



Fixturing solutions for measuring machines and precision mechanics

- CLAMPING CHUCKS
- AUTOMATION
- COLLET HOLDERS
- DIVIDERS
- CLAMPING EQUIPMENT FOR COORDINATE MEASURING MACHINES
- COLLETS

QUALITY | FLEXIBILITY | SWISS MADE

YOUR WORKPIECE – our clamping solution

Intricate geometrics, thin-walled workpieces, extremely large clamping diameters, large shaft diameters and the use of abrasive substances can all turn precision workpiece clamping in a material-protecting manner into a real challenge.

DESIGN PLANNING

From the first diagram to our actual offer and through to the finished 3D model - we will find the right solution for you. We also manufacture to your specifications if you already have the technical drawings.

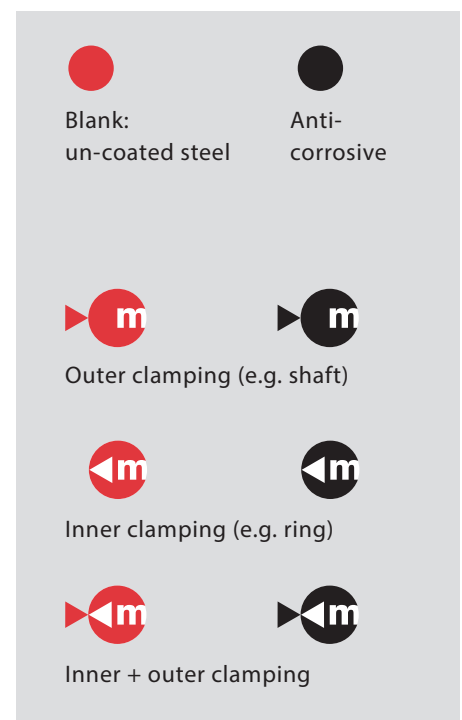
PRODUCTION

We are small but extremely flexible! Once all the planning is in place, we will produce your clamping system straight away. Our track record in designing and implementing customized clamping systems goes back over many years. Our products are effectively used, in particular, in measuring technology (gear measuring machines, concentricity deviating gauges) and in automation.

General technical details

- Version Reinox
Corrosion Protection with additional heat treatment of the clamping chuck via gas nitriding with subsequent oxidation; this treatment makes the clamping chuck especially hard, smooth-running, and low-wear. Reinox clamping chucks are oiled to make it run even smoother – perfect for measuring machines.
- Case-hardened, alternative designations:
Surface-hardened or carbo-nitrided, thus also protected against corrosion
- Altef®-coating
High quality surface protection for aluminum components, advantages:
 - High wear protection
 - High self-lubrication effect
 - corrosion-free
 - Hard as steel: about 50 HRC (or about 520 HV)
 - Durable: For over 13 years at Maprox customers in tough continuous use
- Anodize
Certain aluminum fixtures or their attached parts are anodized

Used symbols



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If the appropriate solution is missing, we develop it.
Because technical progress is important to us. Passion no less.

CLAMPING CHUCKS JF

The original, further improved over many decades in our manufactory; in use worldwide on measuring machines of all kinds up to the watchmaking lathe.

For customers who need precise, yet extremely flat and thus space-saving precision chucks | With up to 8 jaws, an almost complete workpiece-comprising fixation is granted.

On request, we even grind your jaw steps to workpiece diameters defined by you | With the surface-clamping achieved in this way (instead of line or only punctual support), the workpiece is held even better in its shape during clamping.

Technical Details

- Repetitiveness: 5 μm
- Lateral runout: 10 μm
- Concentricity: 20 μm
- Blank JF clamping chucks are greased and therefore suitable for machining, too
- Surface hardness:
D jaws are case-hardened as standard, page 2
- Replacement jaws, see page 8 and 9

Options

- Clamping chucks: Other sizes on request
- Top jaws: Special designs according to customer requirements
- Torque screwdriver for jaw assembly, see page 24
- Safety torque key, see page 24
- Anti-corrosive (Reinox, see page 2)
- Even higher accuracies are possible on request

Clamping chuck JF, with a set of reversible, case-hardened, ground top jaws, Type D

Blank

Type D	Item No.	Clamping ranges [mm] outside - inside		Jaw travel [mm]
JF 3D 55	193516.00	1-61	13-72	6.5
JF 6D 55	193515.00	1-61	13-72	6.5
JF 3D 70	193536.00	1-71	17-88	11
JF 6D 70	193535.03	1-71	17-88	11
JF 3D 100	195089.00	1.5-99.5	27-117	18
JF 6D 100	193571.03	1.5-99.5	27-117	18
JF 8D 150	195035.00	1.5-140	36-182	24



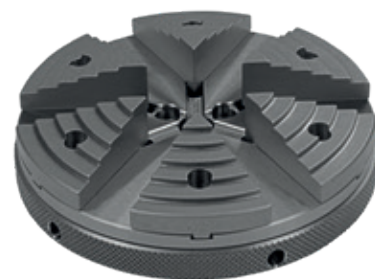
Anti-corrosive

Type D	Item No.	Clamping ranges [mm] outside - inside		Jaw travel [mm]
JF 3D 55	193516.63	1-61	13-72	6.5
JF 6D 55	193515.63	1-61	13-72	6.5
JF 3D 70	193536.63	1-71	17-88	11
JF 6D 70	193535.63	1-71	17-88	11
JF 3D 100	195089.63	1.5-99.5	27-117	18
JF 6D 100	193571.63	1.5-99.5	27-117	18
JF 3D 150	10162.002	1.5-140	36-172	24
JF 8D 150	195035.10	1.5-140	36-172	24
JF 3D 200	195280.00	1.5-210	45-250	35
JF 6D 200	10118.001	1.5-210	45-250	35

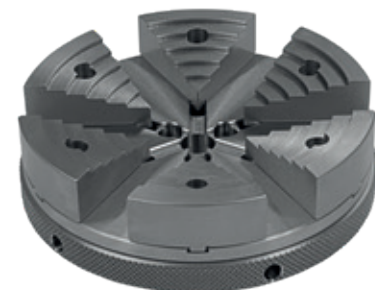


Clamping chucks JF, with a set of soft top jaws, Type A, B, C or DW, W

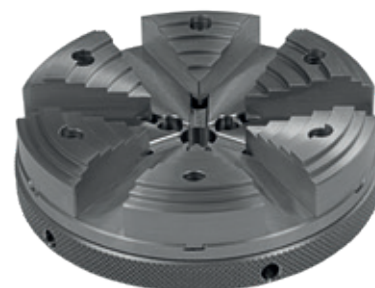
Type A	Item No.	Clamping range[mm] inside	Jaw travel [mm]
JF 6A 55	193512.00	10-48	6.5
JF 6A 70	193532.00	12-62	11
JF 6A 85	193552.00	17-78	16
JF 6A 100	193568.00	16-90	18
JF 8A 125	193584.00	19-134	20
JF 8A 150	193593.03	26-150	24



Type B	Item No.	Clamping range[mm] outside	Jaw travel [mm]
JF 6B 55	193513.00	10-48	6.5
JF 6B 70	193533.00	12-62	11
JF 6B 85	193553.00	17-78	16
JF 6B 100	193569.00	16-90	18
JF 8B 125	193585.00	15-134	20
JF 8B 150	193594.00	22-150	24

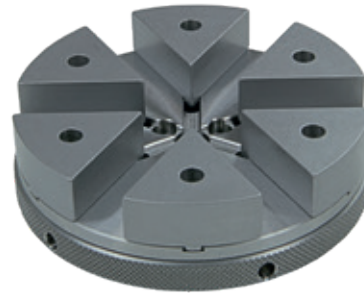
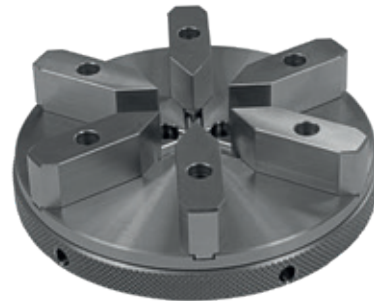


Type C	Item No.	Clamping ranges [mm] outside - inside		Jaw travel [mm]
JF 6C 55	194400.00	10-44	35-48	6.5
JF 6C 70	194403.00	12-51	53-62	11
JF 6C 85	194407.00	17-67	48-78	16
JF 6C 100	194411.00	16-79	58-90	18
JF 8C 125	194417.00	15-102	82-134	20
JF 8C 150	194418.00	22-123	104-150	24



Type DW	Item No.	Jaw travel [mm]
JF 6DW 55	195020.00	6.5
JF 6DW 70	195308.00	11
JF 3DW 70	195309.00	16
JF 6DW 100	195307.00	18
JF 8DW 125	195307.00	20
JF 8DW 150	195023.00	24

Type W	Item No.	Jaw travel [mm]
JF 6W 55	193514.00	6.5
JF 6W 70	193534.00	11
JF 6W 85	193554.00	16
JF 6W100	193570.00	18
JF 8W125	193586.00	20
JF 8W150	193595.00	24



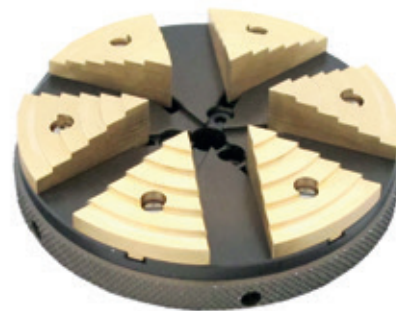
Jaw type DW and W:

- Soft top jaws for workpiece customization by end user

Clamping chuck JF aluminum, with a set of brass top jaws, Type A, B, C

The completely anti-magnetic clamping chuck from Maprox has been in use for many years wherever magnetism plays a role – or not.

Type	Item No.	Clamping ranges [mm]		Jaw travel [mm]
		outside	inside	
JF 6A 100	193568.ALU	-	16-90	18
JF 6B 100	193569. ALU	16-90	-	18
JF 6C 100	194411. ALU	16-79	58-90	18



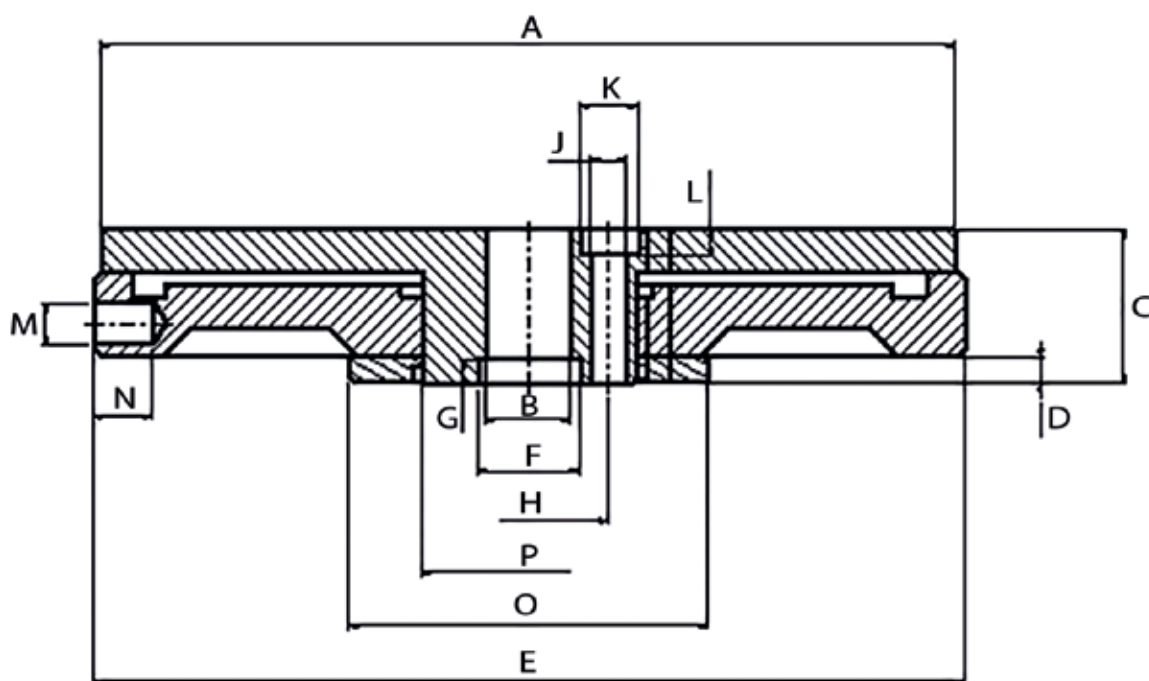
Options

- Top jaws available in plastic, aluminum or Reinox (see Page 2).
Other materials on request.
- Special shapes possible according to your workpiece.

Clamping Chuck JF, Dimensions

Dimensions [mm]

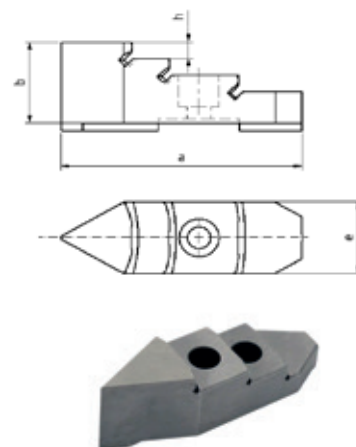
JF Ø	55	70	85	100	125	150	200
A Ø	55	70	85	100	125	150	200
B H7 Ø	8	8	10	10	16	16	16
C	13.8	15.7	16.7	18.2	21.2	21.2	25.2
D	2.8	3.2	3.2	3.2	4.2	4.2	4.2
E Ø	57	72	87	102	127	152	202
F 0/+ 0.010 Ø	10	11	12	12	20	20	20
G	2.6	4	3.1	3.1	5.2	5.2	5.2
H Ø	14.5	17	18.8	18.8	28	28	28
J Ø	3 x 3.1	3 x 3.8	3 x 4.0	3 x 4.1	4 x 5.2	4 x 5.2	4 x 5.2
K Ø	5.6	5.8	6.1	7.2	9.5	9.5	9.5
L	3.6	4.8	5.5	6	6.2	6.2	6.2
M Ø	–	–	–	5	5	5	5
N	–	–	–	7	7	7	7
O Ø	32	37	42	42	50	50	50
P Ø	20	22	25	25	35	35	35
Weight in kg, ca.	0.3	0.5	0.9	1.1	2.5	2.8	4.4



View without jaws

Top jaws JF, reversible Type D

Type D	Item No.	a (Länge)	b (height)	e (width)	h (step height)
JF 3D 55	193273.10	22	9.1	8	2
JF 3D 70	193290.10	26	11.1	10	2.3
JF 6D 55	193271.10	22	9.1	8	2
JF 6D 70	193288.10	26	11.1	10	2.3
JF 6D 100	193317.10	38.5	13.7	12	2.8
JF 8D 150	195246.10	59.5	18	18	4
JF 3D 200	10162.011	80	23.5	20	5
JF 6D 200	10118.005	80	23.5	20	5

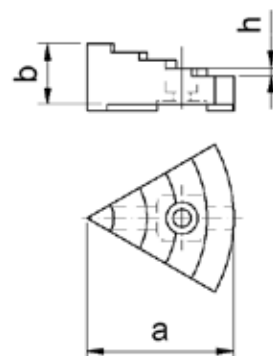


Technical details

- anti-corrosive (Reinox), see page 2

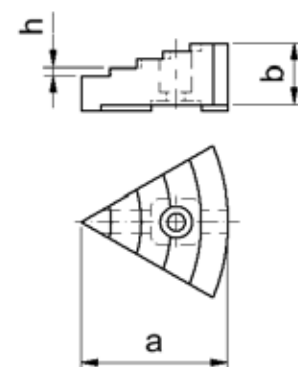
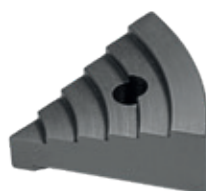
Top jaws Type A

Type A	Item No.	a (length)	b (height)	h
JF 6A 55	193267.00	22	9.1	1.2
JF 6A 70	193284.00	25	9.1	1.25
JF 6A 85	193301.00	30	14.0	1.5
JF 6A 100	193313.00	35	13.7	1.6
JF 8A 125	193332.00	55	18.4	2
JF 8A 150	193341.00	60	18.4	2



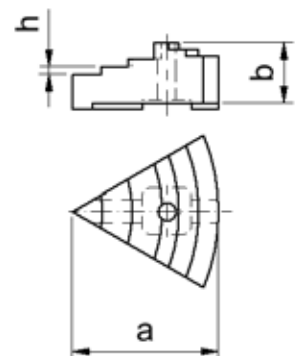
Top jaws Type B

Type B	Item No.	a (length)	b (height)	h
JF 6B 55	193268.00	22	9.1	1.2
JF 6B 70	193285.00	25	10	1.25
JF 6B 85	193302.00	30	14.0	1.5
JF 6B 100	193314.00	35	13.7	1.6
JF 8B 125	193333.00	55	18.4	2
JF 8B 150	193342.00	60	18.4	2



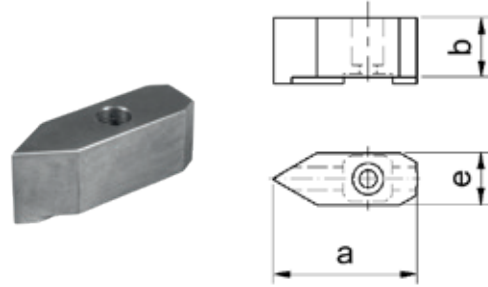
Top jaws Type C

Type C	Item No.	a (length)	b (height)	h
JF 6C 55	193269.00	22	9.1	1.2
JF 6C 70	193286.00	25	9.1	1.25
JF 6C 85	193303.00	30	14.0	1.5
JF 6C 100	193315.00	35	13.7	1.6
JF 8C 125	193334.00	55	18.4	2
JF 8C 150	193343.00	60	18.4	2



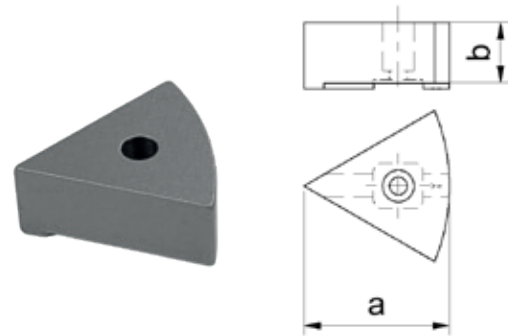
Top jaws Type DW

Type DW	Item No.	a (length)	b (height)	e (width)
JF 3DW 55	193274.00	22	9.1	8
JF 3DW 70	193291.00	26	10.4	10
JF 6DW 55	193272.00	22	9.1	8
JF 6DW 70	193289.00	26	10.4	10
JF 6DW 100	193318.00	39	13.7	12
JF 8DW 150	195290.00	60	18.4	18



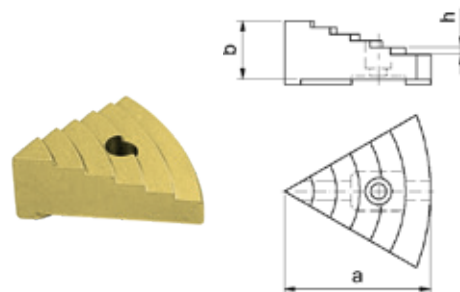
Top jaws Type W

Type W	Item No.	a (length)	b (height)
JF 6W 55	193270.00	22	9.1
JF 6W 70	193287.00	25	9.1
JF 6W 85	193304.00	30	14.0
JF 6W 100	193316.00	35	13.7
JF 8W 125	193335.00	55	18.4
JF 8W 150	193344.00	60	18.4



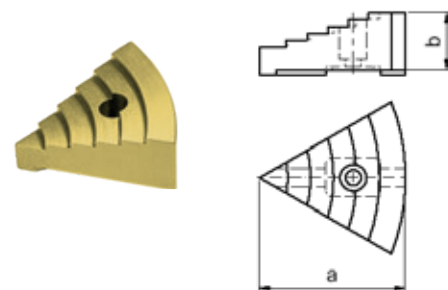
Top jaws brass Type A

Type A	Item No.	a (length)	b (height)	h (step height)
JF 6A 100	193313.70	35	13.7	1.6



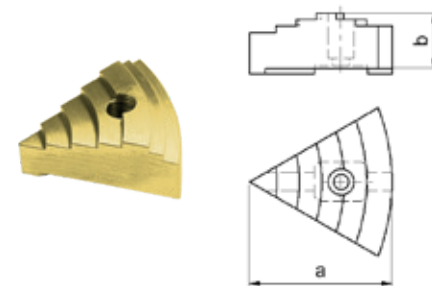
Top jaws brass Type B

Type B	Item No.	a (length)	b (height)	h (step height)
JF 6B 100	193314.70	35	13.7	1.6



Top jaws brass Type C

Type C	Item No.	a (length)	b (height)	h (step height)
JF 6C 100	193315.70	35	13.7	1.6



Face plate JF anti-corrosive (Reinox)

Ultra-flat small face plate with 4 hard, individually adjustable, reversible jaws

Type	Item No.
JF 4E 70	193435.00



Technical details

- Lateral runout: 10 µm
- Incl. open-ended and socket-head wrenches
- Anti-corrosive (Reinox), see page 2

Options

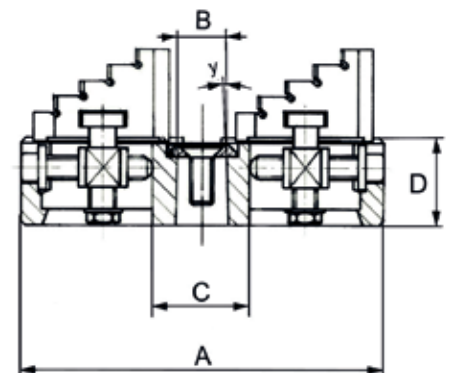
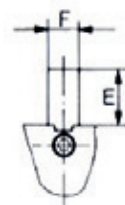
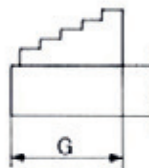
- Shank B8 (Item no. 195004.00)
- Shanks according to customer requirements

Dimensions

A	B	C	D	E	F	G	y	kg
70	9.13	18	13	14	12	27	1° 30'	0.3

Clamping ranges Ø min.-max. [mm]

Inner clamping	20-65
Outer clamping	16-62



Face plate JF anti-corrosive (Reinox)

Ultra-flat small face plate without jaws, with ground surface

Type	Item no.	Bore holes mounting
JF Ø 45	195390.00	JF 70 shank type
JF Ø 80	195399.00	JF 70 shank type
JF Ø 250	15154.001	JF 100 shank type
JF Ø 260	195560.00	Pitch circle 50 mm / M6



Technical details

- Anti-corrosive (Reinox), see page 2

Options

- Shanks JF, see page 11
- Shanks according to customer requirements
- Further sizes on request

Planscheibe magnetisch JF korrosionsgeschützt (Reinox)
mit geschliffener Oberfläche

Type	Item no.	Bore holes mounting
JF Ø 80	195464.00	JF 70 SchaftType



Example of a workpiece fixation

Technical details

- Optical centering rings
- Permanently magnetic
- Anti-corrosive (Reinox), see page 2

Options

- Shanks JF, see page 11
- Shanks according to customer requirements
- Further sizes on request

Shank B, W, C

	Ø	JF 55	JF 70	JF 85	JF 100	JF 125	JF 150	JF 200
B 6	6	194419.00	194426.00	on request	on request	on request	on request	on request
B 8	8	193602.00	193603.00	193204.00	193204.00	on request	on request	on request
W 10	10	194393.00	194420.00	194395.00	194395.00	on request	on request	on request
W 12	12	193231.00	193232.00	193233.00	193233.00	195327.00	195327.00	on request
W 20	20	193236.00	193235.00	193234.00	193234.00	193230.00	193230.00	on request
W 25	25	193237.00	194421.00	193239.00	193239.00	193240.00	193240.00	on request
B 32	32	195314.00	195387.00	194438.00	194438.00	193429.00	193429.00	on request
C 5	32	195007.00	195005.00	193976.00	193976.00	193977.00	193977.00	on request



Shank MK with internal thread

	JF 55	JF 70	JF 85	JF 100	JF 125	JF 150	JF 200
MK 1	195299.00	on request	on request	on request	on request	on request	on request
MK 2	195008.00	195009.00	195010.00	195010.00	195288.00	195288.00	195288.00
MK 3	194422.00	194423.00	194424.00	194424.00	194425.00	194425.00	on request
MK 4	194389.00	194388.00	194428.00	194428.00	194427.00	194427.00	on request
MK 5	195026.00	195027.00	194429.00	194429.00	194430.00	194430.00	on request



Shank MK with withdrawal nut and internal thread

	JF 55	JF 70	JF 85	JF 100	JF 125	JF 150	JF 200
MK2	195337.00	195292.00	195328.00	195328.00	195013.00	195013.00	on request
MK5	on request	on request	194446.00	194446.00	on request	on request	on request



Shank ISO 40

	JF 55	JF 70	JF 85	JF 100	JF125	JF 150	JF 200
ISO 40	on request	195208.00	195291.00	195291.00	195257.00	195257.00	on request



Options

- Cylindrical, Cintra and C3 shanks
- Shanks according to customer requirements



Probably the smallest and at the same time most accurate mini chuck in the world - from Maprox.

CLAMPING CHUCKS ZK Mini

The smallest and most precise chuck in the world | Starting from $\varnothing = 30$ mm – for clamping of small shafts from 0.6 mm or rings from 2 mm inner diameter | Equipped with 2 jaw sets for inner or outer clamping



Technical details

- Outer diameter: 30 mm (body)
33 mm (rotative ring)
- Feed-through bore 8 mm
- Possible speed up to 6000 rpm
- Also suitable for underwater use, eg. wire-cut EDM
- Concentricity accuracy: 30µm
- Repeat accuracy: 10µm



Technical details

- Anti-corrosive (Reinox) see page 2
- Ground
- IMPORTANT: Replacement jaws must be ground onto your clamping chuck

Clamping chuck 3 ZK 30 Mini, stainless, with a set of jaws, type A and B

The mini clamping chuck of Maprox is with a diameter of 30 mm really "mini" | Stainless and precise
With mini clamping pins it can even clamp your workpiece from an inner diameter of $\varnothing = 2.0$ mm.



3 ZK 30 with/without dowel pin



3 ZK 45 without dowel pins

Anti-corrosive with dowel pins

Type	Item no.	Clamping ranges [mm] outside - inside		Jaw travel [mm]
6 ZK 30	on request	-	-	6
3 ZK 30	10000.0130	0.6-36	2-34	6
3 ZK 45	on request	-	-	13

Anti-corrosive without dowel pins

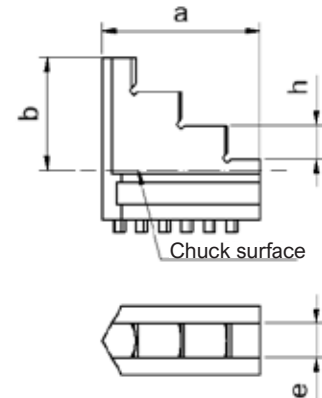
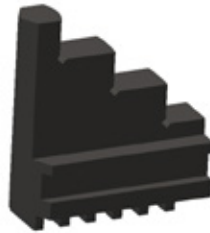
Type	Item no.	Clamping ranges [mm] outside - inside		Jaw travel [mm]
6 ZK 30	10000.0170	0.6-36	6-34	6
3 ZK 30	10000.0110	0.6-36	6-34	6
3 ZK 45	10000.0140	0.6-45	6-45	13



Jaws, type A, B and A jaws with hardened clamping pins | Inner clamping from Ø 2.0 mm

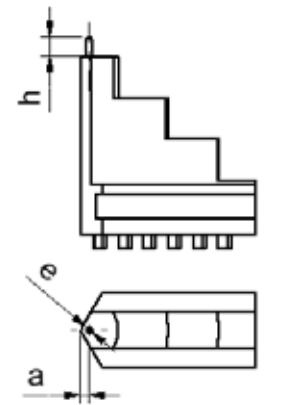
Stepped jaws type A

Type A	Item no.	a	b	e	h
3 ZKA 30	10000.0103.10	14	10	3	3
6 ZKA 30	10000.0173.10	14.5	10	3	3
3 ZKA 45	10000.0103.10	14	10	3	3



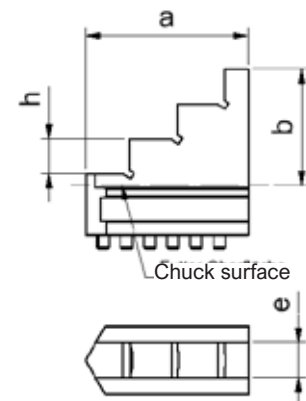
Stepped jaws type A with spring steel pins

Type A	Item no.	a	e	h
3 ZKA 30	10000.0120.10	0,7	Ø0.5	1,5
6 ZKA 30	on request	-	-	-
3 ZKA 45	on request	-	-	-



Stepped jaws type B

Type B	Item no.	a	b	e	h
3 ZKB 30	10000.0104.10	14	10	3	3
6 ZKB 30	10000.0174.10	14.5	10	3	3
3 ZKB 45	10000.0104.10	14	10	3	3

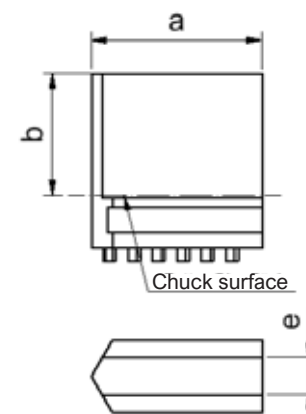


Technical details

- Standard steel Reinox, see page 2
- Ground
- Optional brass jaws

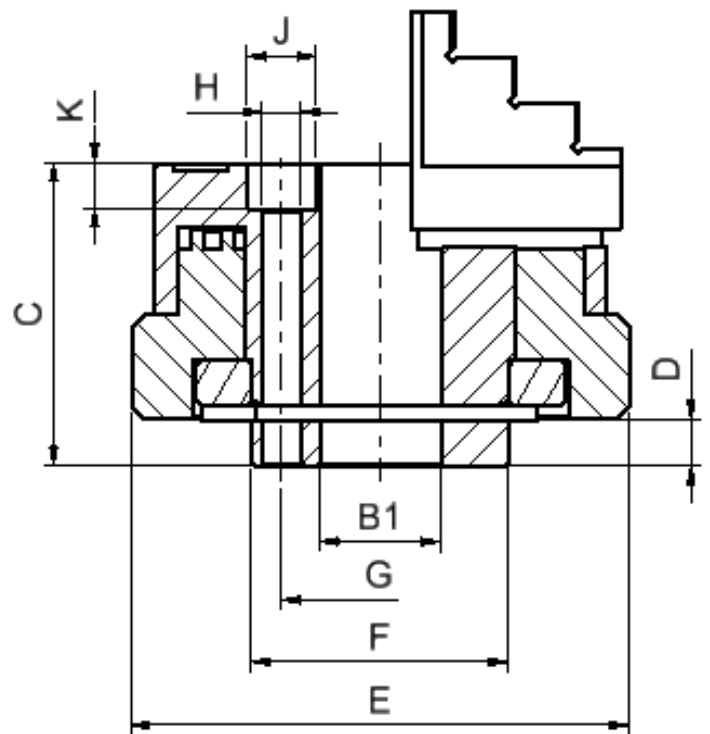
Jaw Type W - soft

Type W	Item no.	a	b	e
3 ZKW 30	10000.0108.10	14	10	3
3 ZKW 45	10000.0108.10	14	10	3



Dimensions [mm]

3 ZK Ø	30	45
B1 Ø	8	8
C	20	20
D	3	3
E Ø	33	45
F Ø / +0.01 Ø	17	17
G Ø	13	13
H Ø	3 x 2.6	3 x 2.6
J Ø	4.6	4.6
K	3	3
Weight in kg, ca.	0.1	0.2



Shank B, W, C

	Ø	ZK 30	ZK 45
B 6	6	on request	on request
B 8	8	on request	on request
W 10	10	on request	on request
W 12	12	on request	on request
W 20	20	196052.00	196052.00
W 25	25	on request	on request
B 32	32	on request	on request
P 10	10	10000.0144	10000.0144



Shank MK with withdrawal nut M22 x 1.5, internal thread

	ZK 30	ZK 45
MK2	196062.00	196062.00
MK3	196077.00	196077.00





Punctuality is a Swiss virtue. Accuracy as well.
These values are extremely important to us. For 35 years.

CLAMPING CHUCKS ZAS – made of high-strength aluminum

ZAS – the aluminum clamping chuck family of Maprox, from $\varnothing = 70-315$ mm, or according to customer requirements also significantly larger | Hard as steel (about 50 HRC), with over 50% less weight – and the usual Maprox precision.

In use since 2004 it defies the toughest conditions | High-quality tactile feel of the black ALTEF® coating | Including a set of reversible steel top jaws, ground and case-hardened

Technical details

- Repetitiveness: 10 μm
- Lateral runout: 10 μm
- Concentricity: 20 μm
- For shank diameter 2-371 mm and bore diameter 18-404 mm
- Clamping chucks made of aluminum, ALTEF® coated, see page 2
- $\varnothing 70-315$: Steel top jaws, ground and case-hardened (anti-corrosive, see page 2)

Options

- Anti-magnetic
- Soft block top jaws W
- Top jaws also available in plastic, aluminum, brass etc. on request
- Special sizes XXL; up to $\varnothing 600\text{mm}$
- Even higher accuracies are possible on request

Clamping chucks 3 ZAS aluminum – made of high-strength aluminum Ø 70-315 mm

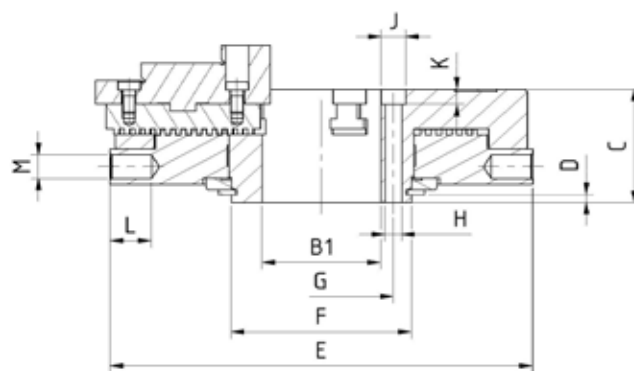
With a set of steel top jaws, ground and case-hardened

Type	Item no.	Clamping ranges[mm] outside - inside		Jaw travel [mm]
3 ZAS 70	197070.00	1-64	17-60	18
3 ZAS 80	197080.00	1-80	18-62	20
3 ZAS 110	197110.00	3-106	22-96	32
3 ZAS 125	197125.00	3-140	32-140	36
3 ZAS 160	197160.00	3-196	40-196	45
3 ZAS 240	197240.00	4-292	38-292	65
3 ZAS 315	197315.00	4-371	40-360	80



Dimensions [mm]

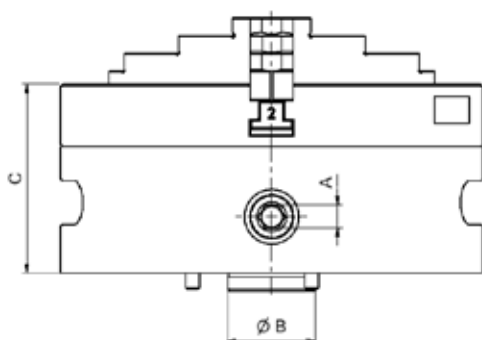
3 ZAS Ø	70	80	110	125	160	240	315
B1 Ø	18	22	32	36	46	68	89
C	31	34	35	40	48.5	67	88.3
D	4	4	4	4	4	4	4
E Ø	73	83	114	135	164	243	318
F +0.01 / 0 Ø	32	38	50	60	70	120	157
G Ø	26	30	42	50	56	86	113
H Ø	3 x 3.2	3 x 4.2	3 x 4.2	3 x 5.3	3 x 6.4	3 x 8.4	3 x 10.2
J Ø	5.7	7.2	7.2	9.4	9.4	15	16.5
K	3.6	4.5	4.5	5.8	6.5	8	10.5
L	10	11	11	12	16	16	16
M Ø	5	7	7	7	10	10	10
Weight in kg, ca.	0.4	0.5	0.9	1.4	2.9	9.5	18.5



Clamping chucks 3 ZAS Key – for easy clamping with torque-wrench

With a set of steel top jaws, ground and case-hardened

Type	Item no.	A; Hex-key [mm]	B; [mm]	C; [mm]	Weight; [kg]
3 ZAS 125 Key	198125.00	8	30	57.5	2.5
3 ZAS 160 Key	198160.00	10	30	62	3.5
3 ZAS 240 Key	198240.00	13	50	93.5	11.2
3 ZAS 315 Key	198315.00	13	50	104.5	21.8



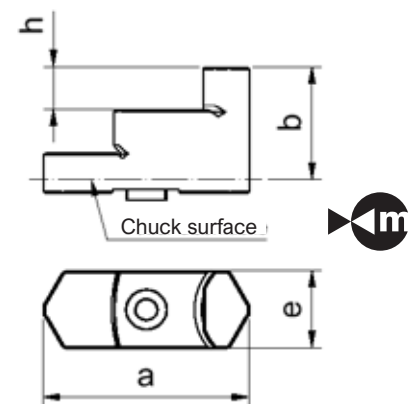
Top jaws 3 ZAS, reversible

Made of steel as standard | Ground and case-hardened (anti-corrosive, see page 2) | Also available in plastic (only top jaws), aluminum, brass, etc.

We create also special types according to your workpiece

Top jaws, reversible

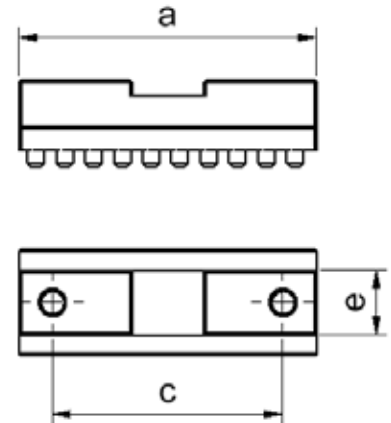
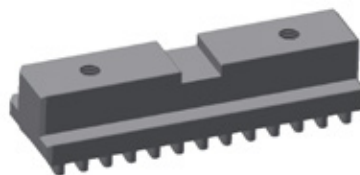
Type	Item no.	a	b	e	h
3 ZAS 70	196071.10	31	17	11.74	6.5
3 ZAS 80	196071.10	31	17	11.74	6.5
3 ZAS 110	196084.10	40	17	11.74	7
3 ZAS 125	196061.10	49	20	14.76	7.5
3 ZAS 160	195383.10	58	25	14.76	7.5
3 ZAS 240	195268.01	100	37	24.62	10
3 ZAS 315	195416.10	130	42	29.62	10



To achieve the the specified level of precision, we recommend having the jaws ground on your chuck at our Maprox-factory.

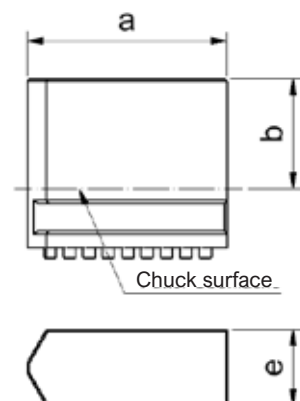
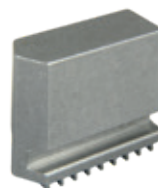
Base jaws - set

Type	Item no.	Number of threads	a	c	e
3 ZAS 70	196070.00	1 (centered)	30	-	5.9
3 ZAS 80	196070.00	1 (centered)	30	-	5.9
3 ZAS 110	196070.00	1 (centered)	30	-	5.9
3 ZAS 125	196060.00	2	41.3	32	9
3 ZAS 160	195382.00	2	65	42	9
3 ZAS 240	195224.00	2	80	50	15
3 ZAS 315	195413.00	2	110	65	19



Block jaws Type W, soft

Type W	Item no.	a	b	e
3 ZFW 70/80	193187.00	31	17	11.74
3 ZFW 110	193031.00	40	17	11.74
3 ZFW 125	193043.00	49	20	14.76
3 ZFW 160	195111.00	58	15.6	14.76
3 ZFW 240	195120.00	88	32	24.62

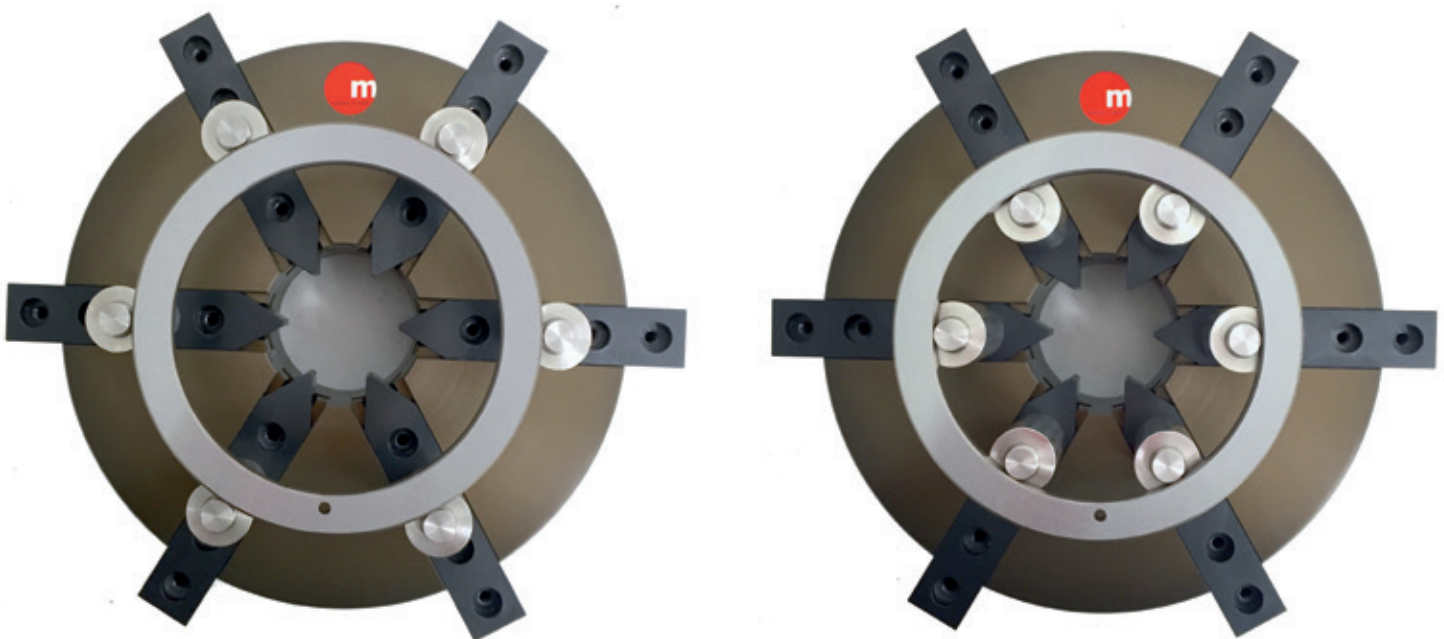


ZAS pin-jaw chuck

The Maprox pin-jaw chuck: A modern classic providing the greatest possible touch probe freedom, due to the minimized workpiece contact areas – high above the chuck, especially made for sensitive rings and shafts | Chuck made of aluminum, ALTEF® coated (corrosion protected, see page 2) | Including 6 pin-jaws or alternatively a combination of 3 pure seating pin-jaws plus 3 pin-jaws without taps | All base and pin-jaws corrosion protected (Reinox), see page 2.

Perfect also in the bearing technology and for gears – with the following advantages for you:

- Large clamping ranges by moving the pin-jaws on the base jaw holes
- High accuracy due to ground pin-jaws with centering collar
- Minimal "crushing" of your workpieces with up to 6 jaws
- Minimal danger of collision with star or cross touch probes due to low workpiece support and large pin-jaw height
- Complete measuring in only ONE clamping with minimal workpiece contact
- Best flexibility => Instead of pin-jaws, reversible step top jaws can also be used (together with positioning sleeves)
- Big parts weights are no problem
- Chuck completely corrosion-free
- All jaws with spanner gap for controlled release and tightening
- Option: Jaws also available in plastic, brass, aluminum as well as in individual customer design



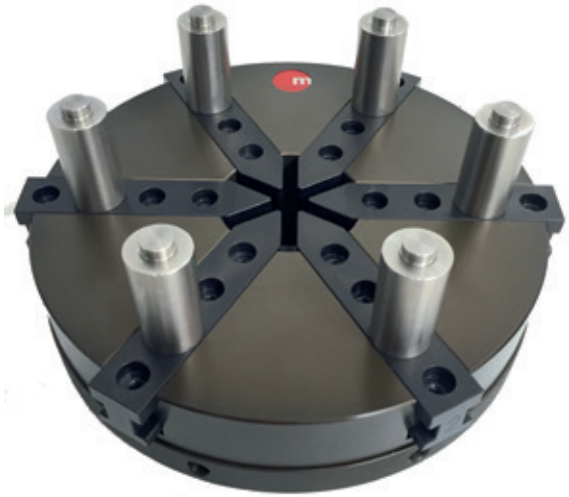
Pin-jaw chuck

6 pin-jaws with contact area (taps)

Dimensions: see page 17

Type	Item no.	Clamping ranges[mm] outside - inside		Jaw travel [mm]
6 ZAS 80	195467.00	19-78	31-90	15
6 ZAS 160	195442.01	28-191	45-208	40
6 ZAS 240	195466.00	60-314	85-339	56

- Further sizes on request



Pin-jaw chuck

3 seating pins and 3 pin-jaws without taps

Dimensions: see page 17

Type	Item no.	Clamping ranges[mm] outside - inside		Jaw travel [mm]
6 ZAS 240	195457.00	60-314	85-339	56

- Further sizes on request



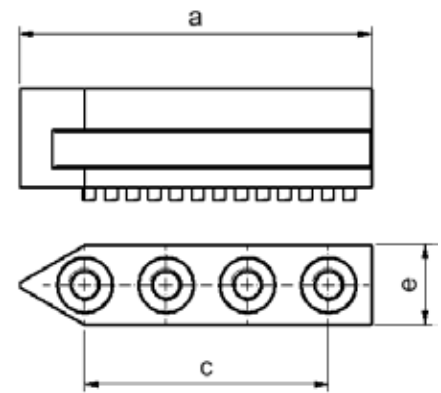
Set of base jaws

Type	Item no.	Number of holes	a	c	e
6 ZAG 80	196085.00	2	38	20	11.7
6 ZAG 160	195118.00	4	65	45	14.7
6 ZAG 240	196035.06	4	118.5	75	24.6

Further sizes on request

Technical details

- Anti-corrosive (Reinox), see page 2



Pin-jaw with contact area (taps)

Type	Item no.	SW	D1	D2	f	h1	h2
1 pin jaw 6 ZAS 80	195445.00	8	12	6 +/- 0.005	3	28.5 +/- 0.005	4.5
1 pin jaw 6 ZAS 160	195446.00	15	18	8 +/- 0.005	5	24 +/- 0.005	8
1 pin jaw 6 ZAS 240	196059.00	22	25	12.5 +/- 0.005	6.25	47 +/- 0.005	7

Further sizes on request

Technical details

- Anti-corrosive (Reinox), see page 2



Seating pin (without taps)

Type	Item no.	SW	D3	h3
1 seating pin 6 ZAS 160	195447.00	15	18	24 +/- 0.005
1 seating pin 6 ZAS 240	195459.00	22	25	47 +/- 0.005

Further sizes on request

Technical details

- Anti-corrosive (Reinox), see page 2



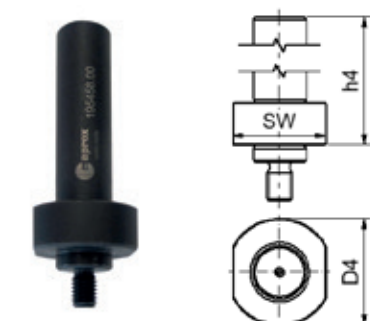
Pin-jaw (without taps)

Type	Item no.	SW	D4	h4
1 pin jaw 6 ZAS 240	195458.00	22	25h7	54

Further sizes on request

Technical details

- Anti-corrosive (Reinox), see page 2



Special sizes XXL – made of high-strength aluminum or steel

When things have to be even bigger!

No problem – on request we produce special sizes of our clamping chucks | 400 mm or 600 mm diameters are successfully in use | Lowest possible height, maximum clamping diameter at the lowest possible weight

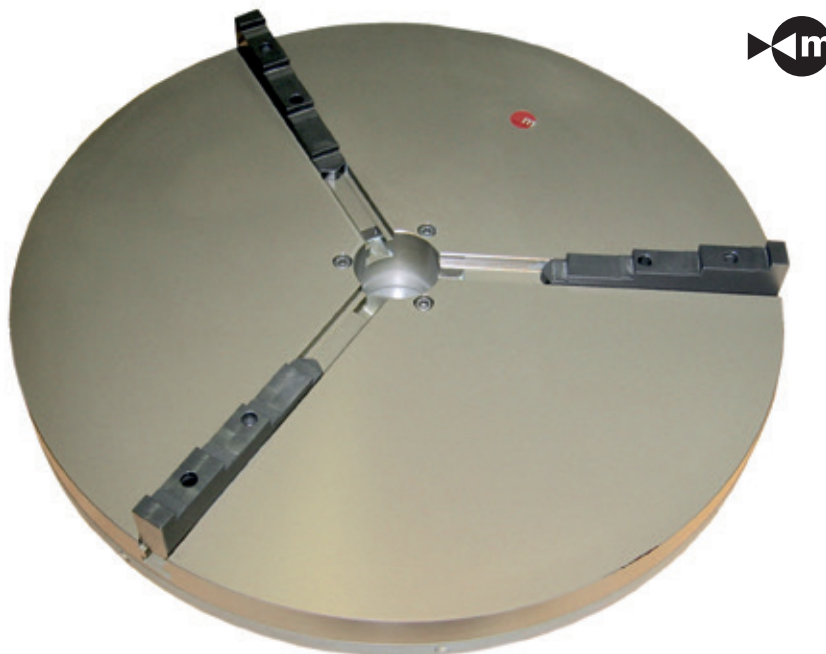


Technical details

- We also realize large inner diameters
For example Ø 350 mm at ID 180 mm
- Clamping chuck made of aluminum: ALTEF® coating, see page 2
- Ø 400 mm, 600 mm or other diameters possible

Options

- Steel clamping chuck anti-corrosive (Reinox), see page 2



Example Ø = 600 mm

Shank B, W, C

	Ø	ZAS 70	ZAS 80	ZAS 110	ZAS 125	ZAS 160	ZAS 240
B 6	6	on request	on request	on request	on request	on request	on request
B 8	8	on request	on request	on request	on request	on request	on request
W 10	10	on request	on request	on request	on request	on request	on request
W 12	12	195244.00	195239.00	on request	on request	on request	on request
W 20	20	195032.00	195036.00	195042.00	195041.00	on request	on request
W 25	25	195301.00	195121.00	195304.00	on request	on request	on request
B 32	32	on request	on request	on request	195316.00	on request	on request
C 5	32	on request	on request	194514.00	on request	on request	on request



Shank MK with internal thread

	ZAS 70	ZAS 80	ZAS 110	ZAS 125	ZAS 160	ZAS 240
MK 1	on request	on request	on request	on request	on request	on request
MK 2	195012.00	on request	195109.00	on request	on request	on request
MK 3	194041.01	194041.02	194041.02	on request	on request	on request
MK 4	on request	193999.00	193399.00	195393.00	on request	195395.00
MK 5	on request	193425.00	193425.00	on request	on request	on request



Shank MK with withdrawal nut M22 x 1.5, internal thread

	ZAS 70	ZAS 80	ZAS 110	ZAS 125	ZAS 160	ZAS 240
MK2	195016.00	on request	195388.00	195293.00	195409.00	on request



Shank ISO

	ZAS 70	ZAS 80	ZAS 110	ZAS 125	ZAS 160
ISO 40	195300.00	on request	195203.00	on request	195199.00
ISO 50	195302.00	on request	195202.00	on request	on request



Options

- Cylindrical, Cintra and C3 shanks
- Shanks according to customer requirements

Quick Change

Fast chuck changeover time on your measuring machine at a 2 µm repeatability is the strength of the Maprox Quick Change System.

Type
CK 3 Shank
CK 6 Shank

Type
CK 3 Adaptation plate
CK 6 Adaptation plate



Chuck mounting area, dimensions according to chuck type (Maprox or others) remains at the clamping chuck

Adaptation plate (remains on the measuring machine) Bore pattern according to measuring machine type (eg. Mahr, Gleason, Mitutoyo RA10, etc.)



Assembly (without clamping chucks)

Dimensions [mm]

Type	CK 3	CK 6
a Ø Adaptation plate	80	130
e Ø Shank	42	97

Technical details

- CK 3 / CK 6 for clamping chuck up to approx. Ø = 125 mm / 160 mm
- Bore patterns are adapted to your clamping chuck and your measuring machine
- Repeatability: < 2 µm
- Precise fixation with Allen key no. 3
- Case-hardened and ground

Options

- For center point

Torque screwdriver for JF jaws

Type	Item no.
1.5 RTD	431870



Technical details

- 2-15 cNm
- Inclusive corresponding extension for jaw screws
- Application recommendation according to operating instruction JF

Safety torque key

Type	Item no.
ATB / 5G	431125



Technical details

- 1-5 Nm
- Please order adaptation piece for JF, ZF or ZAS separately
- Incl. certificate of calibration and operating instruction

Adaptation (Reinox) for safety torque screwdriver 431125

For	Item no.
JF 70	193214.00
JF 85	193212.00
JF 100 / 125 / 150, ZF/ZAS 70	193213.00
ZF/ZAS 80 / 110 / 125	193210.00
ZF/ZAS 160 / 240 / 315, JF 200	193211.00

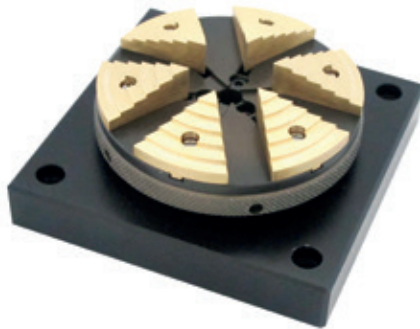


Remark

If you already have a clamping chuck, please send it us as the spiral has no drilling for the adaptation.

Adaptation plate for JF clamping chucks

Type	Item no.
JF 55	AP25JF55
JF 70	AP25JF70
JF 85/100	AP25JF85100
JF 125/150	AP25JF125150



A separate adaptation plate for each chuck size

Adaptation base plates JF

Type	Item no.
JF 55-100	AGP25JF55-100
JF 125-150	AGP25JF125-150



Adaptation base plate for various chuck sizes in combination with chuck-specific adaptation shank.

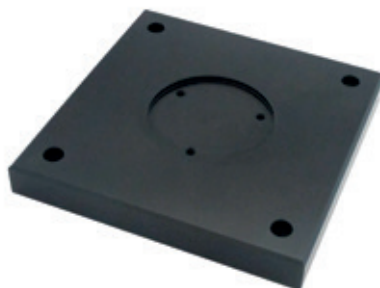
Adaptation shanks JF

Type	Item no.
JF 55	ASJF55
JF 70	ASJF70
JF 85/100	ASJF85100
JF 125/150	ASJF125150



Adaptation plate for ZF and ZAS clamping chucks

Type	Item no.
3 ZF 70	AP25ZF70
3 ZF 80	AP25ZF80
3 ZF 110	AP25ZF110
3 ZF 125	AP25ZF125
3 ZAS 160	AP25ZAS160
3 ZAS 240	AP25ZAS240
3 ZAS 315	AP25ZAS315



Technical details

- Made of aluminum, ALTEF® coated (anti-corrosive, see page 2) or anodized
- Distance between holes same as grid board

Options

- Other adaptation plates for, e.g. SH collet holders, on request
- Positioning sleeve for bore Ø 12.5 mm, ground



Unsurpassed precision comes from the CT machine, flexibility and modularity are important here

COMPUTER TOMOGRAPHY

Computer tomography is a highly precise method for fully digitizing components. It allows for the creation of a digital image that can be used for various purposes. CT data, for example, can be used for first-article inspection, for a comparison of desired versus actual state, for assembly analysis, or for defect analysis (such as for voids, inclusions, cracks, or collisions).

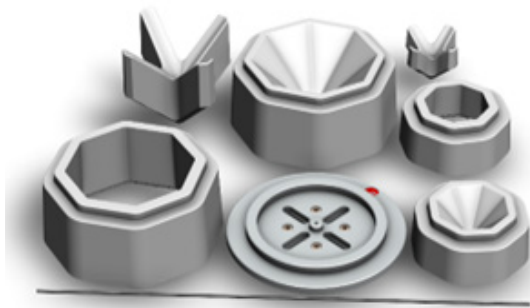
Furthermore, wall thickness analysis or composite material analysis is possible. CT data can also be used as a basis for deriving tool correction data or for creating simple 2D X-ray images for testing printed circuit boards in the electronics industry.

Over the past years, the technology of computed tomography has made enormous progress, continuously improving the image quality and precision of the results. With the growing demand for higher precision and efficiency in production, computed tomography will play an important role in the future.

Companies such as Maprox offer tailor-made solutions for CT inspection of components and continuously work on further developing the technology to meet the requirements of their customers.

Maprox CT-Fix

The CT-Fix is used to position measurement objects for a measurement in a 3D coordinate measuring machine with X-ray computed tomography (CT). The measuring objects can be positioned and fixed in the measuring funnel very simply without any adjustment work, thus achieving optimum measuring results. The components included in a set are used to position measuring objects of various sizes and shapes. For an efficient measurement process, multiple objects to be measured can be positioned simultaneously. Two sizes are available, CT-Fix 70 and CT-Fix 130.



The individual components (anti-static EPS except adapter plate and centering pin) of the set are stackable. The maximum height is determined by the height of the measuring funnel.

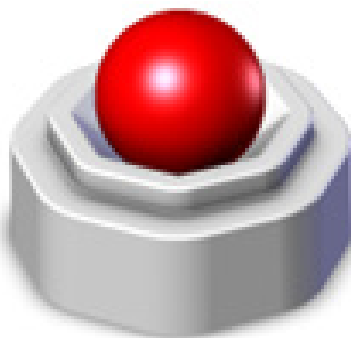
CT-Fix can be used in most commercially available computed tomography measuring devices.

CT-Fix components are maintenance-free. If necessary, clean the parts with a soft, dry cloth before use.

No aggressive cleaning agents may be used!

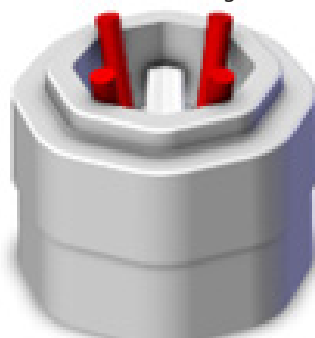
CT-Fix consisting of

Funnel



Objects to be measured are placed in the funnel. By stacking several funnels, several objects to be measured can be measured simultaneously.

Extension ring



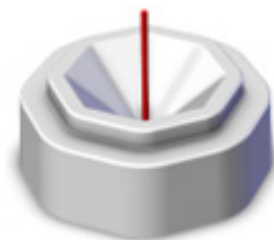
For longer objects to be measured, extension rings are stacked on the funnel. Several extension rings can be stacked on top of one another.

Dividers



Dividers are used to position multiple small objects to be measured in the funnel or to position longer parts together with extension rings.

Centering pin (optional)



The centering pin is inserted through the hole in the funnel or divider as needed. Thanks to its higher density, it is visible in the measurement result, so that the center is precisely defined. The pin can be custom cut to the appropriate length.

Adapter plate (optional)



CT-Fix components are positioned in the center of the measuring funnel using the adapter plate. It has a centering pin (Ø 5mm) and 4 elongated holes (M6), with which it can be precisely centered on the measuring plate.

CT-Fix 70

Type	Item no.	Dimensions [mm]
Adapter plate (opt.)	10000.320	(Ø x H) 190 x 18
Centering pin (opt.)	10000.321	Ø 3.0
Extension ring	10000.340	(Ø x H) 125 x 50 Usable Ø67
Divider	10000.350	N/A
Funnel	10000.330	(Ø x H) 125 x 50 Usable Ø70

CT-Fix 130

Type	Item no.	Dimensions [mm]
Adapter plate (opt.)	10000.320	(Ø x H) 190 x 18
Centering pin (opt.)	10000.321	Ø 3.0
Extension ring	10000.341	(Ø x H) 190 x 80 Usable Ø125
Divider	10000.351	N/A
Funnel	10000.331	(Ø x H) 190 x 80 Usable Ø130



Precision down to the smallest detail
Ultra Precision from Maprox

ULTRA PRECISION

The new "Ultra Precision" series from Maprox sets new standards in the precision measurement of workpieces. The chucks in the series are perfectly matched to the requirements in the high-precision measuring range and enable precise positioning and fixing of parts and components.

The UP chuck, the flagship product of the range, offers an impressive repeatability of at least 5µm when used correctly. This is achieved through the use of high-quality materials and advanced manufacturing technologies. The chuck is equipped with micro-adjustment screws and compression springs to allow precise adjustment and centering of workpieces even when clamped.

Maprox's "Ultra Precision" range is an ideal solution for customers who require the highest precision in workpiece measurement. The products are durable, reliable and provide precise positioning and fixturing of parts and components.

Rely on Maprox's expertise to optimize your manufacturing processes and increase your productivity.

Maprox UP-Chuck

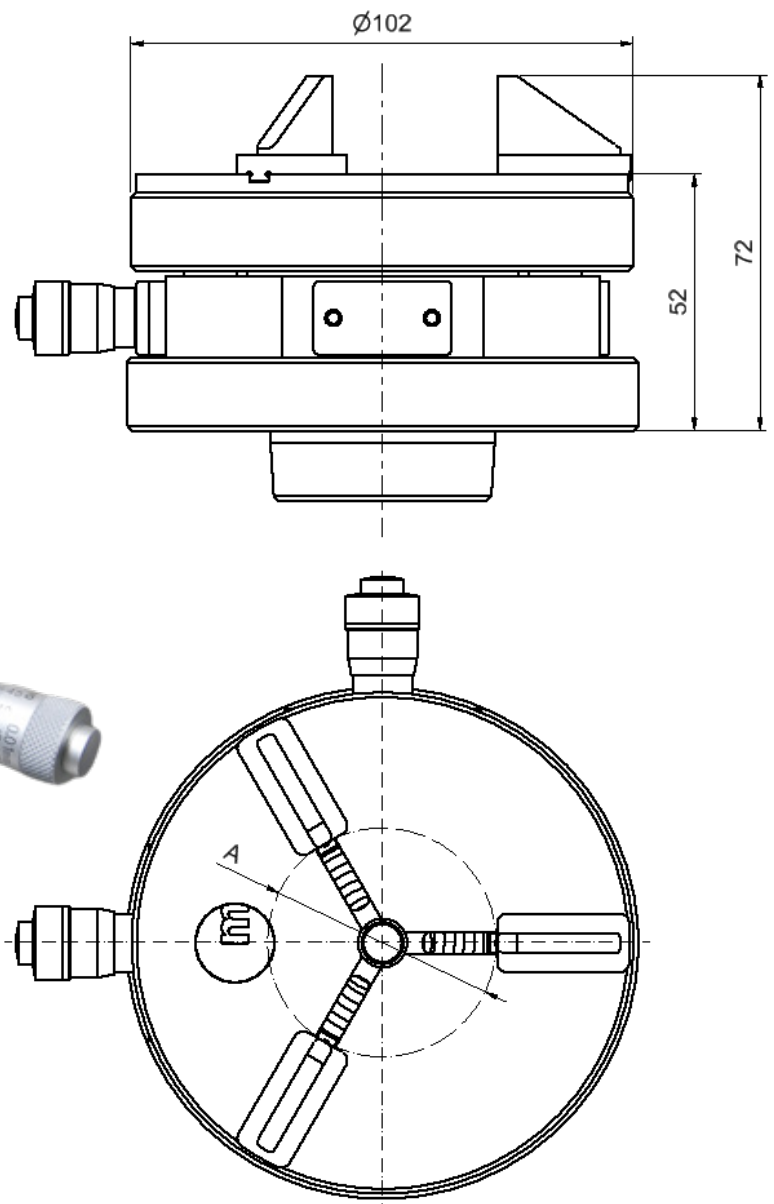
The UP chuck from Maprox offers maximum precision in clamping parts and components in the high-precision measuring range. Parts can be adjusted and centered even when clamped using the micro-adjustment screws as well as the compression springs to ensure optimal positioning. With a minimum 5µm clamping and runout repeatability guaranteed when used correctly, the UP chuck is a reliable solution for precise clamping and measuring.

Rely on Maprox expertise to achieve the highest precision in your manufacturing processes.

In addition to precision and reliability, the Maprox UP chuck also offers high flexibility, as it is compatible with various collets and adapters.

This allows you to adapt the solution to the specific requirements of your manufacturing processes, providing you with a customized solution.

Type	Item no.	A [mm]
Maprox UP-Chuck	10000.460	2-24
Maprox UP-Chuck	10000.461	23-45



Technical details

- Lateral runout: 0.005mm
- Special jaws possible on request



Discover the future of manufacturing
Efficiency through automation with Maprox

AUTOMATION

The future of manufacturing is automated - and at Maprox, we're leading this revolution. Our products give you the efficiency and productivity you need to take your manufacturing processes to the next level. Discover a world where machines adapt perfectly to your needs and handle complex operations with ease.

Whether you're in the automotive, aerospace, medical or electronics industries, we have the perfect solution for you. With our broad product portfolio and years of experience, we offer customized solutions tailored to your specific requirements.

Our slogan "Discover the future of manufacturing - efficiency through automation with Maprox" is not only a promise, but also our vision. We want to help you take your manufacturing to a new level, saving time, costs and resources. With Maprox on your side, you have a trusted partner to help you make your manufacturing more efficient and forward-thinking.

Contact us today and discover the future of manufacturing with Maprox!

Maprox E-Chuck

The E-Chuck from Maprox offers a variety of advantages over conventional chucks. Thanks to its adjustable clamping force, the finest parts can be clamped precisely and securely. Due to its endless rotation around its own axis, the E-Chuck also enables the machining of complex geometries that are often not possible with other chucks.

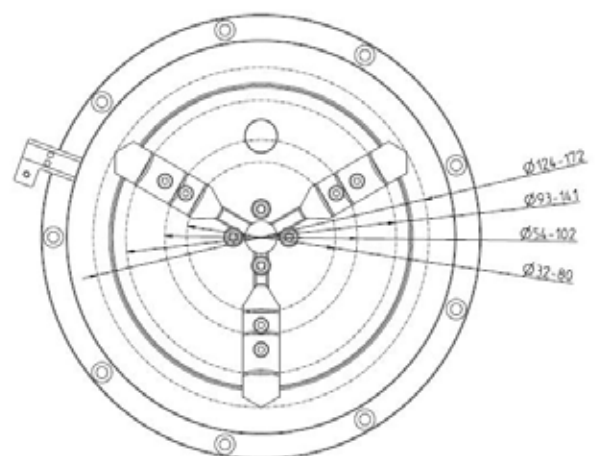
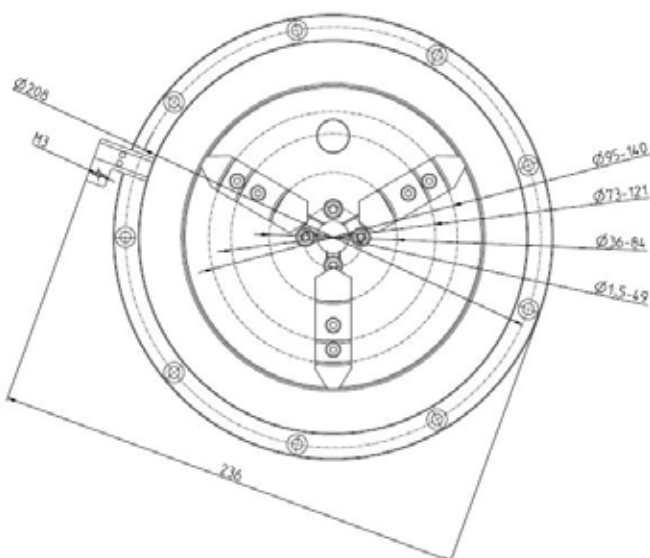
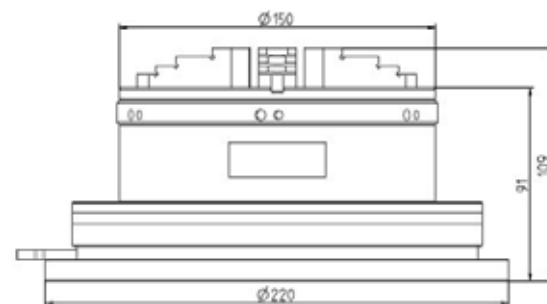
Overall, Maprox's E-Chuck is an innovative solution for use in measuring machines that improves machining productivity, safety and accuracy.

Type	Item no.	Clamping range	Weight
Maprox E-Chuck	514000.00	see illustration	7.5 kg



Technical details

- Lateral runout: 0.02mm
- Max. part weight (horizontal): 4kg
- Max. clamping force: 60N
- Special jaws possible
- CAN-Open interface
- External I/O-Box with machine interface
- LED-Status Ring (RGB)



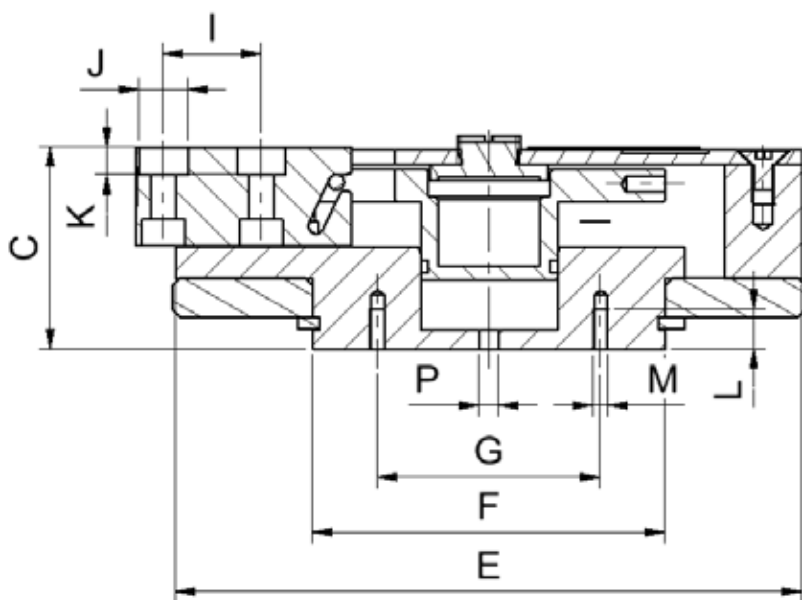
Maprox AIR

The new Maprox chuck combines all the advantages of our manual chucks with pneumatic clamping. Thus, the chuck is fully automatable, controllable via your measuring machine | A real all-rounder with the famous Maprox flexibility.

Type	Item no.	Jaw-travel [mm]
Maprox AIR 100	197400.100	3.5 mm
Maprox AIR 160	197100.00	5 mm



Dimensions [mm]



AIR	100	160
E Ø	100	160
C	52.5	51.5
F Ø	60	90
G Ø	38	57
M	M4*	M4
L	8*	10
P Ø	5	5
J Ø	8 H7	12.5 H7
K	4	7.1
I	11	25
Weight in kg, ca.	1.3	2.5

*: For AIR 100 no threaded holes, but screws

Your benefits

- Can be automated:
Through simple open-close control via measuring machine (e.g. robot loading)
- Rotatable chuck:
Mounting on rotary tables welcome! Pneumatic control by means of rotary feedthrough
- Extra flat:
Overall height of the chuck body only 60 mm
- Flexible clamping range:
Due to our proven top jaw or pin jaw pin jaw concept, depending on customer requirements
- Can also clamp/release pneumatically with spring force if required

- Adjustable clamping force:
Chuck opens pneumatically against spring force. Spring on cover as desired pretensioning -> Thereby also:
Permanently repeatable clamping
- Indoor and outdoor stretching:
Conversion in 3 min. due to unique interchangeable system from Maprox
- Interface flexible:
shanks, intermediate plates, adaptation depending on customer machine

Options

- Top jaws for internal and external clamping
- Standard stepped jaws
- Or with pin jaws, as desired
- Jaws made of steel, coated or aluminum, plastic, etc.

Short stroke cylinder SH PM-100 | Pneumatic clamping device SHG / SH pneumatically

Type	Item no.
SH/G 20	SH20PM-100
SH/G 25	SH25PM-100
SH 32	SH32PM-100

Without collet holder
SH / SHG



Technical details

- For faster cycles and higher clamping force
- Available mounted with collet holder W20, W25 and B32, see page 43
- Anti-corrosive (Reinox), see page 2

Clamping force

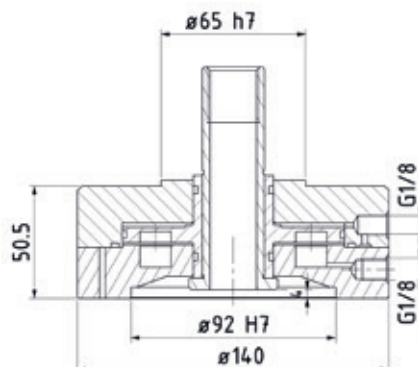
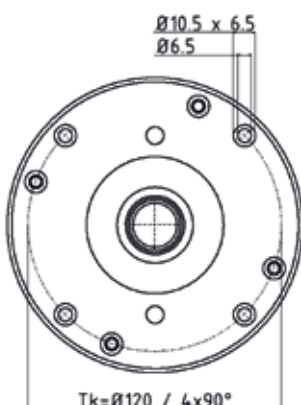
- At 6 bar 4000 N

Options

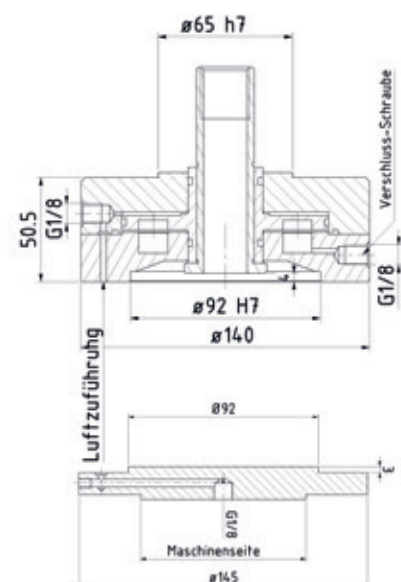
- Simple retrofitting with collet holder W20 and W25, see page 43
- Flange for central air supply

Type	Item no.
SH 20	3.20.S.PM.100
SH 25	3.25.S.PM.100
SH 32	3.32.S.PM.100
SHG 20	4.20.S.PM.100
SHG 25	4.25.S.PM.100

With collet holder
SH / SHG



- Static insert
- Lateral air supply



- Flange air supply
- Rotating insert
- Central air supply

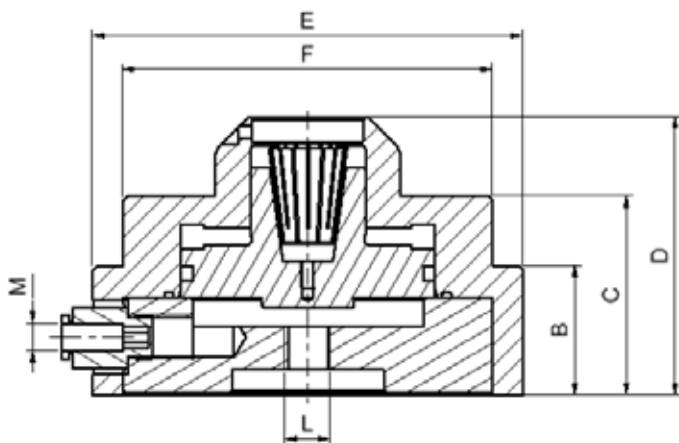
Pneumatic ER collet holder 20 PM and ER 32 PM – for Automation

The new collet chucks are made of coated aluminum and are therefore particularly lightweight (up to less than 1kg) | You can choose whether you want to control your ER collet holder pneumatically from the side or from below | The central rotary feed-through in the base allows you full rotatability on the rotary table, with simultaneous control by your measuring machine.

Type	Item no.
ER16 PM	5.16.PM.000
ER20 PM	5.20.PM.000
ER32 PM	5.32.PM.050



Dimensions [mm]



Type	ER16 PM	ER20 PM	ER32PM
B	28	28	32
C	43	43	47
D	60	66	75
E Ø	93	120	140
F Ø	80	110	130
G Ø TK	70	100	115
L	G1/8	G 1/8	G 1/8
M Ø	6	6	6
Weight in kg, ca.	0.9	1.6	3

Technical details

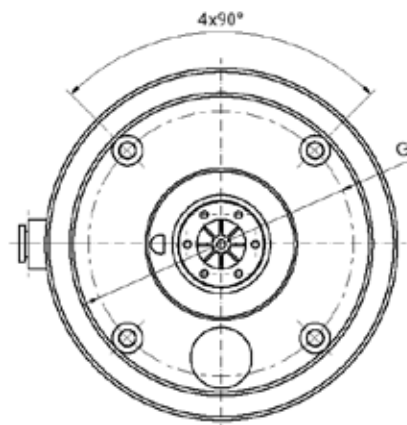
- Weight < 1 kg
- With mounted collets ER16, ER20& ER32 available
- Clamping pressure pneumatically adjustable
- ALTEF® coated, see page 2

Options

- Adaptations on request

Features

- Low overall height
- Optionally rotatable (controlled from below) or laterally controllable
- Connections, M and L, interchangeable



ER-Collets, DIN 6499B (ISO 15488B)

Type	Item no.	Possible Inside-Ø in mm	Steps in mm
ER 11	5.11.000	1-7	0.5
ER 16	5.16.000	1-10	1
ER 20	5.20.000	2-13	1
ER 25	5.25.000	2-16	1
ER 32	5.32.000	2-20	1



« Transforming Your Good Ideas, Into Great Solutions »

Your Maprox Team





Our passion for precision is on everyone's lips.
To live up to this reputation, we do what it takes.

COLLET HOLDER

Maprox collet chucks - a legend | Machinists got to know and appreciate them during their and appreciate during their training | Very precise and at the same time flexible due to the different sizes, in combination with commercially available collets

Also in use for years in machining, such as pneumatically operated in the fully automatic vehicle parts milling center or for measuring bearing components.

We are happy to fulfill your special requests and discuss your individual projects - for example the automated use on measuring machines (e.g. by means of rotary feedthroughs, etc.)

Technical details

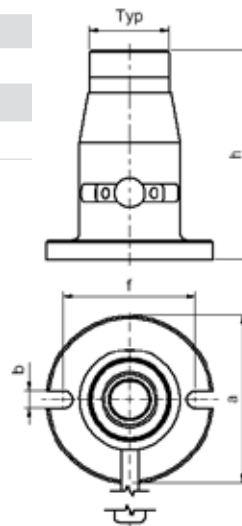
- Anti-corrosive (Reinox), see page 2
- Pneumatic actuation, see page 37

Options

- Depth stop, see page 64
- Pull type collets, see page 54
- 25 mm grid plates, see page 50

Collet holder SHG – with external thread

Type	Item no.	h	a	b	f	Pull type collet
SHG 12	4.12.000S	70	70	10.2 (M8)	60	W12 318E
SHG 20	4.20.000S	100	100	11 (M10)	85	W20 349E
SHG 25	4.25.000S	125	100	11 (M10)	85	W25 364E



Example with expanding mandrel



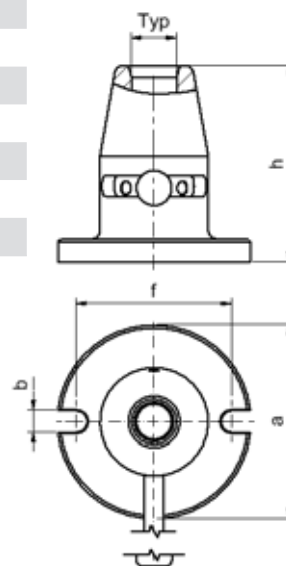
Options

Combination with:

- external step collet (see page 57, 58)
- internal step collet (see page 59)
- Closer / expansion ring / expanding arbor (e.g. Schaublin)
- Depth stops (see page 60)

Collet holder SH

Type	Item no.	h	a	b	f	Pull type collet
SH 8	3.08.000S	60	65	10.2 (M8)	55	B8 302E
SH 10	3.10.000S	60	65	10.2 (M8)	55	W10 314E
SH 12	3.12.000S	70	70	10.2 (M8)	60	W12 318E
SH 20	3.20.000S	100	100	11 (M10)	85	W20 349E
SH 25	3.25.000S	125	100	11 (M10)	85	W25 364E
SH 32	3.32.000S	125	115	11 (M10)	97	B32 3713E



Example with collet



Clamping ranges Ø min-max [mm]

Pull type collet	B8 302E	W10 314E	W12 318E	W20 349E	W25 364E	B32 3713E
Pages 54-60	0.3-10	0.3-10	0.3-12.5	0.3-23	0.3-29	0.3-32

Technical details

- SHG / SH: Anti-corrosive (Reinox), see page 2

Options

- Pneumatically, see page 33



Precise, reliable and solution-oriented.
Three creeds, one name: Maprox.

DIVIDERS

Do you want to inspect or mark parts with angular accuracy on your optical measuring device? Then you are right with our dividers are the right choice | With Maprox's usual precision and flexibility, collets and chucks can be combined with the dividing head of your choice to form a precise clamping system. Our mini chuck is a particularly popular accessory here, as it holds small parts precisely and, thanks to its minimal jaw width it hardly takes up any light during optical measurement.

Technical details

- Anti-corrosive (Reinox), see page 2

Options

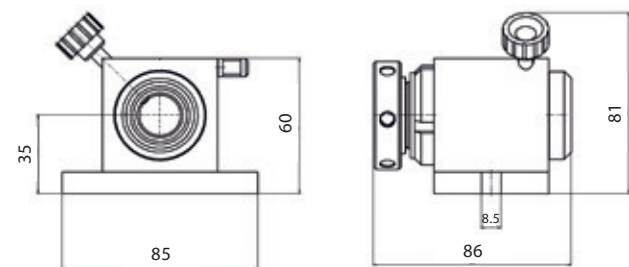
- Pull type collets, see pages from 50
- Chucks with shanks, see pages 5, 13 und 17
- Magnet set, see page 40
- Angle plates, see page 40
- 25 mm grid plates, see page 46



Mini VLK 15 W20

direct division

Type	Item no.
VLK 15 W20	VLK15W20



Technical details

- Clamping via knurled screw
- Spindle mounting W20
- Radial runout of the spindle 10 µm
- Angularity 15 µm on 100 mm workpiece length
- Anti-corrosive (Reinox), see page 2

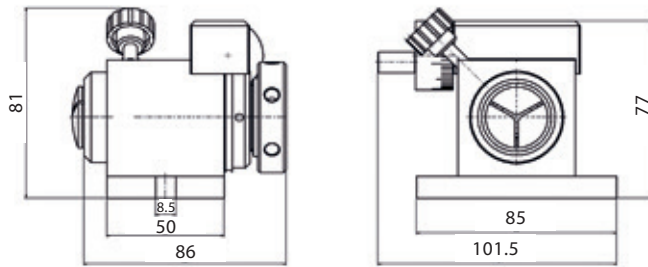
Direct division

- Direct graduation via graduated disk with 24 detents for graduation 2–3–4–6–8–12–24

Mini VLK 15-2 W20

indirect division

Type	Item no.
VLK 15-2W20	VLK15-2W20



Clamping range

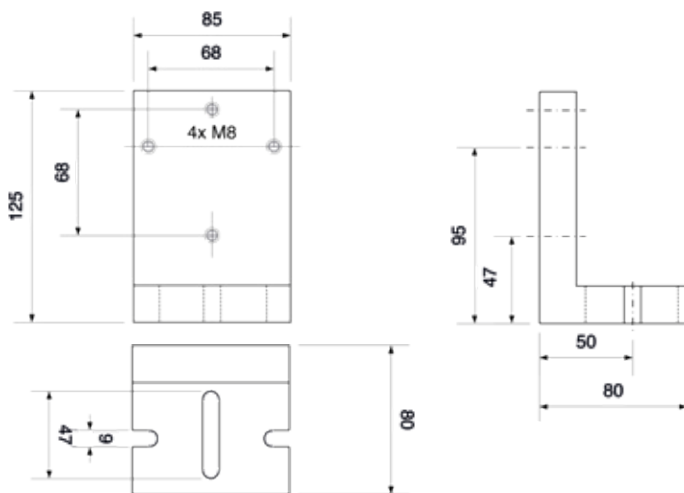
- With pull type collets W20 (349E): Ø 0.3-23 mm
- With shank W20: Clamping range according to chuck mounted on it

Indirect division

- Indirect division via worm wheel
- Per revolution 6°
- Per graduation mark 6 min.

Angle plate VLK

Type	Item no.
VLK 15 1520	VLK15-1520



Adaption platte VLK

Type	Item no.
VLK 15	AP25VLK15
• Height 35 mm	



Technical details

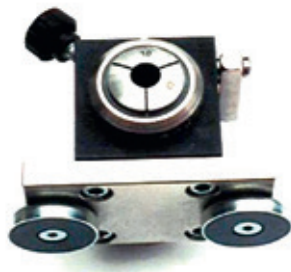
- made of aluminum, ALTEF® coated, see page 2 or anodized
- Hole spacing like grid plate

Options

- Other adaptation plates on request
- Positioning sleeve for bore Ø 12.5 mm, ground

Magnet set für VLK 15

Type	Item no.
VLK 15-M	VLK15-M



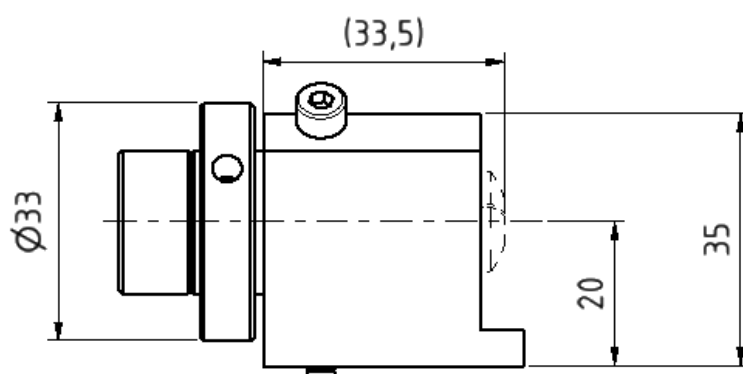
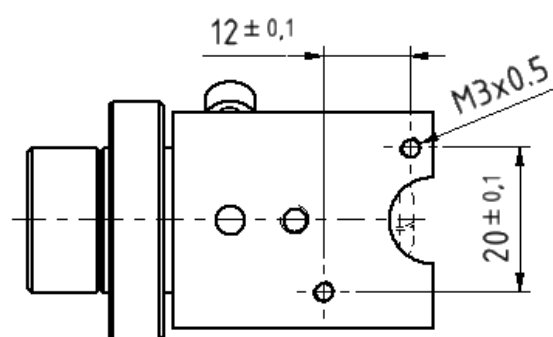
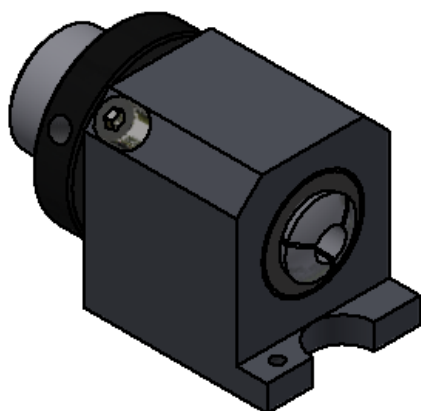
Technical details

- Consisting of 2 magnets
- For screwless attachment to the VLK base plate

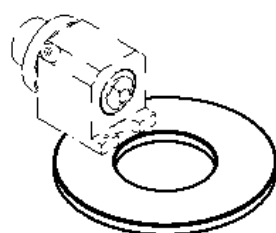
Mini PAR P10

Direct division

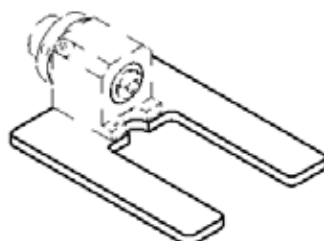
Type	Item no.
Mini-Divider	PAR211-P10



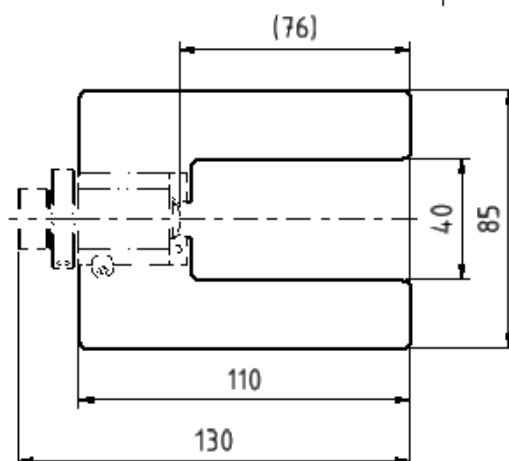
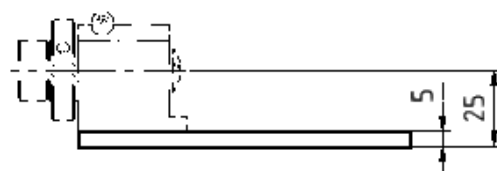
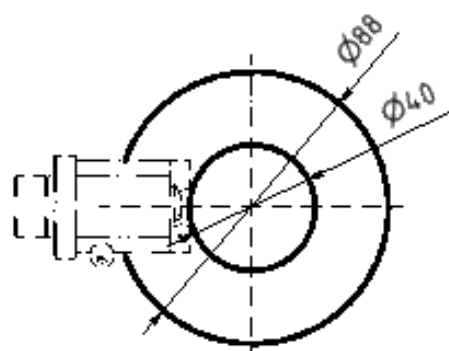
Ground plate	Item no.
Round	PAR100
U-shape	PAR110



• Round - PAR100



• U-shape - PAR110



Technical details

- Direct, precise graduation in 90° steps or according to customer requirements
- Spindle mount P10
- Radial runout of the spindle: 10 µm
- Anti-corrosive (Reinox), see page 2

Clamping range

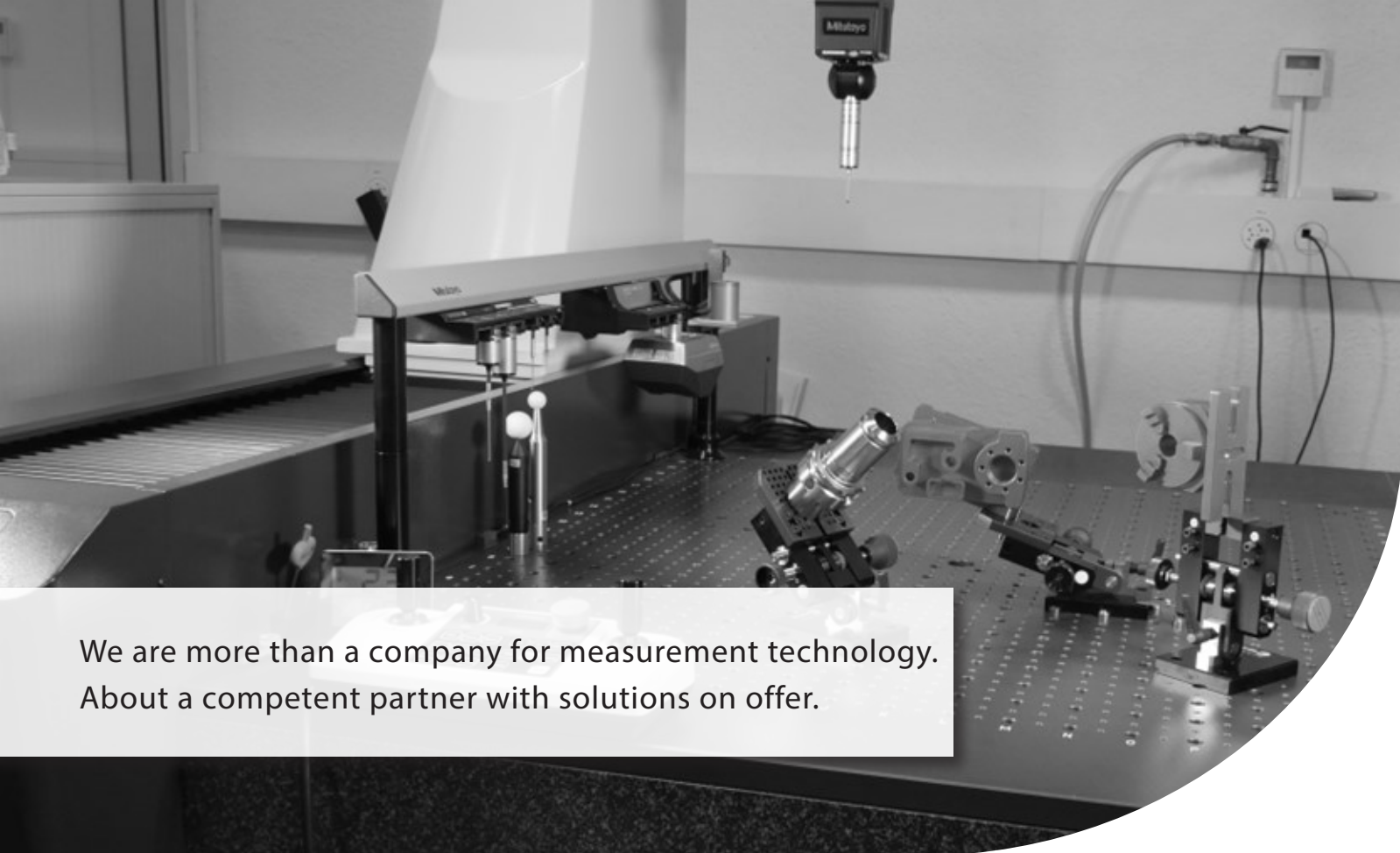
- With pull type collets P10 (310E), see pages 51: 0.5-10 mm

Dimensions

- Main block: 35 x 30 x 36 mm
- Center height: 20 mm (without baseplate)

Options

- Pull type collets P10 (310E)
- Ground plates round and u-shape
- Ground plates on customer request
- Various angle receptacles on request



We are more than a company for measurement technology.
About a competent partner with solutions on offer.

CLAMPING EQUIPMENT FOR COORDINATE MEASURING MACHINES

Inspection fixtures from Maprox meet the 3 biggest challenges when fixing asymmetrical parts on the coordinate measuring machine: Here it's all about flexibility, speed and accessibility.

FLEXIBILITY:

Dough and full cabinets of fixtures are a thing of the past, because Maprox solutions offer an amazing number of clamping possibilities - with only one system.

SPEED:

From one asymmetrical part to the next part with a completely different geometry takes only a few minutes with Maprox test fixtures, it only takes a few minutes until the new part is fixed in place. | The 3D-Flex-Fix system in particular offers a special kind of modular system here, see page 48.

ACCESSIBILITY:

Many measuring machines today use cross or star probes | They need space, at least 50 mm Freedom, if possible around the part | Our test fixtures are designed in such a way that the part itself is held only is held with minimal fixing points, while at the same time providing the greatest possible probe freedom.

Technical details

- made of aluminum, ALTEF® coated, see page 2

Options

- Grid plates and various accessories, such as adaptation plates, can be found on pages 46 and 25

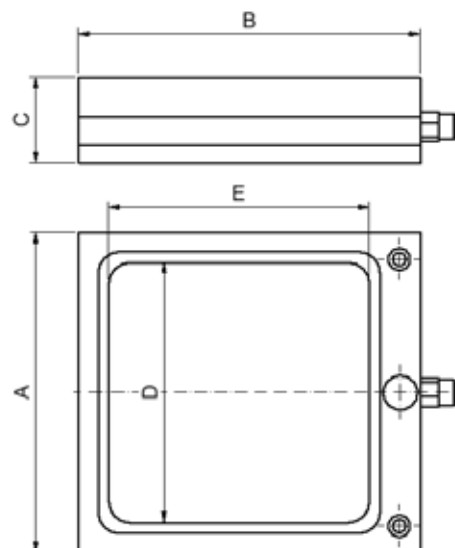
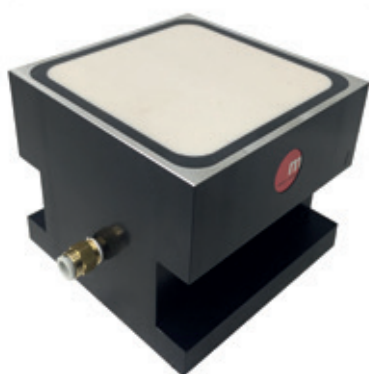
Vacuum-Clamping

Maprox vacuum systems are unique in their flexibility and handling:

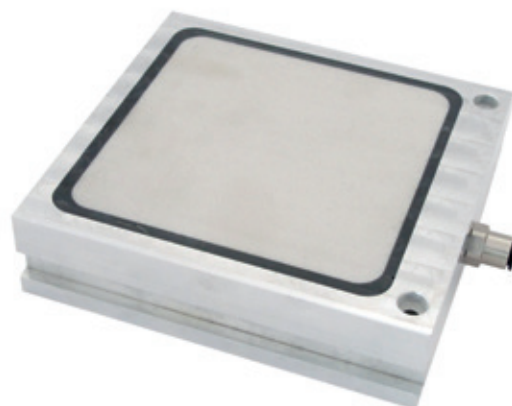
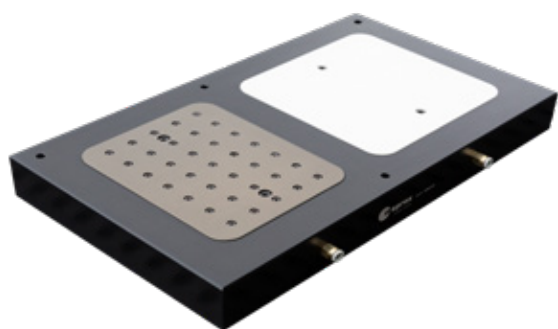
Flat workpieces can be fixed in the simplest way - even if they do not cover the entire plate. No workpiece is crushed and sensitive surfaces are protected.

This is made possible by the microporous plate METAPOR, through which the air is sucked downwards by a vacuum pump. Since there is no lubrication at all, this system can also be used a lot under clean room conditions.

Type	Item no.	A	B	C	D	E
Vacuum plate	10000.0010	150	160	40	122	122
Vacuum plate	10000.0030	100	100	80	84	84



Special sizes with different materials are available on request



Use cases

- Thin-walled clamping (e.g. foils, circuit boards, metal strips, wafers, etc.)
- Precision mechanics (optics, watches, etc.)
- Measuring and testing technology
- Clean room

Technical details

- Surface fine ground
- Flatness and parallelism <10 µm
- Aluminum body
- Corrosion protected

Options

- Dimensions according to customer requirements
- Repeatable positioning: We also realize workpiece-specific recesses, elevations or stops can be realized.
- Further models on request
- Vacuum pump

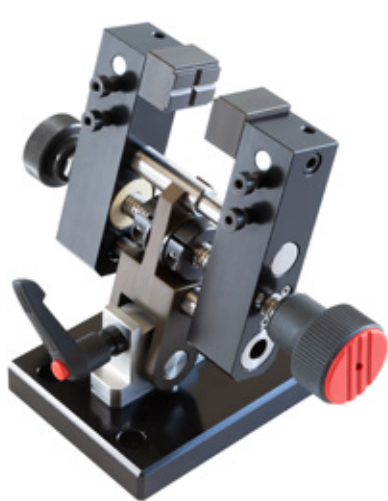
Important

- When using the vacuum systems with Metapor, no liquid may be used (material porous)

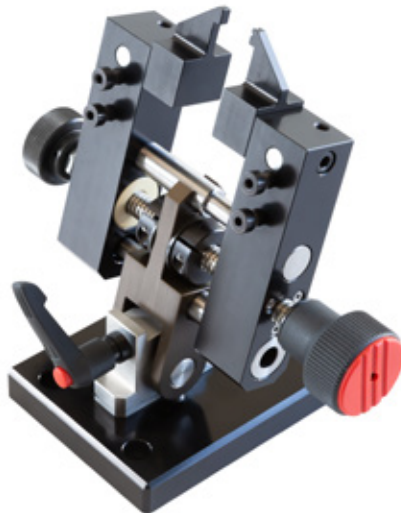
Clamp-Fix center clamp

for universal use on measuring machines | with quick jaw change system | Various Jaw types to choose from | made of aluminum coated, (anti corrosion), see page 2

Type	Item no.	Comments
Clamp-Fix	197200.21	Basic equipment; without jaws



Clamp-Fix with prism and block jaw
10000.031 / 10000.032



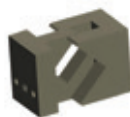
Clamp-Fix with prism and block jaw small
10000.101 / 10000.102



Clamp-Fix with raster jaw set
10000.108

Jaws for center clamp Clamp-Fix | made of aluminum, ALTEF® coated

Type	Item no.
Prism jaw-set large	10000.081



Type	Item no.
Prism jaw small	10000.102



Type	Item no.
Prisms Block jaw	10000.031



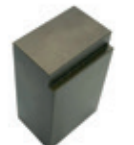
Type	Item no.
Stepped Block jaw	10000.032



Type	Item no.
Block jaw small	10000.101



Type	Item no.
Stepped Block jaw high	10000.103



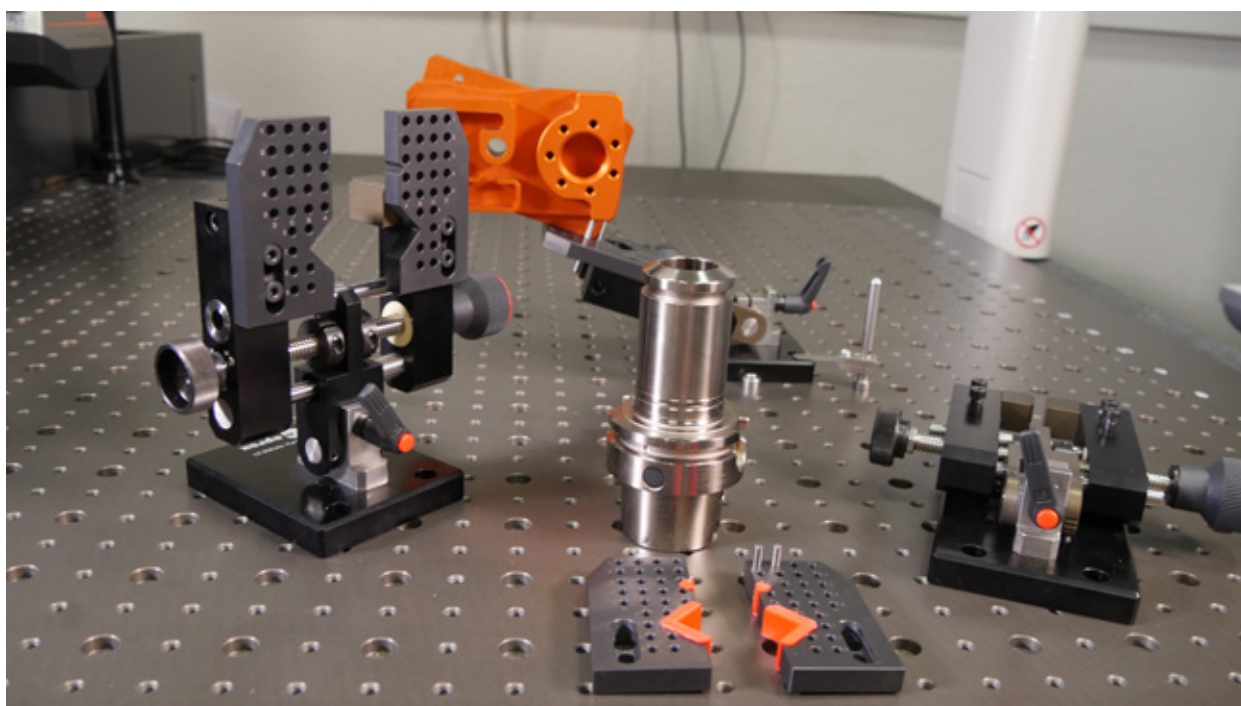
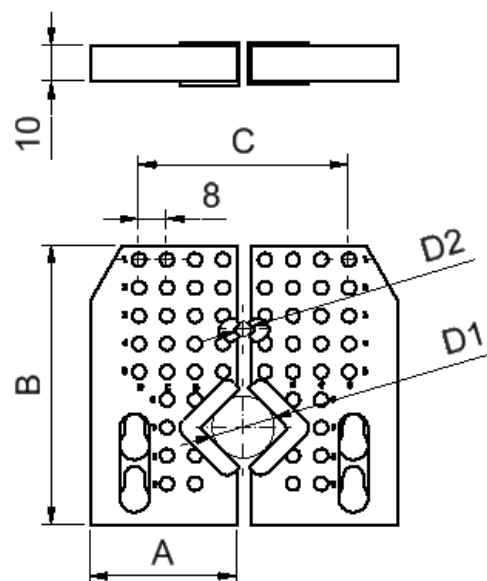
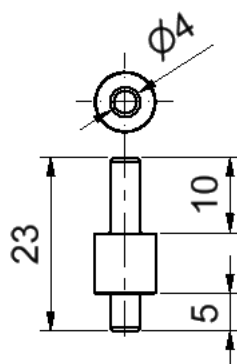
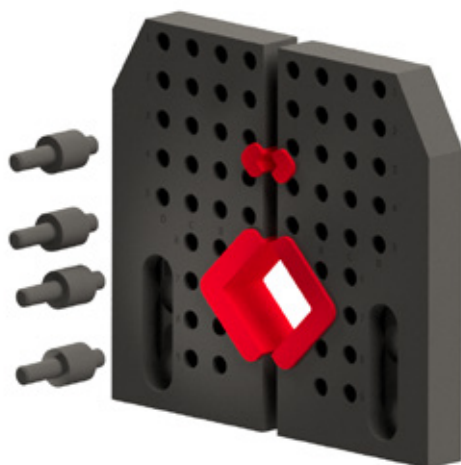
Type	Item no.
Pointed jaw set	10000.135



Arrangement jaws	Clamping range (shaft diameter)		Largest shaft at max. travel (shaft possibly clamped on prism edges)
Prism jaw-set (10000.081)	Ø 12-36 mm		
Left: Prism jaw small (10000.102) Right: Block jaw (10000.101)	Ø 1.2-3 mm		ca. Ø 24 mm
Left: Prism jaw small (10000.031) Right: Block jaw (10000.032)	Ø 1.2-3 mm		ca. Ø 24 mm
Left: Stepped block jaw high (10000.103) Right: Stepped block jaw high (10000.103)	Ø 1.2-3 mm		ca. Ø 24 mm

Raster jaws for centering clamp Clamp-Fix | made of steel corrosion protected

Type	Item no.	A	B	C	D1 Ø	D2 Ø
Raster jaws set	10000.108	42	80	56-90	16-32	3-6



Options

- Block jaws made of steel, plastic, Aluminum, Titanium etc.
- Special jaws according to customer requirements
- Adapter plate for your system

Benefits

- Best accessibility
- Optimum probe clearance
- Clamp and swivel into the desired position
- Ideal for the coordinate measuring machine
- Complete tactile measurement in only one setup

Technical details

- Base plate mountable on 25 and 50 mm grid plates
- Adjustable angle from 0°-90°, preset detent positions every approx. 15°
- Travel (without jaws): 28-68 mm

Dimensions

- Overall height: 150 mm (bottom to upper edge of side arms; without jaws)
- Base plate: 105 x 85 mm

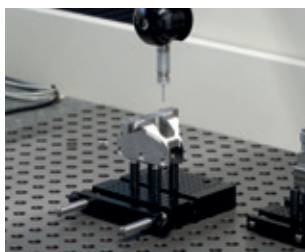
Kontur-Fix KF

for universal use on measuring machines

Type	Item no.
KF 50	KF050-000
KF 75	KF075-000
KF 110	KF110-000



KF 50 equipped with special pin jaws equipped



Thanks to good accessibility the workpiece can be measured in one clamping operation



Technical details

- Includes 4 steel pin jaws, Anti-corrosive (Reinox), see page 2
- For internal and external clamping
- Mountable on 25 mm grid plates
- Body made of aluminum, corrosion protected, anodized

Clamping range

- KF 50 ca. Ø 18-30 mm x 40 mm
- KF 75 ca. Ø 25-45 mm x 70 mm
- KF 110 ca. Ø 50-75 mm x 120 mm

Abmessungen

- Width: 50, 75 and 110 mm

Options

- Ground positioning sleeves for bore Ø 12.5 mm, for exact positioning
- Different clamping forces (springs) available
- Height of support and pin jaws adjustable

Benefits

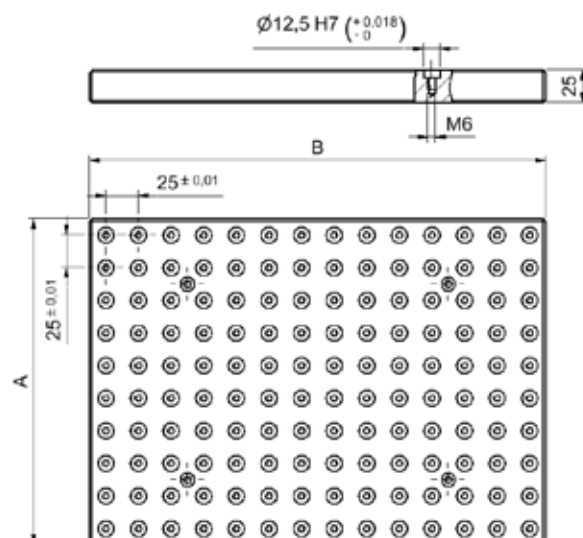
- Good accessibility of the measuring probe
- Complete tactile measurement in one clamping

Grid plate 25 mm

as a base plate for the measuring table

Type	Item no.	A	B
Grid plate small	10000.055	250	350
Grid plate large	10000.059	500	700

Special sizes with different dimensions are possible on request



Technical details

- Grid profile 25 mm with pegging holes Ø 12.5 mm H7
- For twist-proof fixing of adapter plates and clamping elements with fastening threads M6
- made of aluminum, ALTEF® coated, see page 2

Options

- Positioning Sleeves for bore Ø 12.5 mm, ground

Dual-Fix

The Dual-Fix provides a remarkably simple, reliable and fast solution suitable for almost any clamping task and measuring machine. The modular Dual-Fix system enables fast clamping and process-safe, precise operation by anyone. These features make the use of the Dual-Fix system extremely efficient.

Type	Item no.	Remarks
External clamping, manual	QKAMND	not rotatable
Outside clamping, pneumatic	QKAPND	rotatable (only with rotary feed-through)
Internal clamping, manual	QKIMND	not rotatable
Internal clamping, pneumatic	QKIPND	rotatable (only with rotary feed-through)



Dual-Fix with manual actuation
Pneumatic actuation also available

Technical details

- Scope of delivery without jaws, jaws must be ordered separately
- Clamping ranges with standard jaws:
inside: 2-27mm
outside: 0-30mm
- For internal and external clamping
- Mountable on MK1 and MK2 shanks
- Body corrosion protected

Benefits

- Fast and reliable clamping of the component
- Good accessibility of the probe

Dimensions

- Jaw travel: 10mm
- Housing diameter: 55mm

Options

- Jaws for all diameters possible
- Internal and external clamping
- Stops for component specific positioning
- Pneumatic or manual operation
- Rotary feed-through for pneumatic actuation



3D-Flex-Fix

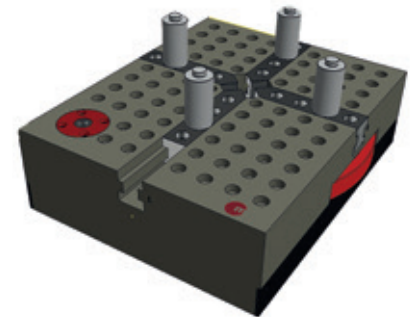
The Universal Clamping System for the Coordinate Measuring Machine offers the solution for your two biggest requirements:

1. unlimited flexibility during clamping 2. speed of workpiece changeover with conversion

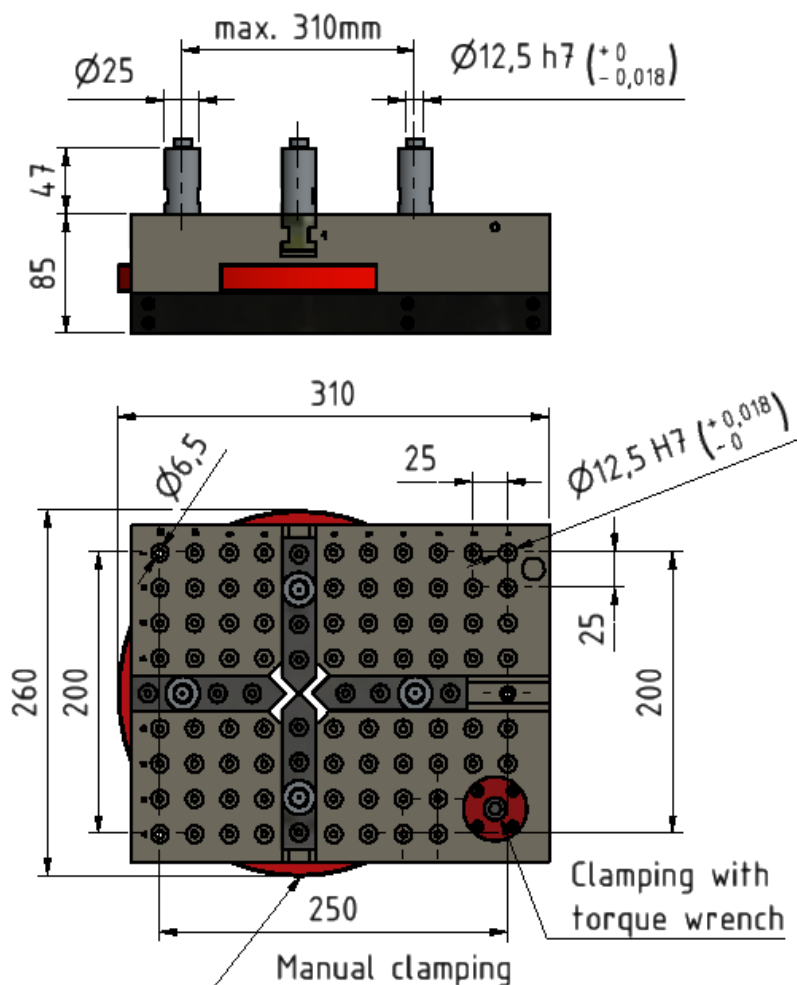
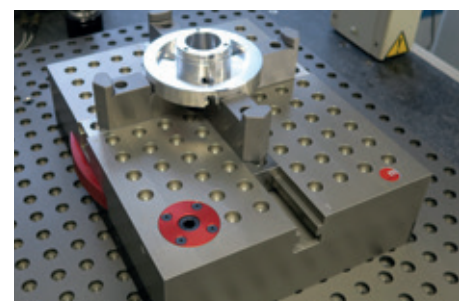
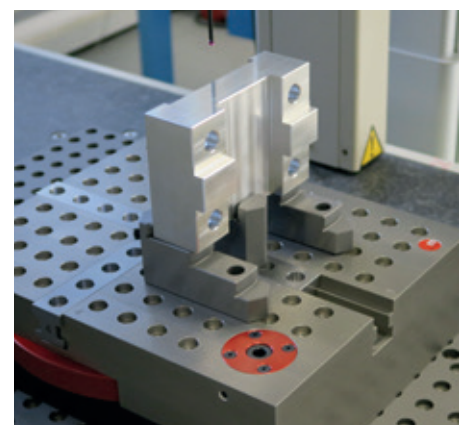
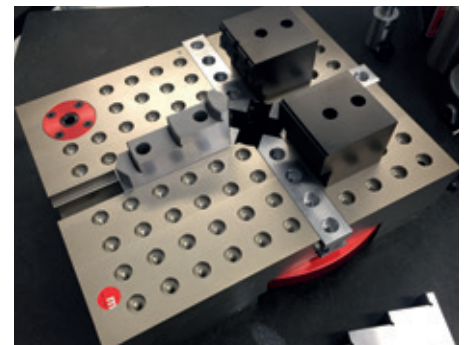
Individual parts of various types or several of the same type with different measuring requirements can be clamped and measured here in the shortest possible time

- Flexible modular principle, simple plug-in system: Various top jaws - also customized - possible
- Basic function: Optionally as vice or 2- to 4-jaw chuck
- Easy adjustment of the clamping torque for sensitive parts

Type	Item no.
3D-Flex-Fix Clamping system for coordinate measuring machines	196046.00
made of aluminum, ALTEF® coated, see page 2	
including:	
• 1 set of base jaws 4 ZAG in steel (196035.00), corrosion protected (Reinox), see page 2 • 4 pcs. pin jaws Ø 25, M6, made of steel, corrosion protected (Reinox), see page 2 • Centering Ø 12.5 mm (196059.00) • 1 pcs. hexagonal screwdriver, PB 207L, SW 8 mm	

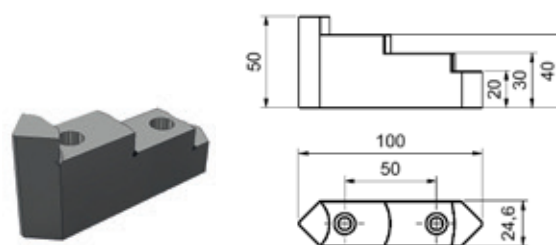


Photos: Application examples

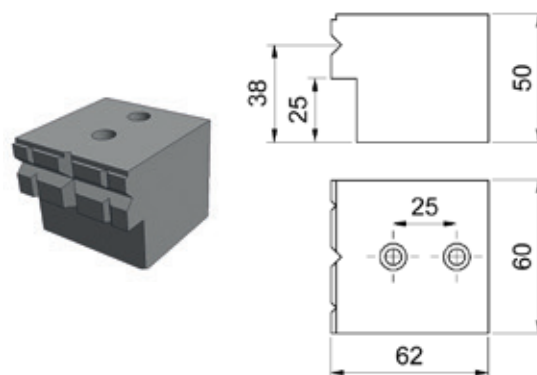


Jaws and positioning sleeve 3D-FLEX-FIX

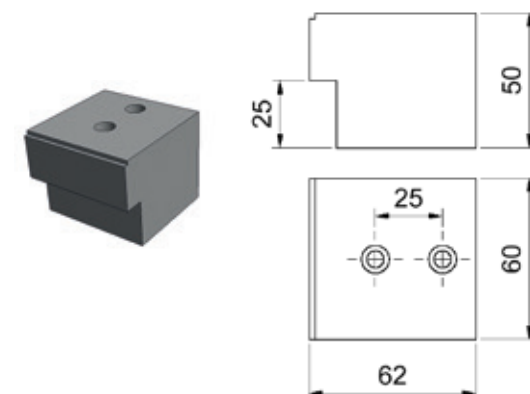
Type	Item no.
Jaw set 4 ZA 3D-Flex-Fix, reversible top jaws made of aluminum, black anodized, incl. 8 jaw screws M6. Positioning sleeves 196043.00 can be ordered additionally.	196038.00



Type	Item no.
Prism jaw 3D-Flex-Fix, 1 piece Top jaw made of aluminum, black anodized, incl. 2 jaw screws M6. Positioning sleeves 196043.00 can be ordered additionally.	196055.00



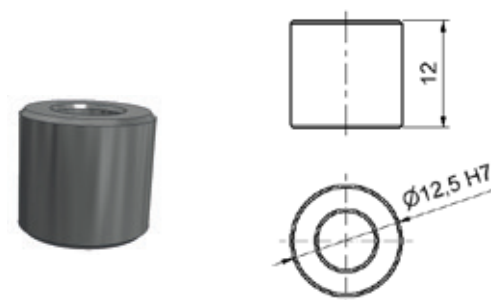
Type	Item no.
Block jaw 3D-Flex-Fix, 1 piece Top jaw made of aluminum, black anodized, incl. 2 jaw screws M6. Positioning sleeves 196043.00 can be ordered additionally.	196056.00



Type	Item no.
Pin jaw 3D-Flex-Fix / 6 ZAS 240, 1 piece pin jaw Ø 25 mm made of steel, corrosion protected (Reinox) See page 2, thread M6, centering Ø 12.5 mm	196059.00
Details / Dimensions, See page 21	



Type	Item no.
Positioning sleeve 3D-Flex-Fix / grid plate 25 mm for bore Ø 12.5 mm case hardened (see page 2) and ground	196043.00



Type W

Pinces tirées - Zugspannzangen - Pull-type collets

Fig. 1

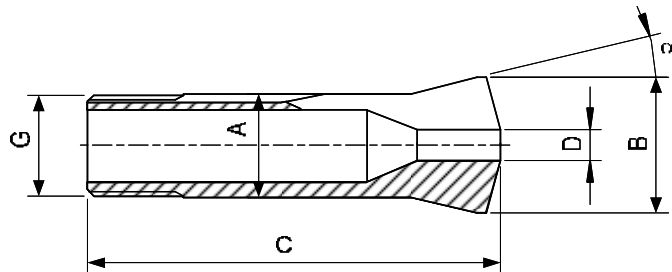
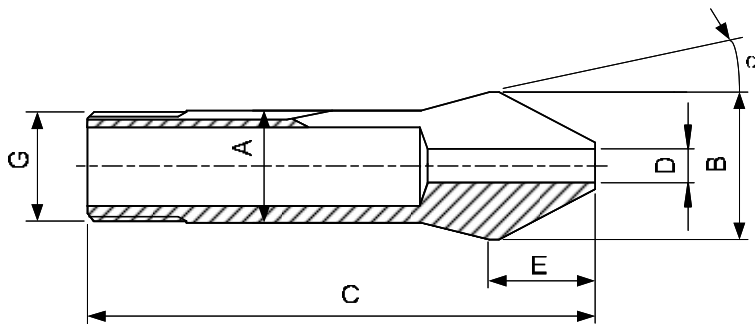
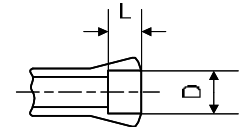


Fig. 2



Alésage à cran
Stufenbohrung
Step bore



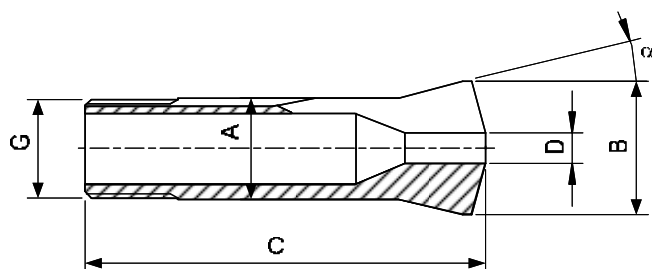
Obturbateurs pour pincas, voir page 75
Dichtgummi für Spannzangen auf Seite 75
Rubber seals for collets on page 75

Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
W10	80-1	10	14	43.6	-	$\emptyset 9.83 \times 0.833 \nless 45^\circ/5^\circ$	15°	0.30...6.70	-	1
								6.71...8.00	15	
								8.01...8.50	6	
								8.51...9.00	5	
								9.01...9.50	4	
								9.51...10.00	3	
W12	80-2	12	16	46	-	$\emptyset 11.75 \times 1.25 \nless 45^\circ/5^\circ$	15°	0.30...8.00	-	1
								8.01...10.00	17	
								10.01...10.50	6	
								10.51...11.00	5	
								11.01...11.50	4	
								11.51...12.00	3	
								12.01...12.50	2	
	80-93108	12	16	52	8.8	$\emptyset 11.75 \times 1.25 \nless 45^\circ/5^\circ$	15°	0.30...8.00	-	2
								8.01...10.00	24	
W15	80-3	15	20.2	58.3	-	$\emptyset 14.75 \times 1.25 \nless 45^\circ/5^\circ$	15°	0.30...10.70	-	1
								10.71...12.70	22	
								12.71...13.00	9.5	
								13.01...13.50	8.5	
								13.51...14.00	7.5	
								14.01...14.50	6.5	
								14.51...15.00	5.5	
								15.01...15.50	4.5	
								15.51...16.00	3.5	
	80-93285	15	20.2	67	12	$\emptyset 14.75 \times 1.25 \nless 45^\circ/5^\circ$	15°	0.30...10.20	-	2
								10.21...12.70	32	

Type W

Pincés tirées - Zugspannzangen - Pull-type collets

Fig. 1



Alésage à cran
Stufenbohrung
Step bore

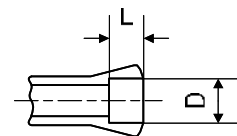


Fig. 2

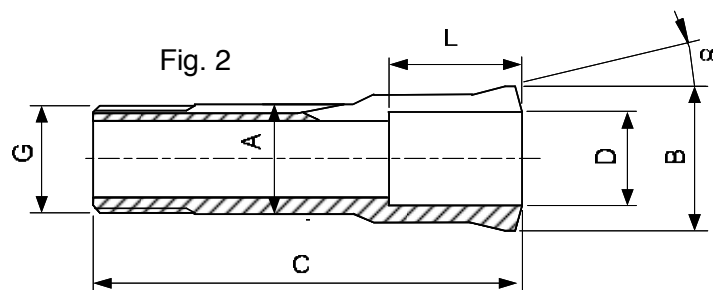


Fig. 3

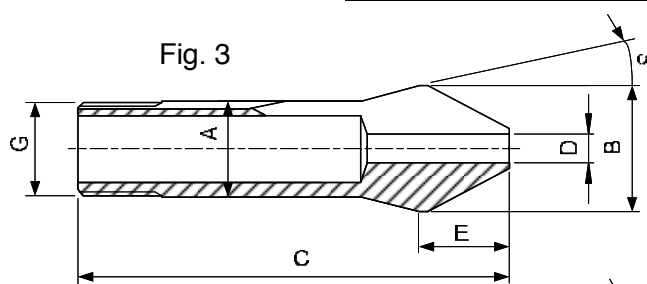


Fig. 4

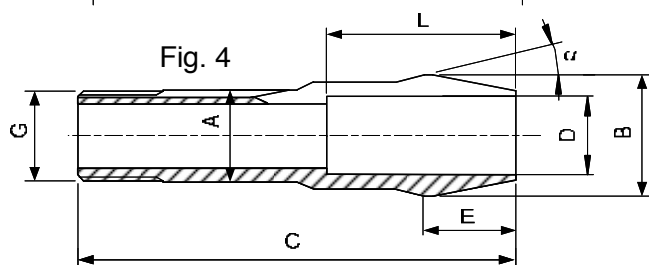
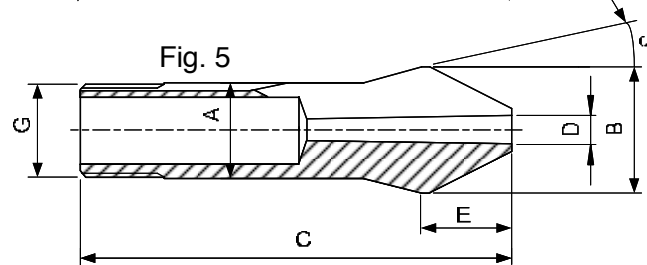


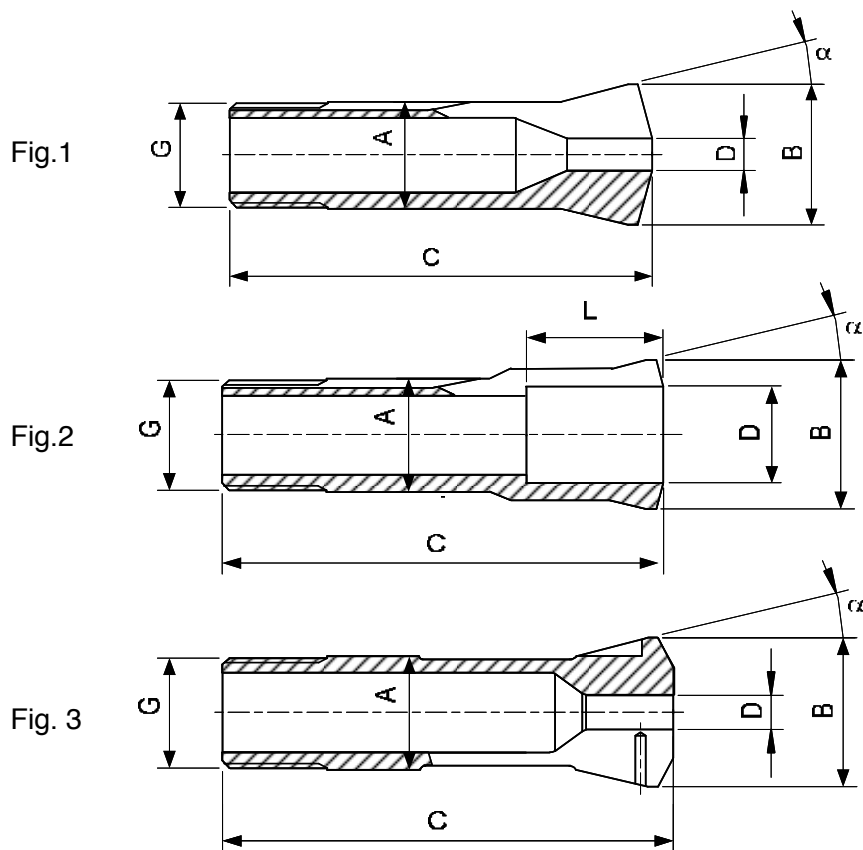
Fig. 5



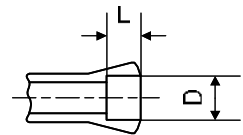
Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
W20	80-4	20	26.3	73	-	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	0.30...14.50	-	1
								14.51...16.00	28	
								20) 16.01...16.50	13.5	
								20) 16.51...17.00	13	
								20) 17.01...17.50	12.2	
								20) 17.51...18.00	11.5	
								20) 18.01...18.50	10.7	
								20) 18.51...19.00	10	
								20) 19.01...19.50	8.7	
								20) 19.51...20.00	7.5	
								20.01...20.50	6.5	
								20.51...21.00	5.5	
								21.01...21.50	4.7	
								21.51...22.00	4	
								22.01...22.50	3	
								22.51...23.00	2	
	80-107	20	26.3	73	-	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	16.01...20.00	24	2
	80-92744	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	0.30...13.00	-	3
								13.01...16.00	41	
	80-93286	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	16.01...20.00	37	4
	80-93828 26)	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	Morse DIN228 MK-1	-	5
	80-93829 26)	20	26.3	94.5	25.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ/5^\circ$	15°	Morse DIN228 MK-2	66	5

Type W

Pincés tirées - Zugspannzangen - Pull-type collets



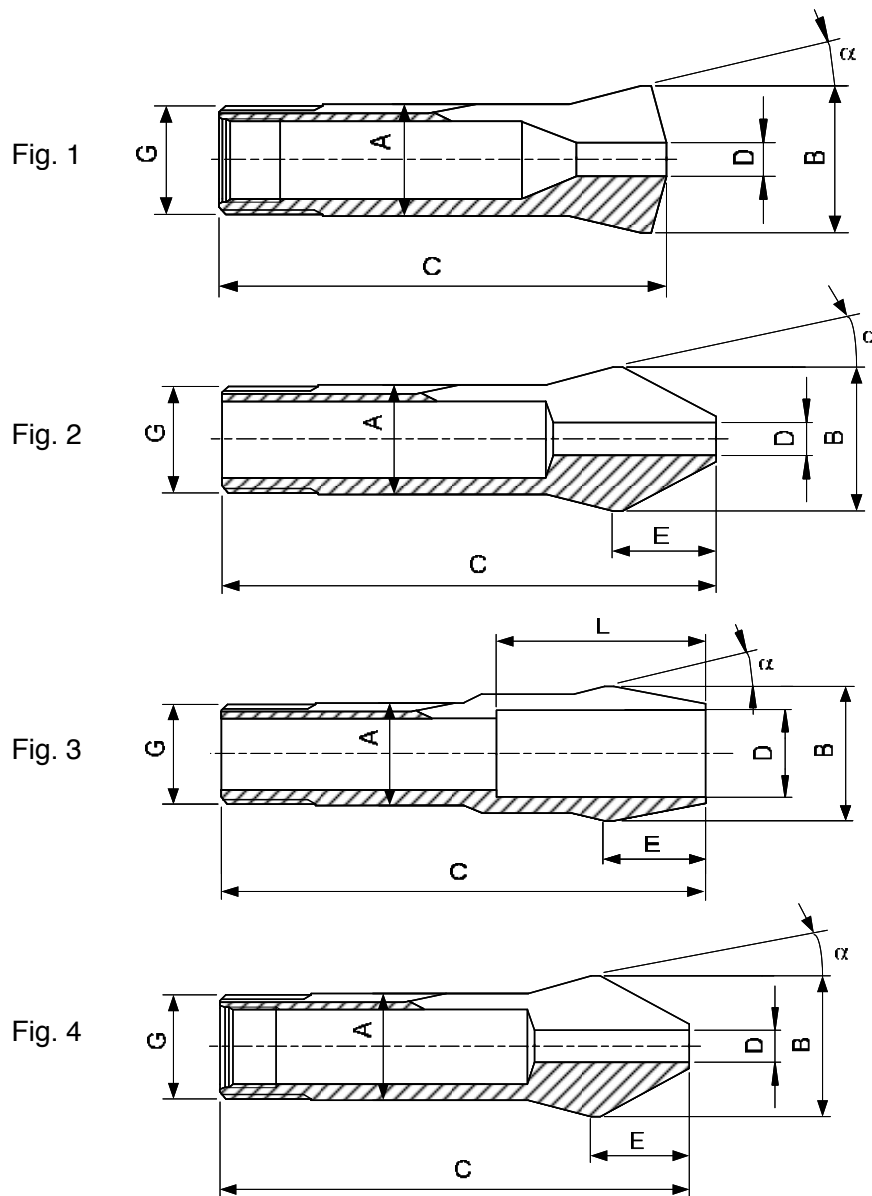
Alésage à cran
Stufenbohrung
Step bore



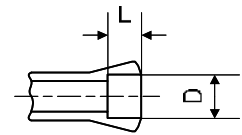
Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
W25	80-5	25	33.7	97.6	-	Ø 24.7x1.693 ∇ 45°/5°	15°	0.30...19.05	-	1
								19.06...21.00	35	
								21) 21.01...21.50	16.5	
								21) 21.51...22.00	16	
								21) 22.01...23.00	15.5	
								21) 23.01...23.50	15	
								21) 23.51...24.00	14.5	
								21) 24.01...24.50	13.5	
								21) 24.51...25.00	12.5	
								21) 25.01...25.40	11.5	
								25.41...25.50	11.5	
								25.51...26.00	10.5	
								26.01...26.50	9.5	
								26.51...27.00	8.5	
								27.01...27.50	7.5	
								27.51...28.00	6.5	
								28.01...28.50	5.5	
								28.51...29.00	4.5	
	80-700	25	33.7	97.6	-	Ø 24.7x1.693 ∇ 45°/5°	15°	21.01...25.40	30	2
	80-1923	25	35	94	-	M25x1	16°	0.50...17.00	-	3

Type W

Pinces tirées - Zugspannzangen - Pull-type collets



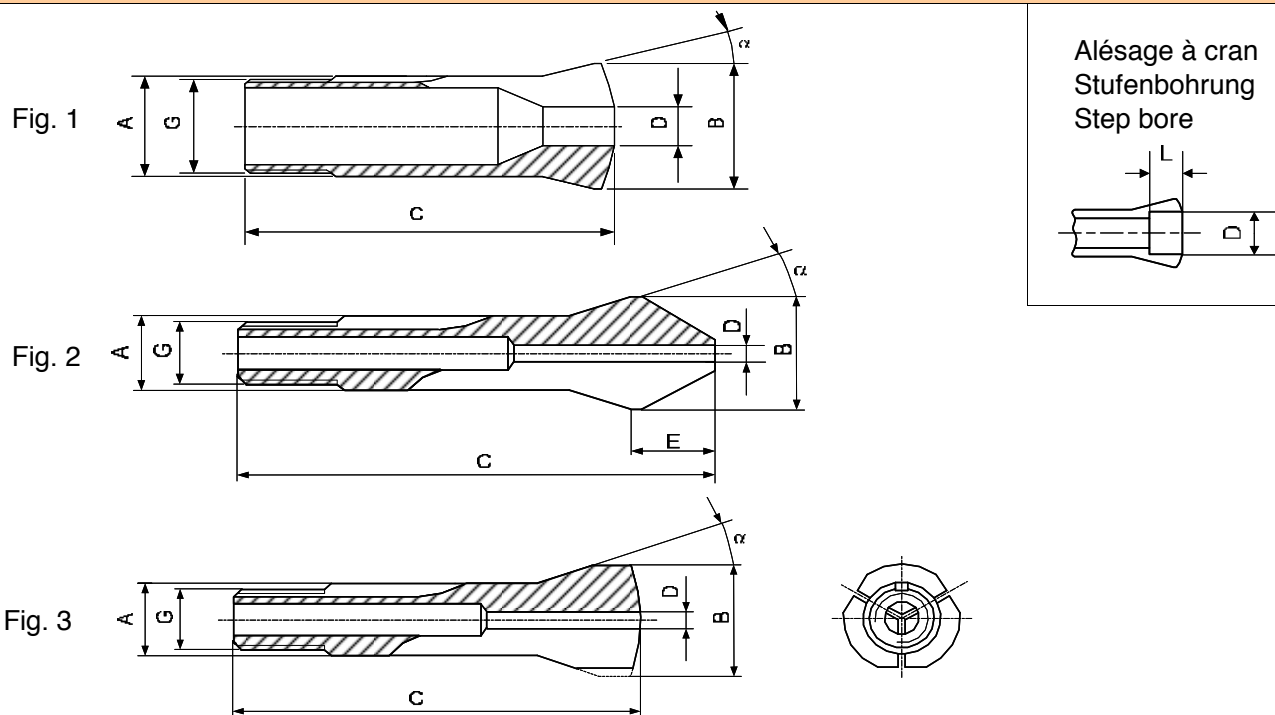
Alésage à cran
Stufenbohrung
Step bore



Type	Art.	A	B	C	E	G	α	D min-max		L	Fig.
W25	80-92872	25	33.7	112.2	19.7	$\emptyset 24.7 \times 1.693$	$\nless 45^\circ/5^\circ$	15°	0.30...19.05 19.06...21.00	- 50	2
	80-2006	25	33.7	112.2	19.7	$\emptyset 24.7 \times 1.693$	$\nless 45^\circ/5^\circ$	15°	21.01...25.40	47	3
	80-93837 26)	25	33.7	112.2	19.7	$\emptyset 24.7 \times 1.693$	$\nless 45^\circ/5^\circ$	15°	Morse DIN228 MK-1	-	2
	80-93838 26)	25	33.7	112.2	19.7	$\emptyset 24.7 \times 1.693$	$\nless 45^\circ/5^\circ$	15°	Morse DIN228 MK-2	-	2
W31.75	80-842	31.75	37.4	87	-	$\emptyset 31.4 \times 1.27$	$\nless 60^\circ$	10°3'	0.50...25.19 25.20...27.99 28.00...28.99 29.00...29.99 30.00...31.00	- 40 10 7 4	1
	80-2007	31.75	37.4	108.7	25.4	$\emptyset 31.4 \times 1.27$	$\nless 60^\circ$	10°3'	0.30...25.19 25.20...28.00	- 64	4

Type B

Pinces tirées - Zugspannzangen - Pull-type collets

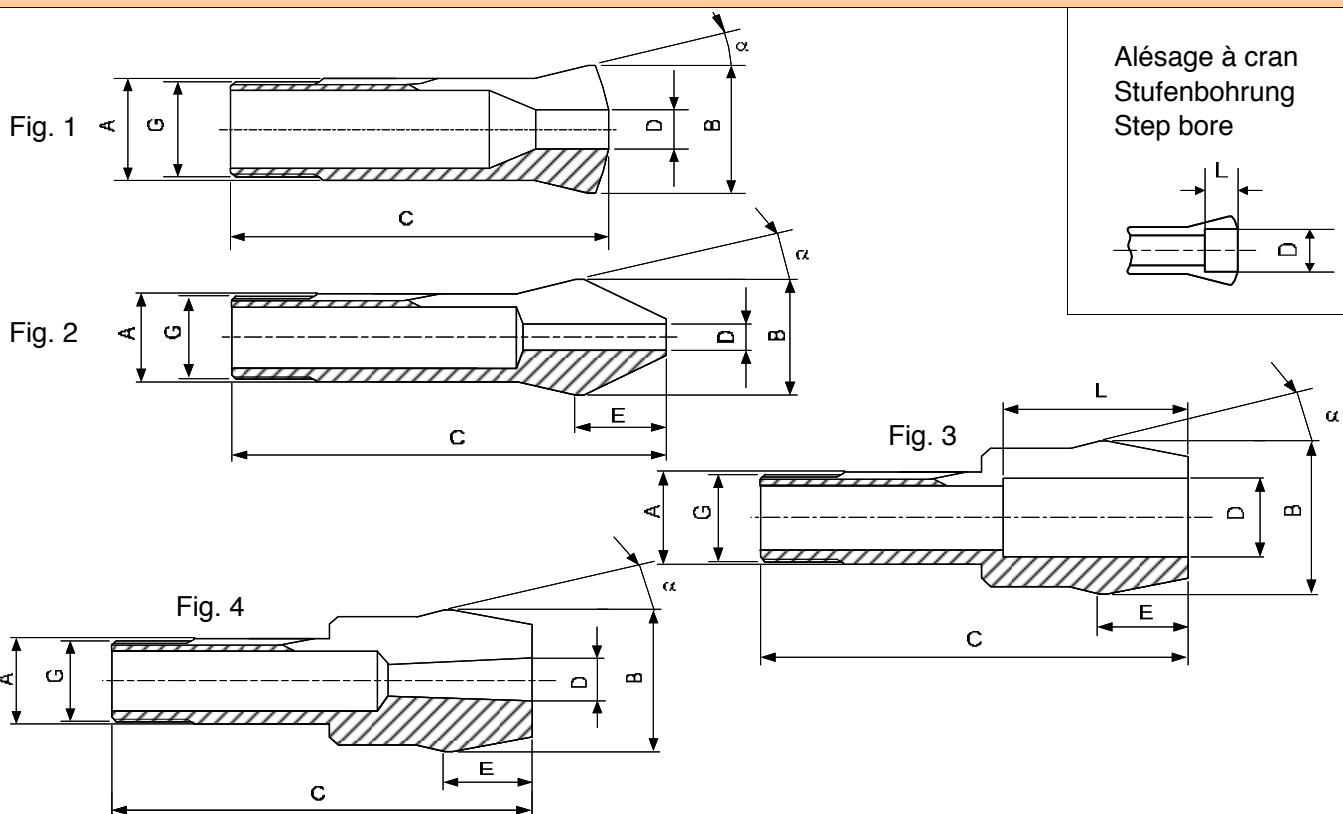


Obturbateurs pour pinces, voir page 75
Dichtgummi für Spannzangen auf Seite 75
Rubber seals for collets on page 75

Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
B6	72-128	6	10.5	31.3	-	$\emptyset 5 \times 0.706 \nless 55^\circ$	20°	0.30...3.00	-	1
								3.01...4.50	12	
								4.51...5.00	4.5	
								5.01...5.50	4	
								5.51...6.00	3.5	
	72-1897 26)	6	9	31.3	-	$\emptyset 5 \times 0.706 \nless 55^\circ$	20°	0.30...3.00	-	3
								3.01...4.50	12	
								4.51...5.00	4.5	
								5.01...5.50	4	
								5.51...6.00	3.5	
B8	72-137	8	13	35.5	-	$\emptyset 6.82 \times 0.625 \nless 55^\circ$	20°	0.30...4.00	-	1
								4.01...6.50	13	
								6.51...7.00	6	
								7.01...7.50	5	
								7.51...8.00	4	
	72-1898 26)	8	13	35.5	-	$\emptyset 6.82 \times 0.625 \nless 55^\circ$	20°	8.01...8.50	3.2	3
								8.51...9.00	2.5	
								9.01...9.50	1.7	
								9.51...10.00	1	
								0.30...4.00	-	
	72-95	8	13	40.5	7	$\emptyset 6.82 \times 0.625 \nless 55^\circ$	20°	4.01...6.50	12.5	2
								6.51...7.00	6	
								7.01...7.50	5	
								7.51...8.00	4	
								0.30...3.30	-	
								3.31...6.50	21	

Type B

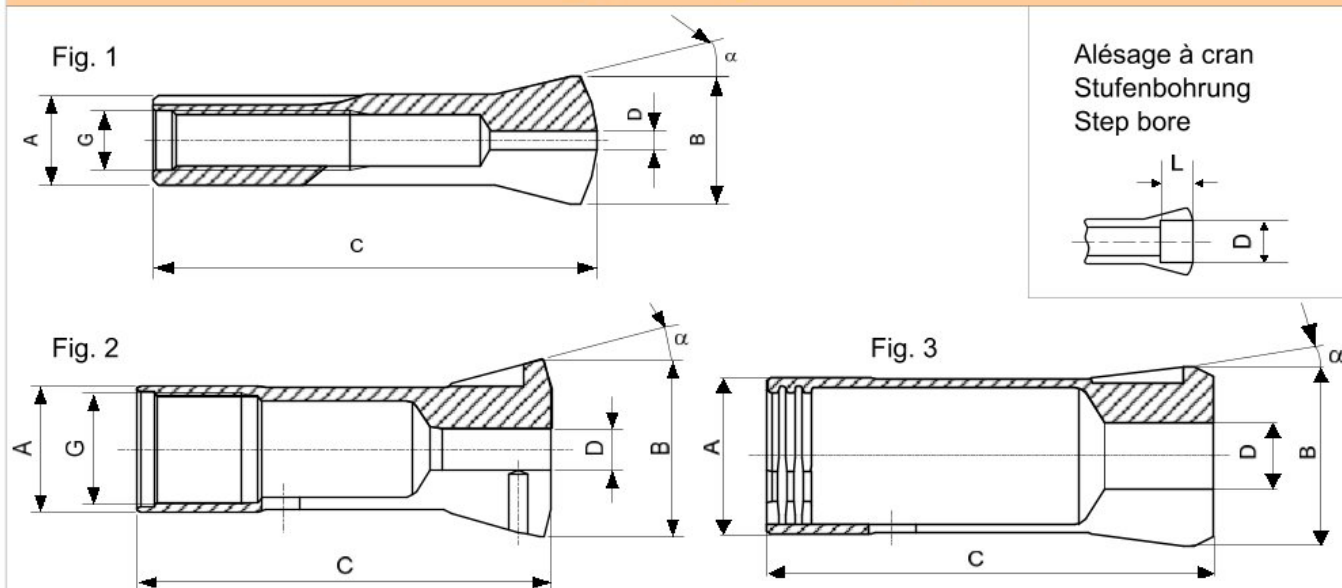
Pinces tirées - Zugspannzangen - Pull-type collets



Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
B15	72-139	15	21	55	-	M13 x 1	20°	0.30...9.50	-	1
								9.51...12.50	20	
								12.51...13.00	8.5	
								13.01...13.50	7.7	
								13.51...14.00	7	
								14.01...14.50	6.5	
								14.51...15.00	6	
B32	72-55 26)	32	40	102	-	M30 x 1.5	15°	0.30...24.00	-	1
								24.01...28.00	44	
								28.01...30.00	12	
								30.01...32.00	8	
B32	72-65	32	40	106	-	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	0.30...24.00	-	1
								24.01...28.00	44	
								28.01...30.00	12	
								30.01...32.00	8	
	72-2003	32	40	124	24	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	0.30...24.00	-	2
								24.01...28.00	64	
BCR32 Voir page - Siehe Seite - see page 23.4										
B32/B45	72-2005	32	53	148.5	32.5	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	1.00...24.00	-	3
								24.01...40.00	80	
	72-93409 26)	32	53	148.5	32.5	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	Morse DIN228 MK-1	-	4
	72-93410 26)	32	53	148.5	32.5	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	Morse DIN228 MK-2	-	4
	72-93411 26)	32	53	148.5	32.5	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	Morse DIN228 MK-3	-	4
	72-93412 26)	32	53	173	57	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	Morse DIN228 MK-4	107	4

Type P

Pinces tirées - Zugspannzangen - Pull-type collets

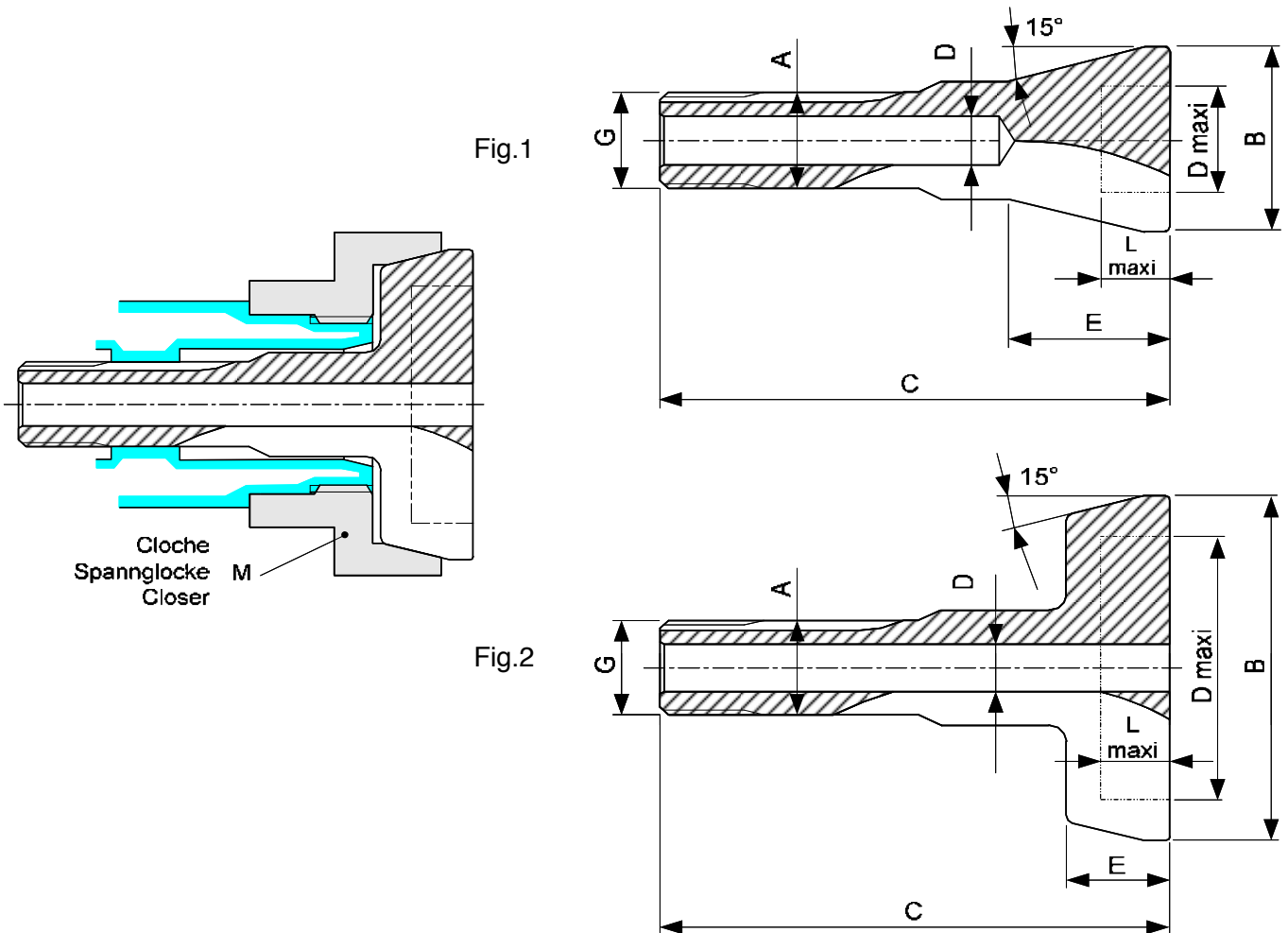


Obturbateurs pour pinces, voir page 75
Dichtgummi für Spannzangen auf Seite 75
Rubber seals for collets on page 75

Type	Art.	A	B	C	G	α	D min-max	L	Fig.
P4.5	78-153	4.5	6.75	22.9	M3.35	15°	0.30...2.50	-	1
							2.51...3.00	8.5	
							3.01...4.00	4	
							4.01...4.50	3	
P5	78-154	5	7	22.9	M3.5	15°	0.30...2.70	-	1
							2.71...3.00	8.5	
							3.01...3.50	12	
							3.51...4.00	4	
							4.01...4.50	3	
P6	78-150	6	8.5	27.2	M4	15°	4.51...5.00	2	1
							0.30...3.20	-	
							3.21...4.50	11.5	
	78-155	6	8.5	24.1	M4	20°	4.51...5.00	4.5	1
							0.30...3.20	-	
P9	78-157	9	13.2	39.3	M6	15°	3.21...4.50	8.5	1
							4.51...5.00	3.5	
							0.30...4.70	-	
							4.71...7.00	12	
P10	78-228	10	14	39	M7	15°	7.01...8.00	7	1
							8.01...9.00	5	
							0.30...5.70	-	
							5.71...8.00	21.5	
							8.01...8.50	6	
P25	78-334	25	35	75	M22x1	16°	8.51...9.00	5	2
PR28	78-2013	28	32	73	-	8°	9.01...9.50	4	3
PR35.5	78-2012	35.5	40	80	-	8°	9.51...10.00	3	3
P36	78-2007	36	45	107	M33x1.25	16°	0.50...18.26	-	2
							2.00...24.50	-	3
							2.00...30.00	-	3
							2.00...21.00	-	2

Type W

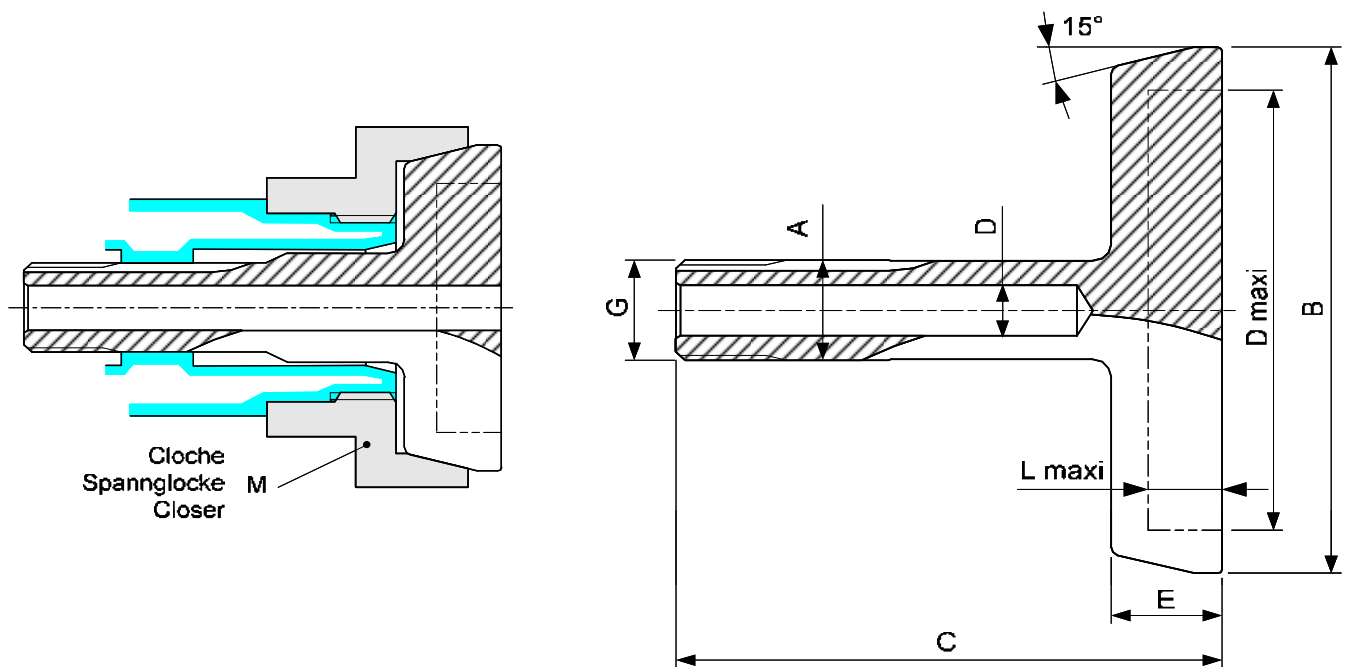
Pinces entonnoirs ébauchées
Vorgearbeitete Glockenzangen
External step collet blanks



Type	Art.	A	B	C	D	D maxi	E	G	L maxi	Fig.	M
W20 10) 80-4	82-51000	20	36 Gr.1	90	10	24	-	∅ 19.7x1.666 ↗45°/5°	13	1	102-20221 3)
	82-51001	20	56 Gr.2	96	10	40	24.5	∅ 19.7x1.666 ↗45°/5°	20	2	102-20226 3)
	82-51002	20	77 Gr.3	96	10	62	24.5	∅ 19.7x1.666 ↗45°/5°	20	2	102-20231 3)
	82-51003	20	98 Gr.4	96	10	82	24.5	∅ 19.7x1.666 ↗45°/5°	20	2	102-20236 3)
	82-51004	20	120 Gr.5	96	10	104	24.5	∅ 19.7x1.666 ↗45°/5°	20	2	102-20241 3)
	82-51005	20	140 Gr.6	96	10	124	24.5	∅ 19.7x1.666 ↗45°/5°	20	2	102-20246 3)

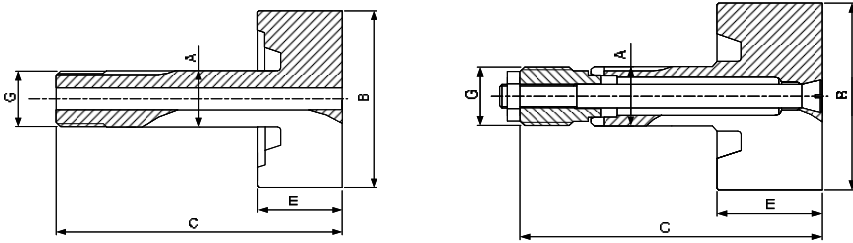
Type W

Pinces entonnoirs ébauchées Vorgearbeitete Glockenzangen External step collet blanks



Type	Art.	A	B	C	D	D maxi	E	G	L maxi	M
W25 10) 80-5	82-51011	25	56 Gr.1	120	10.5	40	24.5	∅ 24.7x1.693 ↗ 45°/5°	20	102-25221 3)
	82-51012	25	88 Gr.2	120	10.5	72	24.5	∅ 24.7x1.693 ↗ 45°/5°	20	102-25226 3)
	82-51013	25	120 Gr.3	120	10.5	104	24.5	∅ 24.7x1.693 ↗ 45°/5°	20	102-25231 3)
	82-51014	25	150 Gr.4	122.5	10.5	132	27	∅ 24.7x1.693 ↗ 45°/5°	22	102-25236 3)

Pincas échelles ébauchées - Vorgearbeitete Ringfutter - Internal step collet blanks



Type	Art.	A	B	C	E	G	Fig.
W12 10) 80-2	84-54020	12	49.2	63	13.5	∅ 11.75x1.25 ∇ 45°75°	1
W20 10) 80-4	84-54220	20	75	99	32	∅ 19.7x1.666 ∇ 45°75°	2
W25 10) 80-5	84-54420	25	96	134	47	∅ 24.7x1.693 ∇ 45°75°	2

Fig. 1

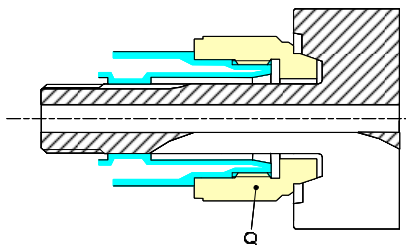
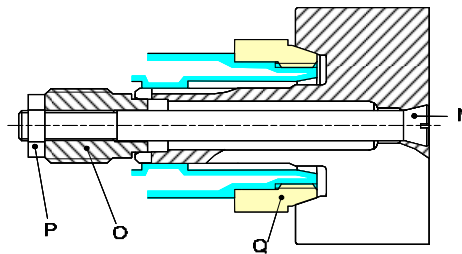


Fig. 2



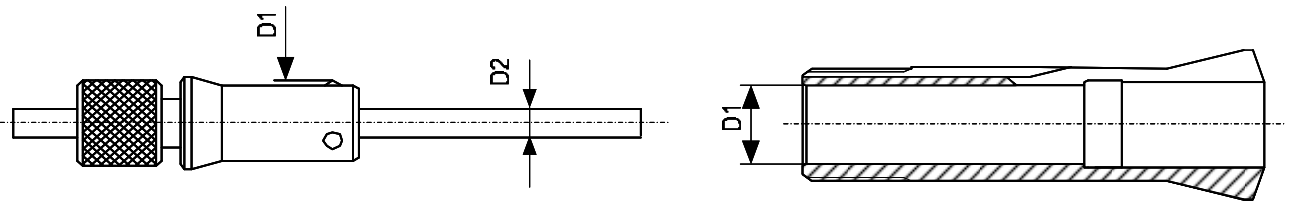
caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

N		tige Dorn arbor
O		écrou Gewinde-Mutter nut
P	DIN 439 0.5d 	contre-écrou Kontermutter lock nut
Q 3)		cône d'expansion Spreizring expansion ring

Type	Art.	N	O	P	Q	Fig.
W12 10) 80-2	84-54020	-	-	-	70-25214 3)	1
W20 10) 80-4	84-54220	84-54300	84-51500	M8	102-20214 3)	2
W25 10) 80-5	84-54420	84-54500	84-52500	M10	102-25214 3)	2

Type W, B, L, F

Butées de profondeur - Tiefenanschläge - Adjustable depth stops



Selon le perçage arrière D1, les butées de profondeur peuvent être choisies aussi pour d'autres types de pinces.

Passend zur jeweiligen Schaftaufbohrung D1 können die Tiefenanschläge auch für andere Spannzangentypen ausgewählt werden.

According to the actual D1 inside diameter, depth stops can be selected for other types of collets.

Art.	D1 min - max	D2	Employée pour - Verwendet für - Used for
68-99100	3.90...4.40	1.2	72-128 B8 / 76-599 F6
68-99101	4.50...5.40	1.2	76-66 F7
68-99102	5.40...6.60	1.5	76-577 F8
68-99103	6.50...7.40	2	76-86 F10 / 80-1 W10
68-99104	8.00...8.80	2.5	80-2 W12
68-99105	9.30...10.90	2.5	72-139 B15 / 76-78 F12 / 76-357 F13 / 76-98 F14 / 80-3 W15
68-99106	12.00...13.80	2.5	76-1076 F16 / 77-122 L20
68-99107	13.50...15.10	5	80-4 W20
68-99108	15.00...16.80	5	
68-99109	16.40...18.20	7	76-87 F20 / 76-71 F22
68-99110	16.50...19.95	5	80-5 W25
68-99111	19.80...22.80	7	76-64 F25
68-99112	22.00...23.80	7	76-22 F27 / 76-93 F28
68-99113	23.00...24.80	7	72-65 B32
68-99114	24.60...27.80	7	76-101 F30 / 76-221 F32 / 80-842 W31.75
68-99115	27.60...30.80	7	76-94 F35
68-99116	30.00...33.80	7	76-72 F38
68-99117	34.80...40.70	10	72-199 B45 / 76-99 F42
68-99118	39.80...44.70	10	76-81 F48

Space for your great ideas & thoughts...

Lined area for notes.



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From watchmaking tools to measuring machines! Our demanding customers appreciate our quality standards - and we appreciate our satisfied customers.

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Maprox AG
Usterstrasse 7
CH-8620 Wetzikon
Tel: +41 (0)43 488 18 00
Fax: +41 (0)43 488 18 08
info@maprox.ch
www.maprox.ch

JKS America Inc.
4420 Anson Boulevard
Whitestown IN 46075 - USA
Phone: +1 463-946 00 01
office@jks-america.com
www.jks-america.com

