b>030</b>	<b>040</b>
	Unit price, €	O. R.	O. R.	O. R.	(O. R.)	O. R.

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**ENERPAC**

**Hydraulic hollow piston cylinder**

(Push or pull)

**Execution:**

- The hollow piston cylinders can all be used as push or pull cylinders.
- Bronzed piston rod
- Single-acting cylinder
- Models RCH 603 and RCH 1003 feature a carry handle.
- They are equipped with a smooth thrust piece with a centre bore.

**Advantage:**

- Retaining ring prevents piston rod from being pushed out

**Notes:**

Mounting flanges on request. Model RRH, double-acting, on request.



Ident. No. 007-027  
Model RCH, single-acting. Model RRH, double-acting.



Ident. No. 005

Model	RCH 121	RCH 123	RCH 202	RCH 206	RCH 302	RCH 306
Max. compressive force (kN)	125	125	214	214	326	326
Lift height (mm)	42	76	49	152	64	155
Oil capacity (cm <sup>3</sup> )	74	136	155	465	296	722
Overall height, retracted (mm)	121	184	162	306	178	306
Bore Ø (mm)	19.5	19.5	26.9	26.9	33	33
Outer Ø (mm)	70	70	100	100	114	114
Weight (kg)	3	4.4	7.6	14.1	10.9	21.8
<b>29531...</b>	Ident. No. <b>005</b>	<b>007</b>	<b>010</b>	<b>017</b>	<b>020</b>	<b>027</b>
	Unit price, €	O. R.	O. R.	O. R.	O. R.	(O. R.)

Prod. group 258

Accessories for			<b>29531 005</b>	<b>29531 007</b>	<b>29531 010</b>
<b>29739...</b>	Manometer	Ident. No.	<b>030</b>	<b>030</b>	<b>020</b>
		Unit price, €	(O. R.)	(O. R.)	O. R.

Accessories for			<b>29531 020</b>	<b>29531 027</b>
<b>29739...</b>	Manometer	Ident. No.	<b>040</b>	<b>040</b>
		Unit price, €	O. R.	O. R.

**ENERPAC**

**Hydraulic hand pumps**

For single-acting cylinders

**Application:**

For operating hydraulic cylinders.

**Execution:**

- The piston hand pumps comprise a pump unit, drain valve and oil reservoir.

- The pumps can be used with the pump head downwards both horizontally and vertically.
- Ready for operation with oil filling

**Advantage:**

- Automatic switch-over from low pressure to high pressure range in two-stage pumps.



Model	P-18	P-39	P-80	P-462	P-392	P-142
Number of levels (PCS)	1	1	2	2	2	2
Max. working pressure 1. Level (bar)	200	700	34	14	14	13
Max. working pressure 2. Level (bar)	-	-	700	700	700	700
Feed volume per stroke (cm <sup>3</sup> )	2.61	2.61	16.28	133	11.25	3.62
Feed volume per stroke 2 (cm <sup>3</sup> )	-	-	2.46	4.8	2.47	0.9
Oil capacity (cm <sup>3</sup> )	350	700	2294	7527	1000	500
Effective oil volume (cm <sup>3</sup> )	360	770	2200	7427	901	328
Connection thread	3/8 inch x 18 mm	3/8 inch x 18 mm	3/8 inch x 18 mm	3/8 inch x 18 mm	3/8 inch x 18 mm	1/4 inch x 18 mm
Weight (kg)	5	6.2	10.7	27	2.4	2.1
<b>29701...</b>	Ident. No. <b>020</b>	<b>030</b>	<b>060</b>	<b>080</b>	<b>210</b>	<b>200</b>
	Unit price, €	O. R.	O. R.	(O. R.)	O. R.	O. R.

Prod. group 258

**ENERPAC**

**Hydraulic hand pumps**

For double-acting cylinders

**Application:**

For operating hydraulic cylinders.

**Execution:**

- The piston hand pumps comprise a pump unit, drain valve and oil reservoir.

- The pumps can be used with the pump head downwards both horizontally and vertically.
- Ready for operation with oil filling

**Advantage:**

- Automatic switch-over from low pressure to high pressure range in two-stage pumps.



Model	P-84
Number of levels (PCS)	2
Max. working pressure 1. Level (bar)	34
Max. working pressure 2. Level (bar)	700
Feed volume per stroke (cm <sup>3</sup> )	16.28
Feed volume per stroke 2 (cm <sup>3</sup> )	2.46
Oil capacity (cm <sup>3</sup> )	2294
Effective oil volume (cm <sup>3</sup> )	2200
Connection thread	3/8 inch x 18 mm
Weight (kg)	11.8
<b>29701...</b>	Ident. No. <b>090</b>
	Unit price, €
	(O. R.)

Prod. group 258



## More than 200 different heavy-duty cylinders

**CLRG series 1000-10000 kN compressive force.**

- Robust heavy-duty cylinder
- Double-acting for precision driving
- Used in areas of construction, in maintenance and in the off-shore sphere
- Double-action
- 60 models
- 50–300 mm stroke length
- Solid plunger construction, plated
- Built-in overload protection
- Grooved thrust piece (hardened)
- Optional interchangeable moving thrust pieces (CAT model)

**CLSG series 500-10000 kN compressive force.**

- Cylinder for support, stroke and lowering jobs on construction sites
- Internal and external corrosion protection shields the cylinders even for short-term use under water
- Single action, without spring return
- 66 models, 50–300 mm stroke length
- Special PTFE coating for increased protection against corrosion
- Grooved thrust pieces (hardened)
- Optional with interchangeable moving thrust pieces (CAT models)
- Injection well to limit stroke
- Large lateral load-bearing capacity

➔ Further information, advice and quotations available on request.

**Air hydraulic single piston pumps**

For single-acting cylinders

**Execution:**

- For single-acting cylinders
- For hand or foot actuation with built-in 3-way air valve that automatically holds the load in the event of air pressure loss. No idling as the pump only works when oil delivery is required. When the set pressure is reached, the pump switches off automatically. The pump can be connected to any compressed air network with a minimum air delivery rate of 250 l/min.
- With silencer
- Rotating oil connection

- Air connection, 1/4 inch 18 NPT
- With pressure limiting valve
- With maximum operating pressure of 700 bar

**scope of supply and services:**

Pumps with oil filling

**Notes:**

Caution! For safety reasons it is advisable to protect the rocker switch of the pumps from falling objects using a safety guard.



Ident. No. 015

Model	PA 133	PATG-1102 N
Effective oil volume (cm <sup>3</sup> )	600	1300
Min./max. feed quantity	0.13-0.65 l/min	1.00-0.160 l/min
Min. air pressure (bar)	4.1	4.1
Max. air pressure (bar)	8.6	8.6
Connection thread	3/8 inch x 18 mm	3/8 inch x 18 mm
<b>29703...</b>	Ident. No. <b>015</b>	Ident. No. <b>030</b>
	Unit price, € O. R.	Unit price, € O. R.

Prod. group 258

**Electro-hydraulic compact pumps**

Two-stage

**Application:**

For portable use on single- or double-acting cylinders.

**Execution:**

- Operating pressure of 700 bar
- Equipped with an adjustable pressure limiting valve. The pump is configured for intermittent operation (thermal safety switch). The operating time depends on the respective pressure.

- With oil filling
- Wired remote operation of motor as standard (24 V safety voltage). 230 V single phase motor connection.

**Notes:**

Other electro-hydraulic compact pumps on request.



Ident. No. 120

Model	PUJ-1200 E	PUJ-1400 E
Valve design	3/2-way	4/3-way
Feed volume under low pressure at 14 bar (l/min)	3.2	3.2
Feed volume under high pressure at 700 bar (l/min)	0.328	0.328
Continuous operating pressure	Depending on load	Depending on load
Effective oil content (l)	2	2
Tank contents (l)	4	4
Connection thread	3/8 inch x 18 mm	3/8 inch x 18 mm
<b>29716...</b>	Ident. No. <b>120</b>	Ident. No. <b>140</b>
	Unit price, € (O. R.)	Unit price, € (O. R.)

Prod. group 258





**ENERPAC**

**Electro-hydraulic pump from XC series**

Wireless and portable

**Application:**

For portable use on single- or double-acting cylinders.

**Execution:**

- Portable and battery-operated electro-hydraulic pump from XC series, up to 2 times faster than pneumatically-operated pumps
- Two delivery stages
- 0.5 HP motor with 28 V lithium ion batteries ensure remarkable speed and operating periods
- Two lithium-ion batteries allow very long operating times, as well as a very short charging time
- Trigger deactivation prevents accidental start-up
- Pressure relief valve with fine adjustment
- 3/8" NPTF connection
- Bladder tank can be used in any position and prevents oil from escaping

- With battery charge indicator

**Advantage:**

- Wireless technology eliminates trip hazards e.g. from power cables and air hoses
- Short assembly and disassembly time
- Ideal for small to medium-sized cylinders as well as hydraulic tools
- Convertible with more than 140 Enerpac tools and cylinders

**scope of supply and services:**

Wireless pump from XC series with shoulder strap, 2 x 28 V lithium ions batteries and a 230 V charger

**Notes:**

Other electro-hydraulic pumps from XC series on request.



Model	XC1201ME	XC1202ME
Max. pressure (bar)	700	700
Feed quantity without load (l/min)	2.05	2.05
Feed volume 1. Level	0.50 l/min < 140 bar	0.50 l/min < 140 bar
Feed volume 2. Level	0.25 l/min up to 700 bar	0.25 l/min up to 700 bar
Battery operating voltage (V/AC)	230	230
Length (mm)	462	462
Height (mm)	295	295
Width (mm)	208	208
Tank contents (l)	1	2
Weight (kg)	10	11
29705... Ident. No.	010	020
Price/pack, €	(O. R.)	(O. R.)

Prod. group 258

**ENERPAC**

**Lithium ion batteries**

**Application:**

Spare battery for pumps from XC series, ref. no. 29705.

**Execution:**

- 28 V lithium ion batteries

**Advantage:**

- Short charging time while also allowing a long operating time

**Notes:**

Accessories for pumps from XC series, ref. no. 29705

Model	Ident. No.	28 volt batteries/XC-28 V
29705...	Unit price, €	030 (O. R.)

Prod. group 258

**ENERPAC**

**Battery charger XC-230VC**

**Application:**

Spare battery charger for charging lithium ion batteries, ref. no. 29705.

**Execution:**

- Accessories for pumps from XC series

**Notes:**

Accessories for pumps from XC series, ref. no. 29705

Model	Ident. No.	Battery charger XC-230VC
29705...	Unit price, €	031 (O. R.)

Prod. group 258

**ENERPAC**

**Manometer model G2535L**

**Application:**

For determining and checking the operating pressure and the force present in the cylinder.

**Execution:**

- Accessories for electro-hydraulic pump from XC series, ref. no. 29705

Model	Ident. No.	Manometer   G2535L model
29739...	Unit price, €	300 (O. R.)

Prod. group 258

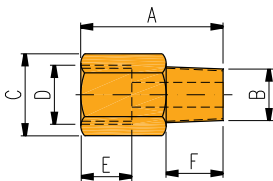


**ENERPAC** High-pressure threaded connections

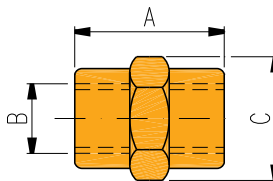
**Application:**  
For connecting hydraulic lines.

**Notes:**  
Width across flats 25.5 mm, ref. no. 29724 290, 310 and 320.

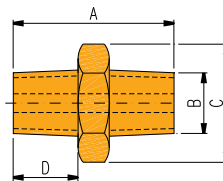
- Execution:**
- For 400 bar operating pressure with connection (1/4 18 NPT)
  - For 700 bar operating pressure with connection (3/8 18 NPT)



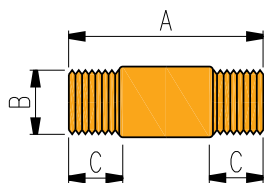
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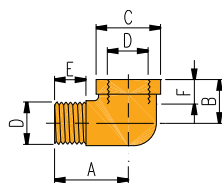
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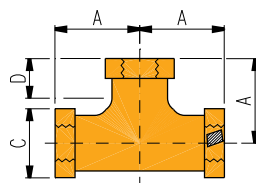
Ident. No. 220



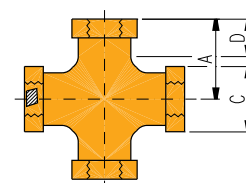
Ident. No. 260



Ident. No. 290



Ident. No. 310



Ident. No. 320

Connection thread								1/4 inch x 18 mm	3/8 inch x 18 mm
		Model	Length A (mm)	Male thread length (mm)	Inner thread dimension	Female thread depth (mm)			
29724...	Pipe reducer	FZ 1055	43	17	3/8 inch x 18 mm	20	Ident. No. 040 Unit price, € O. R.	-	
29724...	Pipe reducer	FZ 1630	19	14	1/4 inch x 18 mm	11	Ident. No. - Unit price, €	070 O. R.	
29724...	Connection sleeve	FZ 1614	29	-	3/8 inch x 18 mm	-	Ident. No. - Unit price, €	200 O. R.	
29724...	Hexagon threaded sleeve	FZ 1617	37	14	-	-	Ident. No. - Unit price, €	220 O. R.	
29724...	Long connector	FZ 1619	51	12	-	-	Ident. No. - Unit price, €	260 O. R.	
29724...	Angle	FZ 1616	33	14	3/8 inch x 18 mm	15	Ident. No. - Unit price, €	290 O. R.	
29724...	T-piece	FZ 1612	22.5	-	3/8 inch x 18 mm	12	Ident. No. - Unit price, €	310 O. R.	
29724...	Crosspiece	FZ 1613	22.5	-	3/8 inch x 18 mm	12	Ident. No. - Unit price, €	320 (O. R.)	

Prod. group 255

**ENERPAC** High-pressure hose

**Application:**  
For connecting hydraulic systems.

- Four-layer design including two sturdy layers of mesh wire
- External layer made of polyurethane for enhanced resistance against wear caused by friction

- Execution:**
- Max. operating pressure 700 bar
  - Pressed-on rubber strain relief for long service life and durability

**Notes:**  
Do not expose the hoses to temperatures above 65°C or 150°F!



Ident. No. 306

Hose length (mm)	600	900	1800	3000	6000
Two-sided connection thread	NPT 3/8 inch x 18 mm	NPT 3/8 inch x 18 mm	NPT 3/8 inch x 18 mm	NPT 3/8 inch x 18 mm	NPT 3/8 inch x 18 mm
Min. bending radius (mm)	70	70	70	70	70
Nominal width (mm)	6	6	6	6	6
Internal Ø (mm)	6.4	6.4	6.4	6.4	6.4
Dynamic operating pressure (bar)	720	720	720	720	720
29730...	Ident. No. 306 Unit price, € O. R.	Ident. No. 309 Unit price, € O. R.	Ident. No. 318 Unit price, € O. R.	Ident. No. 330 Unit price, € O. R.	Ident. No. 360 Unit price, € O. R.

Prod. group 269

Clamping Technology

## ENERPAC Hydraulic coupling

**Application:**

For quickly connecting and disconnecting hydraulic lines.

**Execution:**

- With threaded connections, coupling sleeve for cylinder side and coupling connector for hose side



Ident. No. 010

Model			A 630	A 604
29733...	Standard coupling	Ident. No.	010	050
		Unit price, €	O. R.	O. R.

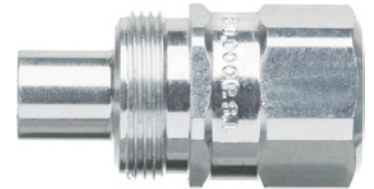
Prod. group 255

## ENERPAC Accessories for hydraulic couplings

Model			AH 630	AH 604
Thread type			National pipe tapered thread	National pipe tapered thread
Connection thread			1/4 inch x 18 mm	3/8 inch x 18 mm
Flow rate (l/min)			2	2
29733...	Coupling connector	Ident. No.	030	070
		Unit price, €	O. R.	O. R.

Prod. group 255

<b>Accessories for</b>			29733 030	29733 070
29733...	Hydraulic coupling	Standard coupling	Ident. No. 010	050
			Unit price, €	O. R.



Ref. no. 29733030

## ENERPAC Accessories for hydraulic couplings

Model			AR 630	AR 400
Thread type			National pipe tapered thread	National pipe tapered thread
Connection thread			1/4 inch x 18 mm	3/8 inch x 18 mm
Flow rate (l/min)			2	2
29733...	Coupling sleeve	Ident. No.	040	080
		Unit price, €	O. R.	O. R.

Prod. group 255

<b>Accessories for</b>			29733 040	29733 080
29733...	Hydraulic coupling	Standard coupling	Ident. No. 010	050
			Unit price, €	O. R.



Ref. no. 29733080

## ENERPAC Hydraulic coupling

**Application:**

For quickly connecting and disconnecting hydraulic lines.

**Execution:**

- With threaded connections, coupling sleeve for cylinder side and coupling connector for hose side



Model				C 604
29733...	High flow coupling	Ident. No.		110
		Unit price, €		O. R.

Prod. group 255

## ENERPAC Accessories for hydraulic couplings

Model				CH 604
Thread type				National pipe tapered thread
Connection thread				3/8 inch x 18 mm
Flow rate (l/min)				15
29733...	Coupling connector	Ident. No.		130
		Unit price, €		O. R.

Prod. group 255

<b>Accessories for</b>			29733 130
29733...	Hydraulic coupling	High flow coupling	Ident. No. 110
			Unit price, €
			O. R.



**ENERPAC** Accessories for hydraulic couplings

Model		CR 400	
Thread type		National pipe tapered thread	
Connection thread		3/8 inch x 18 mm	
Flow rate (l/min)		15	
29733...	Coupling sleeve	Ident. No.	140
		Unit price, €	O. R.

Prod. group 255

Accessories for			29733 140
29733...	Hydraulic coupling	High flow coupling	Ident. No. 110 Unit price, € O. R.



Ref. no. 29733140

Clamping Technology

**WIKAI** Manometer

**Application:**

For determining and checking the operating pressure and the force present in the cylinder.

- Housing black, diameter 100 mm
- kN scales, coloured
- 1/2 14 NPT connection from below
- With installed throttle screw

**Execution:**

- Manometer with stainless steel pipe spring



Model	II	III	IV	VI	VII
Min./max. working pressure	0-700 bar	0-700 bar	0-700 bar	0-700 bar	0-400 bar
Scale value, pressure (bar)	20	20	20	20	20
Force range	0-200 kN	0-430 kN	0-900 kN	-	-
Thread type	National pipe tapered thread	National pipe tapered thread	National pipe tapered thread	National pipe tapered thread	National pipe tapered thread
Connection thread	1/2 inch x 14 mm	1/2 inch x 14 mm	1/2 inch x 14 mm	1/2 inch x 14 mm	1/2 inch x 14 mm
Scale value, force 4	1kN   2kN   5kN	2kN   5kN   20kN	10kN   10kN   20kN	-	-
29739...	Ident. No. 020 Unit price, € O. R.	Ident. No. 030 Unit price, € (O. R.)	Ident. No. 040 Unit price, € O. R.	Ident. No. 060 Unit price, € O. R.	Ident. No. 070 Unit price, € (O. R.)

Prod. group 269

**WIKAI** Manometer glass with trailing pointer

**Application:**

As replacement for manometer

**Notes:**

Accessories for manometers 29739 020-070

**Execution:**

- Manometer glass with trailing pointer

29739...	Ident. No. 200 Unit price, € O. R.
----------	---------------------------------------

Prod. group 269



**ENERPAC** Manometer intermediate piece GA2

**Application:**

For installing the manometer on the cylinder or pump.

- Ref. no. 297420 030, accessories for ref. no. 29742 010-020

**Execution:**

- Ref. no. 297420 010, accessories for ref. no. 29739020-070

**Technical Data:**

- Thread type: National pipe tapered thread

Model	GA 2	GA3
Length (mm)	155	133
Connection thread	3/8 inch	1/4 inch
Pressure gauge connection	1/2 inch x 14 mm	-
29742...	Ident. No. 010 Unit price, € O. R.	Ident. No. 030 Unit price, € (O. R.)

29742 010 = Prod. group 255  
29742 030 = Prod. group 258



Ident. No. 030



Ident. No. 010



## Hydraulic jacks

Clamping Technology

### Application:

For simple lifting of vehicles and components.

### Execution:

- Steel, with pressure limiting valve to prevent overload
- Models A, AX with one piston and one spindle
- Models AT, ATDX with double piston
- ATN model with double telescopic piston for especially low overall height. Suitable for vehicles

with limited ground clearance and confined space such as buses, low loaders, etc. The lever is operated horizontally, as vertical operation is often not possible with overhanging bodywork.

- Loading of the lever in axial direction only and over the entire surface extends the service life.
- Models AX 8-220, A 10-220, A 12-230, A 12-270, AX 15-230, AX 20-240, A 30-240, ATDX 3-185 and AT 5-215 with crown footprint.



Model	Compressive force (kN)	Overall height, retracted (mm)	Lift height (mm)	Spindle stroke (mm)	29760... ID no.	
A2-170	20	170	115	92	<b>010</b>	<b>O. R.</b>
A3.5-170	35	170	115	92	<b>020</b>	<b>O. R.</b>
A5-212	50	212	150	100	<b>040</b>	<b>O. R.</b>
AX8-220	80	220	150	110	<b>050</b>	<b>O. R.</b>
A10-220	100	220	150	110	<b>060</b>	<b>O. R.</b>
A12-230	120	230	157	110	<b>070</b>	<b>O. R.</b>
A12-270	120	270	202	110	<b>080</b>	(O. R.)
AX15-230	150	230	155	110	<b>090</b>	(O. R.)
AX20-240	200	240	155	110	<b>105</b>	<b>O. R.</b>
A30-240	300	240	142	100	<b>120</b>	(O. R.)
ATDX3-185	30	185	215	-	<b>130</b>	(O. R.)
AT5-215	50	215	305	-	<b>140</b>	<b>O. R.</b>
ATN10-175	100	175	210	-	<b>180</b>	(O. R.)
					Unit price, €	

Prod. group 269

## Hydraulic compact jack without spring return

### Application:

For industrial use such as for lifting, pressing and pulling.

### Execution:

- Without spring return
- Can be used in any position

- Hand lever support on pump system can be pivoted 360°
- Die-forged, hardened and roller-polished
- **No. 29763:** The piston is made of hardened, high-strength, corrosion-resistant steel and features a blind hole thread for attaching tools or mountings.
- **No. 29764:**

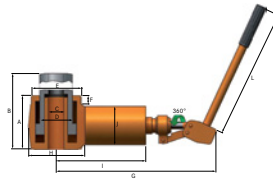
- The hollow piston cylinder is made of hardened, high-strength, corrosion-resistant steel and features a blind hole thread for attaching tools or mountings.
- Low overall height

### Notes:

Manometer connection available on request.

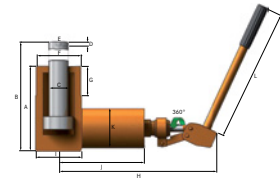


No. 29763



No. 29763  
29764

Hollow piston cylinder, model  
1030H/1050H/1075H/2325H



No. 29764  
29763

Full-piston cylinder, model 1530/1550/1575/3030

Model	1530	1550	3030	1030H	1050H	1075H	2325H
Compressive force (kN)	150	150	300	100	100	100	225
Ø C (mm)	40	40	40	40	40	40	40
Lift height (mm)	30	50	30	30	50	75	25
Ø 2 D (mm)	70	-	-	16.5	20.5	20.5	24.5
Lever length H (mm)	-	-	-	230	230	230	244
Construction height retracted A (mm)	74	100	79	74	100	130	79
Cylinder male thread on semi piston E	-	-	-	-	M70 x 3	M70 x 3	M90 x 3
Cylinder male thread on full piston F	-	M70 x 3	M90 x 3	-	-	-	-
Cylinder Ø on housing I/H (mm)	-	-	-	70	70	70	98
Piston connection thread E	M12	M12	M12	-	-	-	-
Hand lever length, long L (mm)	262	262	262	262	262	262	262
Max. required leverage (N)	240	240	240	240	240	240	240
<b>29763...</b>	Ident. No. Unit price, €	<b>010</b> (O. R.)	<b>015</b> (O. R.)	<b>030</b> (O. R.)	-	-	-
<b>29764...</b>	Ident. No. Unit price, €	-	-	-	<b>005</b> (O. R.)	<b>015</b> (O. R.)	<b>020</b> (O. R.)
						<b>020</b> (O. R.)	<b>025</b> (O. R.)

29763... = Prod. group 269  
29763... = Prod. group 278  
29764... = Prod. group 278

**ENERPAC** Hydraulic bench-mounted presses

**Execution:**

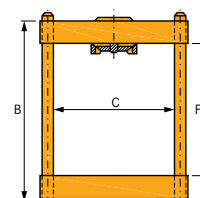
- Compact design
- Easy to transport
- Can be used in vertical and horizontal situations in different workplaces

- Appropriate protective measures must be taken for operations where there is the risk of hand injury from the press tool.

**scope of supply and services:**  
Ready for operation with 1.8 m hose and manometer.

Model	VLP106 P142	
Clear width C (mm)	435	
Clear height F (mm)	430	
Compressive force at 700 bar (kN)	101.7	
Return stroke design	Spring return	
Height B (mm)	620	
Lift height (mm)	155	
Operating type	Manual	
29769...	Ident. No.	010
	Unit price, €	(O. R.)*

Prod. group 258



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