

# BISON

EMPOWERED BY PRECISION

## NEW CLAMPING SOLUTIONS







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

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

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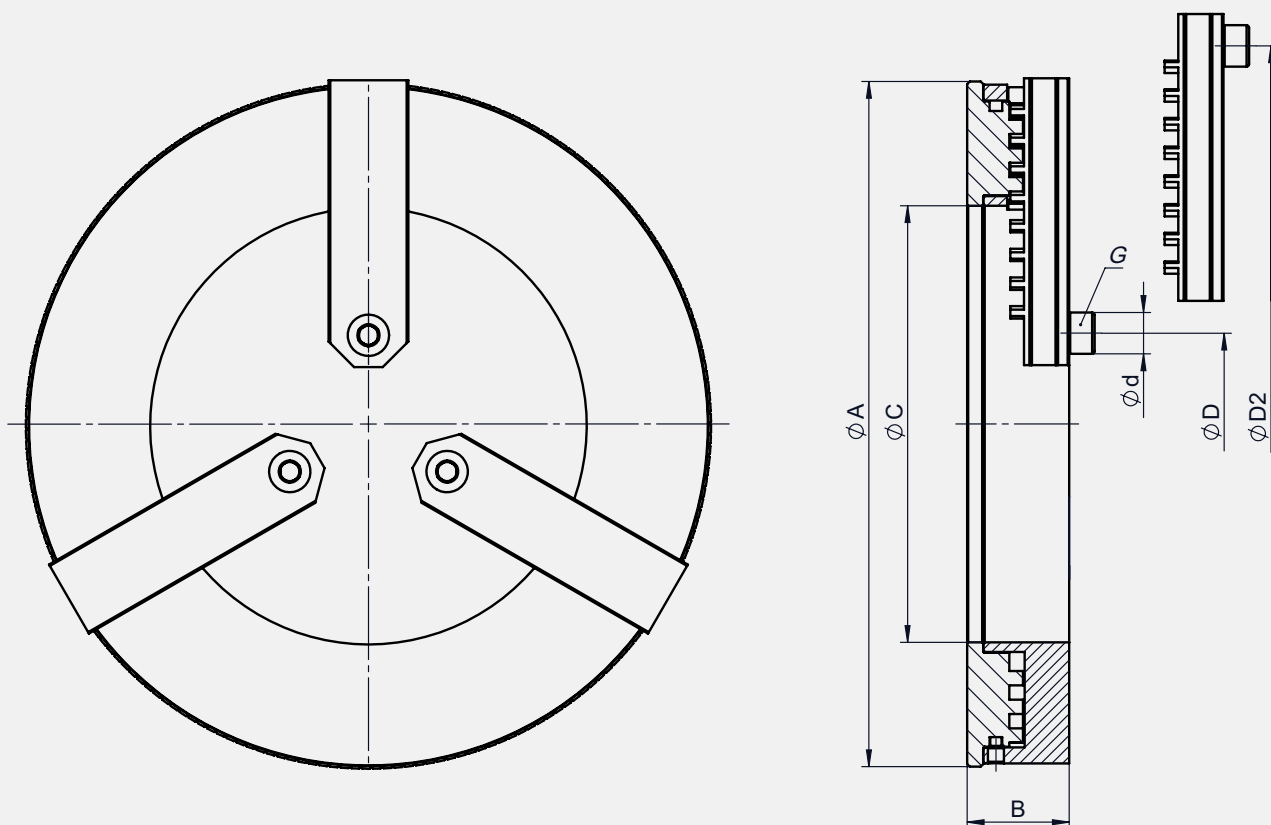


# 1941

## 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

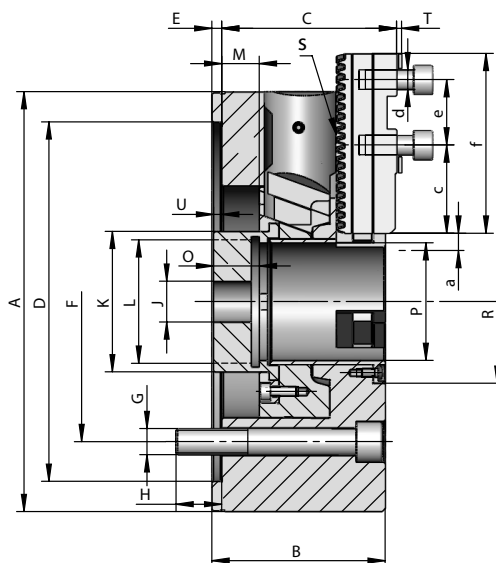
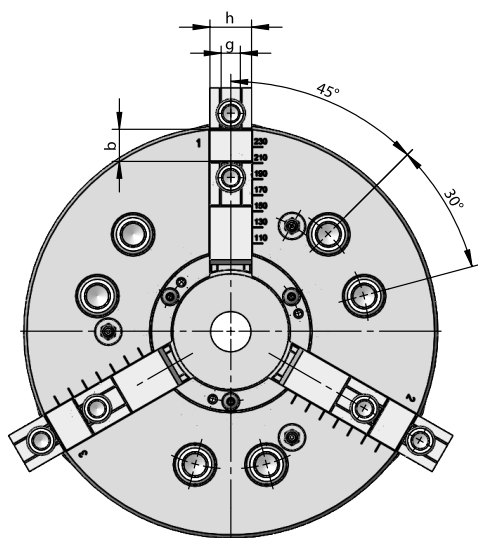
**Power chuck  
with quick jaw change system**

**QUICK JAW CHANGE SYSTEM**



# 2305

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

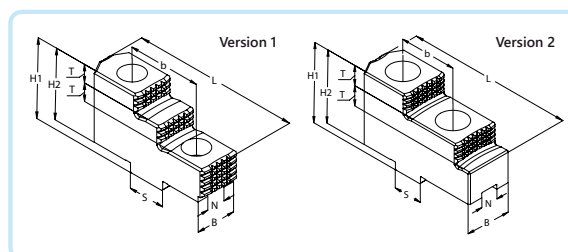


| Type                    |                  | 2305-200-45 | 2305-250-72 | 2305-315-91 | 2305-400-110 |
|-------------------------|------------------|-------------|-------------|-------------|--------------|
| Code No.                | -                | 7-770-0800  | 7-770-1000  | 7-770-1200  | 7-770-1600   |
| 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 <sup>2</sup> | 0.09        | 0.31        | 1.9         | 4            |
| Weight without top jaws | lbs              | 44          | 77          | 119         | 247          |

## Jaws matching the chucks:

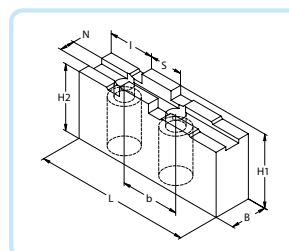
### HARD TOP JAWS

| Code No.   | Jaws type | Chuck Size   | Ver. | N  | S  | B  | H <sub>1</sub> | H <sub>2</sub> | 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       |



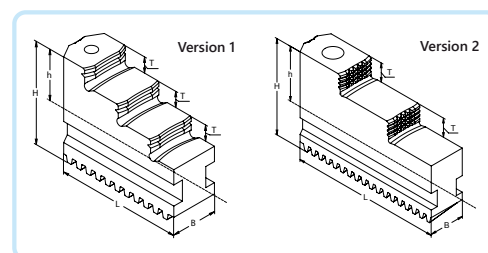
### SOFT TOP JAWS

| Code No.   | Jaws type | Chuck Size   | N  | S  | B  | H <sub>1</sub> | H <sub>2</sub> | 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      |



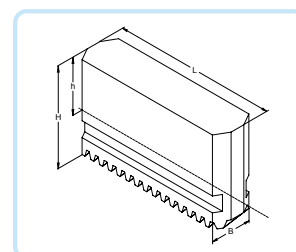
### HARD SOLID JAWS

| 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

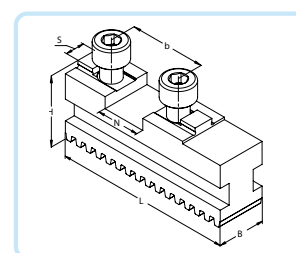
| Code No.   | Jaws type | Chuck Size   | B  | H  | h  | L   | lbs / set |
|------------|-----------|--------------|----|----|----|-----|-----------|
| 7-788-3508 | SJM 200 F | 2305-200     | 22 | 60 | 35 | 94  | 5.7       |
| 7-788-3510 | SJM 250 F | 2305-250;315 | 26 | 70 | 40 | 115 | 9.7       |
|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



## Power chucks are delivered with a set of master jaws.

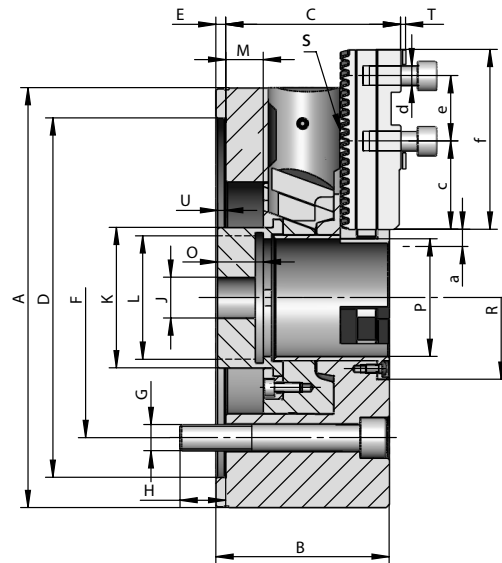
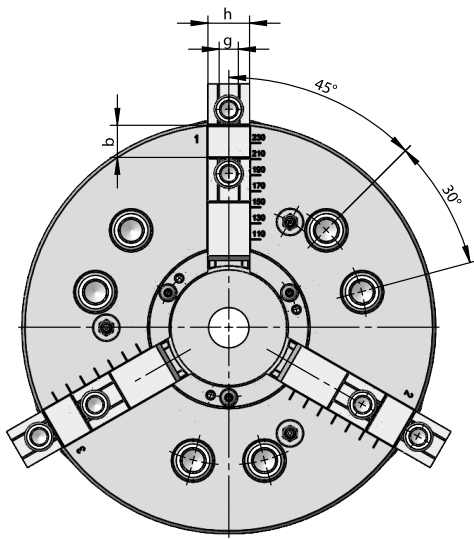
### HARD MASTER JAWS

| 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\*



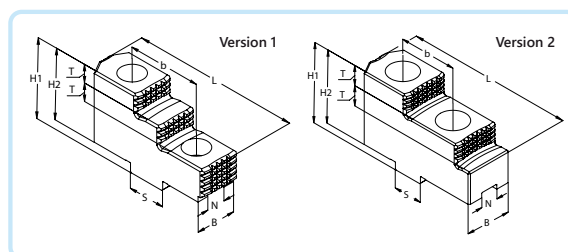
| Type                    |                  | 2305-200-52 RHU | 2305-250-78 RHU | 2305-315-104 RHU | 2305-400-128 RHU |
|-------------------------|------------------|-----------------|-----------------|------------------|------------------|
| Code No.                | -                | 352305120800    | 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 <sup>2</sup> | 0.13            | 0.38            | 1.9              | 4                |
| Weight without top jaws | lbs              | 46              | 83              | 137              | 247              |



## Jaws matching the chucks:

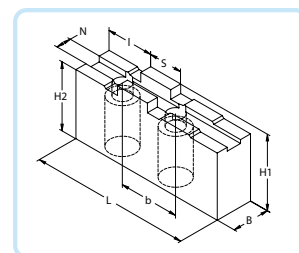
### HARD TOP JAWS

| Code No.     | Jaws type | Chuck Size   | Ver. | N  | S  | B  | H <sub>1</sub> | H <sub>2</sub> | 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       |



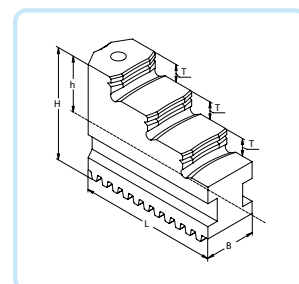
### SOFT TOP JAWS

| Code No.     | Jaws type | Chuck Size   | N  | S  | B  | H <sub>1</sub> | H <sub>2</sub> | 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      |



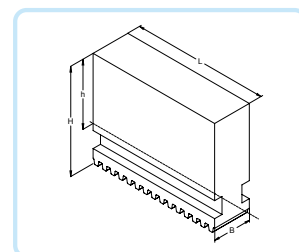
### HARD SOLID JAWS

| 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

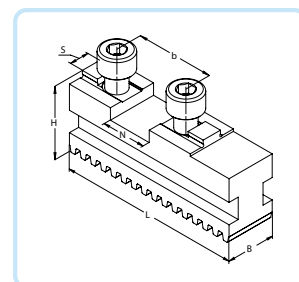
| Code No.     | Jaws type   | Chuck Size | B  | H  | h  | L   | lbs / set |
|--------------|-------------|------------|----|----|----|-----|-----------|
| 398531161000 | SJM 200 RHU | 2305-200   | 22 | 65 | 40 | 84  | 5.7       |
| 398531141700 | SJM 250 RHU | 2305-250   | 26 | 84 | 55 | 99  | 9.7       |
| 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

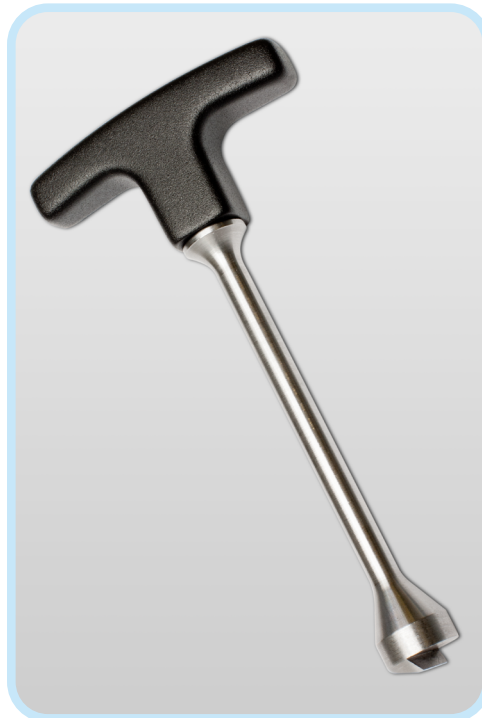
| Code No.     | Jaws type  | Chuck Size | N  | S  | B  | H  | L   | b  | lbs / set |
|--------------|------------|------------|----|----|----|----|-----|----|-----------|
| 398530990200 | SP 200 RHU | 2305-200   | 20 | 10 | 22 | 32 | 85  | 40 | 2.6       |
| 398531001900 | SP 250 RHU | 2305-250   | 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:

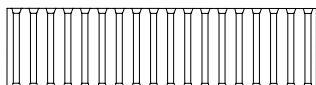
**Quick jaw change system / quick jaw adjustment with operating key**



**Replace jaws in less than one minute!**

#### \*Serration type

Jaws with square serration (Reishauer)



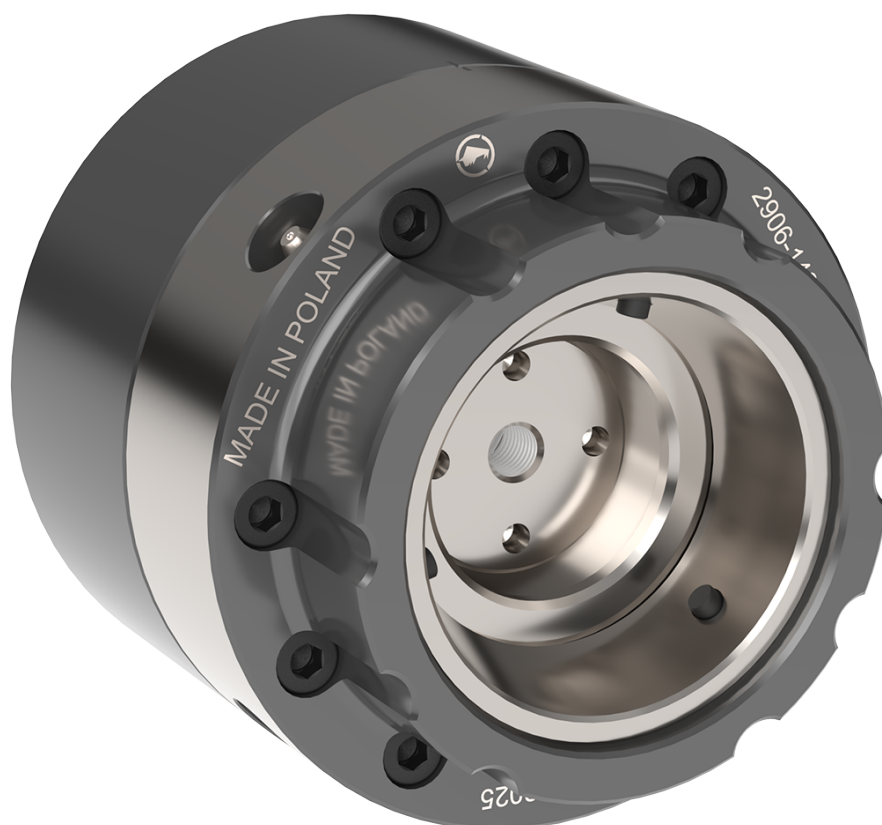
Jaws with angled serration (Forkardt)



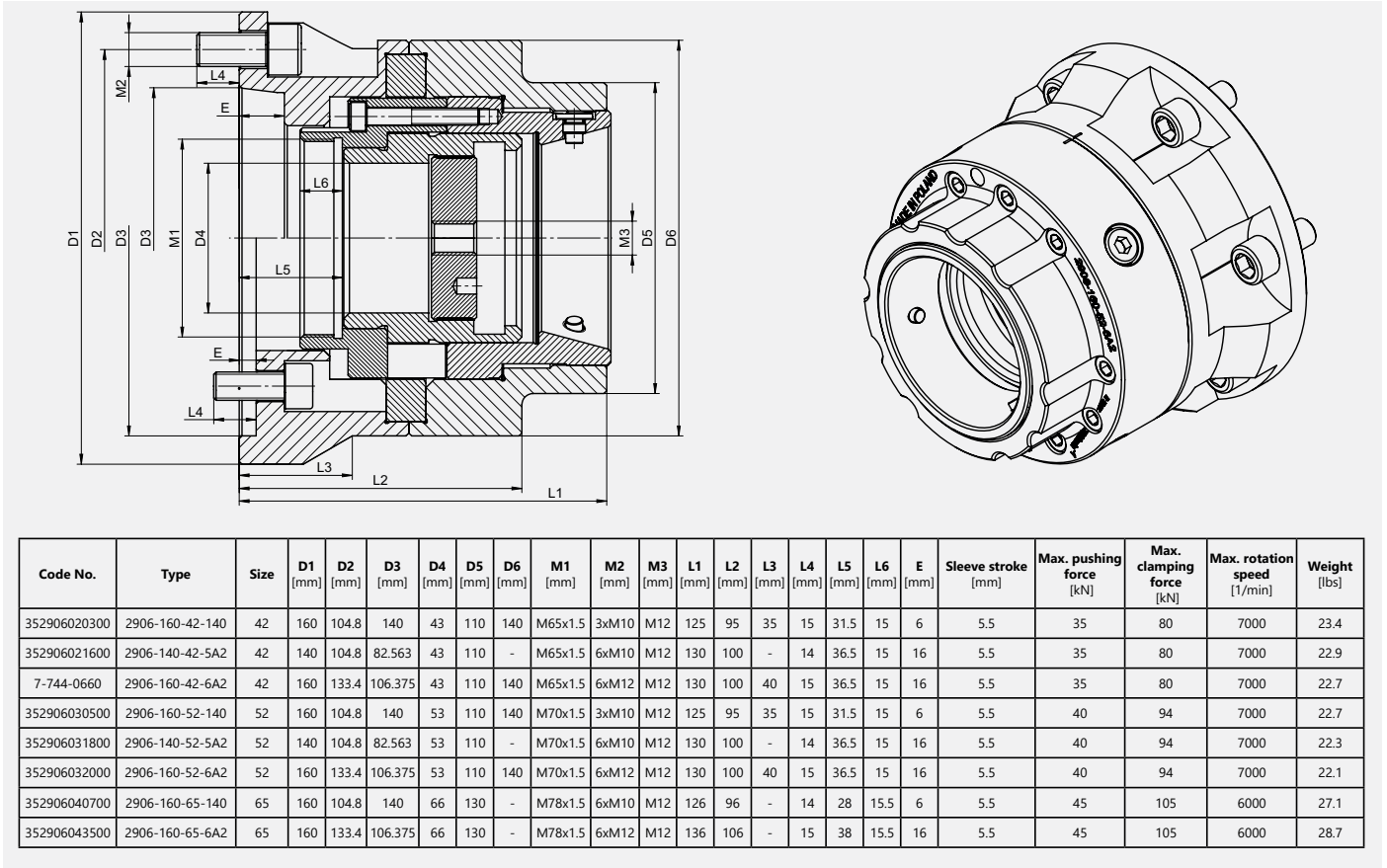


**2906**

## 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.



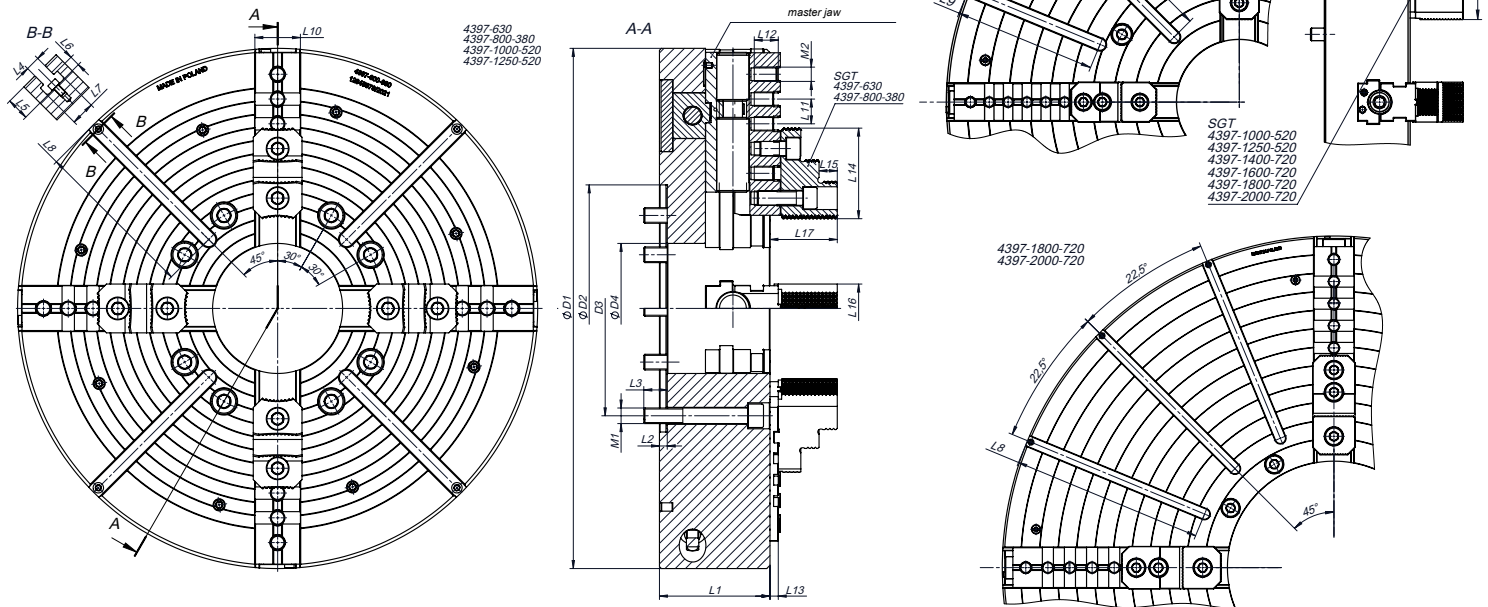
# New Tru-Force independent chucks series

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)



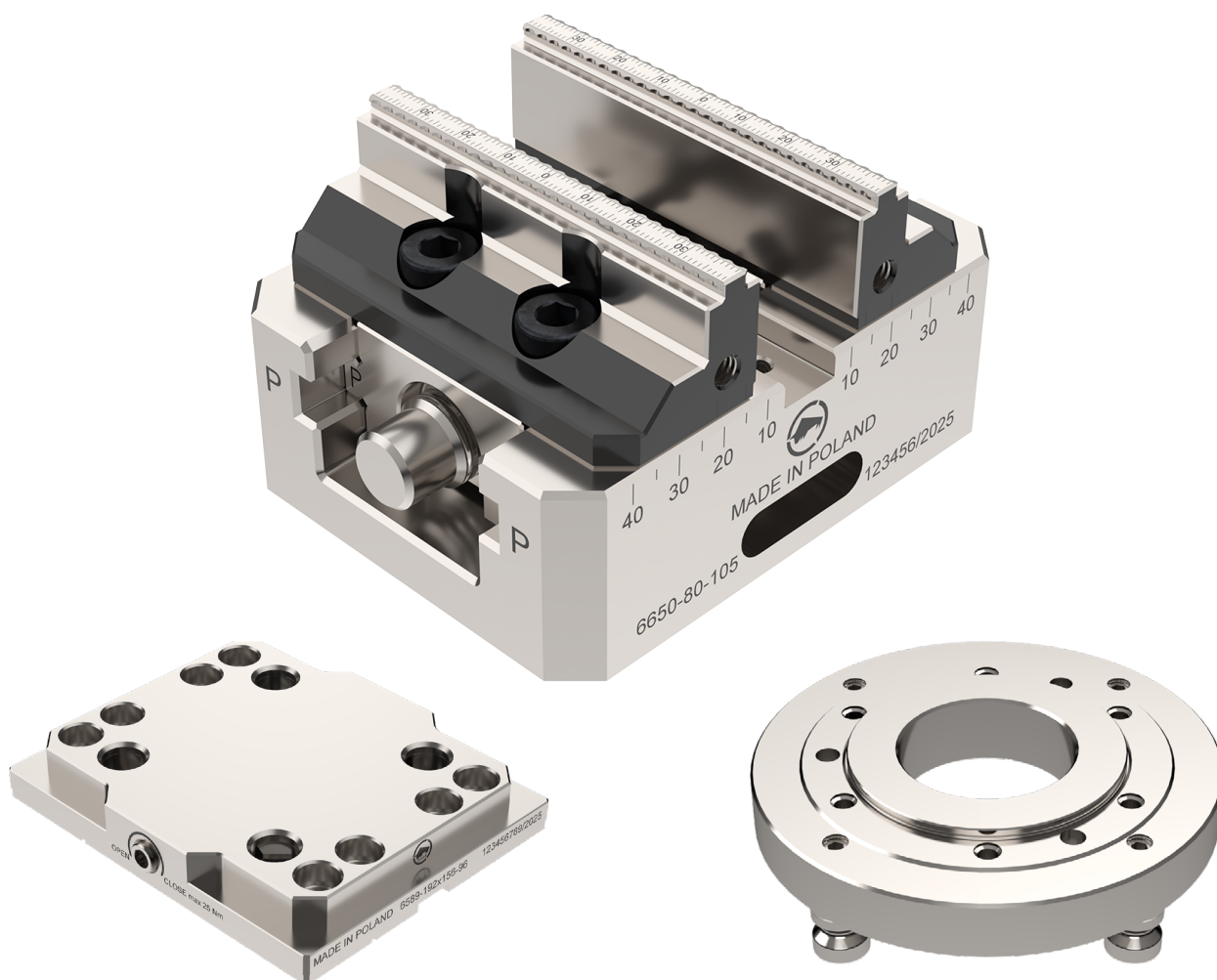
| Type                                           | 4397-630     | 4397-800-380 | 4397-1000-520 | 4397-1250-520 | 4397-1400-720 | 4397-1600-720 | 4397-1800-720 | 4397-2000-720 |
|------------------------------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 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 [kN]/[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**



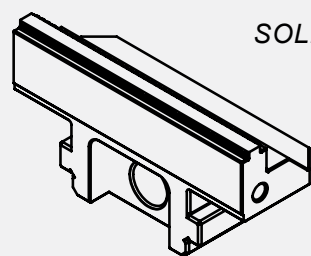
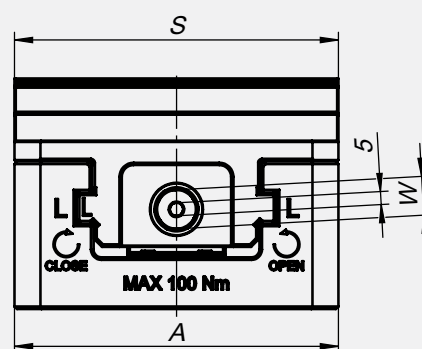
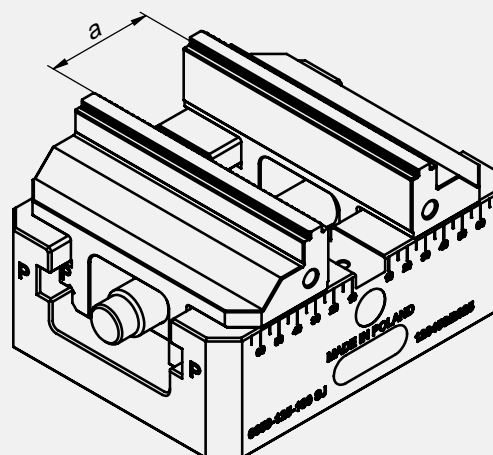
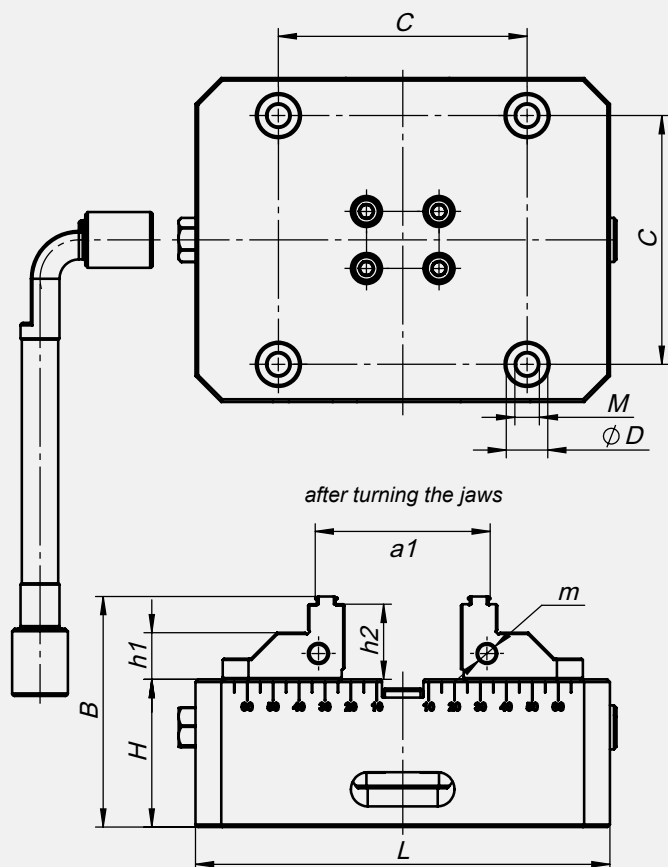
### Features:

- 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.

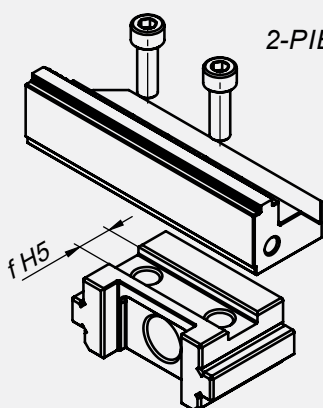
### Additional accessories:

- 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<br>398267710600   | -               | SGM 6650-125<br>398267711900   | -               | SGM 6650-125<br>398267711900  |
| Hard top prismatic jaws set   | -              | SGTP 6650-80<br>398267740100  | -               | SGTP 6650-125<br>398267741400  | -               | SGTP 6650-125<br>398267741400 |
| Hard top jaws set for rollers | -              | SGTW 6650-80<br>398267730000  | -               | SGTW 6650-125<br>398267731200  | -               | SGTW 6650-125<br>398267731200 |
| Set                           | Middle jaw     | SMJ 6650-80<br>398267750300   |                 | SMJ 6650-125<br>398267751600   |                 |                               |
|                               | Floating screw | 6650-80-105<br>398267760500   |                 | 6650-125-160<br>398267762000   |                 |                               |
| Locating insert               |                | -                             | -               | -                              | -               | 6650-125-310<br>398267756000  |
| Fastening pins                |                | 6589-M8 ZP SL<br>326000000900 |                 | 6589-M10 ZP SL<br>326000000700 |                 |                               |
| Side stop                     |                | 6650-80<br>398267720800       |                 | 6650-125<br>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



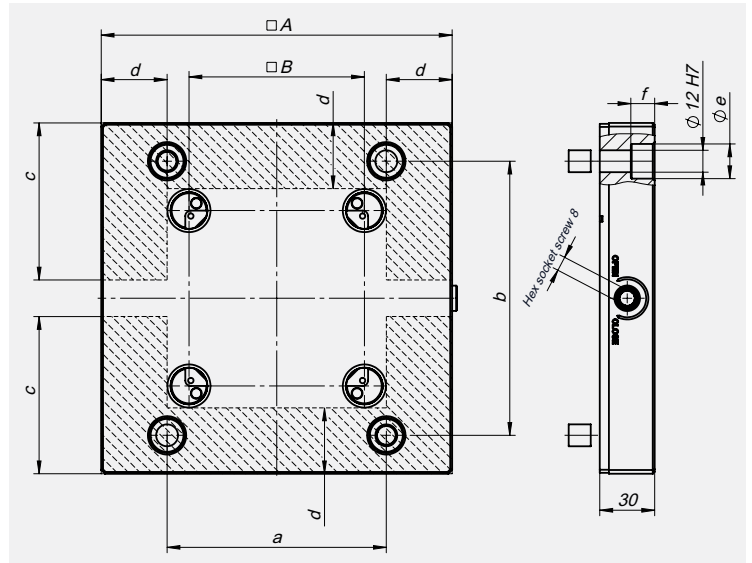
| Code No.     | Type               | A   | B  | a*  | b*  | c  | d  | e    | f  |
|--------------|--------------------|-----|----|-----|-----|----|----|------|----|
| 7-631-3045   | 6589-104x104-52    | 104 | 52 | 82  | 82  | 44 | 16 | 16,8 | 11 |
| 7-631-3089   | 6589-192x192-96    | 192 | 96 | 120 | 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.

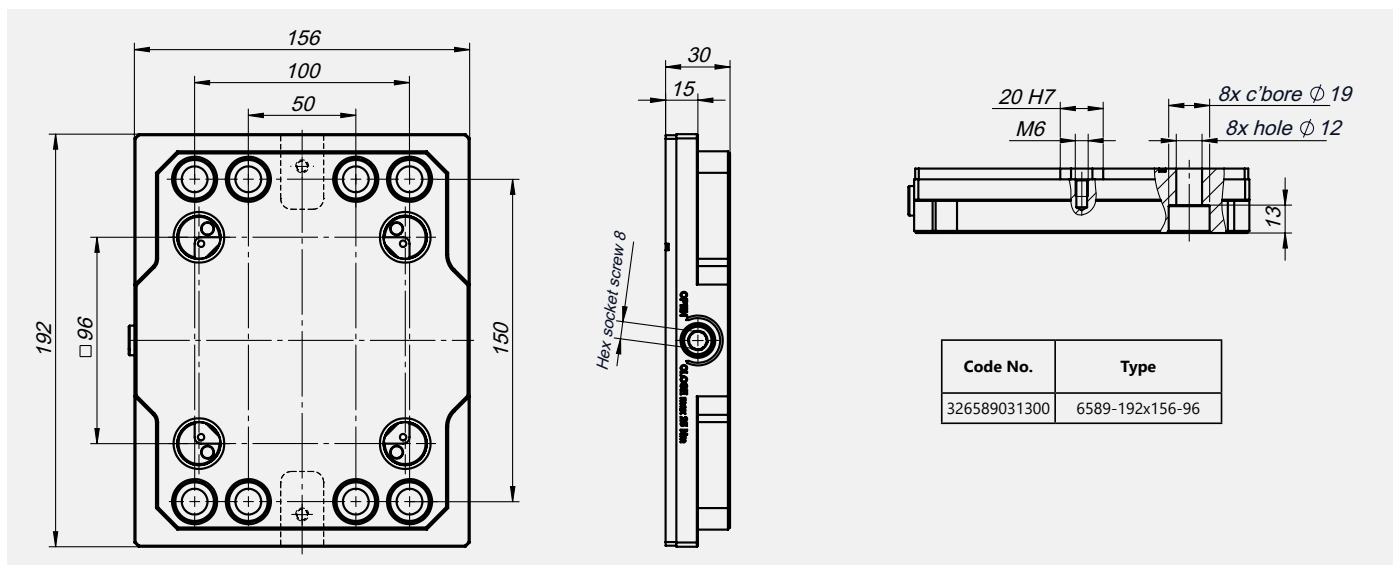
The Bison Zero Point system is equivalent to the following systems:

- 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:

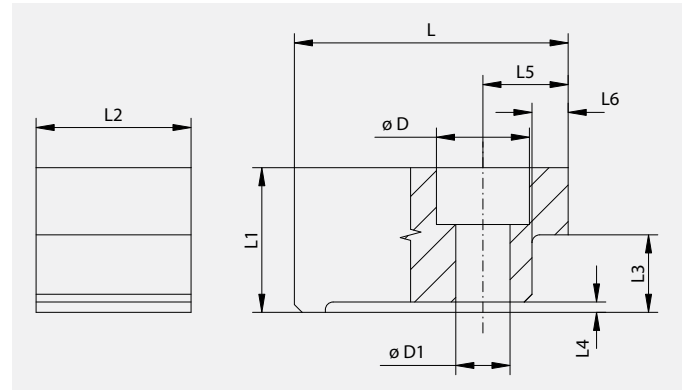
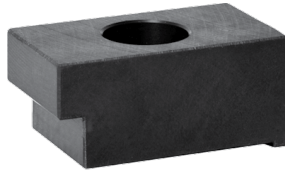
- High fixing repeatability, mounting holes made in  $\pm 0,005$  mm tolerance.
- The height of the mounting plate made within 0,01mm tolerance.
- Low-profile mounting plate (30 mm height).
- Quick-action mounting, using only one screw.
- Suitable for mounting vises, other fixtures or direct mounting 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

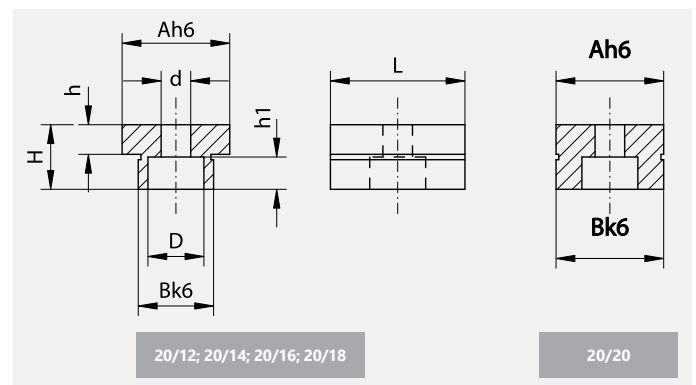
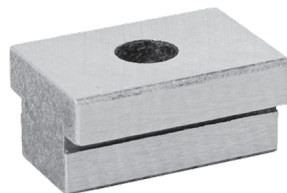
The bases type 6589 for T-slot mounting use clamps and keys offered by Bison.

## 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   |

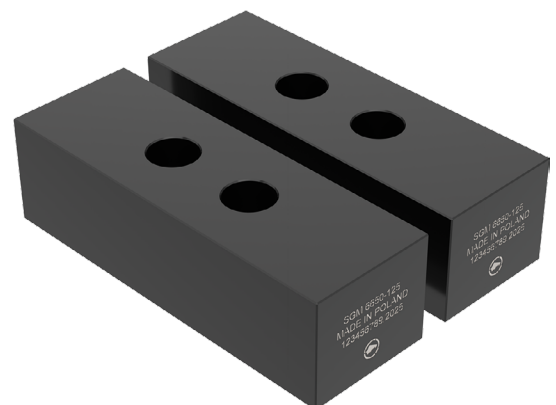
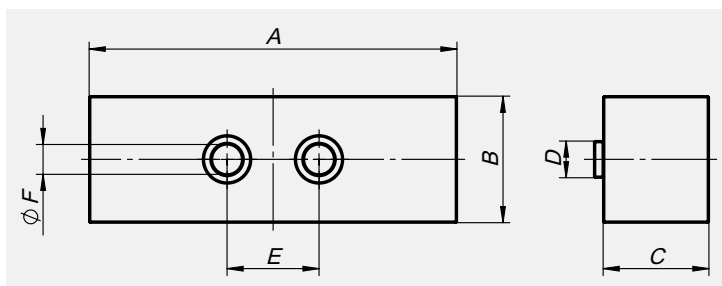
## SLOT NUT



| 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

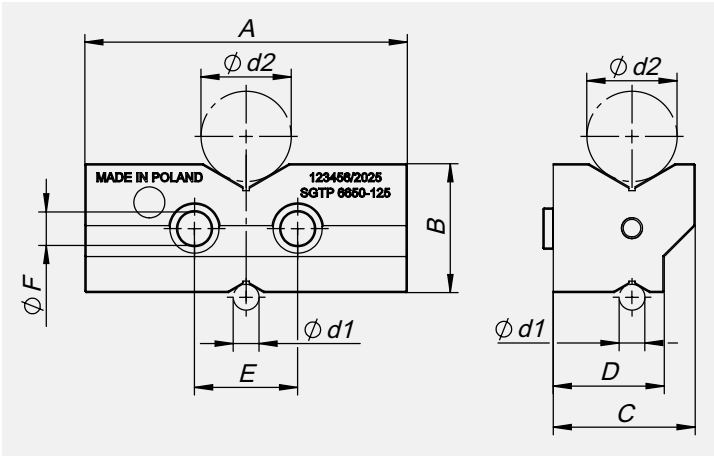
Soft top jaws



| 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

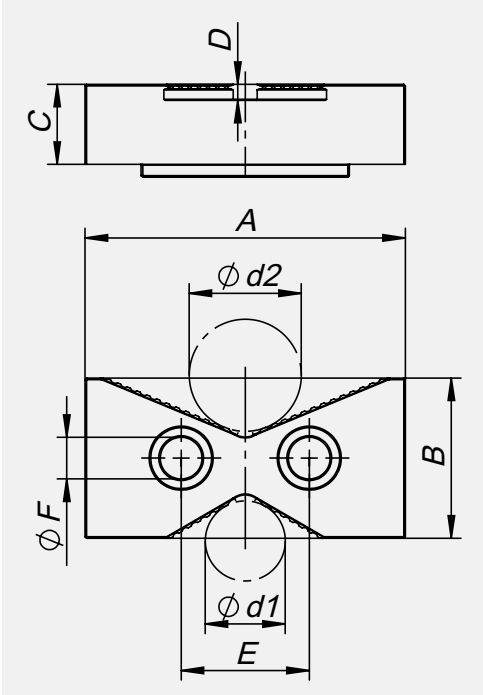
Hard top prismatic jaws



| 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:

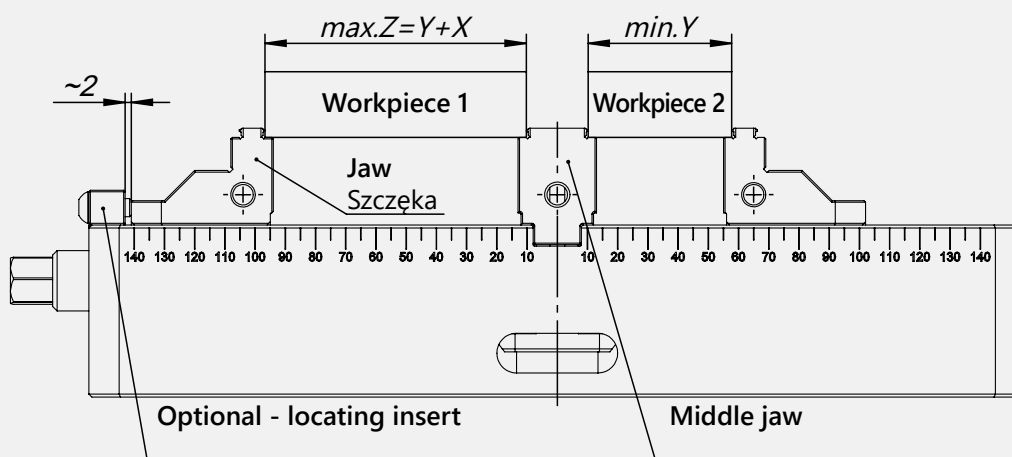
- The middle jaw with a floating operating screw allows for mounting of two parts with the same or different dimensions within a particular clamping range in one vise.
- The jaw can be mounted with smooth or serrated surface.
- The SMJ 6650-125 is equipped with a threaded hole for a side stop.

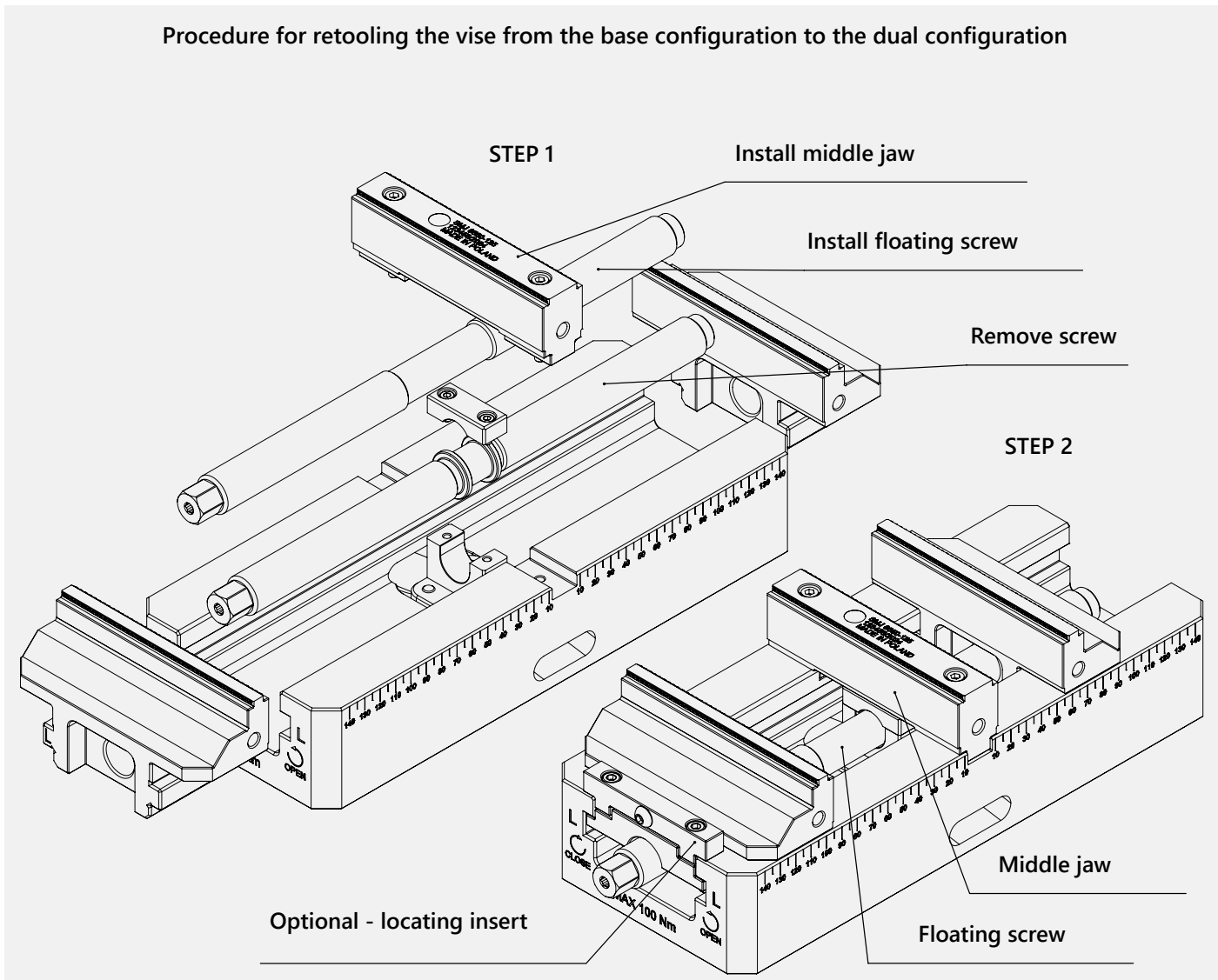
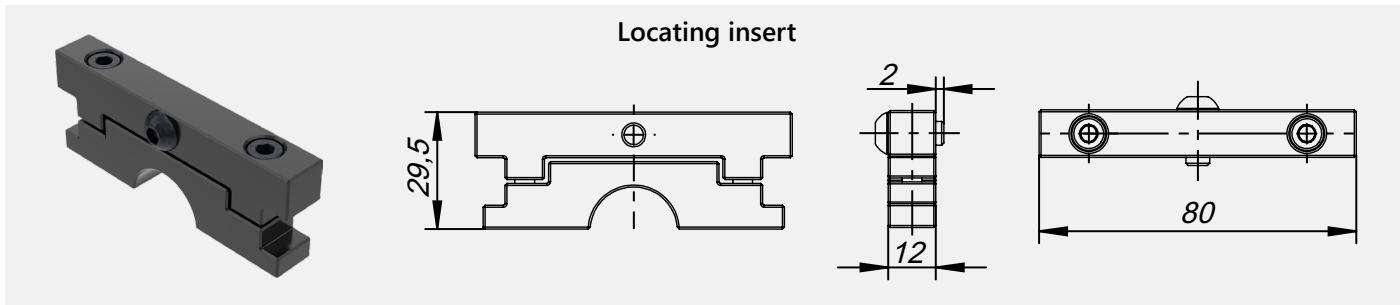
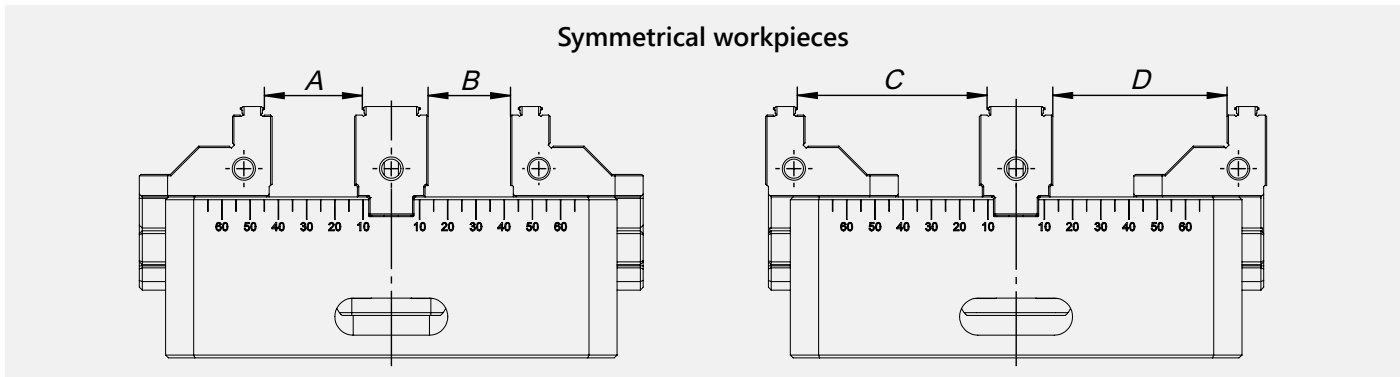


| Middle jaw   |              | Floating screw |              | Optional - locating insert |              | Used to         | Clamping range |       |        |        |
|--------------|--------------|----------------|--------------|----------------------------|--------------|-----------------|----------------|-------|--------|--------|
| 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

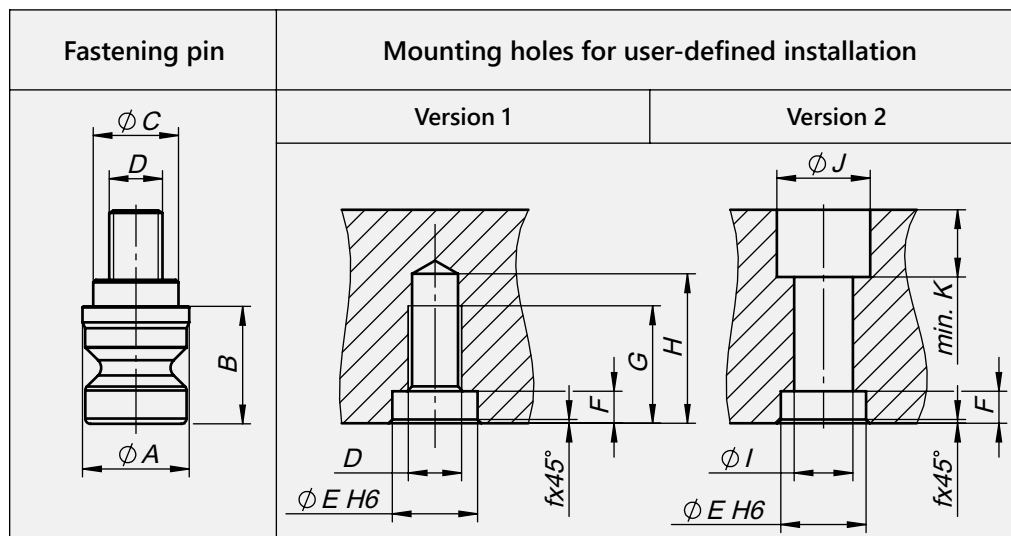
6650-80-105; 6650-80-105 SJ - X = 11 mm;  
6650-125-160; 6650-125-160 SJ - X = 27 mm;  
6650-125-310; 6650-125-310 SJ - X = 40 mm





## 6589 ZP SL

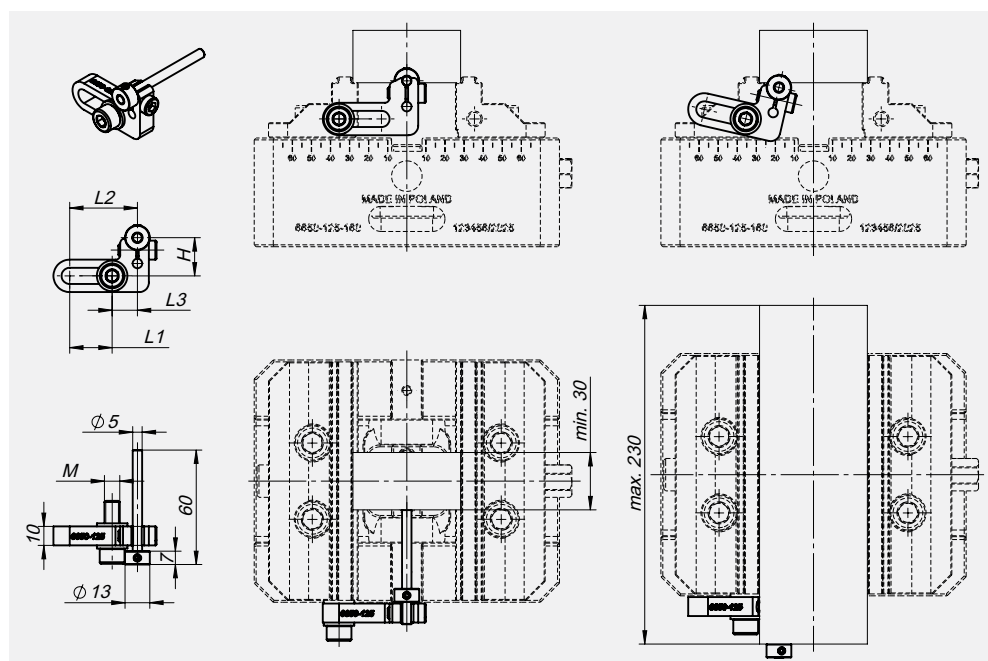
## Fastening pins for boards with Zero Point system\*



| 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<br>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<br>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<br>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

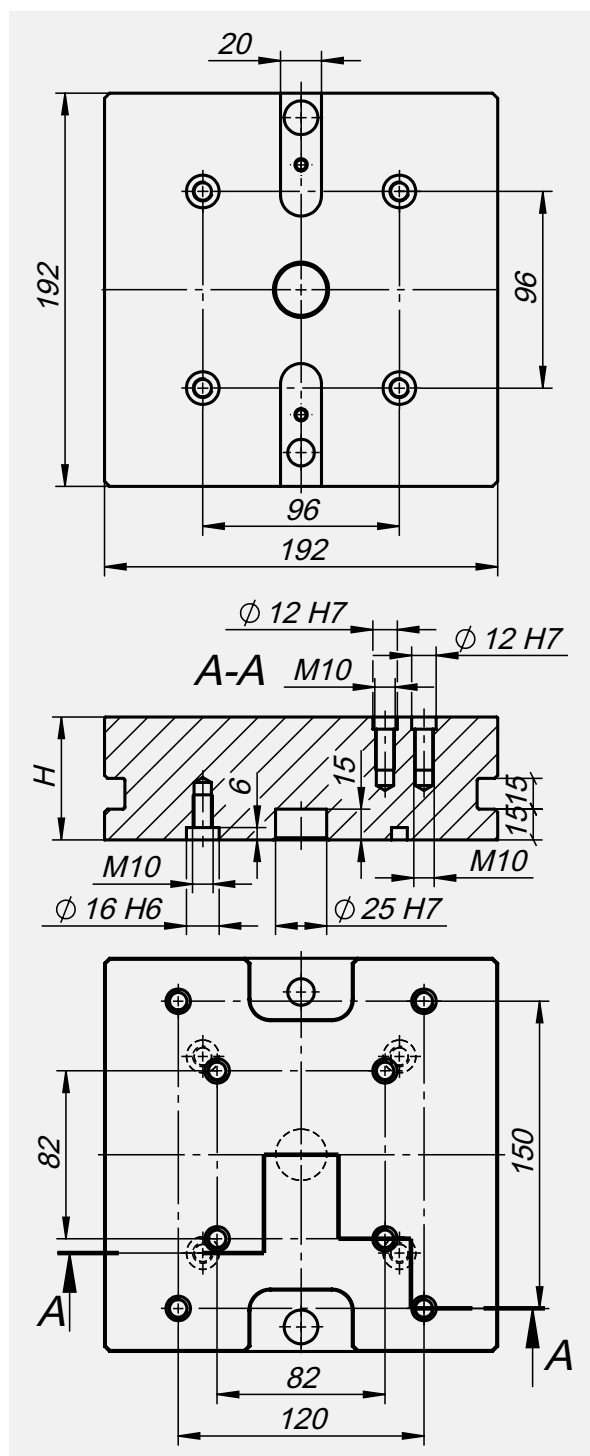
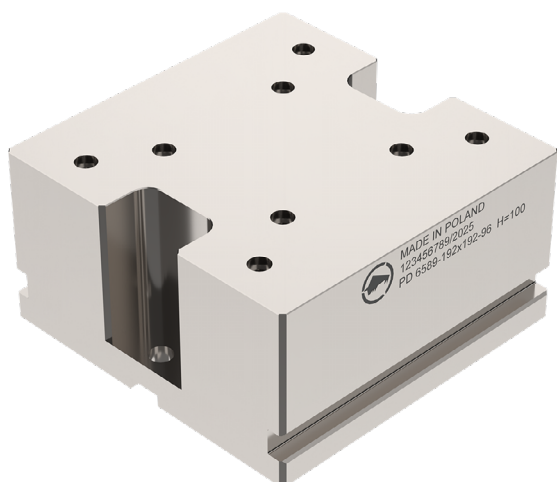
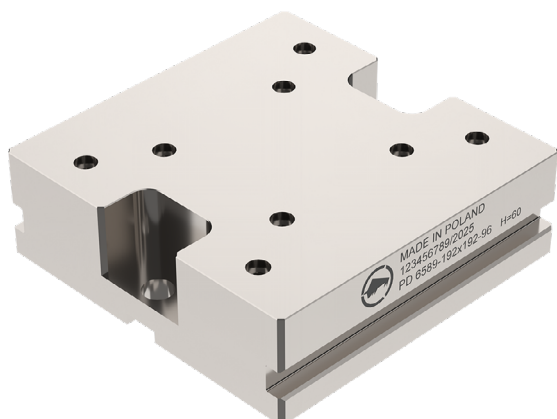


| Code No.     | Type     | Used to                       | L1   | L2   | L3   | H    | L1   | M  |
|--------------|----------|-------------------------------|------|------|------|------|------|----|
| 7-226-930    | 6650-80  | 6650-80-105; 6650-80-105 SJ   | 19,5 | 29   | 9,5  | 16,5 | 19,5 | M6 |
| 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 |



## 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.



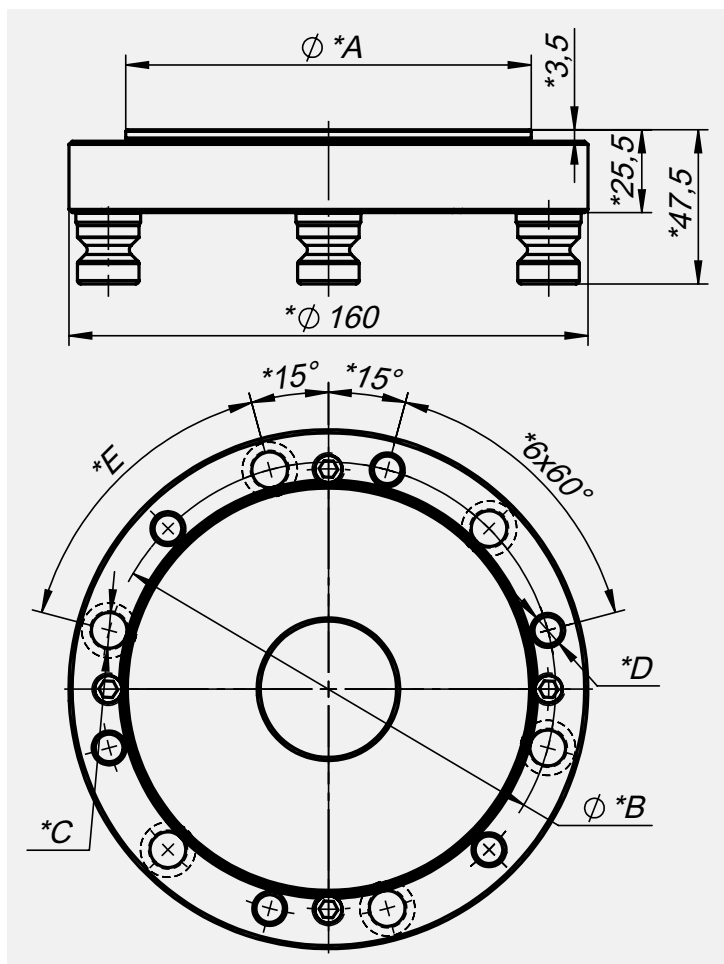
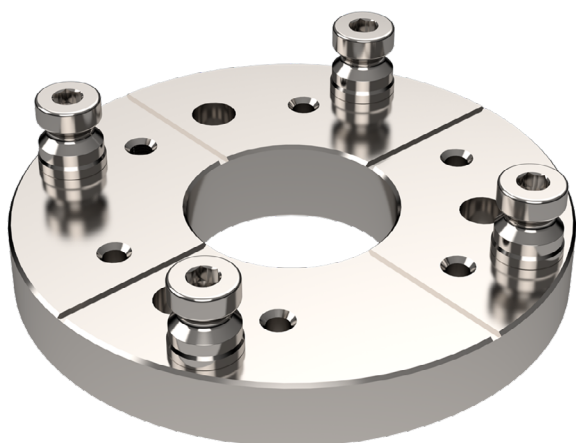
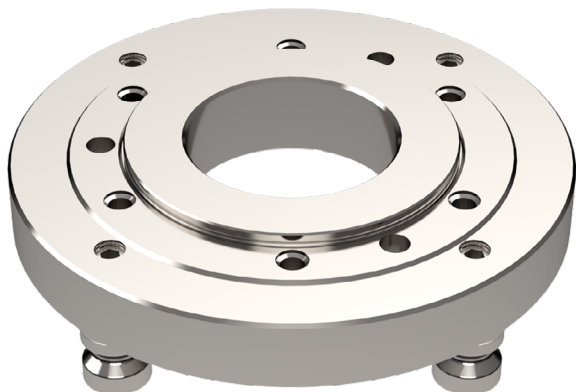
Example application with a vise and a zero-point plate – 60 mm and 100 mm height.



Example of mounting on a zero-point plate.



Example of mounting on a T-slotted table.

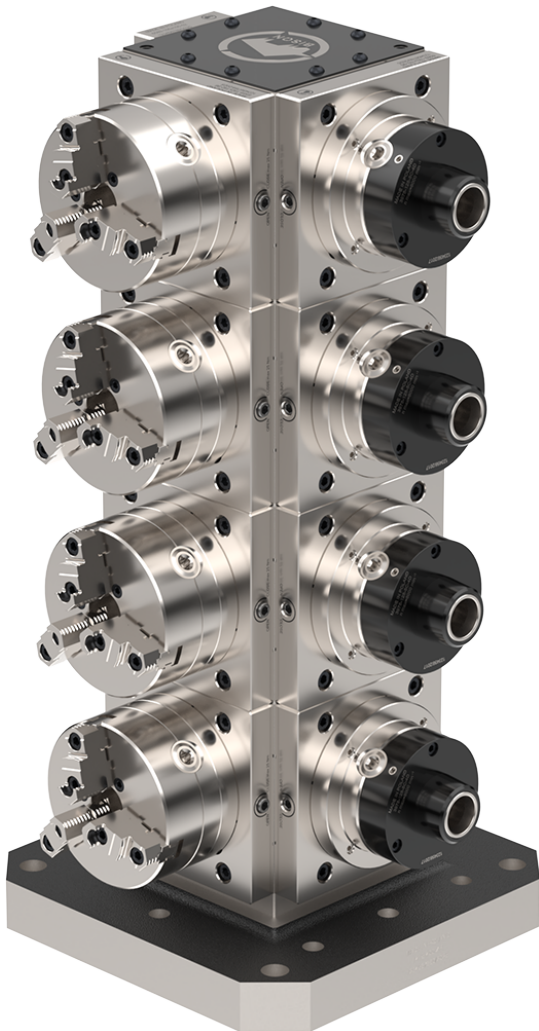
**9470**
**Base plates type 9470 for mounting chucks**


| 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°  |

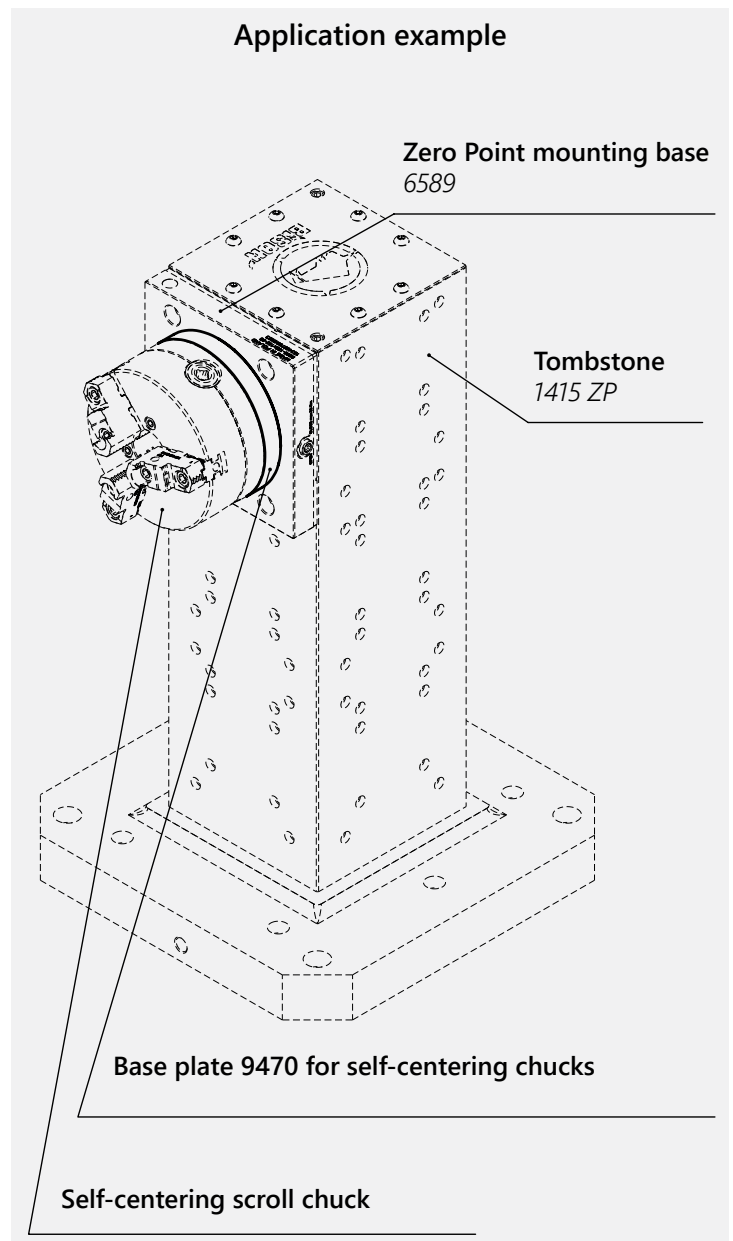
**Custom bases for any type of chucks are available upon request.**

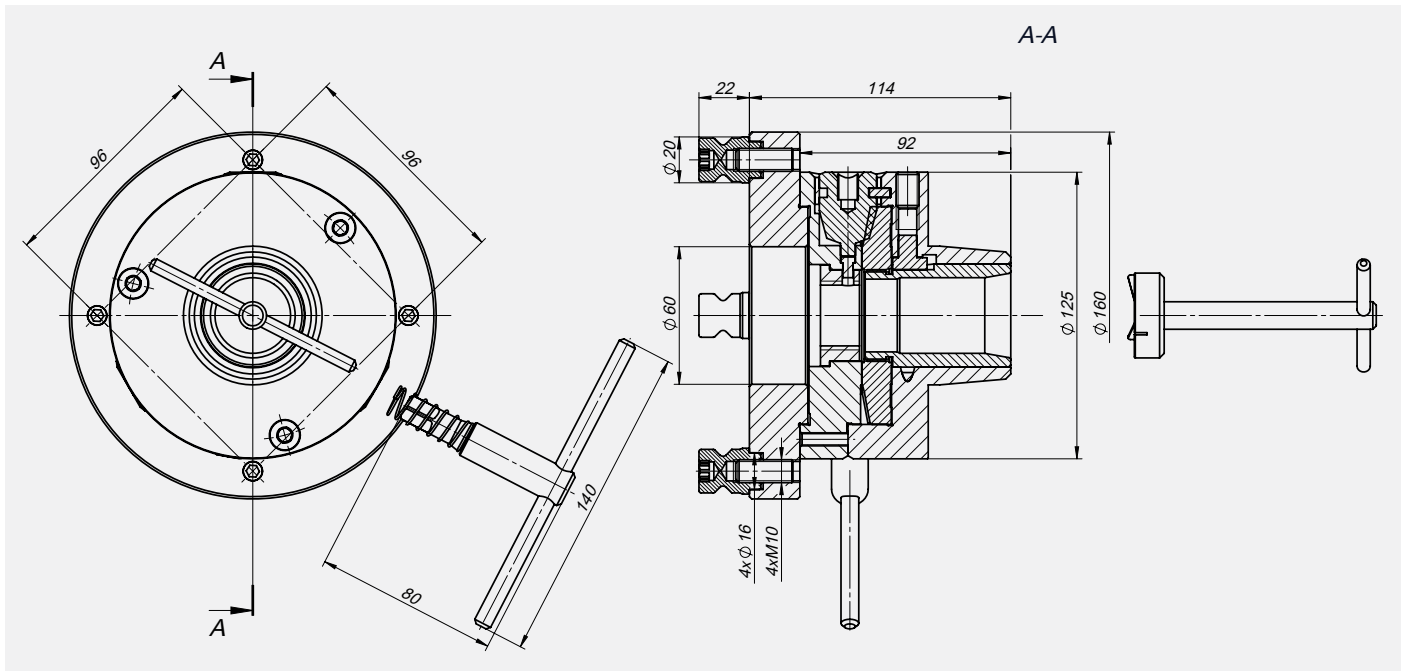
### Features:

- 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  $\pm 0,01\text{mm}$ .

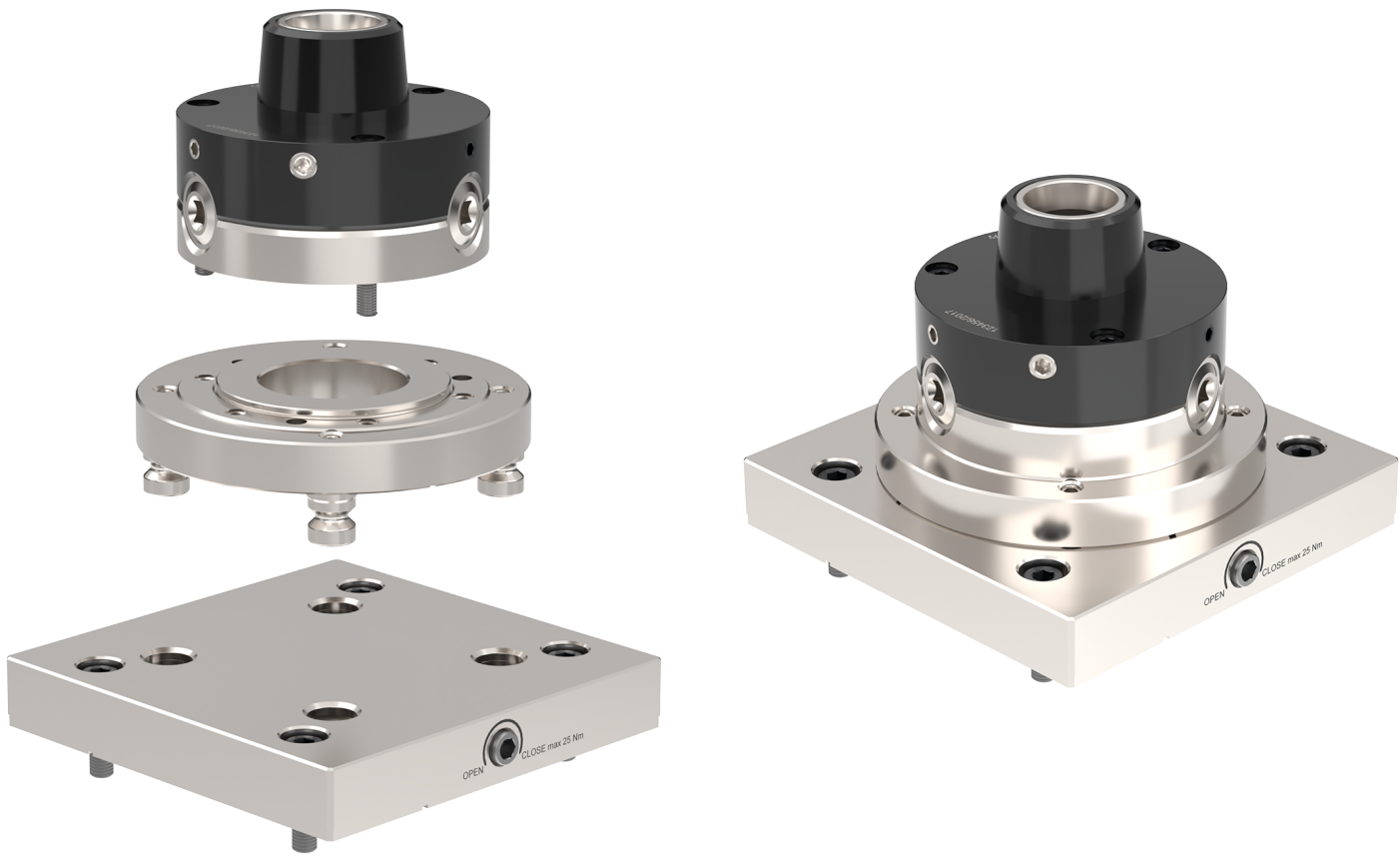


Base plates type 9470 used to mount the chucks type 3205-160 and 3975-125-5C on a tombstone.

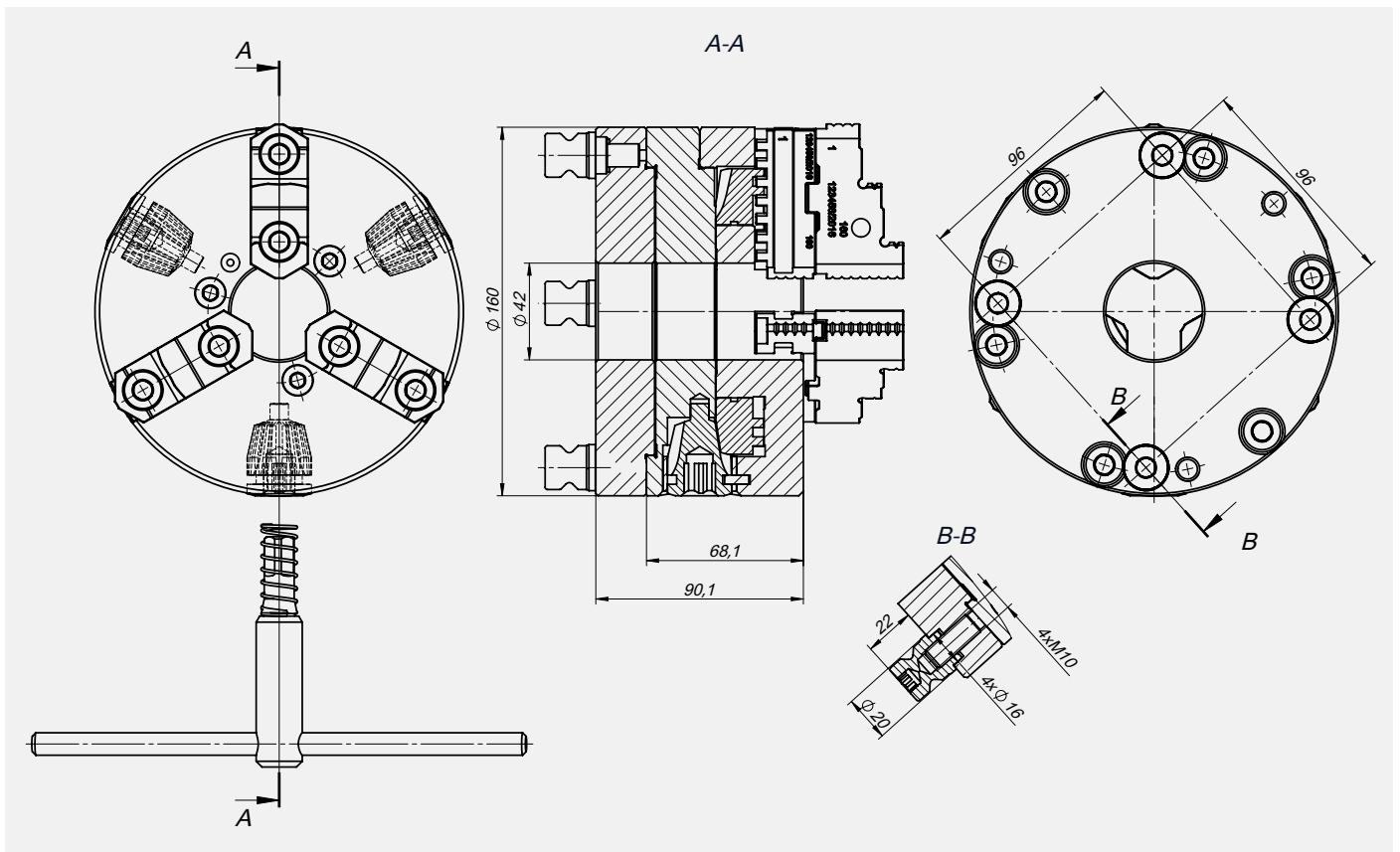




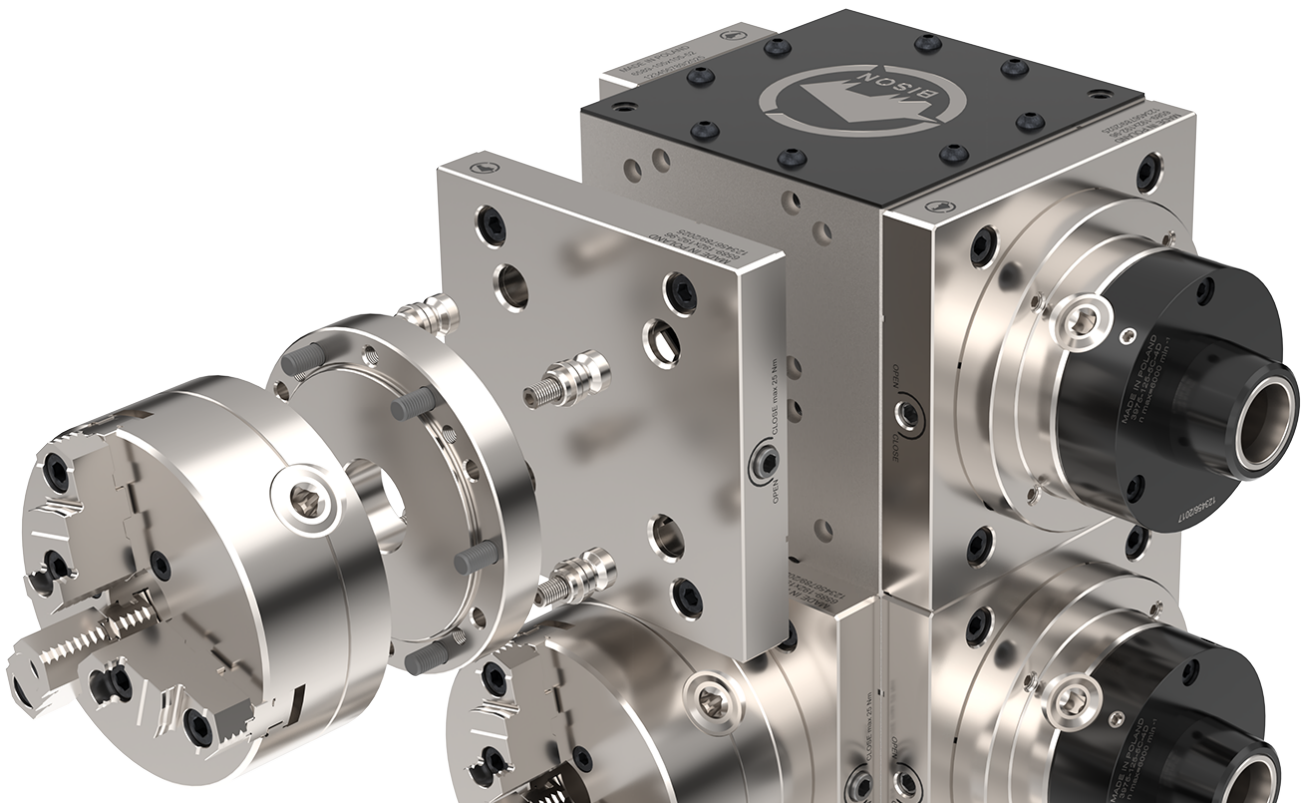
Collet chuck 3975-125-5c with 96x96 base







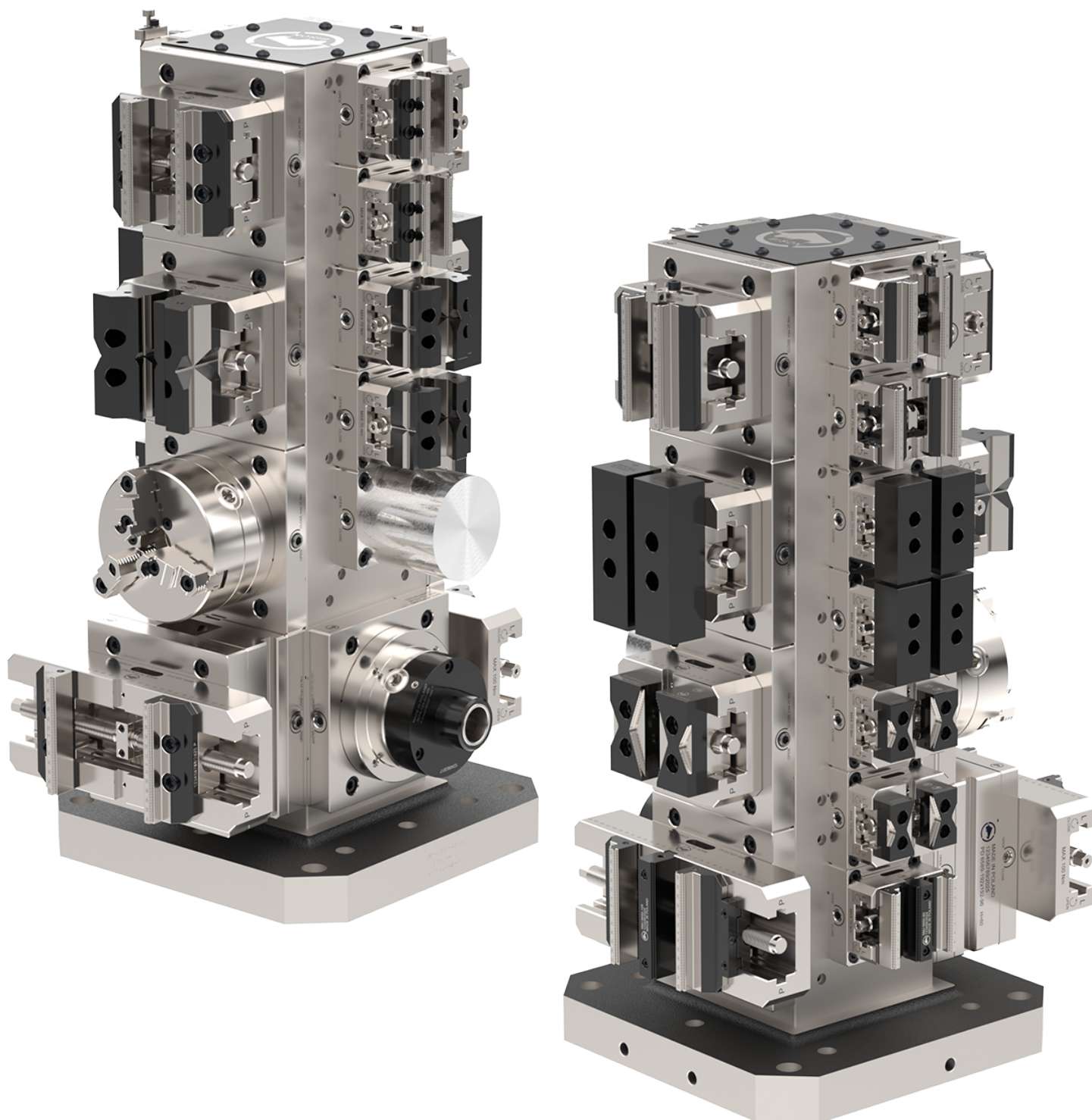
**3 jaw scroll chuck 3505-160 with 96x96 plate**





## 1415-500 QA

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









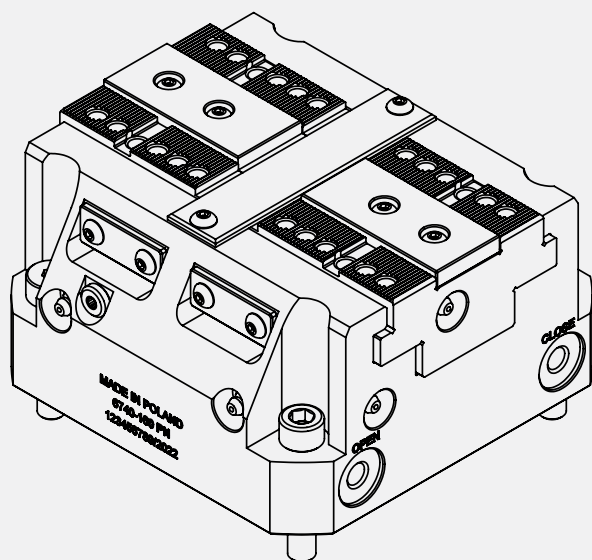
6740

## Self-Centering Power Vise

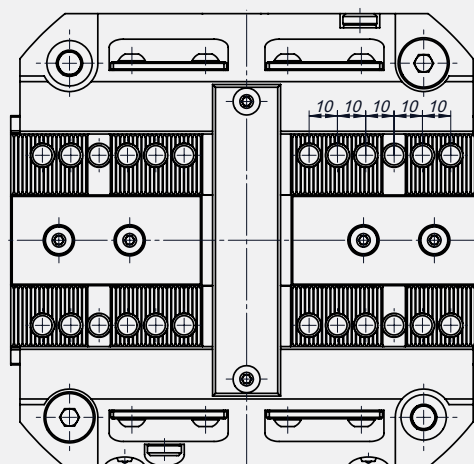
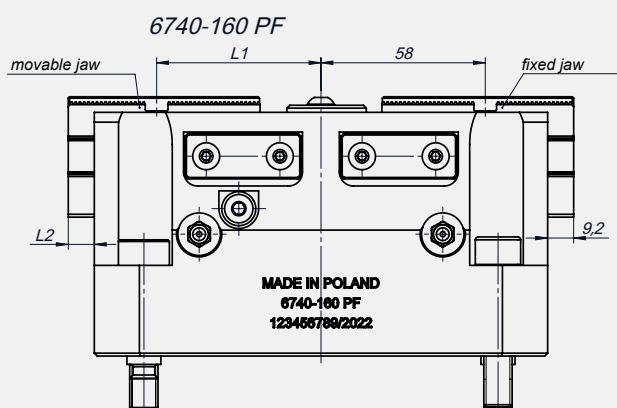
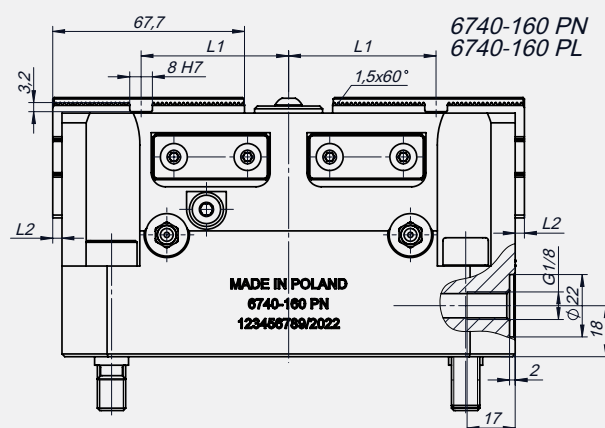
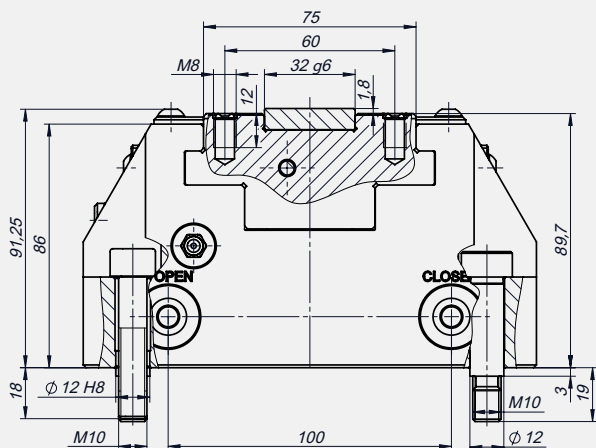
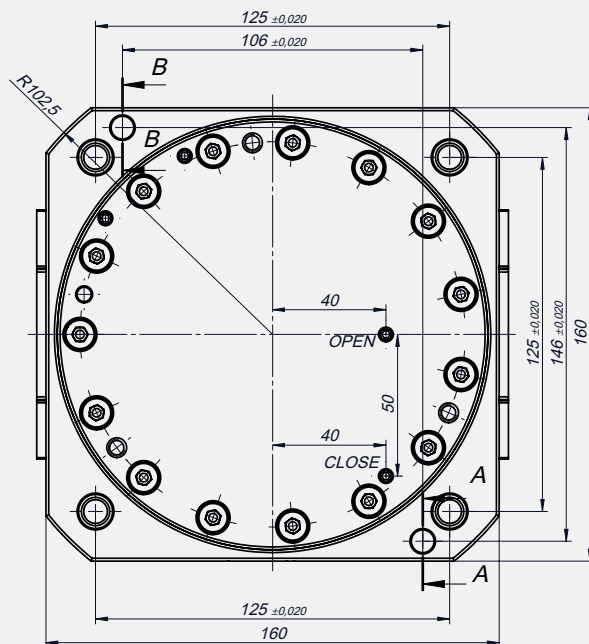
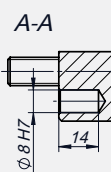
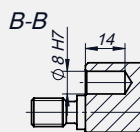


### Features:

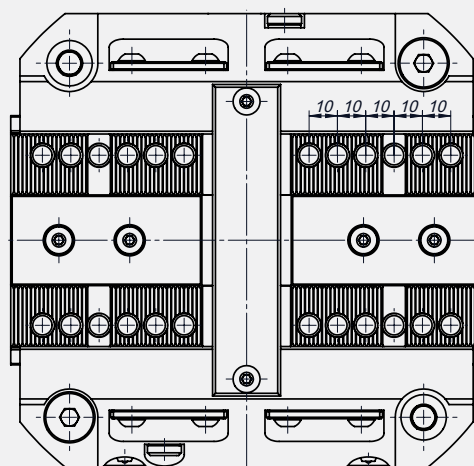
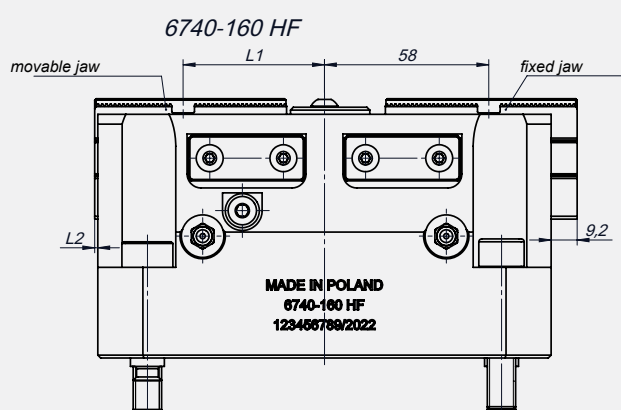
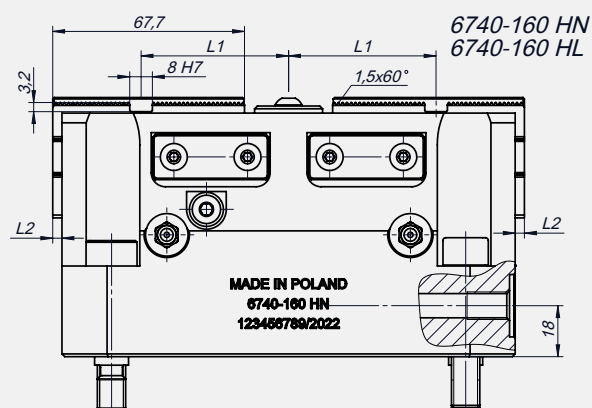
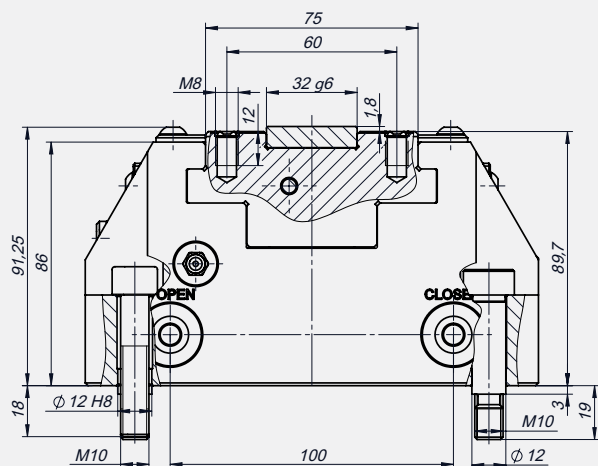
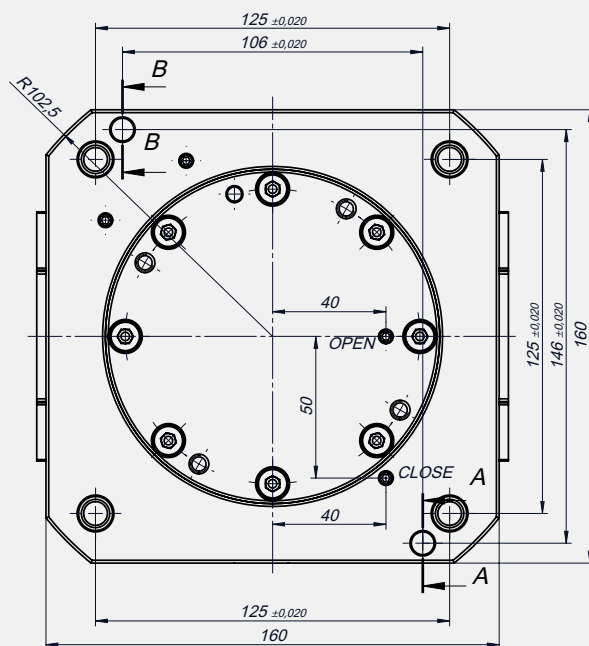
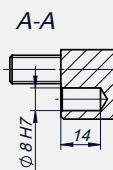
- High repeatability
- High rigidity
- Inside of the vise sealed from chips
- Easy-cleaning design of the vise body
- Compact design
- Linear adjustment of the actuating pressure
- Linear correlation between the input pressure and the clamping force
- The vises are available in two powering setups:
  - Pneumatic powering – type 6740 P
  - Hydraulic powering – type 6740 H
- The vises are available in the following variants:
  - with standard jaws travel – type 6740-160 PN; 6740-160 HN
  - with extended jaws 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 powering:
    - with standard jaws travel –  $F=40$  [kN] for input pressure  $P=9$  [bar]
    - with extended jaws 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 powering:
    - with standard jaws travel –  $F=40$  [kN] for input pressure  $P=30$  [bar]
    - with extended jaws 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]



6740-160 PN  
6740-160 PL  
6740-160 PF



| 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        |



**www.bison-america.com**



### 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:

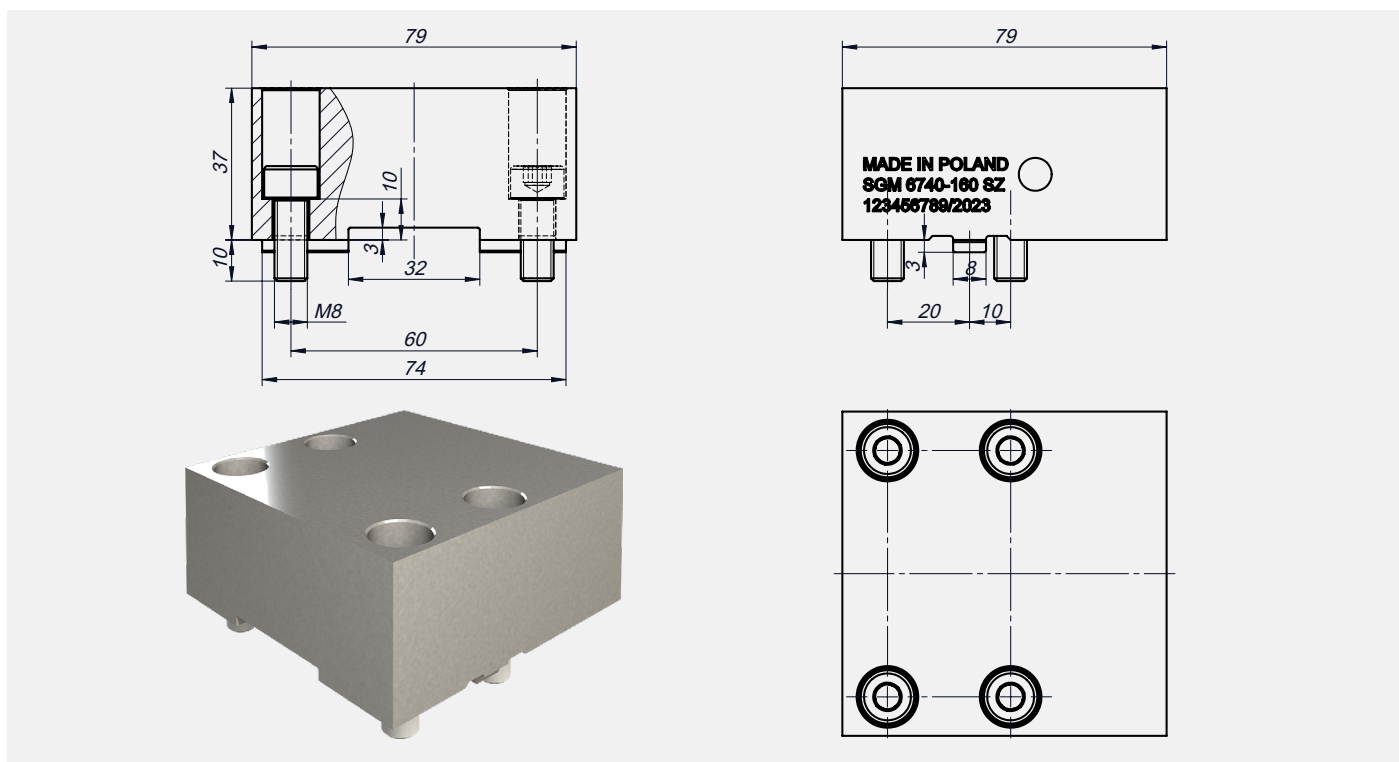
- Self-centering vise without top jaws
- Screws for mounting and setting the vise on the table

### Optional Equipment:

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

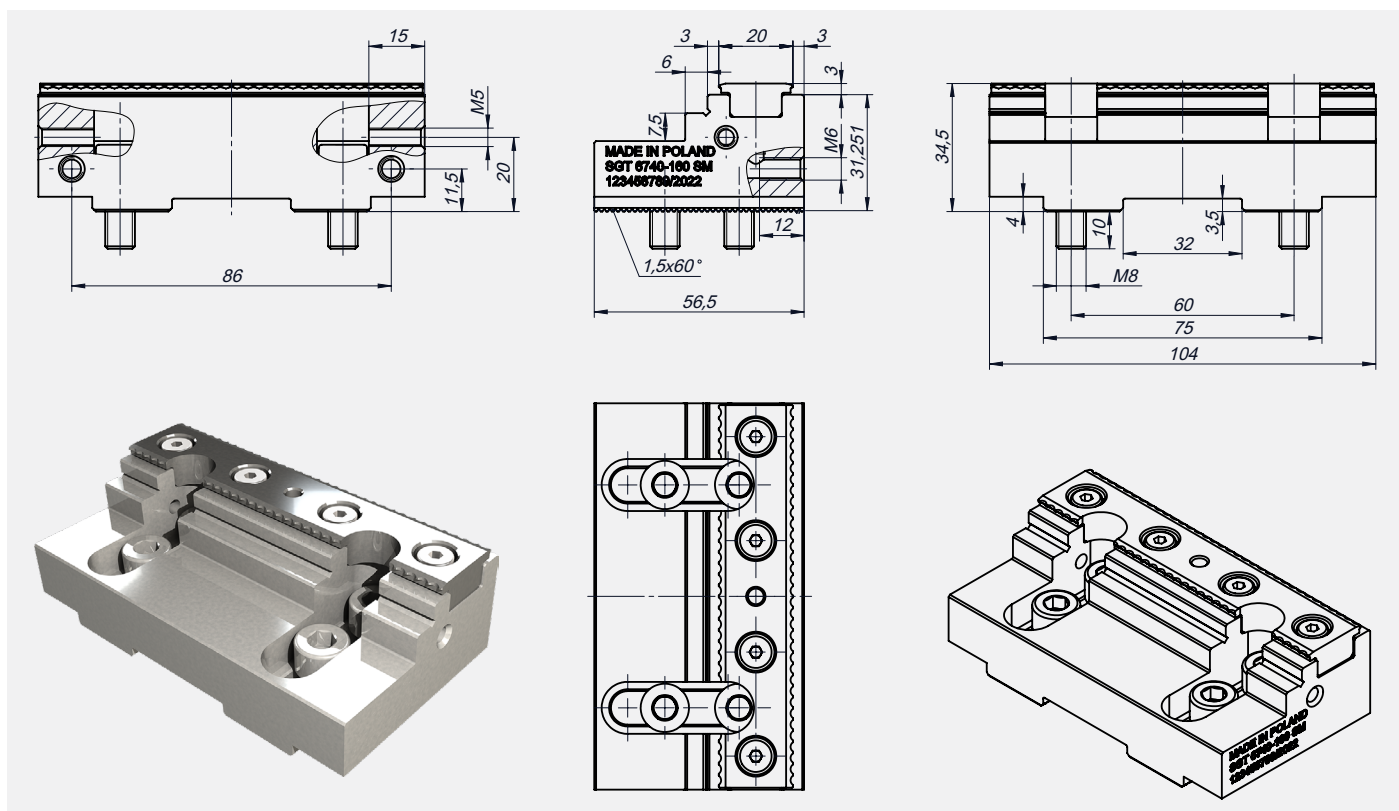
## SGM 6740-160 SZ

### Soft top jaw

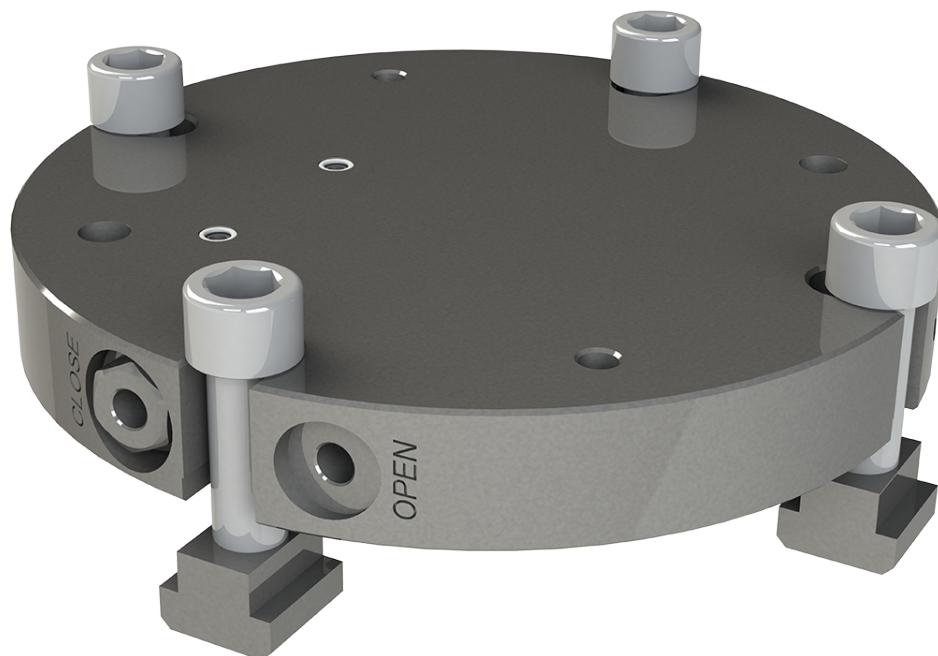


## SGT 6740-160 SM

### Metric hard wide top jaw





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

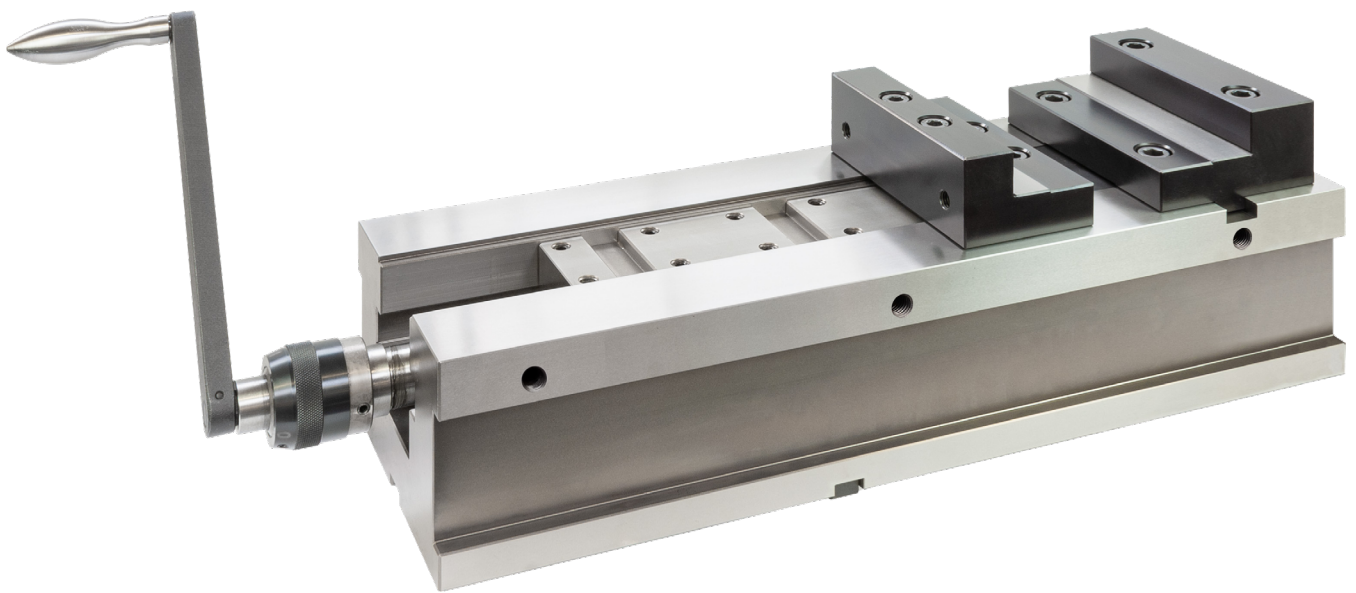
- Spacing of the clamping channels 185x185mm, T-nuts M16/18mm.
- The baseplate for type 6740 P vise is equipped with a non-return valve.
- The baseplate ensures maintaining the operating pressure of the vise after disconnecting from the powering unit for transportation.
- Allows for machining of the 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**

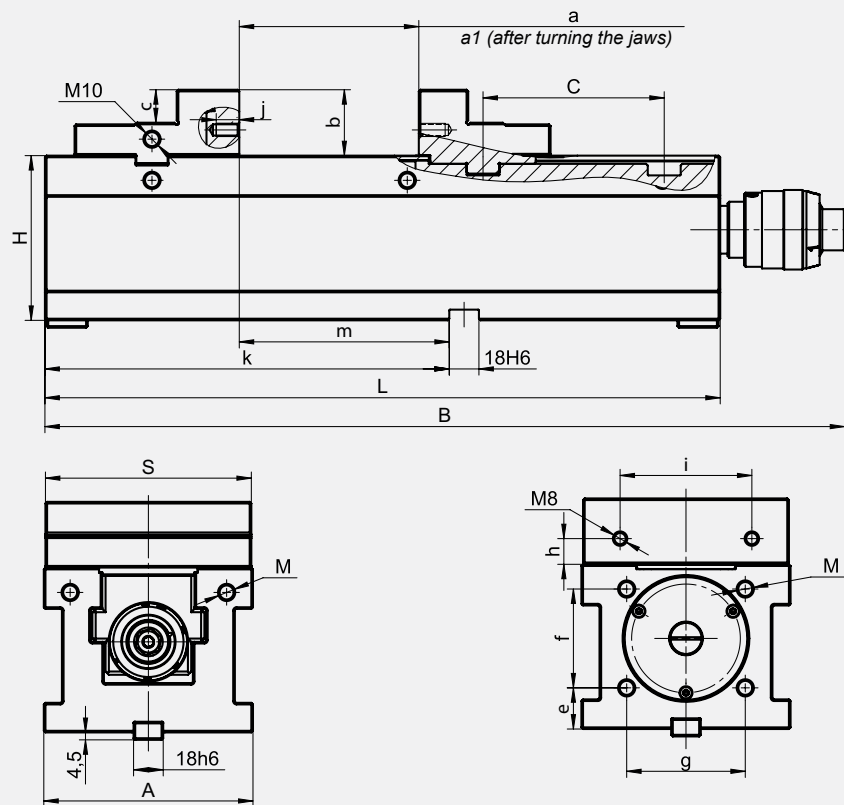


This precision compact vise is designed for precise milling and grinding work. It can be widely used on CNC and conventional machines. The design, accuracy and quality ensure exact positioning of the workpiece and obtaining large clamping forces. Vises can also be set up in multi-vise configurations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



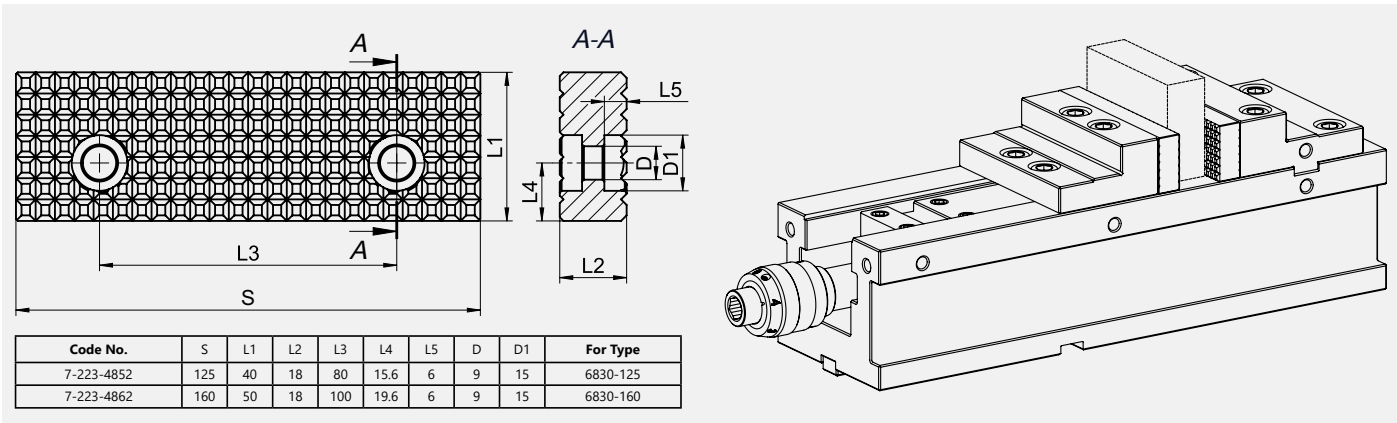
| Type             | S   | L   | H                    | A   | B   | C     | a     | a1      | b  | c  | M   | e  | f  | g   | h    | i   | j  | k     | m           | Clamping force [kN] ±15% |                 |                 |            | Weight [lbs] |
|------------------|-----|-----|----------------------|-----|-----|-------|-------|---------|----|----|-----|----|----|-----|------|-----|----|-------|-------------|--------------------------|-----------------|-----------------|------------|--------------|
|                  |     |     |                      |     |     |       |       |         |    |    |     |    |    |     |      |     |    |       |             | position 1 (2*)          | position 2 (4*) | position 3 (6*) | position 4 |              |
| 6830-125-410-336 | 125 | 410 | 100 <sub>-0,01</sub> | 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 <sub>-0,01</sub> | 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:

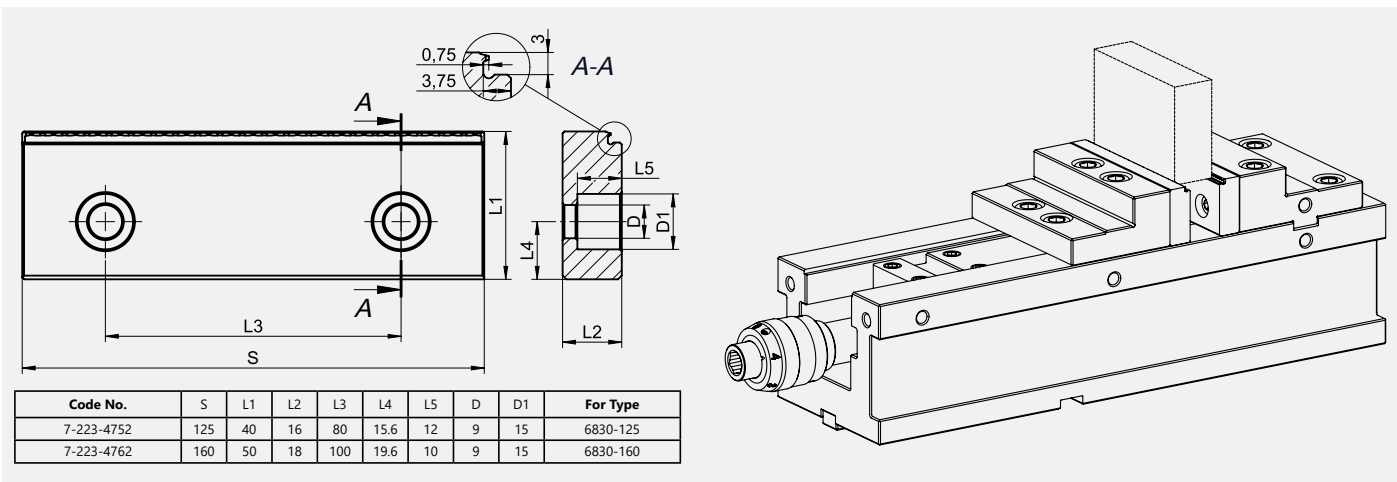
- Wrench
- Slot nuts
- Vice clamps

### Accessories and application examples

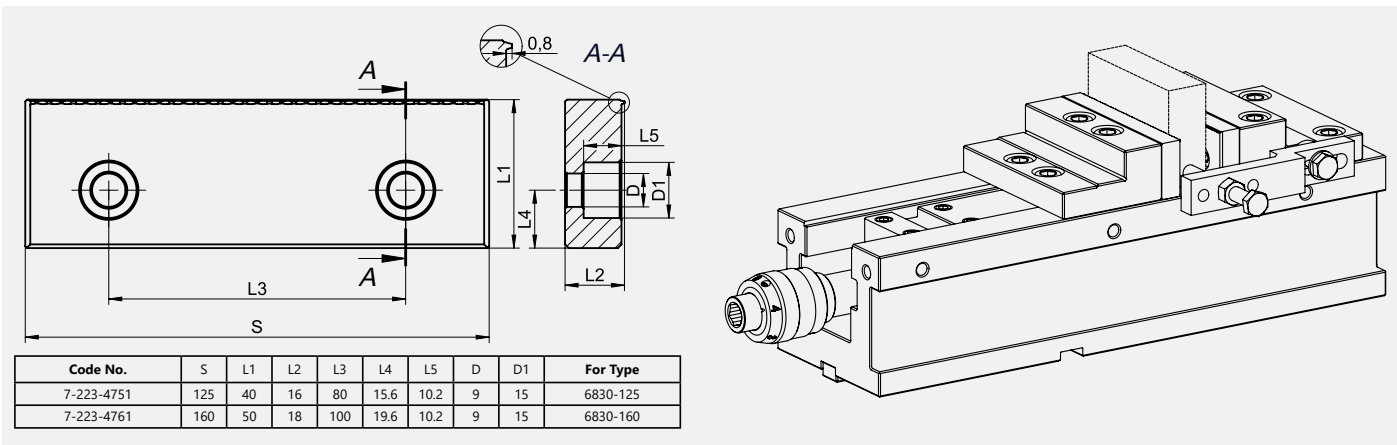
#### Reversible Jaw Inserts WS CR, Fine Grooved/Grooved For, 2pc Set



#### Step Claw Jaw Inserts WS KBS, 2pc Set

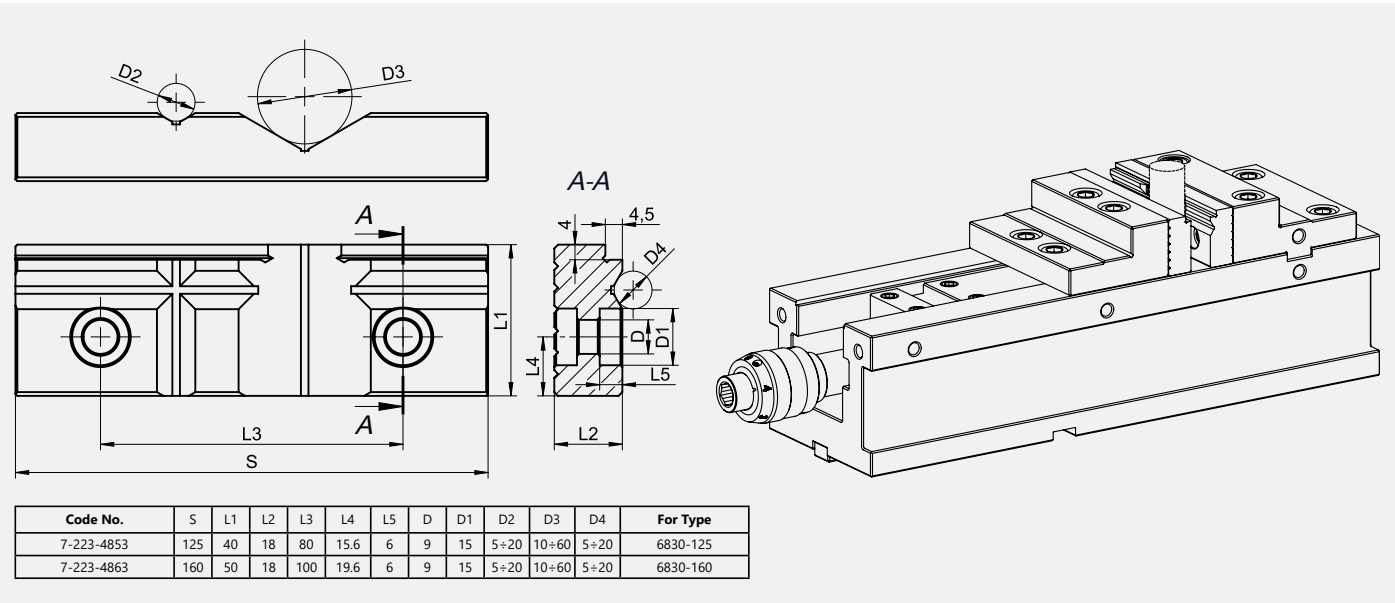


#### Claw Jaw Inserts WS KB, 2pc Set

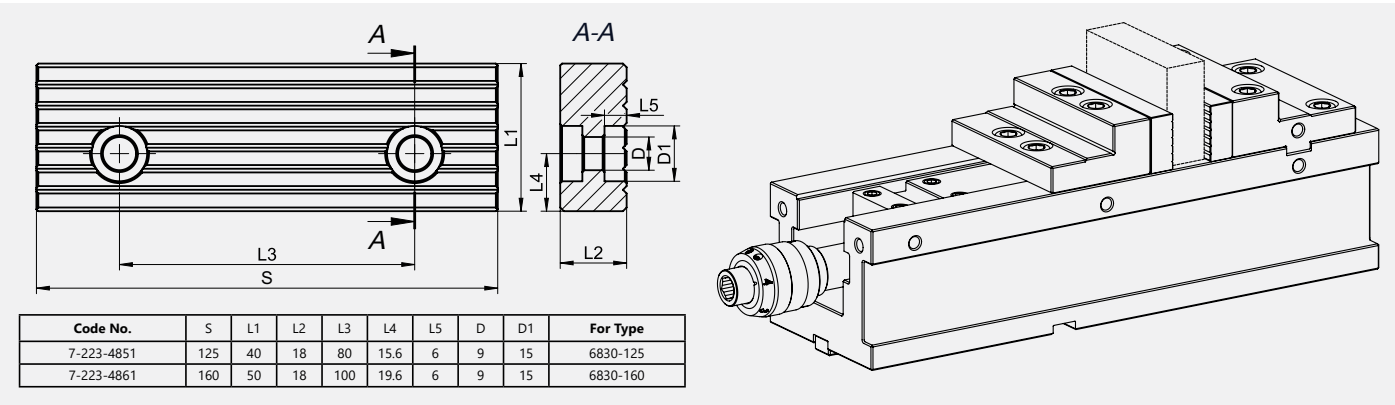




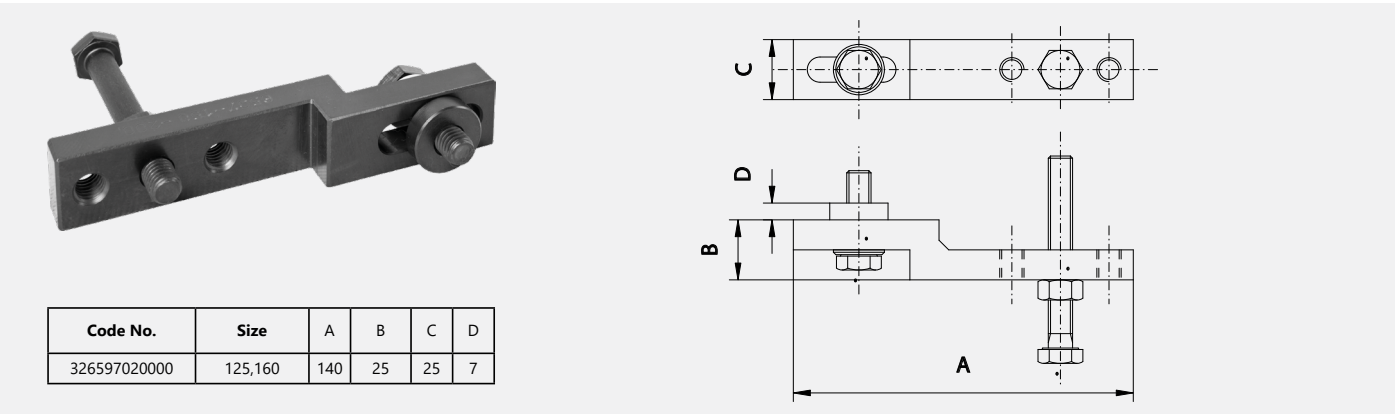
Reversible Jaw Inserts WS PR, Prism/Grooved, 2pc Set



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

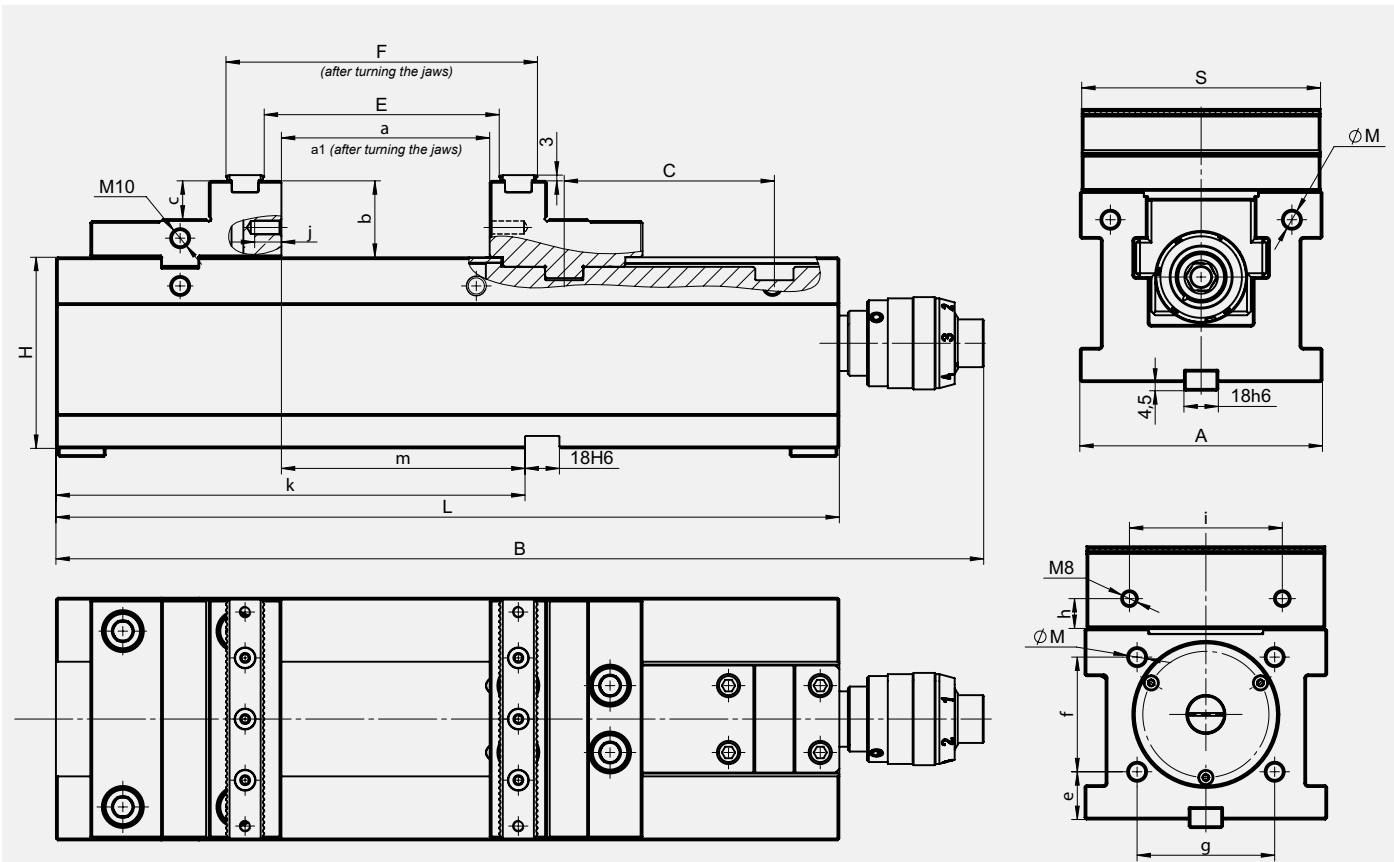


Side Stop



# 6830 LZ

Vises are also available with interchangeable serrated gripping inserts.



| Type                | S   | L   | H                    | A   | B   | C     | E      | F       | a     | a1      | b  | c  | M   | e  | f  | g   | h    | i   | j  | k     | m           | Clamping force<br>[kN] | Weight<br>[lbs] |
|---------------------|-----|-----|----------------------|-----|-----|-------|--------|---------|-------|---------|----|----|-----|----|----|-----|------|-----|----|-------|-------------|------------------------|-----------------|
| 6830-125-410-336 LZ | 125 | 410 | 100 <sub>-0.01</sub> | 127 | 486 | 110   | 14÷223 | 138÷352 | 0÷220 | 116÷336 | 40 | 20 | M10 | 25 | 60 | 72  | 15.6 | 80  | 14 | 245.5 | 127.5±0.015 | 40                     | 88.2            |
| 6830-160-540-464 LZ | 160 | 540 | 115 <sub>-0.01</sub> | 162 | 621 | 2x110 | 22÷335 | 132÷486 | 0÷333 | 131÷464 | 50 | 25 | M12 | 25 | 75 | 110 | 19.6 | 100 | 16 | 197   | 70±0.015    | 60                     | 167.6           |

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 |





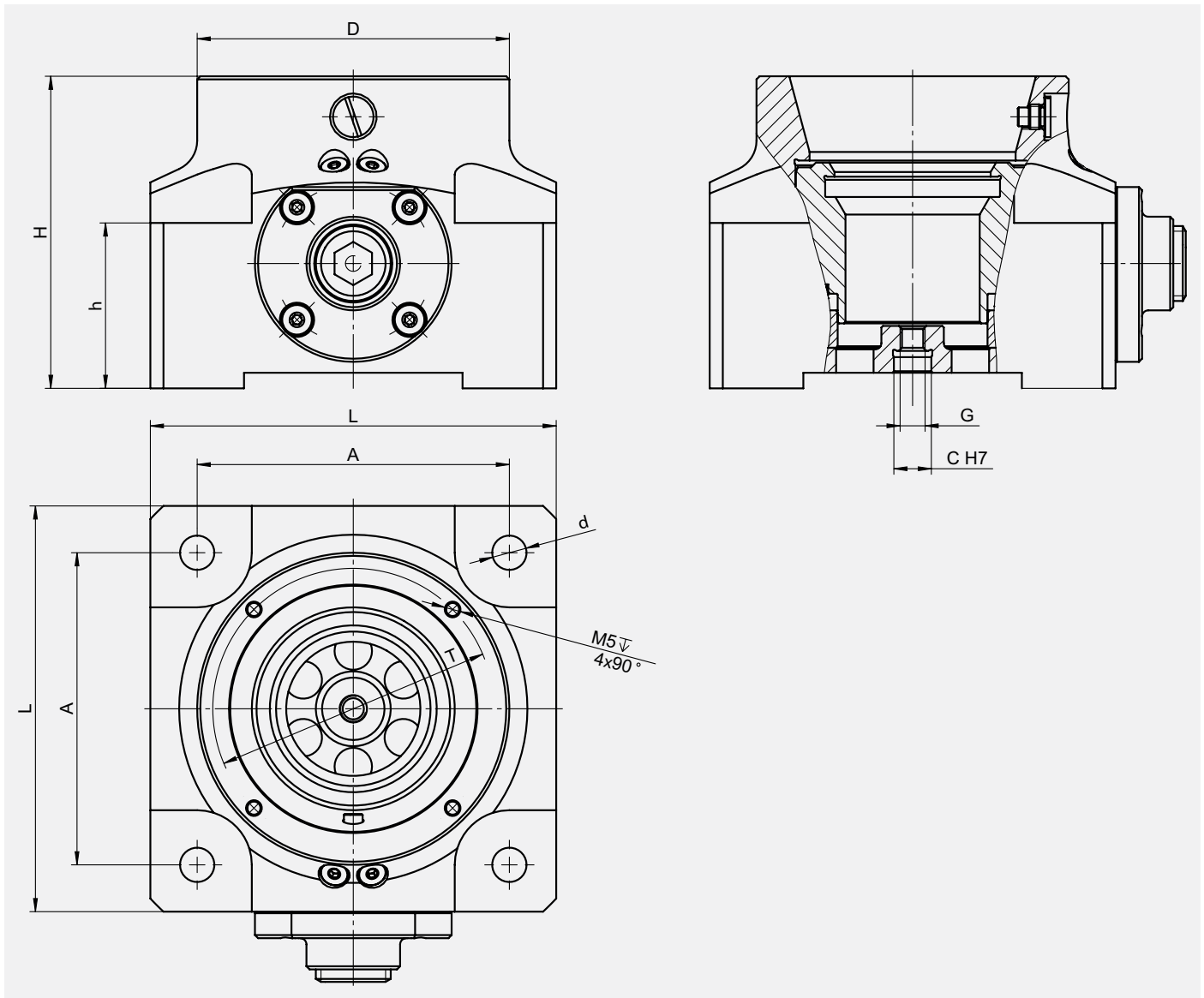
**9316**

## 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



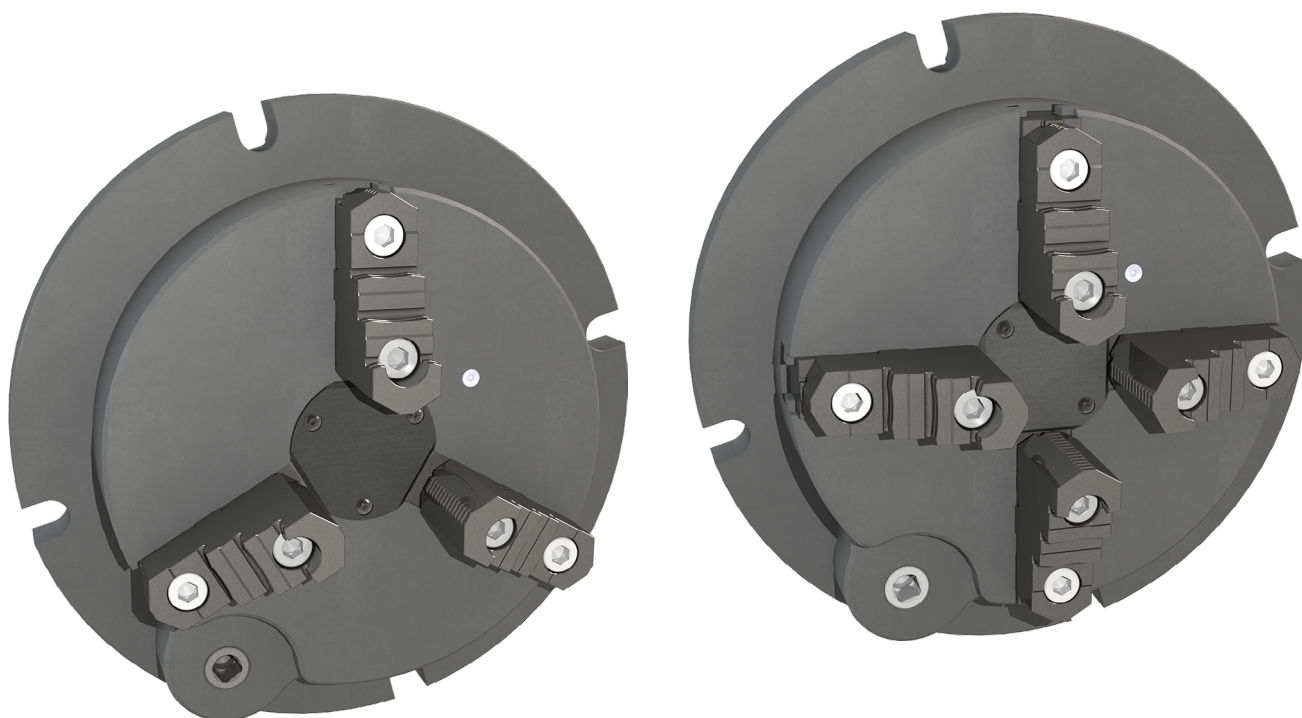
| Code No.   | Type     | A   | L   | H   | h  | D   | d  | G   | C  | T   | Clamping range Ø | Weight [lbs] |
|------------|----------|-----|-----|-----|----|-----|----|-----|----|-----|------------------|--------------|
| 7-862-0640 | 9316-42  | 100 | 130 | 100 | 53 | 100 | 11 | M8  | 12 | 90  | 4-42             | 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  $\leq 0.01$  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

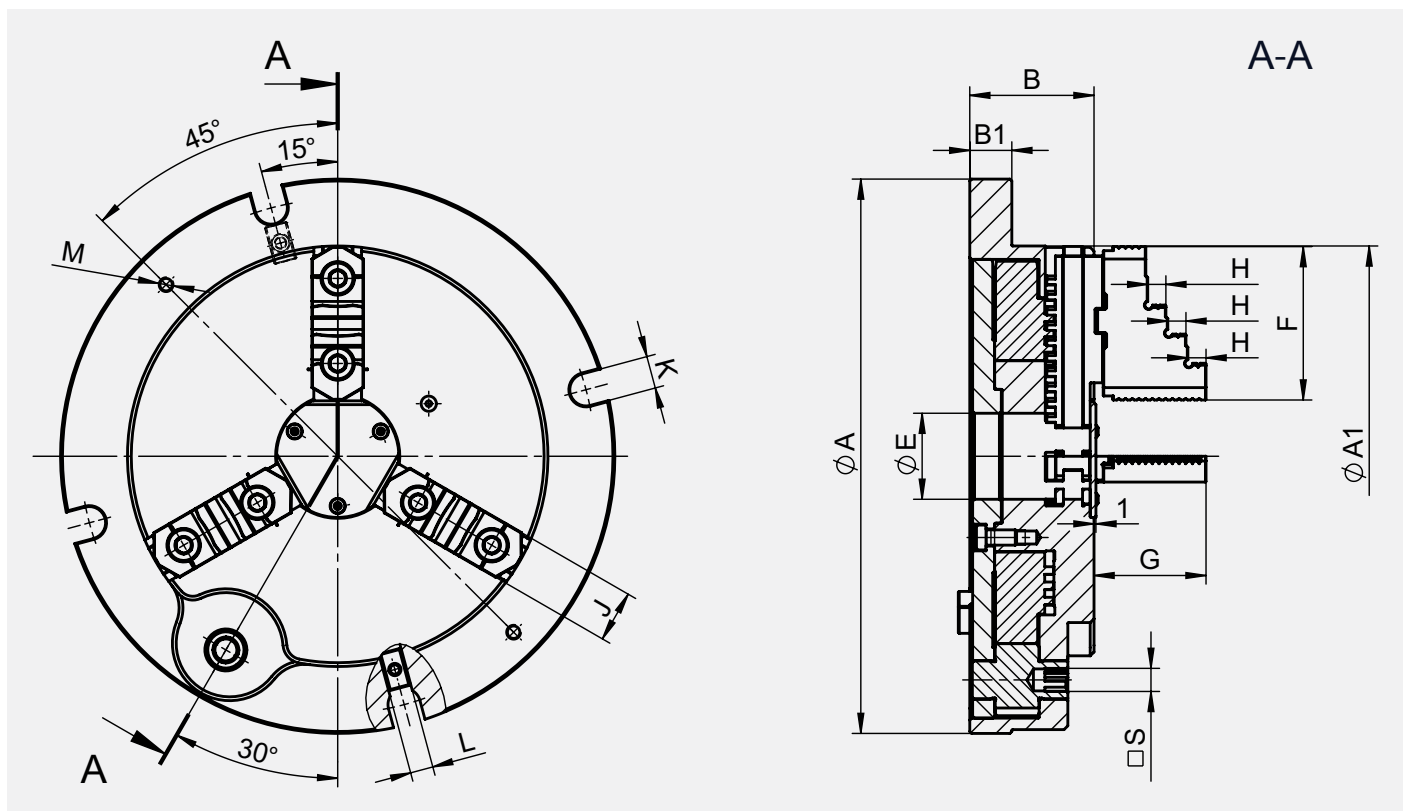


The unmatched advantage of our milling fixtures is their wide clamping range and long jaw travel, which allows for clamping workpieces of various sizes without the need for changing the jaws or for storing a large number of jaws in different sizes.

### 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**

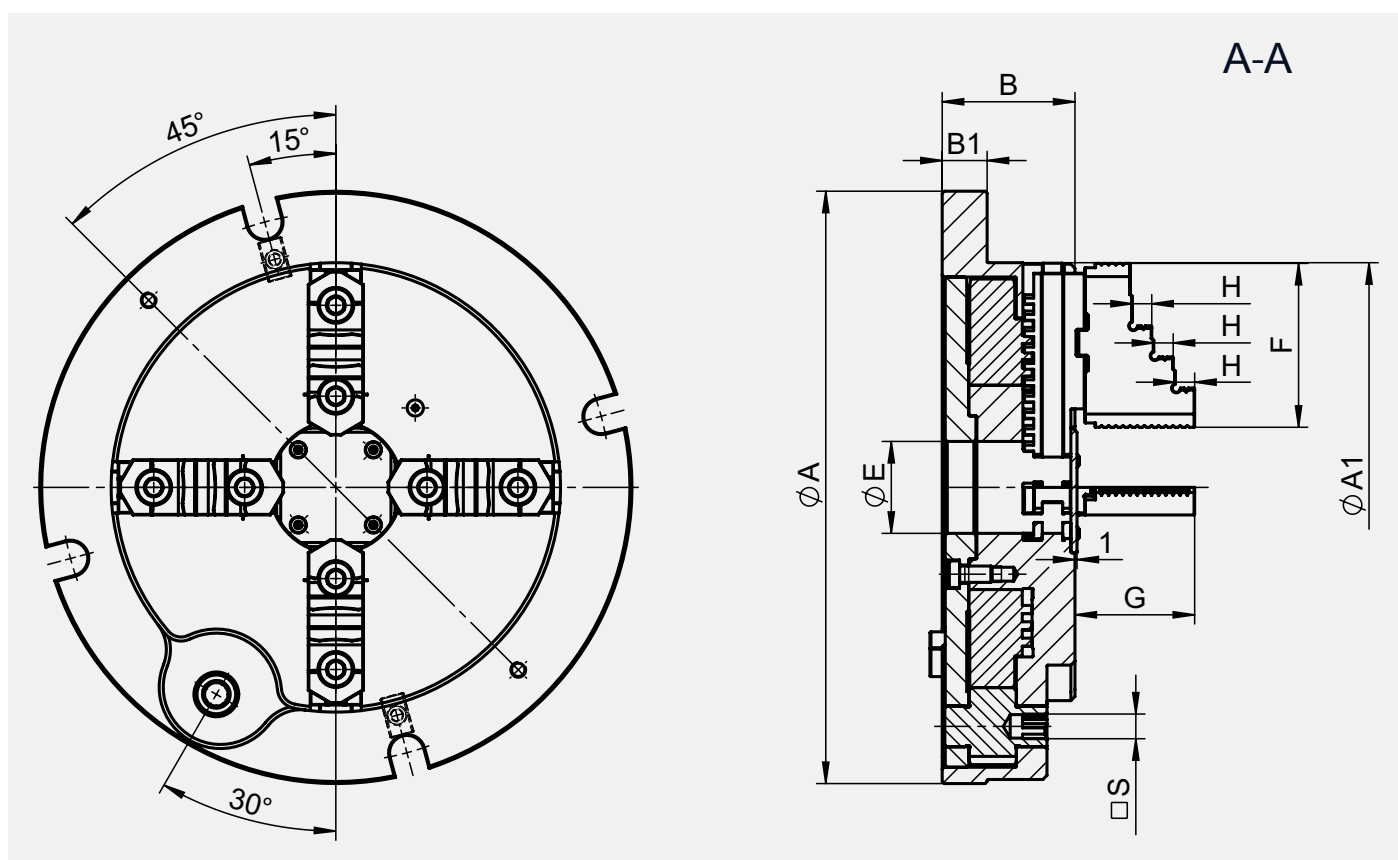


| Code No.   | Type           | Ø A | Ø A1 | B  | B1 | Ø E | F   | G    | H   | J    | K  | L  | M  | □ S | n x J | Weight [lbs] |
|------------|----------------|-----|------|----|----|-----|-----|------|-----|------|----|----|----|-----|-------|--------------|
| 7-640-0630 | 9416-160 FM US | 237 | 175  | 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

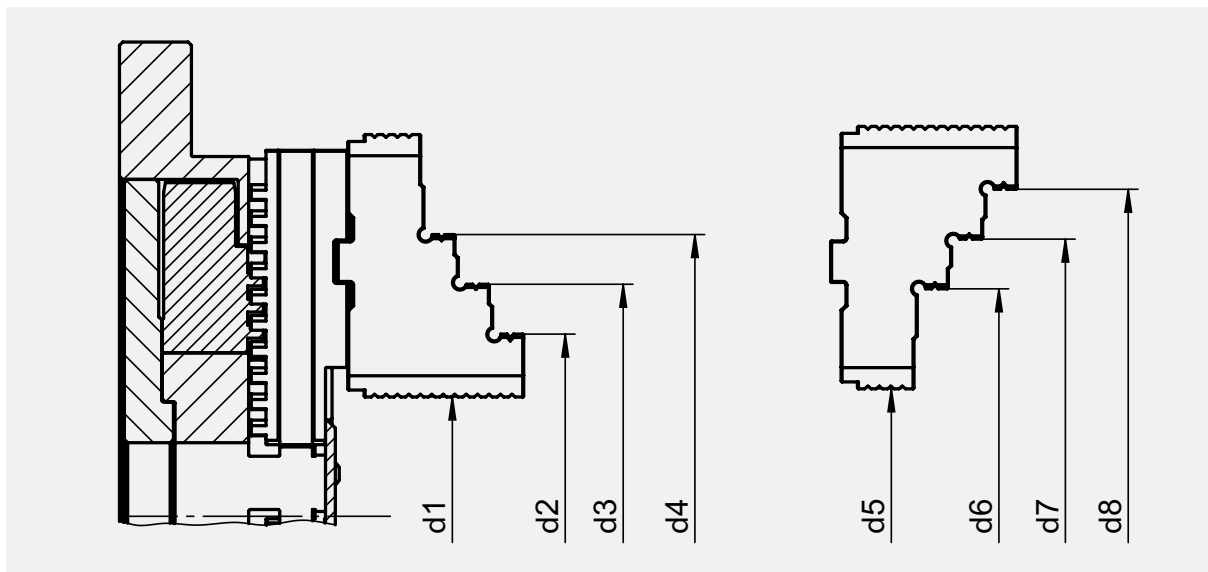


| Code No.   | Type           | Ø A | Ø A1 | B  | B1 | Ø E | F   | G    | H   | J    | K  | L  | M  | □ S | n x J | Weight [lbs] |
|------------|----------------|-----|------|----|----|-----|-----|------|-----|------|----|----|----|-----|-------|--------------|
| 7-640-0640 | 9417-160 FM US | 237 | 175  | 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

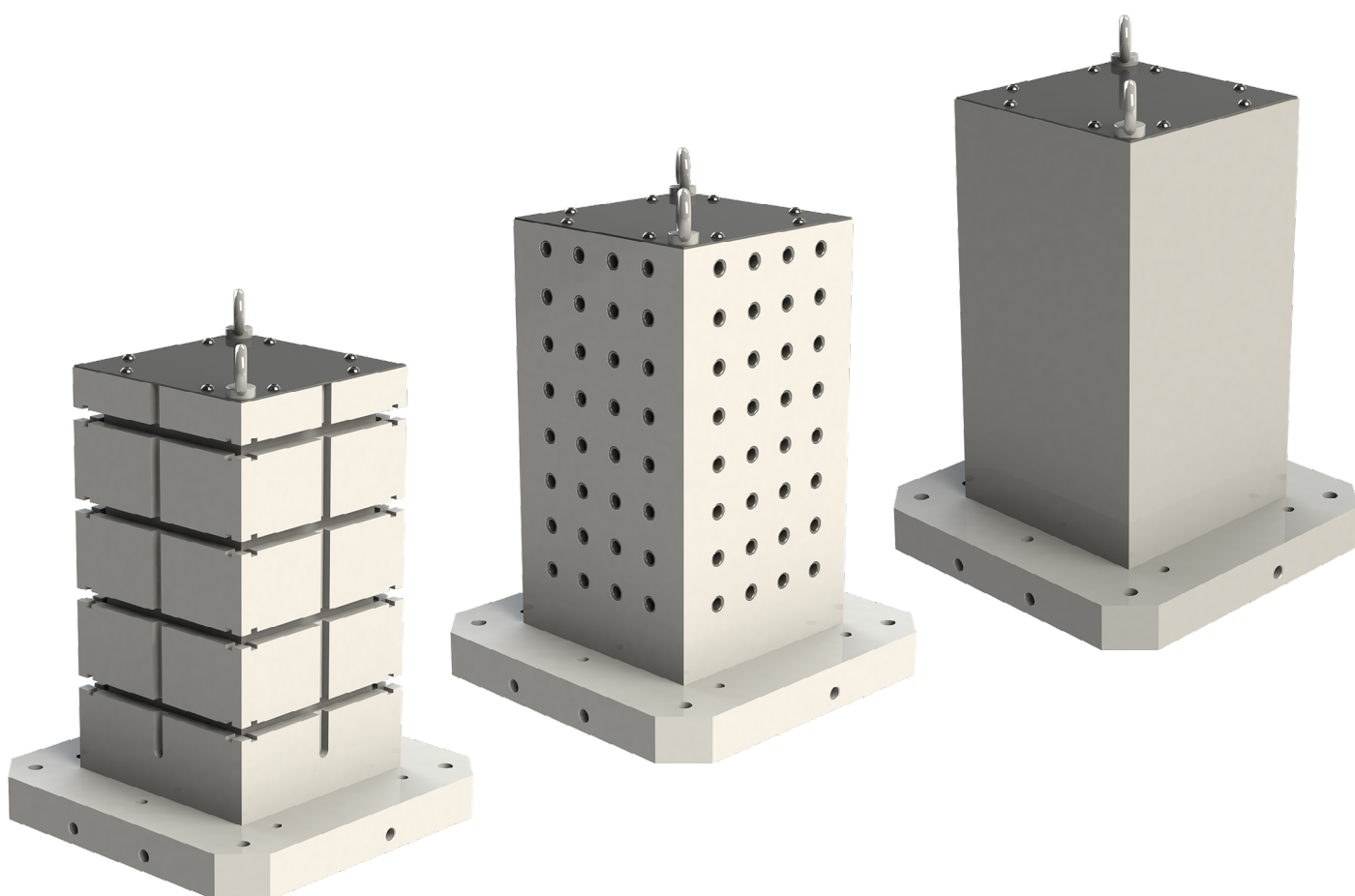


| Type                             | d1      | d2      | d3      | d4      | d5     | d6      | d7      | d8      |
|----------------------------------|---------|---------|---------|---------|--------|---------|---------|---------|
| 9416-160 FM US                   | 32÷61   | 67÷95   | 93÷121  | 115÷144 | 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<br>9417-200 FM US | 42÷73   | 83÷113  | 113÷143 | 142÷172 | 47÷78  | 109÷139 | 140÷170 | 170÷200 |
| 9416-250 FM US<br>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 |



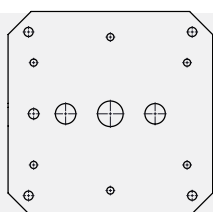
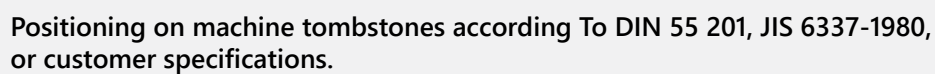
1415  
1415 DS  
1415 ZP

## Tombstones



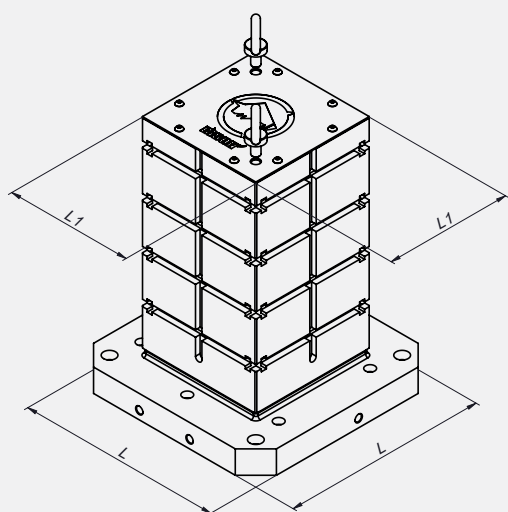


## 2-sided tombstone

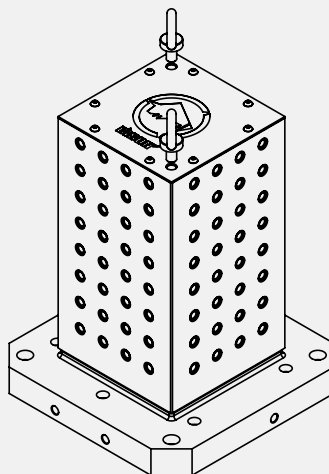
[illegible]

1415

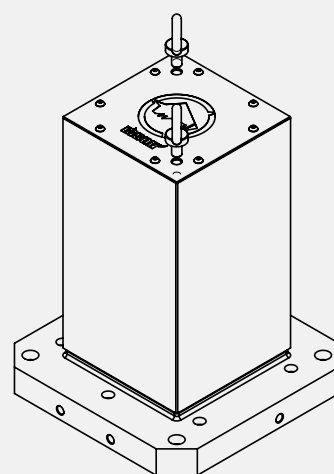
## 4-sided tombstone



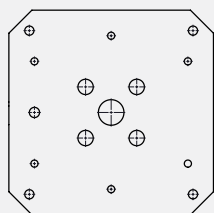
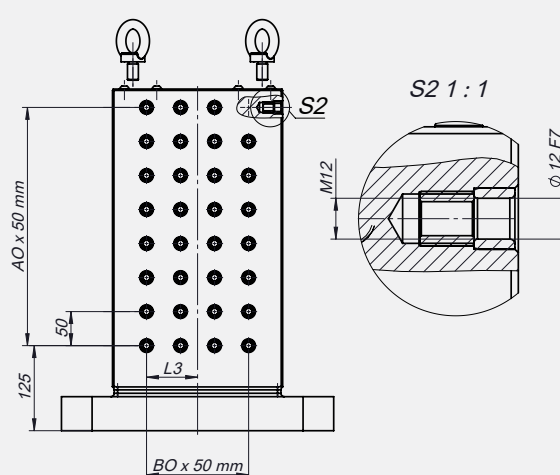
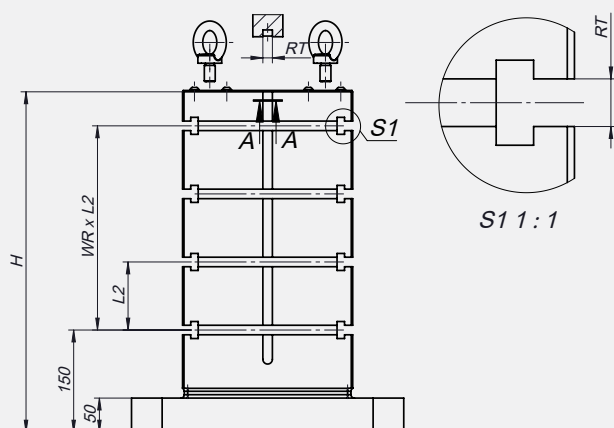
TS: T-Slots



TH: Grid Pattern



BL: Pre-Machined Surfaces

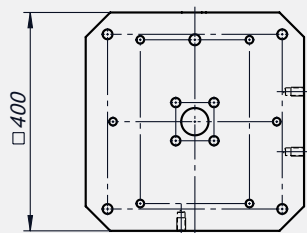
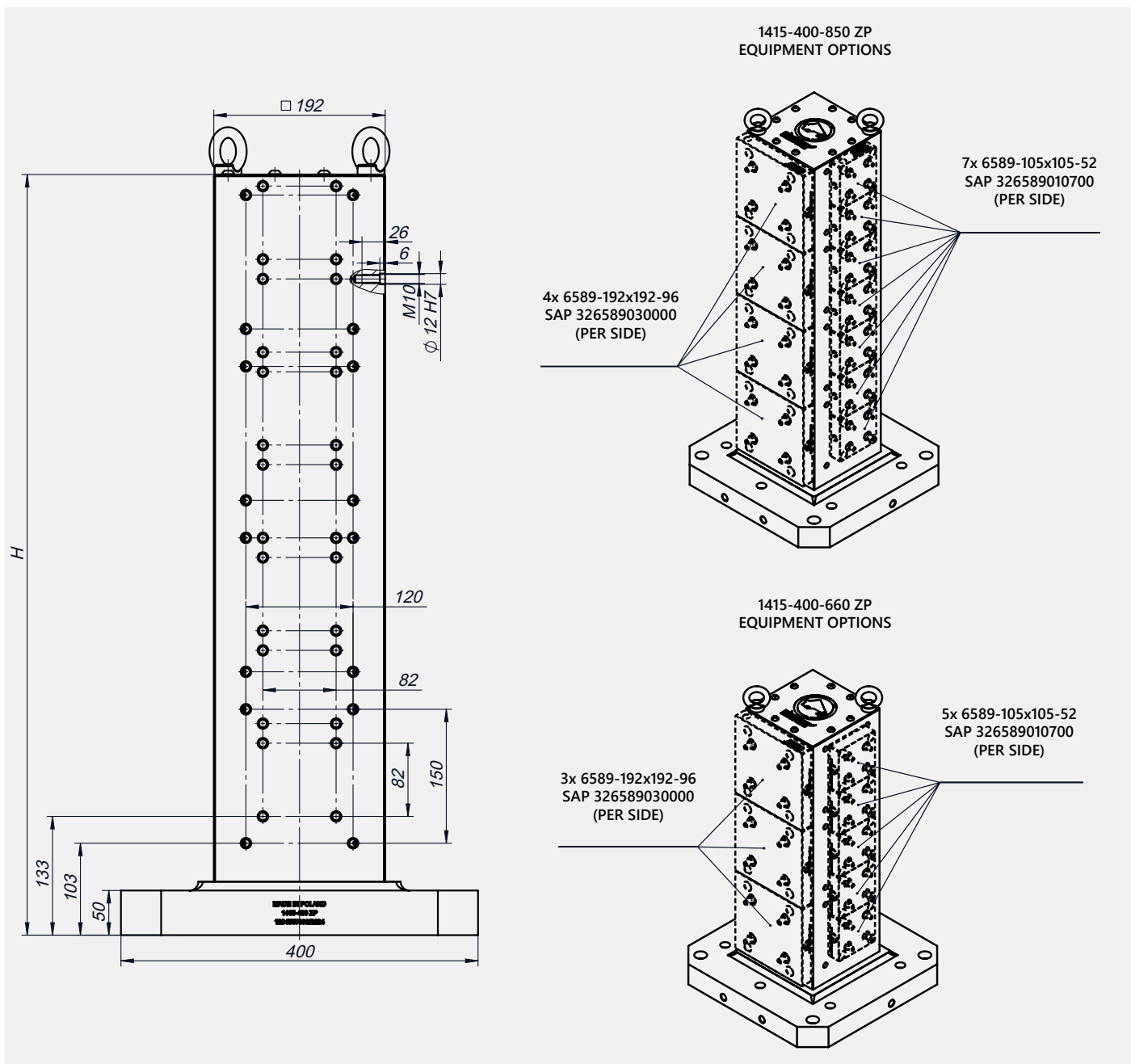


Positioning on machine tombstones according To DIN 55 201, JIS 6337-1980, or customer specifications.

| 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

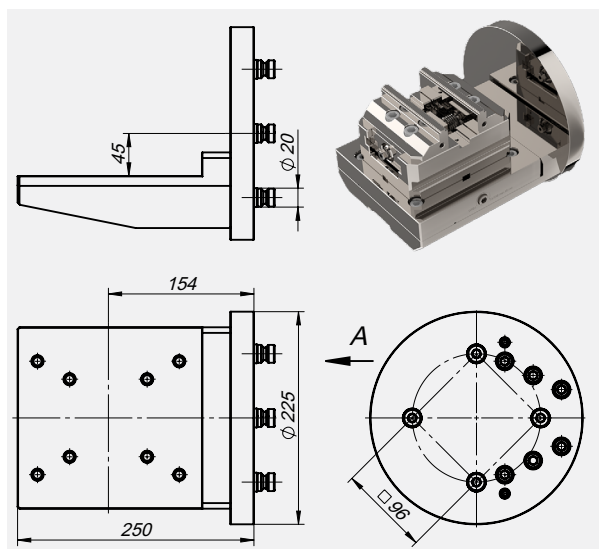
## 4-sided tombstone with zero point system



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

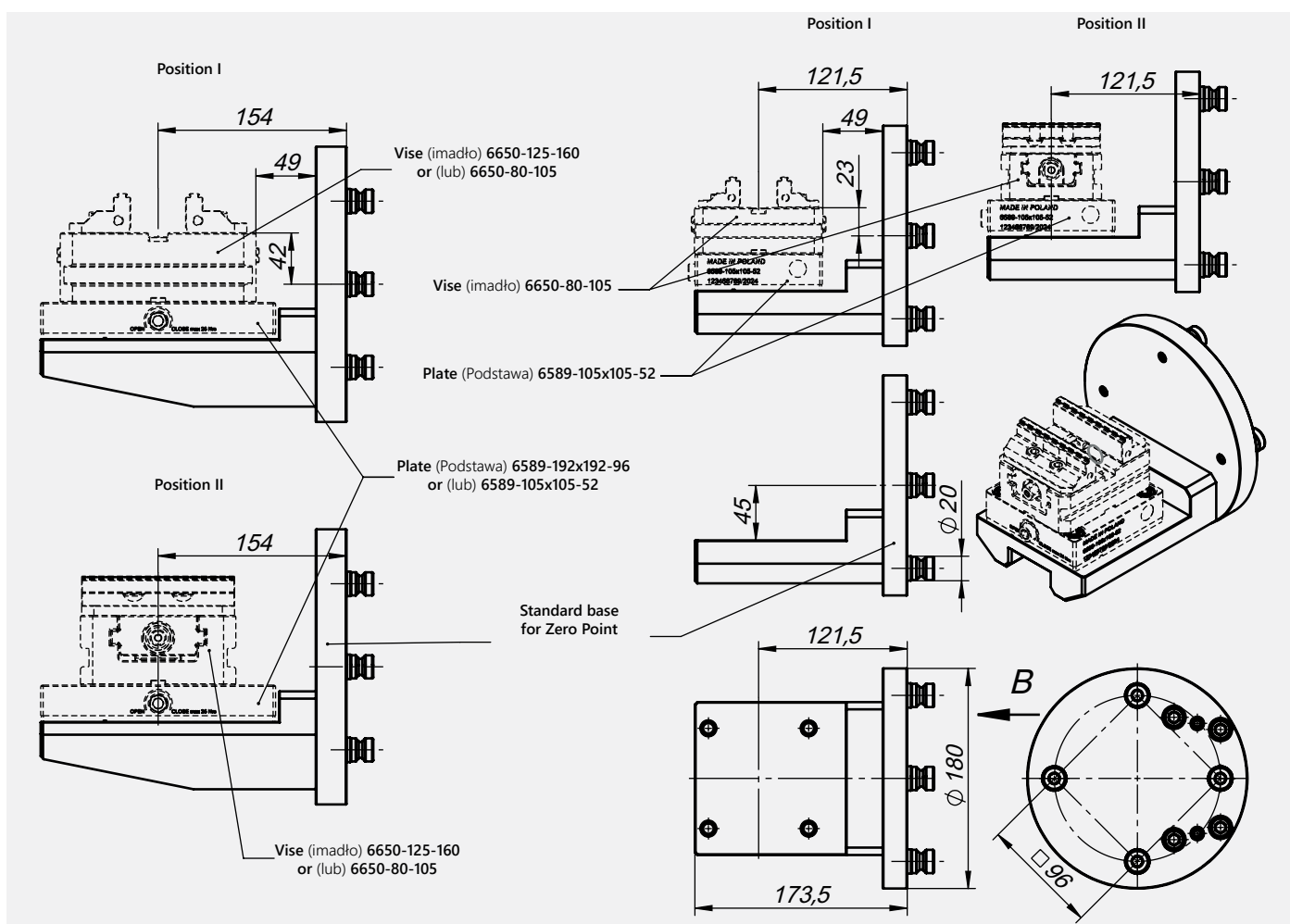


### Angled base for indexing devices (additional 4 axis)

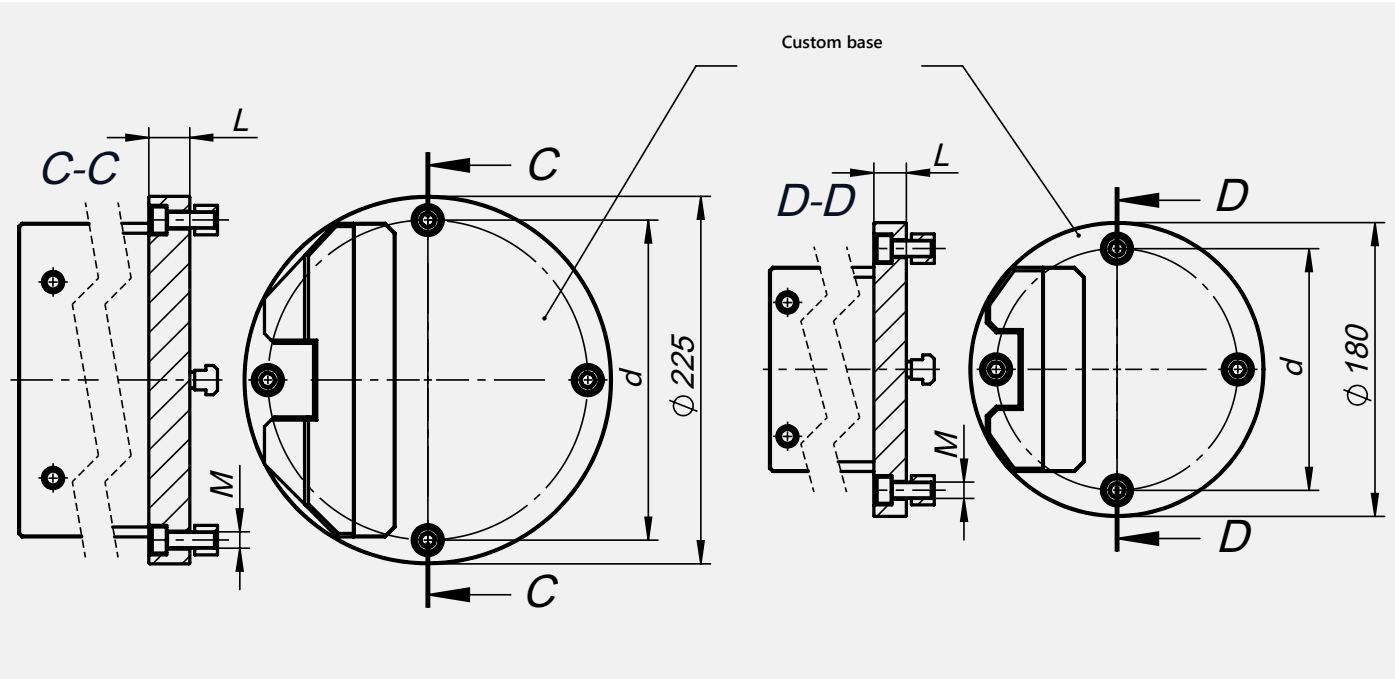
In the standard version, the base connection is equipped with Zero Point quick-release pins. It is possible to make a base connection on special order to any plate of the dividing device. Standard angled base works with 6589 quick-release base and 6650 self-centering vise.

#### 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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