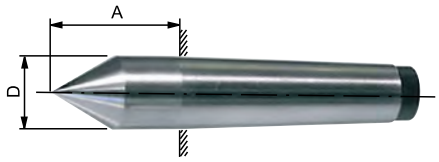
ORION® Fixed lathe centres (DIN 806)

Full tip

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

Execution:
- Tip angle 60°
- Made of tool steel
- Fully hardened and ground

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.	020	030	040	050
		●	●	●	●

Prod. Gr. 211

ORION® Fixed lathe centres (DIN 806)

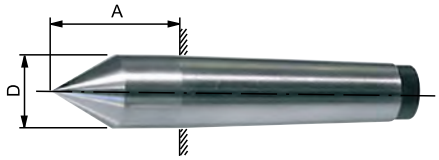
Carbide tip

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

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

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
Flattening Ø D (mm)		7	11	14	18
Programming dimension A (mm)		36	44	57.5	70.5
Outer Ø D (mm)		18	24.1	31.6	44.7
22107...	Ident. No.	020	030	040	050
		●	●	○	○

Prod. Gr. 211

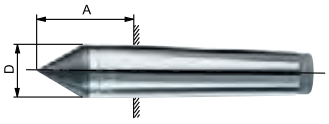
BRUCKNER® Fixed lathe centres (DIN 806)

Full 60° tip and safety core

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

Execution:
- Tip angle 60°
- Made from solid carbide
- Concentricity tolerance on cemented carbide ≤ 0.8 µm
- Post grinding groove marks end of use of centring point
- With safety core

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	44.7
Concentricity tolerance (mm)		0.008	0.008	0.008	0.008
22110...	Ident. No.	020	030	040	050
		●	●	●	●

Prod. Gr. 2AA

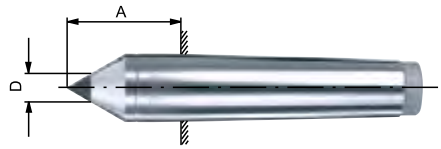
BRUCKNER Fixed lathe centres (DIN 806)

Full tip

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 on cemented carbide ≤ 0.8 µm
- Precision machining to roughing

Advantage:
- Wear-resistant cemented carbide tip



Morse taper size		MK 1	MK 2	MK 3	MK 4	MK 5
Ø D (mm)		7	7	11	14	18
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
		○	●	●	●	○

Prod. Gr. 2AA

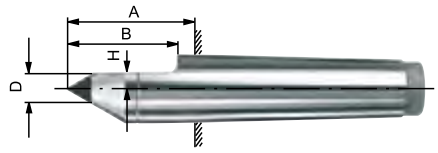
BRUCKNER Fixed lathe centres (DIN 806)

Half flattened tip

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 on cemented carbide ≤ 0.8 µm

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



Morse taper size	Flattening Ø D (mm)	Programming dimension A (mm)	Flattening length B (mm)	Flattening height H (mm)	Concentricity tolerance (mm)	22113... Ident. No.	
MK 1	7	26.5	22	4	0.008	010	●
MK 2	7	36	30	4	0.008	020	●
MK 3	11	44	38	6	0.008	030	●
MK 4	14	57.5	50	7.5	0.008	040	●
MK 5	18	70.5	63	9.5	0.008	050	○

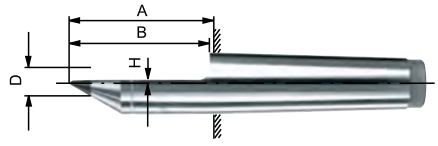
Prod. Gr. 2AA

BRUCKNER Fixed lathe centres (DIN 806)

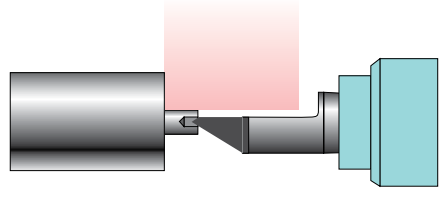
Half, extremely flattened tip

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 ≤ 0.8 µm
- 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
Flattening Ø D (mm)		7	7	11	11	11	14	14	14
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
22114...	Ident. No.	020	021	030	031	032	040	041	042
		○	○	●	●	○	○	○	●

Prod. Gr. 2AA

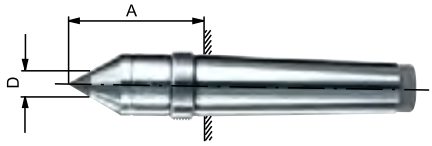
BRUCKNER® Fixed lathe centres (DIN 807)

With full tip and thread for draw-off nuts

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

Execution:
- Tip angle 60°
- With thread for draw-off nut
- Taper fully hardened and precision-ground
- Carbide-tipped
- Concentricity tolerance ≤ 0.8 µm

Delivery:
Supplied without draw-off nut



Morse taper size		MK 2	MK 3	MK 4	MK 5
Flattening Ø D (mm)		7	11	14	18
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
22121...	Ident. No.	120	130	140	150
		●	●	●	●

Prod. Gr. 2AA

p. 805

BRUCKNER® draw-off nut DIN 807 for fixed lathe centres

carbide-tipped, concentricity tolerance < 0.8 µm

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
22122...	Ident. No.	120	130	140	150
		●	●	●	●

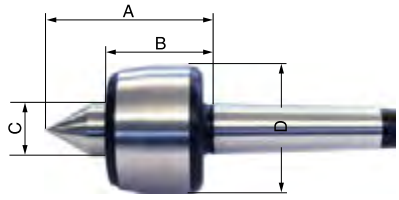
Prod. Gr. 2AA

ORION® Live lathe tips

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 A (mm)		60.5	65	79.5	103	129
Programming dimension for housing B (mm)		43.5	41	48.5	61.5	78.5
Max. workpiece weight (kg)		100	200	500	800	2000
Max. rotation speed (U/min(rpm))		7000	7000	5000	3800	3000
Concentricity tolerance (mm)		0.01	0.005	0.005	0.005	0.005
Ø of housing D (mm)		36	45	60	70	90
Point Ø C (mm)		15	20	25	32	40
22124...	Ident. No.	110	120	130	140	150
		○	●	●	●	●

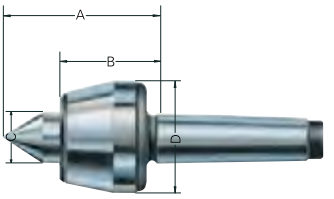
Prod. Gr. 211

Revolving centring points
With shock absorber

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
Max. workpiece weight (kg)		100	200	400	500	800	2000	3500
Max. rotation speed (U/min(rpm))		7000	7000	6300	5000	3800	3000	2600
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005	0.005	0.005	0.01
Ø of housing D (mm)		36	45	50	60	70	90	105
Point Ø C (mm)		15	20	22	25	32	40	50
22126...	Ident. No.	010	020	030	035	040	050	060
		●	○	●	○	●	●	●

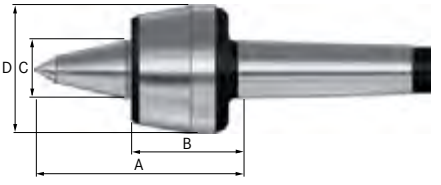
Prod. Gr. 201

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
Max. workpiece weight (kg)		140	400	500	1200
Max. rotation speed (U/min(rpm))		7000	3800	3800	3000
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005
Ø of housing D (mm)		45	60	70	90
Point Ø C (mm)		20	25	32	40
22127...	Ident. No.	020	035	040	050
		○	●	●	●

Prod. Gr. 201

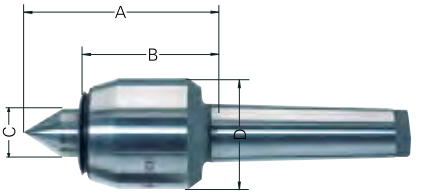
Live high-performance tips
With reinforced bearings

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 high-performance live points on request. For grinding and testing with a 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. workpiece weight (kg)		280	400	525	700	1000	2000	3500
Max. rotation speed (U/min(rpm))		5500	5500	5000	5000	4000	3500	2300
Concentricity tolerance (mm)		0.005	0.005	0.005	0.005	0.005	0.005	0.005
Ø of housing D (mm)		45	45	58	58	76	95	120
Point Ø C (mm)		20	20	25	25	35	45	58
22130...	Ident. No.	020	030	035	040	045	050	060
		●	●	●	●	●	●	●

Prod. Gr. 2AA

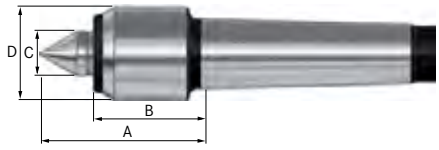
Slim revolving lathe centre

Lathe centre with small housing diameter

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
- Moving point can be replaced

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
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
Ø of housing D (mm)		32	34	42	58
Point Ø C (mm)		15	15	20	30
22132...	Ident. No.	020	030	040	050
		●	●	●	●

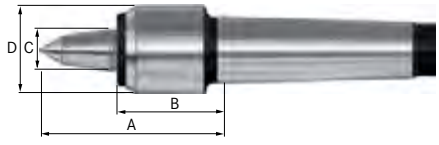
Prod. Gr. 201

Slim synchronously running lathe centre with extended moving point, 60°/30°

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
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
Ø of housing D (mm)		32	34	42	58
Point Ø C (mm)		15	15	20	30
22133...	Ident. No.	020	030	040	050
		●	●	●	●

Prod. Gr. 201

Synchronously running lathe centres, for interchangeable inserts

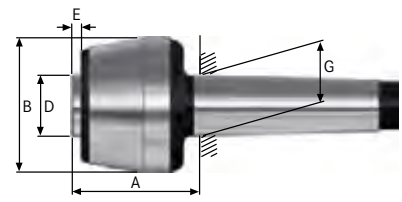
Without insert

Application:
For rough machining and fine turning in general turning operations.

Execution:
- Body hardened and polished

Advantage:
- Very flexible thanks to interchangeable inserts

Delivery:
Synchronous running lathe centres, without insert



Morse taper size		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
Max. workpiece weight (kg)		40	150	130	250	650
Concentricity tolerance (mm)		0.01	0.01	0.01	0.01	0.01
Ø of housing D (mm)		45	55	48	67	85
22144...	Ident. No.	**020**	**030**	**035**	**040**	**050**
		●	●	●	●	○

Prod. Gr. 201

Ejector for live centring points

Application:
For ejecting exchangeable inserts.

Execution:
- Hardened and polished

For Morse taper size		MK 2	MK 3 | MK 4	MK 5
22146...	Ident. No.	**020**	**030**	**050**
		●	●	●

Prod. Gr. 201

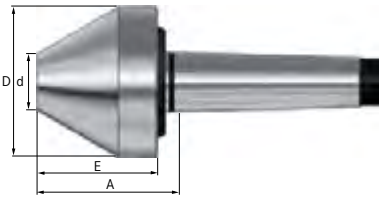
synchronous running self-centring taper, blunt version, taper angle 60°

Blunt version, 60° taper angle

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

Execution:
- Body type: blunt taper
- Taper angle 60°
- Self-centring taper and cone shank are fully hardened and precision-ground

Advantage:
- Maintenance-free owing to permanent lubrication



Morse taper size		MK 2	MK 3	MK 4	MK 4	MK 5
Ø of housing D (mm)		50	80	80	120	120
Point Ø d (mm)		20	30	30	30	30
Programming dimension A (mm)		65	77	78.5	98	99
Taper length E (mm)		52	64	64	83	83
Max. workpiece weight (kg)		200	400	400	800	800
Taper angle (Degree)		60	60	60	60	60
Concentricity tolerance (mm)		0.008	0.008	0.008	0.008	0.008
22176...	Ident. No.	**020**	**030**	**040**	**045**	**050**
		●	○	●	○	○

Prod. Gr. 201

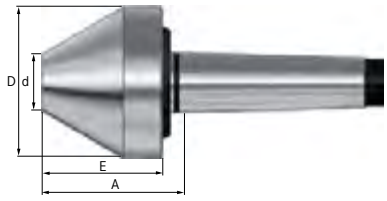
synchronous running self-centring taper, blunt version, taper angle 75°

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	Ø of housing D (mm)	Point Ø d (mm)	Programming dimension A (mm)	Taper length E (mm)	Concentricity tolerance (mm)	Max. workpiece weight (kg)	22176... Ident. No.	
MK 3	80	20	80	67	0.008	400	130	○
MK 3	120	30	85.5	72	0.008	600	135	○
MK 4	80	30	81.5	83	0.008	400	140	○
MK 4	120	50	87	90	0.008	800	143	○
MK 4	170	30	107	72	0.01	1200	145	○
MK 5	120	30	88	83	0.008	800	150	○
MK 5	170	50	106	90	0.01	1600	155	○

Prod. Gr. 201

CoA 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.

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

Appropriate centring points on request

p. 810

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

Prod. Gr. 204

Driving discs, individual

Accessories for CoA face driver

Application:
For driving cylindrical components.

Execution:
- Driving disc directly meshed

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

Ident. No. 408–432

p. 810

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	432	310
		○	○	●	●	●	○	○	○

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
22208...	Ident. No.	308	312	316	320	325	332
		○	○	○	○	○	○

Prod. Gr. 204

Lathe centres, individual

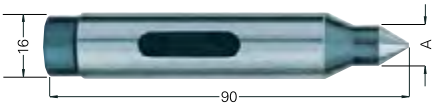
Accessories for CoA face driver

Application:
For compensating for different workpiece centres.

Execution:
- Tip angle 60°

Advantage:
- Suitable for all basic body sizes

Notes:
Centring points with head on request.



Suitable tip Ø A (mm)		4	6	10	12	16
22208...	Ident. No.	604	606	610	612	616
		●	●	○	○	●

Prod. Gr. 204

Block jaws, one-piece, unstepped

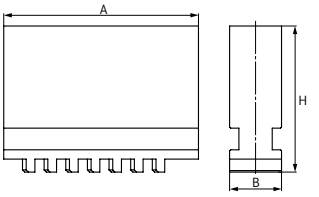
For 3-jaw lathe chuck

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

Delivery:
All sets have 3 pieces



For chuck Ø		80 mm	100 mm	125 mm	160 mm	200 mm	250 mm	315 mm	400 mm
Length A (mm)		32	42	51	70	85	105	125	145
Width B (mm)		11	15	20	20	25	28	32	36
Height H (mm)		28	32	40	53	54	63	73	92
Version		Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened
22391...	Ident. No.	100	105	110	115	120	125	130	135
		●	●	●	●	●	●	●	○

Prod. Gr. 221

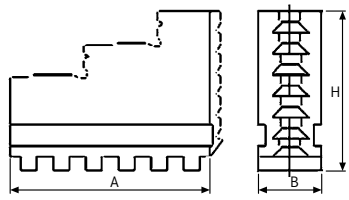
Block jaws, one-piece

For 3-jaw lathe chuck

Application:
For clamping workpieces and tools on lathes.

Execution:
- Hardened
- Outwardly stepped

Delivery:
All sets have 3 pieces



For chuck Ø		80 mm	160 mm	125 mm	200 mm	250 mm	315 mm	400 mm	100 mm
Length A (mm)		32	70	51	85	105	125	145	42
Width B (mm)		11	20	20	25	28	32	36	15
Height H (mm)		28	53	40	54	63	73	92	32
22389...	Ident. No.	350	365	360	370	375	380	385	355
		○	●	●	●	●	○	○	○

Prod. Gr. 221

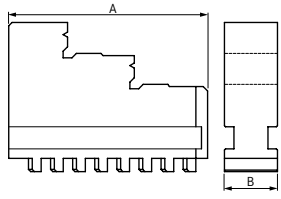
Turning jaws

One piece

Application:
For clamping workpieces and tools on lathes.

Execution:
- Hardened
- Inwardly stepped

Delivery:
All sets have 3 pieces



For chuck Ø		80 mm	100 mm	125 mm	160 mm	200 mm	400 mm
Length A (mm)		32	42	51	70	85	145
Width B (mm)		11	15	20	20	25	36
Height H (mm)		28	32	40	53	54	92
22389...	Ident. No.	300	305	310	315	320	335
		○	●	●	●	●	○

Prod. Gr. 221
For 3-jaw lathe chuck

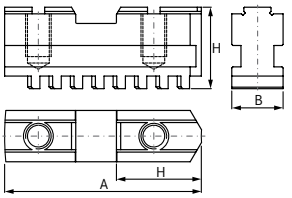
Plain jaw set

For 3-jaw lathe chuck

Application:
Carrier jaw for mounting reverse top jaws or unstepped interchangeable jaw grips.

Execution:
- Hardened

Delivery:
All sets have 3 pieces, including the screws



p. 812

For chuck Ø		125 mm	160 mm	200 mm	250 mm	315 mm	400 mm
Length A (mm)		54	65	79	92	110	130
Width B (mm)		20	20	25	28	32	36
Height H (mm)		28	29	33	36	40	49
22412...	Ident. No.	**100**	**105**	**110**	**115**	**120**	**125**
		●	●	●	●	○	○

Prod. Gr. 221

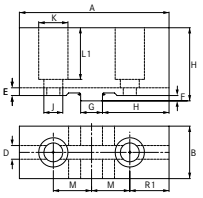
Interchangeable jaw grip, unstepped

For 3-jaw lathe chuck

Application:
For screwing onto plain jaws.

Execution:
- Soft
- Can be hardened

Delivery:
All sets have 3 pieces



For chuck Ø		125 mm	160 mm	200 mm	250 mm	315 mm	400 mm
Length A (mm)		64	78	90	106	120	140
Width B (mm)		22	25	27	32	37	42
Height H (mm)		38.5	41.5	43.5	51.5	55.5	64.5
Version		Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened
22416...	Ident. No.	**100**	**105**	**110**	**115**	**120**	**125**
		●	●	●	●	●	○

Prod. Gr. 221

ZS 3-jaw lathe chuck, flat spiral chuck (DIN 6350-1)

Hand clamping chucks

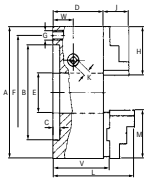
Application:
For clamping workpieces on lathes.
For successful use in areas that require high clamping force, high concentricity and excellent repeat clamping accuracy.

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.

Delivery:
1 set each of drilling jaws and turning jaws, 1 spanner and fastening screws.
Both of the supplied jaw sets are ground in position to ensure concentricity.

Notes:
Chucks with different diameters on request.



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Outer Ø A (mm)		80	100	125	160	200	250	315
Max. clamping range Ø (mm)		80	100	125	160	200	250	315
Through-bore E (mm)		19	20	32	42	55	76	103
Centring Ø B (mm)		56	70	95	125	160	200	200
C (mm)		3	3	4	4	4	5	5
Height with jaws L (mm)		53.5	80.5	95.5	108	119.6	139.6	155
V (mm)		-	53.6	61	69.7	80.2	89.9	100.4
Hole circle Ø F (mm)		67	83	108	140	176	224	286
H (mm)		37	48	52	61	69	90	130
M (mm)		-	47	56	66.7	79.5	95	109.5
D (mm)		39.5	50	56	65	73.5	82	95
J (mm)		14	18	22.5	26	32.5	40	46
W (mm)		14.5	18	20	22.45	25.7	26.5	30
K (mm)		6	8	9	10	11	12	14
Max. rotation speed		7000	6300	5500	4600	4000	3000	2300
Weight (kg)		1.3	2.9	4.5	8.2	14.6	25.7	44.2
22386...	Ident. No.	010	020	030	040	050	060	070
		●	○	●	●	●	○	(○)*

Prod. Gr. 203

ZS 3-jaw lathe chuck, flat spiral chuck (ISO 702-3)

Hand clamping chucks

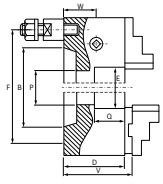
Application:
For clamping workpieces on lathes.
For successful use in areas that require high clamping force, high concentricity and excellent repeat clamping accuracy.

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.

Delivery:
Ident. No. 235–245: With 1 set of drilling jaws (mounted in chuck), 1 set of turning jaws, 1 spanner, 1 set of stud bolts and flanged nuts.
Both of the supplied jaw sets are ground in position to ensure concentricity
Ident. No. 250–275: With 1 set of drilling jaws (mounted in chuck), 1 set of turning jaws, 1 spanner, 1 set of stud bolts and flanged nuts.
Both of the supplied jaw sets are ground in position to ensure concentricity.

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.



Outer Ø A (mm)		125	160	200	200	250	250	315
Max. clamping range Ø (mm)		125	160	200	200	250	250	315
Through-bore P (mm)		-	-	55	55	-	-	-
Hole circle Ø F (mm)		85	104.8	104.8	133.4	133.4	171.4	171.4
Max. taper Ø B (mm)		63.5	82.5	82.5	106.4	106.4	139.7	139.7
Taper shank size		4	5	5	6	6	8	8
V (mm)		73.7	70.7	81.2	81.2	90.9	90.9	101.4
D (mm)		69	66	74.5	74.5	83	83	96
E (mm)		32	42	55	55	76	76	103
W (mm)		33	23.45	26.7	26.7	27.5	27.5	31
Max. rotation speed		5500	4600	4000	4000	3000	3000	2300
Weight (kg)		5.5	8.5	15.5	15.5	30	30	50
22386...	Ident. No.	235	245	250	255	260	265	275
		○	●	○	○	○	○	(○)*

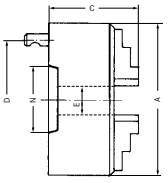
Prod. Gr. 203

ZS 3-jaw lathe chuck, flat spiral chuck (ISO 702-2)

Hand clamping chucks

Application:
For clamping workpieces on lathes.
For successful use in areas that require high clamping force, high concentricity and excellent repeat clamping accuracy.

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.

Delivery:
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).
Both of the supplied jaw sets are ground in position to ensure concentricity

Notes:
Chucks with different diameters and other short taper adapters on request.

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Outer Ø A (mm)		160	200	250
Max. clamping range Ø (mm)		160	200	250
Taper shank size		4	6	6
Max. taper Ø N (mm)		63.5	106.4	106.4
Through-bore E (mm)		42	55	76
Hole circle Ø D (mm)		82.5	133.4	133.4
Height with jaws C (mm)		109	121	140
Max. rotation speed		4600	4000	3000
Weight (kg)		10	17	30.60
22386...	Ident. No.	241	560	570
		○	○	(○)*

Prod. Gr. 203

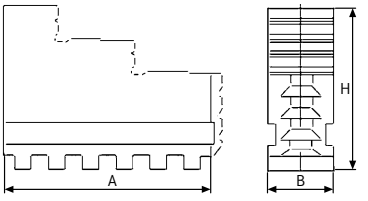
reversible jaws DB, one piece

For 3-jaw lathe chuck

Application:
For clamping workpieces and tools on lathes.

Execution:
- Hardened
- Inwardly stepped
- Grinding down in chuck necessary to achieve precise concentricity.

Delivery:
No. 22389 set = 3 pieces



For chuck Ø		80 mm	100 mm	160 mm	200 mm	250 mm	315 mm
Length A (mm)		37	48	61	69	90	130
Width B (mm)		12	14	18	20	24	34
Height H (mm)		26	33.5	47.5	53.5	67.5	79.5
22389...	Ident. No.	010	020	040	050	060	070
		○	○	●	○	○	○

Prod. Gr. 203

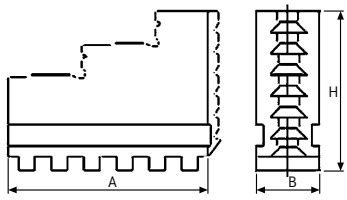
reversible jaws BB, one piece

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.

Delivery:
All sets have 3 pieces



For chuck Ø		80 mm	100 mm	125 mm	160 mm	200 mm	250 mm	315 mm
Length A (mm)		37	48	52	61	69	90	130
Width B (mm)		12	14	18	18	20	24	34
Height H (mm)		26	33.5	41.5	47.5	53.5	67.5	79.5
22389...	Ident. No.	510	520	530	540	550	560	570
		○	○	●	●	●	●	○

Prod. Gr. 203

Block jaws, one-piece, unstepped, BL

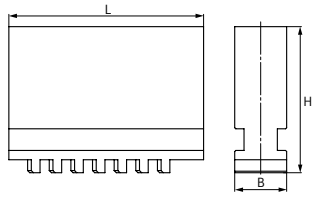
for 3-jaw lathe chuck

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

Delivery:
All sets have 3 pieces



For chuck Ø		80 mm	100 mm	125 mm	160 mm	200 mm	250 mm	315 mm
Length A (mm)		37	48	52	61	69	90	130
Width B (mm)		12	14	18	18	20	24	34
Height H (mm)		26	33.5	41.5	47.5	53.5	67.5	79.5
Version		Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened	Unhardened
22391...	Ident. No.	010	020	030	040	050	060	070
		●	●	●	●	●	●	○

Prod. Gr. 203

GB plain jaw set

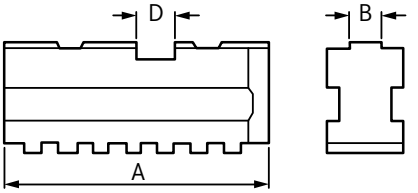
For 3-jaw lathe chuck

Application:
Carrier jaw for mounting reverse top jaws or unstepped interchangeable jaw grips.

Execution:
- Hardened

Delivery:
All sets have 3 pieces, including the screws

Notes:
Jaw width *: Dimensions not included in diagram.



p. 816

For chuck Ø		100 mm	125 mm	160 mm	200 mm	250 mm	315 mm
Length A (mm)		46	55	65	78	92	108
Jaw width * (mm)		14	18	18	20	24	34
Width B (mm)		7.94	7.94	7.94	7.94	12.7	12.7
D (mm)		9.5	12.68	12.68	12.68	19.03	19.03
22412...	Ident. No.	**020**	**030**	**040**	**050**	**060**	**070**
		○	○	●	●	●	○

Prod. Gr. 203

RÖHM Interchangeable jaw grip, unstepped

For 3-jaw lathe chuck

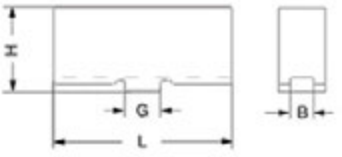
Application:
For screwing onto plain jaws.

Execution:
- Soft
- Can be hardened

Advantage:
- Retroactive machining possible as well as adaptation of shape to workpieces

Delivery:
All sets have 3 pieces

Notes:
Jaw width *: Dimensions not included in diagram.



For chuck Ø		125 mm	160 mm	200 mm	250 mm	315 mm	400 mm
Length A (mm)		62	74	87	103	120	137
Jaws width (mm)		26.5	28.5	30.5	36.5	42.5	42.5
Width B (mm)		7.96	7.96	7.96	12.72	12.72	12.72
Height H (mm)		38	42	43	53	58	65
Bar width G (mm)		12.68	12.68	12.68	19.03	19.03	19.03
22416...	Ident. No.	**030**	**040**	**050**	**060**	**070**	**080**
		○	●	●	●	●	○

Prod. Gr. 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

Delivery:
Chuck JF ultra-flat, incl. a set of reversible, case-hardened interchangeable jaw grips type D

Notes:
Chucks available as 3-jaw or 6-jaw design, also corrosion-protected. Chucks with aluminium body available; quote on request.

Ident. No. 010–020

Ident. No. 040

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
22380...	Ident. No.	**010**	**020**	**040**
		●	●	●

Prod. Gr. 220

ROTA S plus 2.0 3-jaw tapered rod lathe chuck (DIN 6350-1)

Hand clamping chucks

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 centring mounting
- With large through-bore
- Chuck body surface hardened
- 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

Delivery:
1 set of one-piece stepped block jaws, 1 actuator wrench, 1 set of fastening screws

p. 821

Advantage:
- With visible indicator pin for high operating safety

Outer Ø (mm)		160	200	250	315
Min./max. external clamping width		7-163 mm	7-207 mm	8-247 mm	14-319 mm
Min./max. internal clamping width		62-174 mm	71-211 mm	89-251 mm	92-309 mm
Clearance hole (mm)		42	52	62	92
Centring Ø (mm)		145	185	235	300
Pitch circle Ø (mm)		125	160	200	200
Height without jaws (mm)		69.1	88.1	99.1	118.7
Max. rotation speed		5400	4800	4200	3400
22425...	Ident. No.	300	301	302	303
		○	○	○	(○)*

Prod. Gr. 222

ROTA S plus 2.0 3-jaw tapered rod lathe chuck (ISO 702-3)

Hand clamping chucks

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 taper bayonet mounting
- With large through-bore
- Chuck body surface hardened
- 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

Delivery:
1 set of plain jaws and hard interchangeable jaw grips, 1 actuator wrench, 1 set of stud bolts and collar nuts.

p. 821

Advantage:
- With visible indicator pin for high operating safety

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		7-163 mm	7-163 mm	7-163 mm	7-207 mm	7-207 mm	7-207 mm	7-207 mm	8-247 mm
Min./max. internal clamping width		62-174 mm	62-174 mm	62-174 mm	71-214 mm	71-214 mm	71-214 mm	71-214 mm	89-251 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
Max. rotation speed		5400	5400	5400	4800	4800	4800	4800	4200
22426...	Ident. No.	310	311	312	313	314	315	316	317
		○	○	○	○	○	○	○	(○)*

Size		250	250	315	315	315
Outer Ø (mm)		256	256	323	323	323
Min./max. external clamping width		8-247 mm	8-247 mm	14-319 mm	14-319 mm	14-319 mm
Min./max. internal clamping width		89-251 mm	89-251 mm	92-309 mm	92-309 mm	92-309 mm
Clearance hole (mm)		52	62	92	92	92
Tapered bolt Ø (mm)		106.3	139.7	106.3	139.7	196.9
Taper shank size		6	8	6	8	11
Max. rotation speed		4200	4200	3400	3400	3400
22426...	Ident. No.	318	319	320	321	322
		(○)*	(○)*	(○)*	(○)*	(○)*

Prod. Gr. 222

Interchangeable jaw grips, unhardened

Spare jaws for 3-jaw lathe chuck

Application:
Soft clamping jaws for clamping on power chucks, for machining and matching to the workpiece to be machined.

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
- Made from steel 16 MnCr S 5

Delivery:
3 pieces in a set

Notes:
Other dimensions, segment jaws, reversible top jaws, claw jaws and special jaws on request. Hardening instructions can be made available on request.

p. 820 p. 820 p. 820

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
22670...	Ident. No.	130	160	165	200	250
		●	●	○	●	●

Prod. Gr. 224

Interchangeable jaw grips, unhardened

Spare jaws for 3-jaw lathe chuck

Application:
Soft clamping jaws for clamping on power chucks, for machining and matching to the workpiece to be machined.

Execution:
- With ground groove and pointed teeth 1.5 mm x 60°
- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks
- Made from steel 16 MnCr S 5

Delivery:
3 pieces in a set

Notes:
Other dimensions, segment jaws, reversible top jaws, claw jaws and special jaws on request. Hardening instructions can be made available on request.

p. 820 p. 820 p. 820

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
22671...	Ident. No.	135	165	210	254	315
		●	●	●	●	●

Prod. Gr. 224

Stepped jaws, hardened

Spare jaws for 3-jaw lathe chuck

Application:
Clamping jaws for clamping on power chucks for external and internal clamping of workpieces.

Execution:
- With ground groove and teeth 1/16 x 90°, made of steel 16 MnCr 5

- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks

Delivery:
3 pieces in a set

For chuck Ø		160 mm	200 mm	250 mm	315 mm
Length L (mm)		78	84	103.5	128
Width B (mm)		30	40	50	50
Height H (mm)		46	49	58	58
Suitable cheese-head screw		M10	M12	M16	M16
22672...	Ident. No.	160	200	250	315
		○	○	○	○

p. 820 p. 820 p. 820

Prod. Gr. 224

Stepped jaws, hardened

Spare jaws for 3-jaw lathe chuck

Application:
Clamping jaws for clamping on power chucks for external and internal clamping of workpieces.

Execution:
- With ground groove and 1.5 mm x 60° teeth, made of steel 16 MnCr 5

- Suitable for chucks from SCHUNK, FORKARDT, KITAGAWA, RÖHM and SMW.
- For power chucks
- Made from steel 16 MnCr 5

Delivery:
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
22674...	Ident. No.	160	200	250	315
		●	●	●	○

p. 820 p. 820 p. 820

Prod. Gr. 224

Mounting screws

Additional and replacement jaws

Execution:
- For hand chucks no. 22425-22426, 22427-22428
- For use on SCHUNK ROTA-S plus, RÖHM DURO-T and FORKARDT F plus hand chucks.

Delivery:
All sets have 3 pieces

For chuck Ø		125 mm	160 mm | 200 mm	250 mm	315 mm	400 mm | 500 mm
Thread dimension		M6 x 1	M8 x 1	M12 x 1.5	M12 x 1.5	M16 x 1.5
22443...	Ident. No.	030	040	060	070	080
		○	●	●	○	○

Prod. Gr. 222

Sliding blocks

Suitable for interchangeable jaw grips no. 22670, 22671, 22672, 22674, for power chuck: SCHUNK, FORKARDT and SMW/Autoblock

Execution:

- Suitable for interchangeable jaw grips no. 22670, 22671, 22672 and 22674 for power chucks SCHUNK, FORKARDT and SMW/Autoblock
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

Delivery:
screw and sliding block

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
22681...	Ident. No.	012	017	021	025
		○	●	●	○

Prod. Gr. 224

Sliding blocks/fixed T-nuts

Recessed

Execution:

- Compatible with interchangeable jaw grips for power chucks SCHUNK and SMW/Autoblock, offset with chamfer
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

Delivery:
screw and sliding block

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
22681...	Ident. No.	114	117	121
		●	●	●

Prod. Gr. 224

Combination sliding blocks

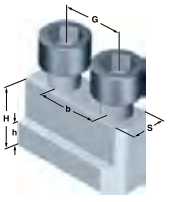
Execution:

- Compatible with interchangeable jaw grips no. 22670, 22671, 22672 and 22674 for power chucks SCHUNK ROTA NCK and KITAGAWA
- With fastening screws to secure the interchangeable jaw grips on the plain jaws
- Tempered and polished

Delivery:
screw and sliding block

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
22681...	Ident. No.	212	214	216
		●	●	●

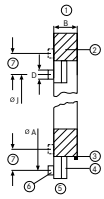
Prod. Gr. 224



Jaw extractor device BAV

Application:
For 3-jaw lathe chucks for unscrewing soft top jaws and block jaws as well as hardened interchangeable jaw grips. The unscrewing device is mainly used for turning internal unscrewing and external screwing of soft jaws on 3-jaw chucks.

Execution:
- For bridging a large clamping range
- For adjusting the clamping diameter with spiral rings or by turning the adjustment slider.



① Standard jaw position
② Housing with spiral ring
③ Knurl
④ Adjustment jaw
⑤ Jaw position reversed
⑥ Mounting screw
Mounting range

Lathe chuck Ø (mm)		200	250	250	315
Outer Ø (mm)		176	215	244	290
Internal Ø (mm)		110	135	162	208
Max. Suspension area outer Ø min/max A		170-260 mm	215-285 mm	240-315 mm	290-360 mm
Max. Suspension area inner Ø min/max J		35-125 mm	70-140 mm	100-175 mm	145-215 mm
22472...	Ident. No.	**010**	**020**	**030**	**040**
		○	○	○	○

Prod. Gr. 203

Safety spanner, spring-loaded, with ejector

For lathe chucks with square drive

Application:
The key has to be firmly pressed into the chuck drive and held there until the clamping procedure is complete. When the pressure is relieved, the key is automatically ejected.

Execution:
- Ref. no. 080-170 with sliding sleeve, for lathe chucks with female square drive.

Ident. No. 090–140

For chuck Ø		100 mm | 110 mm	125 mm | 140 mm	160 mm	200 mm	250 mm	315 mm | 350 mm	400 mm
For lathe chucks with inner square (mm)		8	9	10	11	12	14	17
Length (mm)		130	130	160	160	160	200	250
22471...	Ident. No.	**080**	**090**	**100**	**110**	**120**	**140**	**170**
		●	●	●	●	●	●	○

Prod. Gr. 203

Safety wrench

For lathe chucks with square drive

Application:
The key has to be firmly pressed into the chuck drive and held there until the clamping procedure is complete. When the pressure is relieved, the key is automatically ejected.

Execution:
- Ref. no. 210-219 with ejector pin, for lathe chucks with male square drive (tapered rod chuck)

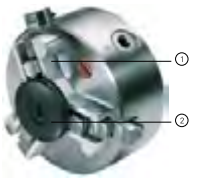
For chuck Ø		160 mm	200 mm	250 mm	315 mm	400 mm
For lathe chucks with external square (mm)		10	12	14	17	19
Length (mm)		140	160	220	230	250
22471...	Ident. No.	**210**	**212**	**214**	**217**	**219**
		●	●	●	●	○

Prod. Gr. 202

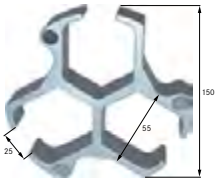
ORION® Workpiece stop

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



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
22474...	Ident. No.	015	020	025	030	035
		●	●	●	●	●

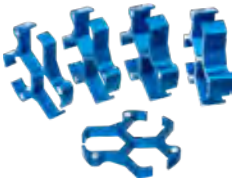
Prod. Gr. 264

ORION® Workpiece stop set

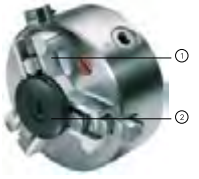
Application:
For clamping short parts on lathe chucks.

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

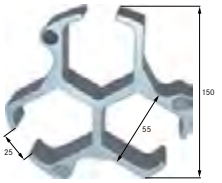
Delivery:
Complete set in wooden case



Workpiece stop set



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
22474...	Ident. No.	100
		●

Prod. Gr. 264

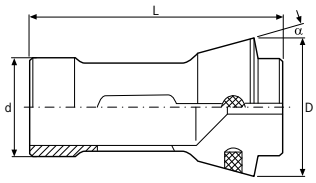
Pressure collet chuck DIN6343 173E with square profile (DIN 173)

Execution:
- hardened and ground
- clamping bridge max. 0.1 mm of the nominal diameter
- Ø 1-10 mm ≤ 20 µm
- Ø 11-30 mm ≤ 30 µm
- Ø 31-60 mm ≤ 40 µm
- Other versions and complete sets deliverable on request.
- **No. 23328:** concentricity
- **No. 23354:** concentricity

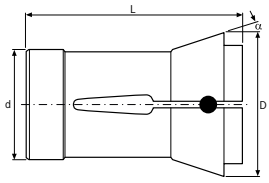
Notes:
No. 23328: ref. no. 23328060-23328300 = collet chucks with square profile, available from size 6 - 30 mm
Tips for ordering:
5-digit item no. (23328) for collet chucks with square profile
Example: collet chuck size 12 mm = order no. 23328120“
No. 23354: ref. no. 23354040-300 = collet chucks with square profile, available from size 4 - 30 mm
Tips for ordering:
5-digit item no. (23354) for collet chucks with square profile
Example: collet chuck, square profile with size 17 mm = order no. 23354170

No. 23328

No. 23354



No. 23328



No. 23354

	FAHRION®				ORION			
Outer Ø D (mm)	60		60		60		60	
Ø d (mm)	48		48		48		48	
Length L (mm)	94		94		94		94	
Profile shape	Square and smooth		Square with transverse grooves		Square and smooth		Square with transverse grooves	
DIN	173		173		173		173	
Width across flats SW	23328... Ident. No.		23328... Ident. No.		23354... Ident. No.		23354... Ident. No.	
6 mm	060	○	-	-	060	○	-	-
7 mm	070	○	-	-	070	○	-	-
8 mm	080	○	-	-	080	○	-	-
9 mm	090	○	-	-	090	○	-	-
10 mm	100	○	-	-	100	○	-	-
11 mm	110	○	-	-	110	○	-	-
12 mm	120	○	-	-	120	○	-	-
13 mm	-	-	130	○	-	-	130	○
14 mm	-	-	140	○	-	-	140	○
16 mm	-	-	160	○	-	-	160	○
18 mm	-	-	180	○	-	-	180	○
20 mm	-	-	200	○	-	-	200	○
22 mm	-	-	220	○	-	-	220	○
25 mm	-	-	250	○	-	-	250	○
28 mm	-	-	280	○	-	-	280	○
30 mm	-	-	300	○	-	-	300	○
15 mm	-	-	-	-	-	-	150	○
17 mm	-	-	-	-	-	-	170	○
19 mm	-	-	-	-	-	-	190	○
24 mm	-	-	-	-	-	-	240	○
26 mm	-	-	-	-	-	-	260	○

ORION = Prod. Gr. 2AE
FAHRION = Prod. Gr. 235

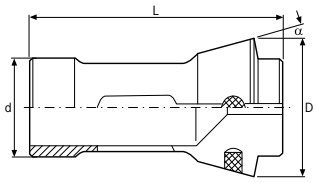
Pressure collet chuck DIN6343 173E with hexagonal profile (DIN 173)

Execution:
- hardened and ground
- clamping bridge max. 0.1 mm of the nominal diameter
- Ø 1-10 mm ≤ 20 µm
- Ø 11-30 mm ≤ 30 µm
- Ø 31-60 mm ≤ 40 µm
- Other versions and complete sets deliverable on request.
- **No. 23337:** concentricity
- **No. 23353:** concentricity

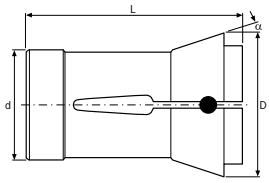
Notes:
No. 23337: ref. no. 23337060-23337360 = collet chucks with square profile, available from size 6 - 36 mm
Tips for ordering:
5-digit item no. (23337) for collet chucks with hexagonal profile
Example: collet chuck size 12 mm = order no. 23337120
No. 23353: ref. no. 23353540-860 = collet chucks with square profile, available from size 4 - 36 mm
Tips for ordering:
5-digit item no. (23353) for collet chucks with square profile
Example: Collet chuck with hexagonal profile with size 17 mm = order no. 23353670.

No. 23337

No. 23353



No. 23337



No. 23353

	FAHRION®				ORION®			
Outer Ø D (mm)	60		60		60		60	
Ø d (mm)	48		48		48		48	
Length L (mm)	94		94		94		94	
Profile shape	Hexagon and smooth		Hexagon with transverse grooves		Hexagon and smooth		Hexagon with transverse grooves	
DIN	173		173		173		173	
Width across flats SW	**23337...** Ident. No.		**23337...** Ident. No.		**23353...** Ident. No.		**23353...** Ident. No.	
6 mm	**060**	○	-	-	**560**	○	-	-
7 mm	**070**	○	-	-	**570**	○	-	-
8 mm	**080**	○	-	-	**580**	○	-	-
9 mm	**090**	○	-	-	**590**	○	-	-
10 mm	**100**	○	-	-	**600**	○	-	-
11 mm	**110**	○	-	-	**610**	○	-	-
12 mm	**120**	○	-	-	**620**	○	-	-
13 mm	-	-	**130**	○	-	-	**630**	○
14 mm	-	-	**140**	○	-	-	**640**	○
15 mm	-	-	**150**	○	-	-	**650**	○
16 mm	-	-	**160**	○	-	-	**660**	○
17 mm	-	-	**170**	○	-	-	**670**	○
19 mm	-	-	**190**	○	-	-	**690**	○
22 mm	-	-	**220**	○	-	-	-	-
24 mm	-	-	**240**	○	-	-	-	-
27 mm	-	-	**270**	○	-	-	-	-
30 mm	-	-	**300**	○	-	-	-	-
32 mm	-	-	**320**	○	-	-	-	-
36 mm	-	-	**360**	○	-	-	-	-
4 mm	-	-	-	-	**540**	○	-	-
5 mm	-	-	-	-	**550**	○	-	-
18 mm	-	-	-	-	-	-	**680**	○
20 mm	-	-	-	-	-	-	**700**	○
21 mm	-	-	-	-	-	-	**710**	○

ORION = Prod. Gr. 2AE
FAHRION = Prod. Gr. 235

collet chuck DIN6343 185E, round

Execution:

- hardened and ground
- clamping bridge max. 0.1 mm of the nominal diameter
- concentricity
- Ø 1-10 mm ≤ 20 µm
- Ø 11-30 mm ≤ 30 µm
- Ø 31-60 mm ≤ 40 µm
- up to Ø 8 mm smooth bore, from Ø 9 mm with crosswise grooves
- **No. 23341:** Other versions and complete sets deliverable on request.

Notes:

No. 23341: Ref. no. 23341040-23341600 = collet chucks with round profile, available from Ø4 - 60 mm with 1.0 mm increments.

Tips for ordering:

5-digit item no. (23341) for collet chucks with round profile

Example: collet chuck size 12 mm = order no. 23341120

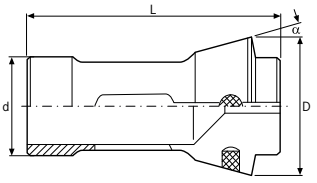
No. 23354: Ref. no. 23354330-23354900 = collet chucks with round profile, available from Ø3 - 60 mm with 1.0 mm increments.

Tips for ordering:

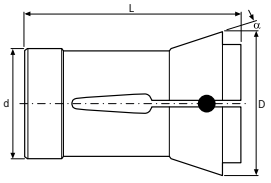
5-digit item no. (23354) for collet chucks with round profile

Example: collet chuck Ø 14 mm = order no. 23354440

No. 23341



No. 23341



No. 23354

	FAHRION®				ORION®			
Outer Ø D (mm)	84		84		84		84	
Ø d (mm)	66		66		66		66	
Length L (mm)	110		110		110		110	
Profile shape	Round and smooth		Round with transverse grooves		Round and smooth		Round with transverse grooves	
Clamping Ø (mm)	**23341...** Ident. No.		**23341...** Ident. No.		**23354...** Ident. No.		**23354...** Ident. No.	
4.0	**040**	○	-	-	**340**	○	-	-
5.0	**050**	○	-	-	**350**	○	-	-
6.0	**060**	○	-	-	**360**	○	-	-
7.0	**070**	○	-	-	**370**	○	-	-
8.0	**080**	○	-	-	**380**	○	-	-
9.0	-	-	**090**	○	-	-	**390**	○
10.0	-	-	**100**	○	-	-	**400**	○
11.0	-	-	**110**	○	-	-	**410**	○
12.0	-	-	**120**	○	-	-	**420**	○
13.0	-	-	**130**	○	-	-	**430**	○
14.0	-	-	**140**	○	-	-	**440**	○
15.0	-	-	**150**	○	-	-	**450**	○
16.0	-	-	**160**	○	-	-	**460**	○
17.0	-	-	**170**	○	-	-	**470**	○
18.0	-	-	**180**	○	-	-	**480**	○

	FAHRION®				ORION			
Outer Ø D (mm)	84		84		84		84	
Ø d (mm)	66		66		66		66	
Length L (mm)	110		110		110		110	
Profile shape	Round and smooth		Round with transverse grooves		Round and smooth		Round with transverse grooves	
Clamping Ø (mm)	23341... Ident. No.		23341... Ident. No.		23354... Ident. No.		23354... Ident. No.	
19.0	-	-	190	○	-	-	490	○
20.0	-	-	200	○	-	-	500	○
21.0	-	-	210	○	-	-	510	○
22.0	-	-	220	○	-	-	520	○
23.0	-	-	230	○	-	-	530	○
24.0	-	-	240	○	-	-	540	○
25.0	-	-	250	○	-	-	550	○
26.0	-	-	260	○	-	-	560	○
27.0	-	-	270	○	-	-	570	○
28.0	-	-	280	○	-	-	580	○
29.0	-	-	290	○	-	-	590	○
30.0	-	-	300	○	-	-	600	○
31.0	-	-	310	○	-	-	610	○
32.0	-	-	320	○	-	-	620	○
33.0	-	-	330	○	-	-	630	○
34.0	-	-	340	○	-	-	640	○
35.0	-	-	350	○	-	-	650	○
36.0	-	-	360	○	-	-	660	○
37.0	-	-	370	○	-	-	670	○
38.0	-	-	380	○	-	-	680	○
39.0	-	-	390	○	-	-	690	○
40.0	-	-	400	○	-	-	700	○
41.0	-	-	410	○	-	-	710	○
42.0	-	-	420	○	-	-	720	○
43.0	-	-	430	○	-	-	730	○
44.0	-	-	440	○	-	-	740	○
45.0	-	-	450	○	-	-	750	○
46.0	-	-	460	○	-	-	760	○
47.0	-	-	470	○	-	-	770	○
48.0	-	-	480	○	-	-	780	○
49.0	-	-	490	○	-	-	790	○
50.0	-	-	500	○	-	-	800	○
51.0	-	-	510	○	-	-	810	○
52.0	-	-	520	○	-	-	820	○
53.0	-	-	530	○	-	-	830	○
54.0	-	-	540	○	-	-	840	○
55.0	-	-	550	○	-	-	850	○
56.0	-	-	560	○	-	-	860	○
57.0	-	-	570	○	-	-	870	○
58.0	-	-	580	○	-	-	880	○
59.0	-	-	590	○	-	-	890	○
60.0	-	-	600	○	-	-	900	○

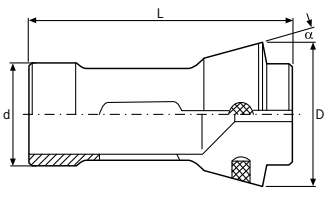
ORION = Prod. Gr. 2AE
FAHRION = Prod. Gr. 235

Compression collet chuck DIN 6343 185 E, square

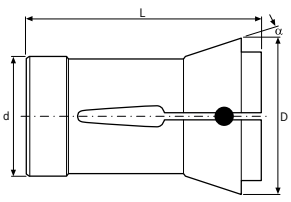
Execution:
- Ø 1-10 mm ≤ 20 µm
- Ø 11-30 mm ≤ 30 µm
- Ø 31-60 mm ≤ 40 µm
- Other versions and complete sets deliverable on request.
- **No. 23342:**
  - hardened and ground
  - clamping bridge max. 0.1 mm of the nominal diameter
  - concentricity
- **No. 23355:**
  - Hardened and ground
  - Clamping bridge max. 0.1 mm of the nominal diameter
  - Concentricity
  - 23355990 is an emergency collet chuck

Delivery:
No. 23355: Ref. no. 23355640-23356000 = collet chucks with square profile, available from Ø4 - 40 mm.
Tips for ordering:
5-digit item no. (23355) for collet chucks with square profile
Example: collet chuck size 16 mm = order no. 23355760, example: collet chuck size 20 mm = order no. 23355800
Example: collet chuck size 40 mm = order no. 23356000

Notes:
No. 23342: ref. no. 23342070-23342400 = collet chucks with square profile, available from size 7 - 40 mm
Tips for ordering:
5-digit item no. (23342) for collet chucks with square profile
Example: collet chuck size 12 mm = order no. 23342120



No. 23342



No. 23355

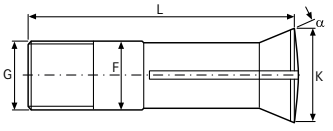
	FAHRION®				ORION®			
Outer Ø D (mm)	84		84		84		84	
Ø d (mm)	66		66		66		66	
Length L (mm)	110		110		110		110	
Profile shape	Square and smooth		Square with transverse grooves		Square and smooth		Square with transverse grooves	
Width across flats SW	23342... Ident. No.		23342... Ident. No.		23355... Ident. No.		23355... Ident. No.	
7 mm	070	○	-	-	670	○	-	-
8 mm	080	○	-	-	680	○	-	-
9 mm	090	○	-	-	690	○	-	-
10 mm	100	○	-	-	700	○	-	-
11 mm	110	○	-	-	710	○	-	-
12 mm	120	○	-	-	720	○	-	-
13 mm	-	-	130	○	-	-	730	○
14 mm	-	-	140	○	-	-	740	○
16 mm	-	-	160	○	-	-	760	○
18 mm	-	-	180	○	-	-	-	-
20 mm	-	-	200	○	-	-	800	○
22 mm	-	-	220	○	-	-	820	○
25 mm	-	-	250	○	-	-	850	○
30 mm	-	-	300	○	-	-	900	○
32 mm	-	-	320	○	-	-	920	○
36 mm	-	-	360	○	-	-	960	○
40 mm	-	-	400	○	-	-	-	-
4 mm	-	-	-	-	640	○	-	-
5 mm	-	-	-	-	650	○	-	-
6 mm	-	-	-	-	660	○	-	-
15 mm	-	-	-	-	-	-	750	○
24 mm	-	-	-	-	-	-	840	○
28 mm	-	-	-	-	-	-	880	○
-	-	-	-	-	-	-	990	○

ORION = Prod. Gr. 2AE
FAHRION = Prod. Gr. 235

ORION® draw-in collet chuck DIN 6341 355 E

Delivery:
Ref. no. 23356010-180 = draw-in collet chucks with round profile, available from Ø1 - 18 mm with 0.5 mm increments.

Tips for ordering:
5-digit item no. (23356) for draw-in collet chucks with round profile
Example: draw-in collet chucks 10.5 mm = order no. 23356105



	ORION®	
	DIN 6341 355 E	
Outer Ø D (mm)	28	
Ø d (mm)	20	
Length L (mm)	117.5	
Thread dimension G	SG 20 x 2	
Profile shape	Round and smooth	
alpha angle	17° 30'	
Clamping Ø (mm)	23356... Ident. No.	
1.0	010	●
1.5	015	●
2.0	020	●
2.5	025	●
3.0	030	●
3.5	035	●
4.0	040	●
4.5	045	●
5.0	050	●
5.5	055	●
6.0	060	●
6.5	065	●
7.0	070	●
7.5	075	○
8.0	080	●
8.5	085	●
9.0	090	○
9.5	095	●

	ORION®	
	DIN 6341 355 E	
Outer Ø D (mm)	28	
Ø d (mm)	20	
Length L (mm)	117.5	
Thread dimension G	SG 20 x 2	
Profile shape	Round and smooth	
alpha angle	17° 30'	
Clamping Ø (mm)	23356... Ident. No.	
10.0	100	●
10.5	105	○
11.0	110	●
11.5	115	○
12.0	120	●
12.5	125	○
13.0	130	○
13.5	135	○
14.0	140	○
14.5	145	○
15.0	150	●
15.5	155	●
16.0	160	●
16.5	165	●
17.0	170	○
17.5	175	○
18.0	180	●

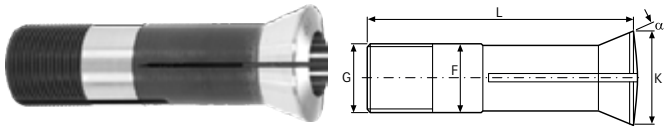
Prod. Gr. 2AE

FAHRION PRAZISION draw-in collet chuck DIN 6341 386E

Application:
For workpiece clamping on lathes, grinding machines and partial devices with a high degree of concentricity and retention force,
preferably for plain material since there is no clamping bypass

Execution:
- h8, that is to say, only the nominal dimension can be clamped
- higher retention force than for pressure clamps,
- but axial movement of the back collets when clamping

Delivery:
Ref. no. 23352015-180 = draw-in collet chucks with round profile, available from Ø1 - 29 mm with 0.5 mm increments.
Tips for ordering:
5-digit item no. (23352) for draw-in collet chucks with round profile
Example: draw-in collet chucks Ø12.5 mm = order no. 23352125



	FAHRION PRAZISION	
	DIN6341 K32 386E	
Outer Ø D (mm)	45	
Ø d (mm)	32	
Length L (mm)	110	
Thread dimension G	TT32 x 1.5	
Profile shape	Round and smooth	
alpha angle	20°	
Clamping Ø (mm)	23352... Ident. No.	
1.0	010	○
1.5	015	○
2.0	020	○
2.5	025	○
3.0	030	○
3.5	035	○
4.0	040	○
4.5	045	○
5.0	050	○
5.5	055	○
6.0	060	○
6.5	065	○
7.0	070	○
7.5	075	○
8.0	080	○
8.5	085	○
9.0	090	○
9.5	095	○
10.0	100	○
10.5	105	○
11.0	110	○
11.5	115	○
12.0	120	○
12.5	125	○
13.0	130	○
13.5	135	○
14.0	140	○
14.5	145	○
15.0	150	○

	FAHRION PRAZISION	
	DIN6341 K32 386E	
Outer Ø D (mm)	45	
Ø d (mm)	32	
Length L (mm)	110	
Thread dimension G	TT32 x 1.5	
Profile shape	Round and smooth	
alpha angle	20°	
Clamping Ø (mm)	23352... Ident. No.	
15.5	155	○
16.0	160	○
16.5	165	○
17.0	170	○
17.5	175	○
18.0	180	○
18.5	185	○
19.0	190	○
19.5	195	○
20.0	200	○
20.5	205	○
21.0	210	○
21.5	215	○
22.0	220	○
22.5	225	○
23.0	230	○
23.5	235	○
24.0	240	○
24.5	245	○
25.0	250	○
25.5	255	○
26.0	260	○
26.5	265	○
27.0	270	○
27.5	275	○
28.0	280	○
28.5	285	○
29.0	290	○

Prod. Gr. 235

RÖHM Replacement device for Captis-M collet chucks

Accessories for all ref. no. 23358201-23358995

Size	23359... Ident. No.	
42	050	●
52	051	●
65	052	●
80	053	●

Prod. Gr. 2AK

ATORN® Permanent magnetic clamping plates

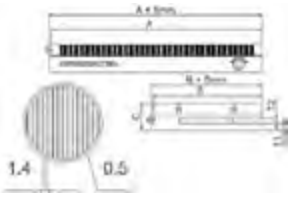
Particularly narrow transverse pole pitch

Application:
For high-precision grinding and eroding work.

Execution:
- double neodymium magnetic system generates an adhesive force of up to 100 N/cm²
- 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

Delivery:
2 limit stop strips, 2 adjustable clamps and hexagon key, operating instructions.

Notes:
Other sizes available on request.



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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.	150	175	200	250	350	400
		●	●	●	●	●	●+

Prod. Gr. 280

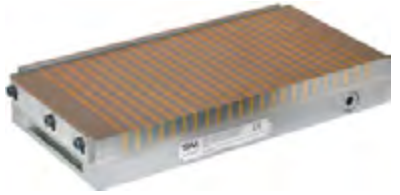
NEOMILL permanent magnetic clamping plates

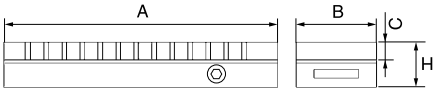
Application:
For milling tasks.

Execution:
- With narrow transverse pole pitch
- Double neodymium magnetic system for high adhesive force up to 150 N/cm²
- 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

Delivery:
With hexagon key, clamping plates, operating instructions.

Notes:
Other dimensions on request.





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Clamping surface length A (mm)		250	350	300	400	500	600
Magnet width B (mm)		150	150	200	200	200	300
Magnetic field height (mm)		12	12	12	12	12	12
Height (mm)		57	57	60	60	60	64
Pole pitch ST/NE		12/3 mm	12/3 mm	12/3 mm	12/3 mm	12/3 mm	12/3 mm
Pole plate thickness (mm)		20	20	23	23	23	23
Wear of pole surface (mm)		5	5	5	5	5	5
Weight (kg)		17	24	26	35	44	67
[SAV] 24341...	Ident. No.	110	120	140	150	160	170
		●	○	●	●+	(○)+	(○)+

Prod. Gr. 230

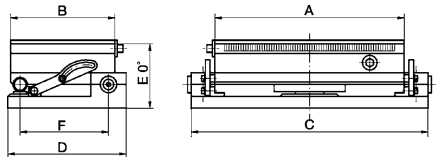
ATORN® Sine table with permanent magnetic clamping plate

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
- slewing range: 0° up to 45°

Delivery:
With 2 limit stop strips, spanner, operating instructions.

Notes:
Delivered ex-works, postage and packaging excluded.



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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	165
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/cm²)		100	100	100	100	100
Roll distance (mm)		55	85	135	135	135
24351...	Ident. No.	210	215	235	245	250
		●	●	●	●+	(○)+

Prod. Gr. 280

NEOMICRO round permanent magnetic chuck

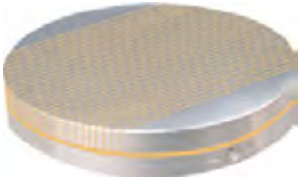
Particularly narrow parallel pole pitch

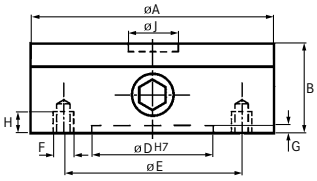
Application:
The micro pole pitch of this magnetic clamping plate makes it possible to clamp medium-sized as well as very flat turning, grinding and erosion parts.

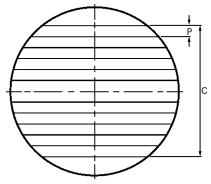
Execution:
- Powerful magnetic system with Neodym magnets and low magnetic field height of 8 mm
- Continuously variable adhesive force adjustment simplifies workpiece alignment
- machining on both sides at the centre of the pole plate is possible with dimension J

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/cm2 (where A = Ø 100: 70 N/cm2)
- The pole plate can also be machines with holes for driving pins and centring aids, max. incorporation 5 mm
- Low profile and low weight

Notes:
Available on request with flange and up to 500 mm diameter







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Clamping plate Ø A (mm)		100	150	200	250	300
Height B (mm)		50	50	57	57	62
Centring Ø D H7 (mm)		60	110	150	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 J		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	680	600	500	450
Magnetic field height (mm)		8	8	8	8	8
Nominal adhesive strength (N/cm²)		70	100	100	100	100
Weight (kg)		3	9	15	20	31
[SAV] 24367...	Ident. No.	100	150	200	250	300
		●	○	○	○	○

Prod. Gr. 230

Permanent magnet round chuck FERROMAX

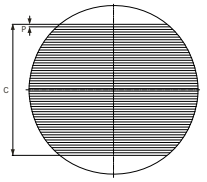
With parallel pole pitch

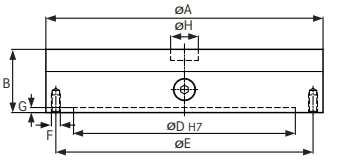
Application:
suitable for clamping large and small workpieces. for use on lathes and grinding machines, dividing and tracer divider devices.

Execution:
- High-performance neodymium magnetic system with low magnetic field height of 8 mm for workpieces from 10 mm upwards
- 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 150 N/cm², from Ø 200 mm, nominal adhesive force 100 N/cm²

Notes:
Available on request with flange and up to 500 mm diameter





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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/cm²)		120	150	150	150	150
Weight (kg)		13	20	31	43	60
[SAV] 24371...	Ident. No.	200	250	300	350	400
		●	●	(○)*	(○)*	(○)*

Prod. Gr. 230

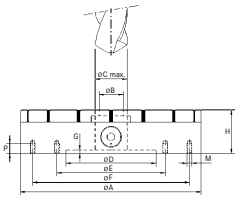
Permanent magnet round chuck NEOSTAR

With radial pole pitch

Application:
For lathes and grinding machines.

Execution:
- With radial pole pitch
- 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

Notes:
Delivered ex-works, postage and packaging excluded.



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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)		20	20	20	20	20	20
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/cm²)		100	100	100	100	100	100
Weight (kg)		49	30	20	13	7	75
[SAV] 24376...	Ident. No.	350	300	250	200	150	400
		(○)*	(○)*	●	●	●	(○)*

Prod. Gr. 230

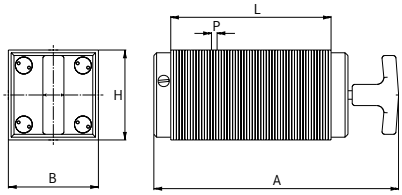
Permanent magnetic clamping blocks

With 4 magnetic clamping surfaces

Application:
For flat, angular, coordinate and profile grinding, countersinking and wire erosion, measuring and testing.

Execution:
- With 4 magnetic clamping surfaces
- Firm clamping for small and thin parts
- Sealed to prevent fluid ingress
- Magnetic field height approx. 2 mm
- Regrinding possible on all 4 sides up to the height of the two front panels

Notes:
Ref. no. 030 stainless version with high-alloy chrome steel poles for use on wire eroding machines. Less suitable for grinding, as stainless steel version has reduced adhesive force.



Length A (mm)		175	195	175
Body length L (mm)		115	135	115
B/H (mm)		64	64	64
Magnetic field height (mm)		2	2	2
Pole pitch ST/NE P		2/2 mm	2/2 mm	2/2 mm
Nominal adhesive strength (N/cm²)		50	50	30
Max. wear of pole surface (mm)		4	4	4
Type		-	-	Stainless steel
24355...	Ident. No.	010	020	030
		●	●	○

Prod. Gr. 265

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Demagnetising devices

For connection to 230 V AC, 50 Hz, power-on time 100% (50% at full load)

Application:
For demagnetising.

Execution:
- For connection to 230 V AC, 50 Hz, 100% operating time (50% at full load)
- Unlike other devices, the intensity of the magnetic field is increased automatically with these devices to correspond to the size of the workpiece, i.e. no workpiece equals low power consumption and low heat development. The devices are therefore also suitable for use underneath a conveyor belt. The devices are fitted with a signal lamp, toggle switch, 3 m cable and plug.
- Workpieces machined on permanent magnet or electromagnetic clamping plates become slightly magnetised. Demagnetising devices are used to remove this magnetisation. The workpieces are placed on one pole of the device and pushed over to the other pole. The process must be repeated a few times depending on the size and shape of the parts. The plates must not be switched off until the workpieces have been removed, as otherwise they will be magnetised again.

Notes:
Particularly ideal for demagnetising high-alloy steels, e.g. ring bearings, stamps and moulds.

Model		3	4	5
Length (mm)		250	200	400
Width (mm)		180	266	306
Height (mm)		87	87	87
Current consumption with workpiece (A)		4	4	4
Current consumption without workpiece (A)		1.5	1.5	1.5
Nominal voltage (V/AC)		230	230	230
Max. penetration depth (mm)		50	50	50
Weight (kg)		11	18	24
[SAV] 24491...	Ident. No.	130	140	150
		●	●	●

Prod. Gr. 230

Manual demagnetising device

For connection to 230 V AC, 50 Hz, degree of protection IP 40, power-on time 50%

Application:
Handy device with plastic housing for focused demagnetising of large surfaces. The device is also suitable for separating steel parts and for conveying lightweight bulk material. The device is switched on and off via an illuminated pushbutton. Supply cable, 3 m with plug.

Execution:
- For connection to 230 V AC, 50 Hz, IP 40 degree of protection, 50% operating time

Model	Length (mm)	Width (mm)	Height (mm)	Max. penetration depth (mm)	Max. switch-on time (min)	Real switch-on time (%)	Nominal voltage (V/AC)	Weight (kg)	[SAV] 24492... Ident. No.	
HD-1	200	105	75	20	5	30	230	1.9	210	●
HD-2	215	150	95	40	5	30	230	2.2	220	●

Prod. Gr. 230

ATORN® Vacuum clamping system and adapter mat set

For dry and wet processing

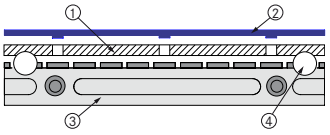
Application:
For clamping workpieces by means of vacuum.

Execution:
- One system with two possibilities, Fig. 1 + 2
- Fig. 1 with adapter mats, quick clamping without a device for workpieces with and without breakouts.
- Fig. 1 + 2 for use with vacuum pumps only (sets without Venturi nozzle).
- Fig. 2, good sealing, also suitable for rough (e.g. sawn) surfaces; particularly well suited for heavy-duty machining.
- Unevenness on the workpiece clamping surface is sealed by means of the elastic sealing cords. Up to 0.5 mm of unevenness or curvature can be compensated for with the sealing cord.
- The modular structure makes it possible to connect several vacuum plates across all patterns. Here, the operating vacuum of the individual plates comes from the connection elements.

Advantage:
- Reduces clamping times
- For fast clamping without equipment
- For clamping non-magnetic workpieces
- Only one clamping cycle for five-sided machining
- Universal clamping system for a wide range of different workpieces

Delivery:
1 each of compatible modular, grid and vacuum clamping plate, 1 compatible adapter plate for the Vac-Mat system, 10 x blue adapter mats, 4 adjustable clamps for modular plates, slot width = 14 mm, 1 assembly tool for replacing blanking plugs, 1 3-m vacuum suction connection, 10-m black vacuum sealing cord, 4 mm diameter

Technical data:
- Adapter plate height H: 32.5 mm
- Grid dimension: 12.5 mm
- Vacuum panels, can be linked: Yes



① Grid vacuum clamping plate

Set contents

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Model		VM 1	VM 2	VM 3
Adapter plate length L (mm)		300	400	600
Adapter plate width B (mm)		200	300	400
For number of adapter mats (PCS)		1	2	4
24500...	Ident. No.	010	015	020
		○	○	○

Prod. Gr. 234

ATORN® Adapter mats

Accessories for vacuum clamping system with adapter mats

Application:
Ident. No. 025–050: For milling breakouts.
Ident. No. 060: Black adapter mat for leakage-free covering of vacant clamping surfaces on aluminium adapter plates.

Execution:
- **Ident. No. 025–050:** With the adapter mats it is possible to machine workpieces on 5 sides in one chucking and create break-outs in internal and external contours.

Notes:
accessories for ref. no. 24500010-020

Ident. No. 025
For workpieces with soft, rough surfaces (blue), tolerance ±0.04 mm

Ident. No. 050
For workpieces with hard, smooth surfaces (green), tolerance ±0.04 mm

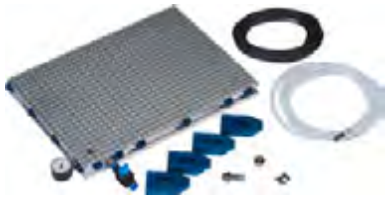
Ident. No. 060
Black adapter mats for leakage-free covering of vacant clamping surfaces

		300	300	300
Length (mm)		300	300	300
Width (mm)		200	200	200
Thickness (mm)		2.5	2.5	2.5
Colour		Blue	Green	Black
24502...	Ident. No.	025	050	060
		●	●	●

Prod. Gr. 234

ATORN® Grid vacuum chuck sets

With venturi nozzle for dry processing



p. 834

Application:
For simple geometric workpieces with rough shapes without breakouts or large breakouts that can be sealed with sealing cords (size must be a multiple of the grid).

Execution:
- With Venturi nozzle
- All grid vacuum plates can also be connected to conventional vacuum pump no. 24501 110 or no. 24501 120.
- Operating pressure approx. 6 bar
- Depending on conditions of use, end vacuum up to 92%, air consumption approx. 95 l/min.

Advantage:
- Minor unevenness and curvatures are sealed and compensated for with the elastic sealing cords.
- Good sealing, also suitable for rough (e.g. sawn) surfaces
- High retention forces, especially suitable for heavy machining such as milling and grinding

Delivery:
1 matching vacuum grid plate with a grid pattern of 12.5 mm, including built-in compressed air vacuum ejector. Mounting grooves and height-adjustable stop discs, 4 x adjustable clamp with a groove width of 14 mm, 1 plastic hose connection for 3 m quick-release coupling, black vacuum sealing cord with 4 mm diameter, 10 m, 1 vacuum generator including silencer and shut-off valve, 1 connection for conventional vacuum pump.

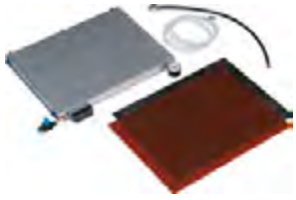
Notes:
Conversion set for wet machining included in scope of delivery. A vacuum pump is also needed for wet machining.

Model		RV 1	RV 2	RV 3
Vacuum plate length L (mm)		300	400	600
Vacuum plate height H (mm)		32.5	32.5	32.5
Vacuum plate width B (mm)		200	300	400
Grid dimension (mm)		12.5	12.5	12.5
Vacuum panels, can be linked		No	No	No
24504...	Ident. No.	010	020	030
		○	○	○

Prod. Gr. 234

ATORN® Slotted vacuum chuck sets

With venturi nozzle for dry processing



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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. Workpieces no larger than a postage stamp can be cut out of larger material sections using milling techniques. Individual adaptation to part geometry ensures 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

Delivery:
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
24503...	Ident. No.	010	020	030
		○	○	○

Prod. Gr. 234

ATORN® Rubber adapter mats

Accessories for slotted vacuum plates

No. 24502
With its high friction coefficient, the blue adhesive rubber mat provides added strength to prevent the workpiece from slipping during machining (height tolerance ± 0.02 mm).

No. 24505 010, 24505 030, 24505 050
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.

No. 24505 020, 24505 040, 24505 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 ± 0.02 mm

Colour		Blue	Brown	Brown	Brown	Black	Black	Black
Length (mm)		2000	300	400	600	300	400	600
Width (mm)		400	200	300	400	200	300	400
Thickness (mm)		1	3	3	3	3	3	3
Thickness tolerance of adapter mat (+/-) (mm)		0.02	0.1	0.1	0.1	0.02	0.02	0.02
24502...	Ident. No.	070	-	-	-	-	-	-
		●						
24505...	Ident. No.	-	010	030	050	020	040	060
			●	○	●	●	●	●

Prod. Gr. 234

ATORN® Sealing cord

Application:
For sealing grid vacuum plates.

Length (m)		50
Outer Ø (mm)		4
Colour		Black
24502...	Ident. No.	010
		●

Prod. Gr. 234

Execution:
- Sealing cord 4 mm in diameter and 50 m long

Sealing strip

ATORN® Vacuum hose

With wire spiral, 10 m

Application:
Connecting hose for vacuum pumps and vacuum plates.

Length (m)		10
Outer Ø (mm)		18
Internal Ø (mm)		12
Colour of vacuum suction hose		Transparent
24502...	Ident. No.	020
		●

Prod. Gr. 234

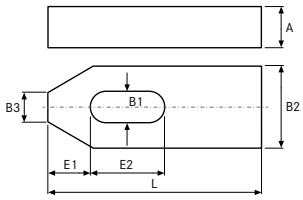
Execution:
- Transparent
- With wire spiral, 10 m long

Vacuum hose with wire spiral

Adjustable clamps (DIN 6314)

Execution:
- Heat-treated steel
- Painted

Notes:
Other sizes on request.



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B1 (mm)		6.6	9	11	14	14	18	18	22
L (mm)		50	60	80	100	125	125	160	160
Suitable cheese-head screw DIN 912		M6	M8	M10	M12 | M14	M12 | M14	M16 | M18	M16 | M18	M20 | M22
E2 (mm)		20	22	30	40	50	45	65	60
A		10 mm	12 mm	15 mm	20 mm	20 mm	25 mm	25 mm	30 mm
B2 (mm)		20	25	30	40	40	50	50	60
B3 (mm)		8	10	12	14	14	18	18	22
26120...	Ident. No.	**010**	**020**	**030**	**040**	**050**	**060**	**070**	**080**
		●	●	●	●	●	●	●	●

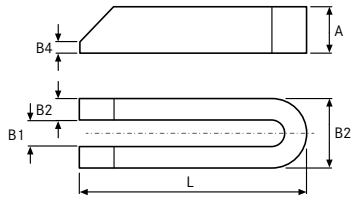
B1 (mm)		22	26	26	33
L (mm)		200	200	250	250
Suitable cheese-head screw DIN 912		M20 | M22	M24	M24	M30
E2 (mm)		80	80	105	100
A		30 mm	30 mm	35 mm	40 mm
B2 (mm)		60	70	70	80
B3 (mm)		22	26	26	34
26120...	Ident. No.	**090**	**100**	**110**	**120**
		●	●	●	○

Prod. Gr. 260

Forked clamps
Bevelled

Execution:
- Heat-treated steel
- Painted

Notes:
Other sizes on request



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B1 (mm)		9	11	14	14	14	18	18	18
L (mm)		80	100	125	160	200	160	200	250
Suitable cheese-head screw DIN 912		M8	M10	M12 | M14	M12 | M14	M12 | M14	M16 | M18	M16 | M18	M16 | M18
A		15 mm	20 mm	25 mm	25 mm	25 mm	30 mm	30 mm	40 mm
B2 (mm)		25	31	38	38	38	48	48	48
B3 (mm)		8	10	12	12	12	15	15	15
B4 (mm)		4	5	6	6	6	8	8	10
26125...	Ident. No.	**020**	**030**	**040**	**050**	**060**	**070**	**080**	**090**
		●	●	●	●	●	●	●	●

B1 (mm)		22	22	22	26	26	26	33	33
L (mm)		200	250	315	200	250	315	250	315
Suitable cheese-head screw DIN 912		M20 | M22	M20 | M22	M20 | M22	M24	M24	M24	M30	M30
A		40 mm	40 mm	40 mm	40 mm	40 mm	40 mm	50 mm	50 mm
B2 (mm)		52	62	62	66	66	66	74	74
B3 (mm)		15	20	20	20	20	20	20	20
B4 (mm)		10	10	10	10	10	10	12	12
26125...	Ident. No.	100	110	120	130	140	150	160	170
		●	●	●	●	●	●	○	○

B1 (mm)		33
L (mm)		400
Suitable cheese-head screw DIN 912		M30
A		50 mm
B2 (mm)		74
B3 (mm)		20
B4 (mm)		12
26125...	Ident. No.	180
		●

Prod. Gr. 260

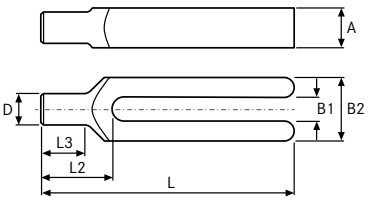
Forked clamps (DIN 6315)

With round clamping adapter

Execution:
- Heat-treated steel
- Painted

- With round clamping face

Notes:
Other sizes on request.



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B1 (mm)		11	14	14	18	18	22	22	26	26
L (mm)		125	160	200	200	250	250	315	250	315
Suitable cheese-head screw DIN 912		M10	M12 | M14	M12 | M14	M16 | M18	M16 | M18	M20 | M22	M20 | M22	M24	M24
A		20 mm	25 mm	25 mm	30 mm	30 mm	40 mm	40 mm	40 mm	40 mm
B2 (mm)		30	40	40	50	50	60	60	70	70
D (mm)		16	20	20	24	24	30	30	38	38
L2 (mm)		36	45	45	55	55	65	65	80	80
L3 (mm)		24	30	30	36	36	45	45	56	56
26130...	Ident. No.	030	040	050	060	070	080	090	100	110
		●	●	●	●	●	●	○	●	○

Prod. Gr. 260

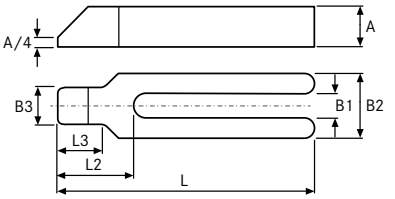
Forked adjustable clamps (DIN 6315)

with lug

Execution:
- Heat-treated steel
- Painted

- With nose

Notes:
Other sizes on request.



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B1 (mm)		9	11	14	14	18	18	22	22	26	26
L (mm)		100	125	160	200	200	250	250	315	250	315
Suitable cheese-head screw DIN 912		M8	M10	M12 | M14	M12 | M14	M16 | M18	M16 | M18	M20 | M22	M20 | M22	M24	M24
A		15 mm	20 mm	25 mm	25 mm	30 mm	30 mm	40 mm	40 mm	40 mm	40 mm
B2 (mm)		30	30	40	40	50	50	60	60	70	70
B3 (mm)		16	20	24	24	28	28	35	35	43	43
L2 (mm)		32	38	47	47	57	57	68	68	83	83
L3 (mm)		18	24	30	30	36	36	45	45	56	56
26132...	Ident. No.	**020**	**030**	**040**	**050**	**060**	**070**	**080**	**090**	**100**	**110**
		●	●	●	●	●	●	●	●	●	●

Prod. Gr. 260

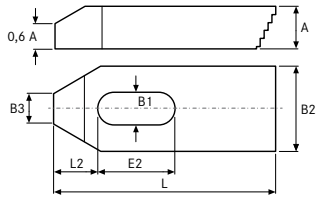
Adjustable clamps (DIN 6314)

Stepped teeth

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.



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B1 (mm)		9	9	11	11	14	14	18	18	22	26
L (mm)		60	100	80	125	100	160	125	200	160	200
Suitable cheese-head screw DIN 912		M8	M8	M10	M10	M12 | M14	M12 | M14	M16 | M18	M16 | M18	M20 | M22	M24
E2 (mm)		22	60	30	70	40	90	45	110	60	80
A		12 mm	12 mm	15 mm	15 mm	20 mm	20 mm	25 mm	25 mm	30 mm	30 mm
B2 (mm)		25	25	30	30	40	40	50	50	60	70
B3 (mm)		10	10	12	12	14	14	18	18	22	26
L2 (mm)		13	13	15	15	21	21	26	26	26	26
26136...	Ident. No.	**020**	**025**	**030**	**035**	**040**	**045**	**050**	**055**	**060**	**070**
		●	●	●	●	●	●	●	●	●	○

Prod. Gr. 260

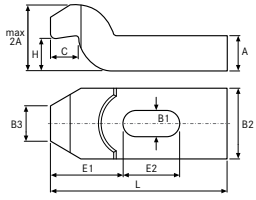
Adjustable clamps (DIN 6316)

Offset

Execution:
- Heat-treated steel
- Painted

- Single depressed centre

Notes:
Aluminium alloy version and other sizes on request.



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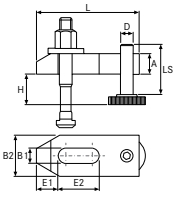
B1 (mm)		6.6	9	11	14	18	18	22	22	26	26
L (mm)		60	80	100	125	125	160	160	200	200	250
Suitable cheese-head screw DIN 912		M6	M8	M10	M12 | M14	M16 | M18	M16 | M18	M20 | M22	M20 | M22	M24	M24
E1 (mm)		22	27.5	36	44	51.5	51.5	59	59	76.5	76.5
E2 (mm)		20	25	32	40	40	50	55	70	60	80
A		10 mm	12 mm	15 mm	20 mm	25 mm	25 mm	30 mm	30 mm	35 mm	35 mm
B2 (mm)		20	25	30	40	50	50	60	60	70	70
H (mm)		9	11	14	18	23	23	27	27	32	32
B3 (mm)		10	12	15	20	25	25	30	30	35	35
C (mm)		8	9	12	16	20	20	24	24	25	25
26138...	Ident. No.	**010**	**020**	**030**	**040**	**050**	**060**	**070**	**080**	**090**	**100**
		●	●	●	●	●	●	●	●	●	●

Prod. Gr. 260

Adjustable clamps
Bevelled

Application:
For clamping workpieces.

Execution:
- With support screw and clamping screw
- Made from heat-treated steel
- Painted



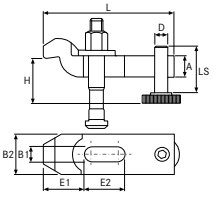
For table grooves according to DIN 650		10 mm	12 mm	14 mm	16 mm	18 mm
Suitable screw DIN 787		M10 x 80 mm	M12 x 100 mm	M12 x 100 mm	M16 x 125 mm	M16 x 160 mm
H		8-32 mm	10-40 mm	10-38 mm	13-48 mm	13-81 mm
B1 (mm)		11	14	14	18	18
B2 (mm)		30	40	40	50	50
L (mm)		80	100	100	125	125
D		M10	M12	M12	M16	M16 x 1
LS (mm)		39	49	49	55	90
A (mm)		15	20	20	25	25
E1 (mm)		15	21	21	26	26
E2 (mm)		30	40	40	45	45
26221...	Ident. No.	**010**	**020**	**030**	**040**	**050**
		●	●	●	●	●

Prod. Gr. 260

Adjustable clamps
Offset

Application:
For clamping workpieces.

Execution:
- With support screw and clamping screw
- Made from heat-treated steel
- Painted



For table grooves according to DIN 650		10 mm	12 mm	14 mm	16 mm	18 mm
Suitable screw DIN 787		M10 x 80 mm	M12 x 100 mm	M12 x 100 mm	M16 x 125 mm	M16 x 125 mm
H		22-46 mm	28-58 mm	28-56 mm	36-71 mm	36-69 mm
B1 (mm)		11	14	14	18	18
B2 (mm)		30	40	40	50	50
L (mm)		100	125	125	160	160
D		M10	M12	M12	M16	M16
LS (mm)		39	49	49	55	55
A (mm)		15	20	20	25	25
E1 (mm)		36	44	44	51.5	51.5
E2 (mm)		32	40	40	50	50
26222...	Ident. No.	010	020	030	040	050
		●	●	●	●	○

Prod. Gr. 260

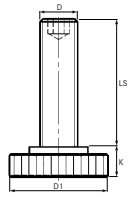
Support bolt spare parts

Accessories for ref. no. 26221 and 26222

Application: Tempered

Version		Tempered	Tempered	Tempered
Thread length LS (mm)		39	49	55
Thread dimension D		M10	M12	M16
Length K (mm)		8	10	13
Screw length (mm)		47	59	68
D1 (mm)		30	36	42
Property class		8.8	8.8	8.8
26222...	Ident. No.	110	112	116
		●	●	●

Prod. Gr. 260



infinitely adjustable clamp, complete

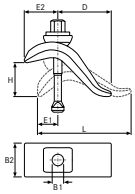
Infinitely adjustable

Application:
For clamping workpieces. It is designed to withstand extremely high loads and is particularly suitable for clamping cutting tools and punches.

Execution:
- made of steel, forged, tempered and galvanised.

Advantage:
- The infinitely variable adjustable clamp quickly spans various clamping heights without any additional support and requires little space on the machine table.

Notes:
with screws for DIN 787 T-groove, length 160 mm, the size 17 adjustable clamp can reach a maximum clamping height of 75 mm.



p. 851

For table grooves according to DIN 650		12 mm	14 mm	16 mm	18 mm	20 mm	22 mm
H1		0-50 mm	0-50 mm	0-75 mm	0-75 mm	0-85 mm	0-85 mm
L (mm)		140	140	140	140	175	175
B1 (mm)		50	50	50	50	60	60
B1 (mm)		17	17	17	17	21	21
D (mm)		60	60	60	60	80	80
E1 (mm)		30	30	30	30	40	40
E2 (mm)		55	55	55	55	70	70
26223...	Ident. No.	010	020	030	040	065	070
		●	●	●	●	●	●

Prod. Gr. 260

Adjustable clamps

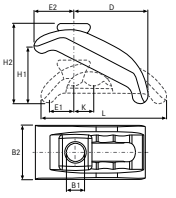
Short, continuously adjustable, with U-piece

Application:
For clamping workpieces.

Execution:
- With U-piece
- Suitable for tough conditions, e.g. on presses
- Tempered
- Galvanised and blue passivated
- Infinitely adjustable

Delivery:
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
H1		0-35 mm	0-55 mm	0-65 mm	0-75 mm
H2		30-55 mm	42-84 mm	50-100 mm	54-111 mm
L (mm)		88	130	140	174
B1 (mm)		38	56	66	76
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
D (mm)		48	74	80	100
E1 (mm)		23	29	32	39
E2 (mm)		28	38	46	52
K (mm)		14	18	20	24
Height (mm)		55	84	100	111
26225...	Ident. No.	**010**	**020**	**030**	**040**
		●	●	●	●

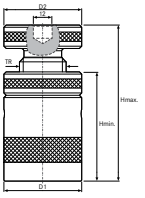
Prod. Gr. 260

p. 851

Screw jacks

Execution:
- Heat-treated steel
- Painted
- With self-locking trapezoidal thread spindle and end safety device.
- With flat support

Notes:
For attachments see no. 26161.



H		38-50 mm	42-52 mm	50-70 mm	70-100 mm	100-140 mm	140-210 mm	190-300 mm
D1 (mm)		31	50	50	50	68	80	-
D2 (mm)		31	50	50	50	68	70	80
Max. force range (kN)		25	100	100	100	120	170	350
Centring Ø (mm)		12	12	12	12	12	12	12
26157...	Ident. No.	**010**	**020**	**030**	**040**	**050**	**060**	**070**
		●	●	●	●	●	●	●

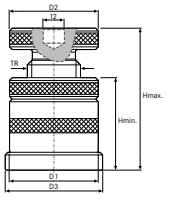
Prod. Gr. 260

Screw jacks

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.



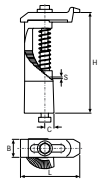
H		52-62 mm	60-80 mm	80-110 mm
D1 (mm)		50	50	50
D3 (mm)		55	55	55
D2 (mm)		50	50	50
Max. force range (kN)		100	100	100
Centring Ø (mm)		12	12	12
26157...	Ident. No.	**120**	**130**	**140**
		●	●	●

Prod. Gr. 260

Stepped clamps

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



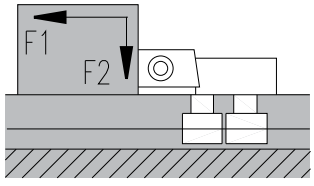
Groove width (mm)		14	14	14	14	14
B (mm)		34	34	34	34	34
H		0-45 mm	15-45 mm	30-75 mm	60-135 mm	120-195 mm
L (mm)		140	112	112	112	112
C (mm)		14	14	15	15	15
S (mm)		0.75	0.75	1.25	2.5	2.5
26233...	Ident. No.	005	010	020	030	040
		●	●	●	●	●

Prod. Gr. 260

Deep clamping jaws, model Bulle

Application:
For clamping with draw-down effect.

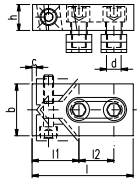
Execution:
- Tempered
- With burnished finish
- Wedge effect in forward and downward direction



Advantage:
- No protruding clamping screws
- Clamps at every angle to the groove

Delivery:
2 pieces in a box with fastening screws ISO 4762 (10.9), nuts for T-slots DIN 508 and hexagon screwdriver ISO 2936.

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
C (mm)		3	3	4	4	5	5
l (mm)		80	80	100	100	140	140
l1 (mm)		39	39	46	46	50	50
l2 (mm)		26	26	34	34	36	40
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.	020	030	040	050	060	070
		●	●	●	●	●	○

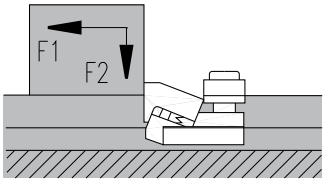
Prod. Gr. 260

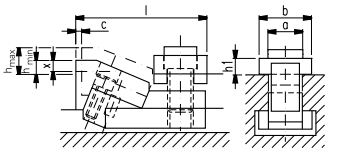
Flat clamp, model Mini-Bulle

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.

Delivery:
2 pieces in a box with fastening screws ISO 4762 (8.8) and hexagon screwdriver ISO 2936.





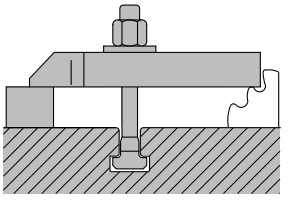
Suitable for groove width (mm)		12	14	16	18	22
Min./max. height		2.5-13.5 mm	1.5-13.5 mm	2.5-17 mm	1.5-16 mm	4.5-21.5 mm
l (mm)		52	55	68	71	89
Width b (mm)		18	22	25	28	35
Clamping force F1 (kN)		5	5.5	8	9	16
Clamping force F2 (kN)		0.6	0.7	0.9	1	1.9
X (mm)		5	5	6	6	9
h1 (mm)		11	11	15	15	20
Clamping width c (mm)		1.8	1.8	2.5	2.5	3
26141...	Ident. No.	010	020	030	040	050
		●	●	●	●	○

Prod. Gr. 260

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



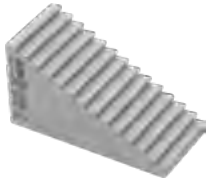
Height (mm)		50	95	140	185	230
Min. step height (mm)		12.5	57.5	102.5	147.5	192.5
Width (mm)		42.5	95	100	105	110
26145...	Ident. No.	010	020	030	040	050
		●	●	●	○	●

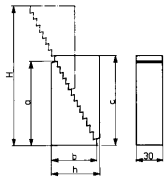
Prod. Gr. 260

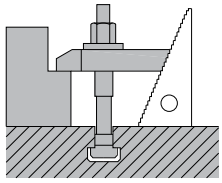
Clamping supports

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
c (mm)	30	30	30
26150... Ident. No.	**110**	**120**	**130**
	●	●	●

Prod. Gr. 260

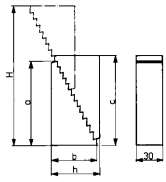
Packing block set

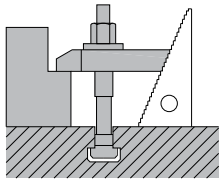
Application:
For supporting adjustable clamps.

Execution:
- Heat-treated steel
- Painted
- Packing blocks can be combined with adjustable clamps

Delivery:
8 x size 1, 8 x size 2, 4 x size 3, in sturdy wooden case, support height 22-208 mm

Delivery





Size	Min. support plate height (mm)	Max. support plate height (mm)	**26151...** Ident. No.	
1. 2. 3	22	208	**010**	●

Prod. Gr. 260

Clamping tool assortments

Basic assortment

Application:
Ident. No. 140: For conventional clamping on machine tables with T-grooves, ideal for toolmaking.
Ident. No. 160: Ideal for toolmaking, manufacture and training equipment, consisting of the clamping tools most commonly required for conventional clamping on machine plates with T-grooves

Execution:
- All parts made of heat-treated steel
- Rolled thread
- T-slot screws heat-treated

Delivery:
Ident. No. 140: Ref. no. 26152140: Clamp 2 pcs 14×100 mm, 2 pcs 14×160 mm, clamping supports 4 pcs size 2, 4 pcs size 3,
T-slot screws 2 pcs M14×16×63 mm; 4 pcs M14×16×100 mm; 4 pcs M14×16×160 mm
Stud bolts 2 pcs size M14×100, 2 pcs size M14×160, high-profile nuts 6 pcs size M14,
Extension nuts 2 pcs size M14, washers 6 pcs size M14,
Ident. No. 160: Ref. no. 26152160: Clamp: 2 pcs 14×100 mm, 2 pcs 14×160 mm, clamping supports 4 pcs size 2, 4 pcs size 3,
T-slot screws 2 pcs M12×14×50 mm; 4 pcs M12×14×80 mm; 4 pcs M12×14×125 mm,
Stud bolts 2 pcs size M12×100, high-profile nuts 6 pcs size M12, extension nuts 2 pcs size M12,
Washers 6 pcs size M12.

Other sizes available

Suitable for groove width (mm)	14	16
Suitable for thread	M12	M14
Tension force (kN)	20	28
Clamping height (mm)	165	195
Weight (kg)	10	11.1
26152... Ident. No.	**140**	**160**
	●	●

Prod. Gr. 260

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

Delivery:
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	415	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	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 125 mm	4 x 125 mm	4 x 125 mm	4 x 125 mm
Number of DIN 6330 B high nuts (PCS)		6	6	6	6	6	6	6
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
26153...	Ident. No.	**010**	**012**	**014**	**015**	**016**	**018**	**022**
		●	●	●	●	○	●	○

Prod. Gr. 260

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
26209...	Ident. No.	**100**	**120**	**140**	**160**	**165**	**180**	**220**
		●	●	●	●	○	●	●

Prod. Gr. 260

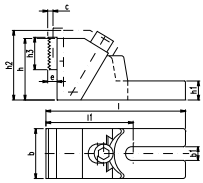
Sturdy clamping jaws

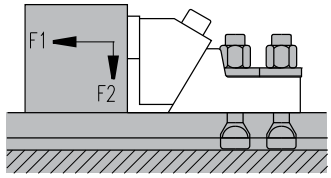
Application:
For lateral clamping of tall workpieces with draw-down force.

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.





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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	25-36 kN
Min./max. clamping force F2	1.2-4.2 kN	4.5-5.4 kN
l (mm)	179	230
l1 (mm)	112.5	138.5
b (mm)	65	75
b1 (mm)	19	26
h (mm)	85	100
h2 (mm)	99	118
h3 (mm)	40	40
c (mm)	8	11
26178... Ident. No.	010	020
	●	●

Prod. Gr. 260

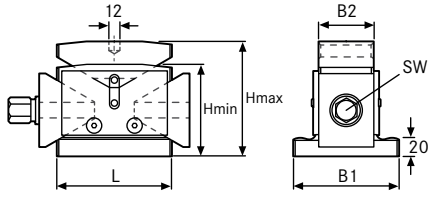
Herkules alignment wedges

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.



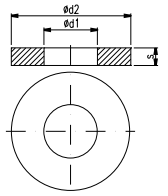
Size	63	125
Min./max. support plate height	50-63 mm	100-125 mm
Wedge block width B2 (mm)	40	60
Support plate width B1 (mm)	40	115
Support plate length L (mm)	63	125
Height adjustment per revolution (mm)	0.86	1.16
Tension force (kN)	40	100
Weight (kg)	1.3	8.6
SW	13 mm	24 mm
26170... Ident. No.	063	125
	●	●

Prod. Gr. 260

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



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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
26208...	Ident. No.	100	120	140	160	180	200	220	240
		●	●	●	●	●	●	●	●

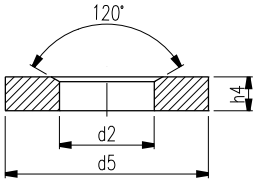
Suitable cheese-head screw DIN 912		M27	M30	M36	M8
Suitable for screw		1 1/16 inch	1 1/8 inch	1 1/4 inch	5/16 inch
Outer Ø d2 (mm)		68	68	80	23
Inner Ø d1 (mm)		28	31	38	8.4
Max. washer height s (mm)		10	10	10	4
26208...	Ident. No.	270	300	360	080
		○	●	○	●

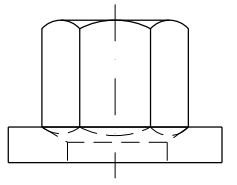
Prod. Gr. 260

Conical washers (DIN 6319)
Case-hardened and phosphated

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.





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Suitable cheese-head screw DIN 912		M8	M10	M12	M14	M16	M20
d2 (mm)		9.6	12	14.2	16.5	19	23.2
d5 (mm)		17	21	24	28	30	36
b4 (mm)		3.5	4.2	5	5.6	6.2	7.5
26208...	Ident. No.	612	614	616	618	620	622
		●	●	●	●	●	●

Prod. Gr. 260

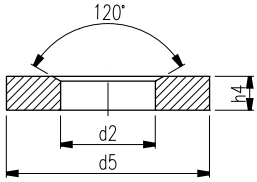
Conical washers (DIN 6319)

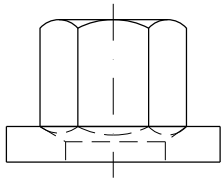
Pressed and tempered

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.





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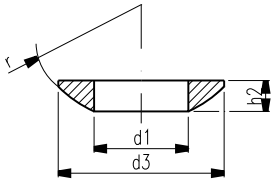
Suitable cheese-head screw DIN 912		M8	M10	M12	M14	M16	M20
d2 (mm)		9.6	12	14.2	16.5	19	23.2
d5 (mm)		24	30	36	40	44	50
b4 (mm)		5	5	6	6	7	8
26208...	Ident. No.	712	714	716	718	720	722
		●	●	●	●	●	●

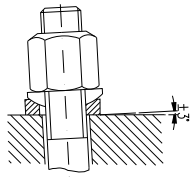
Prod. Gr. 260

Spherical washers (DIN 6319)

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
26208...	Ident. No.	512	514	516	518	520	522
		●	●	●	●	●	●

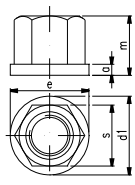
Prod. Gr. 260

Hexagon nuts

Application:
For clamping workpieces.

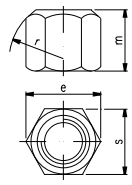
Execution:
- Tempered
- Strength class 10
- Ref. no. 008- 030 with collar, turned and milled

Ident. No. 008-030
With collar 008-030



Ident. No. 008-030
With collar 008-030

Ident. No. 080-300
Without collar 080-300



Ident. No. 080-300
Without collar 080-300

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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	20.03	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
26206...	With collar	Ident. No.	**008**	**010**	**011**	**012**	**013**	**014**	**015**
			●	●	●	●	●	●	●

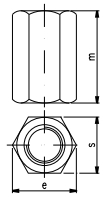
Thread dimension			M16	M18	M20	M22	M24	M30
Width across flats S			24 mm	27 mm	30 mm	34 mm	36 mm	46 mm
Corner dimensions e (mm)			26.8	30.1	33.5	37.7	40	51.3
Height m (mm)			24	27	30	33	36	45
Collar height a (mm)			5	5	6	6	6	8
Collar Ø d1 (mm)			31	34	37	40	45	58
26206...	With collar	Ident. No.	**016**	**018**	**020**	**023**	**024**	**030**
			●	●	●	●	●	●

Prod. Gr. 260

Extension nuts

Application:
For clamping workpieces.

Execution:
- Tempered
- Strength class 10
- Flat on both sides



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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	20.03	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
26207...	Ident. No.	080	100	120	121	140	141	160	200	240	300
		●	●	●	●	●	●	●	●	●	●

Prod. Gr. 260

Nuts for T slots

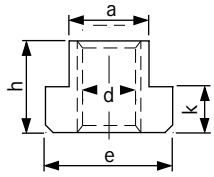
For T-grooves

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

Ident. No. 010–130
Standard

Ident. No. 220–310
Long Shape



Ident. No. 010–130
Ref. no. 010-310

Type		standard	standard	Long type	standard	Long type	standard	Long type	standard
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
26195...	Ident. No.	010	020	220	030	230	040	240	050
		●	●	●	●	●	●	●	●

Type		Long type	standard	Long type	standard	Long type	standard	Long type	standard
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
26195...	Ident. No.	250	060	260	070	270	080	280	090
		●	●	●	●	●	●	●	●

Type		Long type	standard	standard	Long type	standard
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	44	35.6
Thread dimension d		M20	M22	M24	M24	M30
Length e (mm)		35	40	44	88	54
Height h (mm)		28	32	36	36	44
Sliding block height k (mm)		14	16	18	18	22
26195...	Ident. No.	290	100	110	310	130
		●	●	●	●	●

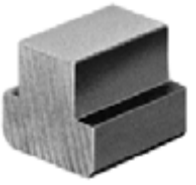
Prod. Gr. 260

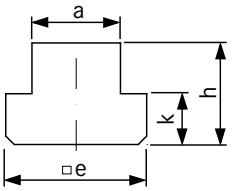
Nut blanks for T slots

Application:
for clamping in T-grooves.

Execution:
- Ref. no. 010- 130 tempered, strength class 10
- 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
		●	●	●	●	●	●	●	●	○	●

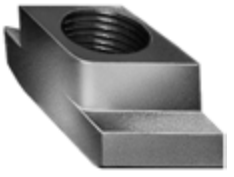
Prod. Gr. 260

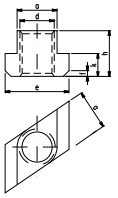
Nuts
For Rhombus T-slots

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
a (mm)		11.7	13.7	15.7	17.7	19.7	21.7	27.7	27.7
d		M10	M12	M14	M16	M16	M20	M20	M24
h (mm)		14	16	18	20	24	28	36	36
k (mm)		7	8	9	10	12	14	18	18
e (mm)		18	22	25	28	32	35	44	44
Property class		8	8	6	6	8	6	8	6
26194...	Ident. No.	010	020	030	040	050	070	075	080
		●	●	●	●	●	●	●	●

Prod. Gr. 260

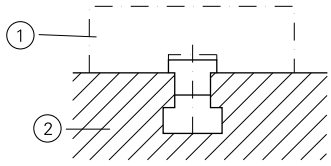
Loose sliding blocks (DIN 6323)

Application:
For positioning tools on jigs.

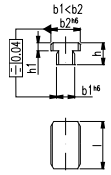
Execution:
- C 15 case-hardened and polished

- Ref. no. 212 for small machines = jig groove 12 mm
- Ref. no. 312-322 for small machines = jig groove 20 mm

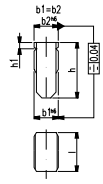
Advantage:
- When transporting the device, there are no sliding blocks protruding from underneath to cause a problem and the machine table cannot be damaged.



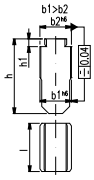
① = Device
② = Machine table



Type A



TYPE B



TYPE C

Form		B	A	A	A	A	C
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
26196...	Ident. No.	212	312	314	316	318	322
		●	●	●	●	●	●

Prod. Gr. 260

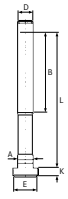
T-slot screws (DIN 787)

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	Groove width (mm)	Length L (mm)	Outer Ø A (mm)	Thread length B (mm)	Head length E (mm)	Head height K (mm)	26200... Ident. No.	
M8	8	32	7.7	22	13	6	110	●
M8	8	40	7.7	-	13	6	115	●
M8	8	50	7.7	35	13	6	120	●
M8	8	63	7.7	45	13	6	125	●
M8	8	80	7.7	50	13	6	130	●
M8	8	100	7.7	60	13	6	135	●
M10	10	40	9.7	30	15	6	215	●
M10	10	50	9.7	30	15	6	220	●
M10	10	63	9.7	45	15	6	225	●
M10	10	80	9.7	50	15	6	230	●
M10	10	100	9.7	60	15	6	235	●
M10	10	125	9.7	75	15	6	240	●
M10	10	160	9.7	-	15	6	245	○
M12	12	50	11.7	33	18	7	320	●
M12	12	63	11.7	40	18	7	325	●
M12	12	80	11.7	55	18	7	330	●
M12	12	100	11.7	65	18	7	335	●
M12	12	125	11.7	75	18	7	340	●

Thread dimension	Groove width (mm)	Length L (mm)	Outer Ø A (mm)	Thread length B (mm)	Head length E (mm)	Head height K (mm)	26200... Ident. No.	
M12	12	160	11.7	100	18	7	345	●
M12	12	200	11.7	120	18	7	350	○
M12	12	250	11.7	150	18	7	355	●
M12	14	50	13.7	33	22	8	420	●
M12	14	63	13.7	45	22	8	425	●
M12	14	80	13.7	55	22	8	430	●
M12	14	100	13.7	65	22	8	435	●
M12	14	125	13.7	75	22	8	440	●
M12	14	160	13.7	100	22	8	445	●
M12	14	200	13.7	120	22	8	450	●
M12	12	250	13.7	150	22	8	455	●
M16	16	63	15.7	45	25	9	525	●
M16	16	80	15.7	55	25	9	530	●
M16	16	100	15.7	65	25	9	535	●
M16	16	125	15.7	85	25	9	540	●
M16	16	160	15.7	100	25	9	545	●
M16	16	200	15.7	125	25	9	550	●
M16	16	250	15.7	150	25	9	555	●
M16	18	63	17.7	45	28	10	625	●
M16	18	80	17.7	55	28	10	630	●
M16	18	100	17.7	65	28	10	635	●
M16	18	125	17.7	85	28	10	640	●
M16	18	160	17.7	100	28	10	645	●
M16	18	200	17.7	125	28	10	650	●
M16	18	250	17.7	150	28	10	655	●
M20	20	80	19.7	55	32	12	730	●
M20	20	100	19.7	65	32	12	735	●
M20	20	125	19.7	85	32	12	740	●
M20	20	160	19.7	110	32	12	745	●
M20	20	200	19.7	125	32	12	750	●
M20	20	250	19.7	150	32	12	755	●
M20	22	80	21.7	55	35	14	830	●
M20	22	100	21.7	65	35	14	835	●
M20	22	125	21.7	85	35	14	840	●
M20	22	160	21.7	110	35	14	845	●
M20	22	200	21.7	125	35	14	850	●
M20	22	250	21.7	150	35	14	855	●
M24	24	100	23.7	70	40	16	935	○
M24	24	125	23.7	85	40	16	940	●
M24	24	160	23.7	110	40	16	945	●
M24	24	200	23.7	125	40	16	950	●
M24	24	250	23.7	150	40	16	955	●
M24	28	125	27.7	85	44	18	965	●
M24	28	160	27.7	110	44	18	970	●
M24	28	200	27.7	125	44	18	975	●
M24	28	250	27.7	150	44	18	980	●

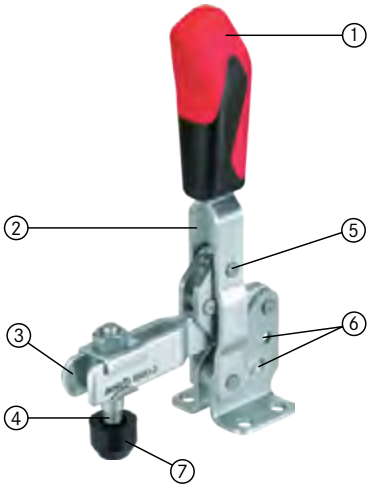
Prod. Gr. 260

AMF quick-action clamp
The features of our quick-action clamp at a glance

the characteristics of our quick-action clamp at a glance

- ergonomic 2-component handle
- safety clamping piece with finger protection
- protection against the loss of pressure screws
- stainless steel rivets
- removable rubber cap

- Ergonomic 2-component handle
- Safety clamping piece with finger protection
- Protection against the loss of pressure screws
- Stainless-steel rivets
- Removable rubber cap



① **Ergonomic 2-component handle** with a high degree of operating comfort due to large hand surface. The grippy surface made of soft components is connected with the hard base material sitting firmly on the clamp.

② **Safety clamp with finger protection** and integrated stop to which there is no access.

③ **Protection against the loss of pressure screws.** For subsequent insertion of pre-assembled pressure screws.

④ Pressure screw (8.8) can be quickly adjusted using the nut washer in tensioner arm.

⑤ **Stainless-steel rivets** in case-hardened bushings. All bearings greased, for durable, consistent functionality.

⑥ The opening angle can be changed by pressing in a stop pin.

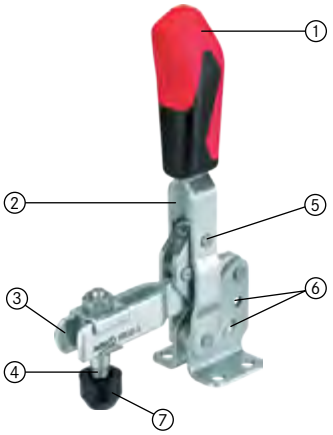
⑦ Pressure screw with removable rubber cap.

Quick-action clamp with coloured handles available on request.

AMF quick-action clamp

the characteristics of our quick-action clamp at a glance

- ergonomic 2-component handle
- safety clamping piece with finger protection
- protection against the loss of pressure screws
- stainless steel rivets
- removable rubber cap



① **ergonomic 2-component handle** with a high degree of operating comfort due to large hand surface. the grippy surface made of soft components is connected with the hard base material sitting firmly on the clamp.

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⑤ **rivets made of stainless steel,** in case-hardened bushings. all bearings greased, for durable, consistent functionality.

⑥ the opening angle can be changed by pressing in a stop pin.

⑦ pressure screw with removable rubber cap

AMF variable quick-action clamp

infinitely adjustable clamping force with adjusting screw

advantages at a glance:

- variable clamping height
- clamping of different workpieces
- usable with small batch sizes
- adjustable clamping force
- ergonomic 2-component handle
- protection against loss on clamping arm

clamping force is adjustable with an adjusting screw: for sensitive materials, the clamping force can be reduced to avoid damaging the material, and high forces can be employed where they are wanted.

- significantly stronger internal mechanism than comparable competitive products – higher clamping forces
- high-quality design:
  - galvanised (not nickel-plated) – more durable
  - solid rivets instead of hollow ones – this results in higher forces

Vertical quick-action clamp

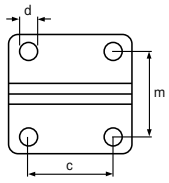
With open clamping arm and horizontal base

Application:
For quick clamping of workpieces.

Execution:
- Galvanised and passivated
- Ergonomic, oil-resistant handle with large hand rest and soft components.
- Case-hardened and lubricated bearing bushes

Delivery:
With thrust bolt and protective cap

Notes:
Size 0-4 also available in stainless steel.



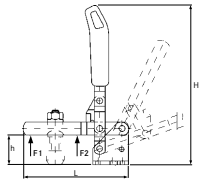


Illustration may be different

Size	0	1	2	3	4	5
Hole spacing min/max c	8.5 x 13.5 mm	-	-	-	-	-
Hole spacing c (mm)	-	16	20	20	32	45
Hole spacing M (mm)	23	-	-	32.5	-	-
Min./max. distance between centre and drill M	-	22.5-26 mm	23-31 mm	-	43.5-46.5 mm	45-50 mm
Hole Ø 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, clamped L1 (mm)	49	61	78	112	141	185
Length, open L2 (mm)	50	59	89	112	130	195
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.	005	010	020	030	040	050
	●	●	●	●	●	●

Prod. Gr. 260

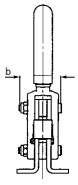
Vertical clamp

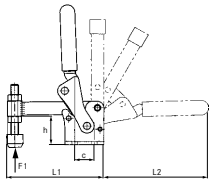
Heavy-duty

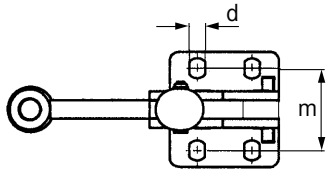
Application:
For quick clamping of workpieces.

Execution:
- With horizontal base
- Reamed and case-hardened bearing bushes
- Hardened, polished and permanently lubricated studs
- burnished steel, lever arm made of steel casting
- With red oil-resistant plastic handle

Delivery:
With tempered and galvanised thrust bolt







Size	2	4
Hole spacing M (mm)	32	45
Hole Ø d (mm)	7.1	8.5
Clamping height h (mm)	25	44
Retention force F1 (kN)	2.5	5
Length, clamped L1 (mm)	85	146
Length, open L2 (mm)	94	160
Thumbscrew size	M6 x 50 mm	M12 x 80 mm
26212... Ident. No.	520	540
	●	○

Prod. Gr. 260

Vertical quick-action clamp

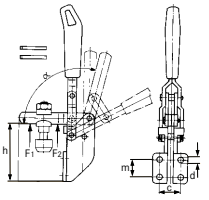
With open clamping arm and angular base

Application:
For quick clamping of workpieces.

Execution:
- Galvanised and passivated
- Stainless steel rivet
- Ergonomic, oil-resistant handle with large hand rest and soft components.

Delivery:
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
Thumbscrew size		M5 x 30 mm	M6 x 35 mm	M8 x 45 mm
26213...	Ident. No.	010	020	030
		●	●	●

Prod. Gr. 260

Horizontal quick action clamps

With open support arm and horizontal base

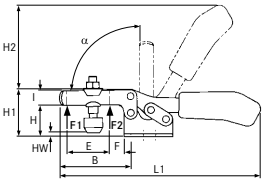
Application:
For quick clamping of workpieces.

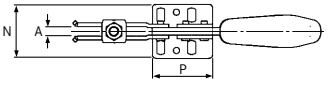
Execution:
- Galvanised and passivated
- Ergonomic, oil-resistant handle with large hand rest and soft components.
- Case-hardened and lubricated bearing bushes

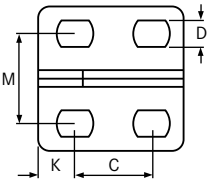
Delivery:
With thrust bolt and protective cap

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.

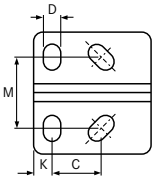
Ident. No. 010–040
Illustration may be different



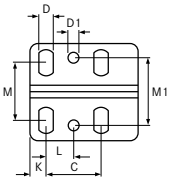




Ident. No. 005
Size 0



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 H (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 H1 (mm)		23	30	45	48.5	75
Length L1 (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
26215...	Ident. No.	005	010	020	030	040
		●	●	●	●	●

Prod. Gr. 260

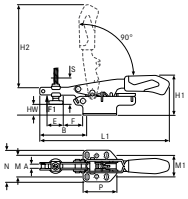
Horizontal clamp with variable clamping height

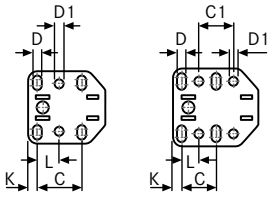
with open clamping arm and horizontal base

Application:
quick-action clamp with infinitely adjustable balancing function for workpieces with different clamping widths.

Execution:
- galvanised and passivated.
- ergonomic, oil-resistant handle with large hand rest and soft components.
- protection against the loss of the clamping screw on the end of the clamping arm.
- complete with zinc-plated clamping bolt
- size 20 clamping bolt M6 x 40 mm
- size 50 clamping bolt M8 x 39 mm
- size 70 clamping bolt M8 x 55 mm

Advantage:
- variable clamping height, for clamping different workpieces
- used for small lot sizes
- infinitely adjustable clamping force
- ergonomic 2 component handle
- protection against loss on clamping arm





Size		20	50	36-38
A (mm)		6	8.4	8.4
B (mm)		63	104	104
C (mm)		26	25.4	25.4
C1 (mm)		-	25.4	25.4
D (mm)		5.5	6.5	6.5
D1 (mm)		5.5	6.5	6.5
E (mm)		22	35	35
F (mm)		26	22	50
H (mm)		27	23	40.5
H1 (mm)		53	58.5	76.5
H2 (mm)		111	158	158
HW max. (mm)		14	6	24
HW min. (mm)		-6.5	-8.5	-6.5
I (mm)		10	13	13
K (mm)		5.3	6.3	6.3
L (mm)		12.7	12.7	12.7
L1 (mm)		173	244	243
M min./max.		26-32 mm	32-44 mm	32-44 mm
M1 (mm)		28	38	38
N (mm)		42.5	57	57
P (mm)		45	63.5	63.5
F1 (kN)		2	3	3
S (mm)		20	35	35
26215...	Ident. No.	310	320	330
		●	●	●

Prod. Gr. 260

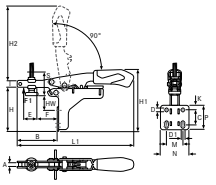
Horizontal clamp with variable clamping height

with open clamping arm and angular base

Application:
quick-action clamp with infinitely adjustable balancing function for workpieces with different clamping widths.

Execution:
- galvanised and passivated.
- ergonomic, oil-resistant handle with large hand rest and soft components.
- protection against the loss of the clamping screw on the end of the clamping arm.
- complete with zinc-plated clamping bolt
- size 20 clamping bolt M6 x 40 mm
- size 50 clamping bolt M8 x 55 mm

Advantage:
- variable clamping height, for clamping different workpieces
- used for small lot sizes
- infinitely adjustable clamping force
- ergonomic 2 component handle
- protection against loss on clamping arm



Size		20	50
A (mm)		6	8.4
B (mm)		56	85
C		20-26 mm	20.4-30.4 mm
D (mm)		5.6	6.5
D1 (mm)		5.6	6.5
E (mm)		22	35
F (mm)		24	37
H (mm)		68	88
H1 (mm)		94	124
H2 (mm)		113	168
HW max. (mm)		24	31
HW min. (mm)		-3	1
I (mm)		10	13
K (mm)		7.1	10.6
L1 (mm)		173	244
N (mm)		45	57
M (mm)		25.4	38.1
P (mm)		38	51
F1 (kN)		2	3
S (mm)		8	13
26213...	Ident. No.	110	120
		●	●

Prod. Gr. 260

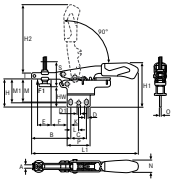
Horizontal clamp with variable clamping height

with open clamping arm and vertical base

Application:
quick-action clamp with infinitely adjustable balancing function for workpieces with different clamping widths.

Execution:
- galvanised and passivated.
- ergonomic, oil-resistant handle with large hand rest and soft components.
- protection against the loss of the clamping screw on the end of the clamping arm.
- complete with zinc-plated clamping bolt
- size 20 clamping bolt M6 x 40 mm
- size 50 clamping bolt M8 x 39 mm

Advantage:
- variable clamping height, for clamping different workpieces
- used for small lot sizes
- infinitely adjustable clamping force
- ergonomic 2 component handle
- protection against loss on clamping arm



Size	20
A (mm)	6
B (mm)	64
C (mm)	25.9
D (mm)	5.6
D1 (mm)	5.6
E (mm)	22
F (mm)	26
H (mm)	47
H1 (mm)	73
H2 (mm)	113
HW max. (mm)	34
HW min. (mm)	13
I (mm)	10
K (mm)	6
L (mm)	12.9
L1 (mm)	173
M min./max.	37-40 mm
M1 (mm)	39.8
N (mm)	21
O (mm)	3
P (mm)	38
F1 (kN)	2
S (mm)	20
26215... Ident. No.	610 ●

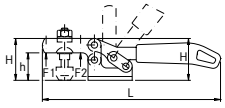
Prod. Gr. 260

ORION® Horizontal quick action clamps

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

Delivery:
With thrust bolt and protective cap



Size 0-1

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 H (mm)	10	25.4	23.5	36.5	38.1
Retention force F1 (N)	270	900	2500	2800	5000
Height H1 (mm)	18	38.1	37.5	56.5	58.1
Length L (mm)	79	142	189	279	279
26215... Ident. No.	805 ●	810 ●	820 ●	830 ●	840 ●

Prod. Gr. 264

AMF Horizontal quick action clamps
With open retaining arm and angular base

Application:
For quick and secure clamping on machine tables and appliances.

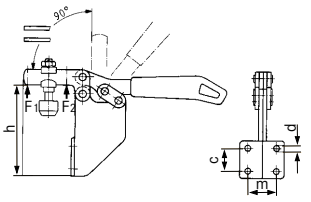
Execution:
- Galvanised and passivated
- With red oil-resistant plastic handle
- Case-hardened and lubricated bearing bushes
- Stainless steel rivet
- Ergonomic, oil-resistant handle with large hand rest and soft components
- Protection against the loss of the clamping screw on the end of the clamping arm

Delivery:
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 H (mm)		73	70
Retention force F1 (N)		1000	1800
Max. tensile force F2 (N)		1200	2500
Height H1 (mm)		94	86.5
Length L (mm)		162	206
Thumbscrew size		M6 x 35 mm	M8 x 45 mm
26216...	Ident. No.	020	030
		●	●

Prod. Gr. 260



Push rod clamp
Small angular base

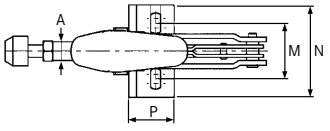
Application:
For quick and secure clamping on machine tables and appliances.

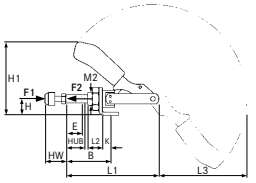
Execution:
- Compression and tension clamp with small angular base
- Individual parts galvanised
- Long push rod version
- Case-hardened and lubricated bearing bushes
- Ergonomic, oil-resistant handle with large hand rest and soft components.

Advantage:
- Handle can be adjusted at any angle to the base surface

Delivery:
With thrust bolt and protective cap

Notes:
Other models available. Detailed brochure on request.





Size		0	1	3
Hole spacing min/max m		-	16-19.5 mm	29.5-42.5 mm
Hole spacing m (mm)		16	-	-
d (mm)		4.5	4.5	6.5
Stroke (mm)		16	20	32
Retaining force (N)		800	1000	2500
Clamping height h (mm)		12	15	25
L1 (mm)		66.5	91	140
Angled base width k (mm)		6.5	7	13
H1 (mm)		49.3	60.5	108
Thumbscrew size		M4 x 20 mm	M4 x 20 mm	M8 x 35 mm
26217...	Ident. No.	005	010	030
		●	●	●

Prod. Gr. 260

Push rod clamp
Short type

Application:
For quick and secure clamping on machine tables and appliances.

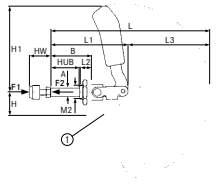
Execution:
- Compression and tension clamp - short model
- Galvanised and passivated
- Fitting screws tempered
- Long push rod version
- Case-hardened and lubricated bearing bushes
- With red oil-resistant plastic handle
- Rivet made of stainless steel
- Ergonomic, oil-resistant handle with large hand rest and soft components.

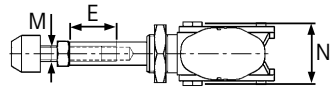
Delivery:
With tempered and galvanised thrust bolt

Notes:
Stainless steel version on request.

Ident. No. 020

Ident. No. 030–050





p. 861

Size		2	3	5
Stroke (mm)		26	32	40
Retaining force (N)		1000	2500	4000
Clamping height h (mm)		24	33	37
L1 (mm)		68.5	108	175
HW		17-25 mm	22-35 mm	30-50 mm
H1 (mm)		73	123	149
Thumbscrew size		M6 x 25 mm	M8 x 35 mm	M12 x 50 mm
26218...	Ident. No.	020	030	050
		●	●	●

Prod. Gr. 260

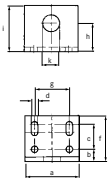
Stable angular base

Accessories push rods tensioner

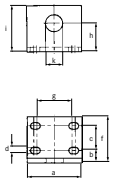
Application:
For securing the push rod clamp.

Execution:
- Enhances areas of application thanks to greater clamping height
- For installation in fixtures
- Attachment using 4 screws

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	41	45
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
Min./max. hole spacing c		11-18 mm	-	-
Hole spacing g (mm)		40	44	60
26218...	Ident. No.	520	530	550
		●	●	●

Prod. Gr. 260

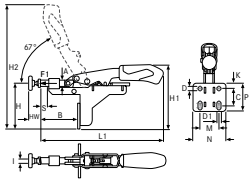
Push rod clamp with variable clamping height

with angular base

Application:
quick-action clamp with infinitely adjustable balancing function for workpieces with different clamping widths.

Execution:
- galvanised and passivated.
- ergonomic, oil-resistant handle with large hand rest and soft components.
- protection against the loss of the clamping screw on the end of the clamping arm.
- complete with zinc-plated clamping bolt
- size 15 clamping bolt M6 x 29mm
- size 25 clamping bolt M8 x 38mm

Advantage:
- variable clamping height, for clamping different workpieces
- used for small lot sizes
- infinitely adjustable clamping force
- ergonomic 2 component handle
- protection against loss on clamping arm



Size	15	25
A (mm)	8.5	11.8
B	42-51 mm	58-83 mm
C	20-26 mm	22-32 mm
D (mm)	5.6	6.5
D1 (mm)	5.6	6.5
E (mm)	20	27
H (mm)	66	84
H1 (mm)	91	119
Stroke (mm)	9	25
H2 (mm)	173	244
I	M6	M8
K (mm)	7.1	10.6
L1 (mm)	167	236
N (mm)	45	57
M (mm)	25.4	38.1
P (mm)	38	51
F1 (kN)	2	3
S (mm)	8	25
Maximum height compensation (mm)	13	35
26217... Ident. No.	115	120
	●	●

Prod. Gr. 260

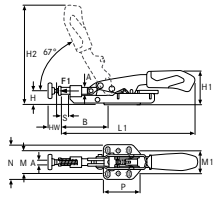
Push rod clamp with variable clamping height

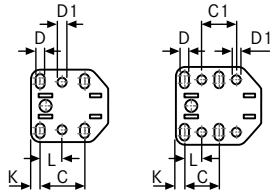
With horizontal base

Application:
quick-action clamp with infinitely adjustable balancing function for workpieces with different clamping widths.

Execution:
- galvanised and passivated.
- ergonomic, oil-resistant handle with large hand rest and soft components.
- protection against the loss of the clamping screw on the end of the clamping arm.
- complete with zinc-plated clamping bolt
- size 15 clamping bolt M6 x 29mm
- size 25 clamping bolt M8 x 38mm

Advantage:
- variable clamping height, for clamping different workpieces
- used for small lot sizes
- infinitely adjustable clamping force
- ergonomic 2 component handle
- protection against loss on clamping arm





Size	15	25
A (mm)	8.5	11.8
B	50-59 mm	67-92 mm
C (mm)	26	25.4
C1 (mm)	-	25.4
D (mm)	5.5	6.5
D1 (mm)	5.5	6.5
H (mm)	17.5	23
H1 (mm)	42	59
H2 (mm)	124	170
I	M6	M8
K (mm)	5.3	6.3
L (mm)	12.7	12.7
L1 (mm)	167	236
M min./max.	26-32 mm	32-44 mm
M1 (mm)	28	38
N (mm)	42.5	57
P (mm)	45	63.5
26217... Ident. No.	215	220
	●	●

Prod. Gr. 260

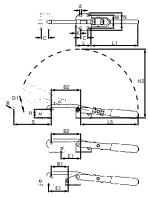
Pull clamps (under tension)

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



p. 863

Size		1	3	5
Max. tensile force (kN)		2	3	5
Height H2 (mm)		111	181	282
Length l1 (mm)		148	242	320
L (mm)		31	40	55
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	26-40 mm
Min./max. clamping width 2 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
Length of extension arm L5 (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
Max. adjustment range (mm)		8	12	14
26219...	Ident. No.	**110**	**130**	**150**
		●	●	●

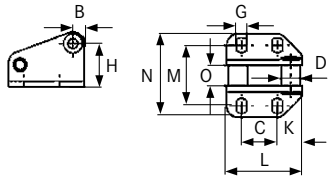
Prod. Gr. 260

Retainer for pull clamp (under tension)

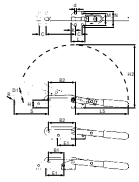
Accessories for no. 26219 110-150

Execution:
- Stainless steel rivet

Counter holder



Counter holder



Size		1	3	5
Distance between centre and drill hole B (mm)		6	6	12
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
26219...	Ident. No.	**210**	**230**	**250**
		●	●	●

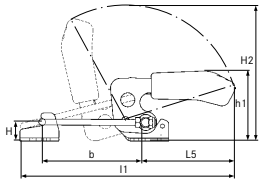
Prod. Gr. 260

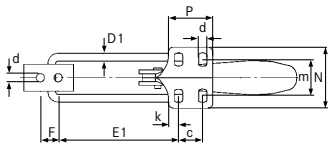
Horizontal pull clamp

Complete with retainer

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	135.5	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
26219...	Ident. No.	310	320	330
		●	●	●

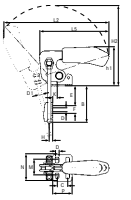
Prod. Gr. 260

Vertical pull clamp

Complete with retainer

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
26219...	Ident. No.	410	420	430
		●	●	●

Prod. Gr. 260

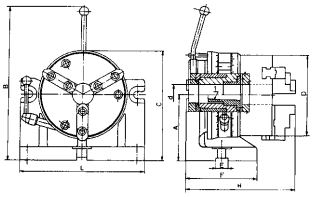
Dividers

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°

Delivery:
Divider with 3-jaw chuck made of cast iron with sliding blocks

Notes:
Delivered ex-works, postage and packaging excluded.



Point height (mm)		200
Dividing device height C (mm)		330
Locking arm height B (mm)		469
Lathe chuck Ø D (mm)		250
Through-bore d (mm)		76
Basic body width F (mm)		180
Width H (mm)		256
Length L (mm)		340
For groove width E (mm)		18
Morse taper size		MK 4
Weight (kg)		86.5
25124...	Ident. No.	200
		●+

Prod. Gr. 270

grinding and control vices, type PLF

Actuation via hexagon socket key

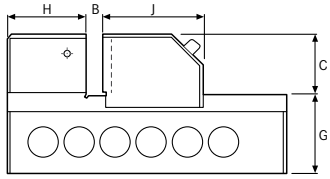
Application:
For horizontal, vertical and lateral grinding, inspection and eroding tasks.

Execution:
- Made of alloyed tool steel
- Hardened and precision-ground
- with pull-down effect
- Ground horizontal and vertical vee block
- Quick adjustment
- Perpendicularity tolerance 0.005 mm/100 mm (base area to fixed jaw clamping surfaces)
- Ref. no. 010- 030 parallelism tolerance 0.005 mm/100 mm (base area to upper guide plate)

Notes:
Type PLF with clamping screw on upper side

Ident. No. 020–030

Ident. No. 010



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
C (mm)		25	32	45
G (mm)		25	35	45
B (mm)		65	100	125
Height (mm)		50	67	90
Body length (mm)		140	190	245
28600...	Ident. No.	**010**	**020**	**030**
		●	●	●

Prod. Gr. 202

grinding and control vices, type PL-S

Actuation via hexagon socket key

Application:
For horizontal, vertical and lateral grinding, inspection and eroding tasks.

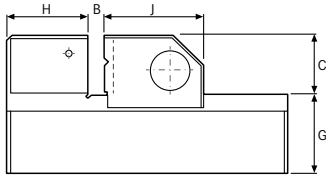
Execution:
- Made of alloyed tool steel
- Hardened and precision-ground
- With quick adjustment
- Perpendicularity tolerance 0.005 mm/100 mm (base area to fixed jaw clamping surfaces)
- ref. no. 110- 150 parallelism tolerance 0.005 mm/100 mm (base area to upper guide plate)
- ref. no. 110-120, type PL-S MICRO, ref. no. 130-150, type PL-S

Ident. No. 110

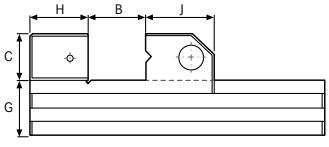
Ident. No. 120

Ident. No. 130

Ident. No. 140–150



Ident. No. 110–120



Ident. No. 130–150

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
C (mm)		15	20	30	40	40
G (mm)		20	25	32	40	50
B (mm)		25	50	80	120	150
Height (mm)		35	45	62	80	90
H (mm)		20	25	33	40	60
J (mm)		25	35	45	50	70
Body length (mm)		75	110	160	210	280
28600...	Ident. No.	**110**	**120**	**130**	**140**	**150**
		●	●	●	●	●

Prod. Gr. 202

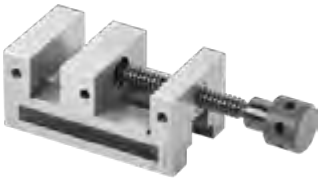
grinding and control vices, type PL-G

Actuation via trapezoidal spindle

Application:
For horizontal, vertical and lateral grinding and inspection tasks.

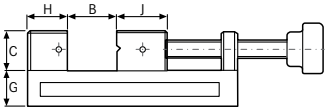
Execution:
- Made of alloyed tool steel
- Hardened and precision-ground
- Perpendicularity tolerance 0.005 mm/100 mm (base area to fixed jaw clamping surfaces)
- Ref. no. 060- 088 parallelism tolerance 0.002 mm/100 mm (base area to upper guide plate)
- Horizontal and vertical ground vee block
- Perpendicularity tolerance 0.005 mm/100 mm (base area to fixed jaw clamping surfaces)
- ref. no. 110- 150 parallelism tolerance 0.005 mm/100 mm (base area to upper guide plate)

Notes:
Mini precision vices, no. 47000



Ident. No. 060, 088
Ref. no. 28604060

Ident. No. 073
Ref. no. 28604073



Model		PL-G 60	PL-G 73	PL-G 88
Prism countersunk horizontally and vertically		Yes	Yes	Yes
Jaws width (mm)		60	73	88
C (mm)		25	35	40
G (mm)		25	32	48
B (mm)		55	100	125
Height (mm)		50	74	88
H (mm)		25	33	40
J (mm)		33	45	50
Body length (mm)		110	210	250
28604...	Ident. No.	060	073	088
		●	●	●

Prod. Gr. 202

Precision sine bar vices

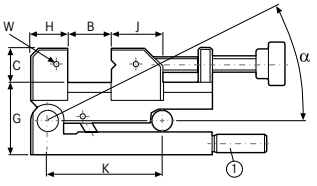
Actuated via trapezoidal spindle

Application:
For grinding and inspection tasks.

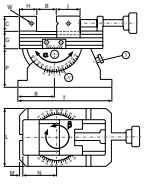
Execution:
- Made of alloyed tool steel
- Hardened and precision-ground
- Precise angular adjustment achieved using gauge blocks (see no. 32050 onwards)
- drawing „W“= 2 x M5x15
- **Ident. No. 010–020:**
  - Squareness tolerance 0.005 mm/100 mm and parallelism tolerance 0.002 mm/100 mm
  - angular deviation at 45° ± 15“
  - 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

Advantage:
- **Ident. No. 100:** 2-dimensional angle setting
- and rotatable 360°

Ident. No. 010–020



Ident. No. 010–020



Ident. No. 100

Model		PS-SV 70	PS-SV 90	PS-ZD 70
Prism countersunk horizontally		Yes	Yes	Yes
Jaws width (mm)		70	90	70
C (mm)		30	40	30
G (mm)		63	73	32
B (mm)		80	120	80
Height (mm)		93	113	137
H (mm)		33	40	33
J (mm)		45	50	45
L (mm)		-	-	110
Body length (mm)		160	210	160
M (mm)		-	-	5
N (mm)		-	-	65
K (mm)		100	150	-
Base body length (mm)		-	-	180
β (Degree)		-	-	360
Winkel α		0-46 Degree	0-46 Degree	0-120 Degree
28620...	Ident. No.	010	020	100
		○	○	○

Prod. Gr. 202

ATORN® Quick-action clamping drill vices

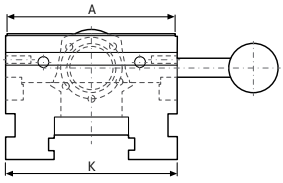
Application:
For quick and safe clamping, in particular for workpiece series machining; can be used with guide rails; clamping on base and side; also suited for light milling tasks.

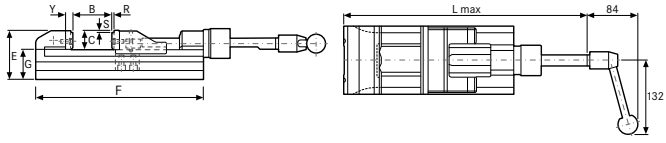
Execution:
- One-handed operation
- Special cast iron body
- Flat and sturdy design

- Max. clamping force 10 kN
- Positive locking engagement
- Large clamping range

Advantage:
- Quick jaw adjustment and clamping with just one lever

Delivery:
Vice incl. guide rails and fastening material.





Clamping with guide rail

Clamping with clamping brackets

Clamping with clamping brackets, laterally

A (mm)	B (mm)	C (mm)	Y (mm)	F (mm)	Max. length (mm)	K (mm)	G (mm)	E (mm)	Weight (kg)	28671... Ident. No.	
110	130	32	12	280	465	112	50	82	12.5	110	●
135	160	40	16	328	545	137	50	90	19	135	●

Prod. Gr. 280

ORION® Electronic drills 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

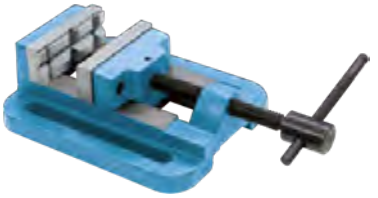
Jaws width (mm)	Clamping width (mm)	Jaws height (mm)	Max. length (mm)	Body width (mm)	Body height (mm)	Chip flute width (mm)	Min. flute spacing (mm)	Max. flute spacing (mm)	Weight (kg)	28665... Ident. No.	
60	70	25	160	130	47	9	90	105	2.5	060	●
80	80	25	190	150	52	9	110	125	4	080	●
100	115	30	240	200	67	12	145	160	9	100	●
120	155	40	300	230	82	12	180	195	16	120	●
150	185	45	355	260	100	15	200	215	24	150	●

Prod. Gr. 282

ORION® drilling hand 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

Ident. No. 200

Jaws width (mm)	Clamping width (mm)	Vice width (mm)	Jaws height (mm)	Base body length (mm)	Body length (mm)	Height (mm)	Clamping flute length (mm)	Chip flute width (mm)	Weight (kg)	28660... Ident. No.	
63	65	105	25	125	125	43	53	12.5	-	063	●
80	85	142	30	142	-	64	72	14	5	085	●
100	92	150	30	150	170	65	163	14	7	100	●
120	110	176	30	176	222	63	190	14	11	120	●
140	150	220	40	220	300	85	225	14	12.5	140	●
100	93	155	30	155	185	63	45	15	-	200	●

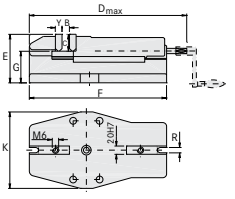
Prod. Gr. 282

RS machine vices
Manual mechanical clamping system without power intensifier

Application:
For drilling and milling.

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
- For matching swivel bases, see no. 28881
- Vice body and swivel base have 20H7 longitudinal slots for precision alignment

Notes:
Transverse grooves on request



A (mm)		113	135	160	200
B (mm)		105	125	145	185
C (mm)		31.6	39.6	49.6	62.6
Y (mm)		12	16	16	20
F (mm)		300	365	410	460
Max. length (mm)		423	510	575	675
G (mm)		58	64	70	82
E (mm)		90	104	120	145
K (mm)		160	200	240	280
R (mm)		14	14	18	22
28710...	Ident. No.	110	135	160	200
		●	●	●+	(○)+

Prod. Gr. 203

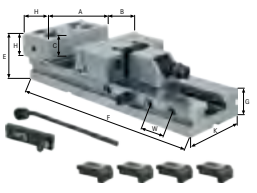
p. 880 p. 870 p. 871 p. 889 p. 891

MSR machine vices
Manual mechanical clamping system without power intensifier

Application:
For milling machines and machining centres.

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
- Rough adjustment of clamping range using rigging pins
- 4 adjustable clamps are required for optimal clamping

Delivery:
With spanner, workpiece limit stop and 4 adjustable clamps. With draw-down jaws



p. 880 p. 870 p. 871 p. 889 p. 891

A (mm)	B (mm)	C (mm)	F (mm)	G (mm)	E (mm)	W (mm)	K (mm)	Max. tension force (kN)	Clamping repeatability (mm)	Weight (kg)	28720... Ident. No.	
125	150	32	345	40	80	50	95	30	0.02	12.7	120	●
150	300	40	520	50	100	50	125	50	0.02	29.5	150	●+

Prod. Gr. 203

Adjustable clamps

For MSR machine vices

Application:
For milling machines and machining centres.

Execution:
- Made of alloyed steel
- 4 adjustable clamps are required for optimal clamping

Delivery:
With sliding block, 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
28722...	Ident. No.	112	114	116	118	212	214	216	218
		●	●	○	●	○	○	●	●

Prod. Gr. 203

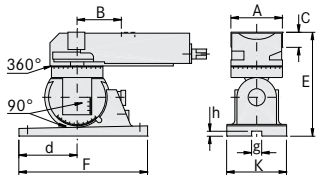
Machine vice

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.

Execution:
- More intensive machining also possible
- Guides and spindles are largely protected against swarf
- groove width g 20H7

Advantage:
- High stability and vibration-free work assured



p. 889 p. 891 p. 890

A (mm)	B (mm)	C (mm)	F (mm)	K (mm)	E (mm)	d (mm)	h (mm)	28745... Ident. No.	
80	80	25	235	116	163	112	6	080	●

Prod. Gr. 2AF

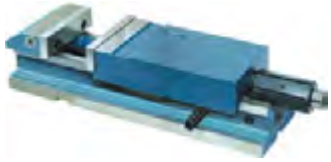
High-pressure machine vices

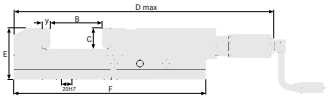
Mechanical/hydraulic

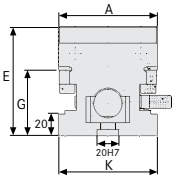
Application:
For individual and series production on drilling and milling machines.

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
- Rough adjustment of clamping range using rigging pins
- Pretensioning facility for elastic parts (stacked mounting)
- Guideways hardened and polished

Delivery:
With 1 set of standard jaws (1 side smooth, 1 side grooved) and hand crank.







p. 880 p. 870 p. 871 p. 889 p. 891

A (mm)		90	125
Min./max. clamping width		0-150 mm	0-220 mm
C (mm)		39.6	39.6
Y (mm)		15.6	15.6
G (mm)		59	70
E (mm)		99	112
F (mm)		370	460
Tension force (kN)		25	40
28832...	Ident. No.	092	127
		●	●+

Prod. Gr. 281

RB-K high-pressure machine vices

Mechanical/hydraulic

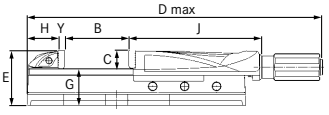
Application:
For individual and series production on drilling and milling machines.

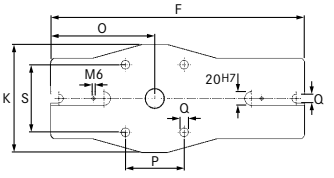
Execution:
- Mechanical-hydraulic clamping system with mechanical pretensioning via hand crank
- Clamping force can be pre-set via limit stop
- Body made from steel
- Bolt system for rapid clamping range adjustment
- Clamping repeatability of 0.01 mm with constant clamping force
- Guideways hardened and polished
- Jaw width 113, 135 and 160 mm die-forged and jaw width 200 mm made from ductile graphite iron
- Used on graduated swivel plates
- Encapsulated spindle

Advantage:
- Incremental pre-set clamping force
- High wear resistance thanks to hardened jaw guides
- Optimum coolant and chip flow
- Can be used without power reinforcement for delicate clamping tasks

Delivery:
With 1 set of standard jaws (1 side smooth, 1 side grooved) and hand crank.

Notes:
Vices with jaw width 250 and 315 on request.






p. 880

p. 870

p. 871

p. 889

p. 891

A (mm)		92	113	135	160	200
Min./max. clamping width		0-100 mm	0-170 mm	0-220 mm	0-310 mm	0-350 mm
C (mm)		31.6	31.6	39.6	49.6	66.6
Y (mm)		12	12	16	16	20
G (mm)		59	65.5	72.5	83.5	104.5
E (mm)		91	97	112	133	171
F (mm)		310	390	468	574	685
S (mm)		100	100	135	180	180
P (mm)		90	90	90	90	160
H (mm)		50	55	70	80	90
J (mm)		218	236.5	262	298	375
Q (mm)		13	13	13	17	21
K (mm)		160	160	200	240	280
Tension force (kN)		25	30	40	50	100
28880...	Ident. No.	301	302	303	304	305
		○	○	(○)+	(○)+	(○)+

Prod. Gr. 203

SGN normal jaw

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
28885...	Ident. No.	010	035	060
		○	●	○

Prod. Gr. 203

SPR vee block jaw

Jaws, screw-on type

Application:
Accessories for high-pressure machine vices, no. 28880.

Execution:
- Hardened and polished
- For combination with normal jaw
- With vertically and horizontally ground prisms

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
28886...	Ident. No.	110	135	160
		○	●	○

Prod. Gr. 203

High-pressure machine vices

Mechanical clamping system, mechanical with power transmission

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
- incl. clamping nipple bore (pitch 200mm) for
- ATORN zero point clamping system

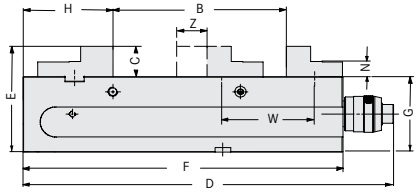
Advantage:
- Chip guard prevents chips penetrating inside the body
- Largely maintenance-free

Delivery:
With stepped jaws and regulator

Notes:
Angled gear on request. Delivered ex-works, postage and packaging excluded.

See image for scope of delivery, with stepped jaws and regulator

Reverse stepped jaws for larger clamping width



p. 880 p. 881 p. 881 p. 880

A (mm)		125	160
Min./max. clamping width		0-216 mm	0-320 mm
Min./max. clamping width for reversible step jaws		97-312 mm	131-451 mm
C (mm)		40	50
F (mm)		400	530
G (mm)		100	115
Max. length (mm)		463	618
E (mm)		140	165
Travel stroke of gate valve (mm)		109	117
Offset range 2		1 x 108 mm	2 x 102.5 mm
Tension force (kN)		40	60
28874...	Ident. No.	125	160
		●+	●+

Prod. Gr. 280

ATORN® High-pressure clamp MH-S 125

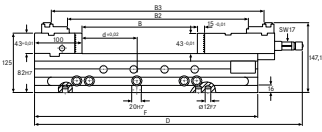
Mechanical/hydraulic

Application:
Vice for precision clamping, with a sliding clamp against a fixed jaw with mechanical/hydraulic power transmission of up to 40 kN.

Execution:
- Spindle made of high-strength special steel
- Basic body, fixed jaw, jaws made of case-hardening steel, hardened on all sides
- Transverse grooves for fast positioning and alignment
- Grooves and mounting threads for holding attachment stepped jaws and (grip) insert
- Use of pull-down quick-change jaws possible
- Use of rhomboid T-sliding blocks and interchangeable slides for multiple clamping possible – installation without tools
- Lateral threads for workpiece stop
- 470-mm bed length can be laterally inverted
- 470-mm bed length can be laterally inverted
- Side mounting holes for bed length 470 mm

Advantage:
- The pre-selected clamping forces enable a workpiece positioning repeat accuracy of ≤ 0.01 mm
- The clamping force can be preselected by the number of spindle rotations
- Spindle mechanically lockable for purely mechanical clamping
- Fast presetting, rigging pin for fast prepositioning of clamping width

Delivery:
with 2 reversible screw jaws (1 side with longitudinal and transverse grooves, 1 side smooth), hand crank, hexagonal, two pieces




p. 873

p. 873

p. 874

p. 874

p. 875

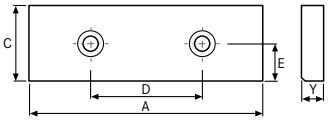
p. 875

Jaws width (mm)	125	125	125	125	125	125	125	125
B	0-239 mm	0-303 mm	0-367 mm	0-431 mm	0-495 mm	0-559 mm	0-623 mm	0-687 mm
B2 (mm)	377	441	505	569	633	697	761	825
Clamping width of attachment step jaws 2 (mm)	445	509	573	637	701	765	829	893
F (mm)	470	534	598	662	726	790	854	918
D (mm)	564	628	692	756	820	884	948	1012
Section (mm)	16	16	16	16	16	16	16	16
Weight (kg)	37.6	41.7	45.1	48.5	51.9	55.3	58.7	62.1
28858... Ident. No.	**001**	**002**	**003**	**004**	**005**	**006**	**007**	**008**
	●	○	○	●	○	○	○	○

Prod. Gr. 280

ATORN® Screw-in jaws for MH-S

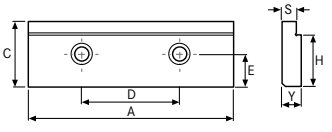
accessories for MH-S125 28858001-008



Ident. No. 010

Ref. no. 10

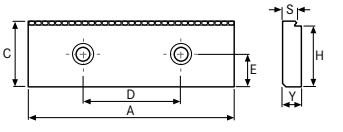
Ident. No. 011



Ident. No. 011

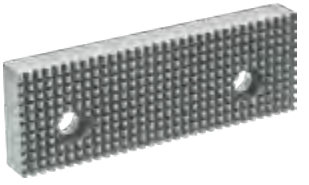
Ref. no. 11

Ident. No. 012

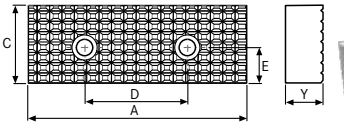


Ident. No. 012

Ref. no. 12



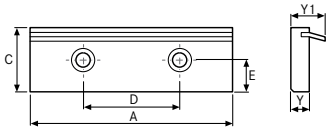
Ident. No. 020



Ident. No. 020

Ref. no. 20

Ident. No. 021



Ident. No. 021

Ref. no. 21

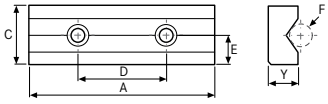
A (mm)	C (mm)	Y (mm)	Y1 (mm)	D (mm)	E (mm)	H (mm)	S (mm)	28858... Ident. No.	
125	43.4	15.4	-	80	16	-	-	010	●
125	43	11.5	-	80	16	35	8.5	011	●
125	43	11.5	-	80	16	40	8.5	012	●
125	43	15	-	80	16	-	-	020	○
125	43	11.5	21.5	-	-	-	-	021	○

Prod. Gr. 280

ATORN® Prism jaws for MH-S

accessories for MH-S125 28858001-008

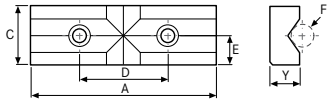
Ident. No. 013
Horizontal prism jaw



Ident. No. 013

Ref. no. 013

Ident. No. 014
Prism jaw horizontal and vertical



Ident. No. 014

Ref. no. 014

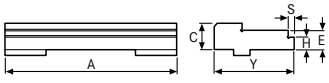
A (mm)	C (mm)	Y (mm)	D (mm)	E (mm)	F	Horizontal 28858... Ident. No.		vertical/ horizontal 28858... Ident. No.	
125	43	20	80	16	8-38 mm	013	○	014	●

Prod. Gr. 280

ATORN® Stepped jaws attachment for MH-S

Accessories for the 28858001-008

Ident. No. 030

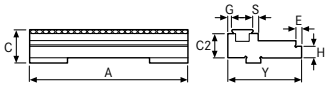


Ident. No. 030

Ident. No. 031

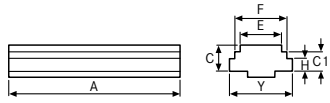
Ref. no. 30

Ref. no. 31



Ident. No. 031

Ident. No. 040



Ident. No. 040

A (mm)	D (mm)	Y (mm)	C (mm)	H (mm)	E (mm)	S (mm)	G (mm)	28858... Ident. No.	
125	-	58	19	9	14	4	-	030	●
125	-	58	26.1	9	4	4	3	031	●
124.9	105	-	-	9	13.5	4	-	040	●

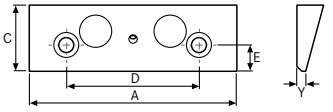
Prod. Gr. 280

ATORN® hardened and ground pull-down quick-change jaws

accessories for MH-S125 28858001-008

Application:
plain jaw with permanent magnets 28858042 is the basic jaw for the pull-down quick-change jaws 2858043-047.

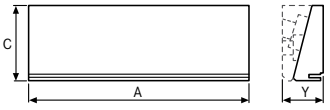
Ident. No. 042



Ident. No. 042

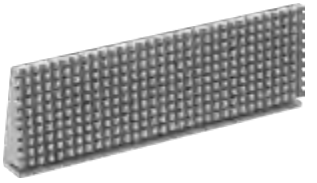
Ref. no. 42

Ident. No. 043



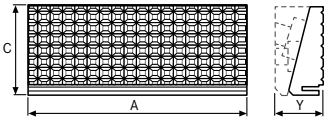
Ident. No. 043

Ref. no. 43



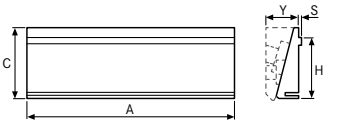
Ident. No. 044

Ref. no. 44



Ident. No. 044

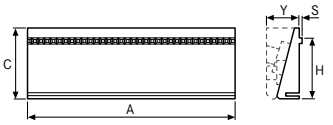
Ident. No. 045



Ident. No. 045

Ref. no. 45

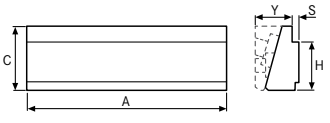
Ident. No. 046



Ident. No. 046

Ref. no. 46

Ident. No. 047



Ident. No. 047

Ref. no. 47

A (mm)	C (mm)	Y (mm)	D (mm)	E (mm)	H (mm)	S (mm)	28858... Ident. No.	
125	43	6	80	16	-	-	042	●
125	43	21.5	-	-	-	-	044	●
125	43	21.5	-	-	37	2	046	●
125	43	26.9	-	-	33	4	047	●

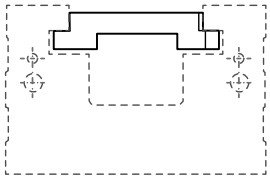
Prod. Gr. 280

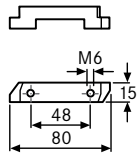
ATORN® Rhombus T-sliding blocks

accessories for MH-S125 28858001-008

für Backenbreite (mm)	Height (mm)	Width (mm)	Hole distance (mm)	28858... Ident. No.	
125	15	80	48	050	●

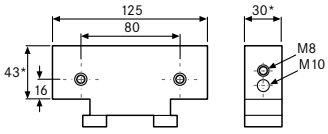
Prod. Gr. 280





ATORN® interchangeable slide for MH-S

accessories for MH-S125 28858001-008



Ref. no. 41

A (mm)	Jaws thickness (mm)	Jaws height (mm)	28858... Ident. No.	
125	30	43	041	●

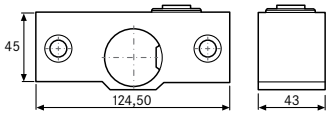
Prod. Gr. 280

ATORN® angle drive for MH-S

accessories for MH-S125 28858001-008

Image, see scope of delivery, ref. no. 28858 055

Hand crank not included in scope of delivery.



Length (mm)	Width (mm)	Height (mm)	28858... Ident. No.	
124.5	43	45	055	●

Prod. Gr. 280

ROEMHELD HILMA ▪ STARK NC high-pressure machine vices

Mechanical/hydraulic

Application:
Particularly suitable for use on vertical machining centres, in tool manufacture, mould making and jig manufacturing, and in production.

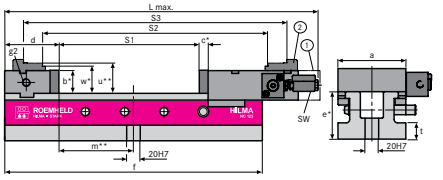
Execution:
- Mechanical-hydraulic clamping system
- design with clamping force display allows continuous, precise clamping force introduction
- Body made from steel
- Rough adjustment of clamping range via rigging pins, fine adjustment with hand crank
- Clamping repeatability of 0.01 mm with constant clamping force
- Guideways hardened and polished

Advantage:
- Spindle and power transmission integrated into sliding body for protection
- Tapped holes on both sides on the fixed jaw for precision limit stops
- Longitudinal or transverse groove for quick positioning 20 H7

Delivery:
Supplied with interchangeable hardened jaws (1 side smooth, 1 side grooved) and with hand crank.

Notes:
On request: Version with clamping force display (actual value display).
hydraulic/hydraulic clamping system, actuated via hydraulic unit available on request.

Image with clamping force display



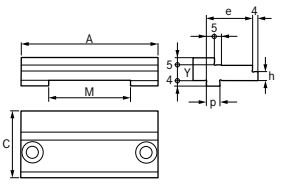
a (mm)		100	125	160
Min./max. clamping width S1		0-205 mm	0-225 mm	0-309 mm
Min./max. Clamping width of attachment step jaws S2 (mm)		330	363	503
Clamping width of attachment step jaws S3 (mm)		386	431	573
c (mm)		13	15	18
e (mm)		70	82	95
f (mm)		380	430	550
L max. (mm)		464	526	684
b* (mm)		34	45	54
w* (mm)		40	53	65
u** (mm)		45	58	70
t (mm)		24	27	27
Thread dimension g2		M12	M12	M20
d (mm)		80	100	120
m ** (mm)		110	115	155
Width across flats		14 mm	17 mm	19 mm
Tension force (kN)		25	40	50
Clamping repeatability (mm)		0.01	0.01	0.01
Weight (kg)		18.5	31.5	58.5
28848...	Ident. No.	**101**	**126**	**161**
		○	●+	●+

Prod. Gr. 283

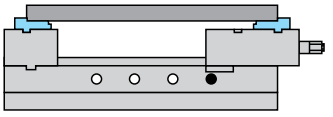
ROEMHELD HILMA ▪ STARK Interchangeable stepped jaws

Accessories for no. 28848

Application:
To achieve greater clamping ranges by mounting on carriages and fixed jaws.



Delivery:
Including fastening screws.



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A (mm)	Suitable for	C (mm)	Max. clamping width of attachment step jaws 3 (mm)	Y (mm)	e (mm)	h (mm)	m (mm)	Nominal slot size (h6) (mm)	Max. clamping width of attachment step jaws 3 (mm) 386 28848... Ident. No.		431 28848... Ident. No.		573 28848... Ident. No.	
100	Carriage	48	386	11.5	34	6	60	10	310	○	-	-	-	-
100	Fixed jaws	48	386	11.5	34	6	-	10	311	○	-	-	-	-
125	Carriage	58	431	14	40	6	65	12	-	-	320	●	-	-
125	Fixed jaws	58	431	14	40	6	-	12	-	-	321	●	-	-
160	Carriage	64	573	17	43	6	88	18	-	-	-	-	330	●
160	Fixed jaws	64	573	17	43	6	-	18	-	-	-	-	331	●

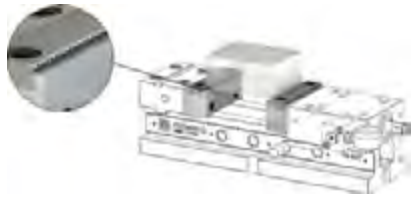
Prod. Gr. 283

ROEMHELD HILMA ▪ STARK Clamping strip with interchangeable insert, grip

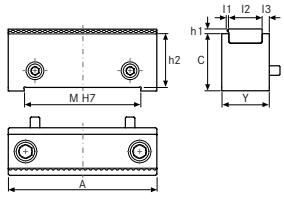
Accessories for Hilma NC ref. no. 28848

Application:
the use of teeth for grip means workpieces can be securely clamped

with significantly increased holding forces.
preferably use in machine vice no. 28848
with clamping force display



A (mm)		100	125	160
Y (mm)		34	40	46
C (mm)		37	48	57
h2 (mm)		34	45	54
M H7 (mm)		78	98	125
h1 (mm)		4	4	6
l1 (mm)		1.5	1.5	1.5
l2 (mm)		22	28	34
l3 (mm)		6	6	6
28848...	Ident. No.	501 ○	502 ○	503 ○



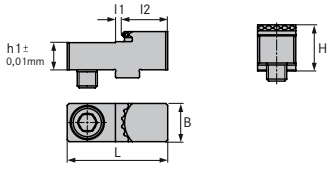
Prod. Gr. 283

ROEMHELD HILMA ▪ STARK Interchangeable insert for fixed jaw and slide

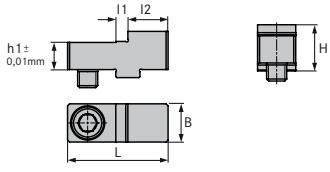
Accessories for Hilma NC ref. no. 28848

Application:
Replaceable inserts for slide and fixed jaw. the use of interchangeable inserts with gripper teeth

or cemented carbide significantly increases the clamping forces on the workpiece.



Ident. No. 521–523
No. 521-523 grip



Ident. No. 526–528
No. 526-528 cemented carbide coating

Type		grip	grip	grip	Cemented carbide coating	Cemented carbide coating	Cemented carbide coating
Suitable for jaw width (mm)		100	125	160	100	125	160
B (mm)		15	19	28	15	19	28
H		16.5 mm	19 mm	22 mm	16.5 m	19 mm	22 mm
h1 (mm)		11.5	14	17	11.5	14	17
L (mm)		40	50	60	40	50	60
l1 (mm)		3	3	6	5	6	7
l2 (mm)		18	23	22	15	20	24
28848...	Ident. No.	521 ○	522 ○	523 ○	526 ○	527 ○	528 ○

Prod. Gr. 283

ROEMHELD HILMA ▪ STARK EL high-pressure machine vices

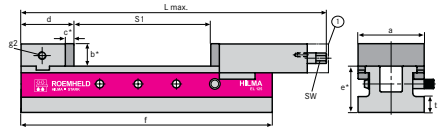
Mechanical/hydraulic

Application:
For tool manufacture, mould making and jig manufacturing, and in production.

Execution:
- Mechanical-hydraulic clamping system with hand crank
- Infinitely adjustable clamping force or pre-selectable with clamping force pre-selector (accessory)
- Body made from steel
- Guideways hardened and polished
- Rough adjustment of clamping range via rigging pins,
- fine adjustment with hand crank
- 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 workpiece stop

Delivery:
Supplied with interchangeable hardened jaws (1 side smooth, 1 side grooved) and with hand crank.



p. 889 p. 891 p. 878 p. 879 p. 878 p. 890

a (mm)		100	125	160
Min./max. clamping width S1		0-205 mm	0-225 mm	0-309 mm
c (mm)		13	15	18
e (mm)		70	82	95
f (mm)		380	430	550
L max. (mm)		464	526	684
b* (mm)		34	45	54
t (mm)		24	27	27
Thread dimension g2		M12	M12	M20
Width across flats		14 mm	17 mm	19 mm
Tension force (kN)		25	40	50
Clamping repeatability (mm)		0.01	0.01	0.01
e (mm)		114	127	140
28862...	Ident. No.	**101**	**126**	**161**
		●	●+	●+

Prod. Gr. 283

ROEMHELD HILMA ▪ STARK Q.I.S plain jaws

with permanent magnets for no. 28848 and 28862

Application:
for mounting quick-change low-tension interchangeable jaws

A (mm)		100	125	160
C (mm)		34	45	54
28849...	Ident. No.	**100**	**125**	**160**
		○	●	●

Prod. Gr. 283

p. 878

ROEMHELD HILMA ▪ STARK Q.I.S. replacement jaw

accessories for plain jaws no. 28849

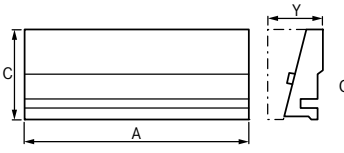
Application:
No. 28850: For clamping workpieces whose surfaces are to be protected from damage.
No. 28853: For clamping workpieces without underlay.

Execution:
- **No. 28850:** Interchangeable jaw, smooth
- **No. 28853:** Interchangeable jaw with step

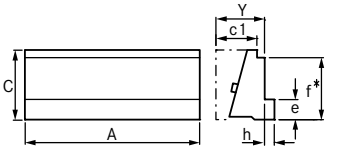
Notes:
additional replacement jaws on request.

No. 28850
No. 28850

No. 28853
No. 28853



No. 28850



No. 28853

A (mm)	Jaw design	c1 (mm)	C (mm)	Y (mm)	h (mm)	e (mm)	f (mm)	28850... Ident. No.		28853... Ident. No.	
100	Smooth	-	34	21	-	-	-	**100**	○	-	-
125	Smooth	-	45	26	-	-	-	**125**	●	-	-
160	Smooth	-	54	31	-	-	-	**160**	●	-	-
100	With steps	21	34	25	4	10	29	-	-	**100**	○
125	With steps	26	45	30	5	13	39	-	-	**125**	●
160	With steps	31	54	35	5	15	45	-	-	**160**	●

Prod. Gr. 283

ROEMHELD HILMA ▪ STARK Adjustable clamps

For no. 28848, 28862

Application:
For mechanical attachment of various fixed bodies.

Delivery:
4 pieces in set, adjustable clamp with screws

Jaws width (mm)		100	125	160
Height (mm)		24	27	27
Suitable cheese-head screw DIN 912		M12 x 45 mm	M12 x 45 mm	M16 x 50 mm
28857...	Ident. No.	**010**	**025**	**060**
		○	●	●

Prod. Gr. 283

kesel Vee block jaw

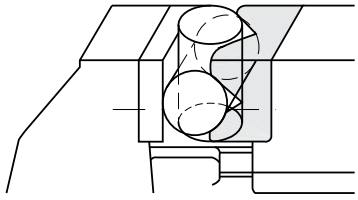
accessories for high pressure machine vices no. 28812

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
Thickness (mm)		28	32
Height (mm)		39.2	49.2
28833...	Ident. No.	**125**	**160**
		●	○

Prod. Gr. 2AF



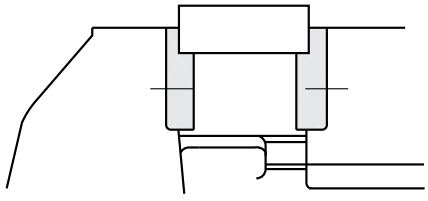
kesel Stepped jaws

accessories for high pressure machine vices no. 28812

Application:
For clamping parallel workpieces without supports.

Jaws width (mm)		125	160
Step height (mm)		6	8
Step depth (mm)		3	5
Thickness (mm)		12	16
Height (mm)		39.2	49.2
28834...	Ident. No.	**125**	**160**
		●	○

Prod. Gr. 2AF



RKE high-pressure machine vice

Application:
For NC machines, machining centres in tool manufacture, mould making jog manufacturing and serial production.

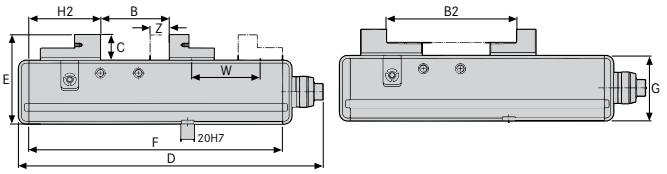
Execution:
- Sturdy steel basic body
- All guides are hardened and polished on all sides
- Central grease nipple for simple lubrication of guides and spindle thread
- Functional surfaces polished
- Drive spindle with preset clamping force via stop
- Clamping surface for adjustable clamps
- Clamping repeatability of 0.01 mm with constant clamping force
- Can be clamped horizontally, laterally and (with a base plate) vertically
- **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 protection prevents chips penetrating inside the body

Delivery:
RKE vice with stepped jaws

Ident. No. 092

Ident. No. 125–200



p. 880 p. 881 p. 881 p. 880

A (mm)		92	125	160	200
B		71-138 mm	97-216 mm	131-320 mm	131-315 mm
B2 (mm)		208	312	451	451
C (mm)		32	40	50	60
G (mm)		80	100	115	115
E (mm)		112	140	165	175
H2 (mm)		80	112.5	130	135
F (mm)		276	400	530	530
D (mm)		346	479	634	634
Tension force (kN)		25	40	60	60
Weight (kg)		15	41	75	85
W		1 x 68 mm	1 x 108 mm	2 x 102.5 mm	2 x 102.5 mm
Z (mm)		70	109	117	117
28878...	Ident. No.	**092**	**125**	**160**	**200**
		○	(○)*	(○)*	(○)*

Prod. Gr. 284

Simple adjustable clamps for T-grooves

Suitable for high pressure machine vices no. 28874 and 28878

Application:
For front and side fixing.

Delivery:
screw with adjustable clamp

T-slot width (mm)		12	14	16	18
28873...	Ident. No.	**212**	**214**	**216**	**218**
		●	●	●	●

Prod. Gr. 203

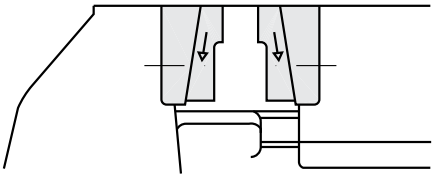
Smooth pull-down jaws

accessories for high pressure machine vices no. 28812

Application:
Are replaced for standard jaws. For clamping with draw-down effect.

Jaws width (mm)			90	125	160
ROHM	**28835...**	Ident. No.	**092**	**127**	-
			○	○	
kesel	**28835...**	Ident. No.	-	-	**161**
					○

KESEL = Prod. Gr. 2AF
ROHM = Prod. Gr. 281



ATORN® Support jaws with pendulum jaw

Application:
For flexible clamping of unmachined part.

Execution:
- Suitable for high pressure vices no. 28878 and 28874
- The stepped jaws are exchanged for the support jaws

Jaws width (mm)		125
28874...	Ident. No.	228
		○

Prod. Gr. 280

ATORN® Stepped jaws, raised

Application:
For flexible clamping of unmachined part.

Execution:
- Suitable for high pressure vices no. 28878 and 28874

Jaws width (mm)		125
28874...	Ident. No.	250
		○

Prod. Gr. 280

ATORN® 5-axis compact machine 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
- on request (larger clamping width)

Advantage:
- Very low clamping force loss when clamping close to edges
- Dirt-resistant thanks to encapsulated spindle
- Secure retention forces

Delivery:
Without jaws, including 4 adjustable clamps

Notes:
torque wrench required (½ inch square drive


p. 881

p. 882

p. 882

p. 882

p. 882

p. 882

A (mm)		125
Min./max. clamping width		0-90 mm
Min./max. clamping width for reversible step jaws		0-178 mm
Min./max. clamping width with gripping/swing jaw		10-202 mm
G (mm)		175
E (mm)		100
F (mm)		250
L1 (mm)		273
Clamp in depth (mm)		8
Tightening torque (Nm)		105
Tension force (kN)		40
Travel stroke of gate valve (mm)		18
28741...	Ident. No.	125
		●

Prod. Gr. 280

ATORN® Stepped jaws

Accessories for 28741125 and 28730 125 and 225

Application:
For clamping parallel workpieces.

Execution:
- For 5-axis compact machine vices no. 28741 125 and no. 28730 125 and 225
- Hardened and polished
- With clip-in device

A (mm)		125
Y (mm)		78/78
C (mm)		39.5
Min. clamping width for reversible step jaws (mm)		0
Max. clamping width for reversible step jaws (mm)		178
28741...	Ident. No.	215
		●

Prod. Gr. 280


p. 882

p. 882

p. 882

ATORN® Grip jaws

Accessories for 28741125 and 28730 125 and 225

Application:
For flexible workpiece clamping, for a wide range of machining processes.

Execution:
- For 5-axis compact machine vices no. 28741 125 and no. 28730 125 and 225
- Hardened and polished
- With 4 grip inserts and 4 contact sleeves

Delivery:
Supplied with 2x grip inserts and 2x contact elements

A (mm)		160
Y (mm)		78/105
C (mm)		25
Min. clamping width with gripping jaws (mm)		10
Max. clamping width with gripping jaws (mm)		202
28741...	Ident. No.	235
		○

Prod. Gr. 280

ATORN® Grip jaws, pendulum jaws

Accessories for 28741125 and 28730 125 and 225

Application:
For clamping non-parallel workpieces, cast parts and moulded workpieces.

Execution:
- Movable jaw
- Hardened and polished
- Cemented carbide grip insert
- With 2 grip inserts

Delivery:
Supplied with 2 x cemented carbide grip inserts

A (mm)		156
Y (mm)		62
C (mm)		20
Min. clamping width for reversible step jaws (mm)		6
Max. clamping width for reversible step jaws (mm)		168
28741...	Ident. No.	245
		○

Prod. Gr. 280

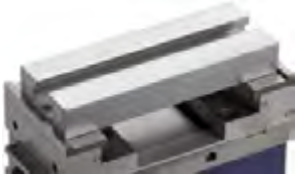
ATORN® Clamping jaws/accessories

Accessories for 28741125 and 28730 125 and 225

Application:
Ident. No. 250: For expanding the clamping width to max. 240 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.

Execution:
- For screwing onto stepped jaws
- **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



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	Screw-on grip jaws	Stepped bars for clipping on	Stepped bars for clipping on
A (mm)		125	60	125	125	125	125
Y (mm)		45	45	6.4	5	-	-
C (mm)		15	15	39.5	19.5	35	15
Min. clamping width (mm)		75	7	5	39	10	10
Max. clamping width (mm)		240	156	70	160	166	166
28741...	Ident. No.	250	251	252	253	254	255
		○	○	●	○	○	○

Prod. Gr. 280

ORION® precision vices, mechanical
with clamping force booster

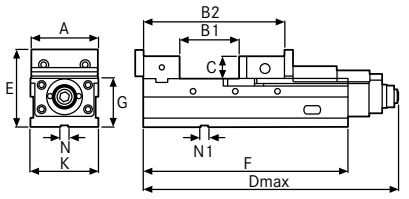
Execution:
- clamping force, can be pre-set via grooved markings
- can be clamped horizontally, vertically or laterally
- steel body, hardened and polished on all sides
- incorporated pull-down
- bed height H: ≤ 0.01 mm

Advantage:
- accurate reproducibility of clamping force
- no change in clamping force
- no vibration during machining
- Long service life

Delivery:
Adjustable clamp set, 1 piece each, matching nut and ratchet tool

A (mm)		102	125	160
B1		0-140 mm	0-201 mm	0-295 mm
B2 (mm)		314.5	381.5	479
C (mm)		45	53	53
G (mm)		85	100	115
F (mm)		324	390	485
K (mm)		104	127	161
Max. length (mm)		428	495	605
Height E (mm)		130	153	168
N h7 (mm)		14	14	14
N1 H7 (mm)		18	18	18
Tension force (kN)		25	35	45
28814...	Ident. No.	001	002	003
		●	●	●

Prod. Gr. 286



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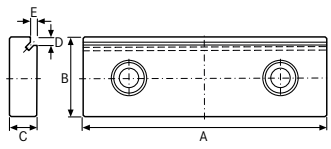
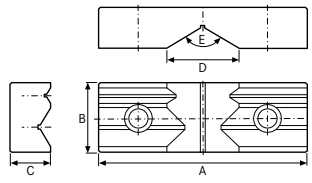
ORION® Clamping jaws
Accessories for 2814001-003

Ident. No. 010–012

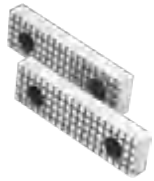


Ident. No. 010–012

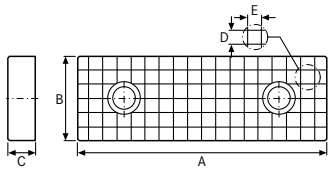
Ident. No. 020–022



Ident. No. 020–022

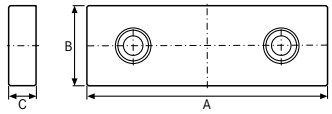


Ident. No. 030–032



Ident. No. 030–032

Ident. No. 040–042



Ident. No. 040–042

For vice with jaw width (mm)	A (mm)	B (mm)	Width (mm)	D (mm)	E (mm)	E (Degree)	Stepped jaws 28814... Ident. No.		Vee block jaw 28814... Ident. No.		Grooved jaws 28814... Ident. No.		Standard clamping jaws 28814... Ident. No.	
102	102	45	15	5	5	-	010	○	-	-	-	-	-	-
125	124.7	53	15	5	5	-	011	○	-	-	-	-	-	-
160	159.2	53	18	5	4.5	-	012	○	-	-	-	-	-	-
102	102	45	28	36.3	-	120	-	-	020	○	-	-	-	-
125	124.7	53	31	50	-	120	-	-	021	○	-	-	-	-
160	159.2	53	31	55	-	120	-	-	022	○	-	-	-	-
102	102	45	15	9	9	-	-	-	-	-	030	○	-	-
125	124.7	53	15	9	9	-	-	-	-	-	031	○	-	-
160	159.2	53	18	9	9	-	-	-	-	-	032	○	-	-
102	102	45	15	-	-	-	-	-	-	-	-	-	040	○
125	124.7	53	18	-	-	-	-	-	-	-	-	-	041	○
160	159.2	53	18	-	-	-	-	-	-	-	-	-	042	○

Prod. Gr. 286

RKZ-M 5-axis machine centre clamping device

For 5-sided machining, centric clamping

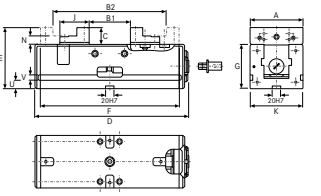
Application:
For use on NC machines, particularly for 5-side machining.

Execution:
- Centric clamping with two movable jaws
- Mechanical clamping system without power intensifier
- Manually actuated
- Steel base body is hardened and ground on all sides, can be clamped on 3 sides
- Dimension G-0.02 mm

Advantage:
- Compact construction
- Mid-clamp accuracy: ± 0.02 - re-clamping accuracy: 0.01
- Constant clamping force for each clamping operation and large re-clamp accuracy
- when using a torque wrench
- Large clamping range

Delivery:
With stepped interchangeable jaws

Notes:
Quotation on request: Special prism jaw version.*
With elevated stepped interchangeable jaw grips.



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A (mm)		50	70	92	125
Min./max. clamping width		0-39 mm	0-58 mm	0-78 mm	0-97 mm
B1		36-75 mm	48-106 mm	70-146 mm	81-177 mm
B2		72-111 mm	95-153 mm	132-208 mm	172-269 mm
C (mm)		20	25	32	40
F (mm)		140	190	260	330
D (mm)		167	219	295	366
V (mm)		12	12	12	12
E (mm)		75	95	117	145
U (mm)		15	20	20	20
K (mm)		52	72	94	126
N -0,01 mm (mm)		10	12	16	20
G (mm)		55	70	85	105
Tension force (kN)		10	15	20	49.5
Tightening torque (Nm)		-	150	150	150
28760...	Ident. No.	**051**	**071**	**093**	**127**
		○	○	○	○

Prod. Gr. 284

ATORN® Plain jaws for jaw quick-change system

Plain jaws suitable for many vices

Application:
Base jaws for retaining interchangeable jaw grips produced from high-strength aluminium and case-hardened 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

Basic set of jaws

p. 886 p. 885

For vice type	Size	Jaws width (mm)	Plain jaw pair 28892... Ident. No.	
Atorn MM-G 125	3	125	**018**	●
Allmatic Centro Grip	3	125	**001**	○
Allmatic Duo Plus mech. all models	3	125	**003**	○
Allmatic LC/TC up to April 98	3	125	**006**	○
Allmatic LC/TC from May 98 1	3	125	**007**	●
Allmatic T-Rex (14 mm slot)	3	125	**013**	○
Allmatic T-Rex (XL)	3	125	**014**	○
Allmatic Titan	3	125	**015**	○
Arnold Arno NC Twin	3	125	**017**	○
Fresmak Arnold MB2	3	125	**019**	○
Fresmak Arnold Twin	2	90	**021**	○
Fresmak Arnold Twin	3	125	**022**	○
Garant NC-LC	3	125	**023**	○
Garant NC-TC	3	125	**024**	○
Gressel Centrinos	2	65	**027**	○
Gressel Centrinos	2	100	**028**	○
Gressel Duogrip all types	3	100	**029**	○
Gressel Duogrip all types	3	125	**030**	○
Gressel Grepos 5X	3	125	**031**	○
Gripos all types	3	100	**032**	○
Gripos all types	3	125	**033**	○
Hilma CS	2	80	**040**	○
Hilma DCS	2	80	**041**	○

For vice type	Size	Jaws width (mm)	Plain jaw pair 28892... Ident. No.	
Hilma DS/TS	2	100	042	○
Hilma DS/TS	3	125	043	○
Hilma KNC	3	125	046	○
Hilma KNC	4	160	047	○
Hilma SCS	2	80	048	○
Hilma SCS	3	120	049	○
Röhm KZS all types	2	80	052	○
Röhm KZS all types	3	125	053	○
Röhm RKD all types	3	125	057	○
Röhm RKE/RKG all types	3	125	058	○
Röhm RKE 160	4	160	059	○
Röhm RKZ all types	3	125	061	○
Schunk KSP-250, KSH-250 all types	3	125	076	○

Prod. Gr. 281

ATORN® Interchangeable jaw grips in aluminium and steel

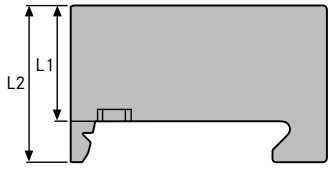
Suitable for ATORN jaw quick-change system

Application:
For optimum adaptation of workpiece contour and clamping surface

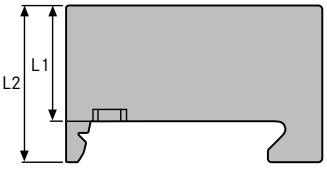
Execution:
- Soft, machinable interchangeable jaw grips
- For the ATORN click system
- **Ident. No. 242–267:** Interchangeable jaw grips made of high-strength aluminium
- **Ident. No. 271–296:** Interchangeable jaw grips made of case-hardening steel

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



Ident. No. 242–267



Ident. No. 271–296

Material	Size	Jaws width (mm)	L1 (mm)	L2 (mm)	Aluminium interchangeable jaw grip 28892... Ident. No.		Steel interchangeable jaw grip 28892... Ident. No.	
Aluminium	2	65	36	49	242	○	-	-
Aluminium	2	70	36	49	243	○	-	-
Aluminium	2	80	36	49	244	○	-	-
Aluminium	2	90	36	49	245	○	-	-
Aluminium	2	100	36	49	246	○	-	-
Aluminium	3	125	36	49	247	○	-	-
Aluminium	2	160	36	49	248	○	-	-
Aluminium	2	180	36	49	249	○	-	-
Aluminium	3	80	45	59	250	○	-	-
Aluminium	3	90	45	59	251	○	-	-
Aluminium	3	100	45	59	252	○	-	-
Aluminium	3	125	45	59	253	●	-	-
Aluminium	3	140	45	59	254	○	-	-
Aluminium	3	160	45	59	255	○	-	-
Aluminium	3	180	45	59	256	○	-	-
Aluminium	3	200	45	59	257	○	-	-
Aluminium	3	225	45	59	258	○	-	-
Aluminium	3	250	45	59	259	○	-	-
Aluminium	4	80	52	69	260	○	-	-
Aluminium	4	100	52	69	261	○	-	-
Aluminium	4	125	52	69	262	○	-	-
Aluminium	4	160	52	69	263	○	-	-
Aluminium	4	200	52	69	264	○	-	-
Aluminium	4	250	52	69	265	○	-	-
Aluminium	4	300	52	69	266	○	-	-
Aluminium	4	400	52	69	267	○	-	-
Steel	2	65	36	49	-	-	271	○
Steel	2	70	36	49	-	-	272	○
Steel	2	80	36	49	-	-	273	○
Steel	2	90	36	49	-	-	274	○
Steel	2	100	36	49	-	-	275	○
Steel	2	125	36	49	-	-	276	○
Steel	2	160	36	49	-	-	277	○
Steel	2	180	36	49	-	-	278	○
Steel	3	80	45	59	-	-	279	○
Steel	3	90	45	59	-	-	280	○
Steel	3	100	45	59	-	-	281	○
Steel	3	125	45	59	-	-	282	●
Steel	3	140	45	59	-	-	283	○
Steel	3	160	45	59	-	-	284	○
Steel	3	180	45	59	-	-	285	○
Steel	3	200	45	59	-	-	286	○
Steel	3	225	45	59	-	-	287	○
Steel	3	250	45	59	-	-	288	○

Material	Size	Jaws width (mm)	L1 (mm)	L2 (mm)	Aluminium interchangeable jaw grip 28892... Ident. No.		Steel inter-changeable jaw grip 28892... Ident. No.	
Steel	4	80	52	69	-	-	289	○
Steel	4	100	52	69	-	-	290	○
Steel	4	125	52	69	-	-	291	○
Steel	4	160	52	69	-	-	292	○
Steel	4	200	52	69	-	-	293	○
Steel	4	250	52	69	-	-	294	○
Steel	4	300	52	69	-	-	295	○
Steel	4	400	52	69	-	-	296	○

Prod. Gr. 281

ATORN® Ejector for quick-jaw-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.	000
			●

Prod. Gr. 281

Quick-change system for jaws (click system)

ATORN® adapter plate for pendulum jaw system 3 can be attached to the ATORN jaw quick-change system (click system)

for many vices

Application:
There are suitable plain jaws for many vices for mounting the adapter plate, see page 977 of H+K catalogue 2016/17, ref. no. 28892...

Execution:
- easy set-up of adapter plate by clicking into the interface
- Patented quick-change system 3, allows the adapter plate to be set up on the vice or double pendulum jaw in seconds.
- 2 quick-change systems in one without tools

Advantage:
- AVAILABLE FOR many VICES. ATORN, RÖHM, SCHUNK, ALLMATIC, HILMA, WNT ETC.

Delivery:
1 piece adapter plate, suitable for ref. no. 28791125 quick-change jaws size 3

Size	28792... Ident. No.	
3	030	●

Prod. Gr. 280

Adapter plate with quick-change interface. Alternatively, on request:
Suitable to directly adapt the vice interface.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p. 887


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ATORN® Pendulum plate system 3

Movable pendulum jaw, 4.5 degrees

Application:
the flexible double pendulum jaws with the 4.5° rotatable pressure pieces adjust to any unevenness and transmit the force optimally into the workpiece.
all materials such as e.g. steel, plastic, cast iron, non-ferrous metals
• clamping on scale layers, flame cuts, saw cuts, milled or ground surfaces
• plates, round and rectangular materials

Execution:
- clamping of raw parts
- first and second clamping (ATORN system with quick-change function.
- multi grip and pressure pieces (order separately)
- rigid construction of system to prevent any vibrations
- extension of the jaw width from 140 to 180 mm

Advantage:
- available for many vices
- no more preliminary shaping
- extremely fast retooling
- quick-change system can be used with various replaceable vices.
- reduced material procurement costs, as ideal for clamping raw parts

Delivery:
ref. no. 28792031 1 piece pendulum plate jaw width 140mm excl. pressure pieces, suitable for ref. no. 28792030
ref. no. 28792032 1 piece pendulum plate jaw width 180mm excl. pressure pieces, suitable for ref. no. 28792030

Size	Width of clamping jaw (mm)	28792... Ident. No.	
3	140	031	●
3	180	032	●

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Ident. No. 031
Pressure piece and universal pressure piece shown in the picture are not included in the scope of delivery.
Please order separately, ref. no. 28792001-004


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ATORN® Fixed jaw system 3

accessories and counterpart for the ATORN pendulum plate

Application:
4 different pressure pieces on the fixed jaws with:
pointed grooves and steel, smooth and flat-grooved grip, replaceable.

Execution:
- with quick-change interface upon request (alternatively, suitable, for direct adaptation to interface of the vice used)

Delivery:
ref. no. 28792033 1 piece fixed jaw, jaw width 140mm excl. pressure pieces, suitable for ref. no. 28791125 quick-change jaws size 3
ref. no. 28792034 1 piece fixed jaw, jaw width 180mm excl. pressure pieces, suitable for ref. no. 28791125 quick-change jaws size 3

Size	Width of clamping jaw (mm)	28792... Ident. No.	
3	140	033	●
3	180	034	●

Prod. Gr. 280

Ident. No. 033
Insert as shown in the picture (flat-grooved) not included in the scope of delivery.
Please order flat-grooved, pointed-grooved, flat and grip inserts separately, ref. no. 28792005-009

Ident. No. 034
Insert as shown in the picture (flat-grooved) not included in the scope of delivery.
Please order flat-grooved, pointed-grooved, flat and grip inserts separately, ref. no. 28792005-009

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ATORN® Pressure piece

accessories for pendulum jaws and fixed jaws

Application:
Replaceable pressure pieces for pendulum jaws and fixed jaws.

Delivery:
ref. no. 28792001 delivery: 1 piece pressure piece, flat grooves, suitable for ref. no. 28792 031 and 032
ref. no. 28792002 delivery: 1 piece pressure piece, pointed grooves, suitable for ref. no. 28792 031 and 032
ref. no. 28792003, delivery: 1 piece flat pressure piece, suitable for ref. no. 28792 031 and 032
„Ref. no. 28792004 universal pressure piece, swivelling, with 4 different clamping side, flat, flat grooves, pointed grooves and grip.
delivery: 1 piece universal pressure piece, incl. screw, suitable for ref. no. 28792 031, 032, 033 and 034
ref. no. 28792009, delivery: 1 piece grip pressure piece, suitable for ref. no. 28792 031 and 032

Ident. No. 004
Ref. no. 28792004 universal pressure piece, Design can be rotated on flat, flat grooves, pointed grooves and grip.

Size	Jaw design	28792... Ident. No.	
3	Flat grooves	001	●
3	Grooved tip	002	●
3	Flat	003	●
3	Flat | Flat grooves | Grooved tip | Gripp	004	●
3	Gripp	009	●

Prod. Gr. 280

ATORN® Use

Accessories for fixed jaw (pendulum jaw)

Application:
Replaceable inserts for fixed jaws.

Delivery:
ref. no. 28792005 delivery: 1 piece insert, with flat grooves, incl. screw, suitable for ref. no. 28792 033 and 034
ref. no. 28792006, delivery: 1 piece insert, with pointed grooves, incl. screw, suitable for ref. no. 28792 033 and 034
ref. no. 28792007, delivery: 1 piece insert, flat, incl. screw, suitable for ref. no. 28792 033 and 034
ref. no. 28792008, delivery: 1 piece grip insert, incl. screw, suitable for ref. no. 28792 033 and 034

Jaw design	28792... Ident. No.	
Flat grooves	005	●
Grooved tip	006	●
Flat	007	●
Gripp	008	●

Prod. Gr. 280

Ident. No. 005

Ident. No. 006

ATORN® Pendulum jaw set, full equipment
in case

Application:
The flexible double pendulum jaws with the rotatable pressure pieces adjust to any unevenness and transmit the force optimally into the workpiece.

Delivery:
ref. no. 28792044:
ref. no. 28792014: 1 piece each 28792049 case, 28792033, 28792030, 28792031, 2 pieces each 28792001, 28792002, 28792003, 28792005, 28792006, 28792007, 28792008, 28792009, 4 pieces each 28792004

ref. no. 28792018: 1 piece each
ref. no. 28792018: 1 piece each 28792049 case, 28792034, 28792030, 28792032, 2 pieces each 28792001, 28792002, 28792003, 28792005, 28792006, 28792007, 28792008, 28792009, 4 pieces each 28792004



Size	Width of clamping jaw (mm)	28792... Ident. No.	
3	140	044	○
3	180	048	○

Prod. Gr. 280

ATORN® Pendulum jaw set in case
with flat grooves and universal

Application:
the flexible double pendulum jaws with the rotatable pressure pieces adjust to any unevenness and transmit the clamping force optimally into the workpiece.

Delivery:
Ref. no. 28792014, contents of delivery for ref. no. 1 piece 28792 049 case, 1 piece 28792 030, 031, 033, 4 pieces 28792004, 2 pieces 28792005, 2 pieces 28792001.
Ref. no. 28792018, contents of delivery for ref. no. 1 piece 28792 049 case, 1 piece 28792 030, 032, 034, 4 pieces 28792004, 2 pieces 28792005, 2 pieces 28792002


Size	Width of clamping jaw (mm)	Jaw design	28792... Ident. No.	
3	140	Flat grooves	014	○
3	180	Flat grooves	018	○

Prod. Gr. 280

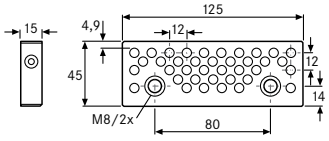
ATORN® Clamping jaw with positioning pins, pneumatic operation

Application:
Clamping jaw system with positioning pins render laborious and time-consuming clamping devices superfluous,
a practical, fast and simple way to lock the position of workpieces in a matter of seconds.

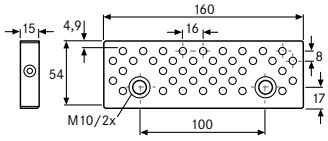
Execution:
- Fast and precise clamping of a wide variety of workpieces.
- Changeover in seconds for various machining operations
- Loose surfaces become superfluous, as does time-consuming cleaning.
- Stable and robust construction, also suitable for high clamping forces.
- Compressed air application via valves on each face.
- Closed on all sides once installed. This makes it low-maintenance.
- Recommended air pressure: 5.5 bar
- High-quality tool steel, hardened, ground and treated with a special oxidation process.

Advantage:
- One press of the blow-out gun and all pins are driven out

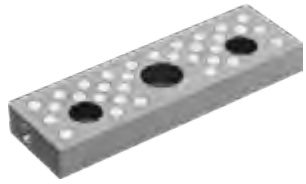
Ident. No. 320–321



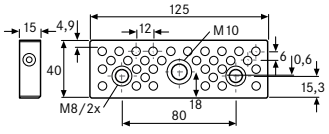
Ident. No. 320



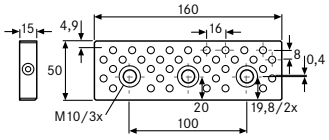
Ident. No. 321



Ident. No. 322–323



Ident. No. 322



Ident. No. 323

Jaws width (mm)			125	160
26111...	suitable jaws for: Hilma NC125 NC125H, EL125 and KNC12	Ident. No.	320 ●	-
26111...	suitable jaws for: NC160 NC160H, EL160 and KNC160	Ident. No.	-	321 ●
26111...	suitable jaws for: KeselCNC125 Bull pneumatic125 ARNO125 BULL125 mechanical, Röhm RKE125 RKE-L125 RKE-U125 RKE-U125 RKG-L125 RKE-LV125 GresselGriposGPS 125,GriposGPS 125-VS, Gripos2 Grepos-5X/5X-S, Grefors, S2 Duogrip, C2 Ecopos	Ident. No.	322 ●	-
26111...	suitable jaws for: KeselCNC 160 Bull pneumatic160 Bull160 mechanical, ARNO 160 Röhm RKE160 RKE-L160 RKE-U160 RKE-UL160,RKG-L160,RKE-LV160 GresselGriposGPS 160,GriposGPS 160-VS, Gripos2 Grepos-5X/5X, Grefors, S2 Duogrip, C2 Ecopos	Ident. No.	-	323 ●

Prod. Gr. 281

ATORN® Workpiece stop

Adjustable in five axes

Application:
For use on drilling and milling machines.

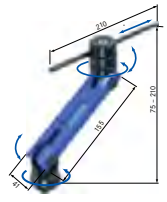
Execution:
- Flexible and sturdy and quick to adjust

26111...	Ident. No.	020 ●

Prod. Gr. 281

- For T-shaped sliding blocks with M8 thread

Delivery:
With T-shaped sliding blocks, 12 and 14 mm



T-slot nuts
For workpiece stop

Application:
For use on drilling and milling machines.

For slot width (mm)		12	14	16	18
Connection thread		M8	M8	M8	M8
26195...	Ident. No.	039	048	057	067
		●	●	●	●

Prod. Gr. 260

Standard

Locating key

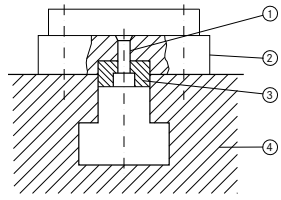
Application:
Fixed sliding blocks are screwed into the standardised 20 mm wide aligning groove of vices or jigs in pairs.
The ability to replace the sliding blocks means that it is possible to work on machines with different groove widths.

Execution:
- Ground precisely around circumference
- C 15 case-hardened
- short alignment times

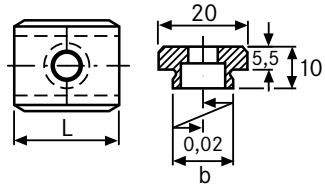
Notes:
Screws are not supplied. Other sizes and flat sliding blocks on request.

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
26196...	Ident. No.	112	114	116	120
		●	●	●	●

Prod. Gr. 260



① Screw
② Device
③ Sliding block
④ Machine table



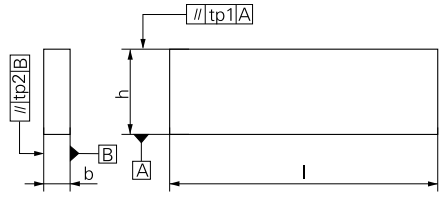
Parallel support pairs (DIN 7168)
Case-hardened steel, finely ground in pairs and true-to-angle

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

Delivery:
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... Ident. No.	
63	2.5	8 mm	0.004	0.006	208	●
63	3.2	10 mm	0.005	0.006	210	●
63	4	12 mm	0.005	0.008	212	●
63	5	16 mm	0.005	0.008	216	●
63	6.3	20 mm	0.006	0.009	220	●
100	4	12 mm	0.005	0.008	312	●
100	5	16 mm	0.005	0.008	316	●
100	6.3	20 mm	0.006	0.009	320	●
100	8	25 mm	0.006	0.009	325	●
100	10	32 mm	0.006	0.011	332	●
100	12	40 mm	0.008	0.011	340	●
160	10	32 mm	0.006	0.011	432	○
160	8	25 mm	0.006	0.009	425	●
160	12	40 mm	0.008	0.011	440	●

Parallel rest length L (mm)	Parallel rest width b (mm)	Parallel rest height h	Alignment tolerance, width (mm)	Alignment tolerance, height (mm)	26257... Ident. No.	
160	16	50 mm	0.008	0.011	450	○

Prod. Gr. 260

ORION® Parallel rest sets

Application:
For parallel support of workpieces in machine vices, on machine tools or on marking-off plates.

Execution:
- Made of steel
- The different dimensions create a multitude of combination possibilities.
- 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
- ref. no. 26256010 nominal dimensional tolerance H + W +/- 0.02 mm in line with (DIN ISO 2768-1 tolerance class m)
- ref. no. 26256020 nominal dimension tolerance at height 14-30 mm +/- 0.02mm, with height 32-50 mm +/- 0.03mm

Delivery:
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.	010	020
		●	●

Prod. Gr. 264

ORION® Parallel rests, single pairs

Application:
For parallel support of workpieces in machine vices, on machine tools or equipment.

Execution:
- Made of steel, hardened and ground
- Height tolerance within a 0.01 mm pair
- Remaining dimensions in accordance with DIN ISO 2768m
- Ref. no. 26256232-250, nominal height tolerance +/-0.03 mm
- Remaining ref. no. nominal width + height tolerance +/-0.02 mm

Length (mm)		150		150			
Pair tolerance		0.01 mm		0.01 mm		0.01 mm	
Nominal tolerance width and height		+/- 0,02 mm					
Nominal tolerance height				+/- 0,02 mm		+/- 0,02 mm	
Width (mm)	Height (mm)	26256... Ident. No.		26256... Ident. No.		26256... Ident. No.	
14	10	114	●	214	●	-	-
16	10	-	-	216	●	-	-
18	10	-	-	218	●	-	-
20	10	-	-	220	●	-	-
22	10	-	-	222	●	-	-
24	10	-	-	224	●	-	-
26	10	-	-	226	●	-	-

Length (mm)		150		150			
Pair tolerance		0.01 mm		0.01 mm		0.01 mm	
Nominal tolerance width and height		+/- 0,02 mm					
Nominal tolerance height				+/- 0,02 mm		+/- 0,02 mm	
Width (mm)	Height (mm)	26256... Ident. No.		26256... Ident. No.		26256... Ident. No.	
28	10	-	-	228	●	-	-
30	10	-	-	230	●	-	-
32	10	-	-	232	●	-	-
35	10	-	-	235	●	-	-
40	10	-	-	240	●	-	-
45	10	-	-	245	●	-	-
50	10	-	-	-	-	250	●

Prod. Gr. 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 x23, 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.	010	020	030
		●	●	●

Prod. Gr. 264

ORION® ORION parallel rests, single pairs IT5

Application:
For parallel support of workpieces in machine vices, on machine tools or equipment.

Execution:
- Made of steel, hardened and ground
- Hight in accordance with DIN ISO 2768m pair tolerance IT5
- Nominal width tolerance +/-0.02 mm

Length (mm)		100		125		150	
Pair tolerance		IT 5		IT 5		IT 5	
Width (mm)	Height (mm)	26254... Ident. No.		26254... Ident. No.		26254... Ident. No.	
5	2	100	●	-	-	-	-
10	2	101	●	-	-	-	-
15	2	102	●	-	-	-	-
20	2	103	●	-	-	-	-
6	3	104	●	-	-	-	-
11	3	105	●	-	-	-	-
16	3	106	●	-	-	-	-
21	3	107	●	-	-	-	-
7	4	108	●	-	-	-	-
12	4	109	●	-	-	-	-
17	4	110	●	-	-	-	-
22	4	111	●	-	-	-	-
8	5	112	●	-	-	-	-
13	5	113	●	-	-	-	-
18	5	114	●	-	-	-	-
23	5	115	●	-	-	-	-
9	6	116	●	-	-	-	-
14	6	117	●	-	-	-	-
19	6	118	●	-	-	-	-
24	6	119	●	-	-	-	-
11	8	-	-	150	●	200	●
16	8	-	-	151	●	201	●

Length (mm)		100		125		150	
Pair tolerance		IT 5		IT 5		IT 5	
Width (mm)	Height (mm)	26254... Ident. No.		26254... Ident. No.		26254... Ident. No.	
21	8	-	-	152	●	202	●
26	8	-	-	153	●	203	●
31	8	-	-	154	●	204	●
36	8	-	-	155	●	205	●
13	10	-	-	156	●	206	●
18	10	-	-	157	●	207	●
23	10	-	-	158	●	208	●
28	10	-	-	159	●	209	●
33	10	-	-	160	●	210	●
38	10	-	-	161	●	211	●
15	12	-	-	162	●	212	●
20	12	-	-	163	●	213	●
25	12	-	-	164	●	214	●
30	12	-	-	165	●	215	●
35	12	-	-	166	●	216	●
40	12	-	-	167	●	217	●
17	14	-	-	168	●	218	●
22	14	-	-	169	●	219	●
27	14	-	-	170	●	220	●
32	14	-	-	171	●	221	●
37	14	-	-	172	●	222	●
42	14	-	-	173	●	223	●

Prod. Gr. 264

Parallel rest sets (DIN 7168)
Corrugated

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.

Delivery:
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
26258...	Ident. No.	110	120
		●	●

Prod. Gr. 260

ATORN zero point clamping system
Convincing advantages in application, technology and maintenance

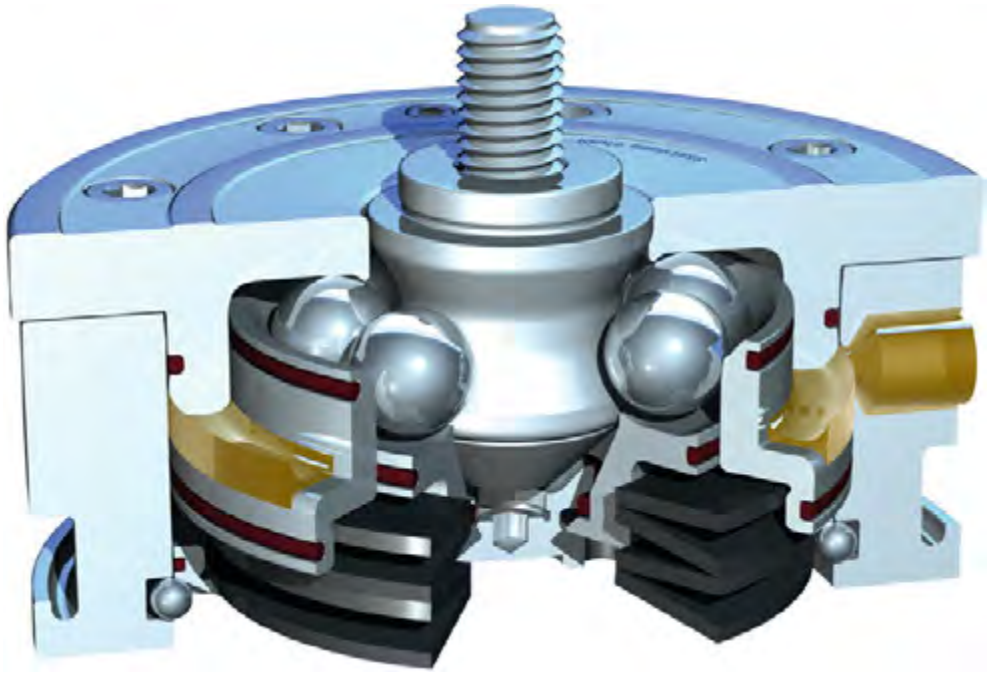
Large clutch movement

For feeding a pallet into the clamping module, a pre-positioning of 6.5 mm is sufficient.

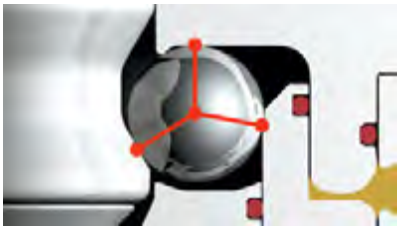
No canting

Cant-free retracting and extending through the optimal contour of the clamping nipple

Large hold, feed and locking forces

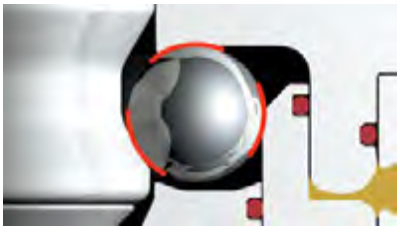


Three-stroke principle



The force is distributed via a three-stroke principle. As a result, there are no shear loads of the balls.

Positive locking



The balls are positively enclosed on 3 sides. The forces evenly impact the balls and are optimally distributed.

Large ball diameter

Better force distribution due to larger ball diameters.

No ball cage

Safety system

Stainless – stable – practicable

The balls are exposed in the ball channel and always reposition themselves. Since the balls do not lie in a cage, dirt can easily be blown out with air.

The system is absolutely process-safe. The clamping module can always be opened.

High-alloy, hardened tool steel – therefore no corrosion. Sturdy, suitable for industrial use and durable.

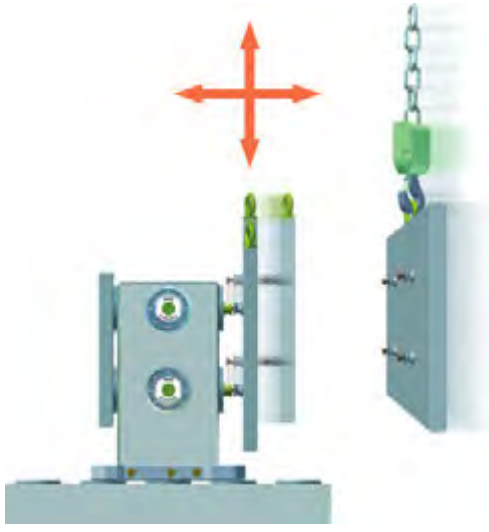
Source: Hahn+Kolb Werkzeuge GmbH
Technical data subject to change.
Availability subject to country specific rules and regulations.

ATORN zero point clamping system
Technology that inspires

The ATORN® zero point clamping system does not shy away from comparison.
Experience the ATORN® zero point clamping system, which presents its strengths through innovative and trendsetting features in a progressive manner.

Benefits making the ATORN® zero-point clamping system unrivalled:

- **Use of different clamping nipples for highest positioning accuracy:**
  - Zero point nipple: positioned to absolute zero reference point
  - Sword nipple: fixates the free axis
  - Undersize nipple: only for clamping and holding function
- **Two options of different zero point definitions**
  - Classic: the zero point is defined by the zero point nipple in combination with the sword nipple
  - With temperature influence: the zero point is defined by the central axis through the exclusive use of sword nipples
- **Maintenance-free system**
  - Completely sealed system made from hardened stainless steel for maintenance-free working
- **Benefits in the application**
  - Easy to use due to the big catch feeder and the possibility of resistance-free import and export
- **Process safety through technical advantage**
  - Process reliability supported through the characteristics „three-stroke principle, form-fit and large sphere diameter“. Due to these characteristics, the force is optimally distributed and does not lose any effect



Process	Without zero point clamping system	With ATORN® 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 hrs)	4.5 min. (0.075 hrs)
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

Source: Hahn+Kolb Werkzeuge GmbH
Technical data subject to change.
Availability subject to country specific rules and regulations.

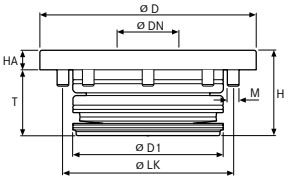
ATORN® mounting clamping module K10.2 and K20

Application:
zero-point clamping system for clamping with optimised setup time for chip and chipless
processing in all areas, such as in the foods, pharmaceutical and chemical industries.

Execution:
- unlocks hydraulically
- lid and piston hardened
- repeat accuracy < 0.005 mm

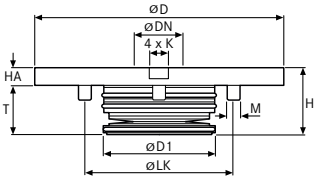
Notes:
the built-in clamping modules have high hold, feed and locking forces at very small
installation dimensions. hydraulic pressure is only required for loosening (min. 50 bar/max. 60 bar). the modules
are mechanically locked in clamped condition. the advantage here is that there are no disturbing lines and no leakage risk.
deliverable on request:
- mounting sketches
- automation solutions
- also deliverable as individual flange version

Ident. No. 500



Ident. No. 500

Ident. No. 107, 501



Ident. No. 107, 501

p. 898 p. 899 p. 898 p. 898

Model		without indexing	with indexing	with indexing
Type		K10.2	K10.2	K20
Retraction force/closing force		10 kN	10 kN	20 kN
Retaining force		25	25	55
D (mm)		112	112	112
DN (mm)		22	22	32
D1 (mm)		50	50	78
H (mm)		30	30	44
HA (mm)		22	22	34
M		M6	M6	M6
K (mm)		-	8	8
T (mm)		22	22	34
Weight (kg)		0.6	0.6	1.4
28981...	Ident. No.	500	501	107
		○	○	○

Prod. Gr. 280

ATORN® multiple clamping stations K10.2

Execution:
- unlocks hydraulically
- repeat accuracy < 0.005 mm
- unhardened steel
- the clamping systems are already equipped with mounting holes (for the most common table grooves sizes 63,
- 100 and 125 mm) and positioning aids. the clamping stations are ready for immediate commissioning. connections are already bolted.
- the clamping station with purge has 2 connections: 1 x open hydraulically, 1 x pneum. purge
- the clamping station is suitable for table groove sizes 63, 100 and 125 mm

Advantage:
- low overall height of only 36 mm

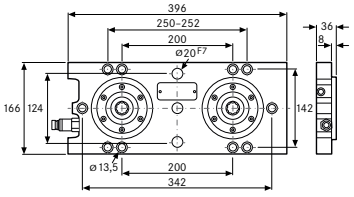
Notes:
mounting sketches, other sizes as well as clamping stations especially tailored to your machine deliverable on request.

p. 898 p. 899 p. 898 p. 898

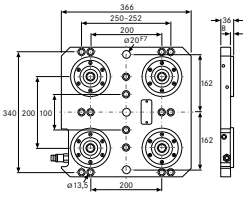
Ident. No. 502

Ident. No. 504

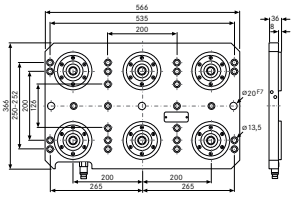
Ident. No. 506



Ident. No. 502



Ident. No. 504



Ident. No. 506

Type		2x clamping station	4x clamping station	6x clamping station
Retraction force/closing force		2 x 10 kN	4 x 10 kN	6 x 10 kN
Retaining force (kN)		25	25	25
Weight (kg)		14	30	46
28981...	Ident. No.	502	504	506
		○	○	(○)*

Prod. Gr. 280

ATORN® multiple clamping stations K20

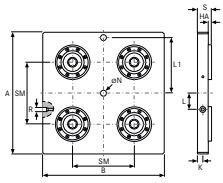
Execution:
- Unlocks hydraulically
- repeat accuracy < 0.005 mm
- unhardened steel
- on request, mounting holes can be created in the base plate according to your specifications.
- the clamping station is equipped with 1 connection: 1 x hydraulic opening.
- mounting sketches, other sizes as well as clamping stations especially tailored to your machine deliverable on request.

Advantage:
- low overall height of only 46 mm

Ident. No. 069

Ident. No. 073

Ident. No. 174



p. 898 p. 899 p. 898 p. 898

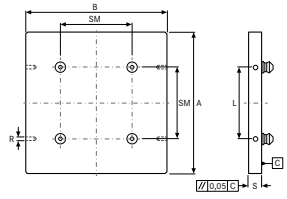
Type		2x clamping station	4x clamping station	6x clamping station
Retraction force/closing force		2 x 20 kN	4 x 20 kN	6 x 20 kN
Retaining force (kN)		55	55	55
A (mm)		196	396	396
B (mm)		396	396	596
HA (mm)		10	10	10
K (mm)		19	19	20
L (mm)		45	53	50
L1 (mm)		180	180	180
N (mm)		20	20	20
R		G 1/4 inch	G 1/4 inch	G 1/4 inch
S (mm)		46	46	46
SM (mm)		200	200	200
Weight (kg)		21.9	44	75
28981...	Ident. No.	**069**	**073**	**174**
		○	(○)*	(○)+

Prod. Gr. 280

ATORN® replacement pallets for K10.2 and K20

Execution:
- High-strength aluminium

Notes:
on request, mounting holes can be included in the replacement pallet according to your specifications.
other dimensions, bore gauges as well as the number of clamping nipple equipment deliverable on request



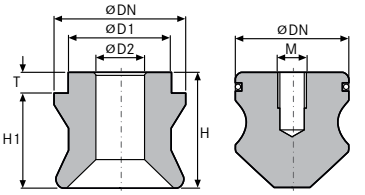
p. 898 p. 899 p. 898 p. 898

For tensioning station		K10.2 / 4-fold	K10.2 / 6-fold	K20 / 2-fold	K20 / 4-fold	K20 / 6-fold
A (mm)		366	366	196	396	396
B (mm)		366	566	396	396	596
L (mm)		200	200	120	200	200
R		M12	M12	M12	M12	M12
S (mm)		30	30	40	40	40
SM (mm)		200	200	200	200	200
Weight (kg)		10	16	6	16	25
28981...	Ident. No.	**601**	**602**	**200**	**201**	**202**
		○	○	○	○	○

Prod. Gr. 280

ATORN® clamping nipple

hardened, for hydraulic clamping modules



p. 898

Type	DN (mm)	D1 (mm)	D2 (mm)	H (mm)	H1 (mm)	M	T (mm)	28981... Ident. No.	
zero-point nipple K10.2	22	15	8	19	16	-	3	079	○
strut nipple K10.2	22	15	8	19	16	-	3	080	●
undersize nipple K10.2	21.8	15	8	19	16	-	3	081	○
protection nipple K10.2	21.8	-	-	-	-	M8	-	082	○
zero-point nipple K20	32	-	12	28	23	-	5	083	○
strut nipple K20	32	-	12	28	23	-	5	084	○
undersize nipple K20	31.8	-	12	28	23	-	5	085	○
protection nipple K20	31.8	-	-	-	-	M8	-	086	○

Prod. Gr. 280

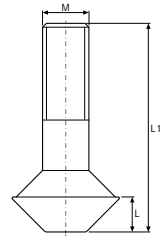
ATORN® nipple catchment screws

Execution:

- strength class 12.9
- versions in other lengths and materials (such as stainless steel) deliverable on request

Type		K10.2	K20
M		M8	M12
L (mm)		6	9
L1 (mm)		37	54
28981...	Ident. No.	092	093
		○	○

Prod. Gr. 280



ATORN® air hydraulic pump

Application:
to open hydraulic clamping modules or clamping stations.

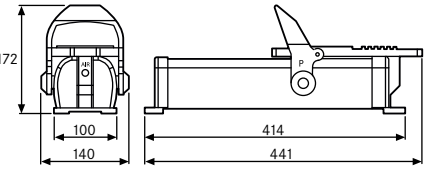
Execution:

- Compact, compressed air operated hydraulic pump for single-acting circuits. The pump is equipped with a
- built-in safety valve, which regulates the hydraulic output pressure.
- the factory default setting of the safety valve is max. operating pressure of 60 bar.
- through the expansion body in the oil tank, the pump can be used horizontally and vertically.
- connecting thread air: G1/4
- Connecting thread oil: G1/4

Notes:
the pump is filled with a commercially available hydraulic oil (HLP32) for operation

Min./max. air pressure	Effective oil volume (cm^3)	Max. feed quantity (l/min)	Weight (kg)	28981... Ident. No.	
4-6 bar	1000	0.75	5.9	535	●

Prod. Gr. 280



p. 899

Attachment set

Application:
for the connection between the air hydraulic pump and clamping station

Delivery:
the connection set includes: 1x hydraulic connection hose, length 2 m

2x straight pipe fitting, 2x straight screw-in connection piece,
1x T-fitting, 1x manometer 0-100 bar
1x straight socket end fitting, 2x quick-release coupling sleeve,
2x quick-release coupling plug, 2x Cu sealing ring for G1/4

28981... Ident. No.	
580	○

Prod. Gr. 280

ENERPAC RC hydraulic pressure cylinder

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

Delivery:
Pressure cylinder with CR400 coupler except for no. 050

Model	Max. compressive force (kN)	Lift height (mm)	Oil capacity (cm^3)	Overall height, retracted (mm)	Weight (kg)	29501... Ident. No.	
RC 50	45	16	10	41	1	010	●
RC 51	45	25	16	110	1	015	●
RC 53	45	76	50	165	1.5	020	●
RC 55	45	127	83	215	1.9	030	●
RC 101	101	26	38	89	1.8	035	●
RC 102	101	54	78	121	2.3	040	●
RC 104	101	105	152	171	3.3	045	●
RC 106	101	156	226	247	4.4	050	●
RC 1010	101	257	373	349	6.4	060	○
RC 1014	101	356	516	450	8.2	062	○
RC 251	232	26	86	139	5.9	064	○
RC 252	232	50	166	165	6.4	065	○
RC 254	232	102	339	215	8.2	067	●
RC 256	232	158	525	273	10	070	○
RC156	142	152	308	271	6.8	156	●

Prod. Gr. 258

Accessories for		29501 010	29501 015	29501 020	29501 030	29501 035	29501 040	29501 045
29739... Manometer	Ident. No.	020 ●	020 ●	020 ●	020 ●	020 ●	-	020 ●
29501... Cylinder base For hydraulic pressure cylinder RC	Ident. No.	-	-	-	-	210 ○	210 ○	210 ○

Accessories for		29501 050	29501 060	29501 062	29501 064	29501 065	29501 067	29501 070
29739... Manometer	Ident. No.	020 ●	020 ●	020 ●	-	-	030 ○	030 ○
29501... Cylinder base For hydraulic pressure cylinder RC	Ident. No.	210 ○	210 ○	210 ○	225 ○	225 ○	225 ○	225 ○

ENERPAC RSM hydraulic pressure cylinder (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

Advantage:
- Retaining ring prevents piston rod from being pushed out

Delivery:
Pressure cylinder with CR400 coupler, *except for RSM 50

Model	Max. compressive force (kN)	Lift height (mm)	Oil capacity (cm^3)	Overall height, retracted (mm)	Housing outer Ø (mm)	Ø of hydraulic piston (mm)	Weight (kg)	29521... Ident. No.	
RSM 50	45	6	4	32	58	41	1	005	●
RSM 100	101	11	18	43	82	55	1.4	010	●
RSM 200	201	11	32	51	101	76	3.1	020	●
RSM 300	295	13	55	58	117	95	4.5	030	●
RSM 500	435	16	99	66	140	114	6.8	050	●
RSM 750	718	16	164	79	165	139	11.3	075	○
RSM 1000	887	16	203	85	178	153	14.5	100	○

Prod. Gr. 258

RCS hydraulic short stroke cylinders

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

Delivery:
Pressure cylinder with CR400 coupler and fluted pressure fitting.

Model	Max. compressive force (kN)	Lift height (mm)	Oil capacity (cm^3)	Overall height, retracted (mm)	Outer Ø (mm)	Weight (kg)	29511... Ident. No.	
RCS 101	101	38	55	88	69	2.7	020	●
RCS 201	201	45	129	98	92	5	040	●
RCS 302	295	62	261	117	101	6.8	050	●
RCS 502	435	60	373	122	124	10	060	○
RCS 1002	887	57	722	141	165	20.7	070	○

Prod. Gr. 258

Accessories for			29511 020	29511 040	29511 050	29511 060	29511 070
29739...	Manometer	Ident. No.	020 ●	020 ●	040 ●	030 ○	040 ●

Hydraulic hollow piston cylinders
(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

Delivery:
RCH hollow piston cylinder with AR 630 coupler. All others with CR400 coupler.

Notes:
Mounting flanges on request. Model RRH, double-acting, on request.

Ident. No. 005–020
Model RCH, single-acting. Model RRH, double-acting.

Model	Max. compressive force (kN)	Lift height (mm)	Oil capacity (cm^3)	Overall height, retracted (mm)	Bore Ø (mm)	Outer Ø (mm)	Weight (kg)	29531... Ident. No.	
RCH 121	125	42	75	120	19.5	69	2.8	005	●
RCH 123	125	76	136	184	19.5	69	4.4	007	●
RCH 202	215	49	150	162	26.9	98	7.7	010	●
RCH 206	2154	155	476	306	26.9	98	14.1	017	●
RCH 302	326	64	298	178	33	114	10.9	020	●
RCH 306	326	155	722	330	33	114	21.8	027	○

Prod. Gr. 258

Accessories for			29531 005	29531 007	29531 010	29531 020	29531 027
29739...	Manometer	Ident. No.	030 ○	030 ○	020 ●	040 ●	040 ●

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
- Single-acting cylinder

Advantage:
- Automatic switch-over from low pressure to high pressure range in two-stage pumps.

Model	Number of steps	Max. working pressure 1. Level (bar)	Max. working pressure 2. Level (bar)	Feed volume per stroke (cm^3)	Feed volume per stroke 2 (cm^3)	Effective oil volume (cm^3)	Connection thread	Weight (kg)	29701... Ident. No.	
P-18	1	200	-	2.46	-	360	NPTF 3/8 inch - 18	5	020	●
P-39	1	700	-	2.46	-	770	NPTF 3/8 inch - 18	6.2	030	●
P-80	2	34	700	16.39	2.46	2200	NPTF 3/8 inch - 18	10.7	060	●
P-462	2	14	700	121.20	4.75	7428	NPTF 3/8 inch - 18	27	080	○
P-392	2	13	700	11.26	-	901	-	4.1	210	●
P-142	2	13	700	3.62	2.47	328	NPTF 1/4 inch - 18	2.1	200	●

Prod. Gr. 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
- Dual-acting cylinder

Advantage:
- Automatic switch-over from low pressure to high pressure range in two-stage pumps.

Model	Number of steps	Max. working pressure 1. Level (bar)	Max. working pressure 2. Level (bar)	Feed volume per stroke (cm^3)	Feed volume per stroke 2 (cm^3)	Effective oil volume (cm^3)	Connection thread	Weight (kg)	29701... Ident. No.	
P-84	2	34	700	16.39	2.46	2200	NPT 3/8 inch	11.8	090	○

Prod. Gr. 258

ENERPAC 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, ¼ inch 18 NPT
- With pressure limiting valve
- With maximum operating pressure of 700 bar

Delivery:
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.

Model		PA 133	PATG-1102 N
Effective oil volume (cm^3)		589	2081
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)		8.3	8.6
Connection thread		NPTF 3/8 inch - 18	NPTF 3/8 inch - 18
29703...	Ident. No.	015	030
		●	●

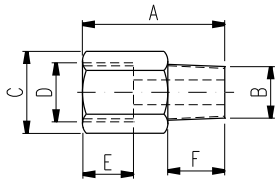
Prod. Gr. 258

ENERPAC High-pressure threaded connections

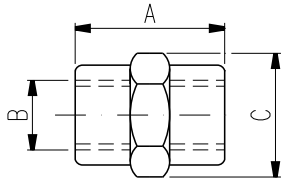
Application:
For connecting hydraulic lines.

Execution:
- for 400 bar operating pressure with connection (¼ 18 NPT)
- For 700 bar operating pressure with connection (3/8 18 NPT)

Notes:
Width across flats 25.5 mm, ref. no. 29724 290, 310 and 320.



Ident. No. 040-070



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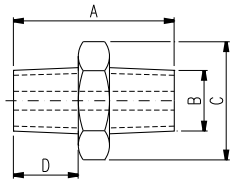

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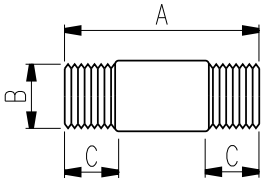

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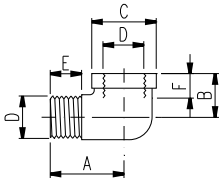

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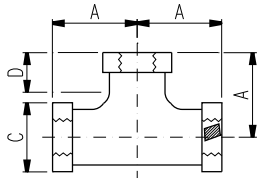

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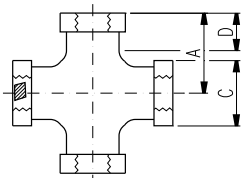


Ident. No. 320

Connection thread								1/4 inch x 18 mm	3/8 inch x 18 mm
		Model	Length (mm)	Male thread length (mm)	Inner thread dimension	Female thread depth (mm)			
29724...	Pipe reducer	FZ 1055	44	17	3/8 inch x 18 mm	20	Ident. No.	040 ●	-
29724...	Pipe reducer	FZ 1630	19	14	1/4 inch x 18 mm	11	Ident. No.	-	070 ●
29724...	Connection sleeve	FZ 1614	29		3/8 inch x 18 mm		Ident. No.	-	200 ●
29724...	Hexagon threaded sleeve	FZ 1617	37	14			Ident. No.	-	220 ●
29724...	Long connector	FZ 1619	51	12			Ident. No.	-	260 ●
29724...	Angle	FZ 1616	33	14	3/8 inch x 18 mm	15	Ident. No.	-	290 ●
29724...	T-piece	FZ 1612	22.5		3/8 inch x 18 mm	12	Ident. No.	-	310 ●
29724...	Crosspiece	FZ 1613	22.5		3/8 inch x 18 mm	12	Ident. No.	-	320 ○

Prod. Gr. 255

ENERPAC High-pressure hose

Application:
For connecting hydraulic systems.

Execution:
- Max. operating pressure 700 bar
- Pressed-on rubber strain relief for long service life and durability
- Four-layer design including two sturdy layers of mesh wire
- External layer made of polyurethane for enhanced resistance against wear caused by friction

Notes:
Do not expose the hoses to temperatures above 65°C or 150°F!

Ident. No. 306–360

Hose length (mm)		600	900	1800	3000	6000	1800
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	NPT 3/8 inch x 18 mm
Min. bending radius (mm)		70	70	70	70	70	70
Nominal width (mm)		6	6	6	6	6	6.4
Internal Ø (mm)		6.4	6.4	6.4	6.4	6.4	6
Dynamic operating pressure (bar)		720	720	720	720	720	720
29730...	Ident. No.	306 ●	309 ●	318 ●	330 ●	360 ●	400 ●

Prod. Gr. 269

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 ●

Prod. Gr. 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 ●

Prod. Gr. 255

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 ●

Prod. Gr. 255

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
			●

Prod. Gr. 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
			●

Prod. Gr. 255

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
			●

Prod. Gr. 255

Ref. no. 29733140

WIKA Manometer

Application:
For determining and checking the operating pressure and the force present in the cylinder.

Execution:
- Manometer with stainless steel pipe spring
- Housing black, diameter 100 mm
- kN scales, coloured
- ½ 14 NPT connection from below
- With installed throttle screw

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	030	040	060	070
		●	○	●	●	○

Prod. Gr. 269

WIKA Manometer glass with slave pointer

Application:
As replacement for manometer

Execution:
- Manometer glass with trailing pointer

Notes:
Accessories for manometers 29739 020-070

29739...	Ident. No.	200
		●

Prod. Gr. 269

GA2 manometer intermediate piece

Application:
Ident. No. 010–030: For installing the manometer on the cylinder or pump.
Ident. No. 040: For determining and checking the operating pressure and the force present in the cylinder.

Execution:
- **Ident. No. 010–030:**
  - Ref. no. 297420 010, accessories for ref. no. 29739020-070
  - Ref. no. 297420 030, accessories for ref. no. 29742 010-020
- **Ident. No. 040:**
  - Manometer with stainless steel pipe spring
  - Housing black, diameter 100 mm
  - kN scales, coloured
  - ½ 14 NPT connection from below
  - With installed throttle screw

Ident. No. 030

Ident. No. 010

Ident. No. 040

Model			GA 2	GA3	-
Length (mm)			155	133	-
Min./max. working pressure			-	-	0-700 bar
Thread type			National pipe tapered thread	National pipe tapered thread	NPTF
Connection thread			3/8 inch	1/4 inch	3/8 inch
Pressure gauge connection			1/2 inch x 14 mm	-	-
ENERPAC	29742...	Ident. No.	010	030	-
			●	○	
WIKA	29742...	Ident. No.	-	-	040
					●

ENERPAC = Prod. Gr. 255
ENERPAC = Prod. Gr. 258
WIKA = Prod. Gr. 258

Simson Hydraulic compact jack

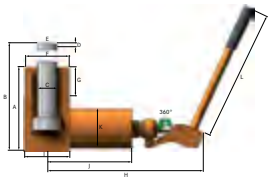
Without spring return

Application:
For industrial use such as for lifting, pressing and pulling.

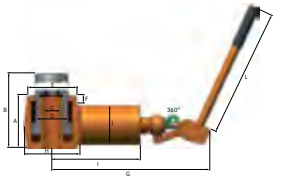
Execution:
- Without spring return
- Can be used in any position
- Hand lever support on pump system can be pivoted 360°
- Die-forged, hardened and roller-polished
- **No. 29763:** The solid piston is made of hardened, high-strength, corrosion-resistant steel and features a blind hole thread for attaching 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
Full-piston cylinder, model
1530/1550/1575/3030



No. 29764

Hollow piston cylinder, model
1030H/1050H/1075H/2325H

Model	Compressive force (kN)	Ø C (mm)	Lift height (mm)	Ø 2 D (mm)	Lever length H (mm)	Construction height retracted A (mm)	Cylinder male thread on semi piston E	Cylinder male thread on full piston F	Cylinder Ø on housing I/H (mm)	Piston connectionthread E	Hand lever length, long L (mm)	29763... Ident. No.		29764... Ident. No.	
1530	150	40	30	70	-	74	-	-	-	M12	262	010	○	-	-
1550	150	40	50	-	-	100	-	M70 x 3	-	M12	262	015	○	-	-
3030	300	40	30	-	-	79	-	M90 x 3	-	M12	262	030	○	-	-
1030H	100	40	30	16.5	230	74	-	-	70	-	262	-	-	005	○
1050H	100	40	50	20.5	230	100	M70 x 3	-	70	-	262	-	-	015	○
1075H	100	40	75	20.5	230	130	M70 x 3	-	70	-	262	-	-	020	○
2325H	225	40	25	24.5	244	79	M90 x 3	-	98	-	262	-	-	025	○

29763... = Prod. Gr. 269
29763... = Prod. Gr. 278
29764... = Prod. Gr. 278