



Solutions for measuring and precision mechanics

- CLAMPING CHUCKS
- COLLET HOLDERS
- DIVIDERS
- HIGH PERFORMANCE CHAMFERING MACHINES
- CLAMPING EQUIPMENT FOR COORDINATE MEASURING MACHINES
- COLLETS

QUALITY | FLEXIBILITY | SWISS MADE

YOUR WORKPIECE – our clamping solution

Intricate geometries, 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 with 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

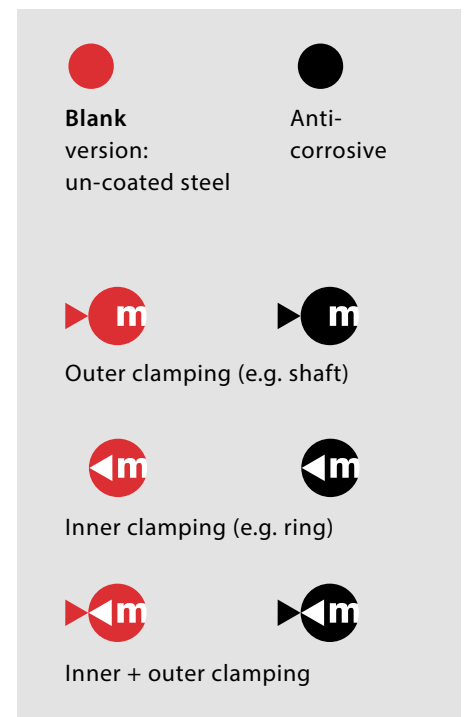
High quality surface protection for aluminum components, advantages:

- 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 ultra-flat

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

- Concentricity: 20 μ
- Lateral runout: 10 μ
- Repetitiveness: 5 μ
- 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 6 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

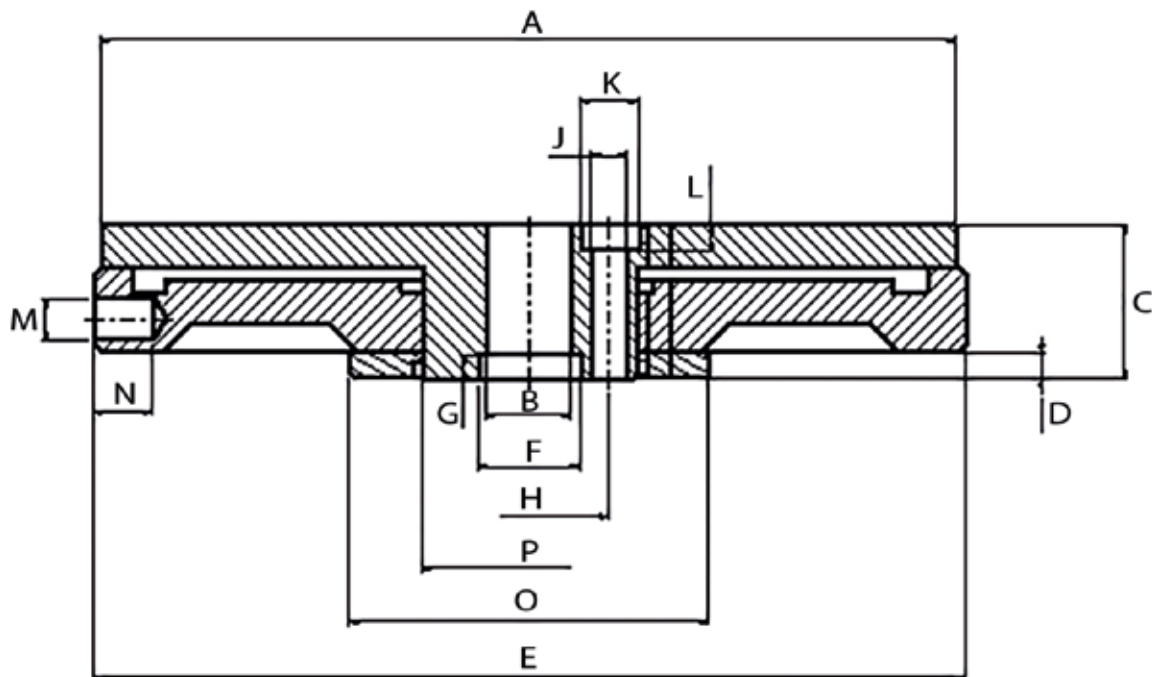
Clamping chucks JF ultra-flat, dimensions

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	16.5	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	2.5	2.5	3	3	3.8	3.8	5.2
H Ø	14.5	17	18.8	18.8	28	28	28
J Ø	3 x 3.1	3 x 3.6	3 x 4.0	3 x 4.1	4 x 5.1	4 x 5.1	4 x 5.1
K Ø	5.2	5.2	6.1	7.2	9	9	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

Jaw travel path [mm]

JF Ø	55	70	85	100	125	150	200
Diameter	13	22	32	36	ca. 40	48	71



Drawing without jaws

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

Blank

Type D	Item no.
JF 3D 55	193516.00
JF 6D 55	193515.00
JF 3D 70	193536.00
JF 6D 70	193535.03
JF 3D 100	195089.00
JF 6D 100	193571.03
JF 8D 150	195035.00



Anti-corrosive

Type D	Item no.
JF 3D 55	193516.63
JF 6D 55	193515.63
JF 3D 70	193536.63
JF 6D 70	193535.63
JF 3D 100	195089.63
JF 6D 100	193571.63
JF 3D 150	10162.002
JF 8D 150	195035.10
JF 3D 200	195280.00
JF 6D 200	10118.001



Technical details

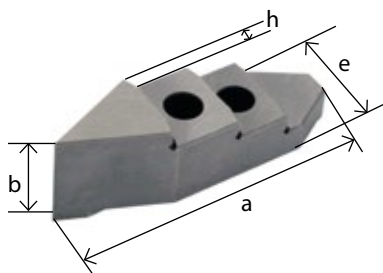
- Anti-corrosive (Reinox), see page 2

Clamping ranges Ø min.-max. [mm], top jaws type D

JF Ø	55	70	100	150	200
Inner clamping	13-50	17-64	27-96	46-140	45-208
Outer clamping	1-61	1-71	1.5-99.5	1.5-141	1.5-210

Top jaws JF, type D reversible, case-hardened, ground

Type D	Item no.
JF 3D 55	193273.10
JF 3D 70	193290.10
JF 6D 55	193271.10
JF 6D 70	193288.10
JF 6D 100	193317.00
JF 8D 150	195246.00
JF 3D 200	10162.011
JF 6D 200	10118.005



Dimensions of jaws [mm]

a (Length)	* b (Height)	e (Width)	h (Height of steps)
22	9.1	8	2
26	10.4	10	2.3
22	9.1	8	2
26	10.4	10	2.3
38.5	13.2	12	2.8
59.5	18	18	4
80	23.5	20	5
80	23.5	20	5

* Height from clamping chuck surface

Option

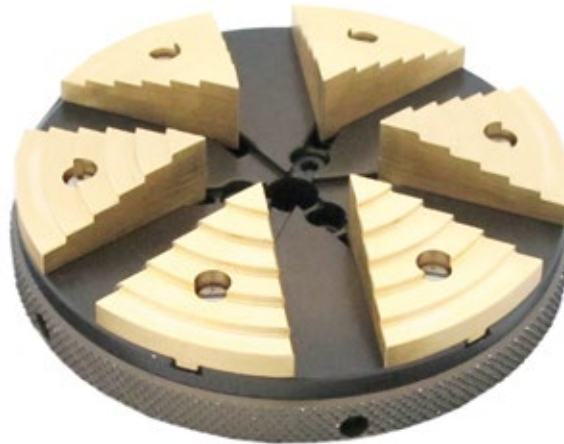
- Anti-corrosive (Reinox), see page 2



Clamping chuck JF ultra-flat aluminum, with a set of brass top jaws, type A, B, C

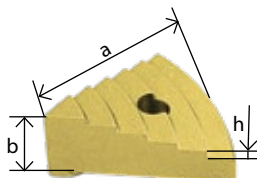
The completely anti-magnetic clamping chuck from Maprox has been in use for many years wherever magnetism plays a role – or not

Type	Item no.
JF 6A 100	193568.ALU
JF 6B 100	193569. ALU
JF 6C 100	194411. ALU
JF 6A/B 100	10716.006



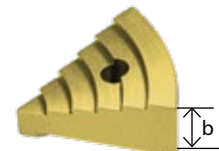
Top jaws type A

Type A	Item no.
JF 6A 100	193313.70



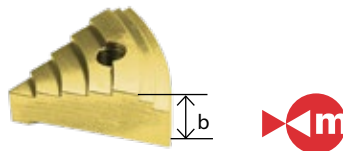
Top jaws type B

Type B	Item no.
JF 6B 100	193314.70



Top jaws type C

Type C	Item no.
JF 6C 100	193315.70



Dimensions of jaws [mm]

a (Length)	* b (Height)	h (Height of steps)
35	13.7	1.6

* Height from chuck surface

Clamping ranges Ø min.-max. [mm]

A jaws	B jaws	C jaws
** T-R: 16-90	** U-S: 16-90	** T-R: 58-90 U-S: 16-79

** Dimensioning, see page 9

Technical details

- Clamping chuck made of aluminum, ALTEF® coating (see page 2)
- Anti-magnetic
- Especially smooth
- Further dimensions and jaw travel path, see page 5

Options

- Further clamping chuck sizes and special top jaws on request

Clamping chucks JF ultra-flat, with a set of soft top jaws, type A, B, C or W, DW

Type A **Item no.**

JF 6A 55	193512.00
JF 6A 70	193532.00
JF 6A 85	193552.00
JF 6A 100	193568.00
JF 8A 125	193584.00
JF 8A 150	193593.03

**Type B** **Item no.**

JF 6B 55	193513.00
JF 6B 70	193533.00
JF 6B 85	193553.00 *
JF 6B 100	193569.00
JF 8B 125	193585.00 *
JF 8B 150	193594.00

**Type C** **Item no.**

JF 6C 55	194400.00
JF 6C 70	194403.00
JF 6C 85	194407.00 *
JF 6C 100	194411.00
JF 8C 125	194417.00 *
JF 8C 150	194418.00

**Type W** **Item no.**

JF 6W 55	193514.00
JF 6W 70	193534.00
JF 6W 85	193554.00 *
JF 6W100	193570.00
JF 8W125	193586.00 *
JF 8W150	193595.00

**Type DW** **Item no.**

JF 6DW 55	195020.00
JF 6DW 70	195308.00
JF 3DW 70	195309.00
JF 6DW 100	195307.00
JF 8DW 125	195307.00 *
JF 8DW 150	195023.00

**Options**

- Top jaws and / or clamping chucks anti-corrosive (Reinox), see page 2
- * on request

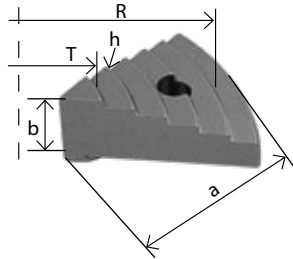


Top jaws JF, type A, B, C, W and DW – soft

Available also in plastic, aluminum, brass or anti-corrosive (Reinox), see page 2

We also create special types according to your workpiece

Type A	Item no.
JF 6A 55	193267.00
JF 6A 70	193284.00
JF 6A 85	193301.00
JF 6A 100	193313.00
JF 8A 125	193332.00
JF 8A 150	193341.00



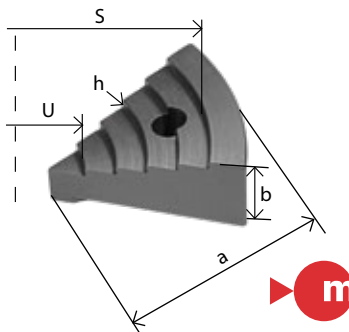
Dimensions of jaws [mm]

a (Length)	* b (Height)	h
22	9.1	1.2
25	9.1	1.25
30	14.0	1.5
35	13.7	1.6
55	18.4	2
60	18.4	2

Clamping ranges Ø
min.-max. [mm]

T-R
10-48
12-62
17-78
16-90
19-134
26-150

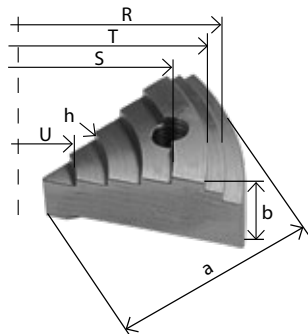
Type B	Item no.
JF 6B 55	193268.00
JF 6B 70	193285.00
JF 6B 85	193302.00
JF 6B 100	193314.00
JF 8B 125	193333.00
JF 8B 150	193342.00



a (Length)	* b (Height)	h
22	9.1	1.2
25	9.1	1.25
30	14.0	1.5
35	13.7	1.6
55	18.4	2
60	18.4	2

U-S
10-48
12-62
17-78
16-90
15-134
22-150

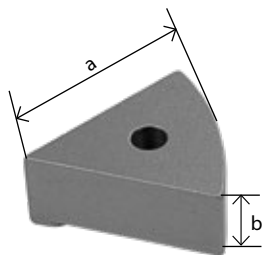
Type C	Item no.
JF 6C 55	193269.00
JF 6C 70	193286.00
JF 6C 85	193303.00
JF 6C 100	193315.00
JF 8C 125	193334.00
JF 8C 150	193343.00



a (Length)	* b (Height)	h
22	9.1	1.2
25	9.1	1.25
30	14.0	1.5
35	13.7	1.6
55	18.4	2
60	18.4	2

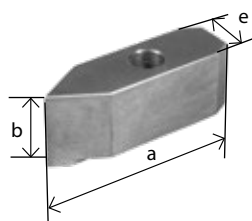
U-S	T-R
10-44	35-48
12-51	53-62
17-67	48-78
16-79	58-90
15-102	82-134
22-123	104-150

Type W	Item no.
JF 6W 55	193270.00
JF 6W 70	193287.00
JF 6W 85	193304.00
JF 6W 100	193316.00
JF 8W 125	193335.00
JF 8W 150	193344.00



a (Length)	* b (Height)
22	9.1
25	9.1
30	14.0
35	13.7
55	18.4
60	18.4

Type DW	Item no.
JF 3DW 55	193274.00
JF 3DW 70	193291.00
JF 6DW 55	193272.00
JF 6DW 70	193289.00
JF 6DW 100	193318.00
JF 8DW 150	195290.00



a (Length)	* b (Height)	e (Width)
22	9.1	8
26	10.4	10
22	9.1	8
26	10.4	10
39	13.7	12
60	18.4	18

* Height from
clamping chuck
surface



Shank B, W, C

	Ø	Thread	JF 55	JF 70	JF 85	JF 100	JF 125	JF150
B 6	6	5 x 0.706 $\times 55^\circ$	194419.00	194426.00				
B 8	8	6.82 x 0.625 $\times 55^\circ$	193602.00	193603.00	193204.00	193204.00		
W 10	10	9.83 x 0.833 $\times 45^\circ/5^\circ$	194393.00	194420.00	194395.00	194395.00		
W 12	12	11.75 x 1.25 $\times 45^\circ/5^\circ$	193231.00	193232.00	193233.00	193233.00	195327.00	195327.00
W 20	20	19.7 x 1.666 $\times 45^\circ/5^\circ$	193236.00	193235.00	193234.00	193234.00	193230.00	193230.00
W 25	25	24.7 x 1.693 $\times 45^\circ/5^\circ$	193237.00	194421.00	193239.00	193239.00	193240.00	193240.00
B 32	32	29.7 x 1.693 $\times 45^\circ/5^\circ$	195314.00	195387.00	194438.00	194438.00	193429.00	193429.00
C 5	32	31.5 x 20 G	195007.00	195005.00	193976.00	193976.00	193977.00	193977.00



Shank MK with internal thread

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



Shank MK with withdrawal nut M22 x 1.5, internal thread

	JF 55	JF 70	JF 85	JF 100	JF 125	JF 150
MK2	195337.00	195292.00	195328.00	195328.00	195013.00	195013.00



Shank ISO 40

	JF 70	JF 85	JF 100	JF125	JF 150
ISO 40	195208.00	195291.00	195291.00	195257.00	195257.00



Options

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



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 μ
- Incl. open-ended and socket-head wrenches
- Anti-corrosive (Reinox), see page 2

Options

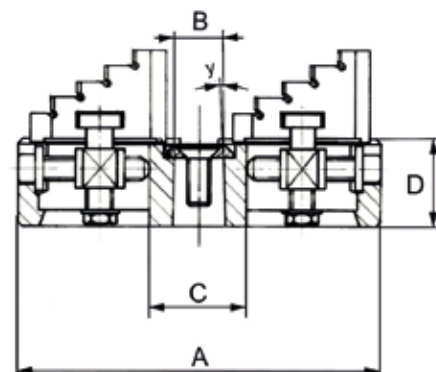
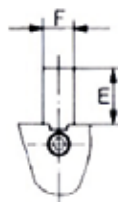
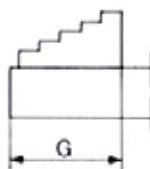
- Shank B8 (Item no. 195004.00)
- Shanks according to customer requirements

Dimensions

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

Clamping ranges $\varnothing$ 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 $\varnothing$ 45	195390.00	JF 70 shank type
JF $\varnothing$ 80	195399.00	JF 70 shank type
JF $\varnothing$ 250	15154.001	JF 100 shank type
JF $\varnothing$ 260	195560.00	Pitch circle 50 mm / μ 6



Technical details

- Anti-corrosive (Reinox), see page 2

Options

- Shanks JF, see page 10
- Shanks according to customer requirements
- Further sizes on request

Face plate magnetic JF anti-corrosive (Reinox)

with ground surface

Type	Item no.	Bore holes mounting
JF $\varnothing$ 80	195464.00	JF 70 shank type



Example of a workpiece fixation

Technical details

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

Options

- Shanks JF, see page 10
- Shanks according to customer requirements
- Further sizes on request





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

CLAMPING CHUCKS ZF ultra short

Our ZF chucks – tried and tested and **robust** | Originally from the metal-cutting world, they were trimmed early **on to the precision demanded in metrology** | Starting from $\varnothing = 30$ mm – for clamping of small shafts from 0.6 mm or rings from 2 mm inner diameter, up to the giant chuck of $\varnothing = 800$ mm or larger, we offer an incomparable selection | Equipped with **2 jaw sets** for inner or outer clamping | Of course also corrosion protected available, too

If you feel the steel weight is too big, have a look at our ZAS Aluminum, page 18

Technical details

- Concentricity: 20 μ
- Lateral runout: 10 μ
- Repetitiveness: 10 μ
- Replacement jaws, see page 15

Options

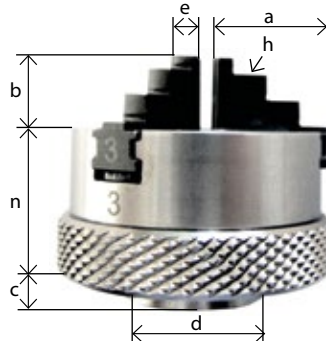
- Clamping chucks: We also realize special shapes according to your workpiece
- 2, 4 and 6 jaw clamping chuck according to customer requirements (from diameter $\varnothing = 70$)
- Jaws: Special and top jaws on request
- Top jaws also available in plastic, aluminum, brass etc. according to customer requirements
- Safety torque keys, see page 25
- Anti-corrosive (Reinox), see page 2
- Even higher accuracies are possible on request

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

Dimensions [mm]

e (Width)	3
a (Length)	14
h (Height of steps)	3
b (Height from chuck surface)	10
n (Height of chuck)	17
c (tie)	3
d	17



Clamping ranges $\varnothing$ min.-max. [mm]

3 ZK 30	$\varnothing$
Inner clamping	6-34
Inner clamping, with clamping pins (on A jaws)	ab 2.0
Outer clamping	0.6-34

Technical details

- Outer diameter: 30 mm (body)
33 mm (rotative ring)
- Feed-through bore 8 mm
- Possible speed up to 3000 rpm
- Also suitable for underwater use, eg. wire-cut EDM

Jaw travel path [mm]

$\varnothing$ ca.	12
-------------------	----

Type	Item no.
3 ZK 30	10000.0110



Type	Item no.
3 ZK 30	10000.0130



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

Type A	Item no.	Type B	Item no.
3 ZKA 30	10000.0103	3 ZKB 30	10000.0104

Type A	Item no.
3 ZKA 30 with clamping pins	10000.0120

Technical details

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

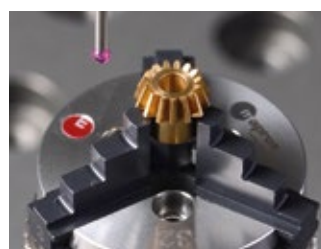
Jaws, type W



Type W	Item no.
3 ZKW 30	10000.0108

Technical details

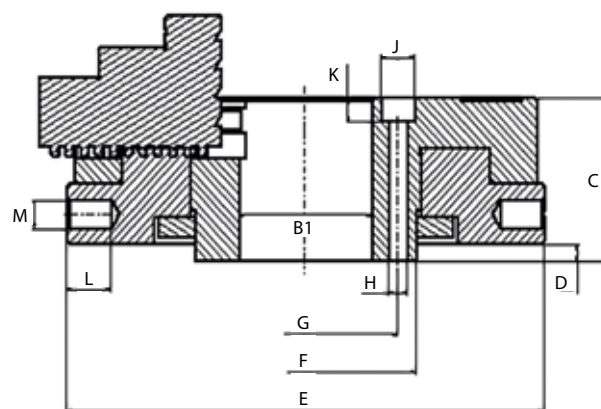
- Soft block jaws



Clamping chucks 3 ZF ultra short, with a set of A and B jaws

Dimensions [mm]

3 ZF Ø	70	80	110	125	160	240
B1 Ø	18	22	32	36	46	68
C	31	34	35	40	48.5	67
D	4	4	4	4	4	4
E Ø	73	83	114	129	164	243
F Ø / +0.01 Ø	32	38	50	60	70	120
G Ø	26	30	42	50	56	86
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
J Ø	5.7	7.2	7.2	9.4	10.5	15
K	3.6	4.5	4.5	5.8	6.5	8
L	10	11	11	12	16	16
M Ø	5	7	7	7	10	10
Weight in kg, ca.	1.2	1.4	2.5	4.0	6.5	21.0



Flange assembly: For shank diameter 1-222 mm and bore diameter 17-222 mm

Blank

Type	Item no.
3 ZF 70	193001.00
3 ZF 80	193013.00
3 ZF 110	193024.00
3 ZF 125	193036.00
3 ZF 160	195039.00
3 ZF 240	195073.10



Anti-corrosive

Type	Item no.
3 ZF 70	193001.01
3 ZF 80	193013.01
3 ZF 110	193024.01
3 ZF 125	193036.02
3 ZF 160	195039.01
3 ZF 240	195073.00



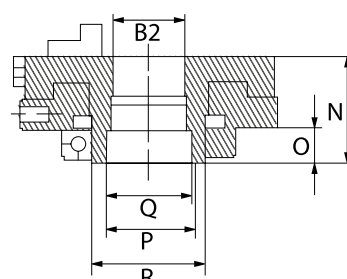
Technical details

- Anti-corrosive (Reinox), see page 2

Direct mounting Schaublin W12 / W20 / W25:
For shank diameter 1-125 mm and bore diameter 17-125 mm

Blank

Type	Item no.	3 ZF Ø	70 W12	80 W12	110 W20	125 W25
3 ZF 70 W12	193010.00	B2	18	20	32	42
3 ZF 80 W12	193022.00	N	38	43	45.5	50.5
3 ZF 110 W20	193033.00	O	11	13	14.5	14.5
3 ZF 125 W25	193044.00	P	23	23	37.97	49
		Q	M22.6 x 2	M22.6 x 2	M37.6 x 3	M47.6 x 3
		R	32	32	50	60
		Weight in kg, ca.	1.3	1.6	2.8	4.3



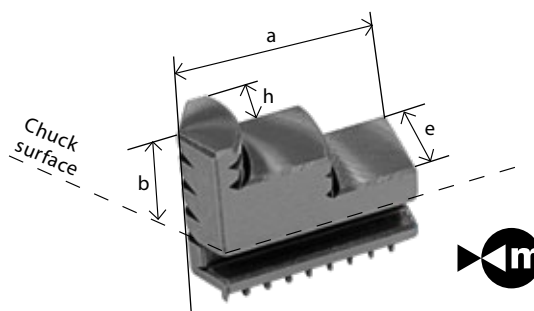
Stepped and block jaws 3 ZF

Also available in plastic, aluminum and brass

We create also special types according to your workpiece

3 ZFA Stepped jaws

Type A	Item no.
3 ZFA 70/80	193188.00
3 ZFA 110	193029.00
3 ZFA 125	193041.00
3 ZFA 160	195105.00
3 ZFA 240	195071.00

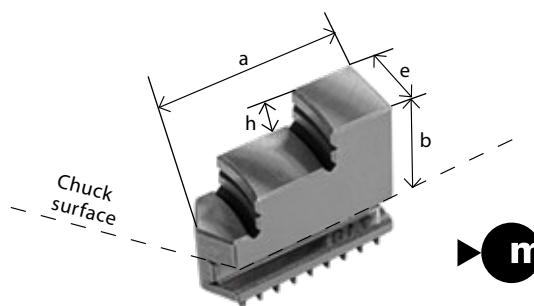


Technical details

- Case-hardened (anti-corrosive, see page 2)
- Ground

3 ZFB Stepped jaws

Type B	Item no.
3 ZFB 70/80	193189.00
3 ZFB 110	193030.00
3 ZFB 125	193042.01
3 ZFB 160	195106.00
3 ZFB 240	195072.00

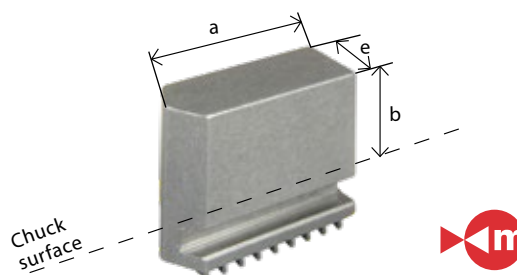


Technical details

- Case-hardened (anti-corrosive, see page 2)
- Ground

3 ZFW Block jaws, soft

Type W	Item no.
3 ZFW 70/80	193187.00
3 ZFW 110	193031.00
3 ZFW 125	193043.00
3 ZFW 160	195111.00
3 ZFW 240	195120.00



Clamping ranges Ø min.-max. [mm]

3 ZF Ø	70	80	110	125	160	240
Inner clamping	18-60	18-62	22-96	32-125	32-160	58-222
Outer clamping	1-64	1-80	3-106	3-125	3-180	4-222

Jaw travel path [mm]

3 ZF Ø	70	80	110	125	160	240
Ø	36	41	64	73	90	112

Dimensions of jaws [mm]

3 ZF Ø	70	80	110	125	160	240
a (Length)	31	31	40	49	58	88
b (Height from chuck surface)	17	17	17	20	15.6	32
e (Width)	11.74	11.74	11.74	14.76	14.76	24.62
h (Height of steps)	6.5	6.5	7	7.5	7.5	14

Tool grinding chuck 6 ZF

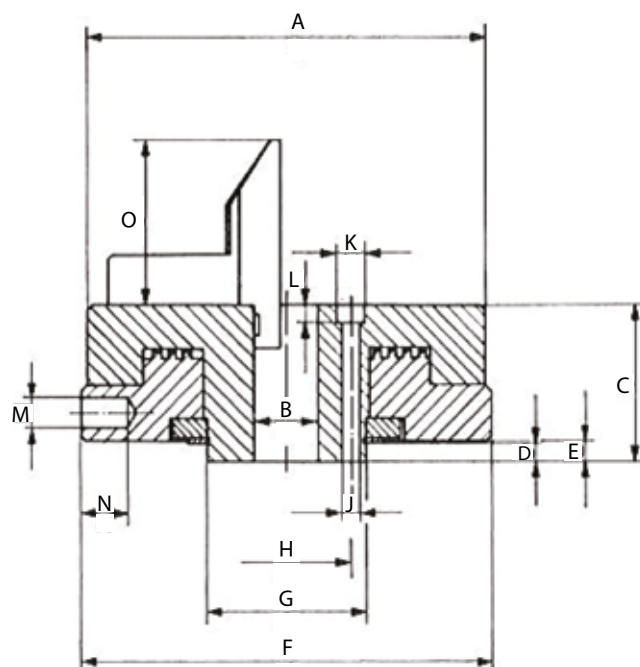
Special rapid action chuck type 6 ZF for tool grinding machines

Special cast body, knurled scroll ring heat-treated

With a set of clamping jaws, case-hardened and ground

Dimensions [mm]

6 ZF Ø	80	110	125	160	240
A Ø	80	110	125	160	240
B Ø	22	22	42	45	80.5
C	34	35	40	48.5	65
D	4	4	3.5	3.5	4
E	4	4	4	8	12
F Ø	83	114	129	164	243
G Ø / +0.01 Ø	38	38	60	70	120
H Ø	30	30	50	56	104
J Ø	3 x 4.3	3 x 4.3	3 x 5.3	4 x 6.4	4 x 10.5
K Ø	7.2	7.2	9.4	10.5	16.5
L	4.5	4.5	8.3	8.3	10.5
M Ø	7	7	7	10	10
N	11	11	12	16	16
O	28	30	32	32	32
Weight in kg, ca.	1.4	2.6	4.1	6.4	17.3



Type	Item no.
6 ZF 80	193050.00
6 ZF 110	194586.00
6 ZF 125	193053.00
6 ZF 160	193439.00
6 ZF 240	193224.00



Clamping ranges Ø min.-max. [mm]

6 ZF Ø	80	110	125	160	240
Outer clamping	2-22	2-22	2-36	4-42	7-85

Set of jaws

Type	Item no.
6 ZF 80	193052.00
6 ZF 110	194591.00
6 ZF 125	193056.00
6 ZF 160	194475.00
6 ZF 240	193227.00



Technical details

- Concentricity: 30 µ
- Lateral runout: 10 µ
- Ø 240:
Asymmetrical jaw assembly
- Jaws case-hardened (see page 2)
- Jaws ground

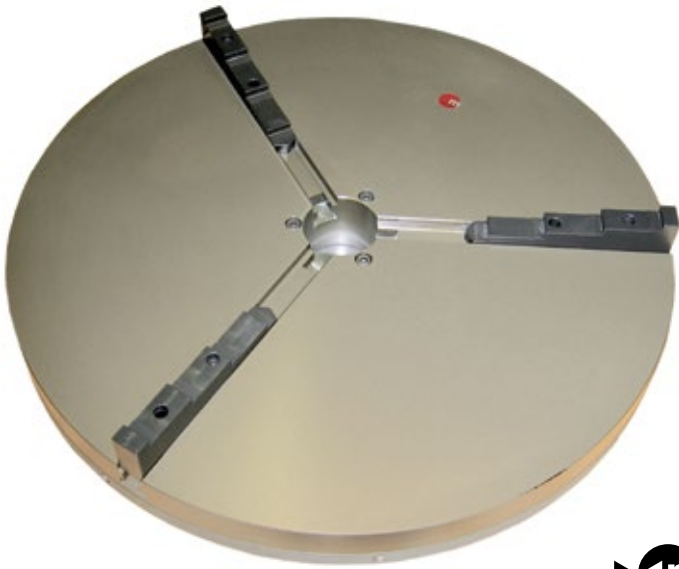
Options

- Jaws for inner and outer clamping
- Soft block jaws

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, 600 mm or even 800 mm diameters are successfully in use | Lowest possible height, maximum clamping diameter at the lowest possible weight



Example Ø = 600 mm



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, 800 mm or other diameters possible

Option

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

MX Hydraulic – form-fitting clamping

Ø 240 mm, Ø 300 mm and Ø 400 mm (on request)



Example of a double unit MX Ø = 400 mm with customer specific sealed segment jaws, for the machining of sensitive rings

Application

- Assured scrolling of thin-walled rings
- Outer and inner clamping
- Machining

Advantages

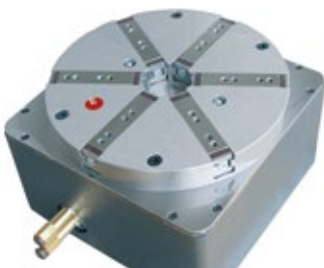
- Form-fitting clamping
- No deformation of your workpiece
- Secure and fast clamping
- Low maintenance
- Extremely robust design
- Top jaws: Design according to customer requirements

Technical details

- Power: Hydraulic, max. pressure 100 bar
- Clamping force: 500-4500 daN

Accessories / Options

- Hydraulic aggregate
- Control
- Joining elements



Example MX Ø = 400 mm without top jaws





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 $\varnothing = 70\text{--}315\text{ mm}$, 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 | Recognizable by the unique gold-bronze finish of the ALTEF® coating | Including a set of **reversible steel top jaws**, ground and case-hardened

Technical details

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

Options

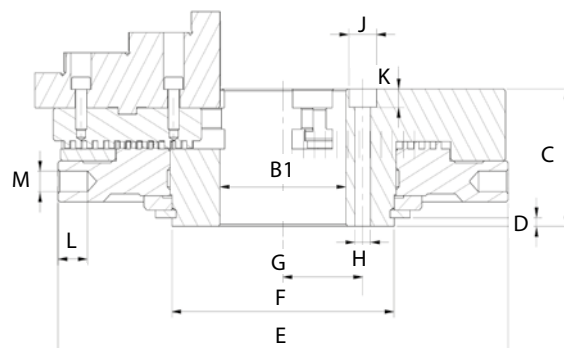
- Anti-magnetic
- Soft block top jaws W
- Top jaws also available in plastic, aluminum, brass etc. on request
- Special sizes XXL, see page 17
- Even higher accuracies are possible on request

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 (anti-corrosive, see page 2)

Dimensions [mm]

3 ZAS Ø	70	80	110	125	160	240	315
B1 Ø	18	22	32	36	46	68 (H7)89	
C	31	34	35	40	48.5	67	88.3
D	4	4	4	4	4	4	4
E Ø	73	86	114	135	164	243	318
F Ø / +0.01 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	6.4	8.4	10.2
J Ø	5.7	7.2	7.2	9.4	10.5	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
Number of steps	2	2	2	2	2	3	3



Height of jaws from clamping chuck surface (b), see page 20

Clamping ranges Ø min.-max. [mm]

3 ZAS Ø	70	80	110	125	160	240	315
Inner clamping	17-60	18-62	22-96	32-140	40-196	38-292	40-360
Outer clamping	1-64	1-80	3-106	3-140	3-196	4-292	4-371

Jaw travel path [mm]

3 ZAS Ø	70	80	110	125	160	240	315
Ø	36	41	64	73	90	130	160

Type	Item no.
3 ZAS 70	196072.00
3 ZAS 80	196082.00
3 ZAS 110	196110.00
3 ZAS 125	196125.00
3 ZAS 160	195380.00
3 ZAS 240	195226.00
3 ZAS 315	195410.00



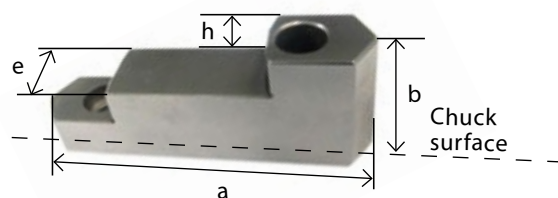
Jaws: case-hardened



Steel top jaws 3 ZAS, reversible

Ground and case-hardened (anti-corrosive, see page 2) | Also available in plastic, aluminum, brass, etc.
We create also special types according to your workpiece

Type	Item no.
3 ZAS 70	196071.00
3 ZAS 80	196082.00
3 ZAS 110	196084.00
3 ZAS 125	196061.00
3 ZAS 160	195383.00
3 ZAS 240	195268.00
3 ZAS 315	195416.00



Technical details

- Case-hardened (anti-corrosive, see page 2)
- Ground

Dimensions of jaws [mm]

3 ZAS Ø	70	80	110	125	160	240	315
a (Length)	31	31	40	49	58	100	130
b (Height from chuck surface)	17	15	17	20	25	37	42
e (Width)	11.74	11.74	11.74	14.76	14.76	24.62	29.62
h (Height of steps)	6.5	6.5	7	7.5	7.5	10	10



Pin-jaws



Base jaws ZAG

Options

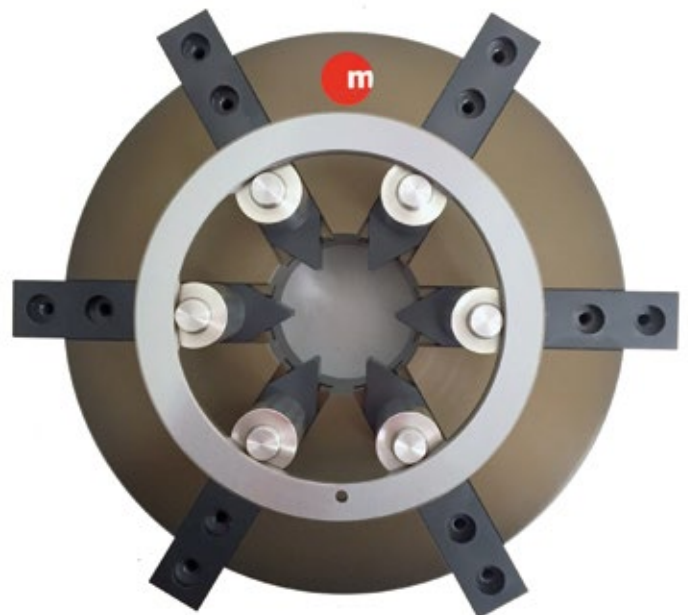
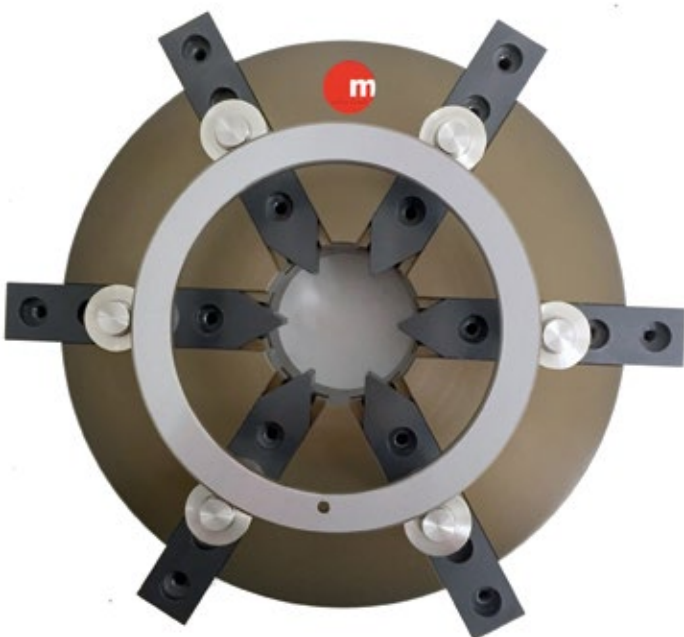
- For 3 ZAS 240:
pin-jaws with contact area
and corresponding base jaws
type ZAG (see page 23)

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 ZAS

Dimensions: see page 19

Clamping ranges Ø min.-max. [mm]

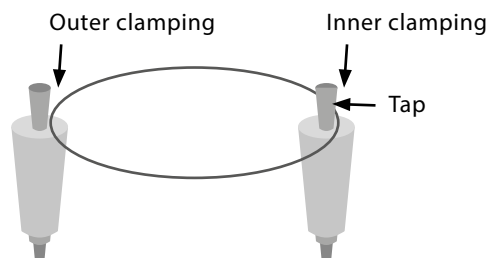
6 ZAS Ø	80	160	240
Inner clamping	31-90	45-208	85-339
Outer clamping	19-78	28-191	60-314

Jaw travel path [mm]

6 ZAS Ø	80	160	240
Ø	30	81	112

Dimensions of jaws [mm]

6 ZAS Ø	80	160	240
SW (Wrench size, for all pin-jaws)	8.0	15.0	22.0
D1 (Pin Ø)	12h7	18h7	25h7
D2 (Tap Ø – on top of pin)	6h7	8h7	12.5h7
f (Workpiece contact area)	3	5	6.25
h1 (Height of pin-jaw – without taps)	28.5 +/- 0.01	24 +/- 0.01	47 +/- 0.01
h2 (Height of tap)	4.5	8.0	7.0



D3 (Seating pin Ø)	25h7
h3 (Height of seating pin)	47 +/- 0.01
D4 (Pin-jaws without tap Ø)	12.5h7
h4 (Height of pin-jaw without tap)	54
a (Length of base jaw)	118.5
Distance on base jaw:	
c (Inner bore hole to outer bore hole)	75.0
e (Width of base jaw)	24.6
Amount of pin bore holes per base jaw	4

Pin clamping chuck

6 pin-jaws with contact area (taps)

Type	Item no.
6 ZAS 80	195467.00
6 ZAS 160	195442.00
6 ZAS 240	195466.00

Further sizes on request



Pictures:
6 ZAS 240 (195466)

Pin-jaw chuck

3 seating pins and 3 pin-jaws without taps

Type	Item no.
6 ZAS 240	195457.00

Further sizes on request



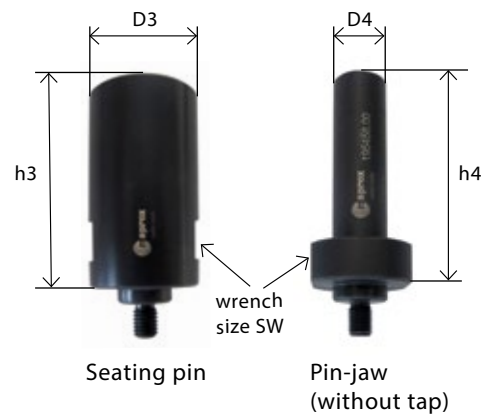
Pin-jaw with contact area (taps)
Anti-corrosive (Reinox), see page 2

Type	Item no.
1 pin-jaw ZAS 240	196059.00
Further sizes on request	



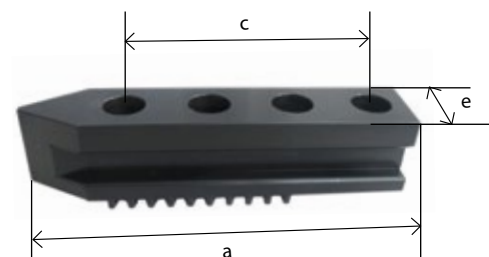
Seating pin and pin-jaw (without taps)

Type	Item no.
6 ZAS 240 pin-jaw (without tap, Reinox)	195458.00
6 ZAS 240 1 seating pin (without tap, Reinox)	195459.00
Further sizes on request	



Set of base jaws, anti-corrosive (Reinox), see page 2

Type	Item no.	Amount of bore holes
3/6ZAG80 1 set of 6 pieces	196085.00	2
3/6ZAG160 1 set of 6 pieces	195118.00	4
3/6ZAG240 1 set of 6 pieces	196035.06	4



Option

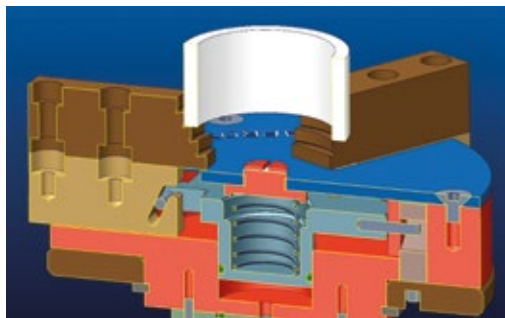
- Jaws also available in plastic, aluminum or brass
- We create also special types according to your workpiece



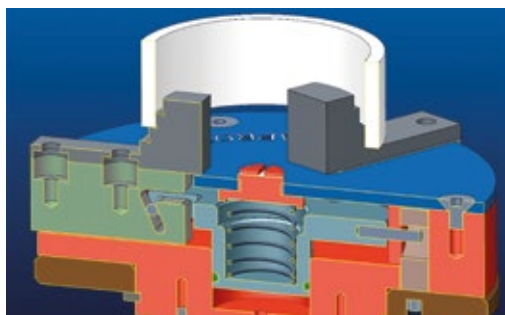
Maprox AIR – for automation

The new Maprox chuck combines all the advantages of our manual chucks with pneumatic clamping | This makes the chuck fully automatic and controllable via your measuring machine | A true all-rounder with the well known Maprox quantity and flexibility

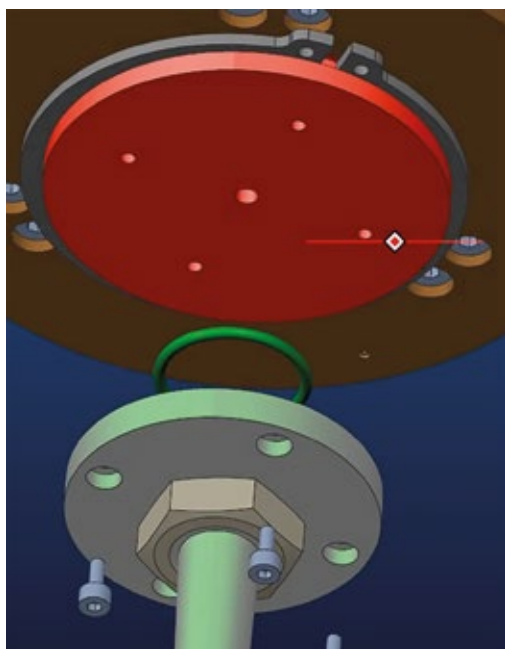
Type	Item no.
Maprox AIR 160	197100.00



Outer clamping



Innerer clamping, by simply exchanging the base jaws and top jaws



Shaft or adaptation to your turntable individually selectable according to machine type



Air chuck without top jaws

Your advantages

- **Automatic:**
By simple on-off control via measuring machine (eg robot loading)
- **Rotating feed:**
Mounting on turntables welcome!
Pneumatic supply via rotary union feedthrough
- **Low profile:**
Overall height of the chuck body only 60 mm
- **Flexible clamping range:**
Through our proven top jaw or pin jaw concept, or depending on customer request
- **Adjustable clamping force:**
Chuck opens pneumatically against spring force. Adjustable pre-tension of the spring at the top cover to desired force → resulting in perfect repeatable clamping
- **Inner and outer clamping:**
Changeover time of only 3 min. through a unique change system by Maprox
- **Interface flexible:**
Shanks, intermediate plates, adaptation depending on the customer's machine set-up

Technical details

- Diameter $\varnothing = 160$ mm (further diameters in planning)
- Open with compressed air through the chuck center, with max. 6 bar
- Clamp by means of spring-tension (standard part, exchangeable)
- Jaw travel path (OPEN-CLOSE, not to be confused with clamping range): Approx. 8 mm

Options

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

Quick Change

Fast chuck changeover time on your measuring machine at a 2 μ 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. $\varnothing = 125 \text{ mm} / 160 \text{ mm}$
- Bore patterns are adapted to your clamping chuck and your measuring machine
- Repeatability: $\leq 2 \mu$
- Precise fixation with Allen key no. 3
- Case-hardened and ground

Option

- For center point

Torque screwdriver for JF jaws

Type

1.5 RTD

Item no.

431870



Technical details

- 2-15 cNm
- Inclusive corresponding extension for jaw screws

Application recommendation according to operating instruction JF

Safety torque key

Type

ATB / 5G

Item no.

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



Our passion for precision is on everyone's lips.
To meet this reputation, we do what is necessary.

COLLET HOLDERS

Maprox collet holders – a legend | Cutting machine operators know and appreciate them during their training | **Very precise and at the same time flexible** due to the different construction sizes, in combination with **standard collets**

For years also in **the machining world in use**, such as **pneumatically operated** in fully automatic automotive-parts-milling-centers or for measuring bearing components

With pleasure we fulfill your special requests and discuss your individual projects – for example, the **automated use** on measuring machines (such as rotary **feedthroughs**, etc.)

Technical details

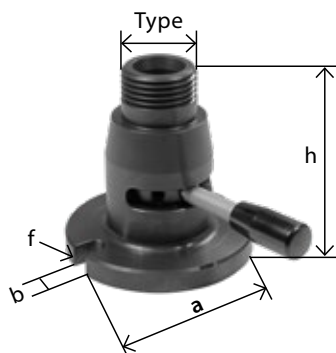
- Anti-corrosive (Reinox), see page 2
- Pneumatic or hydraulic operation, see page 28 and 31

Options

- Depth stops, see page 55
- Pull-type collets from page 45
- 25 mm grid boards, see page 42

Collet holder SHG – with outer thread

Type	Item no.
SHG 12	4.12.000S
SHG 20	4.20.000S
SHG 25	4.25.000S



Options

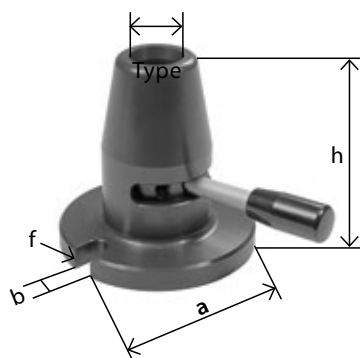
Combination with:

- External step collets (see pages 52, 53)
- Ring chuck (see page 54)
- Closer / expansion ring / expanding arbor (e.g. Schaublin)
- Depth stops (see page 55)



Collet holders SH

Type	Item no.
SH 8	3.08.000S
SH 10	3.10.000S
SH 12	3.12.000S
SH 20	3.20.000S
SH 25	3.25.000S
SB 32	3.32.000S



Dimensions [mm]

Type SHG / SH	8	10	12	20	25	32
Pull-type collets	B8 302E	W10 314E	W12 318E	W20 349E	W25 364E	B32 3713E
h (Height from table)	60	60	70	100	125	125
a (Diameter)	65	65	70	100	100	115
b (Width of slot)	10.2	10.2	10.2	11	11	11
f (Diameter of pitch circle / screw type)	55 / M8	55 / M8	60 / M8	85 / M10	85 / M10	97 / M10

Clamping ranges Ø min-max [mm]

Pull-type collets	B8 302E	W10 314E	W12 318E	W20 349E	W25 364E	B32 3713E
Pages 45-50	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

- Pneumatic, see page 28

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

Pneumatic

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

Without collet holders
SH / SHG / B



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

With collet holders
SH / SHG / B



Technical details

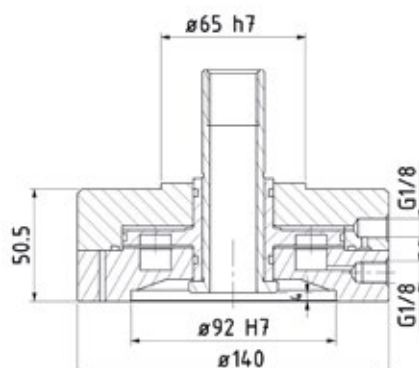
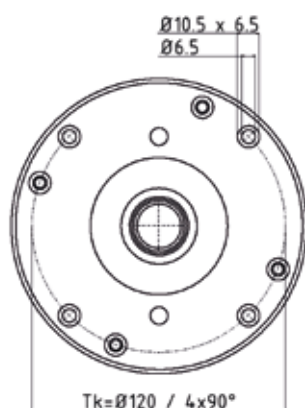
- For faster cycles and higher clamping force
- Can be supplied with already mounted collet holders W20, W25 and B32, see page 27
- Anti-corrosive (Reinox), see page 2

Clamping force

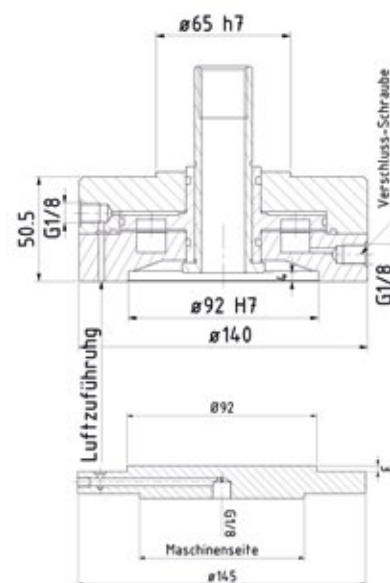
- At 6 bar 4000 N

Options

- Simple refitting with collet holders W20 and W25, see page 27
- Flange for central air supply



- Static use
- Lateral air supply

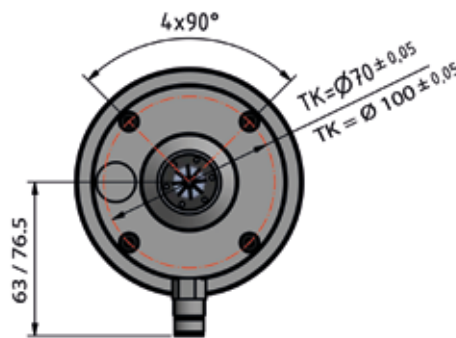
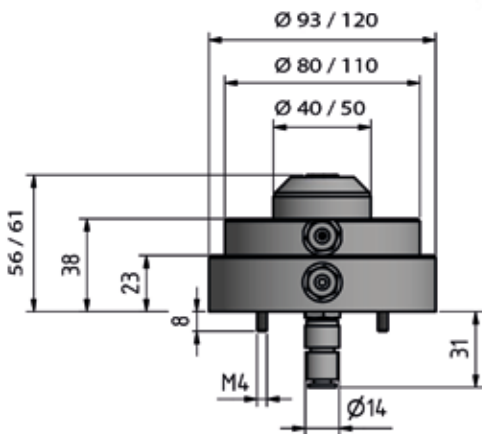


- Flange air supply
- Rotative use
- Central air supply

Pneumatic collet holders ER16 PM and ER20 PM – for automation

The new collet holders are made of coated aluminum and therefore **very light < 1 kg** | Choose for yourself whether you want to pneumatically control your ER collet holder laterally or from below | The central rotary feedthrough on the bottom allows you to fully rotate on the turntable while being controlled 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



Technical details

- Weight < 1 kg
- Available with collets ER16 and ER20 mounted
- Clamping pressure pneumatically adjustable
- Alu, coating Altefco, see page 2

Optionen

- Adaptations on request

Characteristics

- Low height
- Optionally rotatable (controlled from below) or laterally controlled

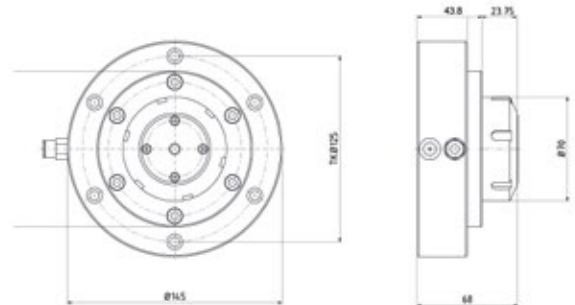
Collet holders ER32 PM

Pneumatic clamping / release

Type	Item no.
ER32 PM	5.32.PM.000



With clamped shaft



Technical details

- For dead length collets ER32
- Clamping pressure pneumatically adjustable
- Mountable on 25 mm grid board
- Anti-corrosive (Reinox), see page 2

Characteristics

- Low height
- Simple integration into automation processes

Options

- Rotative use possible
- Check valve
- Dead length collets ER32 / UP
- Depth stop available per collet diameter

ER Collets, DIN 6499B (ISO 15488B)

Type	Item no.	Possible inner 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





Accurate, reliable and solution-oriented.
Three confessions, one concept: Maprox.

DIVIDERS

You want to **check or label** parts with an **exact angle** on your optical measuring machine? Then you are correct with our divider | With the well-known accuracy and flexibility of Maprox, collets and chucks can be combined with the divider of your choice to form a precise clamping system

Above all, our **mini-chuck** is a **popular accessory here**, as it precisely fixes small parts and **hardly takes light away** from the optical measurement due to the minimal width of the jaws

Technical details

- Anti-corrosive (Reinox), see page 2



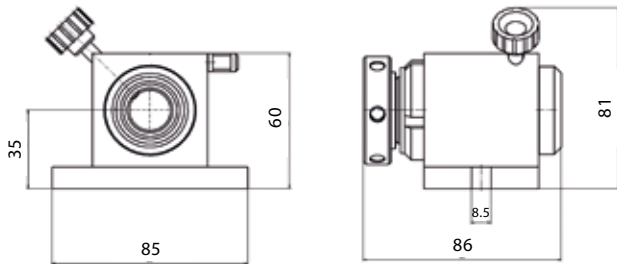
Options

- Pull-type collets, see pages 45-50
- Clamping chucks with shank, see page 10
- Mini clamping chuck with shank, see page 13 (Example, see picture on the left)
- Sine table, see page 34
- Angle plates, see page 35
- Magnetic set, see page 31
- Magnetic adaptation plate, see page 33
- 25 mm grid board, see page 42

Mini VLK 15 W20

for direct division

Type	Item no.
VLK 15 W20	VLK15W20



Technical details

- Fixation by the knurled screw
- Spindle mounting W20
- Concentricity deviation of the spindle 10 μ
- Angularity 15 μ on 100 mm workpiece length
- Anti-corrosive (Reinox), see page 2

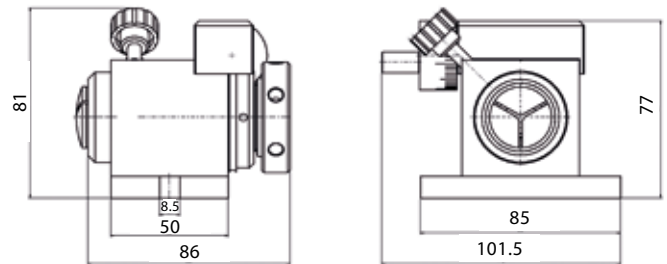
Direct division

- Direct division via index plate with 24 stop notches for division 2–3–4–6–8–12–24

Mini VLK 15-2 W20

for indirect division

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



Indirect division

- Indirect division via way of worm gear
- By every rotation 6°
- By every graduation line 6 min.

Clamping range

- With pull-type collets W20 (349E): $\varnothing$ 0.3–23 mm
- With shank W20: According to the mounted clamping chuck

Magnetic set for VLK 15

Type	Item no.
VLK 15-M	VLK15-M



Technical details

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



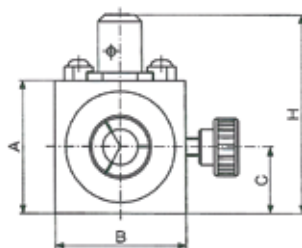
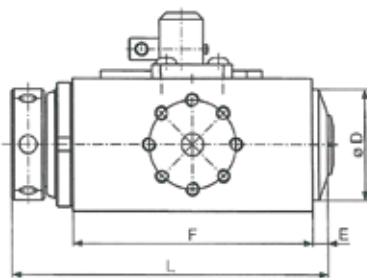
VLK 8

Direct division with positioning cylinder

Dimensions [mm]

A	B	C	D	E	F	H	L	Pull-type collets	Clamping ranges
60	60	30	50	8	110	90	146	349E / W20	0.3-23
60	60	30	50	8	110	90	146	355E / L20	0.3-22
70	70	35	60	16	110	100	154	367E / W28	1.5-24
70	70	35	60	16	110	100	154	3713E / B32	0.3-32

Type	Item no.
VLK 8 W20	VLK8W20
VLK 8 L20	VLK8L20
VLK 8 W25	VLK8W25
VLK 8 B32	VLK8B32



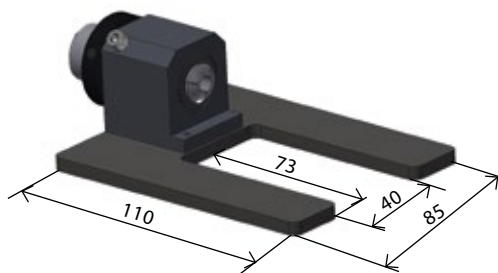
Technical details

- Swiss design
- Positioning cylinder divisions 2–3–4–6–8–12–24
- Positioning cylinder hardened and ground
- Workpiece mounting for standard pull-type collets
- Division set by slide plate and clamping plate
- Change-over from one to the other division in 30 sec.
- Concentricity 10 μ
- Positioning cylinder can be wedged
- High productivity thanks to rapid positioning
- No division errors
- Housing surface-coated
- Divider mounting in the vice or on the magnetic disc
- Special mounting with additional base plate or angle plate with 2 x 90° sine division
- The divider is for light milling, boring, flat grinding, eroding, engraving and assembly work

Mini PAR P10

Direct division

Type	Item no.
Mini divider	PAR211-P10
Base plate P10 (U-shape)	PAR110



Picture with base plate (height 5 mm) P10

Technical details

- Direct, precise division in 45° steps or as requested by the customer
- Spindle mounting P10
- Concentricity deviation of the spindle: 10 μ
- Anti-corrosive, see page 2

Clamping range

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

Dimensions

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

Options

- Pull-type collets P10 (310E)
- Base plate P10, height 5 mm, U-shape
- Base plates on request
- Various angle plates on request

Universal clamping system VLK 26 W20

For W20 (349E) pull-type collets / mounting shanks

VLK 26 W20 is a flexible clamping system which can be used for a broad range of applications in manufacturing and for measuring jobs | Repetitiveness 15 μ

Type	Item no.
VLK 26 W20	VLK26W20



VLK 26 W20 in horizontal use

- By loosening a locking screw, the clamping cylinder including the workpiece can be turned; the scale ring can be reset to the zero position
- Latch screw for 15° division
- Release for processing tool
- Center height: 40 mm



VLK 26 W20 in vertical use

- The collet feeder can be fitted from the side when used vertically



VLK 26 W20 used as a divider

- A grid system permits a direct 24 x 15° division
- Using the scale ring allows for 3° sub-steps

Technical details

- ALTEF® coated (anti-corrosive, see page 2)
- Suitable for wire-cut EDM

Dimensions: 80 x 85 x 90 mm

Center height: 40 mm

Weight: 1730 g

Part precision: 6'

Clamping range: With pull-type collet W20 $\varnothing$ 0.3-23 mm
With shank W20 depending on the used chuck

Magnetic adaptation plate VLK 26

Type	Item no.
VLK 26 11	VLK2611



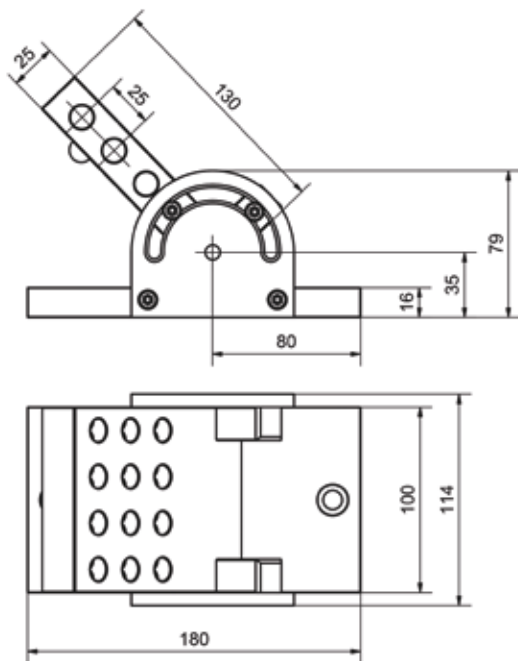
Dimensions

- 100 x 100 x 25 mm

Sine table ST

Angle table with grid mechanism

Type	Item no.
VLK-ST 100	VLK-ST 100



Use

- Grinding, eroding, measuring
- Machining and measuring of precision parts in angular position

Technical details

- Steel construction, anti-corrosive (Reinox), see page 2
- Turntable made of aluminum with quick-tightening system (Witte), ALTEF® coated (anti-corrosive), see page 2
- Pivoting around its short axis
- Can be fitted on 25 mm grid boards
- Grid mechanism: 15, 30, 45, 60, 75 and 90°
- Angular accuracy: +/- 20 sec.
- Plane parallelism: +/- 10 µ/100 mm

Application

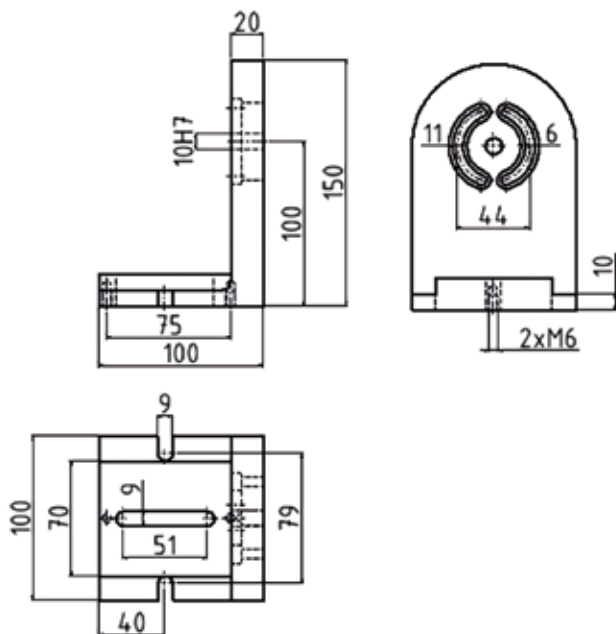
- Angles up to 45° are determined by using the gauge block according to the sine principle (sine table included in scope)

Including

- Lock wrench size 5, 2 x
- Lock bolt M6, 2 x
- 1 allen key each 4 + 5 mm
- 1 sine table

Angle plates VLK

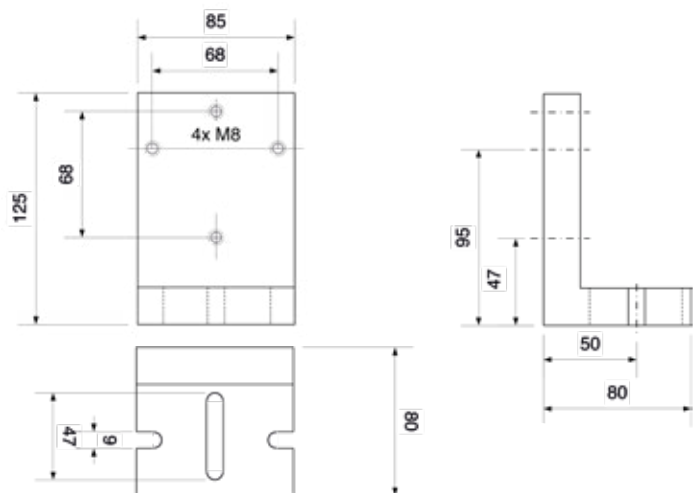
Type	Item no.
VLK 26 10	VLK2610



Technical details

- Including 2 fixing screws
- Anti-corrosive (Reinox), see page 2

Type	Item no.
VLK 15 1520	VLK15-1520



Options

- VLK 26 W20 see page 35
- VLK 15 W20 see page 33



We are satisfied when things work and the customer is enthusiastic. This is not an empty phrase, but a clear attitude. Since ever.

HIGH PERFORMANCE CHAMFERING MACHINES

You want to chamfer glass or ceramic workpieces and are looking for a fully production-capable and ultra-stable all-rounder? Our high performance chamfering machines are the answer | FFlexible, accurate and easy to use | Valued by many customers worldwide and in continuous use | Grinding lengths over 1 m or now also round parts | Ask us!

Technical details

- Grinding lengths: 200, 350, 500 mm; on request: 700 ... >1000 mm
- Chamfer angle: Adjustable up to 45° (insert wedges), from 700 mm stepless
- Chamfer width: Up to 5 mm
- Workpiece weight: Up to 20 kg

Options

- **Feed-drive**, adjustable (pre-reverse, footswitch operation), from 700mm standard
- **Mobile machine substructure with built-in coolant supply**

For standard machines with grinding length 200-500 mm:

- **Insertion wedges** for specific chamfering angles
- Custom made **clamping devices**
- **Support** for flat, large parts

High performance chamfering machine FFFM

For chamfering glass, ceramics and others | Fully production-proof & ultra-stable | Direct driven grinding wheel via powerful medium frequency motor | Use of cooling lubricants: Stainless coolant sump and special motor shaft seal | All workpiece supports nitrided | All parts in the grinding area chemically nickel-plated or anodized | Simplest cooling water supply: Separate container, floor installation

Type	Item no
FFFM 200	FFFM 200
FFFM 350	FFFM 350
FFFM 500	FFFM 500

Included:

- 1 grinding disc, grain size on request, e.g. $\varnothing = 46$ mm metal bound
- 1 cooling water tank with pump



Technical details

- Grinding lengths: 200, 350, 500 mm; on request: 700 ... >1000 mm
- Chamfer angle: Adjustable up to 45° (insert wedges), from 700 mm stepless
- Chamfer width: Up to 5 mm
- Workpiece weight: Up to 20 kg

Options

- Feed-drive, adjustable (pre-reverse, footswitch operation), from 700mm standard
- Mobile machine substructure with built-in coolant supply
- Insertion wedges for specific chamfering angles
- Custom made clamping devices
- Support for flat, large parts

Type [mm]	200	350	500
Chamfering way	200	350	500
Sled bearing surface	460	610	760
Space	390 x 860	390 x 1160	390 x 1460
Speed	1'200-8'000 U/min		
Weight	70 kg		
Prism width	120 x 43 mm		
Medium frequency motor	230 V, 50 Hz, 650 Watt		
Grinding wheel diameter	70 mm		
Colour	RAL 5015 sky blue		
Machine substructure	Coolant tank installed, accessory drawer		



We are more than just an enterprise for measuring technology.
Possibly a competent partner with solutions to offer.

CLAMPING EQUIPMENT FOR COORDINATE MEASURING MACHINES

Maprox measuring systems address the 3 biggest challenges in **fixing asymmetric** parts on the coordinate measuring machine: **flexibility, speed** and **accessibility**

FLEXIBILITY:

Plasticine and full cabinets with fixtures are a thing of the past, with Maprox solutions offering an **amazing array of clamping options** – all in one system

SPEED:

From an asymmetric part to the next part with a completely different geometry, only a **few minutes** pass with Maprox clamping equipment until the new part is fixed | Especially the **3D-Flex-Fix-System** offers a modular system of a special kind, see page 40

ACCESSIBILITY:

Many measuring machines today use cross or star touch-probes | They need space, at least 50 mm freedom, if possible around the part | Our test fixtures are designed so that the part itself is held only with minimal fixing points, while at the same time the **greatest possible freedom of touch-probes** is granted

Technical details

- Made of high-strength aluminum, ALTEF® coated (see page 2) or anodized, anti-corrosive

Options

- Grid boards and various accessories, as e.g. adaptation plates, see pages 42 and 43

Precision clamping device Clamp-Fix

For the universal use on measuring machines | with quick jaw change system | 6 different standard jaws available | made of aluminum, ALTEF®-coated (anti-corrosive), see page 2

Type	Item no.
Clamp-Fix G	197200.00-G
Clamp-Fix K	197200.00-K



Jaws for precision clamping device Clamp-Fix | made of aluminum, ALTEF®-coated (anti-corrosive)

<table><tr><th>Type</th><th>Art. Nr.</th></tr><tr><td>Set of prism jaws big</td><td>10000.081</td></tr></table>	Type	Art. Nr.	Set of prism jaws big	10000.081		<table><tr><th>Type</th><th>Item no.</th></tr><tr><td>Prism jaw small</td><td>10000.102</td></tr></table>	Type	Item no.	Prism jaw small	10000.102		<table><tr><th>Type</th><th>Item no.</th></tr><tr><td>Prism block jaw</td><td>10000.031</td></tr></table>	Type	Item no.	Prism block jaw	10000.031	
Type	Art. Nr.																
Set of prism jaws big	10000.081																
Type	Item no.																
Prism jaw small	10000.102																
Type	Item no.																
Prism block jaw	10000.031																
<table><tr><th>Type</th><th>Item no.</th></tr><tr><td>Stepped block jaw</td><td>10000.032</td></tr></table>	Type	Item no.	Stepped block jaw	10000.032		<table><tr><th>Type</th><th>Item no.</th></tr><tr><td>Block jaw small</td><td>10000.101</td></tr></table>	Type	Item no.	Block jaw small	10000.101		<table><tr><th>Type</th><th>Item no.</th></tr><tr><td>Stepped block jaw high</td><td>10000.103</td></tr></table>	Type	Item no.	Stepped block jaw high	10000.103	
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																

Arrangement of jaws	Clamping range (Diameter of shaft)		Biggest shaft at max.travel path (please be aware that shaft may then hold on prism edges instead of inside the prism)
Set of prism jaws big (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

Technical details

- Base plate mountable on 25 and 50 mm grid plates
- Adjustable angle at stop 90°, predetermined locking positions every more or less 15°
- Travel distance (without jaws): 28-68 mm

Dimensions

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

Clamping range

- See table above

Options

- Block jaws made of steel, plastic, aluminium etc.
- Special jaws at the customer's request
- Adaptation plate for your system

Advantages

- Easy access
- Optimal probe freedom
- Clamp and swivel into position
- Ideal for the coordinate measuring machine
- Measuring of the entire tactile in just one clamping

Content of delivery type G

- 10000.081, 1 set of prism jaws big
- 10000.031, 1 prism block jaw
- 10000.032, 1 stepped block jaw

Content of delivery type K

- 10000.102, 1 prism jaw small
- 10000.101, 1 block jaw small
- 10000.031, 1 prism block jaw
- 10000.032, 1 stepped block jaw

3D-Flex-Fix

The universal clamping system for the CMM provides the solution for your two most challenging requirements:

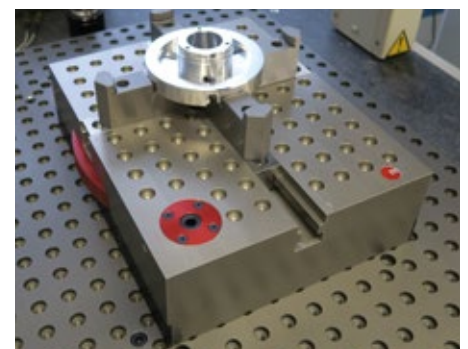
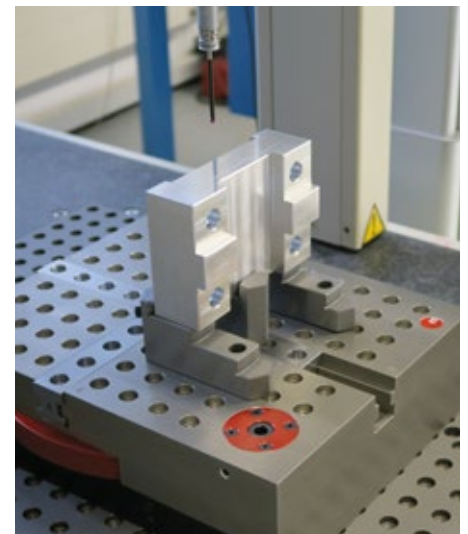
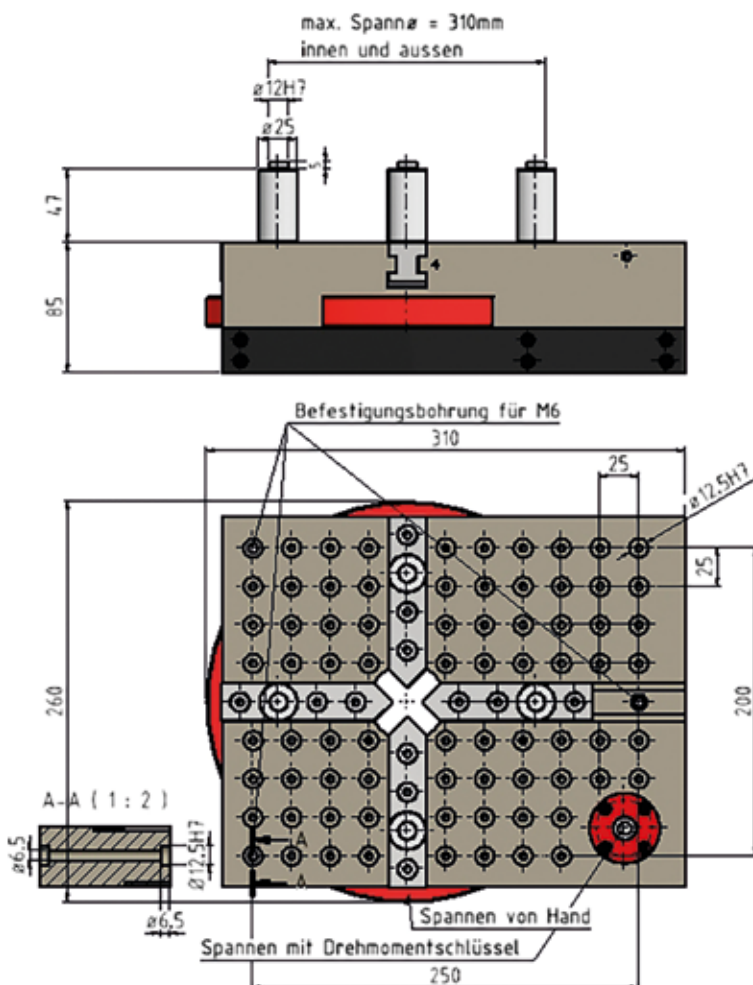
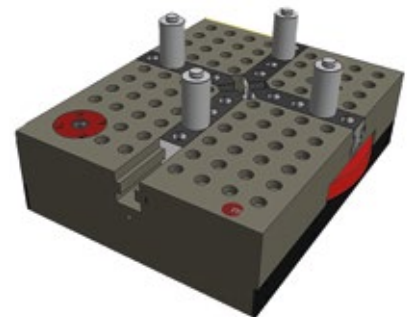
1. Unlimited clamping flexibility

2. Very fast changeover times from one part to another

Single parts of different design or several parts of same design with different measurement requirement can be clamped and measured rapidly now

- Flexible modular concept, simple plugging system: Plenty of different top jaws possible – even completely taylormade, too
- Base function: Choose between vice and 2 to 4 jaw chuck
- Simple adjustment of clamping-torque when using sensitive parts

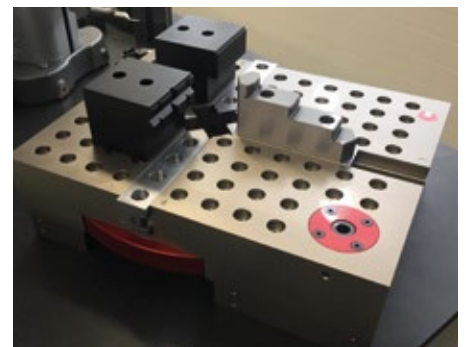
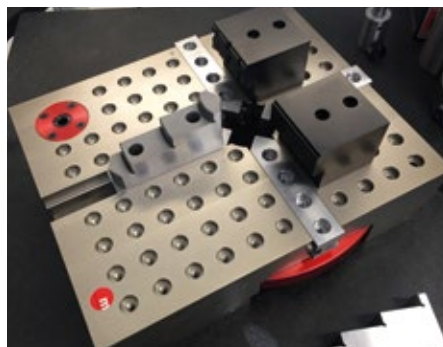
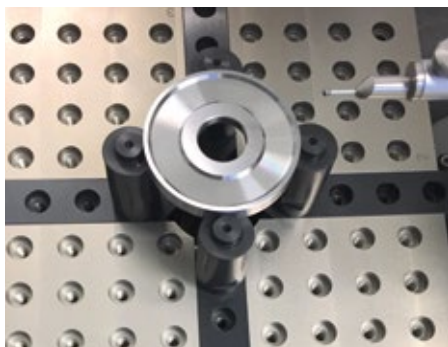
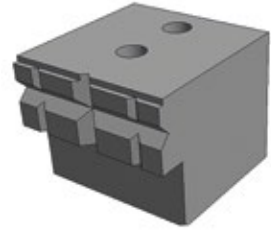
Type	Item no.
3D-Flex-Fix clamping system for coordinate measuring machines made of aluminum, ALTEF® coated (see page 2)	196046.00
including:	
– 1 set of base jaws 4 ZAG made of steel (196035.00), anti-corrosive (Reinox), see page 2	
– 4 pin-jaws Ø 25, M6, made of steel, anti-corrosive (Reinox), see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



Pictures: Application examples

Jaws and positioning sleeve 3D-FLEX-FIX

Type	Item no.
Set of jaws 4 ZA 3D-Flex-Fix, reversible top jaws, made of aluminum, black anodized, incl. 8 jaw screws M6 positioning sleeves 196043.00 can also be ordered (see below)	196038.00
Type	Item no.
Prism jaw 3D-Flex-Fix, 1 top jaw, made of aluminum, black anodized, incl. 8 jaw screws M6 positioning sleeves 196043.00 can also be ordered (see below)	196055.00
Type	Item no.
Block jaw 3D-Flex-Fix, 1 top jaw, made of aluminum, black anodized, incl. 8 jaw screws M6 positioning sleeves 196043.00 can also be ordered (see below)	196056.00
Type	Item no.
Pin-jaw 3D-Flex-Fix / 6 ZAS 240, 1 pin-jaw Ø 25 mm made of steel, anti-corrosive (Reinox) see page 2 thread M6, centering Ø 12.5 mm	196059.00
Details / Dimensions, see page 23	
Type	Item no.
Positioning sleeve 3D-Flex-Fix / Grid board 25 mm for bore Ø 12.5 mm case-hardened (see page 2) and ground	196043.00



Contour Fix KF

for the 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



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



Technical details

- Including 4 pin-jaws made of steel, anti-corrosive (Reinox), see page 2
- For inner and outer clamping
- Can be mounted on 25 mm grid boards
- Body made of aluminium, anti-corrosive, 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

Dimensions

- Widths: 50, 75 and 110 mm

Options

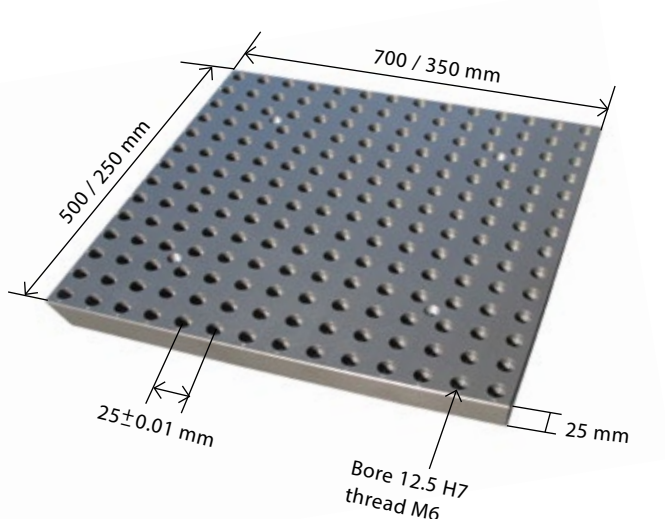
- Ground centering sleeves for bore Ø 12.5 mm for precise positioning
- Various clamping forces (springs) available
- Height of the support and pin-jaws adjustable

Advantages

- Great accessibility for the touch probe
- Entire tactile measurement in only one clamping

Grid board 25 mm

as base plate for the measuring table



Technical details

- Grid profile 25 mm with indexing bores Ø 12.5 mm H7
- For the anti-rotating fixation of adaptation plates and clamping elements with fixing threads M6
- Aluminum, ALTEF® coated (see page 2)

Dimensions

- 700 x 500 x 25 mm
- 350 x 250 x 25 mm
- On request

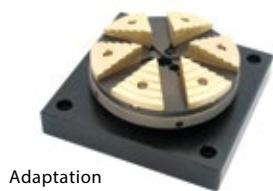
Options

- Positioning sleeves for bore Ø 12.5 mm, ground

Adaptation plates for 25 mm grid boards

Adaptation plate for JF clamping chucks

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



Adaptation plate with JF chuck

Adaptation base plates JF

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



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



Adaptation plates for VLK 15 mini dividers

Type	Item no.
VLK 15	AP25VLK15

- Height 35 mm



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



Vacuum clamping

The Maprox vacuum systems are unique in their flexibility and handling:

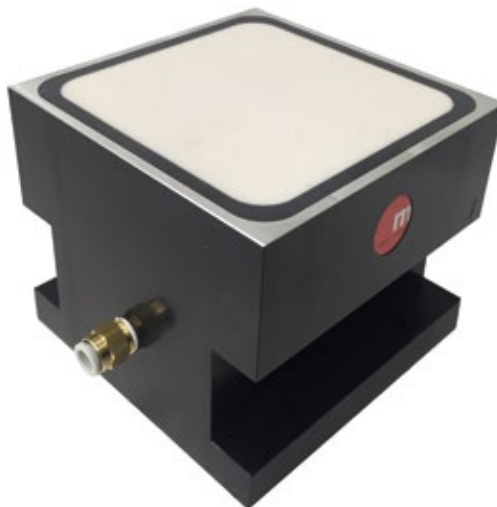
Flat workpieces can be fixed in the simplest way – even if they do not cover the entire plate | No workpiece is crushed and **sensitive surfaces** are protected

This is made possible by the microporous METAPOR® plate, which is used to suck the air downwards by means of a vacuum pump | Since **lubrication is not required** here, this system is also used a lot under **clean room conditions**

Type	Item no.
Vacuum plate	10000.0010



Type	Item no.
Vacuum plate	10000.0030



Dimensions [mm]

Item no.	Width	Length	Height
10000.0010	120	120	40
10000.0030	80	80	100

Applications

- Thin-wall clamping (e.g. films boards, metal strips etc.)
- Precision mechanics (Optics, clocks etc.)
- Measuring and testing technology
- Clean room

Technical details

- Surface honed
- Flatness and parallelism <10 µ
- Body made of aluminum
- Anti-corrosive

Options

- Dimensions according to customer requirements
- Exact repeatable positioning:
We also produce workpiece-specific indentations, elevations or stops
- Further models on request
- Vacuum pumps

Important

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

Type W

Pincés tirées - Zugspannzangen - Pull-type collets

Fig. 1

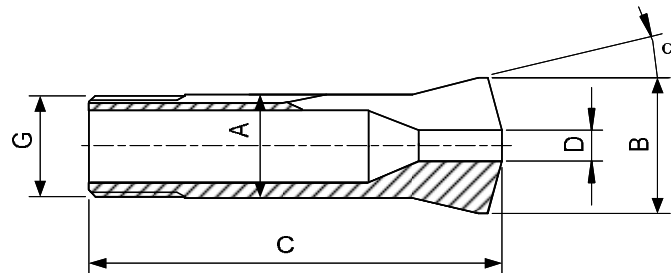
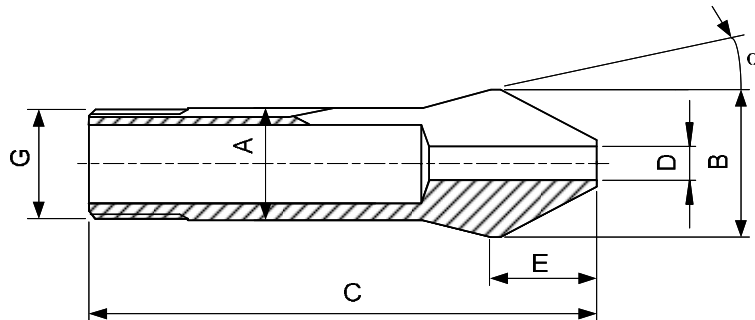
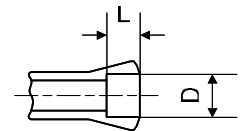


Fig. 2



Alésage à cran
Stufenbohrung
Step bore



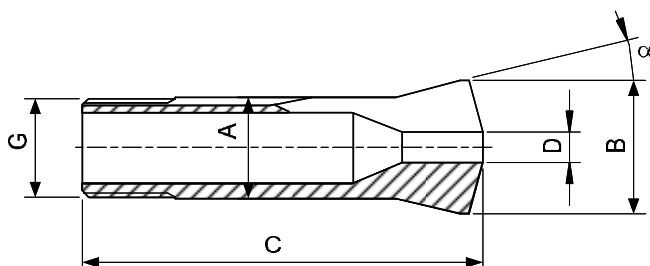
Obturbateurs pour pincés, voir page 75
Dichtgummi für Spannzangen auf Seite 75
Rubber seals for collets on page 75

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

Type W

Pinces tirées - Zugspannzangen - Pull-type collets

Fig. 1



Alésage à cran
Stufenbohrung
Step bore

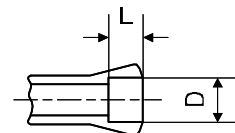


Fig. 2

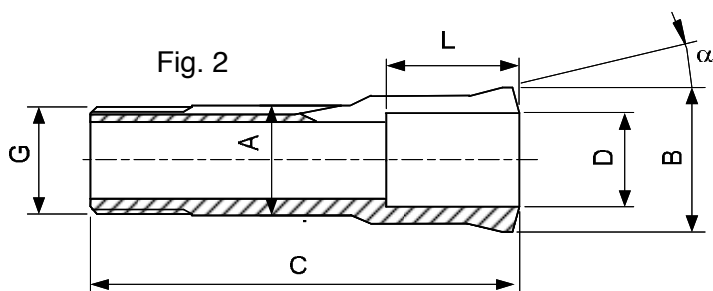


Fig. 3

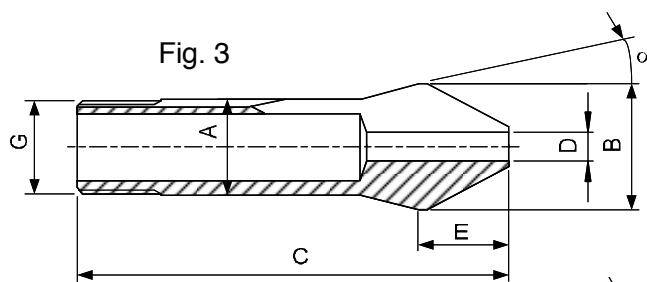


Fig. 4

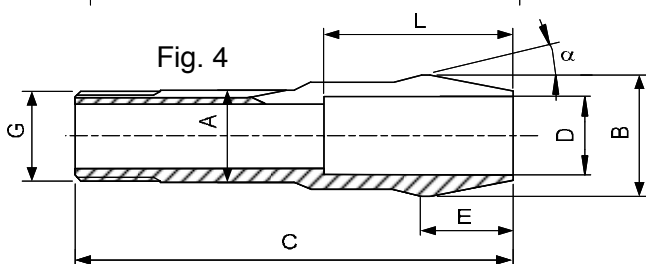
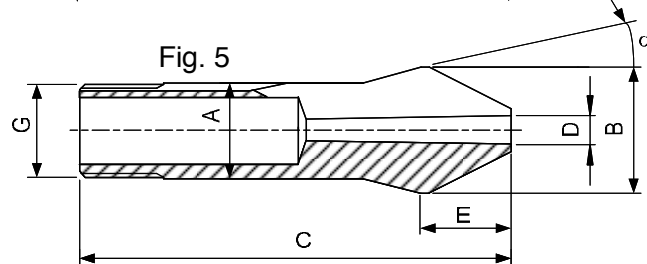


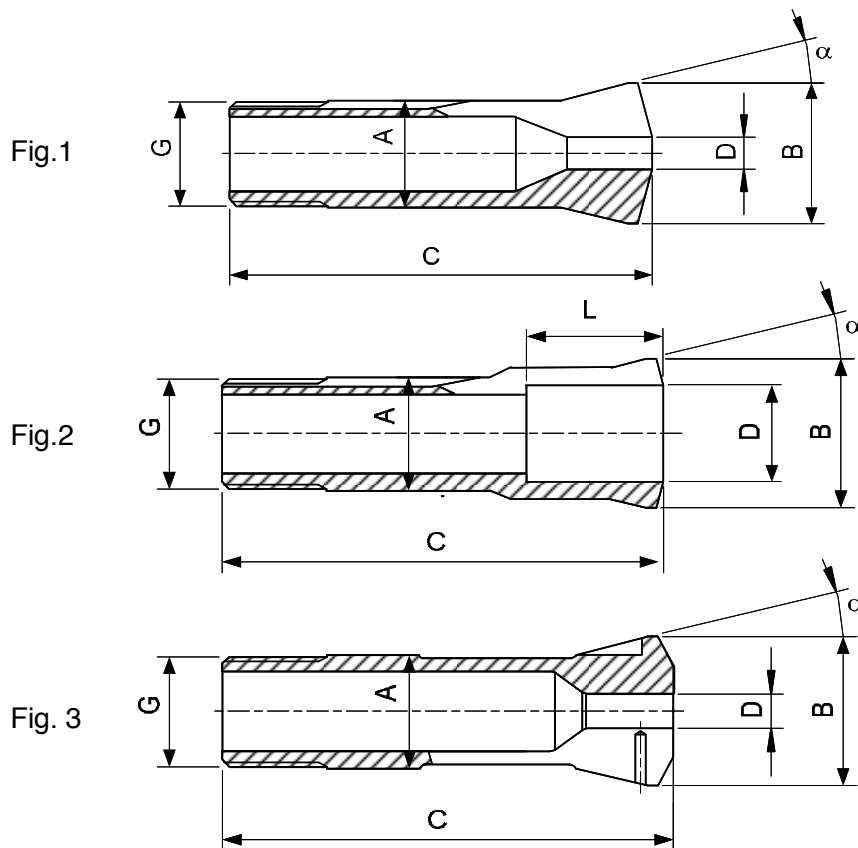
Fig. 5



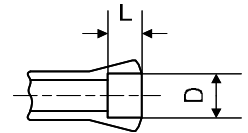
Type	Art.	A	B	C	E	G	α	D min-max	L	Fig.
W20	80-4	20	26.3	73	-	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	0.30...14.50	-	1
								14.51...16.00	28	
								20) 16.01...16.50	13.5	
								20) 16.51...17.00	13	
								20) 17.01...17.50	12.2	
								20) 17.51...18.00	11.5	
								20) 18.01...18.50	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	-	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	16.01...20.00	24	2
	80-92744	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	0.30...13.00	-	3
	80-93286	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	13.01...16.00	41	
	80-93286	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	16.01...20.00	37	4
	80-93828 26)	20	26.3	84.5	15.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	Morse DIN228 MK-1	-	5
	80-93829 26)	20	26.3	94.5	25.5	$\emptyset 19.7 \times 1.666 \nabla 45^\circ$	15°	Morse DIN228 MK-2	66	5

Type W

Pincas tirées - Zugspannzangen - Pull-type collets



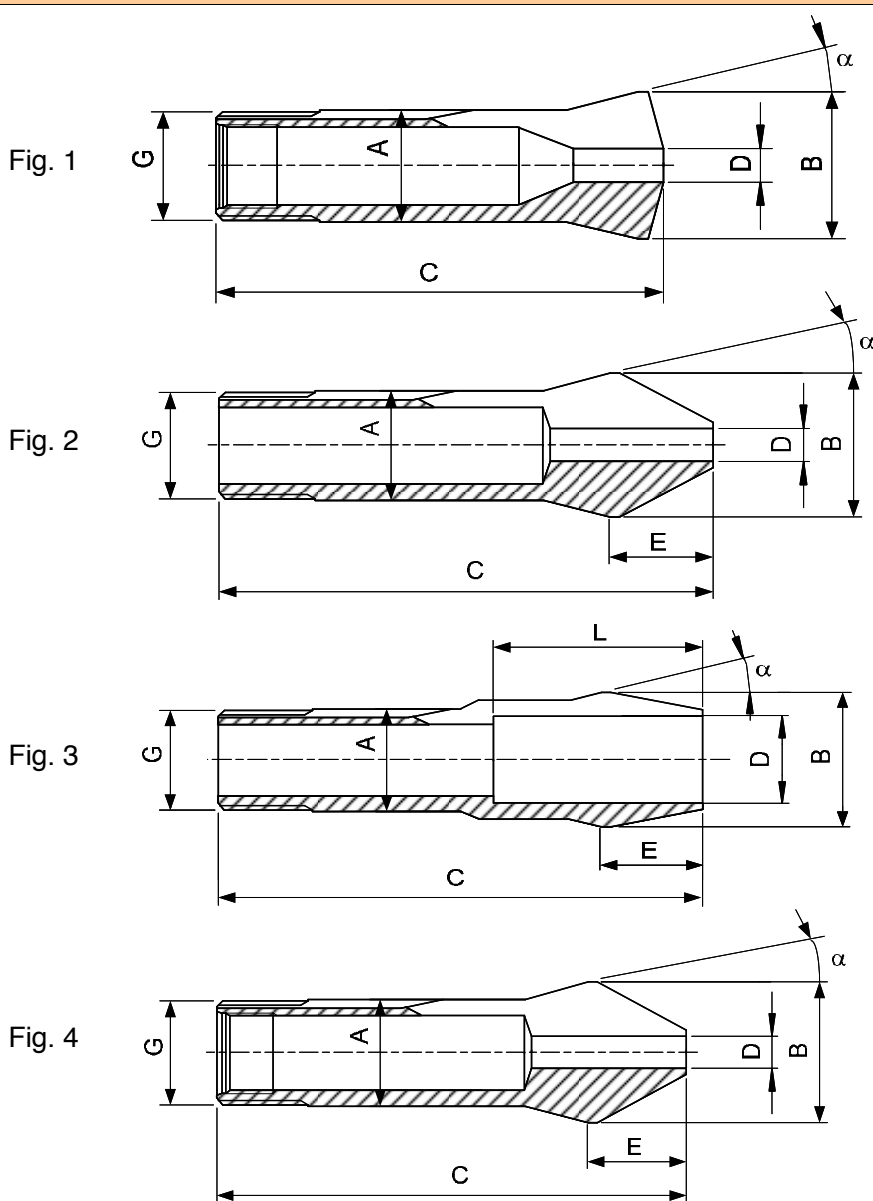
Alésage à cran
Stufenbohrung
Step bore



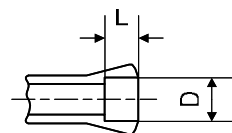
Type	Art.	A	B	C	E	G	α	D min-max 	L	Fig.
W25	80-5	25	33.7	97.6	-	$\emptyset 24.7 \times 1.693 \nabla 45^\circ$	15°	0.30...19.05	-	1
								19.06...21.00	35	
								21) 21.01...21.50	16.5	
								21) 21.51...22.00	16	
								21) 22.01...23.00	15.5	
								21) 23.01...23.50	15	
								21) 23.51...24.00	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	-	$\emptyset 24.7 \times 1.693 \nabla 45^\circ$	15°	21.01...25.40	30	2
	80-1923	25	35	94	-	M25x1	16°	0.50...17.00	-	3

Type W

Pincés tirées - Zugspannzangen - Pull-type collets



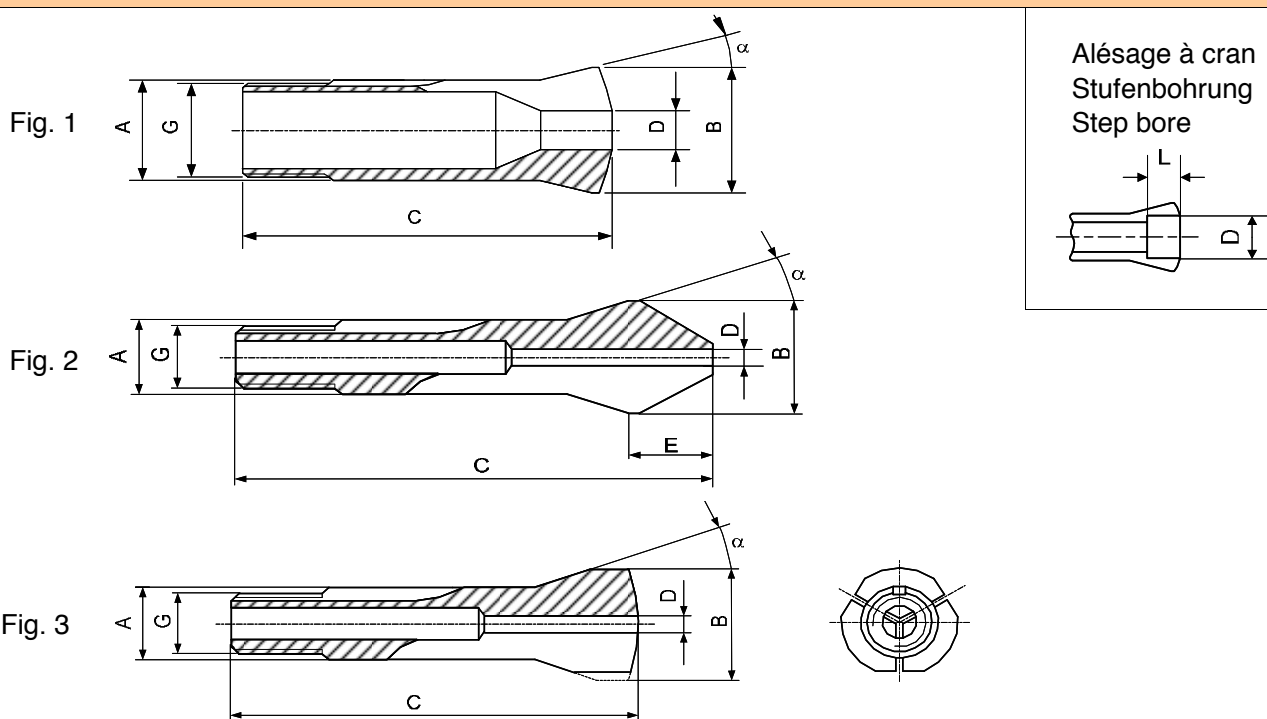
Alésage à cran
Stufenbohrung
Step bore



Type	Art.	A	B	C	E	G	α	D min-max		L	Fig.
W25	80-92872	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

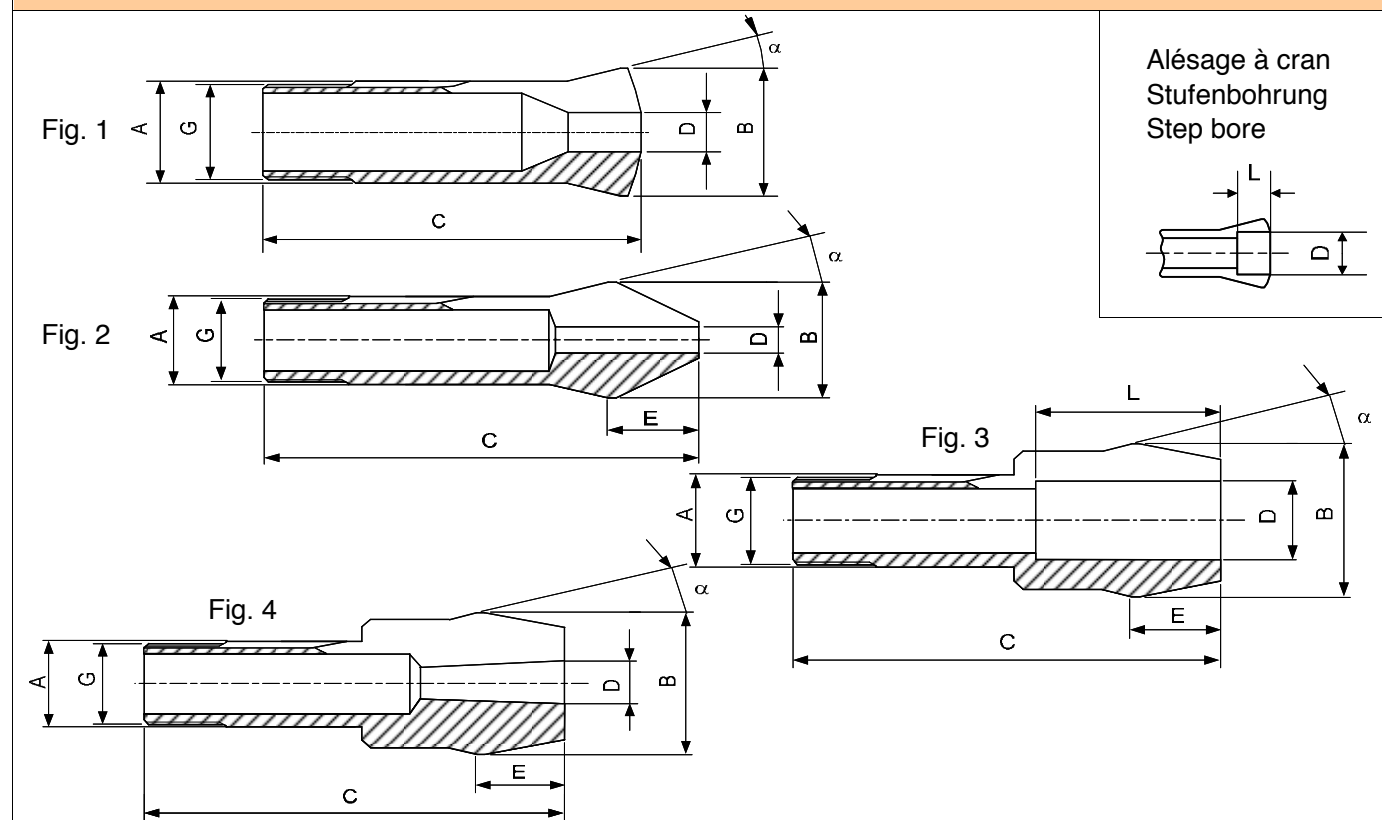


Obturbateurs pour pinces, voir page 75
Dichtgummi für Spannzangen auf Seite 75
Rubber seals for collets on page 75

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		
								8.01...8.50	3.2		
								8.51...9.00	2.5		
								9.01...9.50	1.7		
								9.51...10.00	1		
	72-1898 26)	8	13	35.5	-	$\emptyset 6.82 \times 0.625 \nless 55^\circ$	20°	0.30...4.00	-	-	3
								4.01...6.50	12.5		
								6.51...7.00	6		
								7.01...7.50	5		
								7.51...8.00	4		
	72-95	8	13	40.5	7	$\emptyset 6.82 \times 0.625 \nless 55^\circ$	20°	0.30...3.30	-	-	2
								3.31...6.50	21		

Type B

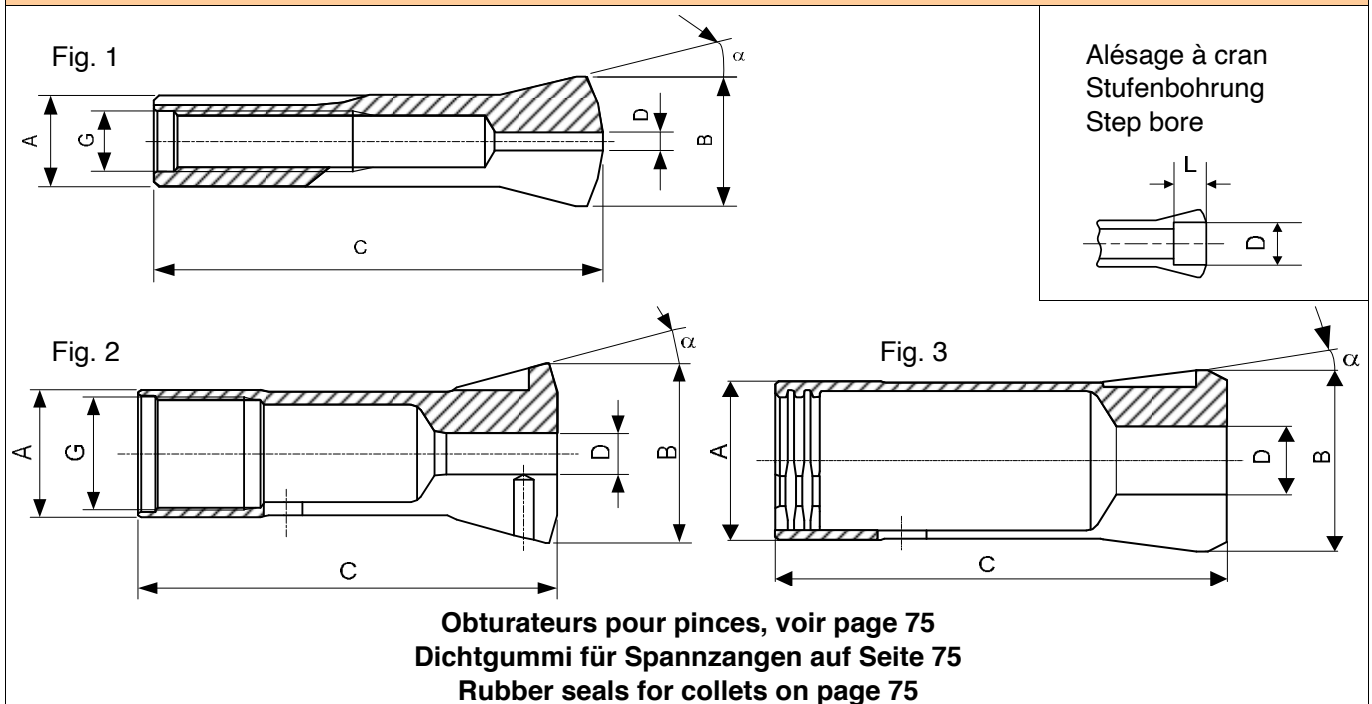
Pinces tirées - Zugspannzangen - Pull-type collets



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 9.51...12.50 12.51...13.00 13.01...13.50 13.51...14.00 14.01...14.50 14.51...15.00	- 20 8.5 7.7 7 6.5 6	1
B32	72-55 26)	32	40	102	-	M30 x 1.5	15°	0.30...24.00 24.01...28.00 28.01...30.00 30.01...32.00	- 44 12 8	1
B32	72-65	32	40	106	-	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	0.30...24.00 24.01...28.00 28.01...30.00 30.01...32.00	- 44 12 8	1
	72-2003	32	40	124	24	$\emptyset 29.7 \times 1.693 \nless 45^\circ 5^\circ$	15°	0.30...24.00 24.01...28.00	- 64	2
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 24.01...40.00	- 80	3
	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

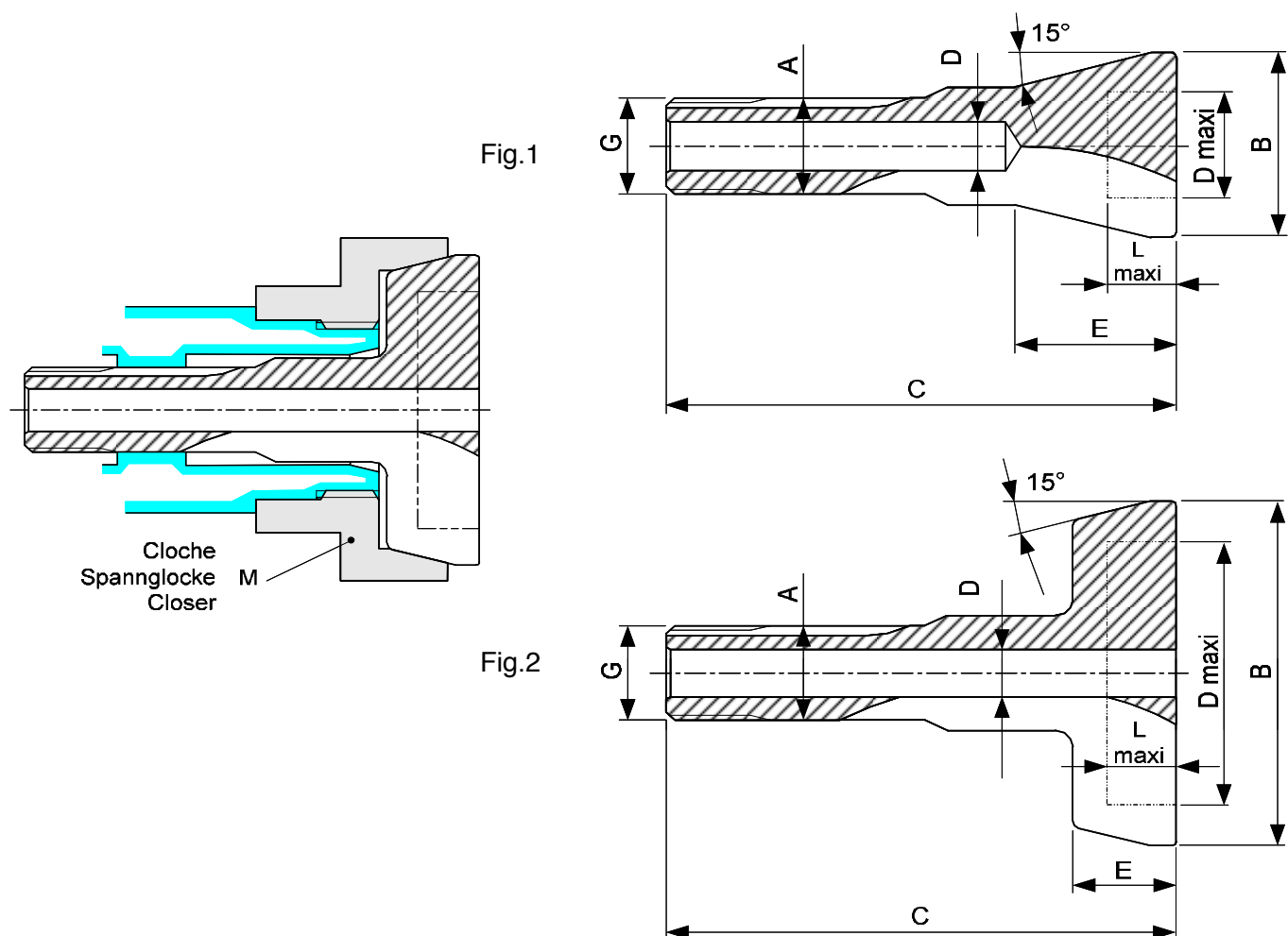
Pincés tirées - Zugspannzangen - Pull-type collets



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

Type W

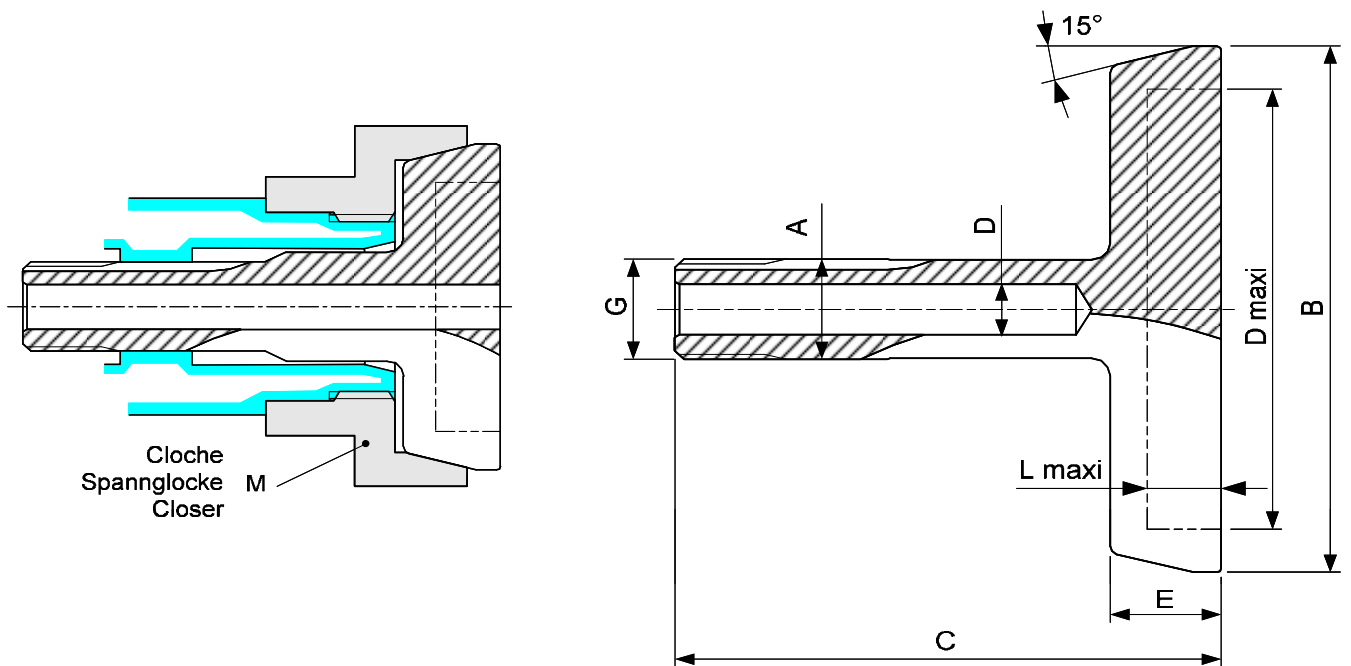
Pincas entonnoirs ébauchées
Vorgearbeitete Glockenzangen
External step collet blanks



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

Pincas 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)

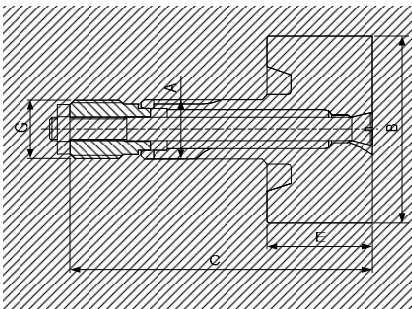


Fig. 1

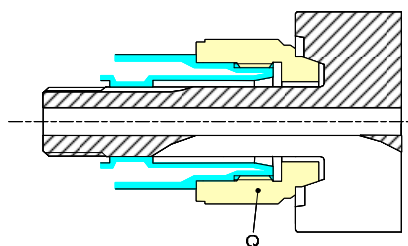
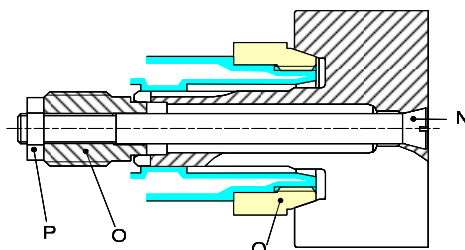


Fig. 2



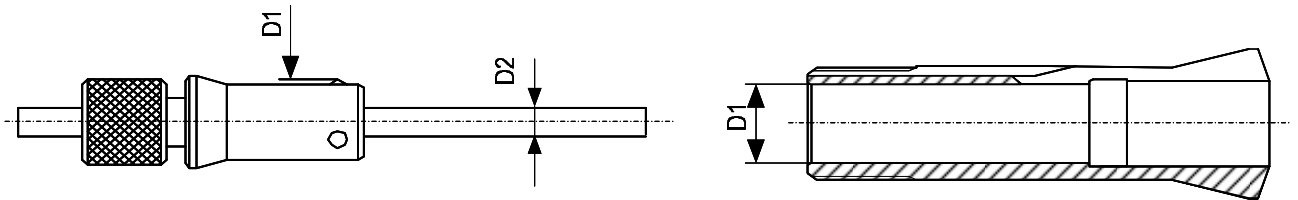
caractères gras : inclus dans la livraison
Fettschrift : im Lieferumfang inbegriffen
bold script : included in delivery

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 - Tiefenanschlätze - 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 Tiefenanschlätze 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



In 1982 Max Maurer laid the foundations for our success. Since then, we have been building on it. Stone by stone. And year by year.

February 2020 EN

From the clockmaker's instrument to the measuring machine itself! Our demanding customers appreciate our quality standards and we feel the same about our satisfied customers.

Challenges are welcome! Non-standard design, prototype or a small batch? Whatever it is, we develop the optimum solution with you.

Manufactured 100% in Switzerland. Together with our close-at-hand production partners we come up with short delivery times at fair prices.



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