

21775 Precision centring device Centricator



Applications

For centring, positioning, aligning, adjusting, checking, probing flat surfaces and edge finding with a working accuracy of 2 µm. The high-precision mechanics with circumferential probe and stationary dial gauge form the heart of the device.

Note:

Deliverable with interchangeable straight shanks on request.

21775 201

Precision centring device CO-S

Design

- Fixed clamping shank, 16 mm diameter
- Dial gauge with 0.005 mm reading accuracy
- 1 probe insert ball, diameter 5 mm (for bores)
- 1 bent probe insert, ball diameter 5 mm (for shafts)
- In case

21775 204

Precision centring device C III-S

Design

- Fixed clamping shank, 16 mm diameter
- Dial gauge with 0.005 mm reading accuracy
- 1 probe insert ball, diameter 5 mm (for bores)
- 1 x hexagonal screwdriver SW 3
- Vial of watch oil no. 5
- In wooden device case

21775 201

21775 204



Type	Dial gauge reading accuracy mm	Sensing range inner diameter mm	Sensing range outer diameter mm	Flat faces mm	Probe depth inner diameter mm	Probe depth outer diameter mm	21775	...
CO-S	0.005	6-125	0-125	120-160	55	20		201
C III-S	0.005	2-400	0-300	0-480	150	150		204

21776 Individual accessory

Applications

For art. no. 21775.

21776 102

Edge finder

Applications

For positioning the working spindle axis using workpiece edges or corners.

21776 103

Probe insert

Design

Straight, ball diameter 1.6 mm.

Applications

For centring bores smaller than 6 mm.

21776 102

	21776	...
Edge finder		102
Probe insert		103



21776 103



21777 Accessory set

Design

Comprising:

- **Probe insert**, ball diameter 1.6 mm for centring bores smaller than 6 mm
- **Angle probe insert**, ball diameter 2.5 mm for aligning surfaces from 90 mm to 280 mm diameter
- **Extensions** to enlarge the working area
- **Flat face probe**, ball diameter 5.0 mm

Applications

For **Type C III-S** no. 21775 204 and 205.

21777

	21777	...
		101



21780

Articulated measuring stand

Design

Mechanical central clamping for all joints, infinitely adjustable clamping force, any position within the action radius can be achieved. Dial gauge mount with 8-mm shank diameter, length = 40 mm for direct mounting in the machine (collet chuck!).

Applications

For lever gauge measuring instruments. Used for: workpiece positioning, centring bores/pins, aligning workpieces, hard-to-reach places.

Note:

Lever gauge probes, see HHW catalogue Volume 2 (tools + machines) art. no. 33245 et seq.



21780

Action radius approx. mm	21780	...
150		201

21635

Replacement screws for Weldon

DIN 1835 B



21635

Thread	For diameter mm	21635	...
M 6	6		601
M 8	8		602
M 10	10		603

Thread	For diameter mm	21635	...
M 12	12+14		604
M 14	16+18		605
M 16	20		606

Thread	For diameter mm	21635	...
M 18 x 2	25		607
M 20 x 2	32+40		608

21636

Saw blade mounts

Design

With straight shank for mounting on surface chucks, high degree of concentricity.

Applications

For mounting saw blades with diameters of 20–100 mm and saw blade thickness of 0.2–6 mm (see art. no. 17002–17008 and 17030–17031).

Note:

Saw blade not included in delivery.

21636 300

Design

Set, six pieces, consisting of all sizes of art. no. 21636 301–306, incl. case.

21636 301-308

Design

Individual.



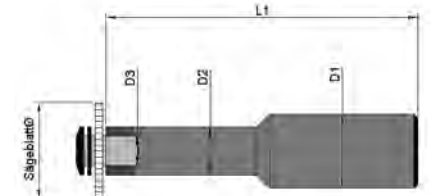
21636 300

Set contents	Mount Ø mm	21636	...
Six pieces	20/25/32/40/50/63		300

For saw blade Ø mm	L1 mm	Ø D1 mm	Ø D2 mm	Ø D3 mm	Individual	
					21636	...
20	94	20	10.0	5		301
25	104	20	13.0	8		302
32	110	20	16.0	8		303
40	114	20	19.5	10		304
50	141	25	24.5	13		305
63	141	25	24.5	16		306
80	160	25	34.0	22		307
100	160	25	39.5	22		308



21636 301-308



21655

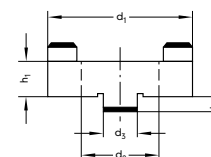
Driving rings

DIN 6366

Applications

For combined mill arbors, art. no. 21648–21650.

For mill arbor Ø d ₂ mm	h ₁ mm	d ₃ mm	h ₂ mm	d ₁ mm	21655	...
16	10	8	5.0	32		202
22	12	10	5.6	40		203
27	12	12	6.3	48		204
32	14	14	7.0	58		205
40	14	16	9.0	70		206



21655

21656

Cutter retaining screws



Design

Without bore.

Applications

For combination mill arbors, blade head supports and cutters with lateral grooves.

21656

For mill arbors with pin Ø mm	Retaining screw thread	21656	...
10	M 5		101
13	M 6		102
16	M 8		103
22	M 10		104
27	M 12		105
32	M 16		106
40	M 20		107



21657

Key for cutter retaining screws



Design

Hardened special steel with burnished finish.

Applications

For tightening cutter retaining screws DIN 6367.

21657

For mill arbors with pin Ø mm	21657	...
13		102
16		103
22		104
27		105
32		106
40		107



21659

Cutter retaining screws

Design

Consisting of a stud bolt with hexagon socket (operated using a hexagonal T-handle wrench and screwed-on threaded ring).

Applications

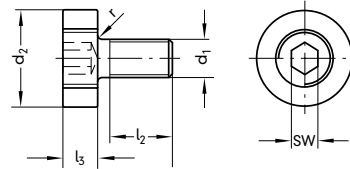
For mill arbors, blade head supports and cutters with lateral grooves.

During the clamping phase, the threaded ring pushes against the face of the mill and no longer rotates with the stud bolt. Prevents damage to the mill and improves concentricity and axial runout accuracy!

21659

Note:

A huge clamping force is generated due to the different pitches of the two threads on the stud bolt.



For mill arbors with pin Ø mm	Retaining screw thread (d ₁)	Thread length (l ₂) MM	Hexagon socket SW mm	Threaded ring Ø x thickness (d ₂ x l ₃) mm	21659	...
16	M 8	13.0	5	20 x 7		101
22	M 10	14.4	6	28 x 8		102
27	M 12	17.5	8	35 x 9		103
32	M 16	20.5	10	42 x 10		104
40	M 20	24.0	12	52 x 11		105

21667

Mill arbor rings



B

Design

Turned in steel, hardened, ground flat and lapped. Keyway DIN 138.

21667



Bore	16 mm	...	22 mm	...	27 mm	...	32 mm	...	40 mm	...	50 mm	...
Ring width mm	21667	...	21667	...	21667	...	21667	...	21667	...	21667	...
2		111		121		131		141		151		161
3		112		122		132		142		152		162
4		113		123		133		143		153		163
5		114		124		134		144		154		164
6		115		125		135		145		155		165
10		116		126		136		146		156		166
20		117		127		137		147		157		167
30		118		128		138		148		158		168

Clamping technology

