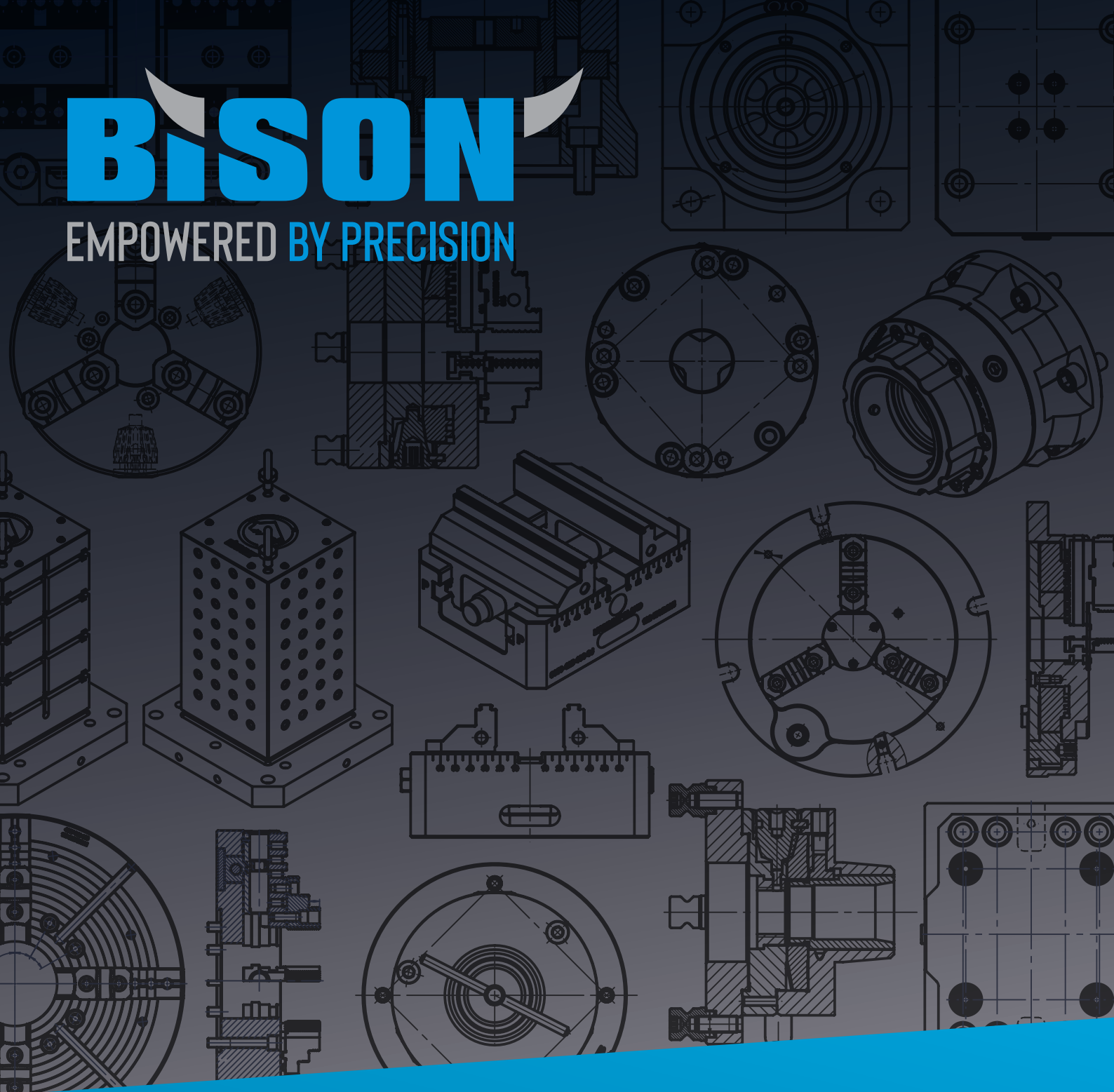


BISON

EMPOWERED BY PRECISION



NEW CLAMPING SOLUTIONS







JAW TIGHTENING ATTACHMENT FOR 3-JAW LATHE CHUCKS **P. 5**

POWER CHUCK WITH QUICK JAW CHANGE SYSTEM **P. 7**

POWER CHUCK FOR RUBBER FLEX GT CLAMPING HEADS **P. 13**

TRU-FORCE 4-JAW INDEPENDENT CHUCKS **P. 15**

ZERO POINT CLAMPING SYSTEM **P. 18**

SELF-CENTERING POWER VISE **P. 37**

NC PRECISION COMPACT VISE **P. 45**

MANUAL STATIONARY CHUCK FOR CLAMPING HEADS **P. 51**

SELF-CENTERING MILLING FIXTURE **P. 53**

TOMBSTONES **P. 57**

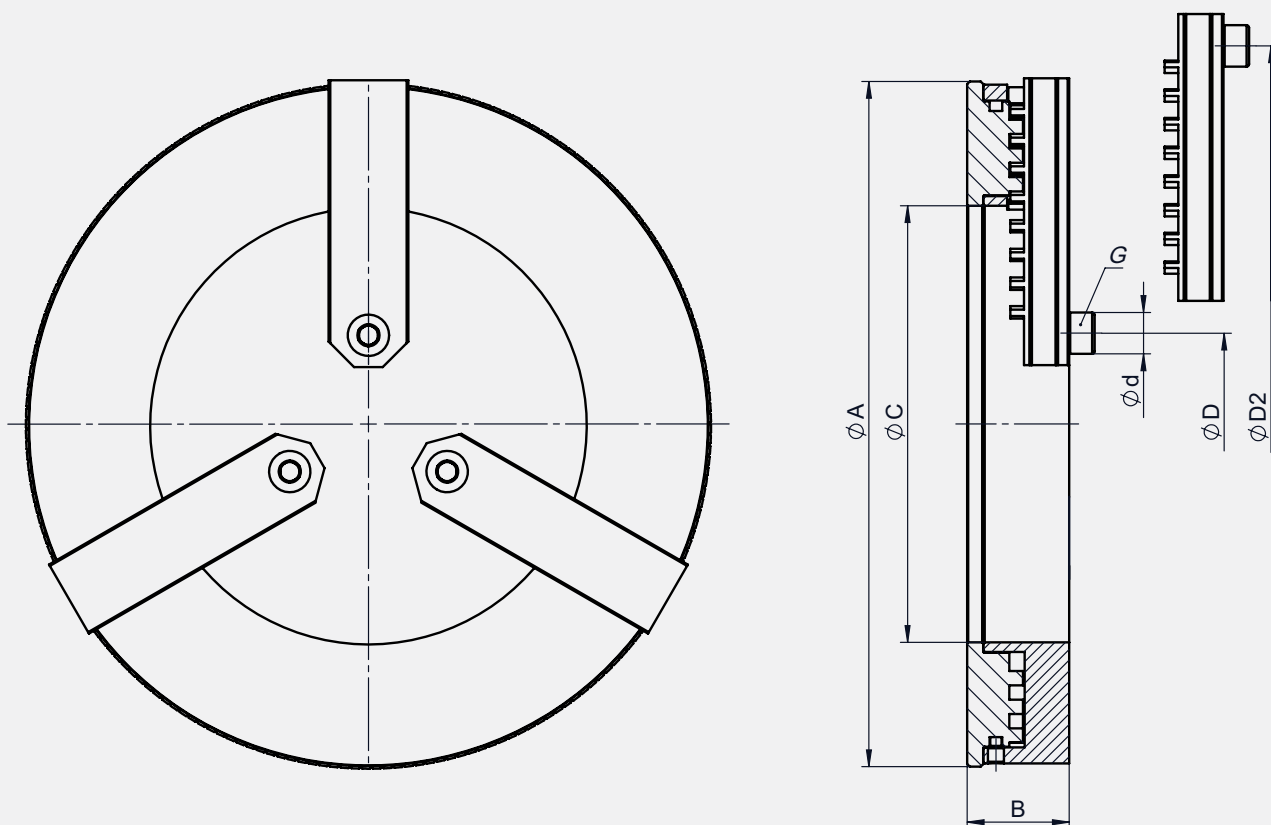


1941

Jaw tightening attachment for 3-jaw lathe chucks



Jaw tightening attachment 1941 for wide range of reversible stepless jaws. It is used for tightening jaws mounted in the chuck for turning or grinding of clamping surfaces of lathe chuck jaws, or for setting the required range for the clamping jaws. It's entirely made of steel, which ensures longevity, rigidity, and wear resistance.



Code No.	Type	ØA	B	ØC	ØD	ØD2	Ød	G	Weight [lbs]
7-985-005	1941-125-0	153	28.5	112	50-115	150-215	8.5	M5	4
7-985-008	1941-200-1	176	32	112	35-125	170-260	13	M8	8
7-985-010	1941-250-2	215	32	137	70-140	215-285	13	M8	12
7-985-011	1941-250-3	244	32	164	100-175	240-315	13	M8	14
7-985-012	1941-315-4	290	32	210	145-215	290-360	13	M8	17
7-985-016	1941-400-5	342	32	262	160-270	330-440	16	M10	21



2305 2305 RHU

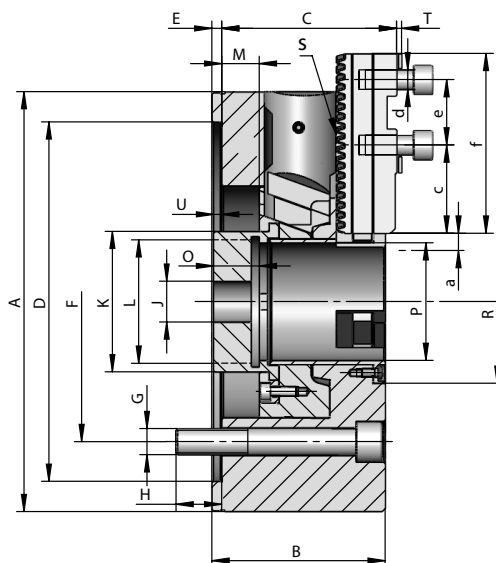
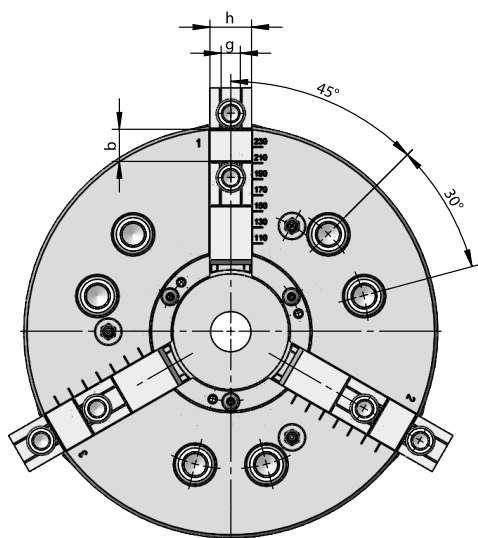
Power chuck
with quick jaw change system

QUICK JAW CHANGE SYSTEM



2305

Fast jaws replacement with a operating key, very low height design, jaws with angled serration*



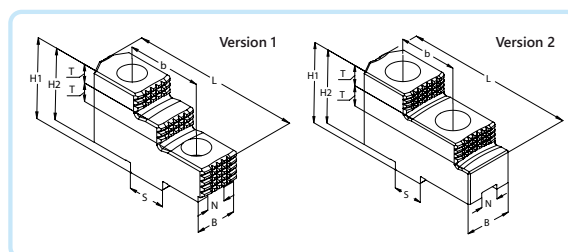
Type		2305-200-45	2305-250-72	2305-315-91	2305-400-110
Code No.	-	7-770-0800	7-770-1000	7-770-1200	7-770-1600
A	mm	206	257	315	400
B	mm	89	106	106	133
C	mm	90	107	107	135
D H6	mm	170	220	300	300
E	mm	6	6	6	6
F	mm	133.4	171.4	235	235
G	-	6xM12	6xM16	6xM20	6xM20
H	mm	20	28	31	30
J	mm	20	25	25	25
K	mm	57	86	108	130
L max.	-	M52x2	M80x2	M100x2	M120x2
M (max. Drawbar stroke)	mm	20	23	23	28
O	mm	24	28	28	40
P	mm	45	72	91	110
R	mm	73	100	122	146
S (Serration pitch)	mm	4.8	6	6	7
T	mm	3	3	3	3
Umin.	mm	5	5	4	5
Umax.	mm	25	28	27	33
a (max. Jaw stroke)	mm	7.2	8.3	8.3	10
b	mm	20	20	20	26
c	mm	37	54	54	55
d	-	M8x1	M12x1.5	M12x1.5	M12x1.5
e	mm	40	40	40	54
f	mm	90	110	110	125
g	mm	10	12	12	12
h	mm	22	26	26	32
Jaws type	-	F200	F250	F250	F315
Max. pulling force	kN	45	60	60	80
Max. clamping force	kN	84	120	120	160
Max. speed	rpm	5500	4500	3500	2500
Moment of inertia	kgm ²	0.09	0.31	1.9	4
Weight without top jaws	lbs	44	77	119	247



Jaws matching the chucks:

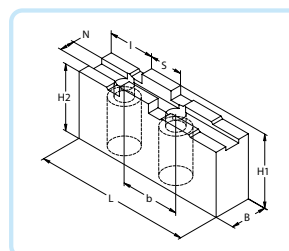
HARD TOP JAWS

Code No.	Jaws type	Chuck Size	Ver.	N	S	B	H ₁	H ₂	L	T	b	lbs / set
7-787-3308	SGT 200 F	2305-200	1	10	20	22	43	38	72	10	40	1.8
7-787-3310	SGT 250 F	2305-250;315	2	12	20	32	55	50	90	14	40	4.6
7-787-3316	SGT 315 F	2305-400	2	12	26	36	62	56	104	15	54	7.3



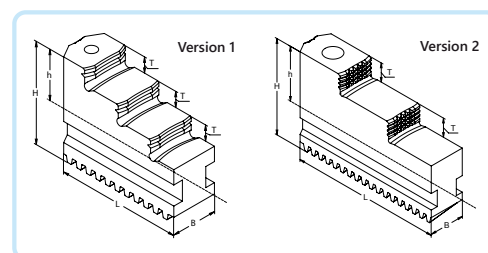
SOFT TOP JAWS

Code No.	Jaws type	Chuck Size	N	S	B	H ₁	H ₂	L	b	I	lbs / set
7-788-3308	SGM 200 F	2305-200	10	20	22	47	43	105	40	34	4.4
7-788-3310	SGM 250 F	2305-250;315	12	20	32	55	50	125	40	36	8.2
7-788-3316	SGM 315 F	2305-400	12	26	37	62	56	145	54	45	13.4



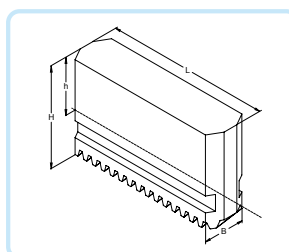
HARD SOLID JAWS

Code No.	Jaws type	Chuck Size	Ver.	B	H	L	T	h	lbs / set
7-788-3408	SJT 200 F	2305-200	1	22	60	94	10	35	4.2
7-788-3410	SJT 250 F	2305-250;315	2	26	70	115	14	40	7.3
7-788-3416	SJT 315 F	2305-400	2	32	81	129	15	46	11.9



SOFT SOLID JAWS

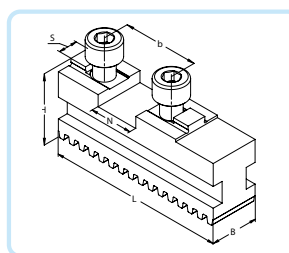
Code No.	Jaws type	Chuck Size	B	H	h	L	lbs / set
7-788-3508	SJM 200 F	2305-200	22	60	35	94	5.7
7-788-3510	SJM 250 F	2305-250;315	26	70	40	115	9.7
7-788-3516	SJM 315 F	2305-400	32	81	46	130	15.0



Power chucks are delivered with a set of master jaws.

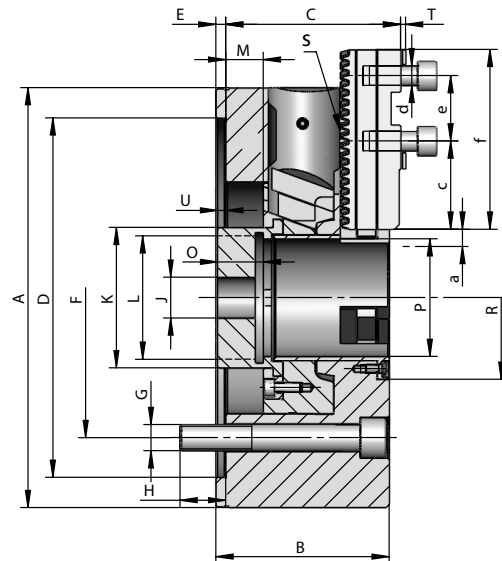
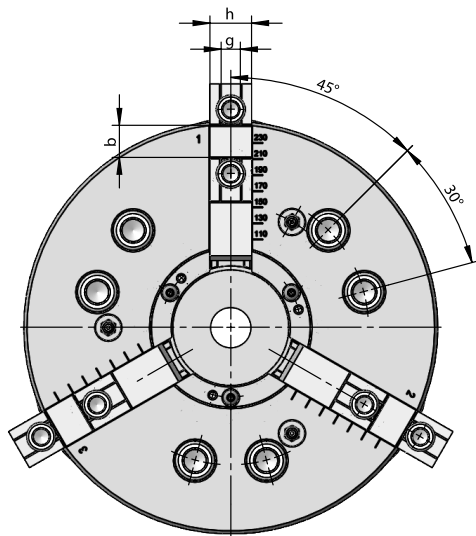
HARD MASTER JAWS

Code No.	Jaws type	Chuck Size	N	S	B	H	L	b	lbs / set
7-788-3510	SP 200 F	2305-200	20	10	22	35	90	40	2.6
7-788-3610	SP 250 F	2305-250;315	20	12	26	40	110	40	4.0
7-788-3616	SP 315 F	2305-400	26	12	32	46	125	54	6.6



2305 RHU

Fast jaws replacement with a operating key, very low height design, jaws with square serration*



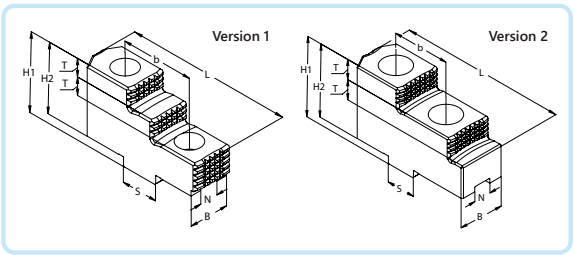
Type		2305-200-52 RHU	2305-250-78 RHU	2305-315-104 RHU	2305-400-128 RHU
Code No.	-	352305120800	352305130000	352305140100	352305150300
A	mm	213	262	325	400
B	mm	89	106	113	131
C	mm	89.4	107	117	135
D H6	mm	170	220	300	300
E	mm	6	6	6	6
F	mm	133.4	171.4	235	235
G	-	6xM12	6xM16	6xM20	6xM20
H	mm	20	28	34	32
J	mm	20	25	25	25
K	mm	65	86	121	130
L max.	-	M60x2	M86x2	M112x2	M138x2
M (max. Drawbar stroke)	mm	20	23	23	28
O	mm	24	28	28	40
P	mm	52	78	104	128
R	mm	80	106	135	164
S (Serration pitch)	mm	4.7	5.5	5.5	5.5
T	mm	2.5	3	3	3
Umin.	mm	5	5	4	3
Umax.	mm	25	28	27	31
a (max. Jaw stroke)	mm	7.2	8.3	8.3	10
b	mm	20	20	20	26
c	mm	32	48	59	55
d	-	M8	M12	M12	M12
e	mm	40	40	40	54
f	mm	85	104	115	125
g	mm	10	12	12	12
h	mm	22	26	32	32
Jaws type	-	RHU 200	RHU 250	RHU 315	RHU 315
Max. pulling force	kN	45	60	70	80
Max. clamping force	kN	84	120	145	160
Max. speed	rpm	5500	4500	3500	2500
Moment of inertia	kgm ²	0.13	0.38	1.9	4
Weight without top jaws	lbs	46	83	137	247



Jaws matching the chucks:

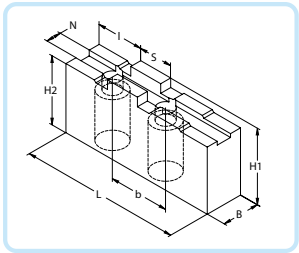
HARD TOP JAWS

Code No.	Jaws type	Chuck Size	Ver.	N	S	B	H ₁	H ₂	L	T	b	lbs / set
398531086700	SGT 200 F	2305-200	1	10	20	22	43	38	72	10	40	1.8
398531087000	SGT 250 F	2305-250;315	2	12	20	32	55	50	90	14	40	4.6
398531088200	SGT 315 F	2305-400	2	12	26	36	62	56	104	15	54	7.3



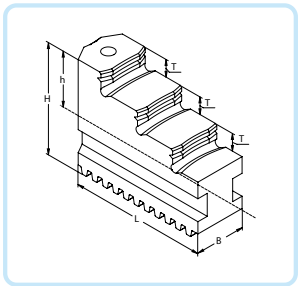
SOFT TOP JAWS

Code No.	Jaws type	Chuck Size	N	S	B	H ₁	H ₂	L	b	I	lbs / set
398525443000	SGM 200 F	2305-200	10	20	22	47	43	105	40	34	4.4
398525449700	SGM 250 F	2305-250;315	12	20	32	55	50	125	40	36	8.2
398525458600	SGM 315 F	2305-400	12	26	37	62	56	145	54	45	13.4



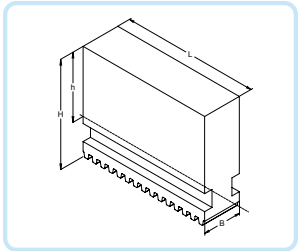
HARD SOLID JAWS

Code No.	Jaws type	Chuck Size	B	H	L	T	h	lbs / set
398530933000	SJT 200 RHU	2305-200	22	54	84.8	8	29	4.2
398530941600	SJT 250 RHU	2305-250	26	65	107.4	10	36	7.3
398530951800	SJT 315 RHU	2305-315	32	66	117	11	32	7.7
398530950500	SJT 315 RHU	2305-400	32	70	132	17	40	9.7



SOFT SOLID JAWS

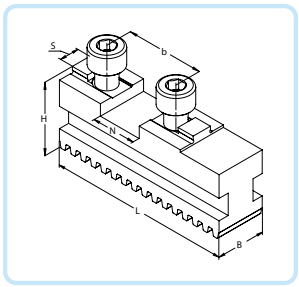
Code No.	Jaws type	Chuck Size	B	H	h	L	lbs / set
398531161000	SJM 200 RHU	2305-200	22	65	40	84	5.7
398531141700	SJM 250 RHU	2305-250	26	84	55	99	9.7
398531171200	SJM 315 RHU	2305-315	32	90	56	121	15.0



Power chucks are delivered with a set of master jaws.

HARD MASTER JAWS

Code No.	Jaws type	Chuck Size	N	S	B	H	L	b	lbs / set
398530990200	SP 200 RHU	2305-200	20	10	22	32	85	40	2.6
398531001900	SP 250 RHU	2305-250	20	12	26	40	104	40	4.0
398531011000	SP 315 RHU	2305-315	20	12	32	46	115	40	6.8
398531010800	SP 315 RHU	2305-400	26	12	32	46	125	54	6.6



Features:

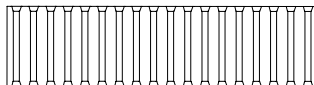
Quick jaw change system / quick jaw adjustment with operating key



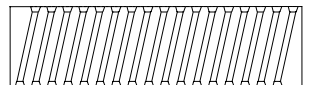
Replace jaws in less than one minute!

*Serration type

Jaws with square serration (Reishauer)

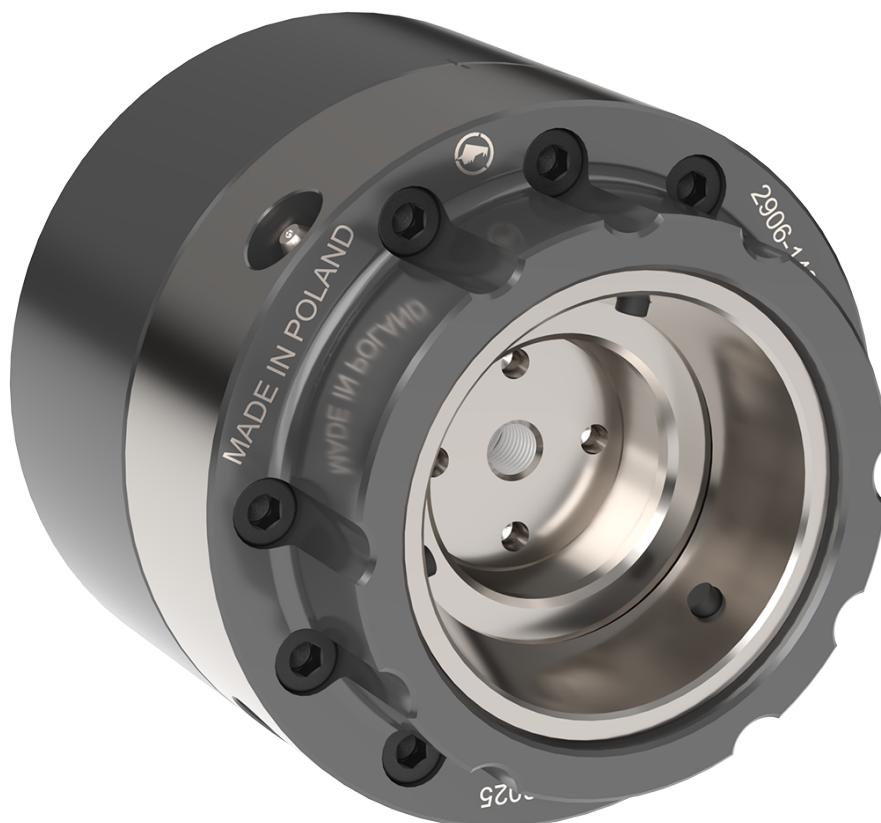


Jaws with angled serration (Forkardt)

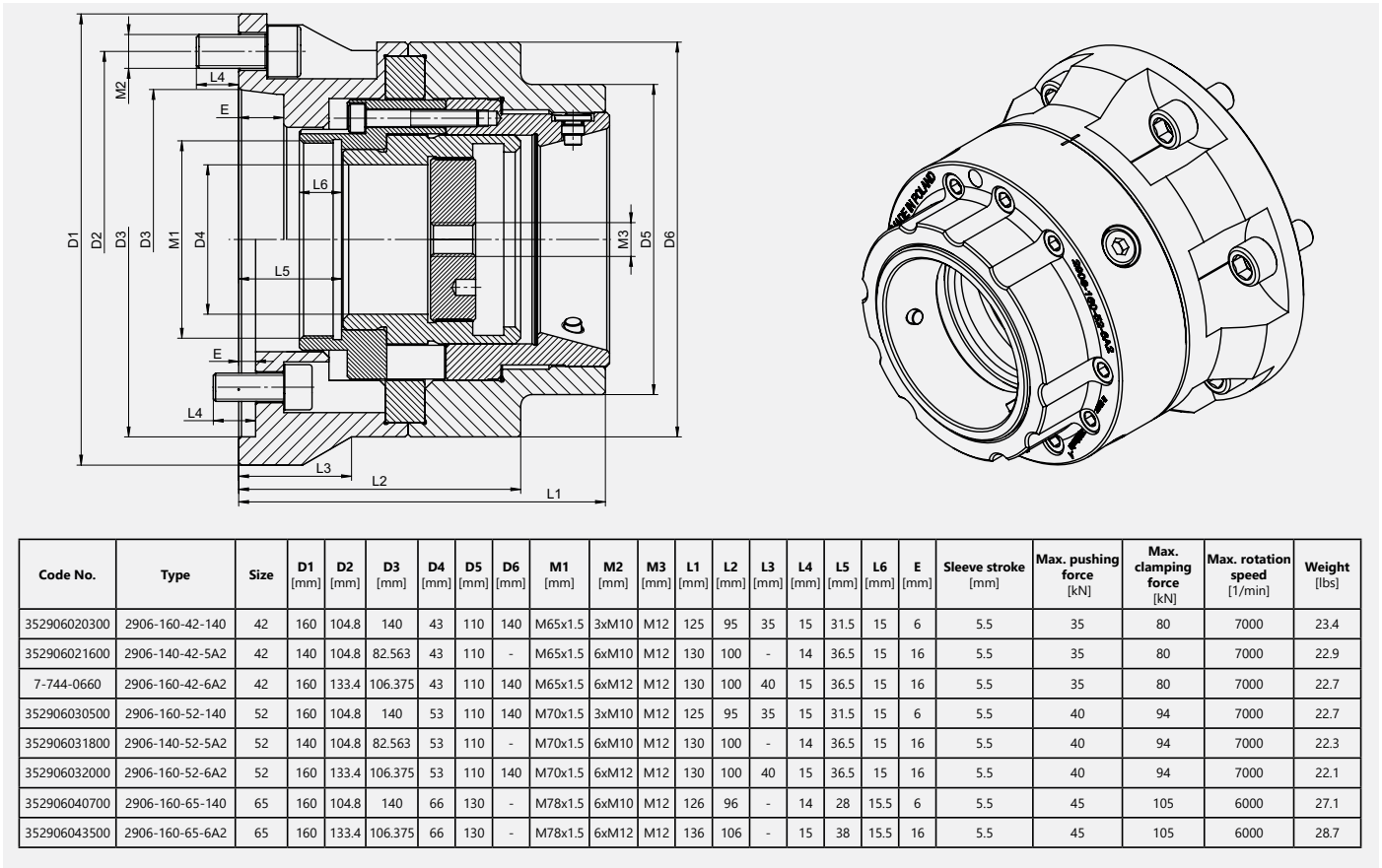


2906

Power chuck for Rubber Flex GT clamping heads



The 2906 power chucks for Rubber Flex GT clamping heads are designed for mounting shafts and rods of various diameter range. Especially useful for machining soft and easily deforming materials. The chucks ensure safe and secure clamping and quick change of clamping heads with a head changing gun.



Features:

- low profile design
- high rotational speed
- minimal deformation of the workpiece
- low moment of inertia
- high clamping force
- body and cone sleeve made of wear-resistant material
- high clamping precision

Workpiece remains in a fixed position during clamping what ensures precise position in Z-axis. To use as a chuck with a through-hole for rods and pipes, remove end-stop adapter.

Clamping heads and changing guns are available upon request.



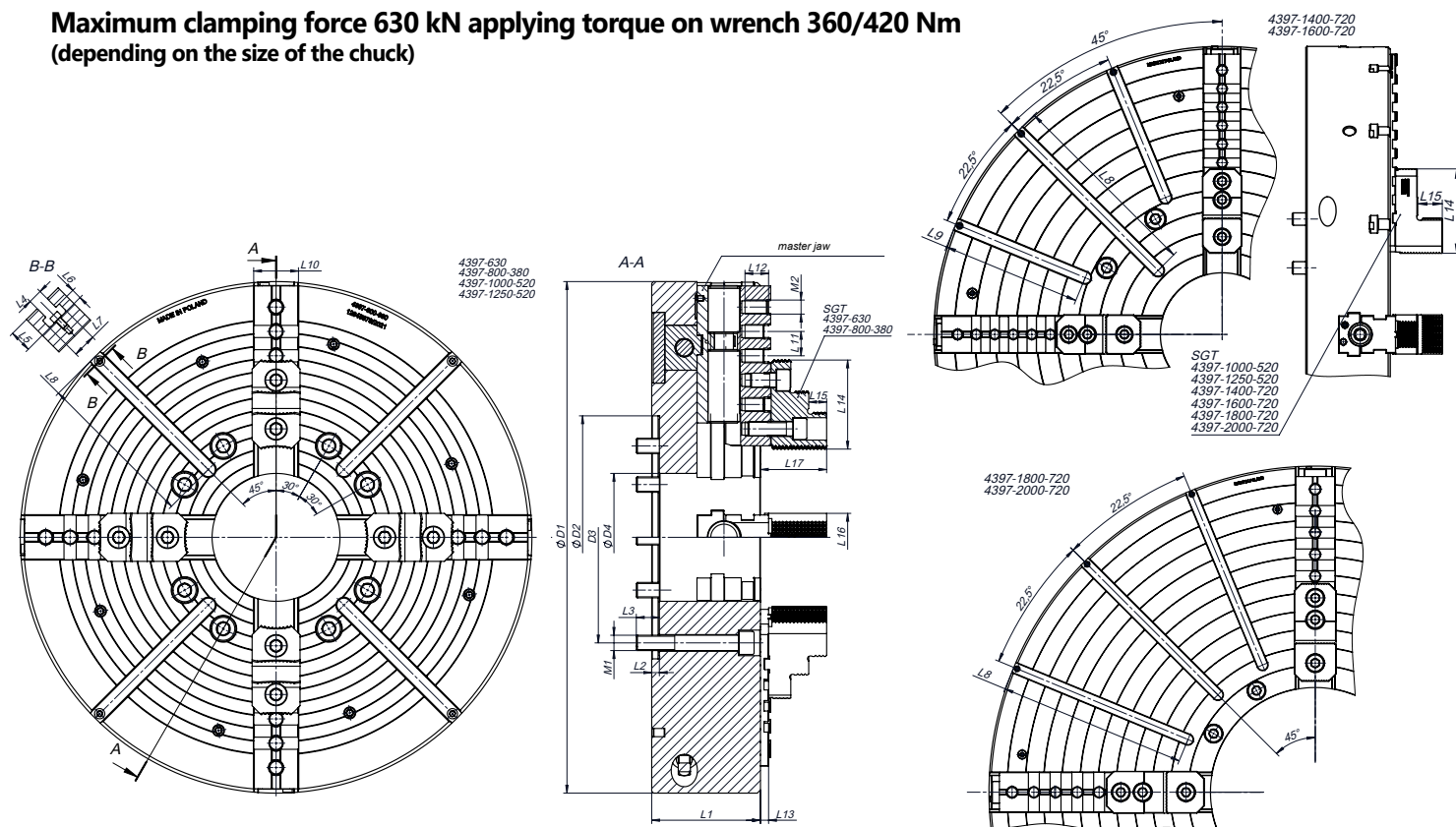
New Tru-Force independent chucks series

4397

**Tru-Force 4-jaw independent chuck
with wedge jaw system**



Maximum clamping force 630 kN applying torque on wrench 360/420 Nm
(depending on the size of the chuck)



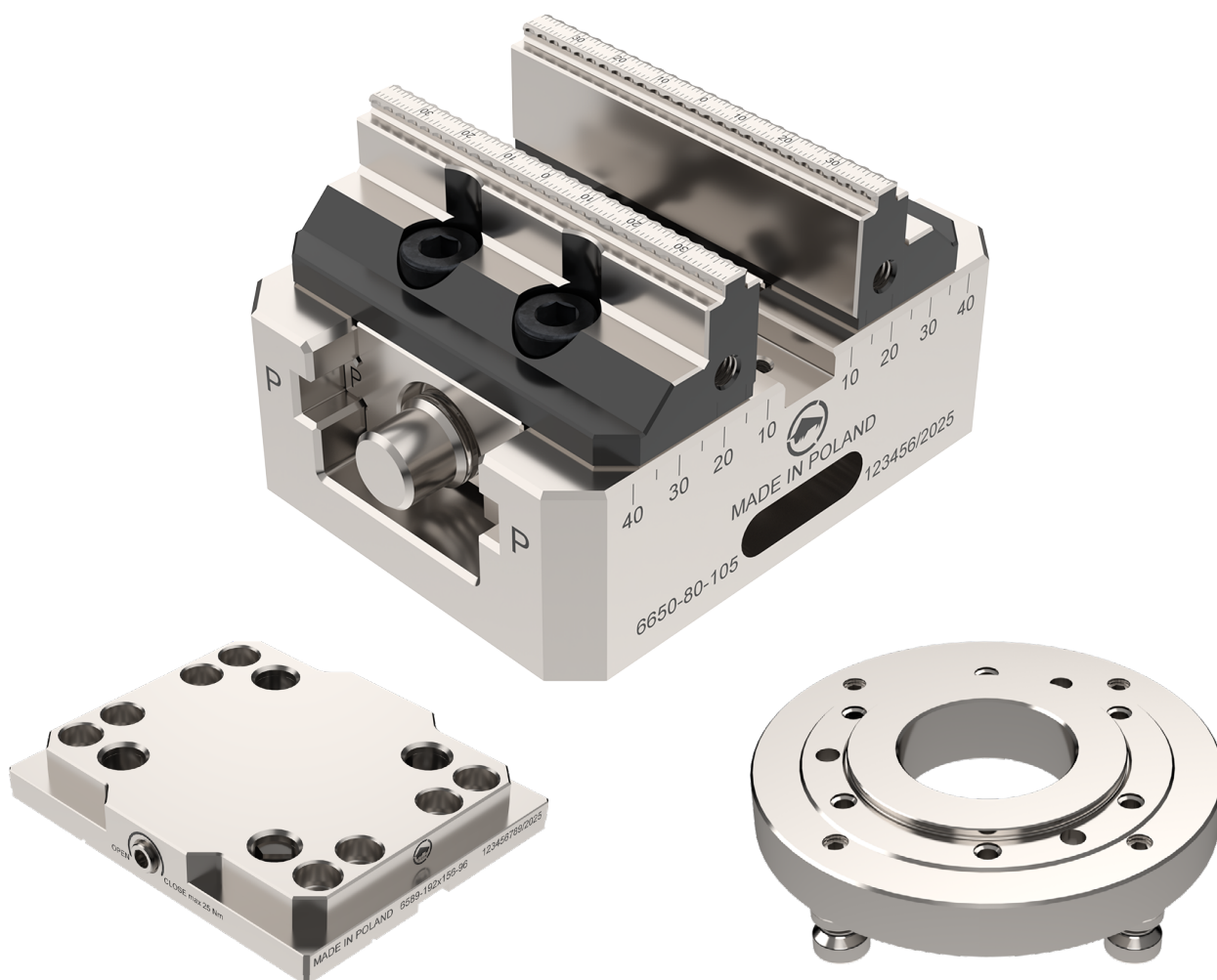
Type	4397-630	4397-800-380	4397-1000-520	4397-1250-520	4397-1400-720	4397-1600-720	4397-1800-720	4397-2000-720
Code No.	354397020000	7-858-3200	354397041600	354397050500	354397060700	354397070900	354397080000	354397090200
D1	630	800	1000	1250	1400	1600	1800	2000
D2	270	380	520	520	720	720	720	720
D3	235	330.2	463.6	463.6	647.6	647.6	647.6	647.6
D4	160	200	200	210	300	300	578	578
L1	170	170	190	190	205	205	220	220
L2	12	12	12	12	12	12	12	12
L3	30	36	36	36	45	45	45	45
L4	22	22	22	28	28	28	28	28
L5	35	35	35	50	50	50	50	50
L6	16	16	16	20	20	20	20	20
L7	37	37	37	46	46	46	46	46
L8	160	250	340	400	480	550	520	620
L9	-	-	-	-	340	440	-	-
L10	70	70	70	70	90	90	110	110
L11	38.1	38.1	38.1	38.1	45	45	60	60
L12	34	34	39	39	39	39	54	54
L13	12.8	12.8	12.8	12.8	12.8	12.8	20.8	20.8
L14	135	135	150	150	205	205	270	270
L15	28	28	60	60	60	60	60	60
L16	75	75	80	80	95	95	115	115
L17	103.5	103.5	121.5	121.5	126.5	126.5	144.5	149.5
M1	M20	M24	M24	M24	M30	M30	M30	M30
M2	M22	M22	M24	M24	M24	M24	M30	M30
Master jaw stroke	9	9	9	9	9	9	9	9
Weight [lbs]	828	1,295	2,314	3,687	4,826	6,424	8,307	10,511
Max. detail weight without support [lbs]	240	400	800	1300	1900	2500	3300	4100
Max. detail weight with support [lbs]	15000	20000	35000	40000	45000	50000	55000	55000
Max. rotation speed [1/min]	970	760	610	490	440	380	340	300
Max. clamping force/torque on wrench [kNj]/[Nm]	630/360	630/360	630/360	630/360	630/420	630/420	630/420	630/420



6650
6589
9470

Quick-fix Zero Point clamping system:

- 5-axis self-centering vise
- Base plates for vises
- Base plates for chucks





SELF-CENTERING PRECISION VISE 6650

P. 20

ZERO POINT MOUNTING BASES

P. 22

ACCESSORIES

P. 24

DISTANCE PLATES

P. 29

BASE PLATES FOR CHUCKS

P. 31

CUSTOM TOMBSTONES

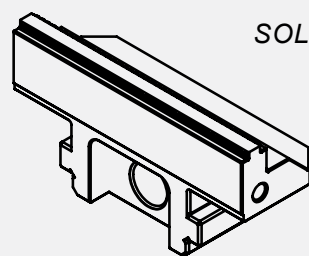
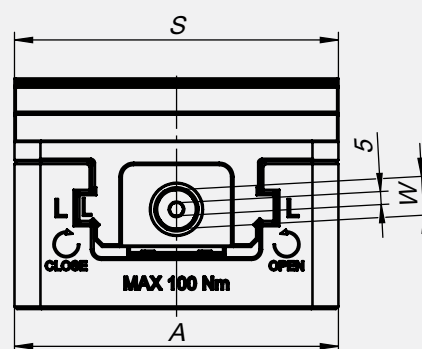
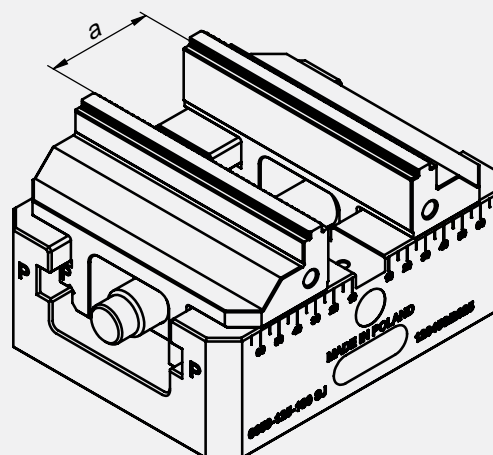
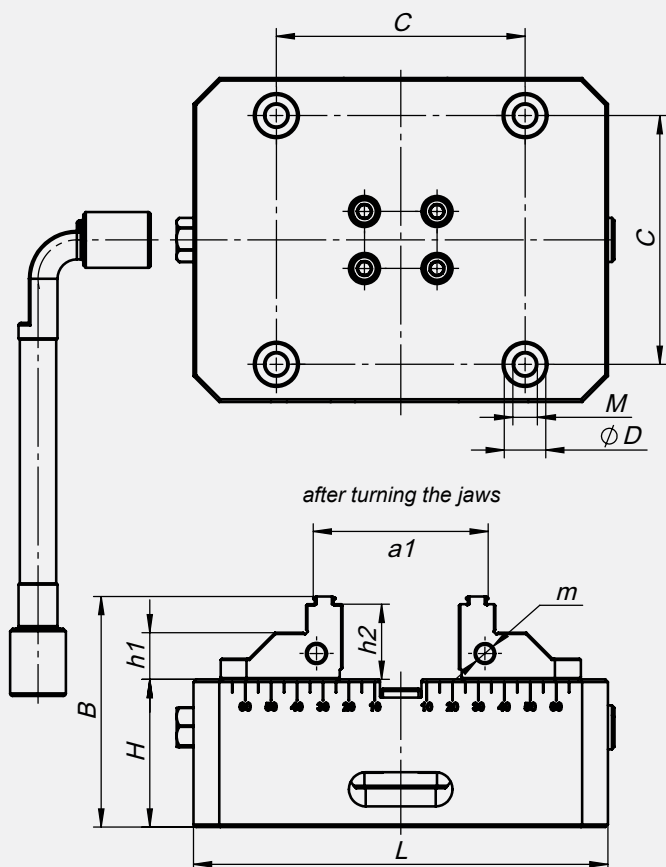
P. 35

Features:

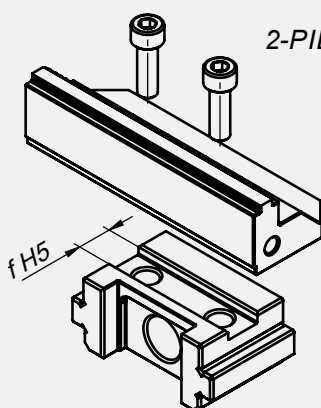
- Compact and symmetrical design makes this vise ideal for 5-axis machining centers.
- Features serrated jaws, using which reduces the area needed for holding the workpiece to only 3 mm. That ensures better access to the workpiece from multiple angles and enables more complex machining operations. The advantage is reducing the machining cycle time, as well as the number of required machining operations and frequency of the tool exchanges.
- The vise can be mounted on quick-fix bases type 6589. The vise is compatible with quick-fix bases available on the market with 52-mm or 96-mm pin spacing (the pin spacing on vises depends on the size).
- Wide clamping range can be further increased by reversing the jaws.
- The vise jaws have serrated surfaces, which can bite in the raw or heat-treated material. Pre-stamping is not required.
- The jaws also have ground surfaces for clamping machined materials.
- The jaws allow for mounting side-stops.
- The operating screw is heat-treated for increased service time.
- For vises with 2-piece jaws, it is possible to replace the hard top jaw with teeth with a soft jaw, a hard jaw for shafts, or a prismatic hard jaw. The soft jaw can be shaped and used for machining irregularly shaped parts.
- In the center section of the vise, it is possible to install a middle jaw with a floating screw, which allows for clamping two symmetrical parts as well as parts of different sizes.
- Self-centering clamping action distributes the clamping force between both jaws. The force is more evenly distributed across the area of the workpiece, minimizing the risk of damage or deformation.

Additional accessories:

- Soft jaws, hard prismatic jaws, hard jaws for rollers
- Middle jaw and floating screw
- Locating insert
- Fastening pins
- Side Stop



SOLID JAW



2-PIECE JAW

ACCESSORIES						
Code No.	7-226-031	7-226-032	7-226-051	7-226-052	7-226-055	7-226-056
Type	6650-80-105 SJ	6650-80-105	6650-125-160 SJ	6650-125-160	6650-125-310 SJ	6650-125-310
Jaw type	solid	2-piece	solid	2-piece	solid	2-piece
Soft top jaws set	-	SGM 6650-80 398267710600	-	SGM 6650-125 398267711900	-	SGM 6650-125 398267711900
Hard top prismatic jaws set	-	SGTP 6650-80 398267740100	-	SGTP 6650-125 398267741400	-	SGTP 6650-125 398267741400
Hard top jaws set for rollers	-	SGTW 6650-80 398267730000	-	SGTW 6650-125 398267731200	-	SGTW 6650-125 398267731200
Set	Middle jaw	SMJ 6650-80 398267750300		SMJ 6650-125 398267751600		
	Floating screw	6650-80-105 398267760500		6650-125-160 398267762000		
Locating insert		-	-	-	-	6650-125-310 398267756000
Fastening pins		6589-M8 ZP SL 326000000900		6589-M10 ZP SL 326000000700		
Side stop		6650-80 398267720800		6650-125 398267721000		

Code No.	Type	S	L	H	A	B	C	Ø D	M	a	a1	h1	h2	m	f	w	Centering accuracy [mm]	Repeat accuracy	Clamping force [kN]	Torque on wrench [Nm]	Weight [lbs]
7-226-031	6650-80-105 SJ	80	105	38	80	63	52	12	M8	6÷50	50÷90	12	22	M6	12	12	± 0.02	0.005	15	70	5.3
7-226-032	6650-80-105	80	105	38	80	63	52	12	M8	6÷50	45÷90	12	22	M6	12	12	± 0.05	0.005	15	70	5.3
7-226-051	6650-125-160 SJ	125	160	57	125	89	96	16	M10	6÷90	75÷155	18	29	M8	16	15	± 0.02	0.005	20	100	18.6
7-226-052	6650-125-160	125	160	57	125	89	96	16	M10	6÷90	75÷155	18	29	M8	16	15	± 0.05	0.005	20	100	18.5
7-226-055	6650-125-310 SJ	125	310	57	125	89	96	16	M10	6÷230	75÷305	18	29	M8	16	15	± 0.02	0.005	20	100	31.3
7-226-056	6650-125-310	125	310	57	125	89	96	16	M10	6÷230	75÷305	18	29	M8	16	15	± 0.05	0.005	20	100	31.2

6589

PATENTED

Zero Point mounting base series 6589



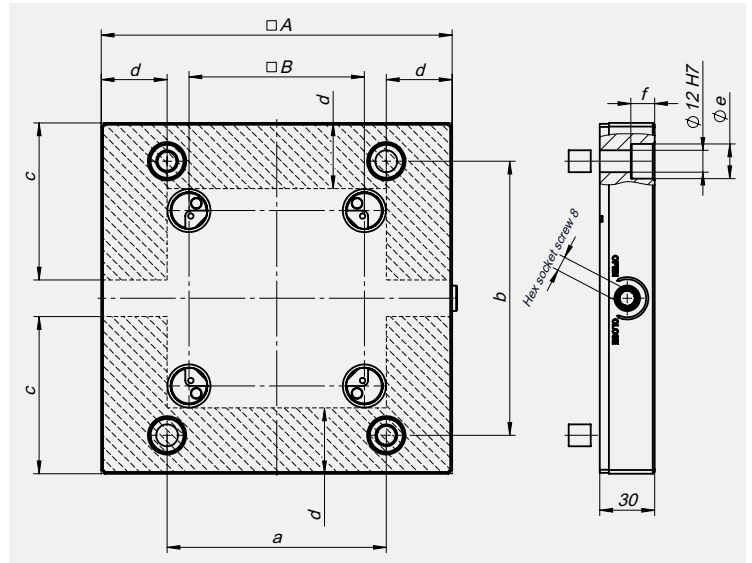
Code No.	Type	A	B	a*	b*	c	d	e	f
7-631-3045	6589-104x104-52	104	52	82	82	44	16	16,8	11
7-631-3089	6589-192x192-96	192	96	120	150	86	36	19	13
326589011000	6589-104x104-52 BL	104	52	**	**	44	16	16,8	11
326589032600	6589-192x192-96 BL	192	96	**	**	86	36	19	13

* Standard location of mounting pins, custom setups available on request.

** The "BL" type baseplates are made without mounting holes.



Machinable area for mounting holes or sockets for clamps - made on customer's request.



Features:

- High fixing repeatability, mounting holes made in $\pm 0,005$ mm tolerance.
- The height of the mounting plate made within 0,01mm tolerance.
- Low-profile mounting plate (30 mm height).
- Quick-action mounting, using only one screw.
- Suitable for mounting vises, other fixtures or direct mounting of workpieces with pre-made mounting holes, matching the location of the mounting pins.
- Pre-made base mounting holes for M10 bolts, available arrangements: 82x82 mm or 120x150 mm. Other setups of mounting holes or sockets for clamps available on request.

The Bison Zero Point system is equivalent to the following systems:

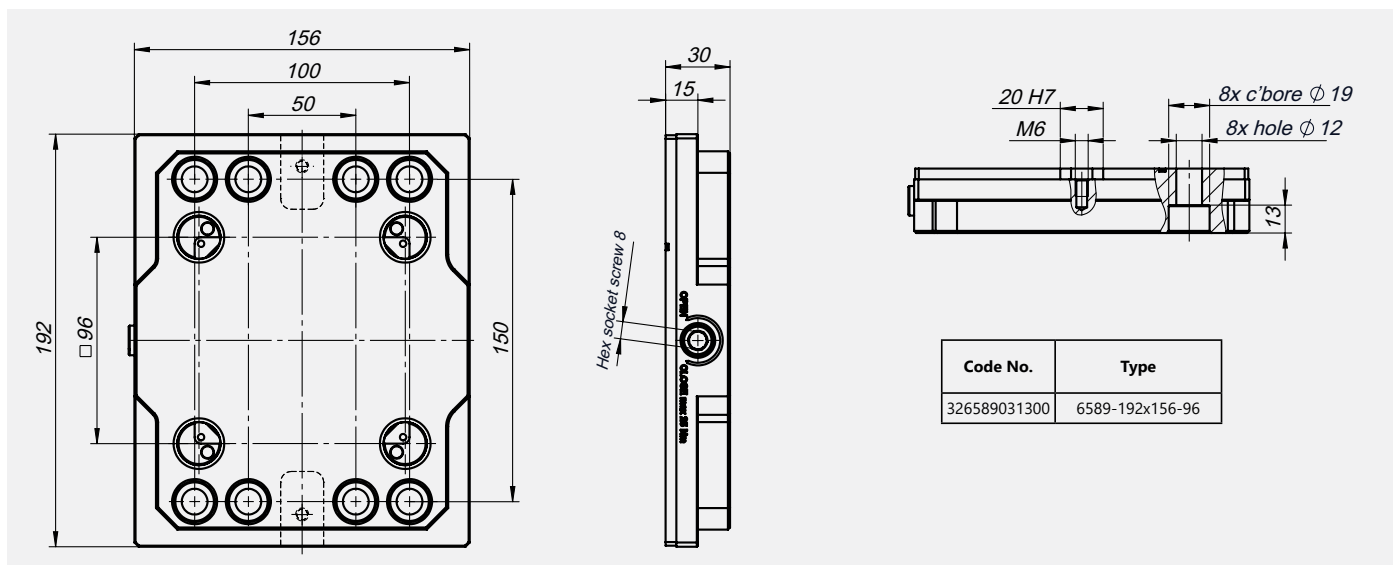
- LANG Quick Point series
- Gerardi QUICK CHANGE TABLE FOR COMPACT GRIP VISES Art. 660
- Piranha Clamp Zero Point
- HWR SolidPoint

6589 - FOR T-SLOT MOUNTING

Zero Point mounting base series 6589



PATENTED



Features:

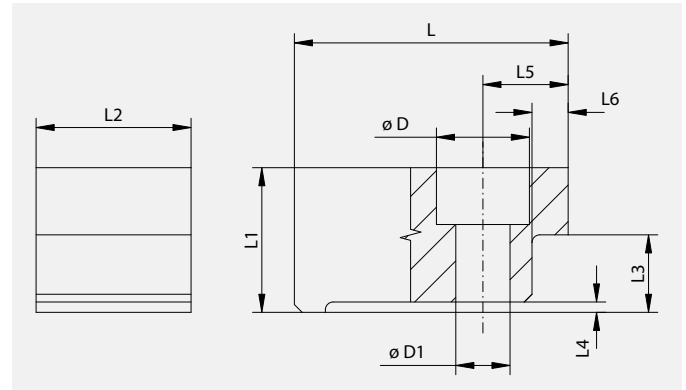
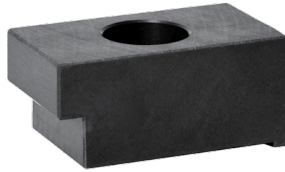
- High fixing repeatability, mounting holes made in $\pm 0,005$ mm tolerance.
- The height of the mounting plate made within 0,01mm tolerance.
- Low-profile mounting plate (30 mm height).
- Quick-action mounting, using only one screw.
- Suitable for mounting vises, other fixtures or direct mounting of workpieces with pre-made mounting holes, matching the location of the mounting pins.
- Pre-made base mounting holes for M10 bolts, available arrangements: 82x82 mm or 120x150 mm. Other setups of mounting holes or sockets for clamps available on request.

The Bison Zero Point system is equivalent to the following systems:

- LANG Quick Point series
- Gerardi QUICK CHANGE TABLE FOR COMPACT GRIP VISES Art. 660
- Piranha Clamp Zero Point
- HWR SolidPoint

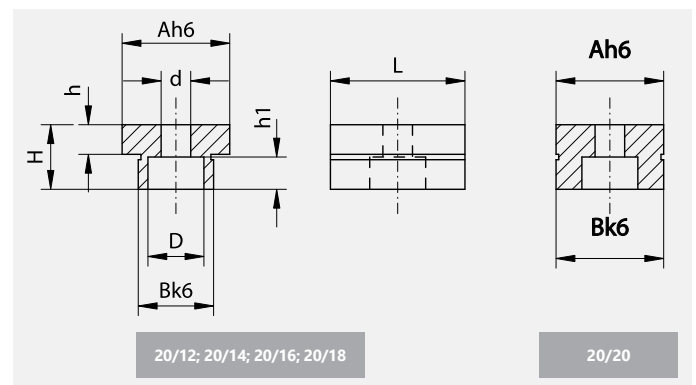
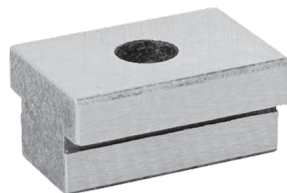
The bases type 6589 for T-slot mounting use clamps and keys offered by Bison.

CLAMP



Code No.	L	L1	L2	L3	L4	L5	L6	D	D1
398266720000	53	28	30	15	2	16,6	7,0	18	10,5
398263660100	62	22,5	28	15	2	20	8	20	13

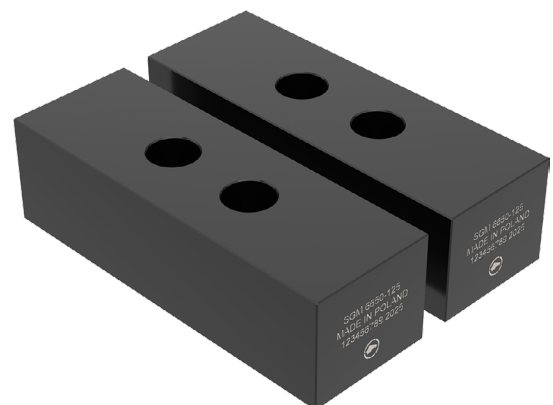
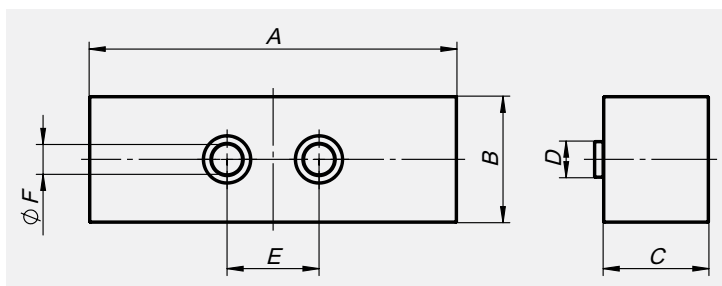
SLOT NUT



Code No.	Size	A	B	L	H	h	h1	D	d
398263758200	20/12	20	12	25	12	4,5	6,8	10,4	6,6
398263760200	20/14	20	14	25	12	4,5	6,8	10,4	6,6
398263762800	20/16	20	16	25	12	4,5	6,8	10,4	6,6
398263764300	20/18	20	18	25	12	4,5	6,8	10,4	6,6
398263766900	20/20	20	20	25	12	4,5	6,8	10,4	6,6

6650 SGM

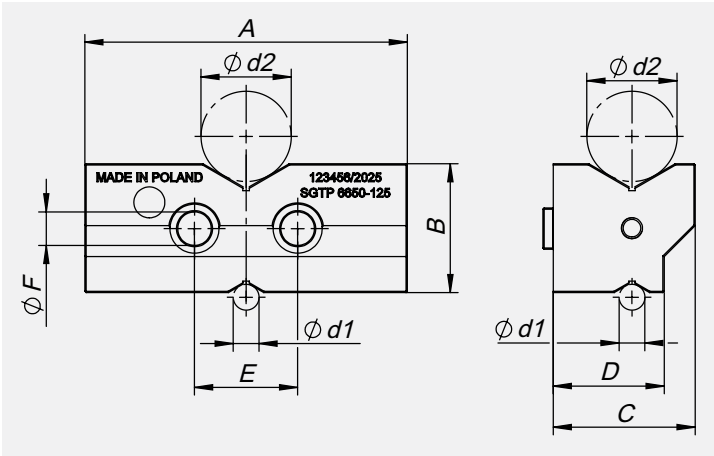
Soft top jaws



Code No.	Type	Used to	A	B	C	D	E	Ø F
7-226-303	SGM 6650-80	6650-80-105	110	45	35	12	27	9
398267711900	SGM 6650-125	6650-125-160	160	55	46	16	40	13
398267711900	SGM 6650-125	6650-125-310	160	55	46	16	40	13

6650 SGTP

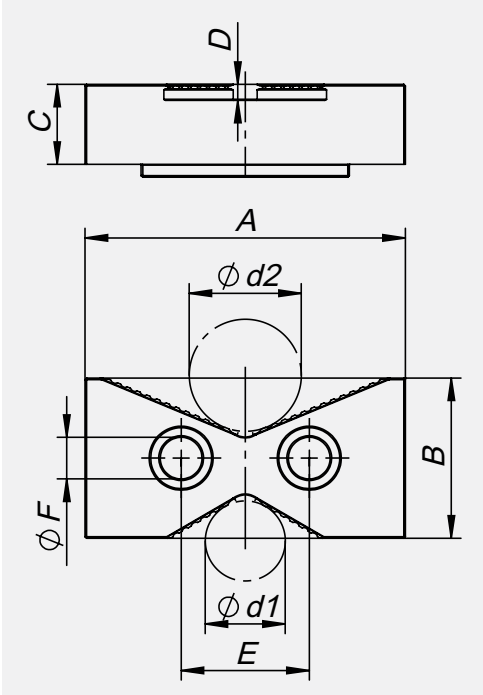
Hard top prismatic jaws



Code No.	Type	Used to	A	B	C	D	E	Ø F	Ø d1	Ø d2
398267740100	SGTP 6650-80	6650-80-105	80	33,5	38	30	27	9	6-13	13-40
398267741400	SGTP 6650-125	6650-125-160	125	50	55	43	40	13	10-22	18-60
398267741400	SGTP 6650-125	6650-125-310	125	50	55	43	40	13	10-22	18-60

6650 SGTW

Hard top jaws set for rollers



Code No.	Type	Used to	A	B	C	D	E	Ø F	Ø d1	Ø d2
398267730000	SGTW 6650-80	6650-80-105	60	33,5	20	5	27	9	16-50	21-60
398267731200	SGTW 6650-125	6650-125-160	100	50	25	5	40	13	25-95	35-105
398267731200	SGTW 6650-125	6650-125-310	100	50	25	5	40	13	25-95	35-215

SMJ 6650

Middle jaw with floating screw + locating insert

Features:

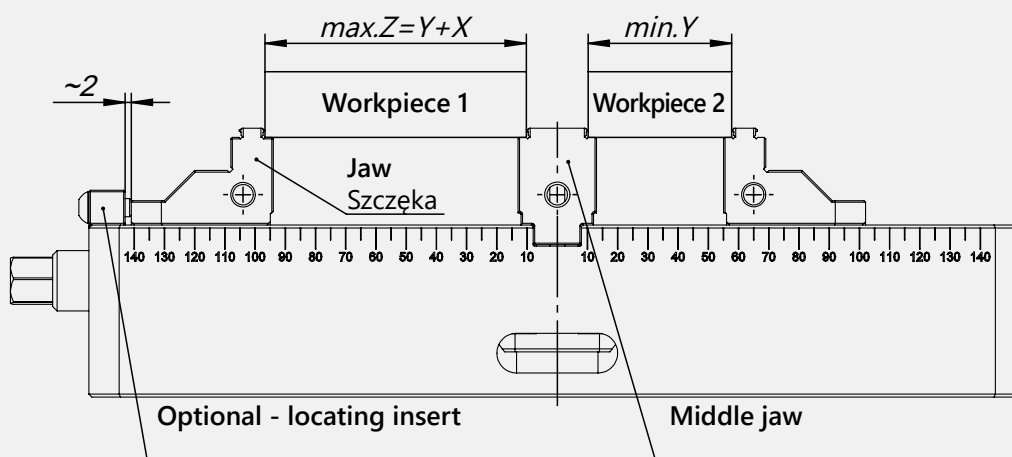
- The middle jaw with a floating operating screw allows for mounting of two parts with the same or different dimensions within a particular clamping range in one vise.
- The jaw can be mounted with smooth or serrated surface.
- The SMJ 6650-125 is equipped with a threaded hole for a side stop.

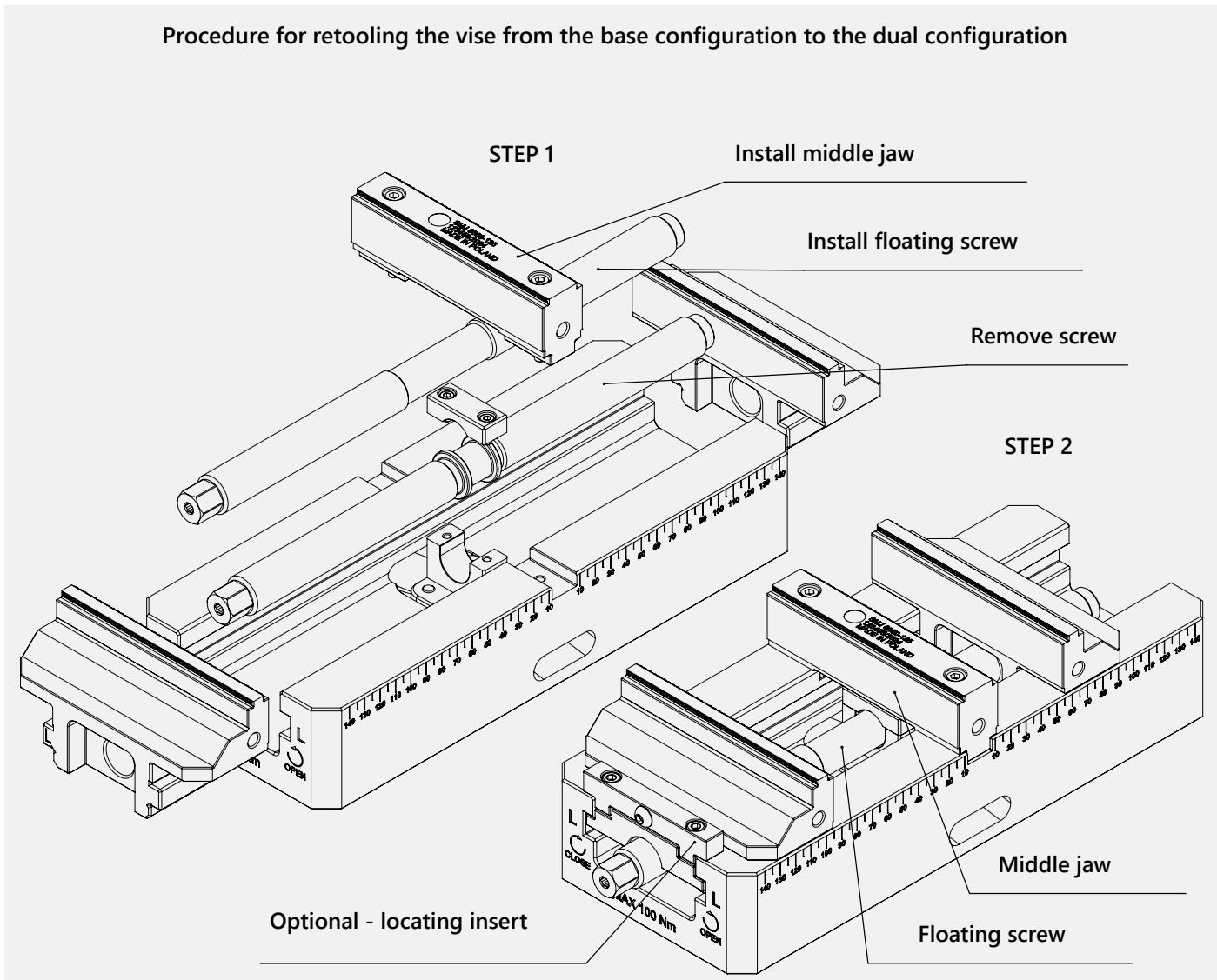
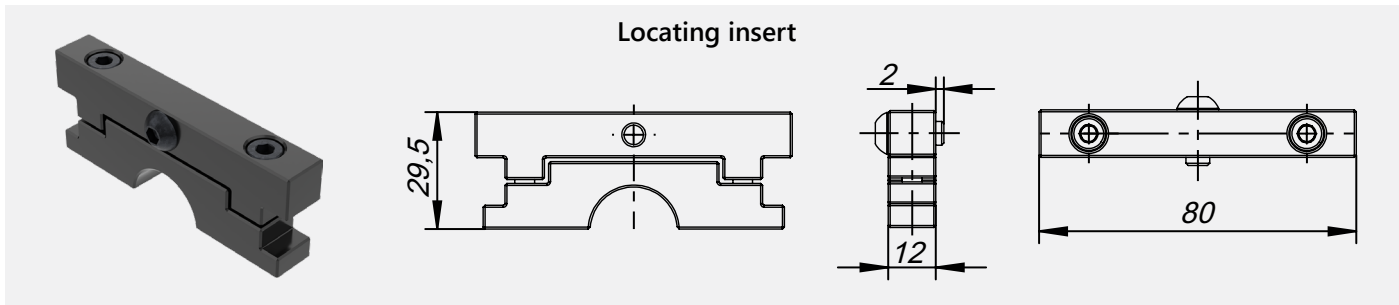
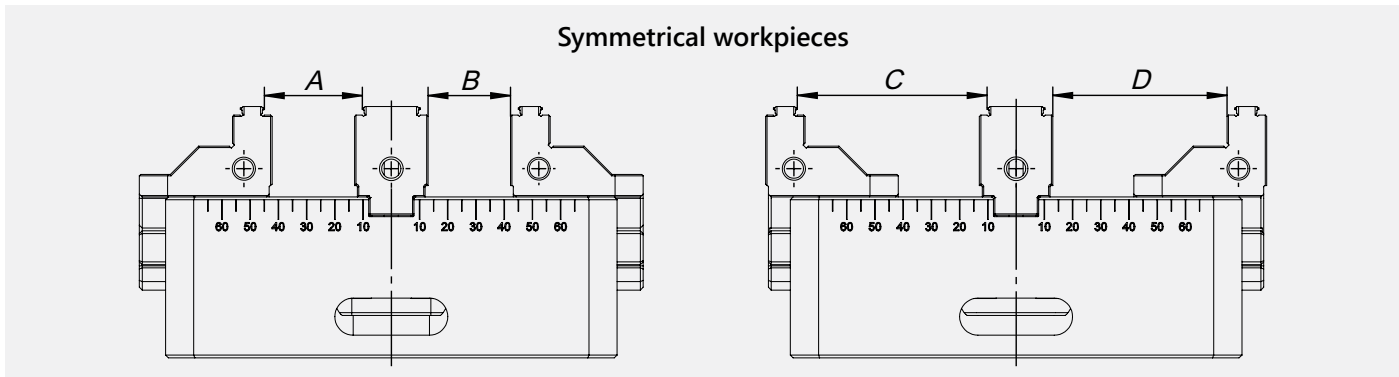


Middle jaw		Floating screw		Optional - locating insert		Used to	Clamping range			
Type	Code No.	Type	Code No.	Type	Code No.		A	B	C	D
SMJ 6650-80	398267750300	6650-80-105	398267760500	-	-	6650-80-105	6÷17	0÷11	26÷37	22÷31
						6650-80-105 SJ	6÷17	0÷11	26÷37	22÷31
SMJ 6650-125	398267751600	6650-125-160	398267762000	-	-	6650-125-160	6÷35	0÷29	39÷67	34÷61
						6650-125-160 SJ	6÷35	0÷29	39÷67	34÷61
		6650-125-310	398267764600	6650-125-310	398267756000	6650-125-310	6÷110	0÷104	39÷142	34÷136
						6650-125-310 SJ	6÷110	0÷104	39÷142	34÷136

Non-symmetrical workpieces - maximum difference

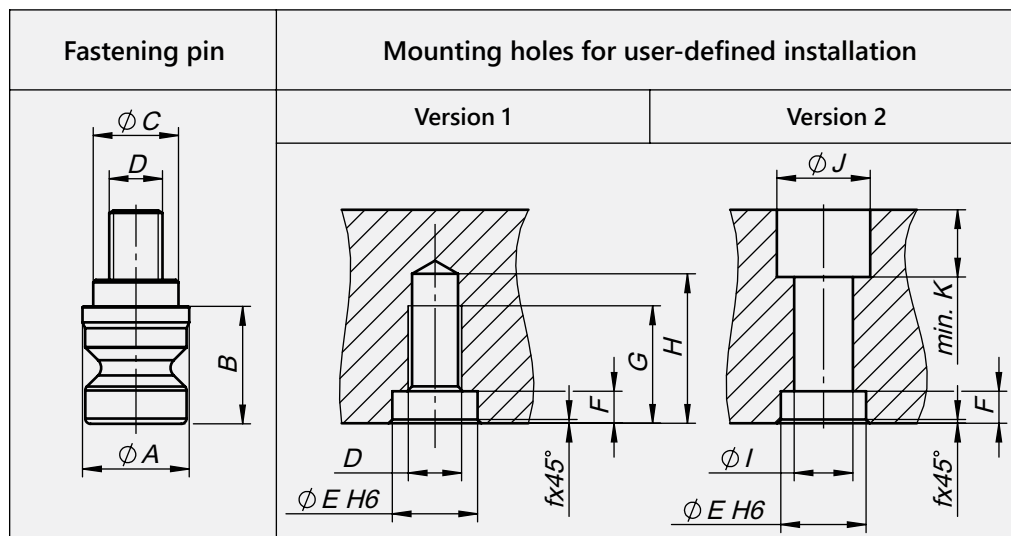
6650-80-105; 6650-80-105 SJ - X = 11 mm;
6650-125-160; 6650-125-160 SJ - X = 27 mm;
6650-125-310; 6650-125-310 SJ - X = 40 mm





6589 ZP SL

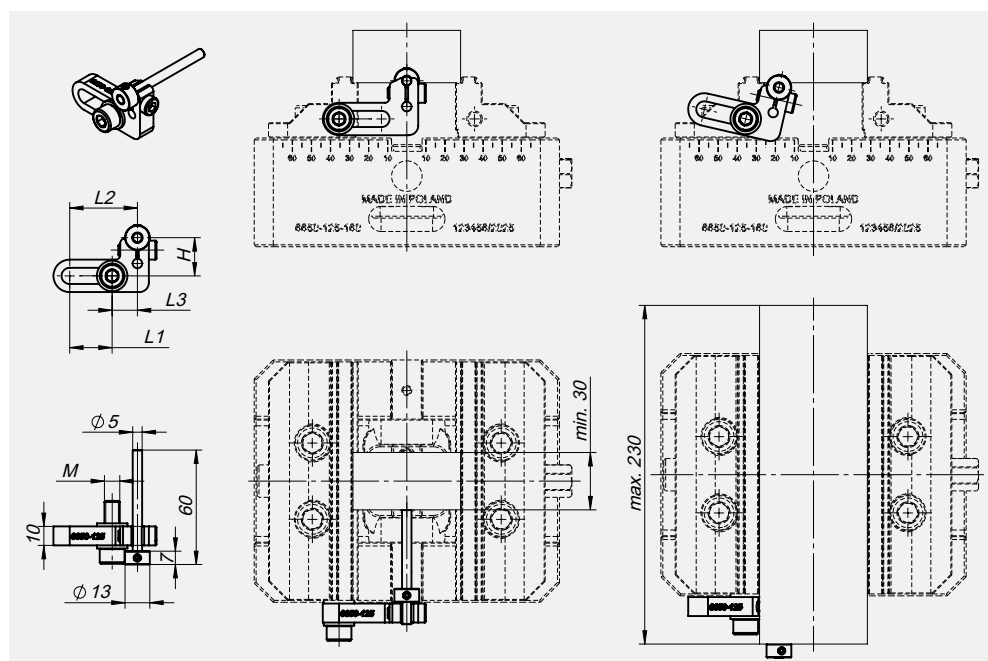
Fastening pins for boards with Zero Point system*



Code No.	Type	Used to	Ø A	B	Ø C	D	Ø E	F	f	G	H	Ø I	Ø J	K
7-631-3990	6589-M8 ZP SL	6650-80-105 6650-80-105 SJ	16	22	12	M8	12	6	0,7	22	26	9	15	9
326000000700	6589-M10 ZP SL	6650-125-160 6650-125-160 SJ	20	22	16	M10	16	6	0,7	22	28	11	18	11
326000000700	6589-M10 ZP SL	6650-125-310 6650-125-310 SJ	20	22	16	M10	16	6	0,7	22	28	11	18	11

*Fastening pins not included, sold separately.

SIDE STOPS 6650

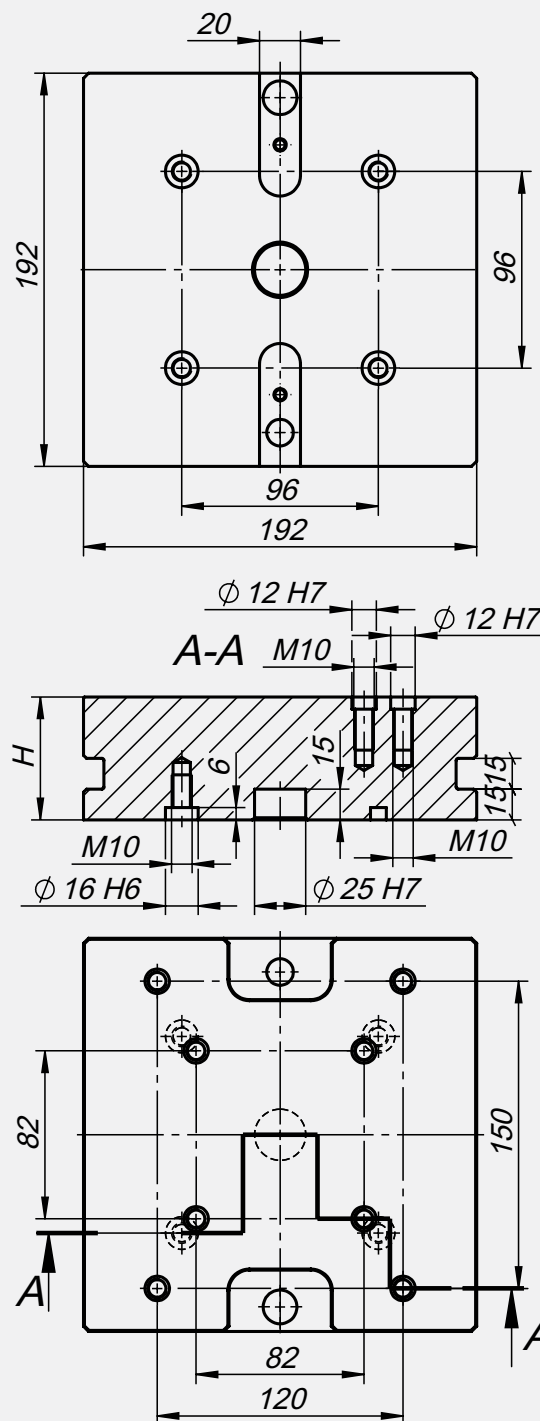
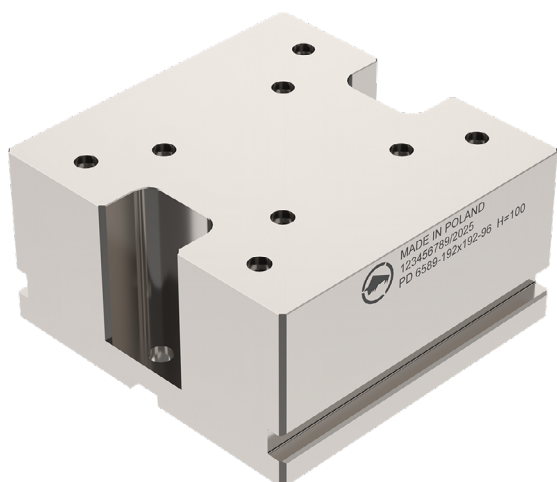
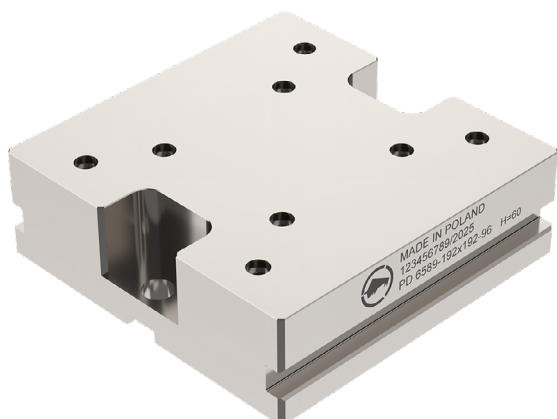


Code No.	Type	Used to	L1	L2	L3	H	L1	M
7-226-930	6650-80	6650-80-105; 6650-80-105 SJ	19,5	29	9,5	16,5	19,5	M6
398267721000	6650-125	6650-125-160; 6650-125-160 SJ	22	35,5	13,5	20	22	M8
398267721000	6650-125	6650-125-310; 6650-125-310 SJ	22	35,5	13,5	20	22	M8

PD 6589

Distance plate

Code No.	Type	H
7-631-3986	PD 6589-192x192-96 H=60	60
396000002300	PD 6589-192x192-96 H=100	100



Features:

- The distance plate is used on 5-axis CNC machines allowing for raising the vise or the workpiece mounted to the zero-point base plate.
- With the distance plate it's possible to increase the angle range of the rotation axis, which allows for machining bigger size or more complex workpieces.
- The distance plate helps increasing precision and quality of machining of complex parts due to possibility of accessing the workpiece from wider variety of angles.
- Ability of accessing the workpiece from more angles in a single setup helps minimizing the setup time and increases productivity.
- The distance plate can be mounted to 96x96 zero-point bases or directly to a T-slotted table using keys and clamps or screws with T-nuts.



Example application with a vise and a zero-point plate – 60 mm and 100 mm height.



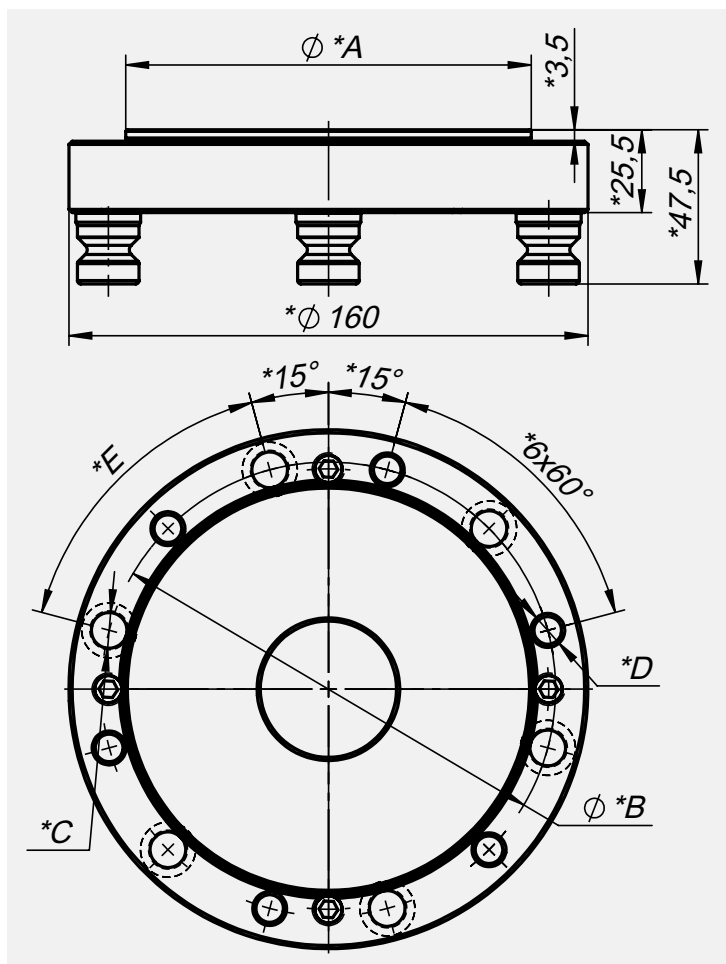
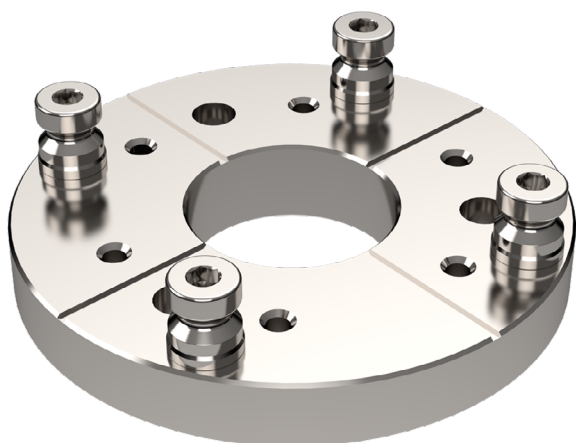
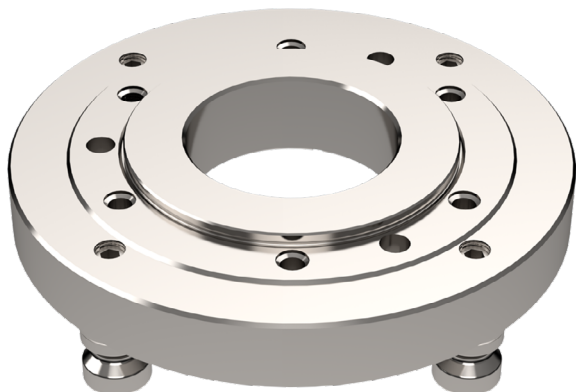
Example of mounting on a zero-point plate.



Example of mounting on a T-slotted table.

9470

Base plates type 9470 for mounting chucks

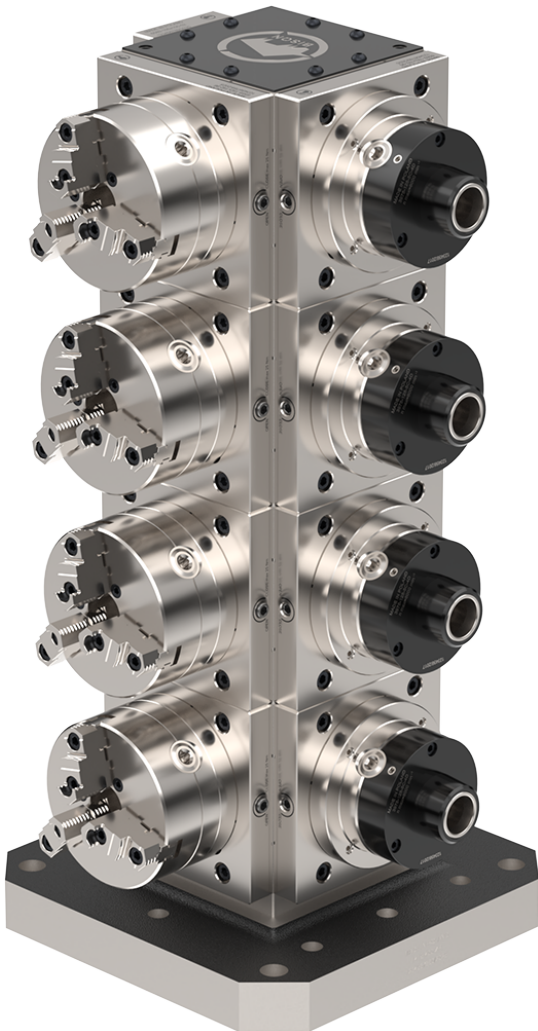


Code No.	Type	Used to	A	B	C	D	E
7-631-0059	9470-125-96x96	3204-125; 3205-125; 3274-125; 3275-125; 3504-125; 3505-125; 3574-125; 3575-125; 3604-125; 3605-125; 3674-125; 3675-125; 3704-125; 3705-125; 3774-125; 3775-125	95	108	3xM8	6xM8	3x120°
7-631-0069	9470-160-96x96	3204-160; 3205-160; 3274-160; 3275-160; 3504-160; 3505-160; 3574-160; 3575-160; 3604-160; 3605-160; 3674-160; 3675-160; 704-160; 3705-160; 3774-160; 3775-160; 3202-160; 3203-160; 3602-160; 3603-160	125	140	6xM10	6xM10	6x60°

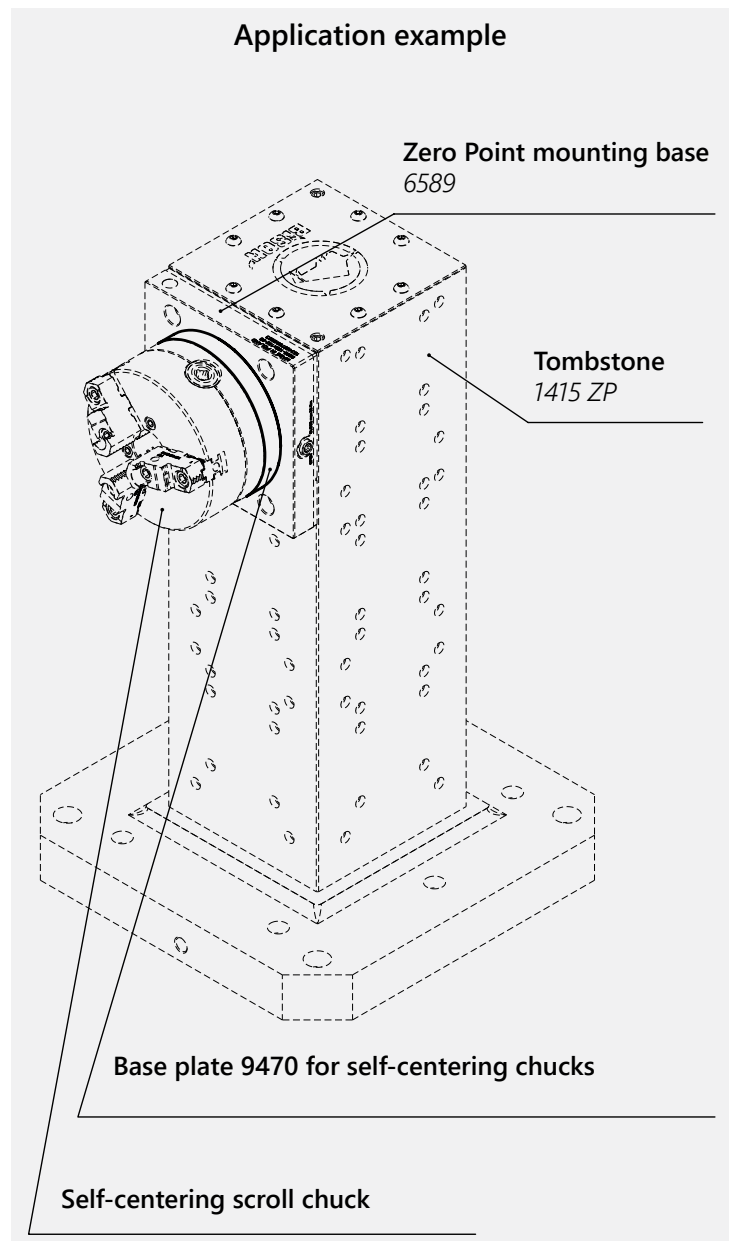
Custom bases for any type of chucks are available upon request.

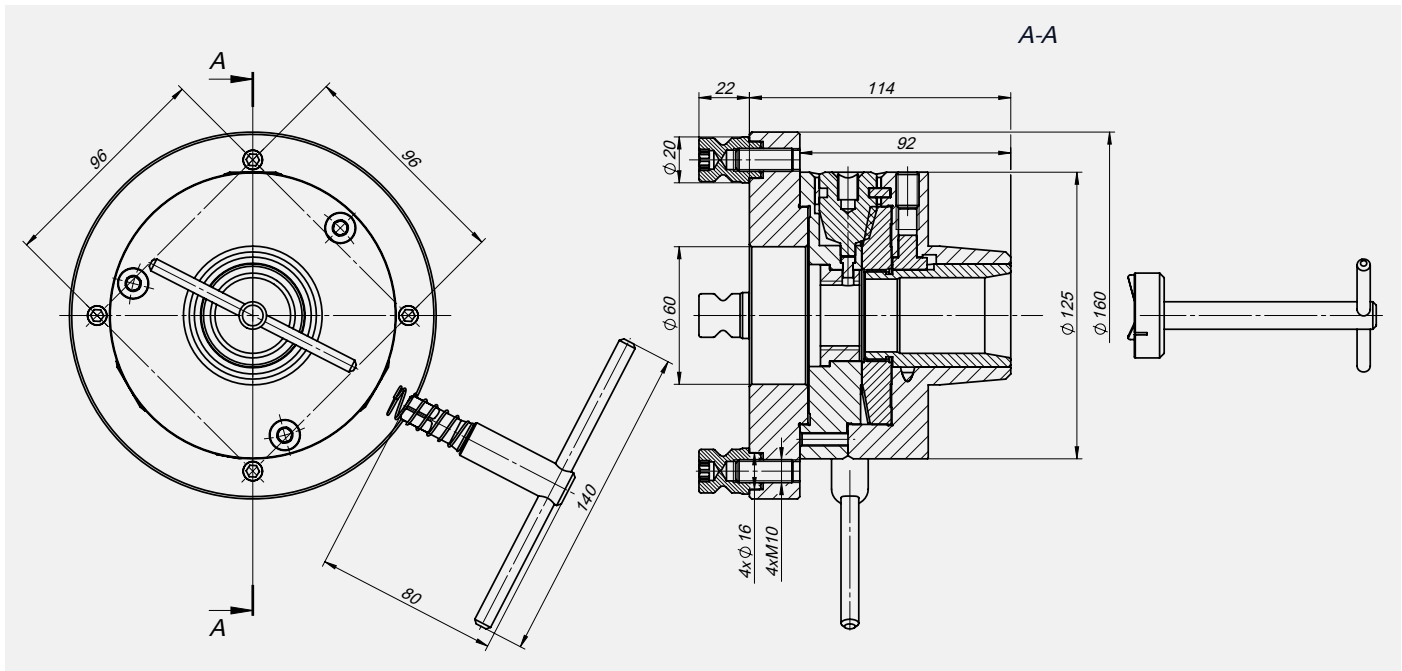
Features:

- Base plates type 9470 are designed for mounting standard plain back chucks to the zero-point bases with 96x96 stud system.
- The baseplate is an interface between a chuck with standard plain back mounting and a zero-point plate type 6589-192x192-96 P or other compatible substitute plates.
- Baseplates for other standard or special products made by Bison are available on request.
- The position tolerance for the chuck mounting pilot to the 96x96 mounting pins is $\pm 0,01\text{mm}$.

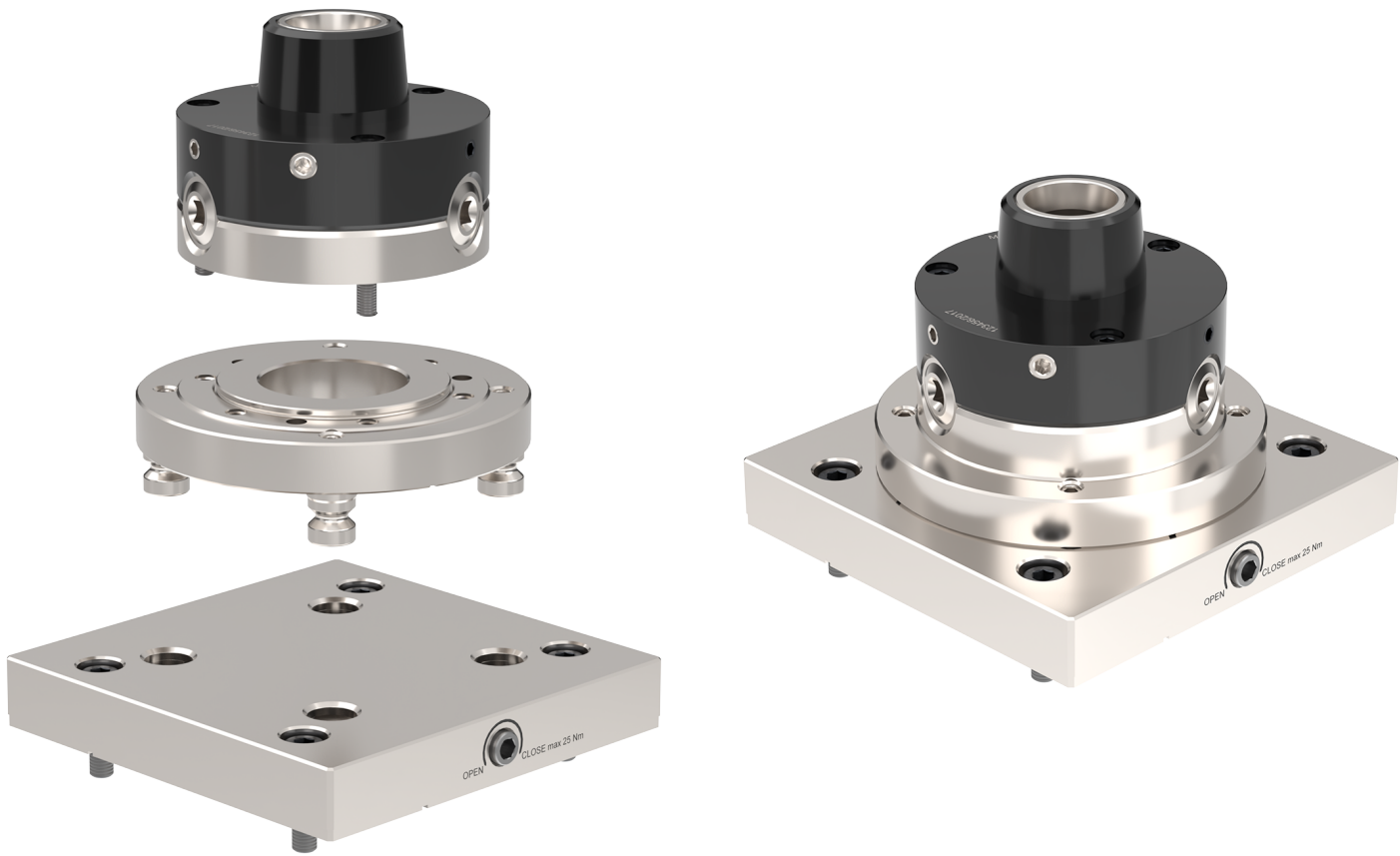


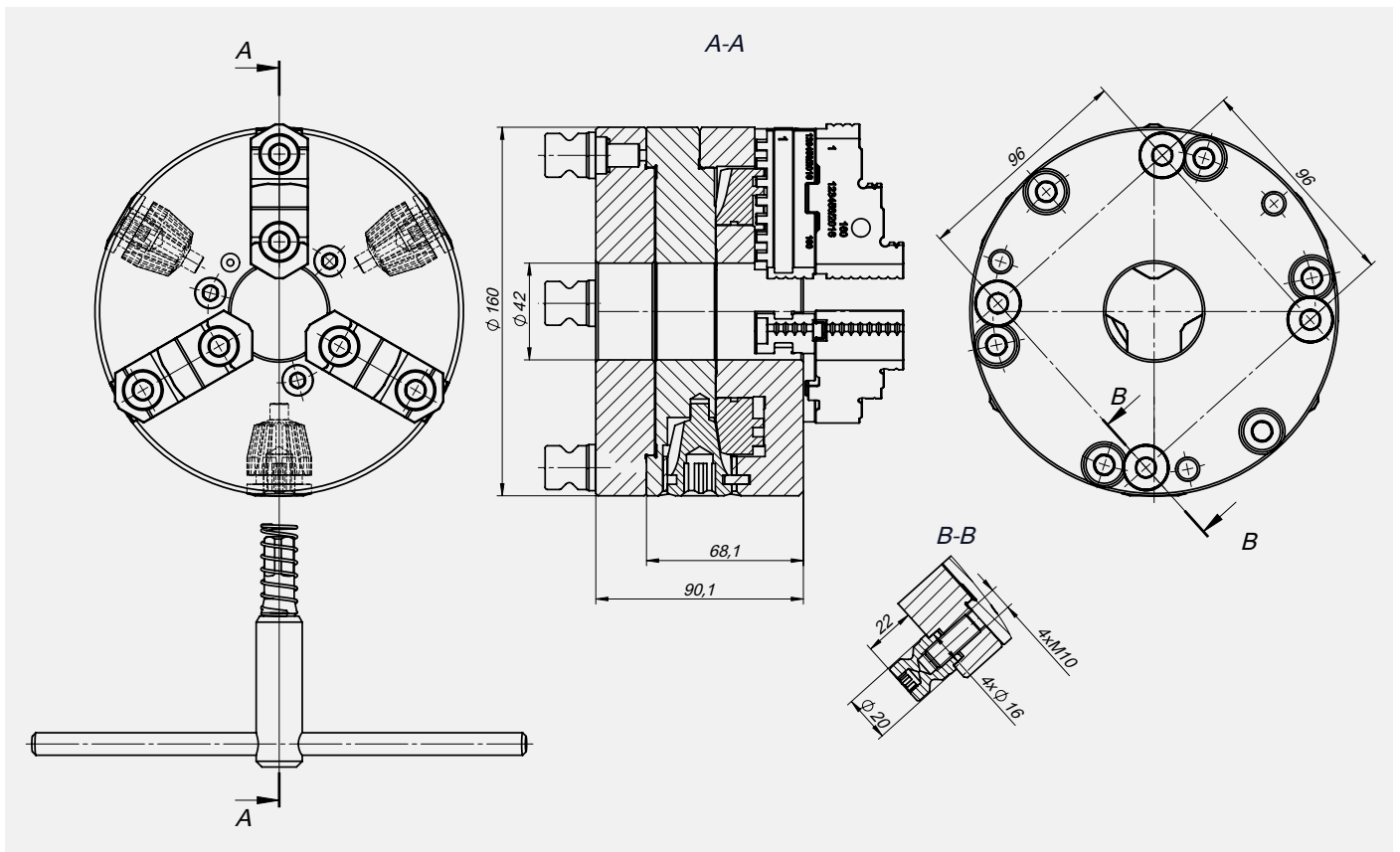
Base plates type 9470 used to mount the chucks type 3205-160 and 3975-125-5C on a tombstone.



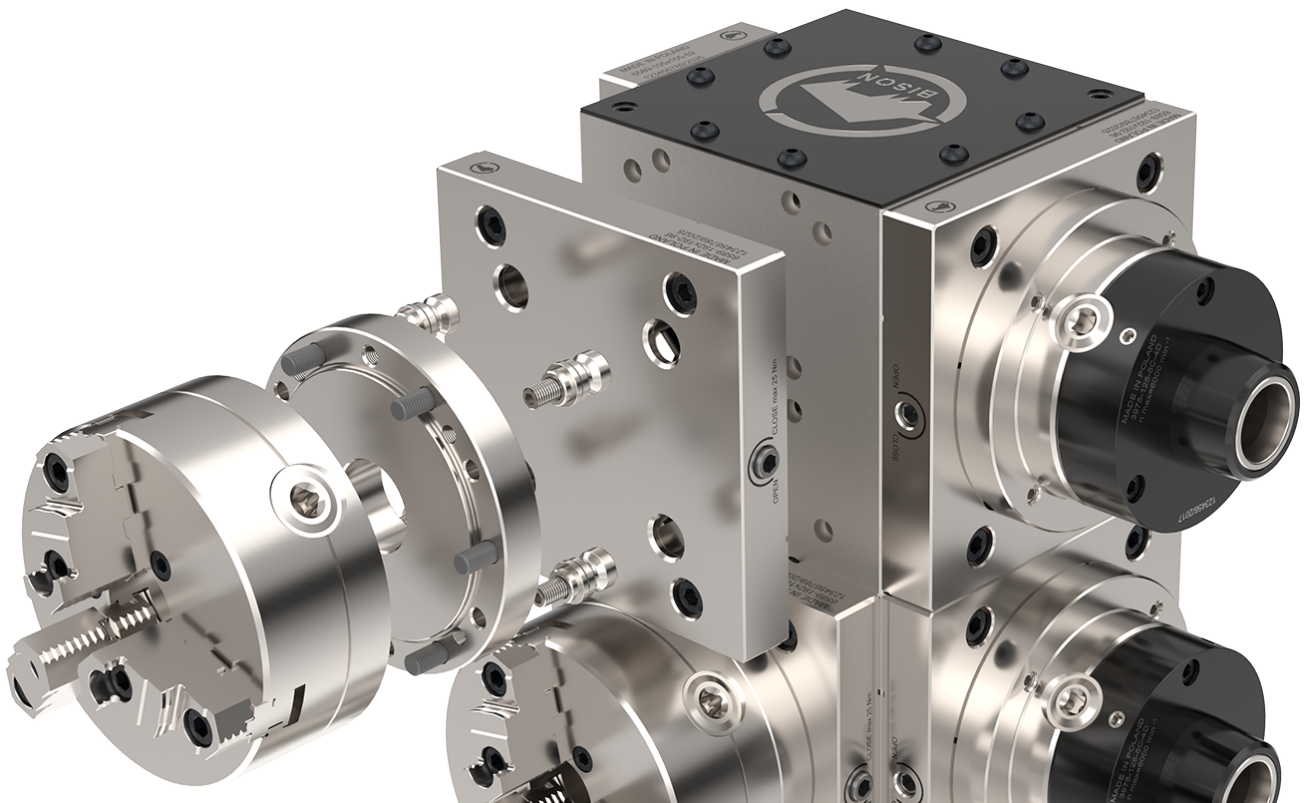


Collet chuck 3975-125-5c with 96x96 base





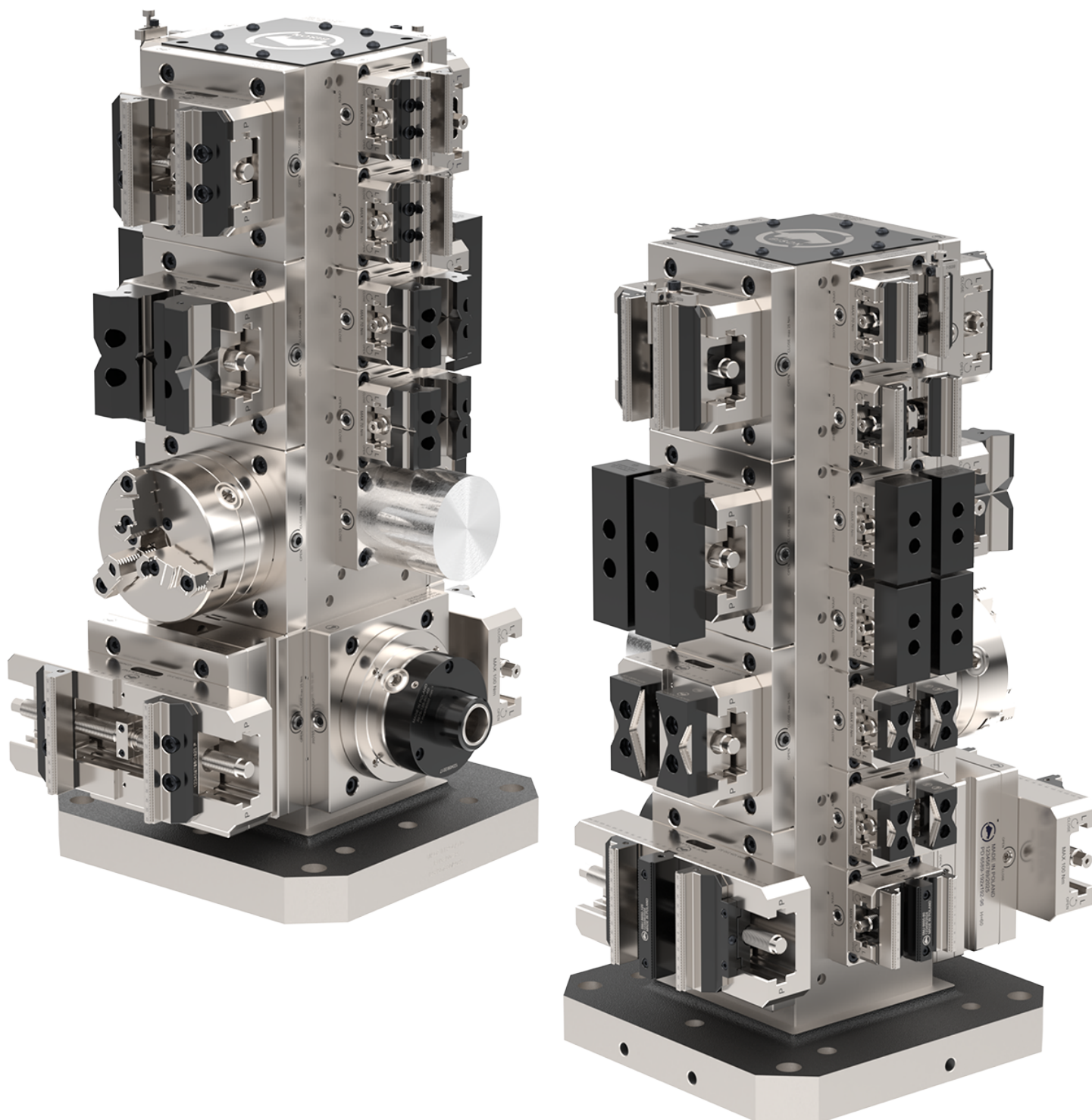
3 jaw scroll chuck 3505-160 with 96x96 plate





1415-500 QA

Bison also provides custom tombstones, allowing for creating variety of flexible fixture setups for machining centers.







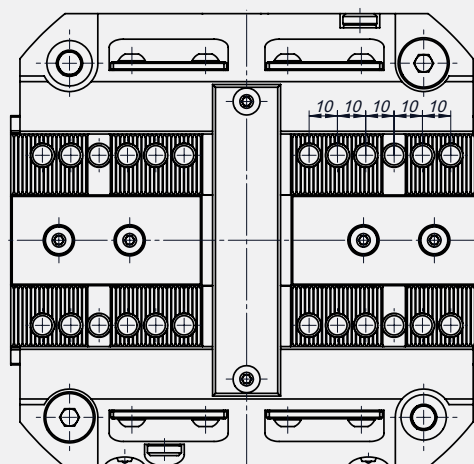
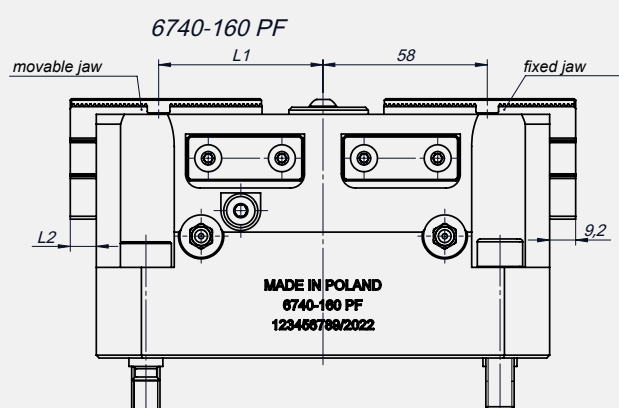
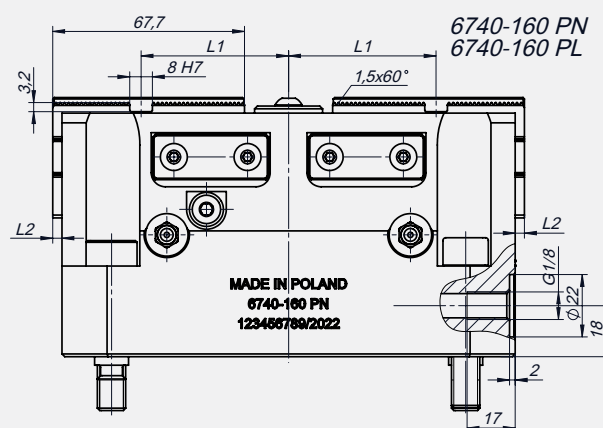
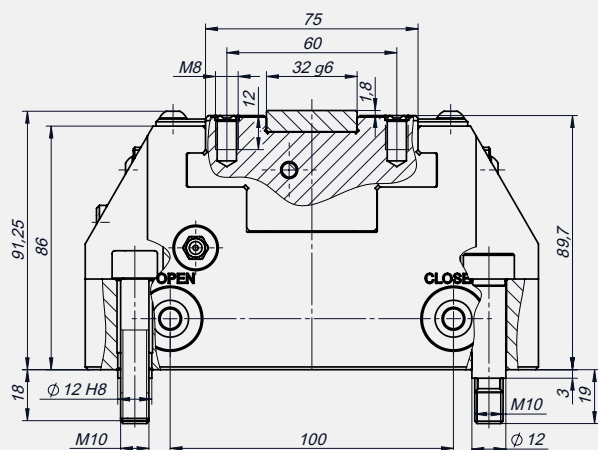
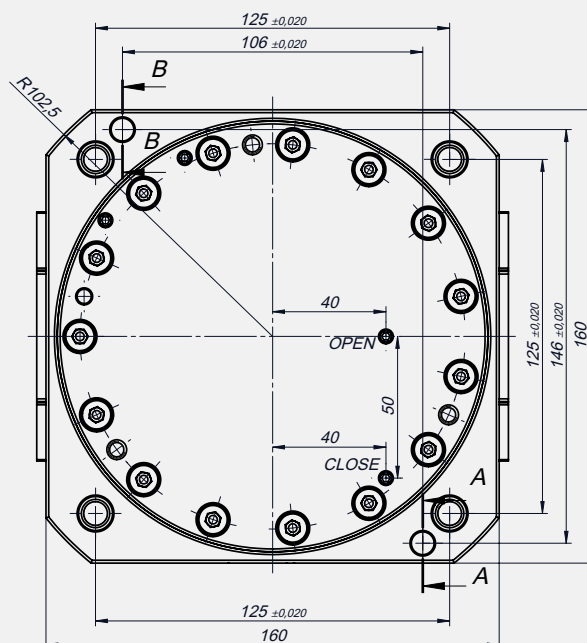
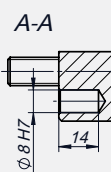
6740

Self-Centering Power Vise

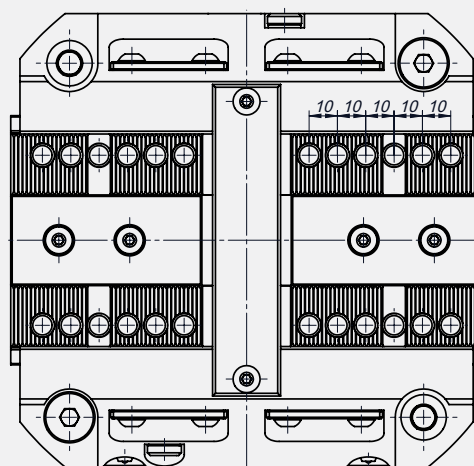
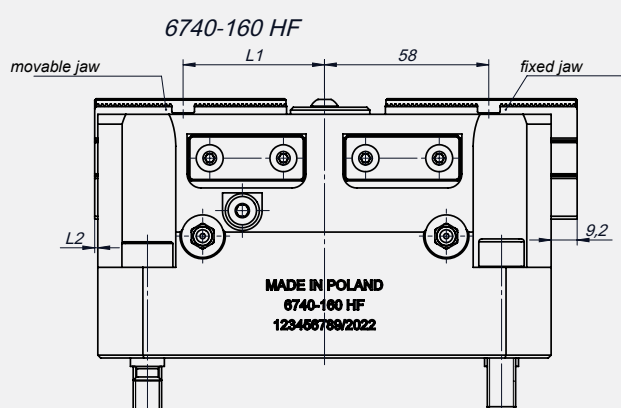
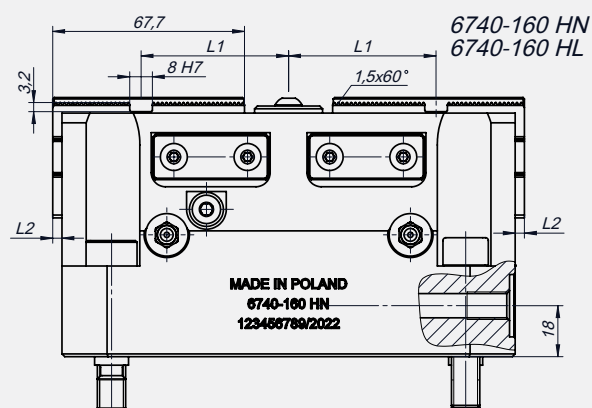
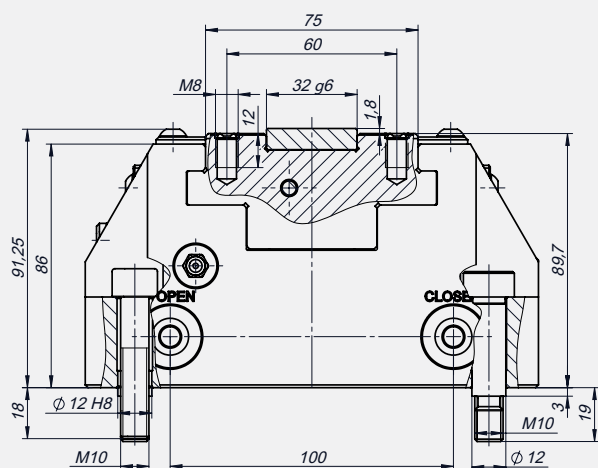
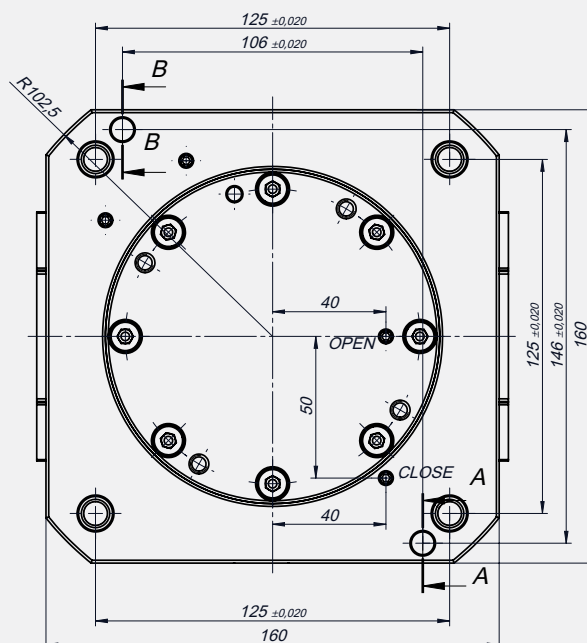
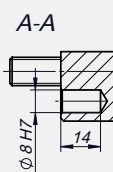


Features:

- High repeatability
- High rigidity
- Internal components sealed from contamination
- Vise body designed for easy cleaning
- Compact design
- Linear adjustment of the actuating pressure
- Linear correlation between the input pressure and the clamping force
- The vises are available in two actuation options:
 - Pneumatic actuation – type 6740 P
 - Hydraulic actuation – type 6740 H
- The vises are available in the following variants:
 - with standard jaw travel – type 6740-160 PN; 6740-160 HN
 - with extended jaw travel – type 6740-160 PL; 6740-160 HL
 - with one movable and one stationary jaw – type 6740-160 PF; 6740-160 HF
- Max clamping force:
 - Vices with pneumatic actuation:
 - with standard jaw travel – $F=40$ [kN] for input pressure $P=9$ [bar]
 - with extended jaw travel – $F=19$ [kN] for input pressure $P=9$ [bar]
 - with one movable and one stationary jaw - $F=32$ [kN] for input pressure $P=9$ [bar]
 - Vices with hydraulic actuation:
 - with standard jaw travel – $F=40$ [kN] for input pressure $P=30$ [bar]
 - with extended jaw travel – $F=38$ [kN] for input pressure $P=60$ [bar]
 - with one movable and one stationary jaw - $F=32$ [kN] for input pressure $P=25$ [bar]



Part No.	7-227-060P	7-227-061P	7-227-062P
Type	6740-160 PN	6740-160 PL	6740-160 PF
max. L1	52.06	58	58
max. L2	3.26	9.2	9.2
Jaw stroke	3	8.1	8.1
Max. pressure [bar]	9	9	9
Max. clamping force [kN]	40	19	32
Weight [lbs]	13.4	13.4	13.5



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Properties:

- Standardized location of the holes for mounting the vise on the machine table and powering connections allows for interchanging the pneumatic with hydraulic vises
- The holes for mounting the vise on the machine table are made in H7 tolerance
- The body and the working parts of the vise are hardened for high precision and long service time
- Features venting and central lubrication
- Allows for central powering
- Master jaws with a socket, T-nut and 1.5x60° serration
- Outside and inside clamping
- Stroke control with proximity switches (optional)

Standard Equipment:

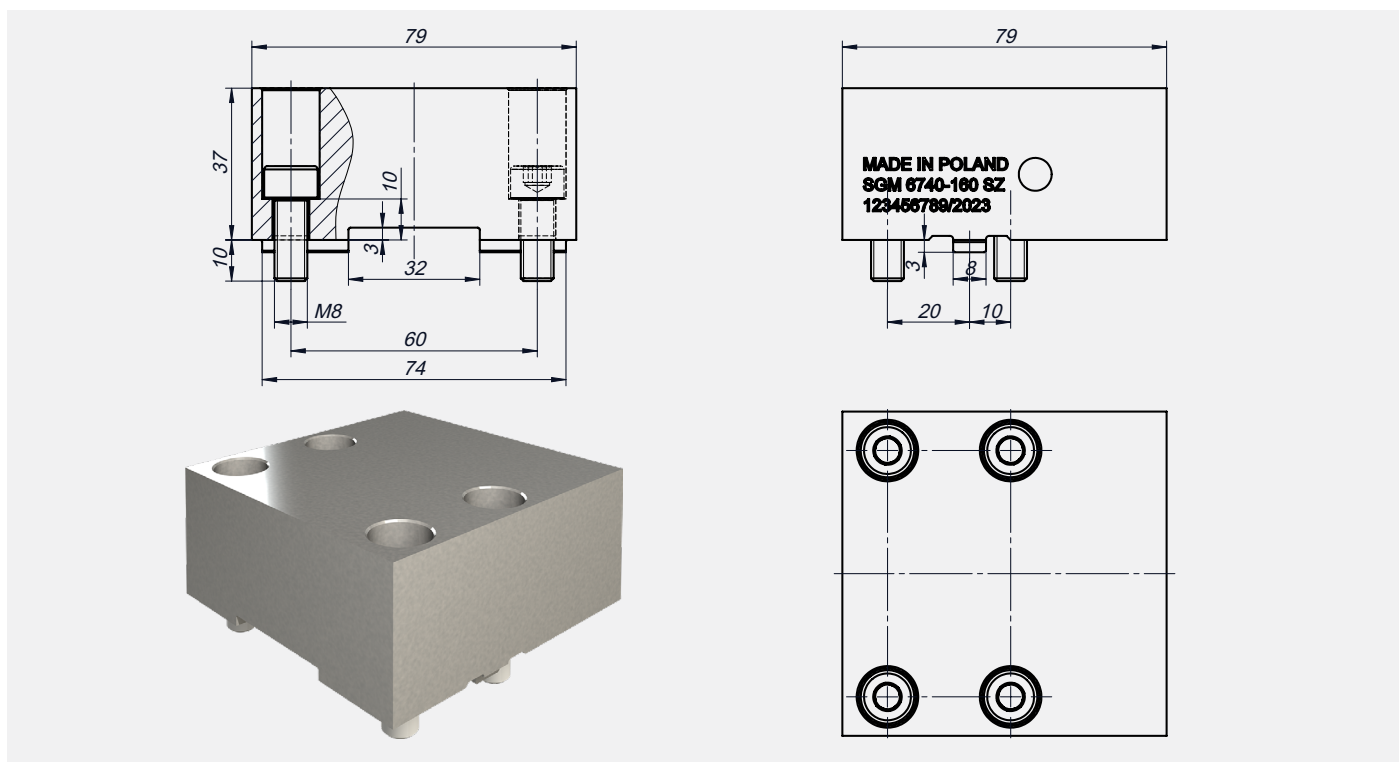
- Self-centering vise without top jaws
- Screws for mounting and setting the vise on the table

Optional Equipment:

- Soft Top Jaws with T-nuts
- Hard Top Jaws with Serrated Inserts, 1.5x60° serration
- Base plate with valve

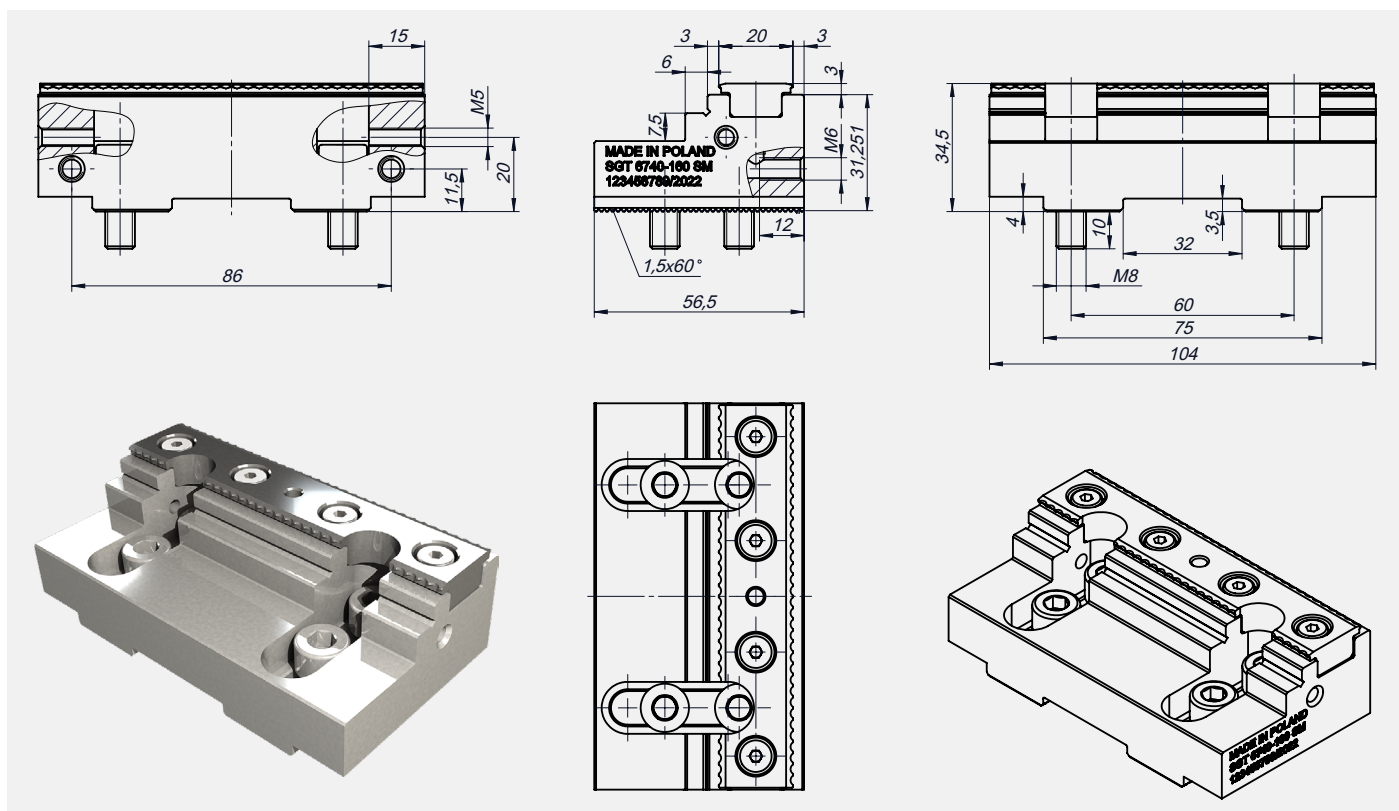
SGM 6740-160 SZ

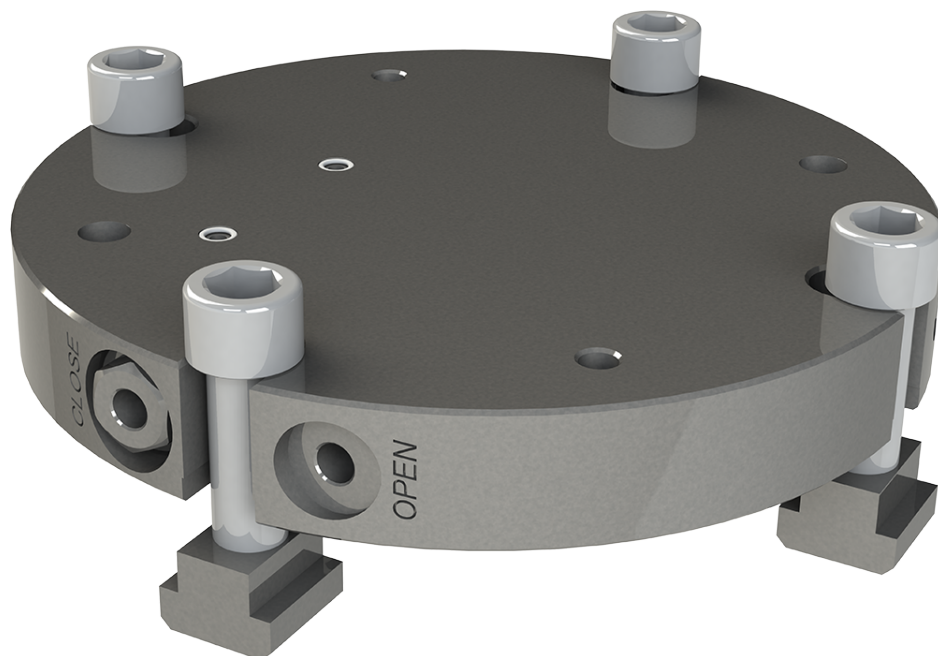
Soft top jaw



SGT 6740-160 SM

Metric hard wide top jaw



6780-160 P**Baseplate with power connector for vises type 6740 P****Features:**

- Spacing of the clamping channels 185x185mm, T-nuts M16/18mm.
- The baseplate for type 6740 P vise is equipped with a non-return valve.
- The baseplate ensures maintaining the operating pressure of the vise after disconnecting from the powering unit for transportation.
- Allows for machining of the workpieces held by the vise after disconnecting it from the powering unit.
- Powers the vise through the additional dedicated channels located on the bottom part of the vise.
- Designed to be mounted on the tables with T-slots located 100 mm apart.
- Allows for mounting on the tables with other T-slot layouts, using additional clamps.
- The entire baseplate, including the area in the center, is made of solid material, which allows for adding a mounting hole for "Zero-Point" system with a single pin.



6830
6830 LZ

NC Precision Compact Vise

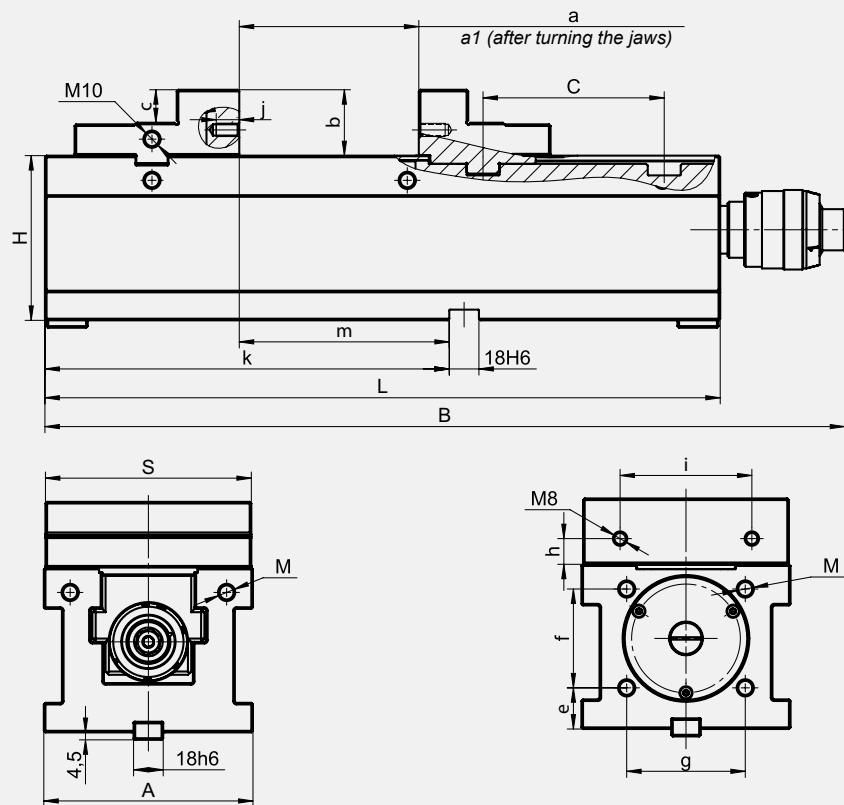


This precision compact vise is designed for precise milling and grinding work. It can be widely used on CNC and conventional machines. The design, accuracy and quality ensure exact positioning of the workpiece and obtaining large clamping forces. Vises can also be set up in multi-vise configurations and be mounted directly on machine pallets. This vise features multi-level clamping force enhancement system.

Features:

- high body rigidity
- high repeatability of workpiece positioning
- reversible fixed and movable jaw
- the possibility of using replaceable clamping inserts
- body and jaws are made of high-quality alloy steel, hardened to $58 \div 62$ HRC
- the ability to work in a vertical position without the need for a pallet
- possibility of setting the vice on side surfaces of the body

6830



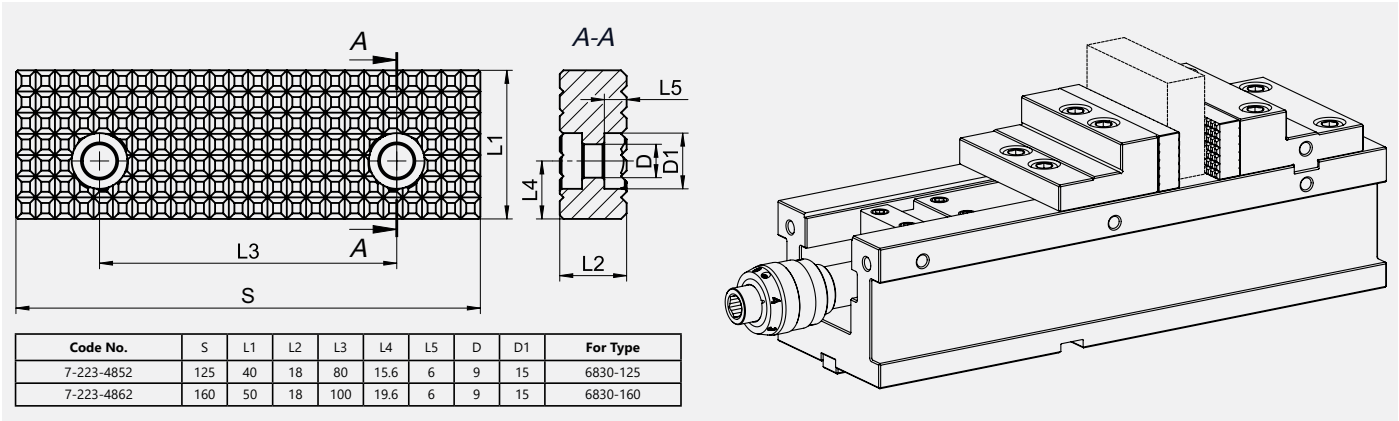
Type	S	L	H	A	B	C	a	a1	b	c	M	e	f	g	h	i	j	k	m	Clamping force [kN] ±15%				Weight [lbs]
																				position 1 (2*)	position 2 (4*)	position 3 (6*)	position 4	
6830-125-410-336	125	410	100 _{-0,01}	127	486	110	0÷220	116÷336	40	20	M10	25	60	72	15,6	80	14	245,5	127,5±0,015	10	20	30	40	85.3
6830-160-540-464	160	540	115 _{-0,01}	162	621	2x110	0÷333	131÷464	50	25	M12	25	75	110	19,6	100	16	197	70±0,015	20*	40*	60*	-	167.3

Standard accessories:

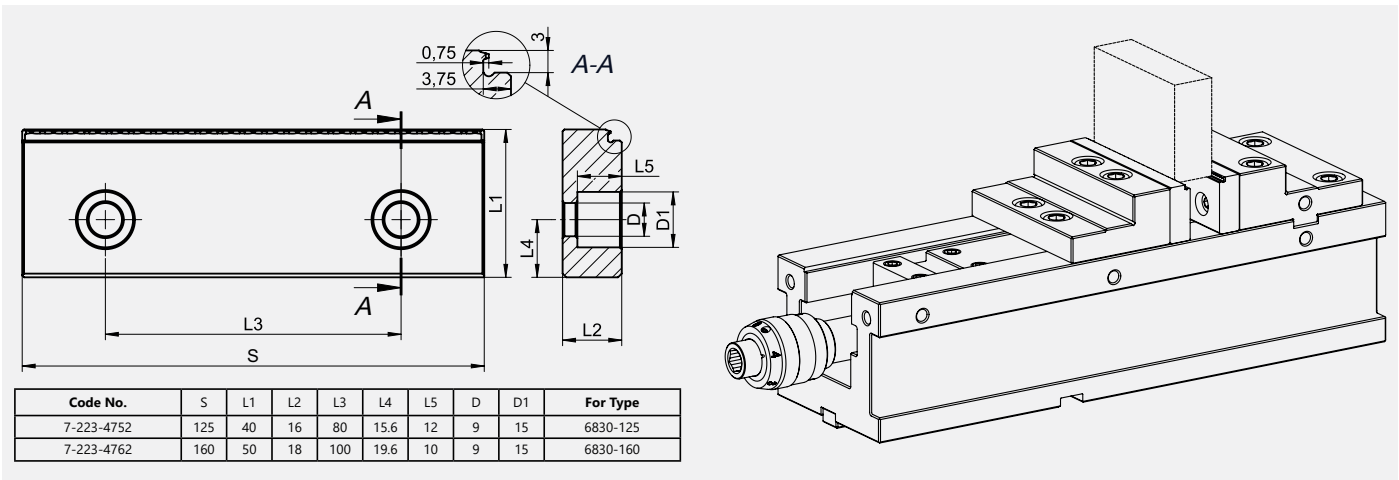
- Wrench
- Slot nuts
- Vice clamps

Accessories and application examples

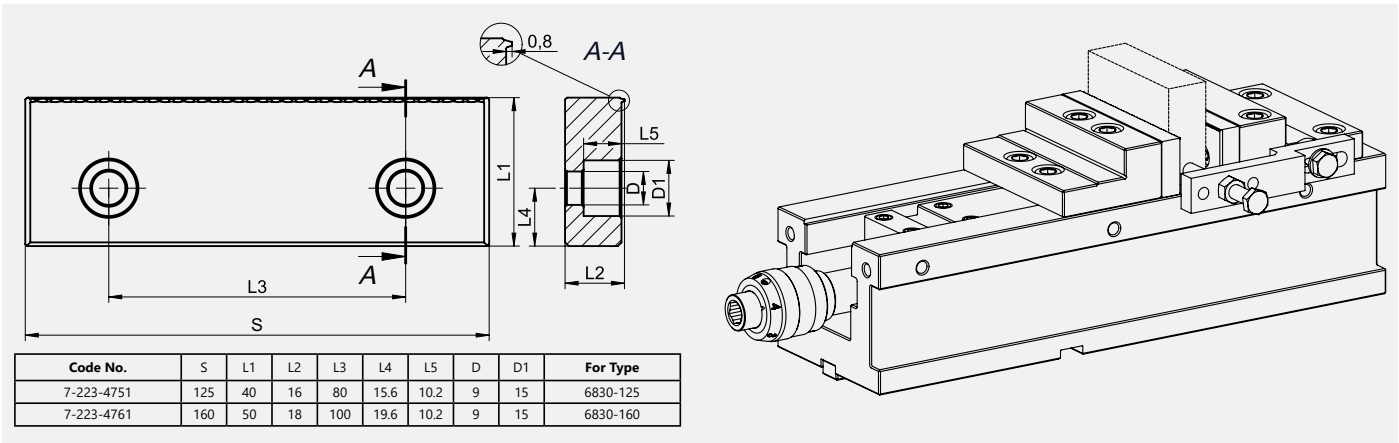
Reversible Jaw Inserts WS CR, Fine Grooved/Grooved For, 2pc Set



Step Claw Jaw Inserts WS KBS, 2pc Set

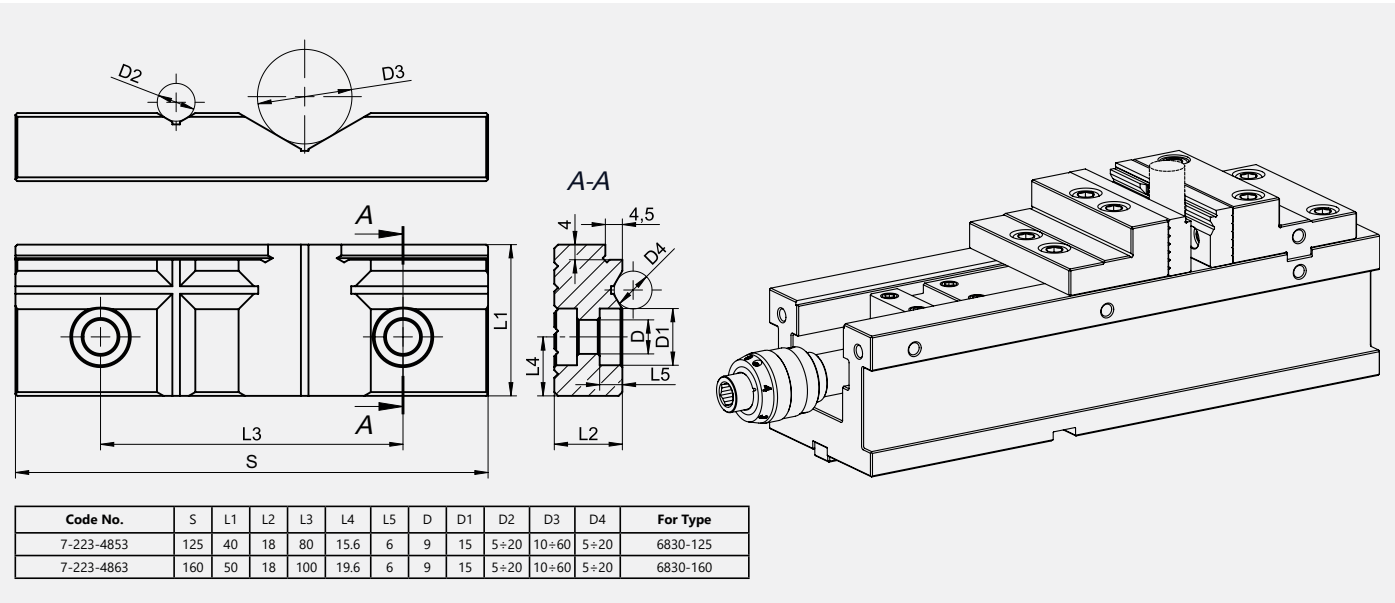


Claw Jaw Inserts WS KB, 2pc Set

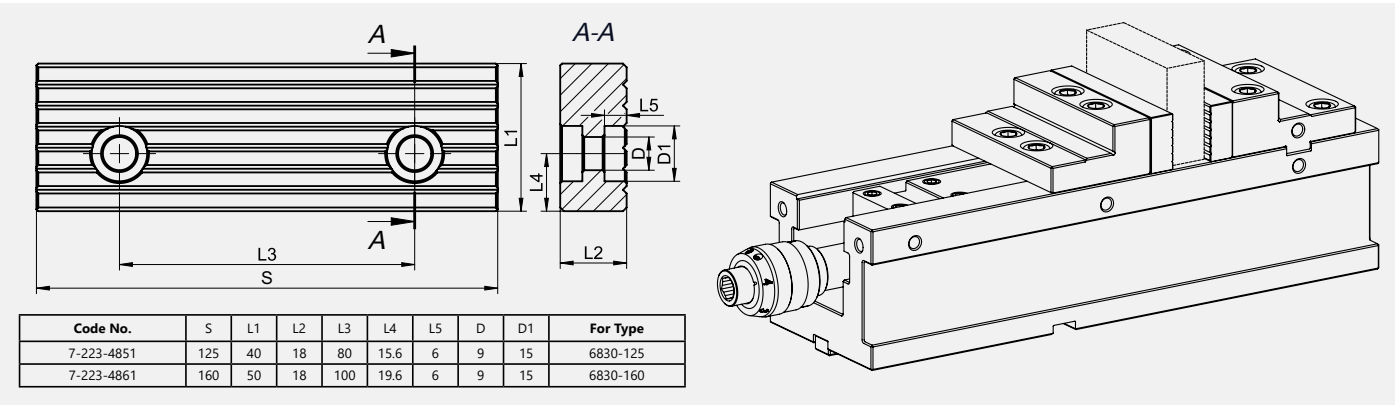




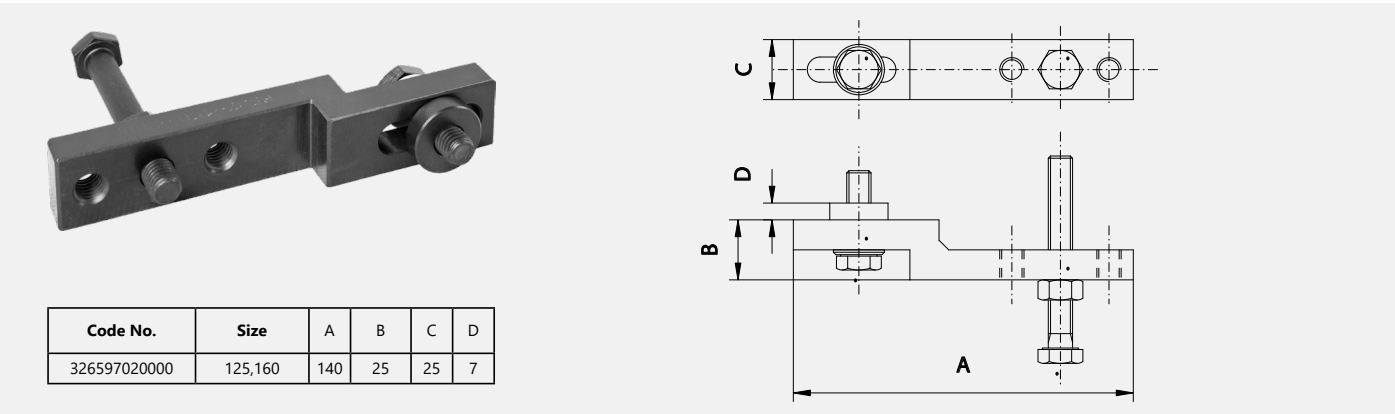
Reversible Jaw Inserts WS PR, Prism/Grooved, 2pc Set



Reversible Jaw Inserts WS R, Grooved/Smooth, 2pc Set

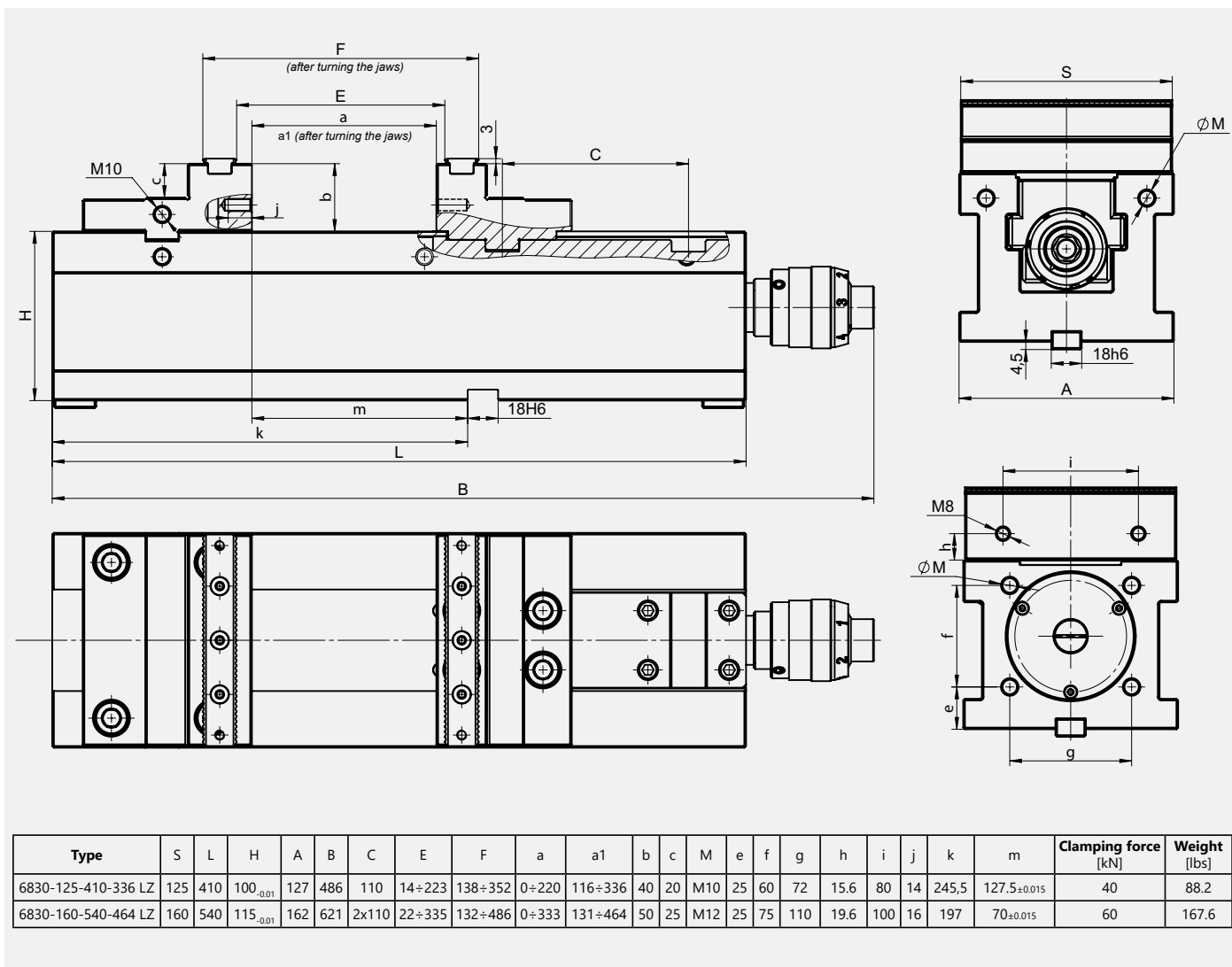


Side Stop



6830 LZ

Vises are also available with interchangeable serrated gripping inserts.



The vise 6830 in the "LZ" version can be turned into the standard 6830 version by exchanging the hard top jaws with the jaws as specified in the chart below.

Code No.	Type
396000001800	JAW INSERT SET 6830-125-410-336
396000001900	JAW INSERT SET 6830-160-540-464



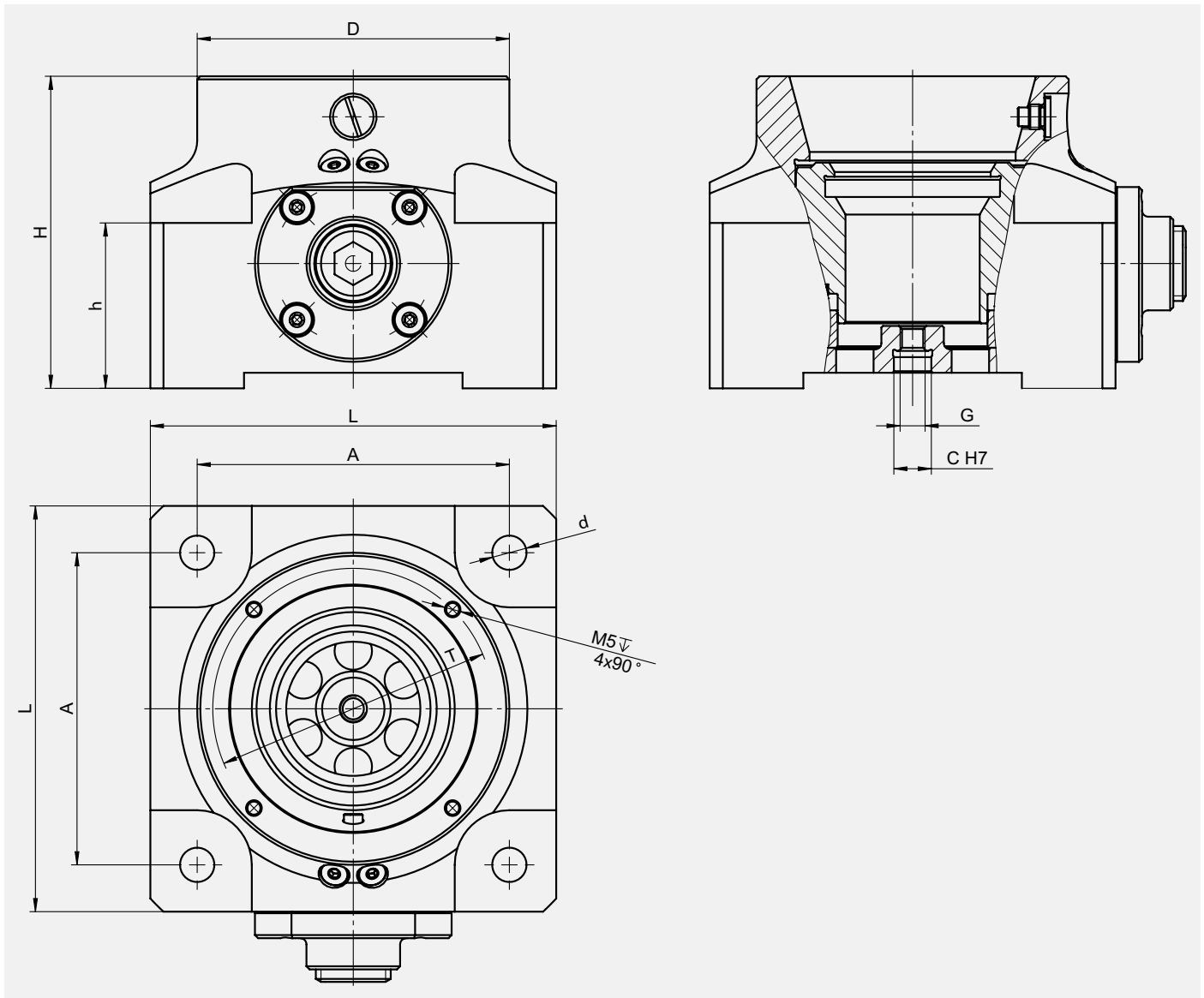
9316

Manual stationary chuck for clamping heads



Features:

- High clamping force and rigidity ensuring high precision machining
- High efficiency due to quick change and assembly of the clamping heads
- High flexibility due to compatibility with standard clamping heads
- Ideal for 5-axis machining due to compact design



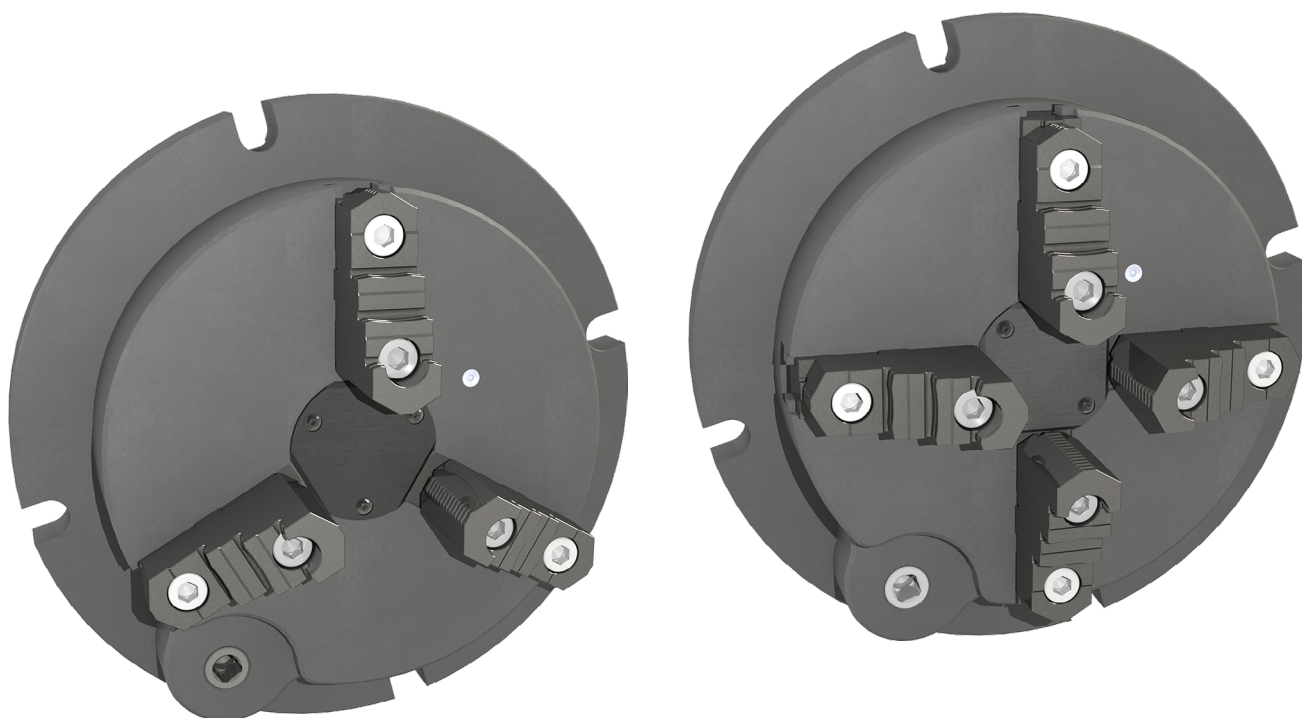
Code No.	Type	A	L	H	h	D	d	G	C	T	Clamping range Ø	Weight [lbs]
7-862-0640	9316-42	100	130	100	53	100	11	M8	12	90	4-42	17.4
7-862-0650	9316-52	100	130	100	53	100	11	M8	12	90	6-52	16.8
7-862-0660	9316-65	120	150	100	53	120	11	M10	16	110	4-65	21.2
7-862-0690	9316-100	170	200	110	60	165	13	M12	20	155	40-100	40.4

Properties:

- Manually operated with a SW 12 wrench
- Repeatability ≤ 0.01 mm
- Collets closed by pull-down action
- Optional workpiece stops
- Can be mounted horizontally or vertically
- Threaded holes for the front-side stops

9416
9417

Self-centering milling fixture

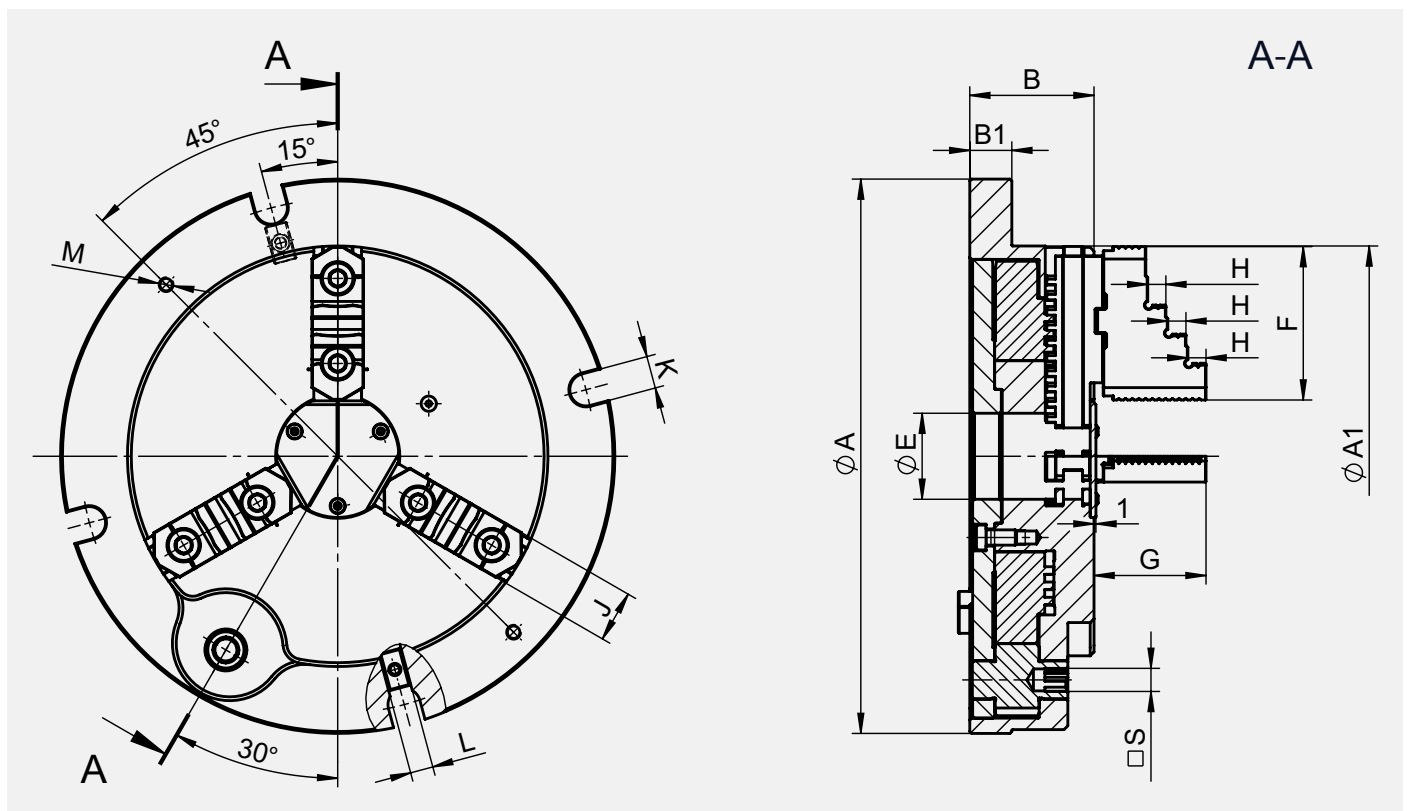


The unmatched advantage of our milling fixtures is their wide clamping range and long jaw travel, which allows for clamping workpieces of various sizes without the need for changing the jaws or for storing a large number of jaws in different sizes.

Features:

- A milling fixture in the form of a spiral lathe chuck with split jaws, integrated with the base.
- Depending on the adaptation, it can be used on milling machine tables, T-towers, drill tables, surface grinders.
- It has a mechanism drive from the front of the fixture, you can use a standard wrench with a spring or a ratchet knob with a cap.
- The fixture is sealed against chips, the center by the lid, and the guides by extra teeth on the jaw.
- It has two t-stones and 4 recesses for fastening screws to be fixed to the table/tower/pallet/. It is possible to attach it by the flange of the fixture through clamping claws to the machine table.
- The fixture is low, which is a big advantage for machine tools with a small Z-axis travel, because it does not limit the machine's movements like a chuck with a base.
- When the profile is as low as possible, standard 3200 soft jaw can be used and shaped accordingly.

9416

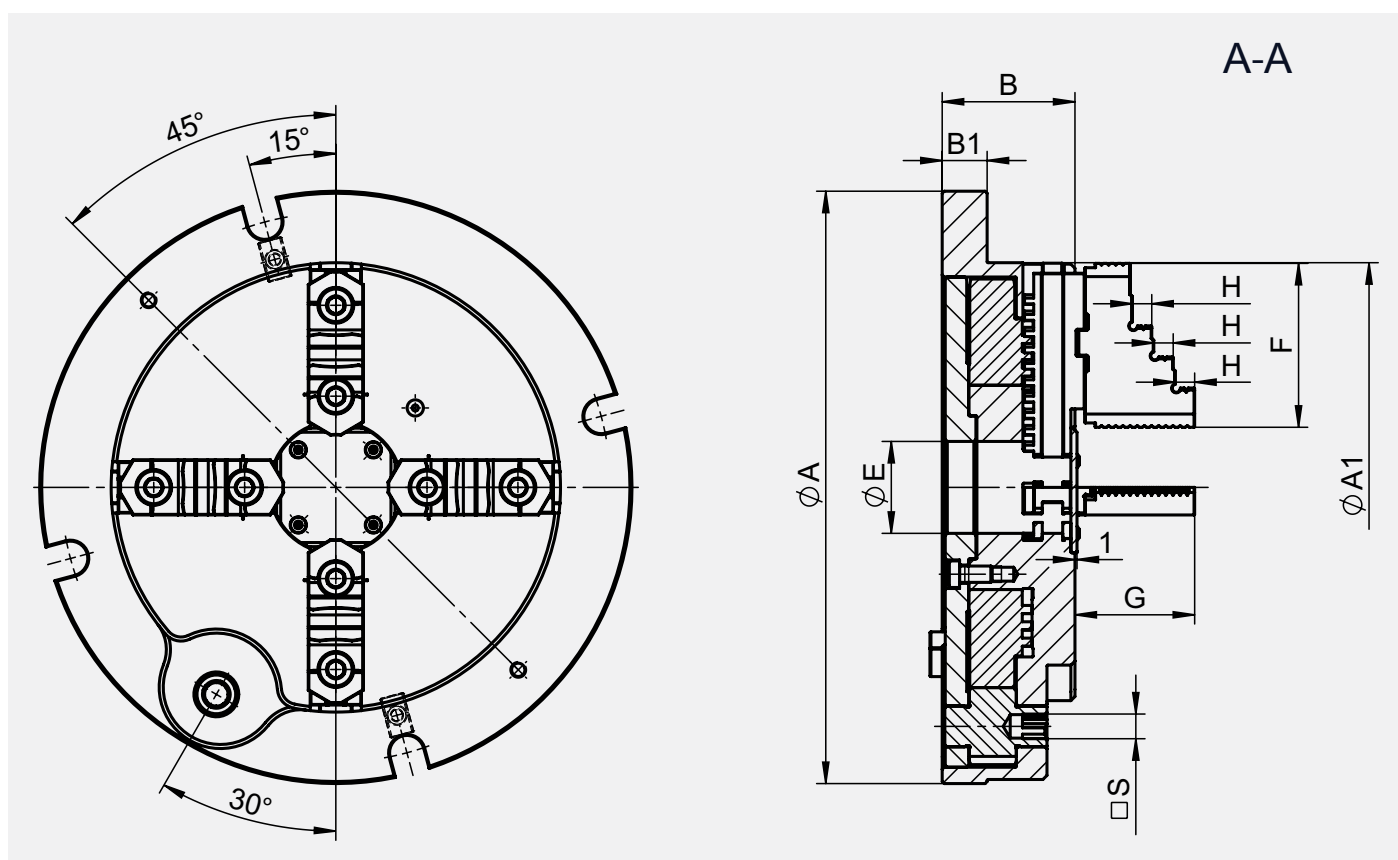


Code No.	Type	Ø A	Ø A1	B	B1	Ø E	F	G	H	J	K	L	M	□ S	n x J	Weight [lbs]
7-640-0630	9416-160 FM US	237	175	52	17	32	67	51	8.5	25	17	12	-	9	3	27.1
7-640-0830	9416-200 FM US	290	220	65	22	45	80	58.6	9.5	27	17	12	-	11	3	51.8
7-640-1030	9416-250 FM US	350	275	73	22	57	95	63.6	12	32.5	20	18	M8	14	3	83.3
7-640-1230	9416-315 FM US	405	335	80	24	80	110	71.4	13	37	20	18	M8	14	3	128.8

Standard accessories:

- wrench "T"
- 1/2" ratchet with internal square
- □ S to 1/2" adapter
- eye bolt (only 250 and 315) -2 pcs.

9417

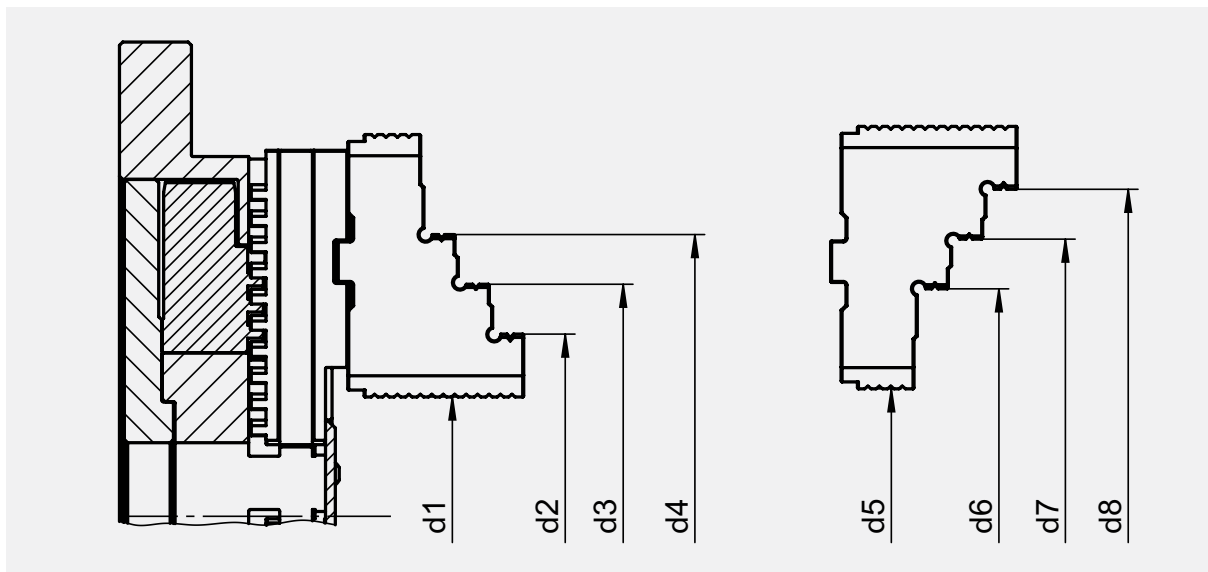


Code No.	Type	Ø A	Ø A1	B	B1	Ø E	F	G	H	J	K	L	M	□ S	n x J	Weight [lbs]
7-640-0640	9417-160 FM US	237	175	52	17	32	67	51	8.5	25	17	12	-	9	4	28
7-640-0840	9417-200 FM US	290	220	65	22	45	80	58.6	9.5	27	17	12	-	11	4	53.1
7-640-1040	9417-250 FM US	350	275	73	22	57	95	63.6	12	32.5	20	18	M8	14	4	85.1
7-640-1240	9417-315 FM US	405	335	80	24	80	110	71.4	13	37	20	18	M8	14	4	131.4

Standard accessories:

- wrench "T"
- 1/2" ratchet with internal square
- □ S to 1/2" adapter
- eye bolt (only 250 and 315) -2 pcs.

Clamping range

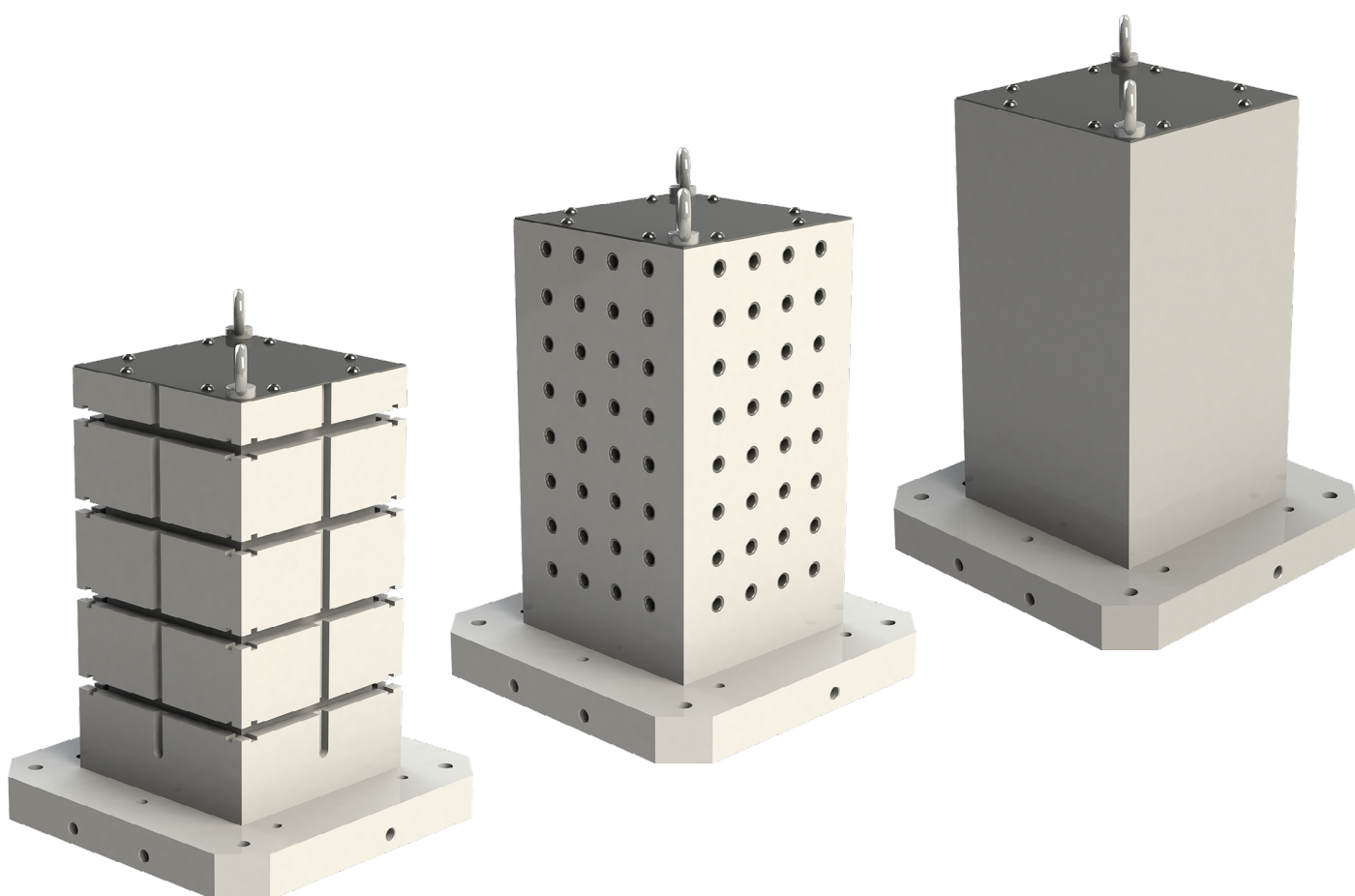


Type	d1	d2	d3	d4	d5	d6	d7	d8
9416-160 FM US	32÷61	67÷95	93÷121	115÷144	38÷66	90÷119	114÷143	142÷160
9417-160 FM US	36÷61	71÷95	97÷121	119÷144	42÷66	94÷119	118÷143	146÷160
9416-200 FM US 9417-200 FM US	42÷73	83÷113	113÷143	142÷172	47÷78	109÷139	140÷170	170÷200
9416-250 FM US 9417-250 FM US	60÷98	108÷145	143÷180	178÷216	66÷105	141÷179	178÷216	214÷250
9416-315 FM US	100÷166	151÷217	193÷259	235÷302	76÷143	163÷230	207÷273	250÷315
9417-315 FM US	106÷166	157÷217	199÷259	241÷302	82÷143	168÷230	212÷273	255÷315

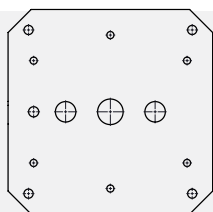
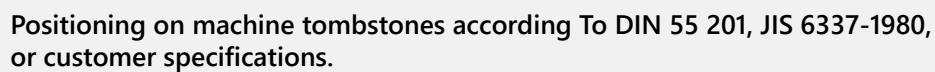


1415
1415 DS
1415 ZP

Tombstones

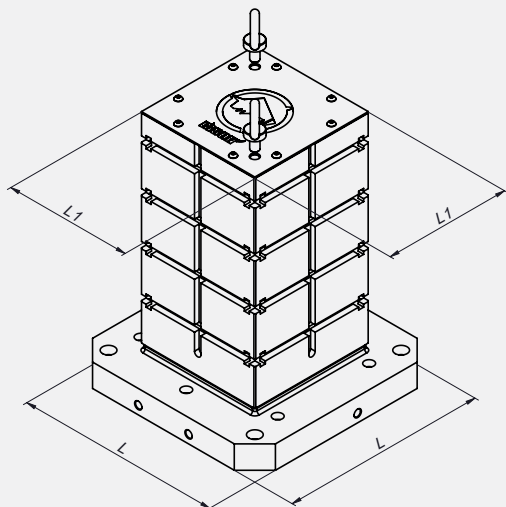


2-sided tombstone

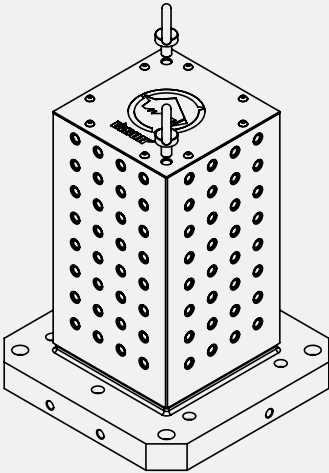
[illegible]

1415

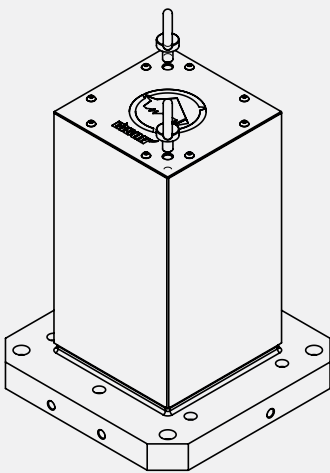
4-sided tombstone



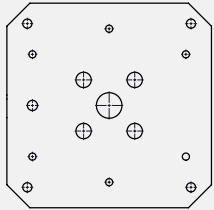
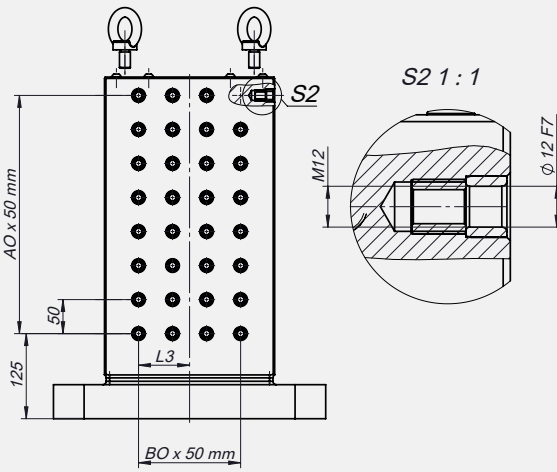
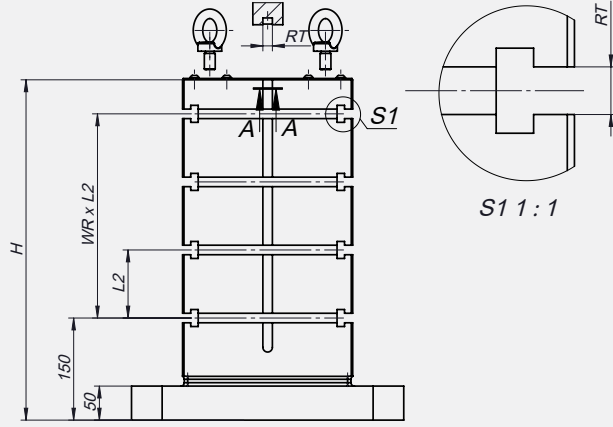
TS: T-Slots



TH: Grid Pattern



BL: Pre-Machined Surfaces

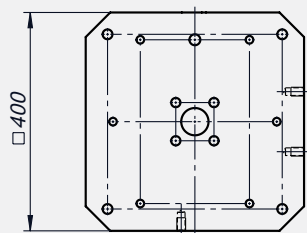
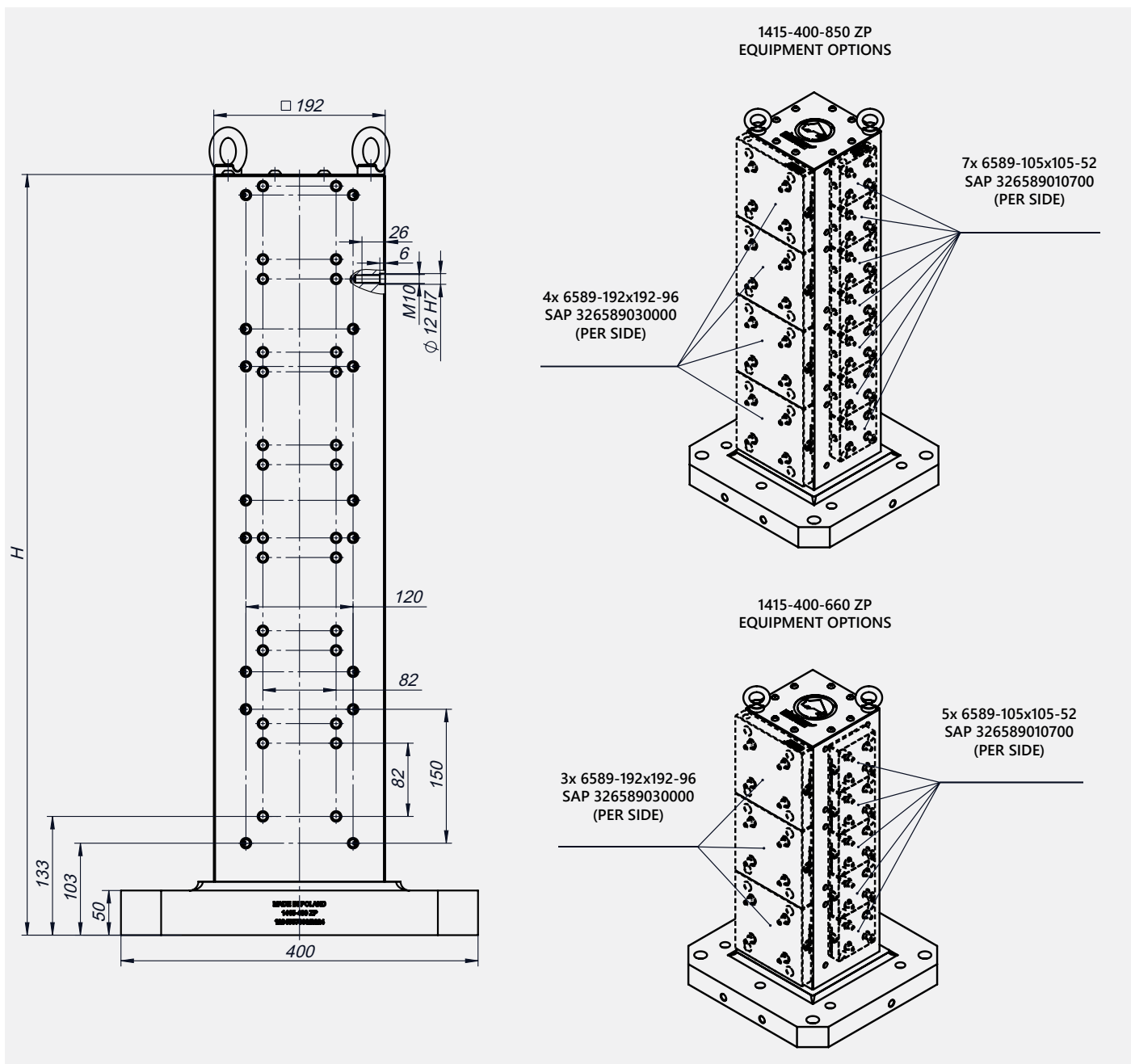


Positioning on machine tombstones according To DIN 55 201, JIS 6337-1980, or customer specifications.

Code No.	Type	L	H	L1	RT	L2	WR	L3	AO	BO	Holes number	Weight [lbs]
381415202200	1415-400 TS	400	500	250	14	100	3	-	-	-	-	401.3
381415212400	1415-400 TH	400	500	250	-	-	-	75	7	3	128	423.3
381415224100	1415-400 BL	400	500	251	-	-	-	-	-	-	-	433.2
381415204800	1415-500 TS	500	600	300	14	100	4	-	-	-	-	628.3
381415214000	1415-500 TH	500	600	300	-	-	-	100	9	4	200	662.5
381415224100	1415-500 BL	500	600	301	-	-	-	-	-	-	-	678
381415206300	1415-630 TS	630	700	350	14	125	4	-	-	-	-	950.2
381415216500	1415-630 TH	630	700	350	-	-	-	125	11	5	288	987.7
381415226700	1415-630 BL	630	700	351	-	-	-	-	-	-	-	1,009.7

1415 ZP

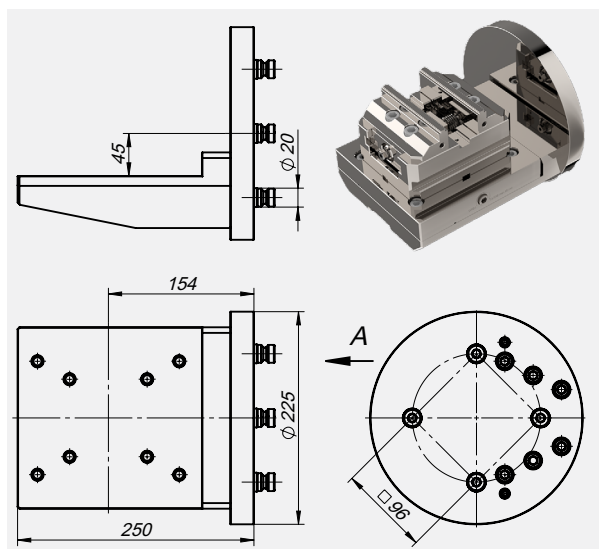
4-sided tombstone with zero point system



Positioning on 400 mm machine tombstones according To DIN 55 201, JIS 6337-1980, or customer specifications.

Code No.	Type	H	Weight [lbs]
381415403700	1415-400-660 ZP	660	364
381415404000	1415-400-850 ZP	852	452

ANGLE BASE

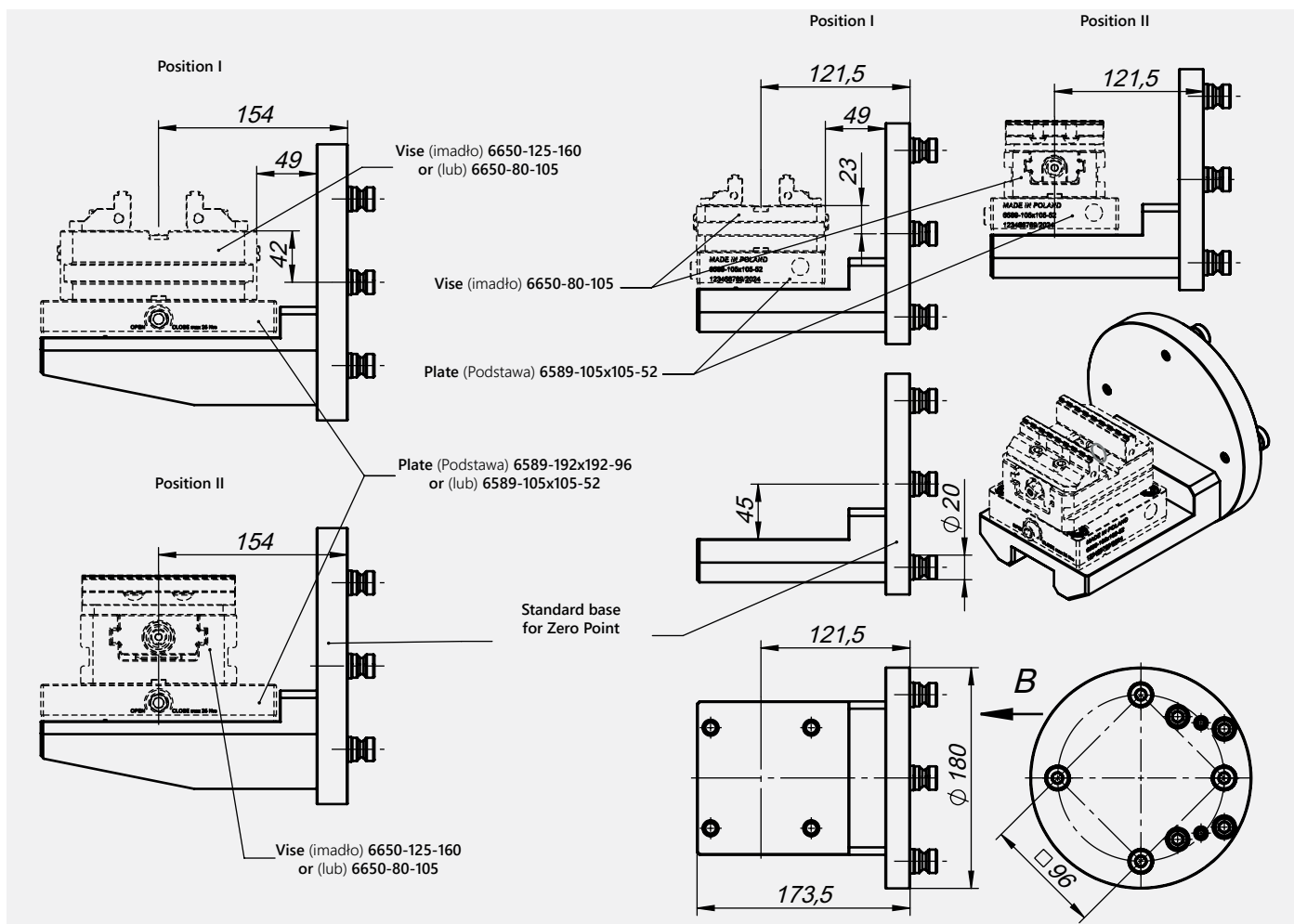


Angled base for indexing devices (additional 4 axis)

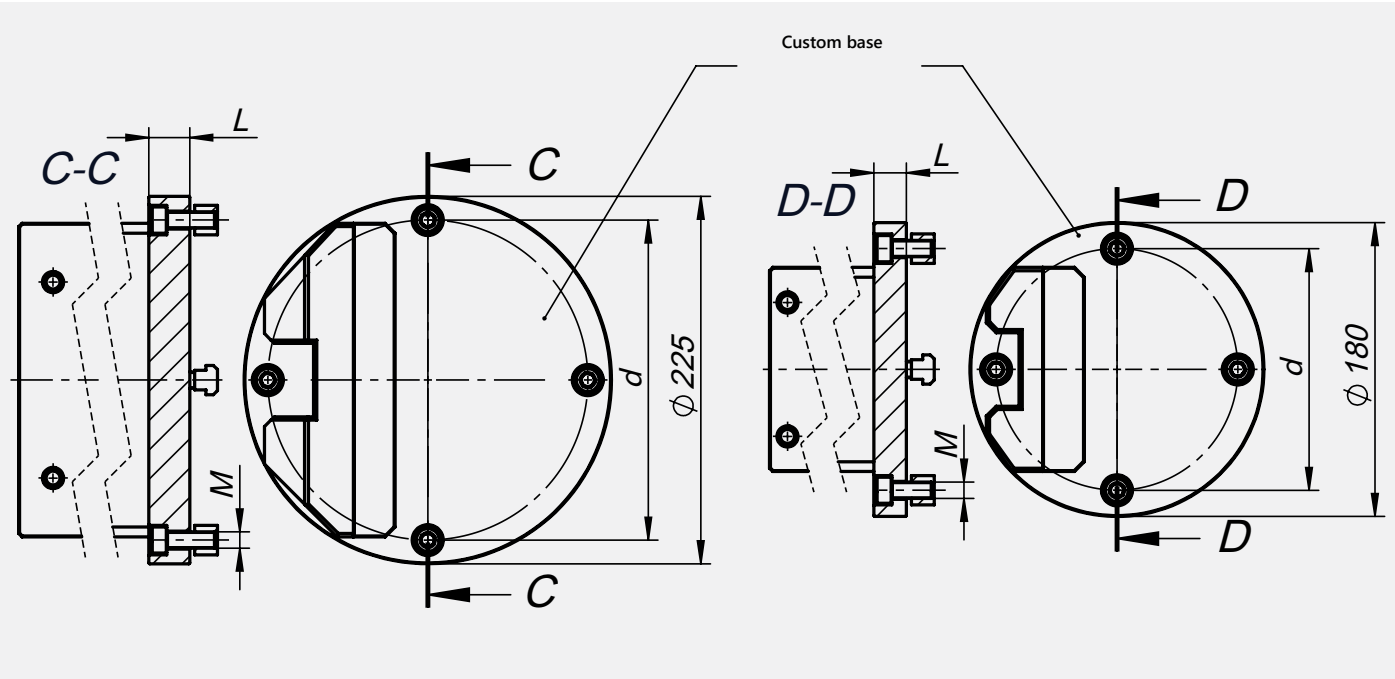
In the standard version, the base connection is equipped with Zero Point quick-release pins. It is possible to make a base connection on special order to any plate of the dividing device. Standard angled base works with 6589 quick-release base and 6650 self-centering vise.

Solution advantages:

- Low weight compared to traditional solutions.
- Zero Point quick-release pins allow for quick mounting and removal of the angle pallet.
- The design of the base does not limit the processing area.
- Optimization of production by reducing the number of fixtures.



Name	Type	Size	Weight [lbs]	Works with plate	Works with vise	Weight of the whole set [lbs]
Angle Base	Standard base for Zero Point	180	19	6589-105x105-52	6650-80-105	30
Angle Base	Standard base for Zero Point	225	46	6589-105x105-52	6650-80-105	56
				6589-192x192-96	6650-125-160	



* Custom-made angle base for any device plate							
Name	Type	Size	Works with plate	Works with vise	d	L	4xM
Angle Base	Custom base	180 *	6589-105x105-52	6650-80-105	*	*	*
Angle Base	Custom base	225 *	6589-105x105-52	6650-80-105	*	*	*
			6589-192x192-96	6650-125-160	*	*	*





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