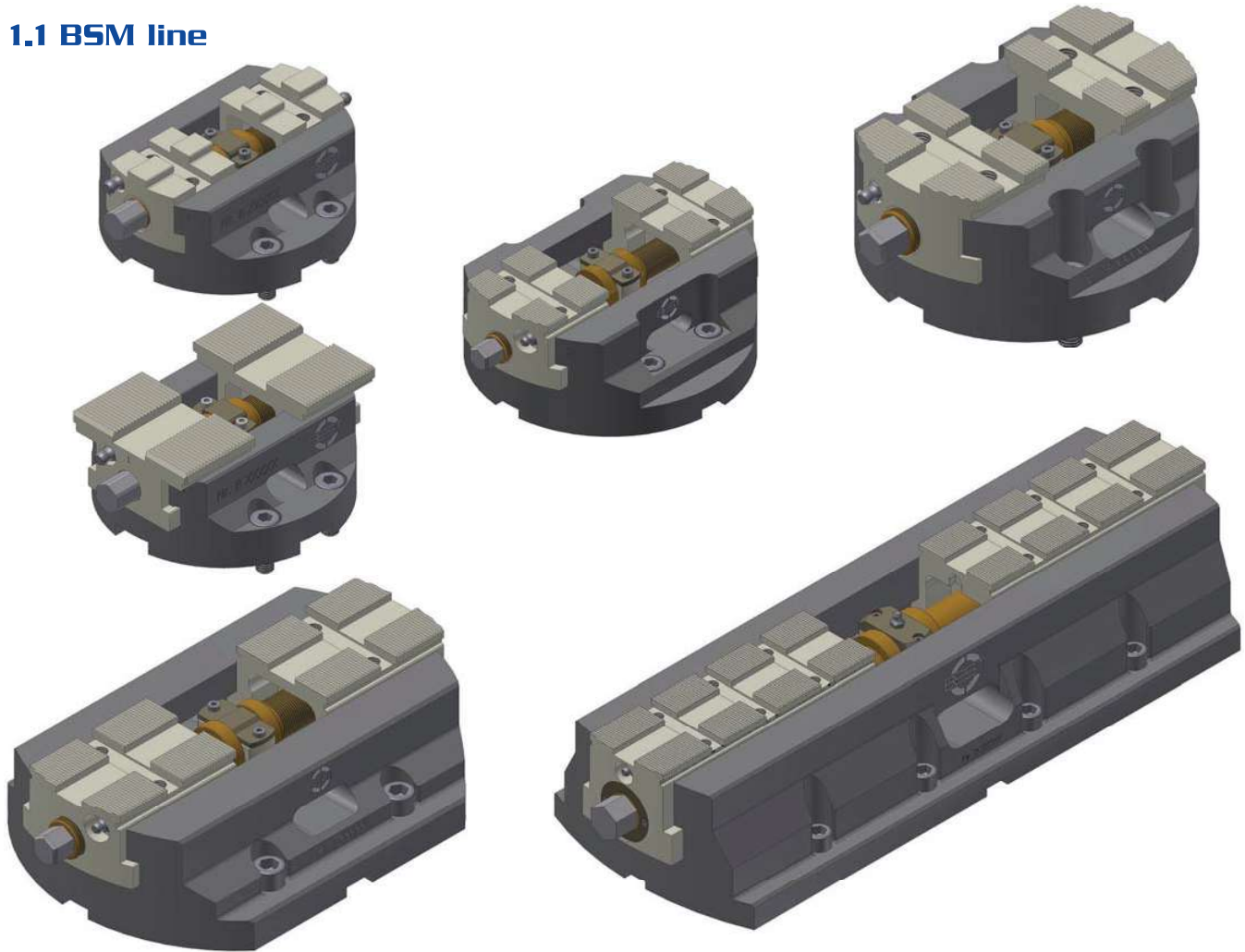


# 1. Mechanical centric vices

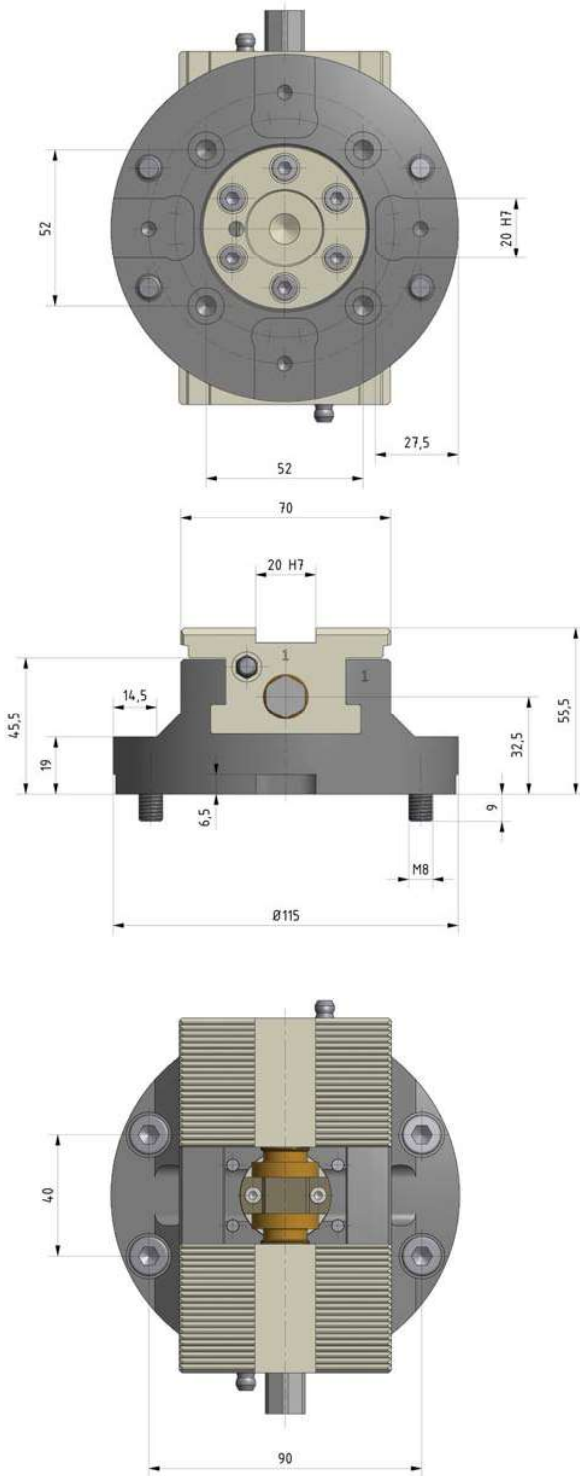
## 1.1 BSM line



### Advantages of BSM centric vices:

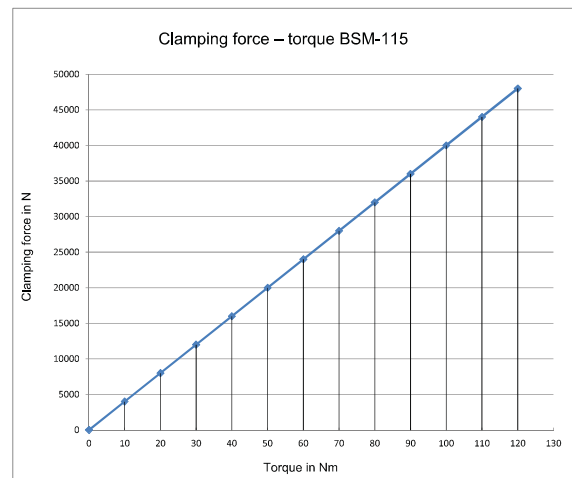
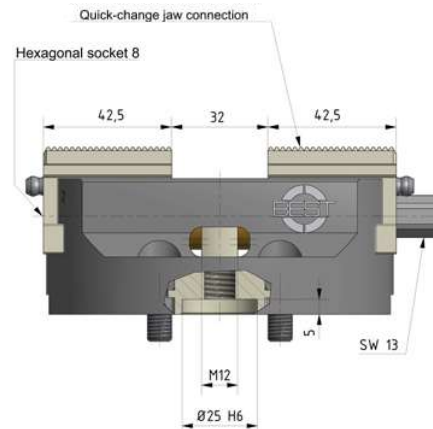
- Low-obstruction contours and extremely flat design for optimum flexibility and multi-axis machining centres
- Extremely high clamping forces (up to 100 kN)
- Up to 50 mm stroke / jaw
- Housing sizes from 115 mm to 500 mm
- Repetition accuracy of 0.005 mm (with ground-in jaws)
- Centring accuracy of +/- 0.01 mm (with ground in jaws)
- Jaw widths of up to 500 mm
- Combined quick-change jaw connection and tongue and groove from model size BSM140 onward
- Ground-in threaded spindle
- Low wear due to nitrogen-hardened surfaces
- Depending on requirements, the BSM centric vice can be screwed conventionally to the machining table or used as a RPC zero-point centric vice on the BEST Realpoint system
- The BSM centric vice can be adapted for use with zero-point systems of other manufacturers

## 1.1.1 Mechanical centric vice BSM-115-SWBA



### Technical data:

Order number:	200-0115-012
Designation:	BSM-115-SWBA
Installation length:	Ø 115 mm
Installation height:	55.5 mm
Weight:	2.96 kg
Clamping range:	0–100 mm
Stroke per jaw:	15 mm
Max. torque:	120 Nm
Max. clamping force:	48 kN
Jaw connection:	Quick-change

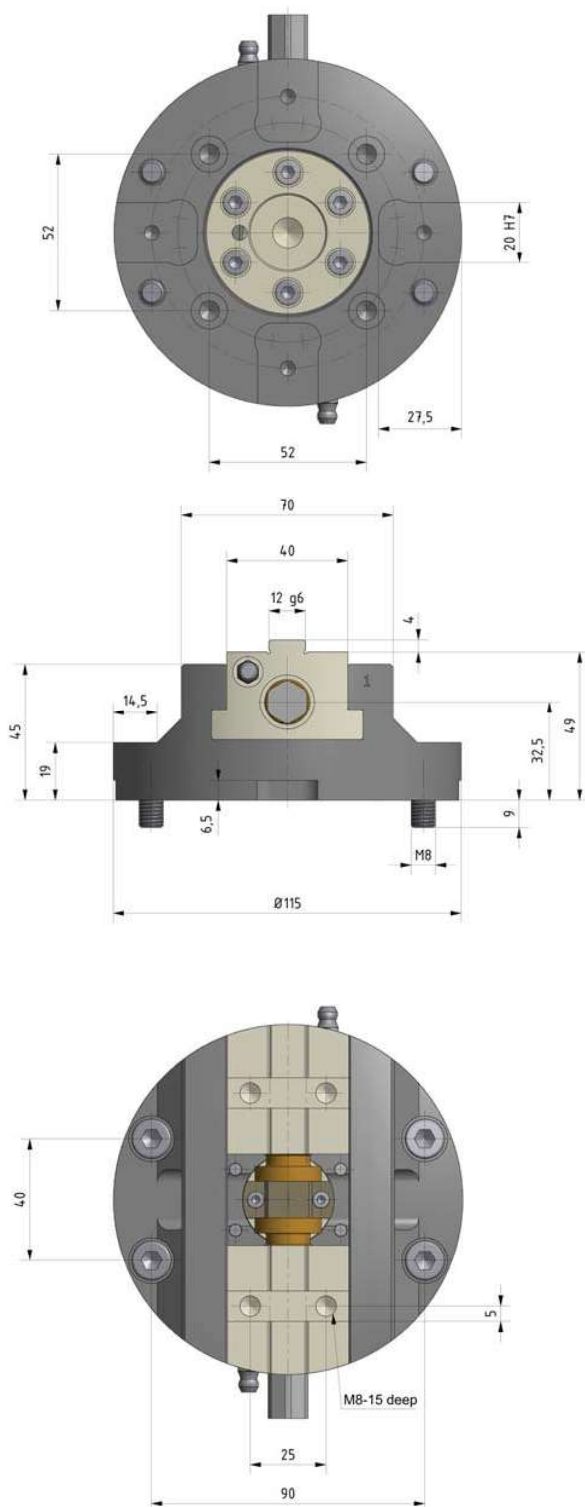


### Installation options for the BSM-115-SWBA:

- The centric vice BSM-115-SWBA can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-115-SWBA can be quickly upgraded to an RPC-115-SWBA zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

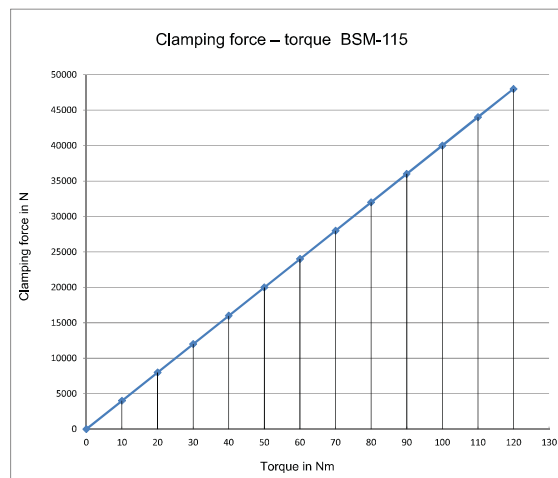
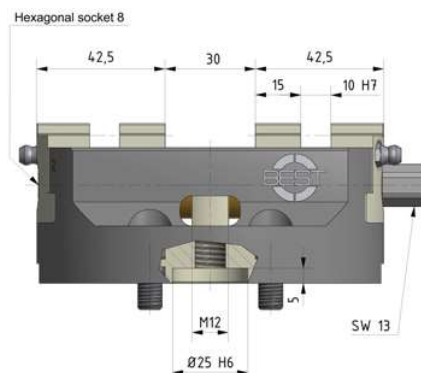
You can find the corresponding jaws for the centric vice on Pages 32 to 34.

## 1.1.2 Mechanical centric vice BSM-115-KV



### Technical data:

Order number:	200-0115-014
Designation:	BSM-115-KV
Installation length:	Ø 115 mm
Installation height:	49 mm
Weight:	2.96 kg
Clamping range:	0–100 mm
Stroke per jaw:	15 mm
Max. torque:	120 Nm
Max. clamping force:	48 kN
Jaw connection:	tongue and groove



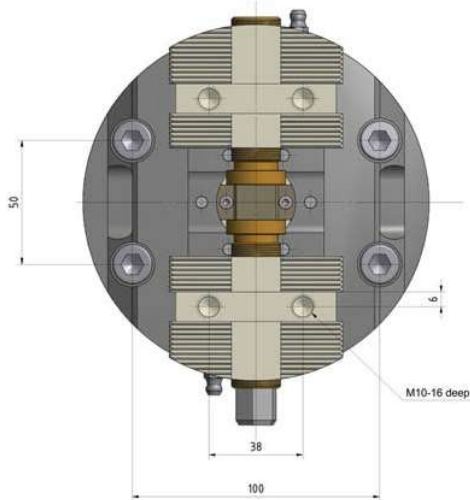
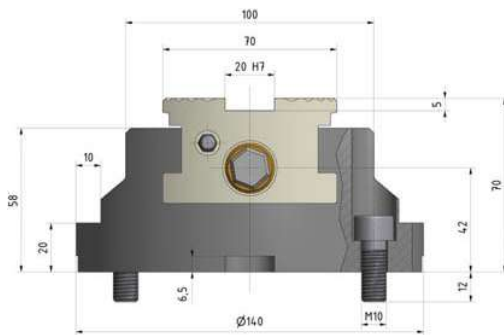
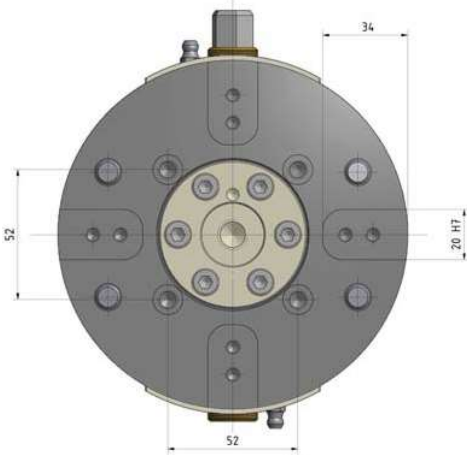
### Installation options for the BSM-115-KV:

- The centric vice BSM-115-KV can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-115-KV can be quickly upgraded to an RPC-115-KV zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

You can find the corresponding jaws for the centric vice on Pages 35 to 40.

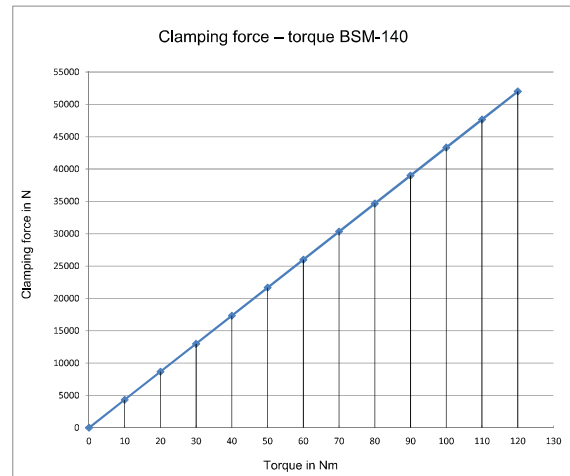
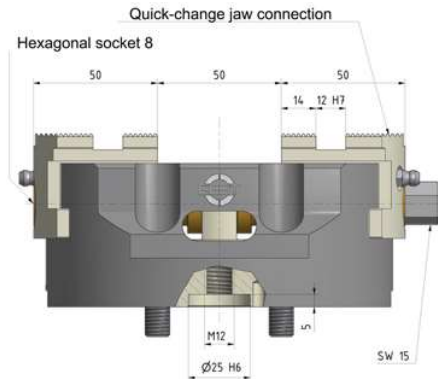


## 1.1.3 Mechanical centric vice BSM-140



### Technical data:

Order number:	200-0140-010
Designation:	BSM-140
Installation length:	Ø 140 mm
Installation height:	70 mm
Weight:	5.6 kg
Clamping range:	0–120 mm
Stroke per jaw:	25 mm
Max. torque:	120 Nm
Max. clamping force:	52 kN
Jaw connection:	Quick-change and tongue and groove

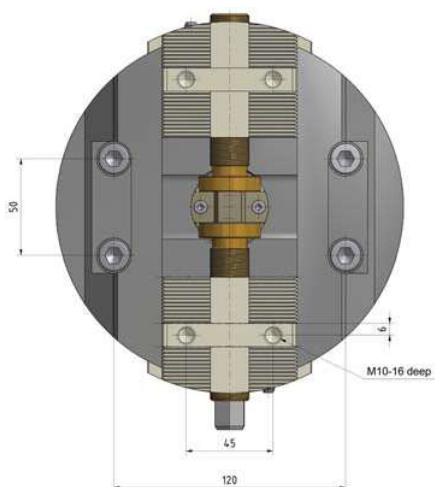
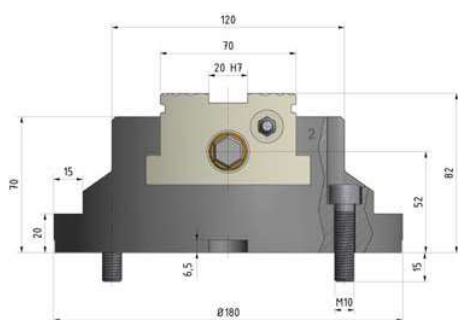
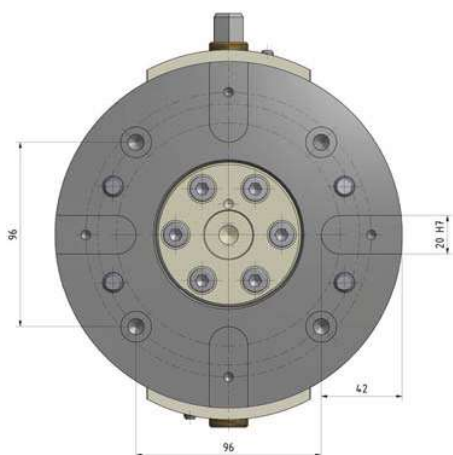


### Installation options for the BSM-140:

- The centric vice BSM-140 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-140 can be quickly upgraded to an RPC-140 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

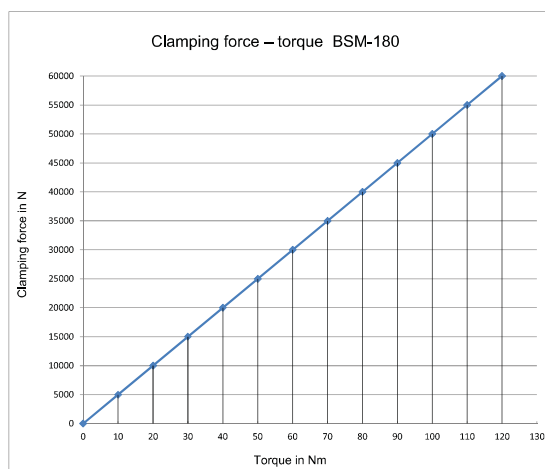
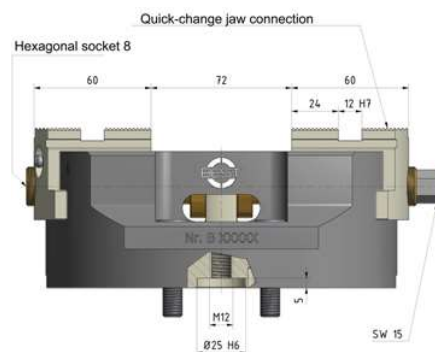
You can find the corresponding jaws for the centric vice on Pages 32 to 40.

## 1.1.4 Mechanical centric vice BSM-180



### Technical data:

Order number:	200-0180-010
Designation:	BSM-180
Installation length:	Ø 180 mm
Installation height:	82 mm
Weight:	10.9 kg
Clamping range:	0–160 mm
Stroke per jaw:	35 mm
Max. torque:	120 Nm
Max. clamping force:	60 kN
Jaw connection:	Quick-change and tongue and groove



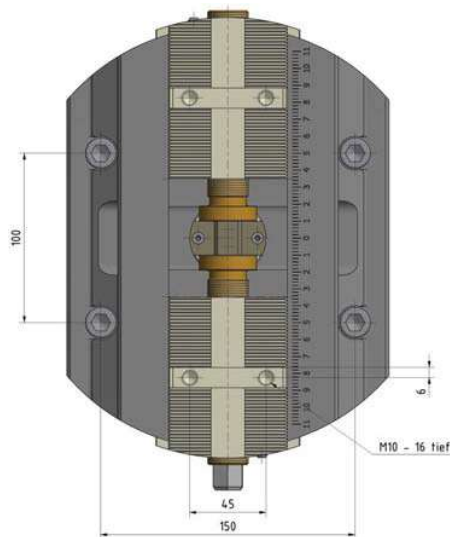
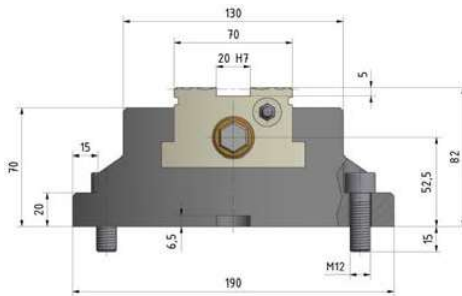
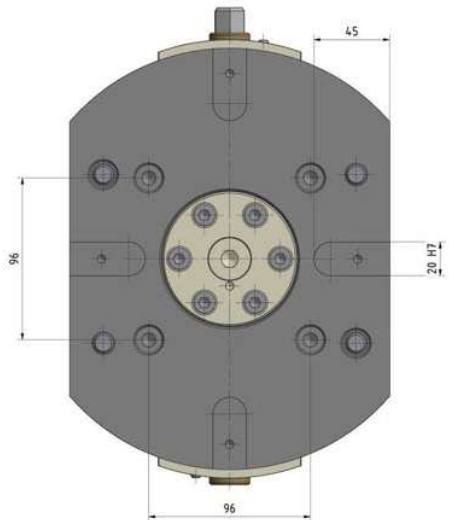
### Installation options for the BSM-180:

- The centric vice BSM-180 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-180 can be quickly upgraded to an RPC-180 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

You can find the corresponding jaws for the centric vice on Pages 32 to 40.

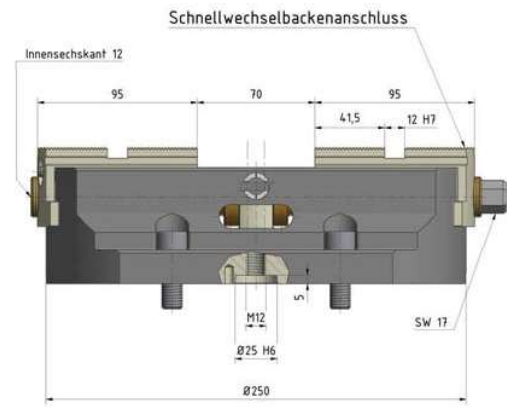


## 1.1.5 Mechanical centric vice BSM-250

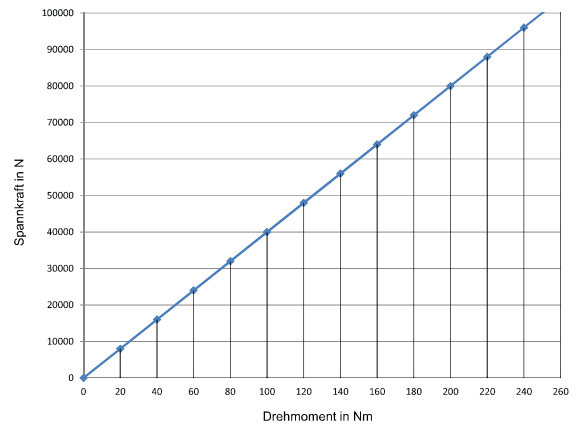


### Technical data:

Order number:	200-0250-010
Designation:	BSM-250
Installation length:	Ø 250 mm
Installation height:	82 mm
Weight:	19 kg
Clamping range:	0–250 mm
Stroke per jaw:	35 mm
Max. torque:	250 Nm
Max. clamping force:	100 kN
Jaw connection:	Quick-change and tongue and groove



Spannkraft - Drehmoment BSM-250

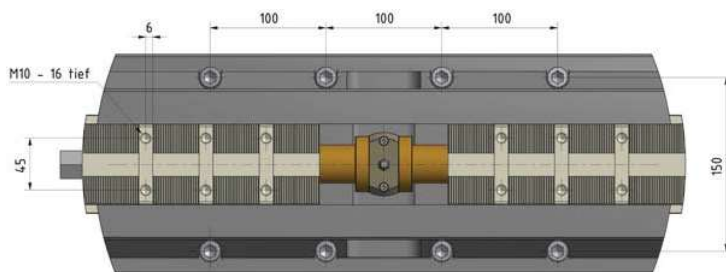
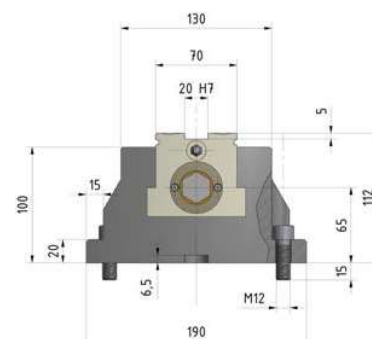
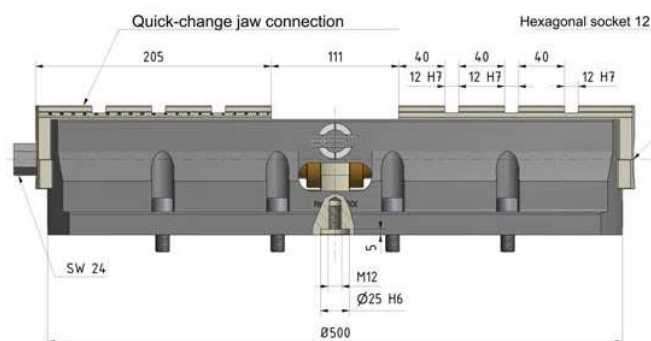
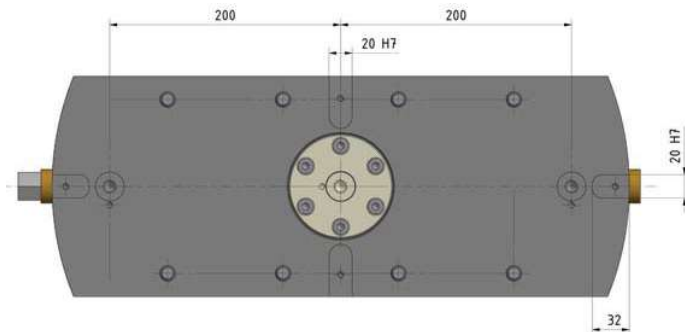


### Installation options for the BSM-250:

- The centric vice BSM-250 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-250 can be quickly upgraded to an RPC-250 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

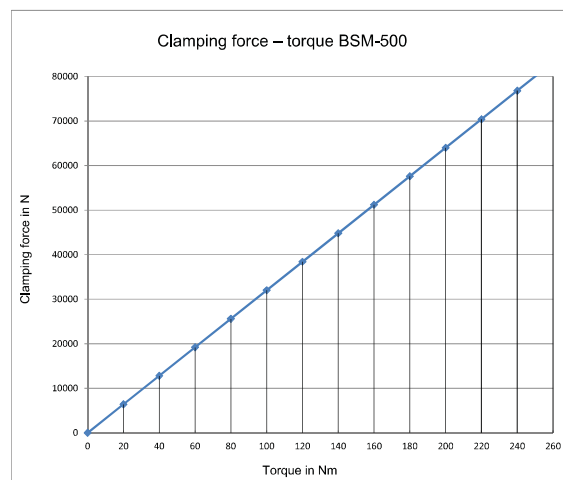
You can find the corresponding jaws for the centric vice on Pages 32 to 40.

## 1.1.6 Mechanical centric vice BSM-500



### Technical data:

Order number:	200-0500-010
Designation:	BSM-500
Installation length:	500 mm
Installation height:	112 mm
Weight:	59 kg
Clamping range:	0–500 mm
Stroke per jaw:	55 mm
Max. torque:	250 Nm
Max. clamping force:	80 kN
Jaw connection:	Quick-change and tongue and groove



### Installation options for the BSM-500:

- The centric vice BSM-500 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-500 can be quickly upgraded to an RPC-500 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and a sword-shaped tightening bolt (see Page 45).

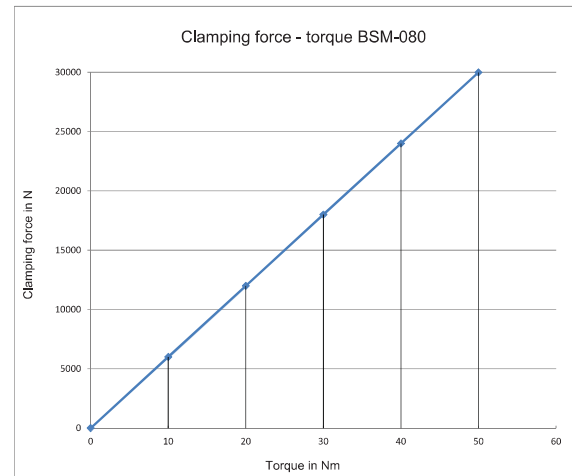
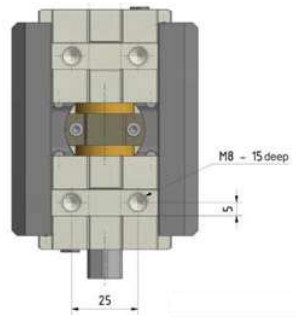
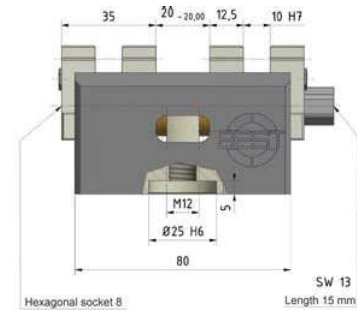
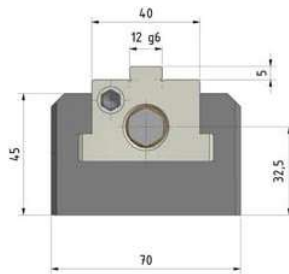
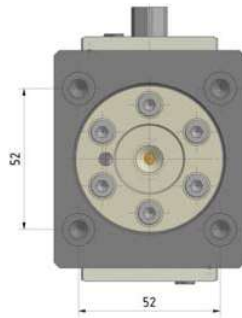
You can find the corresponding jaws for the centric vice on Pages 32 to 40.



## 1.1.7 Mechanical centric vice special size BSM-080-KV

### Technical data:

Order number:	200-0080-001
Designation:	BSM-080-KV
Installation length:	80 mm
Installation height:	50 mm
Weight:	1.8 kg
Clamping range:	0–80 mm
Stroke per jaw:	10 mm
Max. torque:	50 Nm
Max. clamping force:	30 kN
Jaw connection:	Tongue and groove



### Installation options for the BSM-080-KV:

- The BSM-080-KV centric vice can be attached to a pallet from below using screws.
- The BSM-080-KV can be quickly upgraded to an RPC-080-KV zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts.

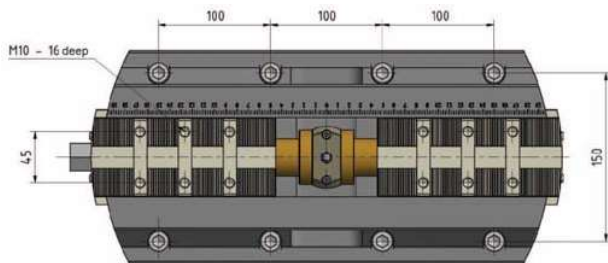
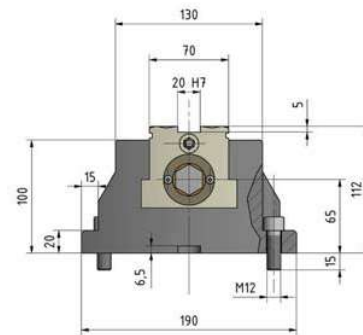
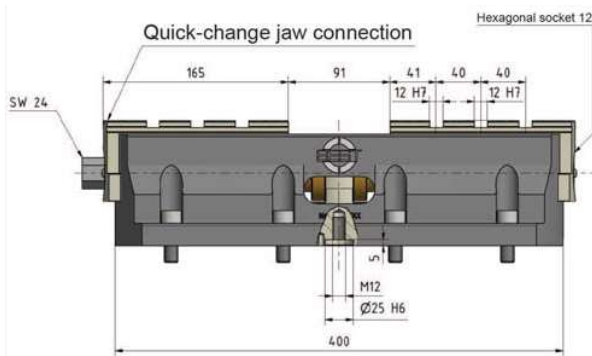
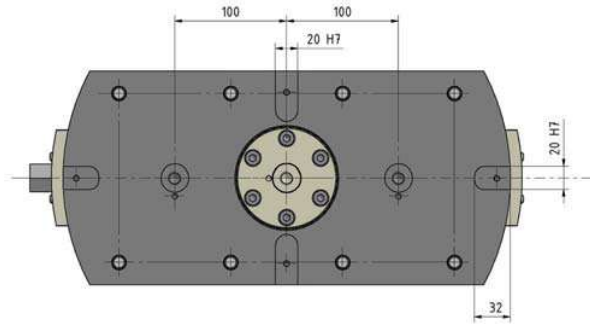
**We are happy to offer you jaws to fit your requirements.**



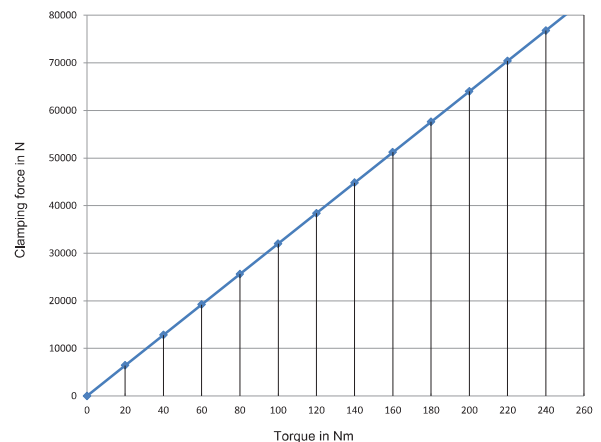
## 1.1.8 Mechanical centric vice special size BSM-400

### Technical data:

Order number:	200-0400-001
Designation:	BSM-400
Installation length:	400 mm
Installation height:	112 mm
Weight:	45 kg
Clamping range:	0–400 mm
Stroke per jaw:	45 mm
Max. torque:	250 Nm
Max. clamping force:	80 kN
Jaw connection:	Quick-change and tongue and groove



Clamping force - torque BSM-400



### Installation options for the BSM-400:

- The centric vice BSM-400 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-400 can be quickly upgraded to an RPC-400 zero-point centric vice simply by fitting a tightening bolt and a sword-shaped tightening bolt (see Page 51).

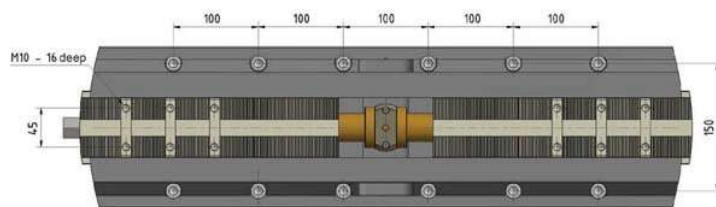
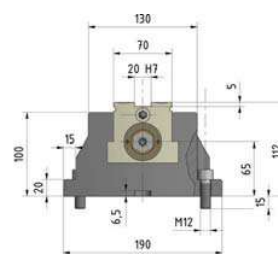
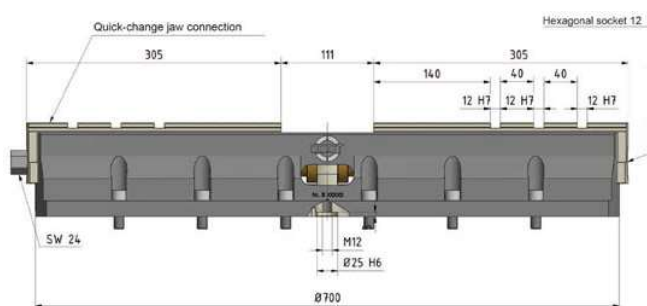
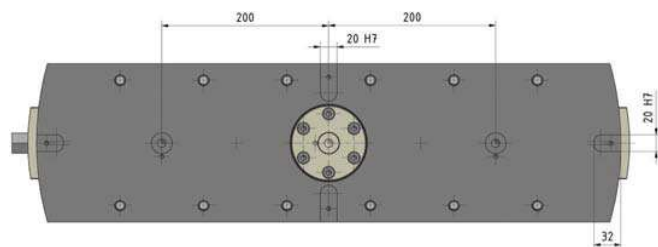
You can find the corresponding jaws for the centric vice on Pages 32 to 40.



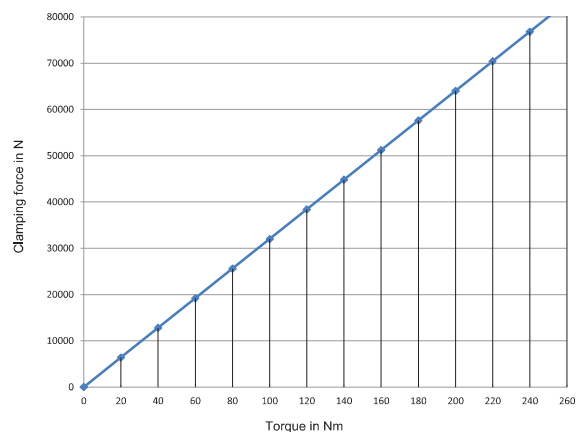
## 1.1.9 Mechanical centric vice special size BSM-700

### Technical data:

Order number:	200-0700-010
Designation:	BSM-700
Installation length:	700 mm
Installation height:	112 mm
Weight:	78 kg
Clamping range:	0–700 mm
Stroke per jaw:	55 mm
Max. torque:	250 Nm
Max. clamping force:	80 kN
Jaw connection:	Quick-change and tongue and groove



Clamping force - torque BSM-700

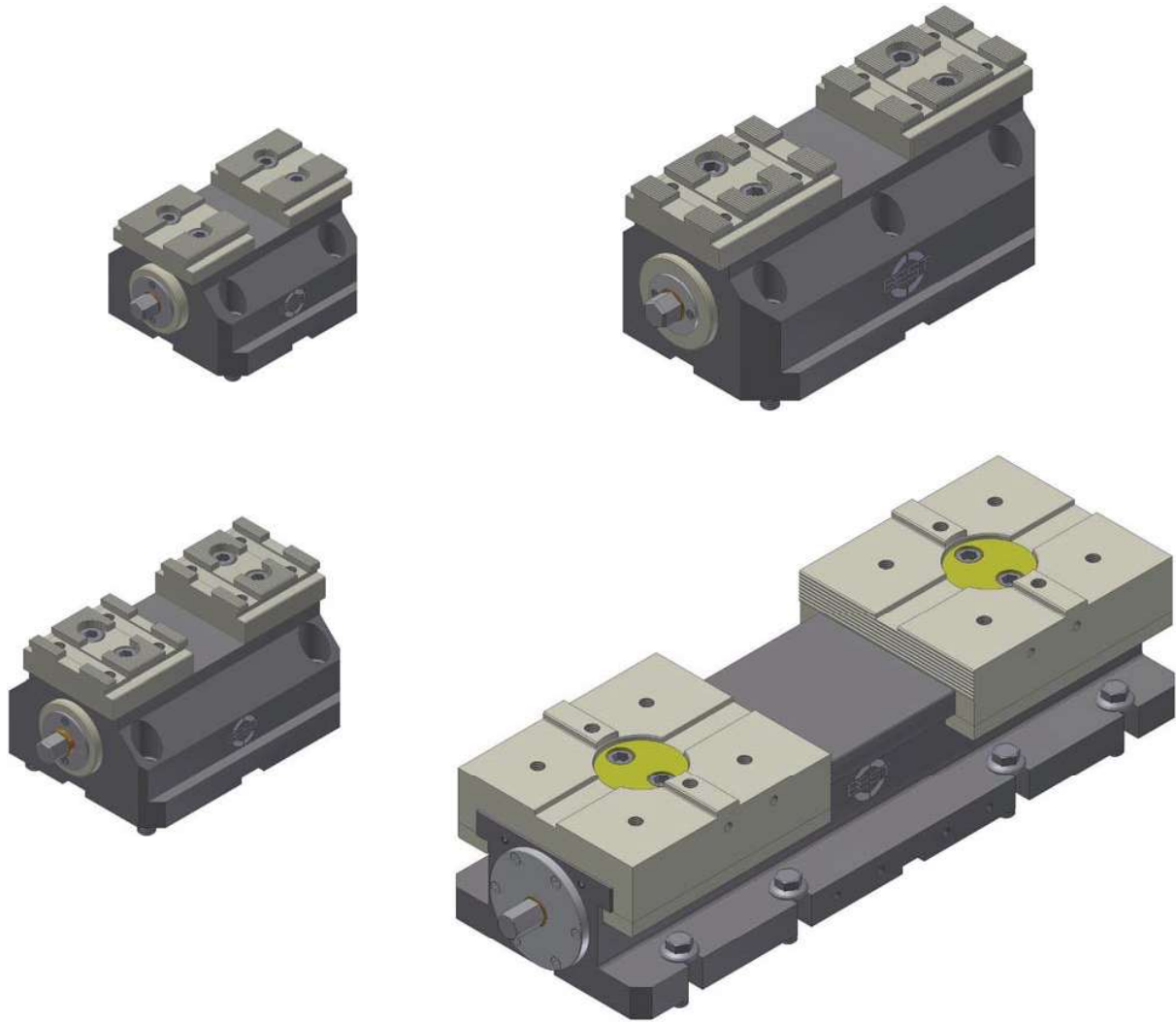


### Installation options for the BSM-700:

- The centric vice BSM-700 can be attached to the machining table from the top using screws or steel ties or on a pallet using screws or clamps.
- The BSM-700 can be quickly upgraded to an RPC-700 zero-point centric vice simply by fitting a tightening bolt and a sword-shaped tightening bolt (see Page 51).

You can find the corresponding jaws for the centric vice on Pages 32 to 40.

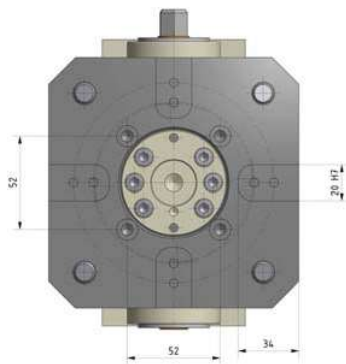
## 1.2 BSMG line



### Advantages of BSMG centric vices:

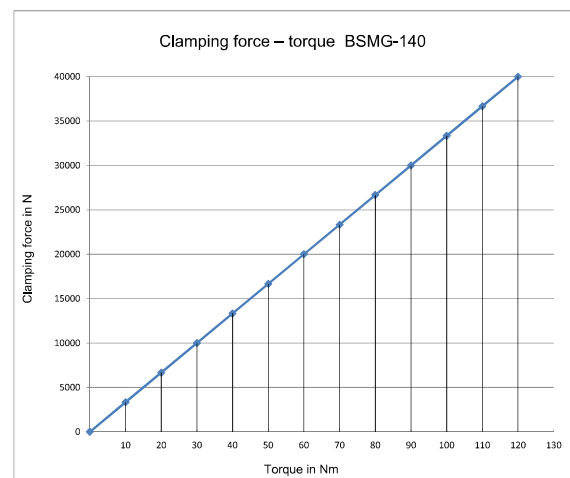
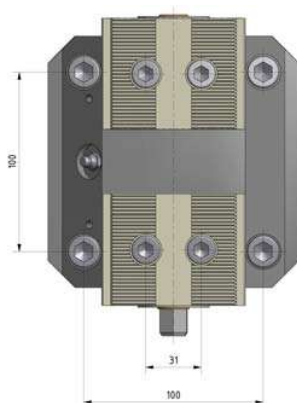
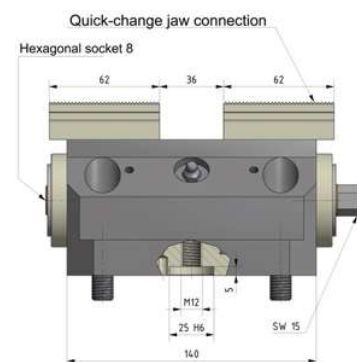
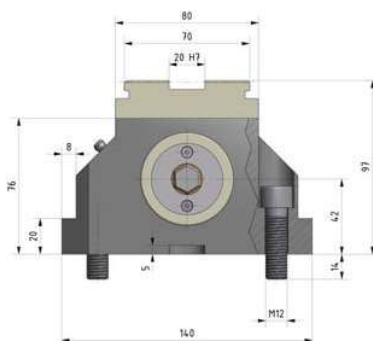
- Highest-possible degree of process reliability in unmanned production operations as a result of the encapsulated design, which prevents soiling on the inside of the centric vice (with use of purge air)
- Extremely high rigidity as a result of solid design
- Extremely high clamping forces (up to 100 kN)
- Housing sizes from 140 mm to 500 mm
- Repetition accuracy of 0.005 mm (with ground-in jaws)
- Centring accuracy of +/- 0.01 mm (with ground in jaws)
- Jaw widths of up to 500 mm
- Low wear due to nitrogen-hardened surfaces
- Depending on requirements, the BSMG centric vice can be screwed conventionally to the machining table or used as a RPCG zero-point centric vice on the BEST Realpoint system

## 1.2.1 Encapsulated centric vice BSMG-140



### Technical data:

Order number:	220-0140-004
Designation:	BSMG-140
Installation length:	140 mm
Installation height:	97 mm
Weight:	10 kg
Clamping range:	0–130 mm
Stroke per jaw:	18 mm
Max. torque:	120 Nm
Max. clamping force:	40 kN
Jaw connection:	Quick-change

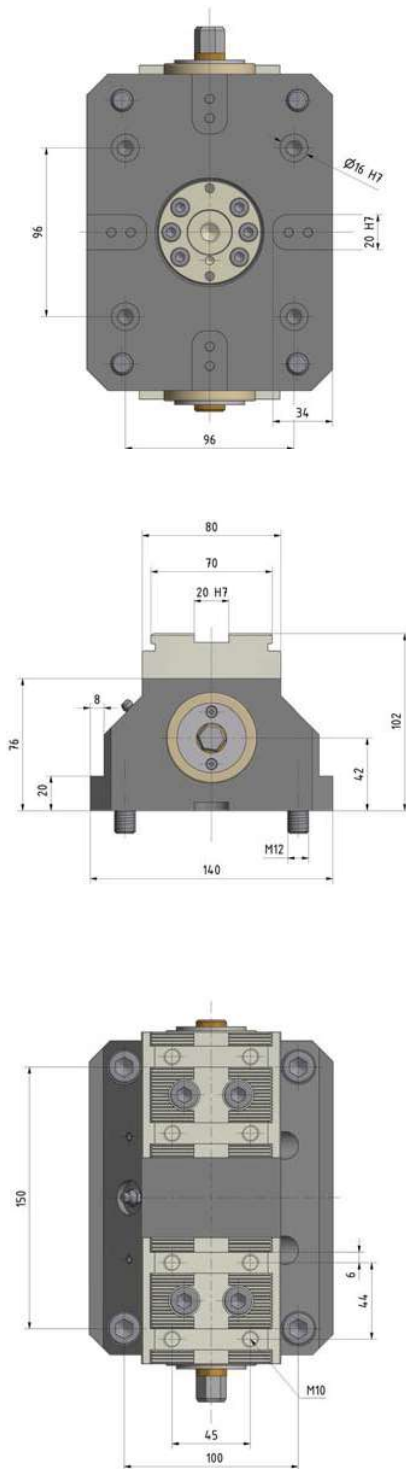


### Installation options for the BSMG-140:

- The BSMG-140 centric vice can be attached to the machining table from above using screws or steel ties.
- The BSMG-140 can be quickly upgraded to an RPCG-140 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

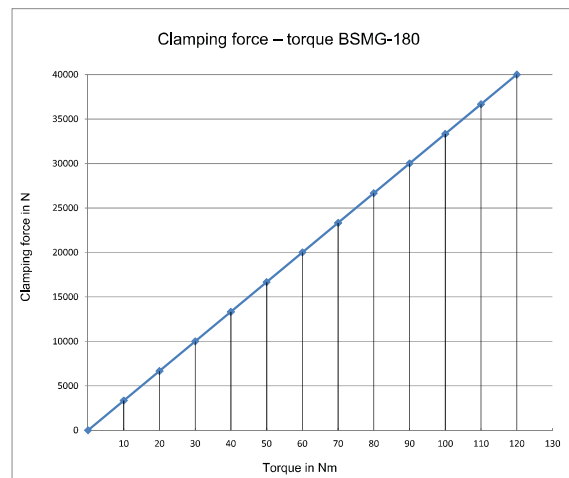
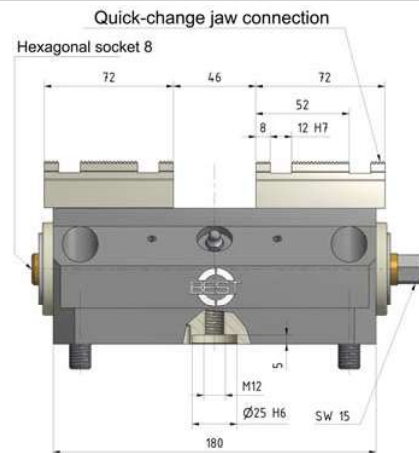
You can find the corresponding jaws for the centric vice on Pages 32 to 34.

## 1.2.2 Encapsulated centric vice BSMG-180



### Technical data:

Order number:	220-0180-004
Designation:	BSMG-180
Installation length:	180 mm
Installation height:	102 mm
Weight:	13 kg
Clamping range:	0–170 mm
Stroke per jaw:	23 mm
Max. torque:	120 Nm
Max. clamping force:	40 kN
Jaw connection:	Quick-change and tongue and groove

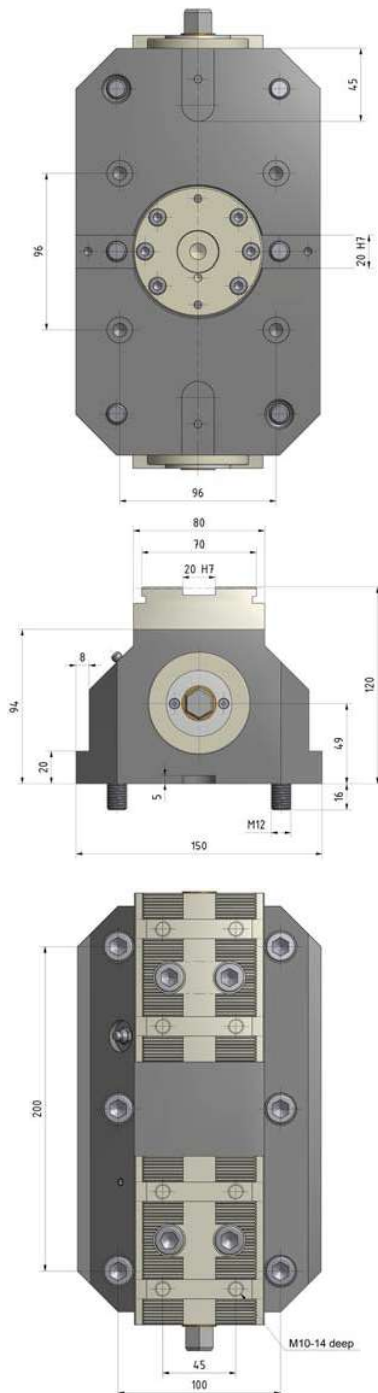


### Installation options for the BSMG-180:

- The BSMG-180 centric vice can be attached to the machining table from above using screws or steel ties.
- The BSMG-180 can be quickly upgraded to an RPCG-180 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

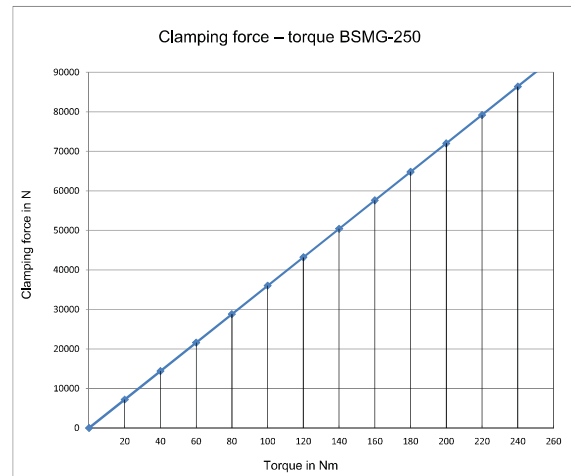
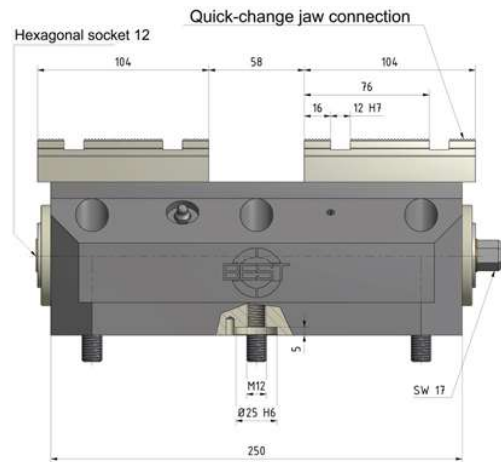
You can find the corresponding jaws for the centric vice on Pages 32 to 40.

## 1.2.3 Encapsulated centric vice BSMG-250



### Technical data:

Order number:	220-0250-004
Designation:	BSMG-250
Installation length:	250 mm
Installation height:	120 mm
Weight:	23 kg
Clamping range:	0–240 mm
Stroke per jaw:	29 mm
Max. torque:	250 Nm
Max. clamping force:	90 kN
Jaw connection:	Quick-change and tongue and groove



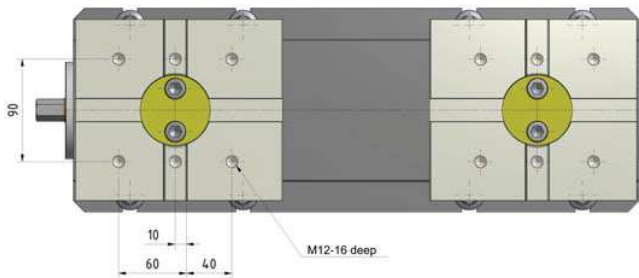
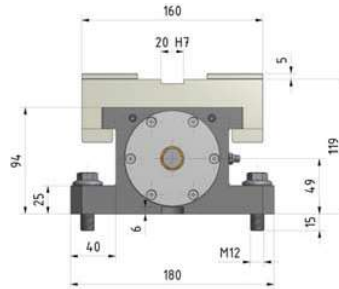
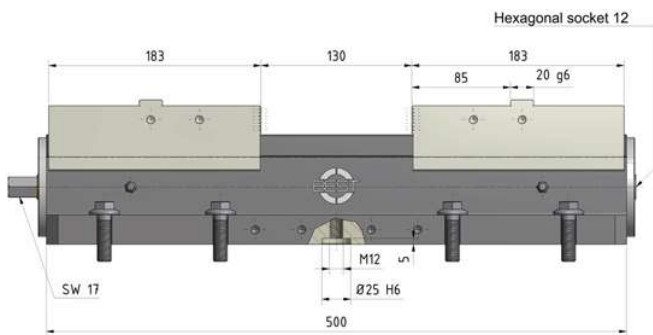
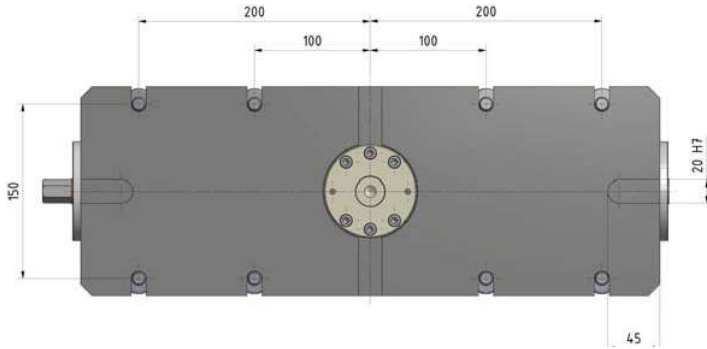
### Installation options for the BSMG-250:

- The BSMG-250 centric vice can be attached to the machining table from above using screws or steel ties.
- The BSMG-250 can be quickly upgraded to an RPCG-250 zero-point centric vice (see Page 51) simply by fitting a tightening bolt and two alignment bolts (see Page 45).

You can find the corresponding jaws for the centric vice on Pages 32 to 40.

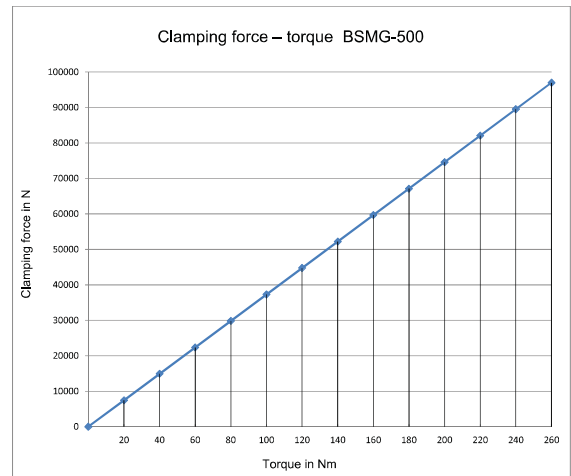


## 1.2.4 Encapsulated centric vice BSMG-500



### Technical data:

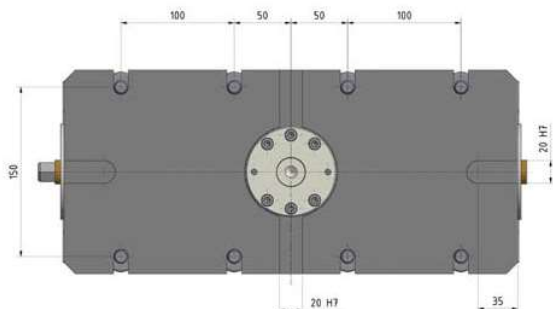
Order number:	220-0500-200
Designation:	BSMG-500
Installation length:	500 mm
Installation height:	119 mm
Weight:	70 kg
Clamping range:	0–500 mm
Stroke per jaw:	65 mm
Max. torque:	250 Nm
Max. clamping force:	93 kN
Jaw connection:	Tongue and groove



### Installation options for the BSMG-500:

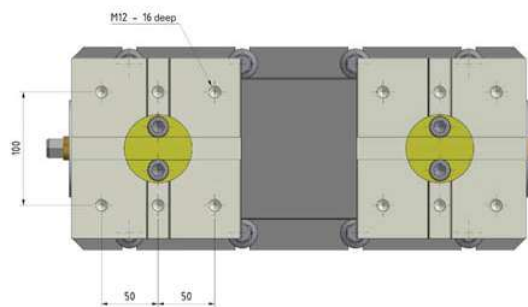
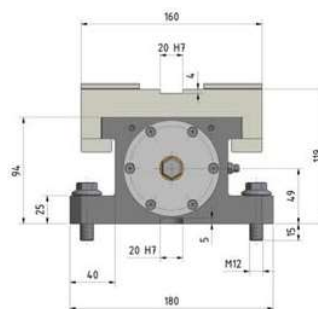
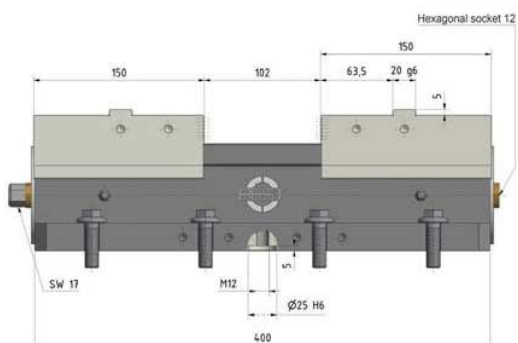
- The BSMG-500 centric vice can be attached to the machining table from above using screws or steel ties. You can find the corresponding jaws for the centric vice on Pages 35 to 40.

## 1.2.5 Encapsulated centric vice special size BSMG-400

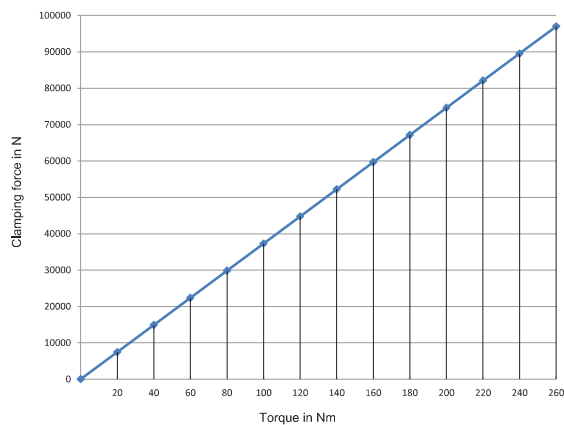


### Technical data:

Order number:	220-0400-001
Designation:	BSMG-400
Installation length:	400 mm
Installation height:	119 mm
Weight:	48 kg
Clamping range:	0–400 mm
Stroke per jaw:	50 mm
Max. torque:	250 Nm
Max. clamping force:	93 kN
Jaw connection:	Tongue and groove



Clamping force - torque BSMG-400



### Installation options for the BSMG-400:

- The BSMG-400 centric vice can be attached to the machining table from above using screws or steel ties.

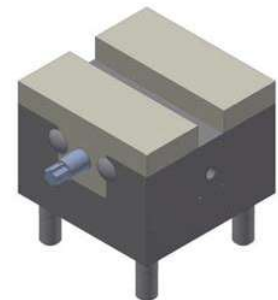
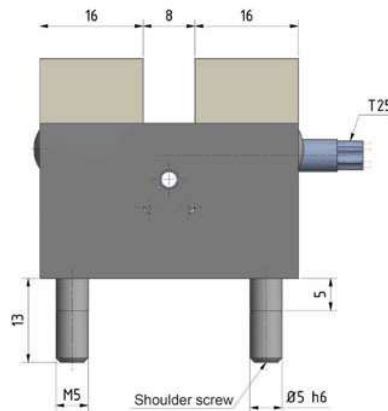
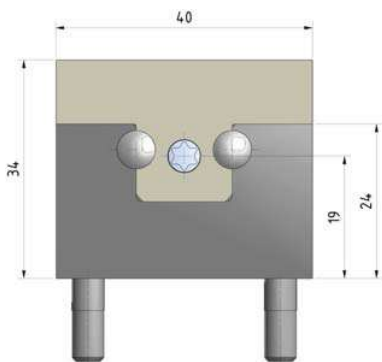
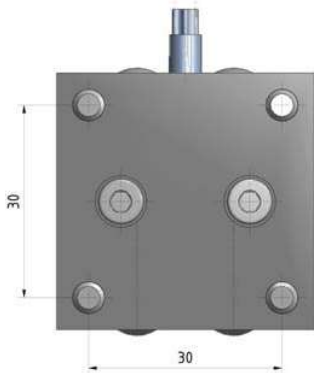
We are happy to offer you jaws to fit your requirements.

## 1.3 Miniature vices

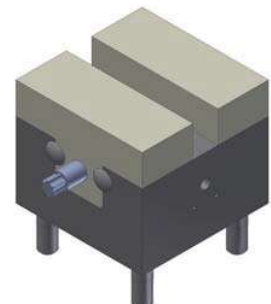
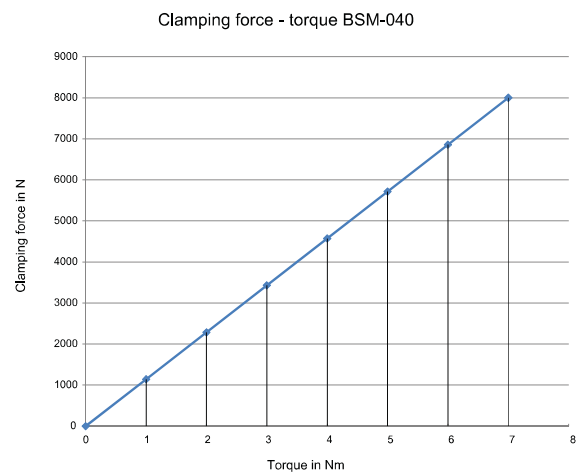
### 1.3.1 BSM-040 with blank jaws

#### Technical data:

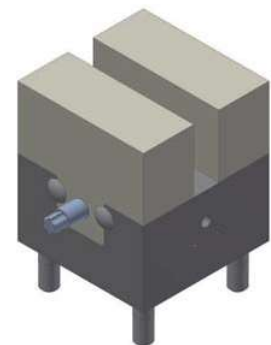
Order number:	200-0040-001	200-0040-002	200-0040-003
Designation:	BSM-040	BSM-040	BSM-040
Dimensions (LxWxH):	40 x 40 x 30 mm	40 x 40 x 34 mm	40 x 40 x 44 mm
Weight:	about 500 g	about 500 g	about 500 g
Clamping range:	0–34 mm	0–34 mm	0–34 mm
Stroke per jaw:	5 mm	5 mm	5 mm
Max. torque:	7 Nm	7 Nm	7 Nm
Max. clamping force:	8 kN	8 kN	8 kN
Repeat accuracy:	+/- 0.02 mm		
Jaw connection:	Clamping jaws screwed onto spindle		
Order number, jaw as single part:	300-0040-001	300-0040-002	300-0040-003



200-0040-001



200-0040-002



200-0040-003

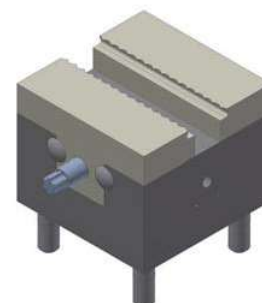
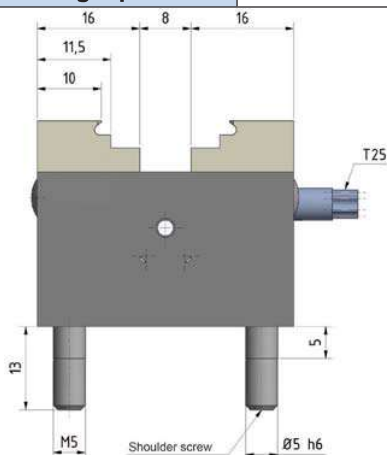
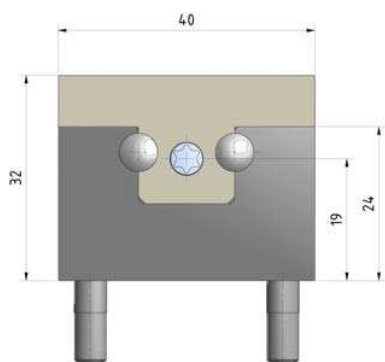
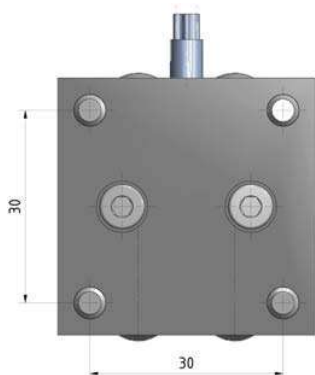
#### Application area:

Especially for the processing of small, precise workpieces with mould jaws, such as e.g. in the watch industry or medical technology.

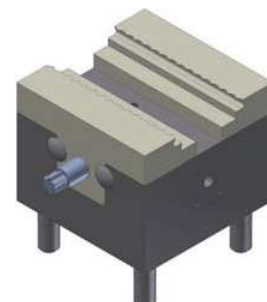
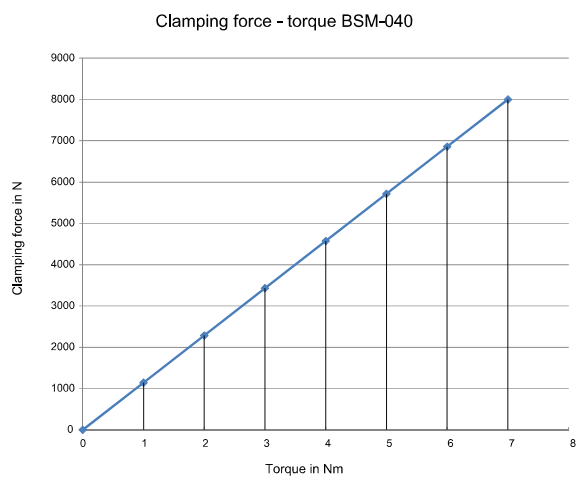
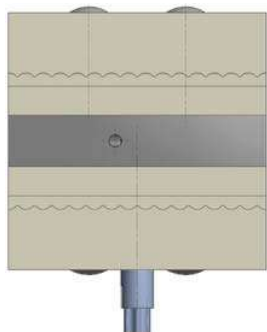
## 1.3.2 BSM-040 with grip jaws

### Technical data:

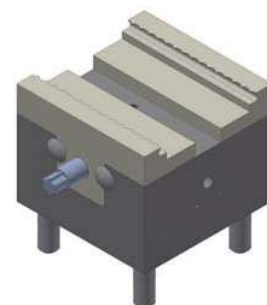
<b>Order number:</b>	<b>200-0040-004</b>	<b>200-0040-005</b>	<b>200-0040-006</b>
<b>Designation:</b>	<b>BSM-040</b>	<b>BSM-040</b>	<b>BSM-040</b>
<b>Dimensions (LxWxH):</b>	40 x 40 x 32 mm	40 x 40 x 32 mm	40 x 40 x 32 mm
<b>Weight:</b>	about 500 g	about 500 g	about 500 g
<b>Clamping range:</b>	3 - 13 mm	12 - 22 mm	21 - 31 mm
<b>Stroke per jaw:</b>	5 mm	5 mm	5 mm
<b>Max. torque:</b>	7 Nm	7 Nm	7 Nm
<b>Max. clamping force:</b>	8 kN	8 kN	8 kN
<b>Repeat accuracy:</b>	+/- 0.02 mm		
<b>Jaw connection:</b>	Clamping jaws screwed onto spindle		
<b>Order number, jaw as single part:</b>	<b>300-0040-004</b>	<b>300-0040-005</b>	<b>300-0040-006</b>



200-0040-005



200-0040-004



200-0040-006

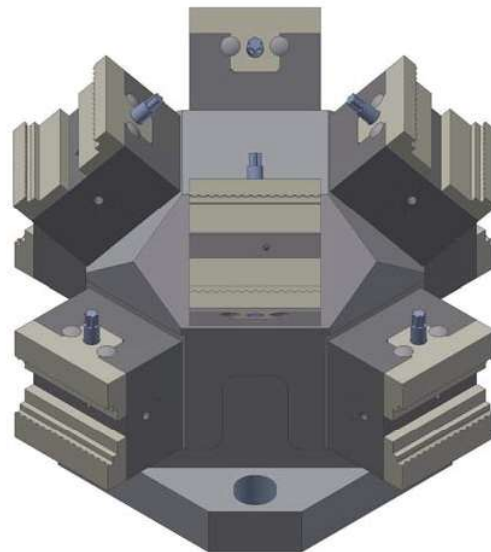
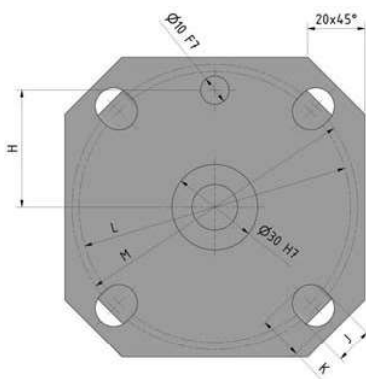
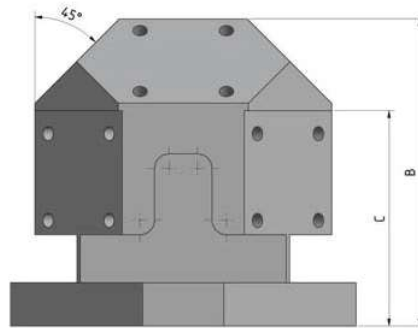
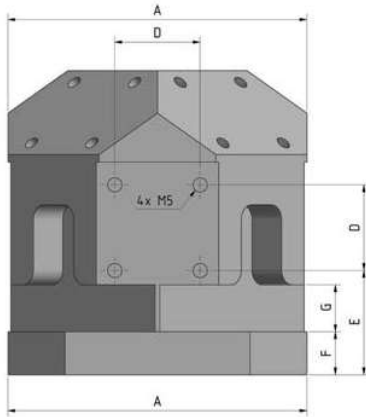
### Application area:

Especially for the processing of blanks or finishing of small, precise workpieces, such as e.g. in the watch industry or medical technology.

### 1.3.3 5-axis clamping jaw for miniature vices

#### Features:

- Material: Aluminium, thus very light empty weight
- Optimised utilisation of the 5-axis machine
- Very good accessibility for the processing of the workpieces due to offset arrangement of the miniature vice and 45° arrangement of the upper vice



#### Table of dimensions:

Order number:	Designation	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	K mm	L mm	M in mm
250-0105-001	B5S100-8	105	107	75	30	37	15	17	41	13	15.5	Ø 95	Ø 100

You can find the matching miniature vices to the 5-axis clamping jaw on Pages 22 and 23; they are not included in the scope of supply for this 5-axis clamping jaw.

5-axis clamping jaws for miniature vices in other materials (e.g. steel), heights and forms are available on request.

## 1.4 Special solutions

If you are interested in one of the following special solutions or if you have a different special application, we would be delighted to hear from you.

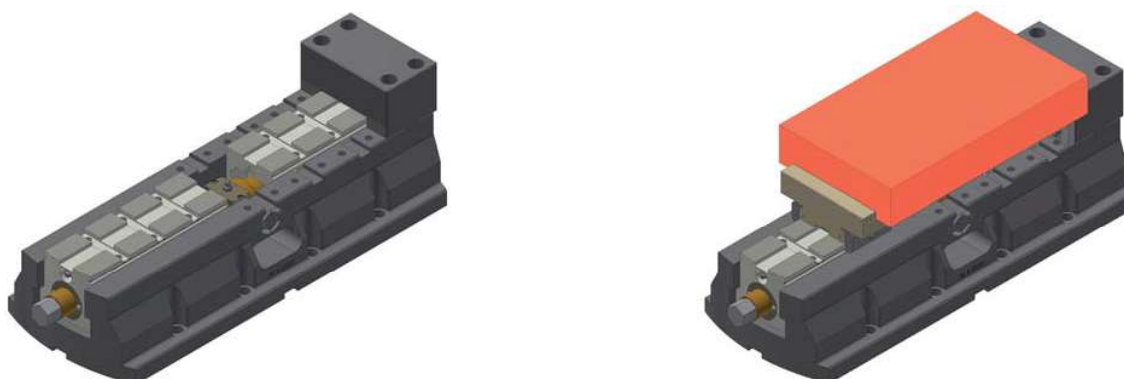
After you have given us the specific data for your application, we will send you a technical draft together with an offer for the number of items you require.



<b>Order number:</b>	<b>200-0115-010</b>	<b>200-0115-011</b>	<b>210-0115-004</b>
<b>Designation:</b>	<b>BSM-115 quick-change</b>	<b>BSM-115 tongue and groove</b>	<b>BSM-115 tongue and groove</b>
These centric vices are variants of standard model BSM-115. The technical data for these variants are analogue to the standard models (see Pages 7 and 8).			



<b>Order number:</b>	<b>200-0500-020</b>
<b>Designation:</b>	<b>BSM-500 double vice</b>
The centric vice BSM-500 (see Page 12) can be modified to allow two workpieces to be clamped. Play on the spindle bearing allows compensation of dimensional deviations between the two clamped workpieces. The attachment of a fixed jaw in the centre allows two identical parts to be clamped at the same time.	



<b>Order number:</b>	<b>200-0500-025</b>
<b>Designation:</b>	<b>BSM-500 with fixed jaw or as a centric vice</b>
The BSM-500 centric vice (see Page 12) can be modified so that it can be operated either as a centric vice or with a fixed jaw. The position of the fixed jaw can be freely selected.	