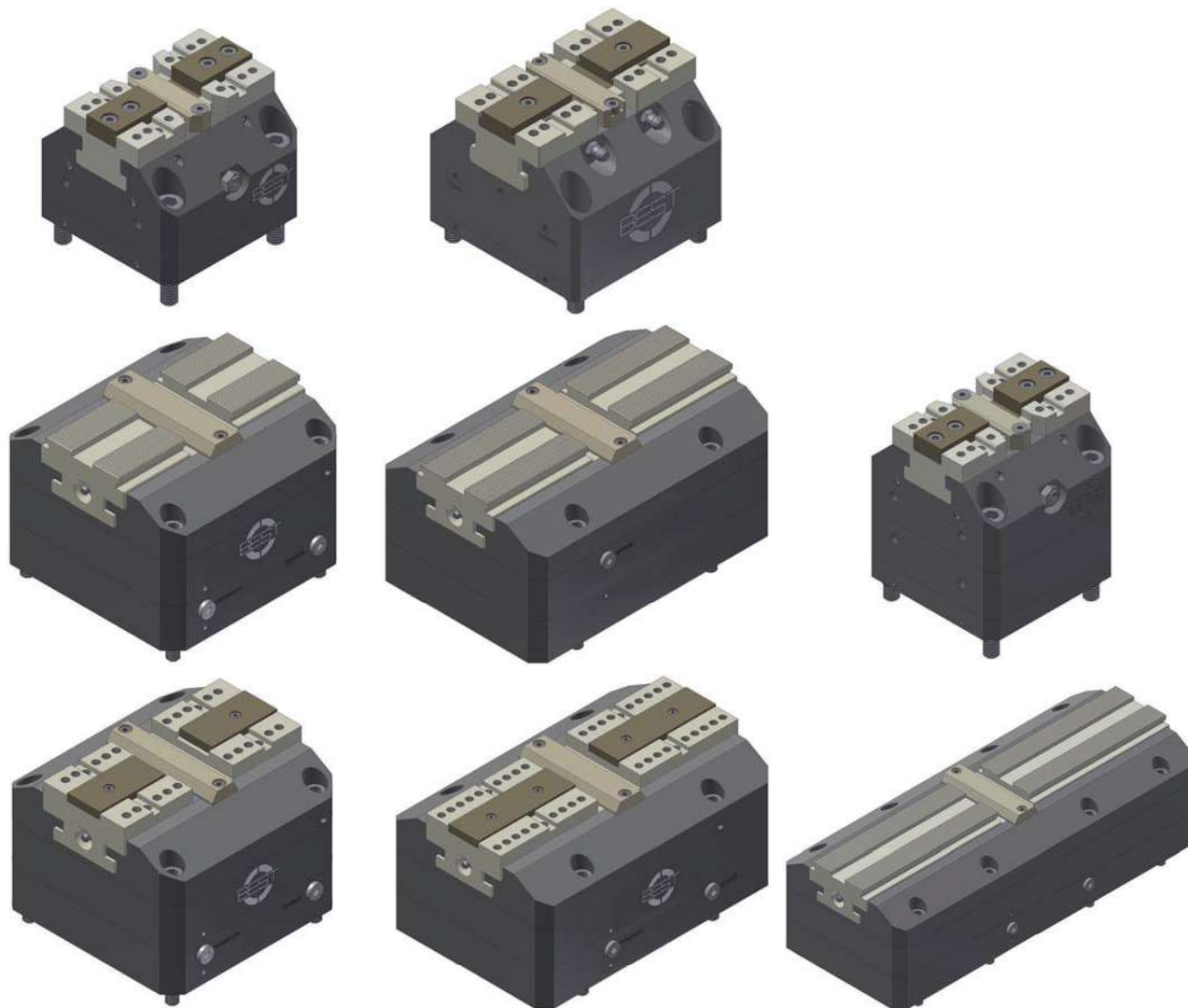


## 5. Vices for automation solutions

### 5.1. Pneumatic vice models

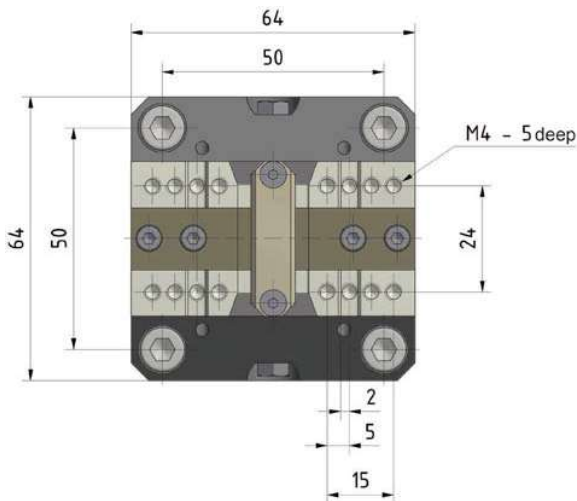
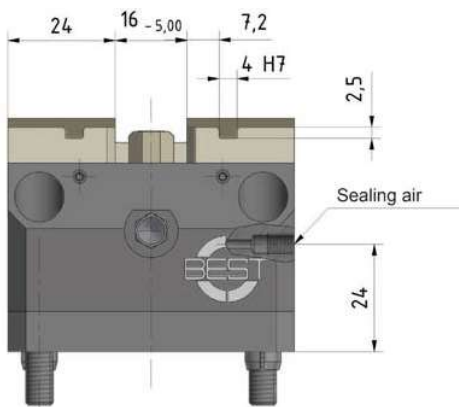
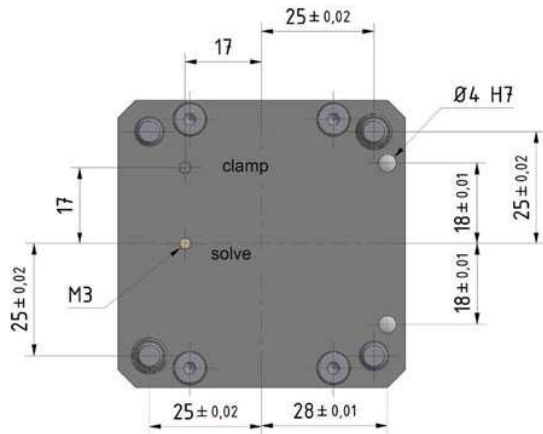
#### 5.1.1. Pneumatic centric vices



#### Advantages of the BEST pneumatic vices:

- Extremely high rigidity as a result of solid design
- Extremely high clamping forces (up to 40 kN)
- Housing sizes from 64 mm to 250 mm (in the standard design, larger models are available on request)
- 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 240 mm
- Low wear due to nitrogen-hardened surfaces
- Suitable for internal or external clamping
- Individual special solutions / customer-specific customisations available on request  
(Please provide us with the specific data for your application, and we will send you a technical draft together with an offer for the number of items you require)
- Compensating clamping

## 5.1.1.1 Pneumatic centric vices BSP-64



### Optional additional functions:

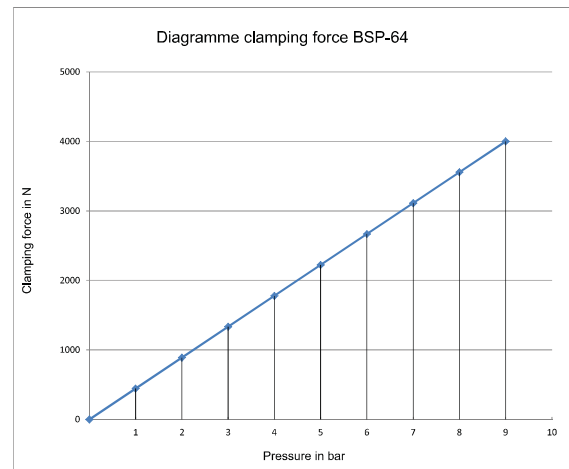
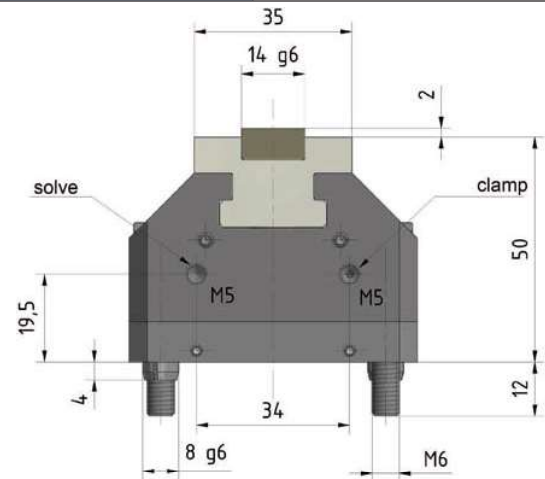
- Compensation function
- Clamping path monitoring
- Central lubrication connection
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Technical data:

Order number:	150-0064-001
Designation:	BSP-64
Dimensions (LxWxH):	64 x 64 x 50 mm
Weight:	1.2 kg
Clamping range:	0–55 mm
Stroke per jaw:	2.5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	4 kN at 9 bar
Air consumption (6 bar):	186 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside



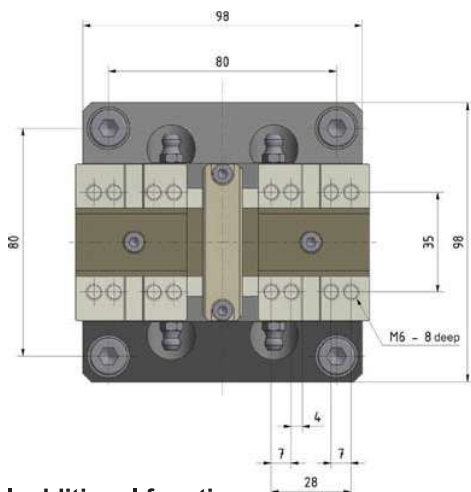
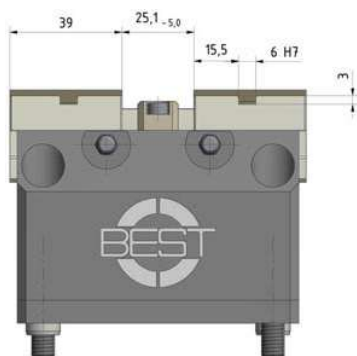
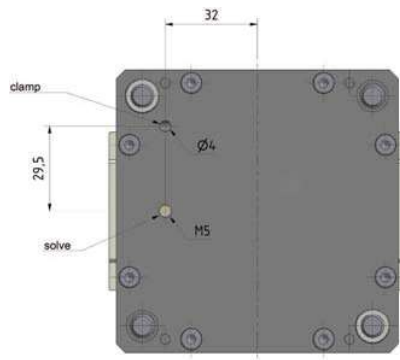
### Matching blank jaw:

Order number:	301-0034-001
Dimensions (WxLxH):	36 x 29 x 18 mm
Material:	16 MnCr5

### Seal set (for maintenance):

Order number:	100.350.064
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## 5.1.1.2 Pneumatic centric vices BSP-100



### Technical data:

Order number:	150-0100-005
Designation:	BSP-100
Dimensions (LxWxH):	98 x 98 x 79 mm
Weight:	4 kg
Clamping range:	0–90 mm
Stroke per jaw:	2.5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure.:	1 bar
Max. clamping force:	14 kN at 9 bar
Air consumption (6 bar):	701 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside

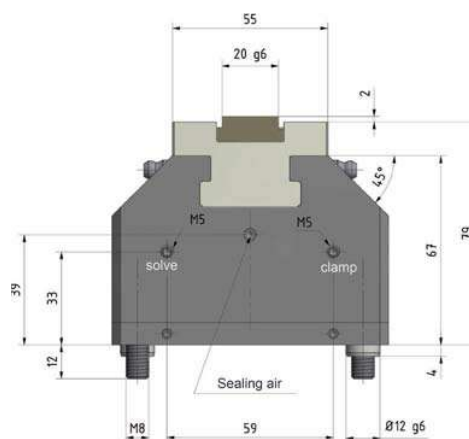
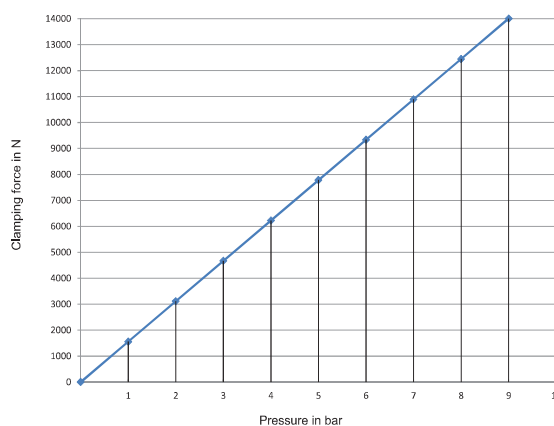


Diagramme clamping force BSP-100



### Optional additional functions:

- Compensation function
- Clamping path monitoring
- Central lubrication connection
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.  
Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Matching blank jaw:

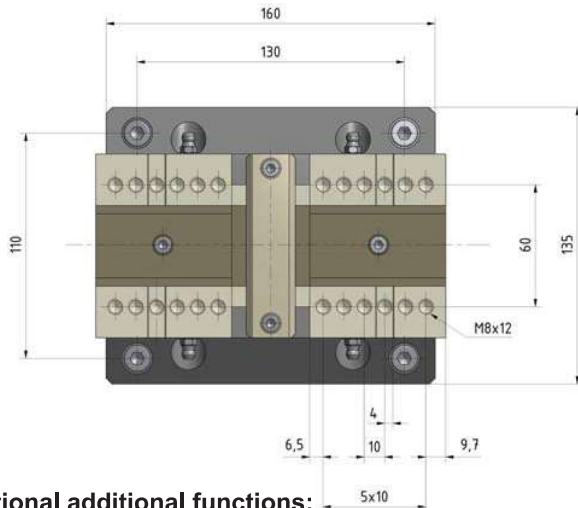
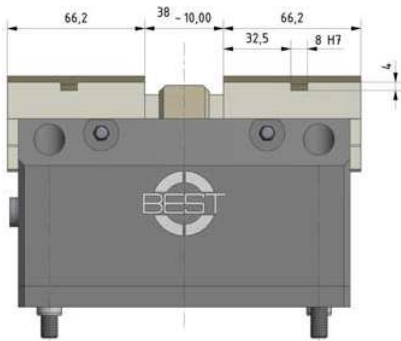
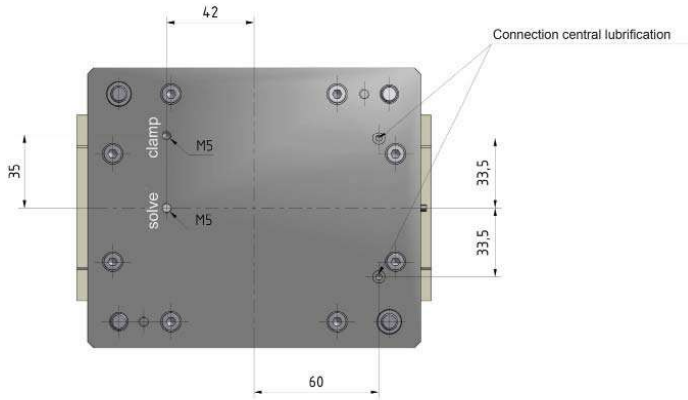
Order number:	301-0060-002
Dimensions (WxLxH):	60 x 45 x 30 mm
Material:	16 MnCr5

### Seal set (for maintenance):

Order number:	100.350.100
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### 5.1.1.3 Pneumatic centric vice BSP-160



#### Optional additional functions:

- Compensation function
- Clamping path monitoring
- Central lubrication connection
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

#### Technical data:

Order number:	150-0160-009
Designation:	BSP-160
Dimensions (LxWxH):	160 x 135 x 108 mm
Weight:	14 kg
Clamping range:	0–150 mm
Stroke per jaw:	5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	25 kN at 9 bar
Air consumption (6 bar):	2490 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside

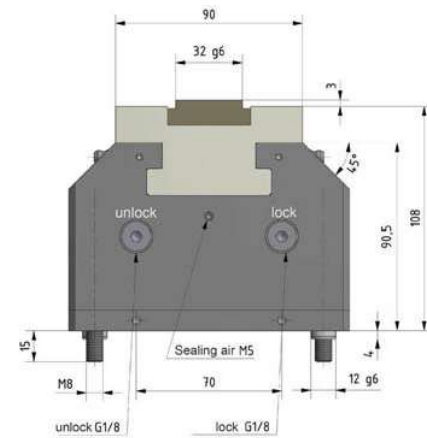
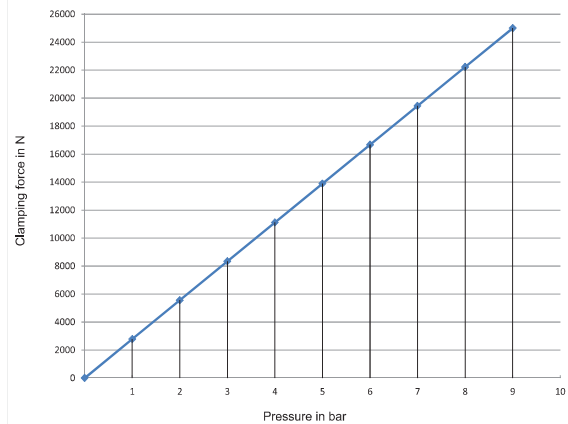


Diagramme clamping force BSP-160



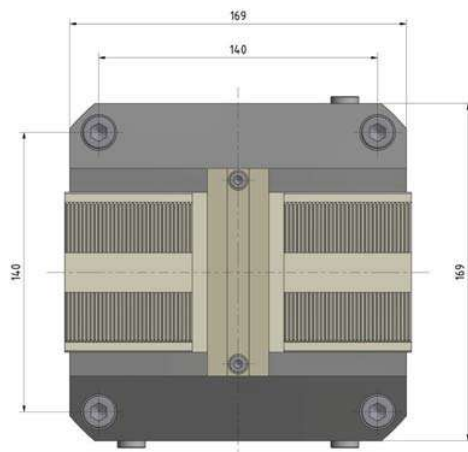
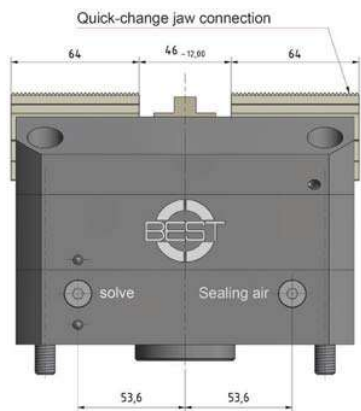
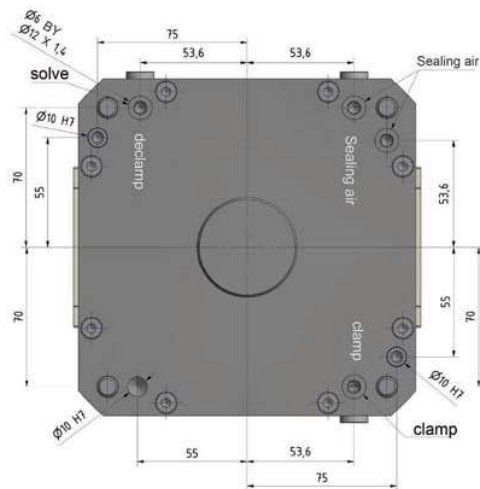
#### Matching blank jaw:

Order number:	301-0094-008
Dimensions (WxLxH):	94 x 67 x 50 mm
Material:	16 MnCr5

#### Seal set (for maintenance):

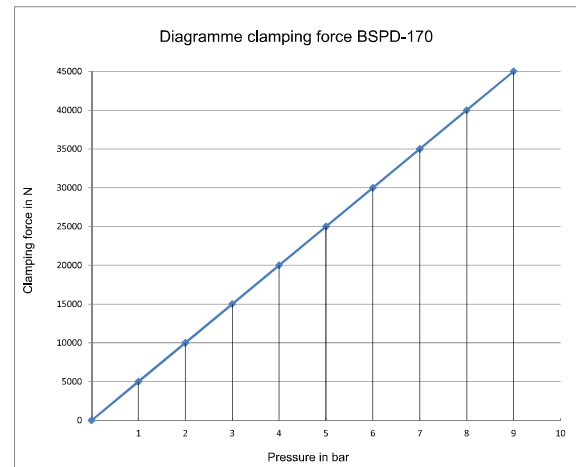
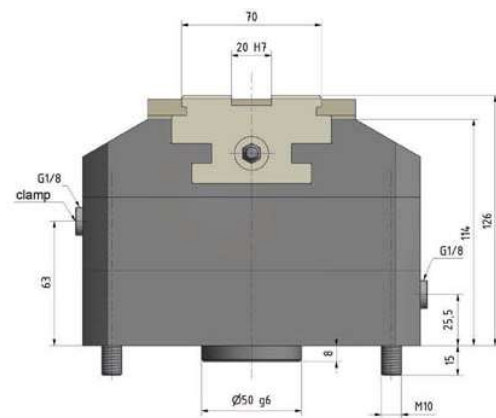
Order number:	100.350.160
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## 5.1.1.4 Pneumatic centric vice BSPD-170-SWBA (with double piston)



### Technical data:

Order number:	152-0170-002
Designation:	BSPD-170-SWBA
Dimensions (LxWxH):	169 x 169 x 126 mm
Weight:	22 kg
Clamping range:	20–160 mm
Stroke per jaw:	6 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	45 kN at 9 bar
Air consumption (6 bar):	4557 cm <sup>3</sup> per double stroke
Jaw connection:	Quick-change
Air connections:	On the side and underside



### Optional additional functions:

- Clamping path monitoring
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Matching jaws:

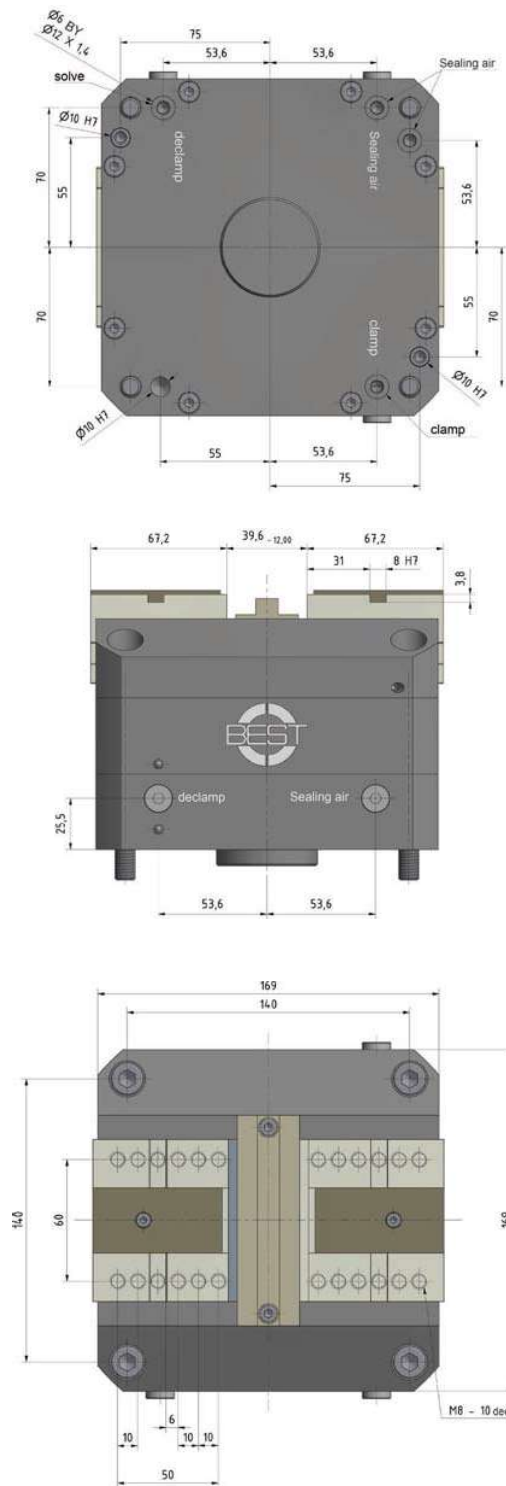
Pages 32 to 34

### Seal set (for maintenance):

Order number:	100.352.170
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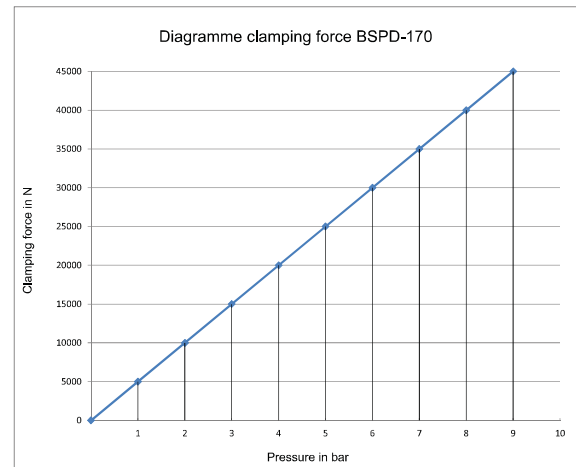
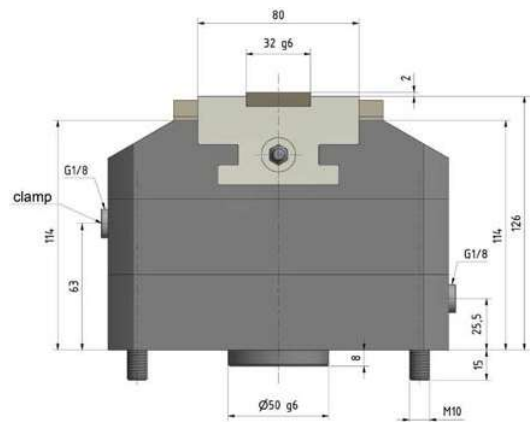


## 5.1.1.5 Pneumatic centric vice BSPD-170-KV (with double piston)



### Technical data:

Order number:	152-0170-003
Designation:	BSPD-170-KV
Dimensions (LxWxH):	169 x 169 x 126 mm
Weight:	22 kg
Clamping range:	0–160 mm
Stroke per jaw:	6 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	45 kN at 9 bar
Air consumption (6 bar):	4557 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside



### Optional additional functions:

- Clamping path monitoring
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.  
Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

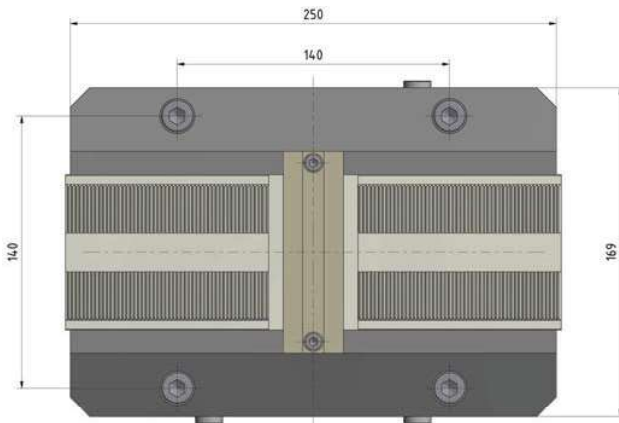
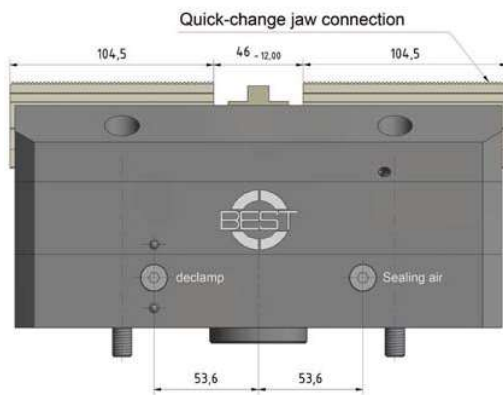
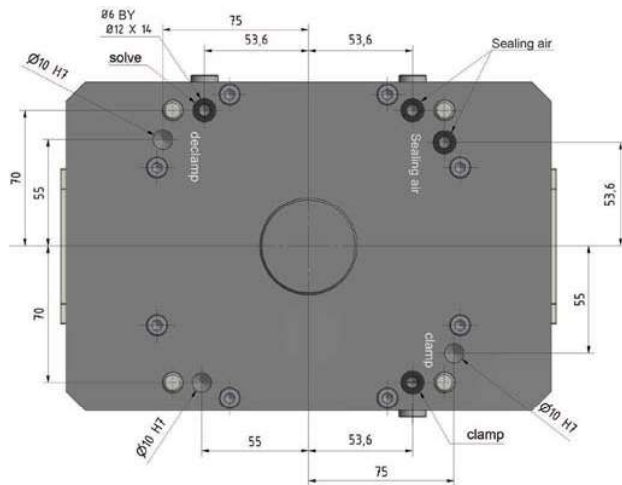
### Matching blank jaw:

Order number:	301-0094-008
Dimensions (WxLxH):	94 x 67 x 50 mm
Material:	16 MnCr5

### Seal set (for maintenance):

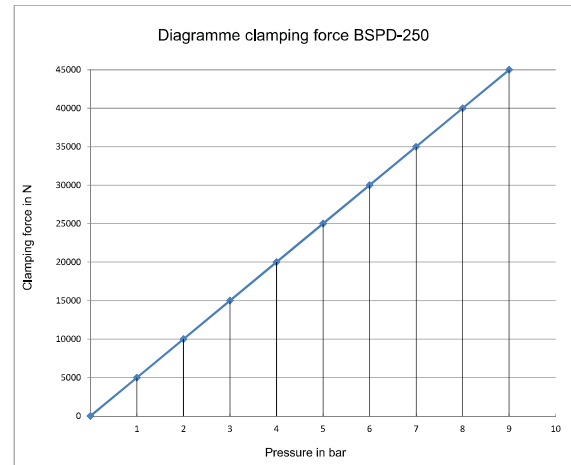
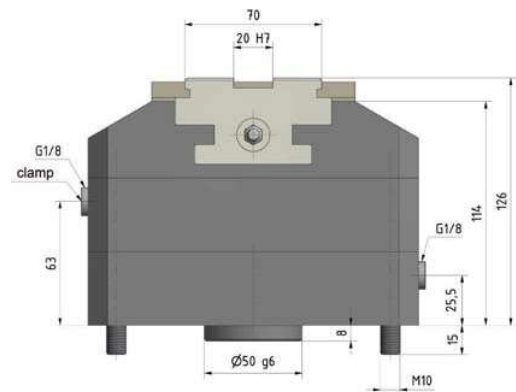
Order number:	100.352.170
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## 5.1.1.6 Pneumatic centric vice BSPD-250-SWBA (with double piston)



### Technical data:

Order number:	152-0250-002
Designation:	BSPD-250-SWBA
Dimensions (LxWxH):	250 x 169 x 126 mm
Weight:	35 kg
Clamping range:	20–240 mm
Stroke per jaw:	6 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	45 kN at 9 bar
Air consumption (6 bar):	4557 cm <sup>3</sup> per double stroke
Jaw connection:	Quick-change
Air connections:	On the side and underside



### Optional additional functions:

- Clamping path monitoring
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Matching jaws:

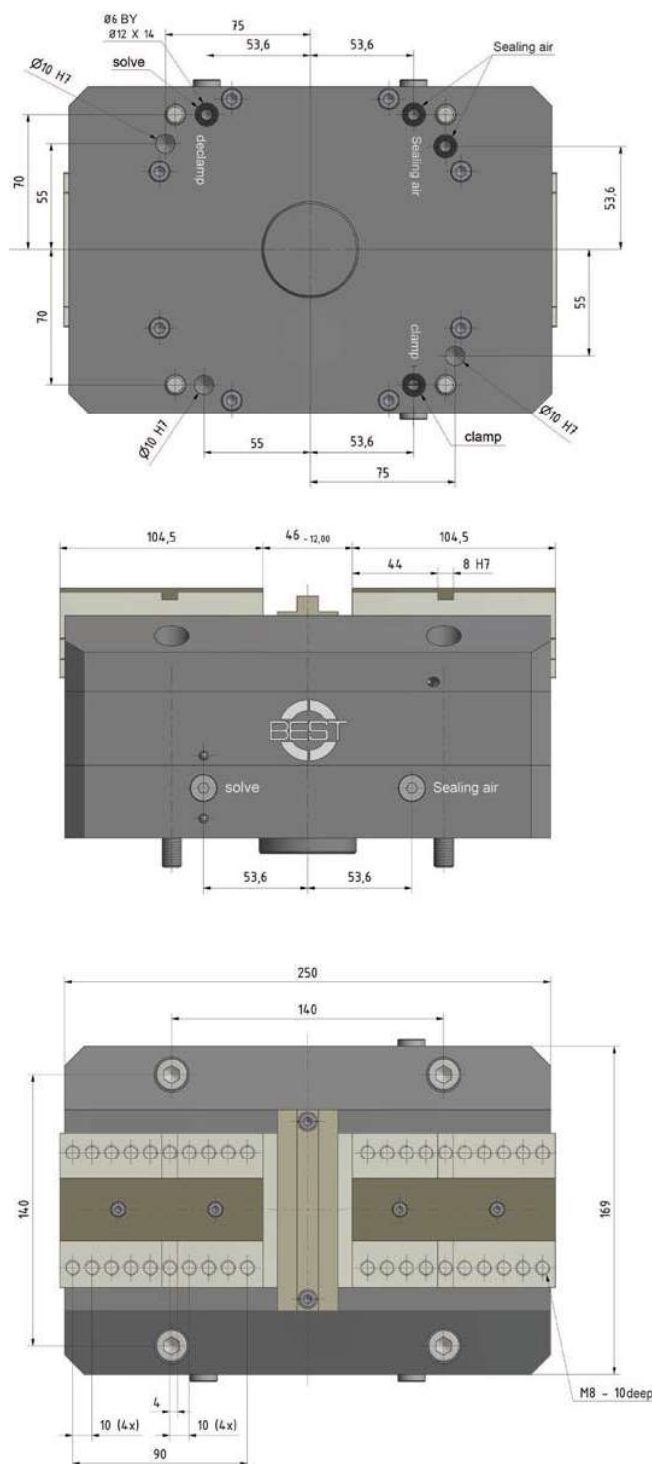
Pages 32 to 34

### Seal set (for maintenance):

Order number:	100.352.170
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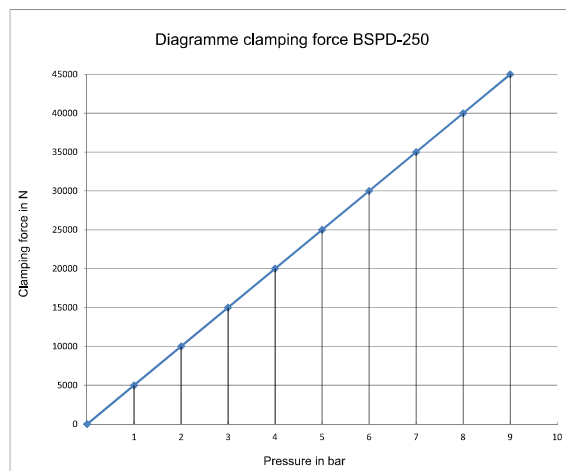
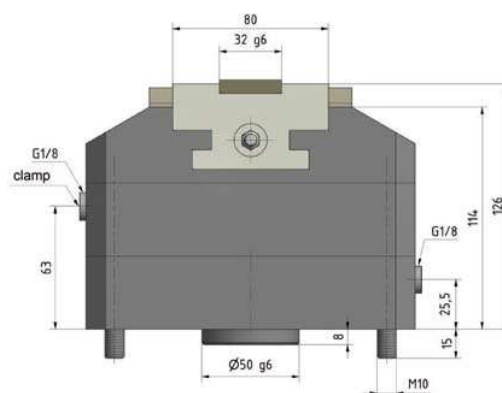


## 5.1.1.7 Pneumatic centric vice BSPD-250-KV (with double piston)



### Technical data:

Order number:	152-0250-003
Designation:	BSPD-250-KV
Dimensions (LxWxH):	250 x 169 x 126 mm
Weight:	35 kg
Clamping range:	0–240 mm
Stroke per jaw:	6 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:	1 bar
Max. clamping force:	45 kN at 9 bar
Air consumption (6 bar):	4557 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside



### Optional additional functions:

- Clamping path monitoring
- Fixed jaw
- Sealing air connection

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Matching blank jaw:

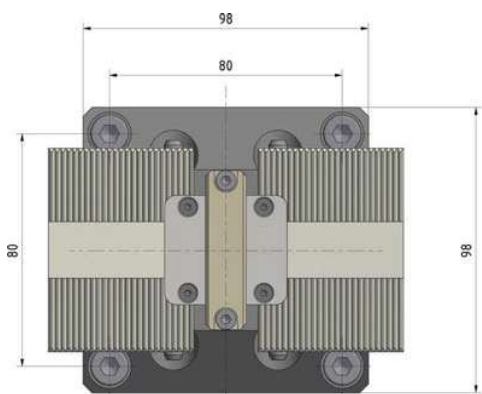
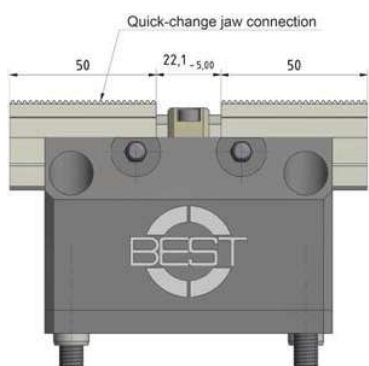
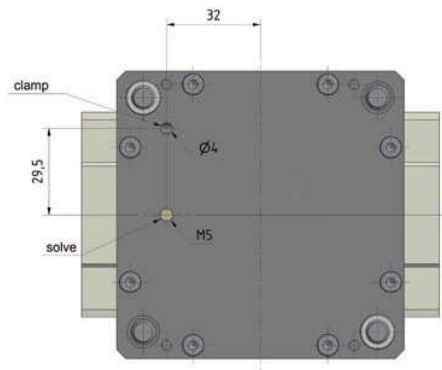
Order number:	301-0150-006
Dimensions (WxLxH):	150 x 120 x 70 mm
Material:	16 MnCr5

### Seal set (for maintenance):

Order number:	100.352.170
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## 5.1.1.8 Pneumatic centric vice special size BSP-100-SWBA



### Technical data:

Order number:	150-0100-008
Designation:	BSP-100-SWBA
Dimensions (LxWxH):	98 x 98 x 79.5 mm
Weight:	4 kg
Clamping range:	0–90 mm
Stroke per jaw:	2.5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure.:	1 bar
Max. clamping force:	14 kN at 9 bar
Air consumption (6 bar):	701 cm <sup>3</sup> per double stroke
Jaw connection:	Quick-change
Air connections:	On the side and underside

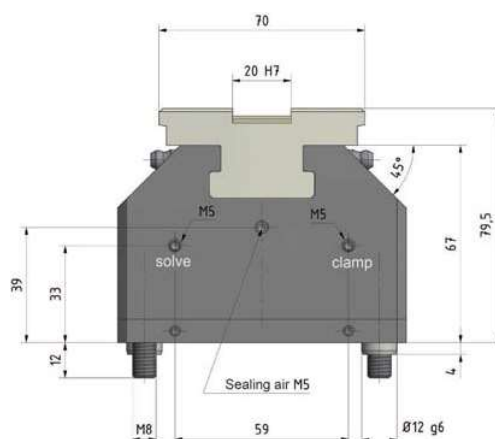
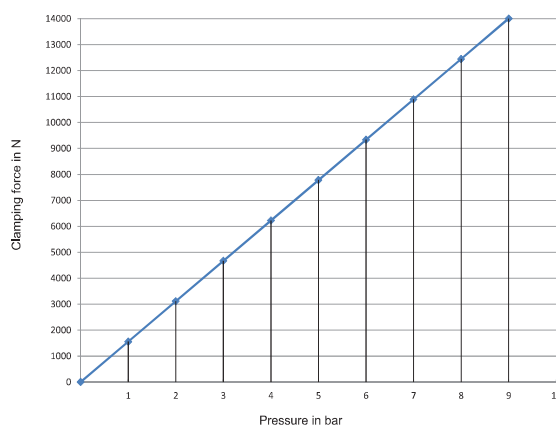


Diagramme clamping force BSP-100



### Optional additional functions:

- Compensation function
- Fixed jaw
- Clamping path monitoring
- Sealing air connection
- Central lubrication connection

See optional additional functions, page 88.  
Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

### Matching jaws:

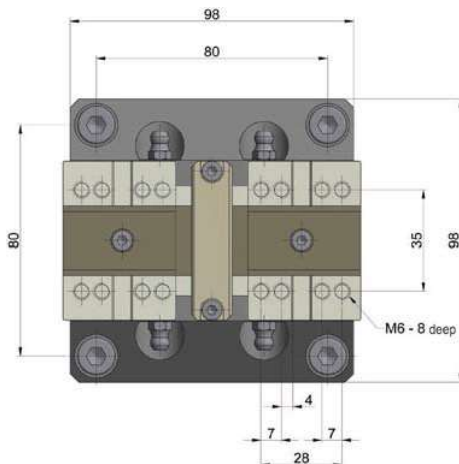
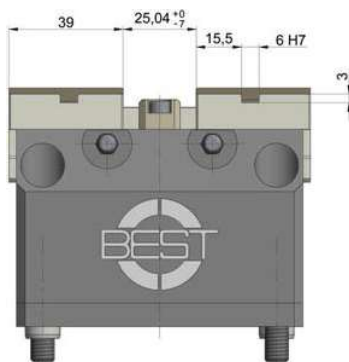
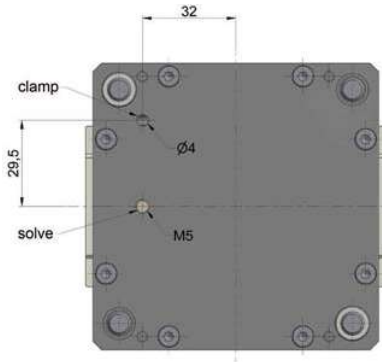
Pages 32 to 34

### Seal set (for maintenance):

Order number:	100.350.100
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## 5.1.1.9 Pneumatic centric vice special size BSP-100-SH (with extended stroke)



### Technical data:

Order number:	150-0100-010
Designation:	BSP-100-SH
Dimensions (LxWxH):	98 x 98 x 79 mm
Weight:	4 kg
Clamping range:	0–90 mm
Stroke per jaw:	3.5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure.:	1 bar
Max. clamping force:	11 kN at 9 bar
Air consumption (6 bar):	701 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside

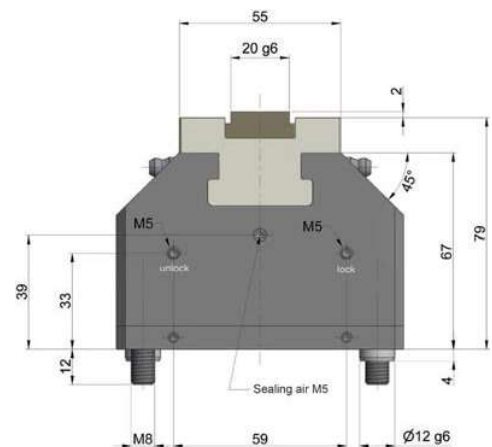
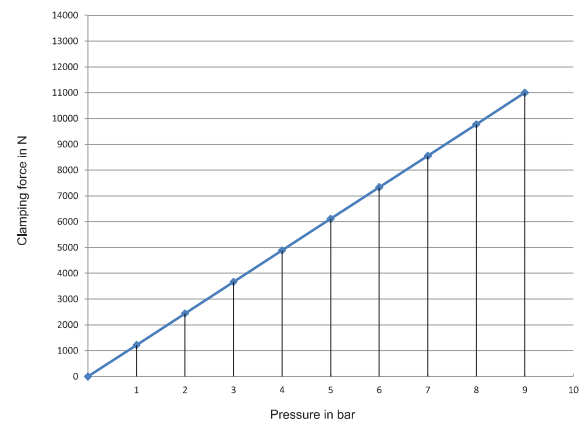


Diagramme clamping force BSP-100 (150-0100-010)



### Optional additional functions:

- Compensation function
- Fixed jaw
- Clamping path monitoring
- Sealing air connection
- Central lubrication connection

See optional additional functions, page 88.  
Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

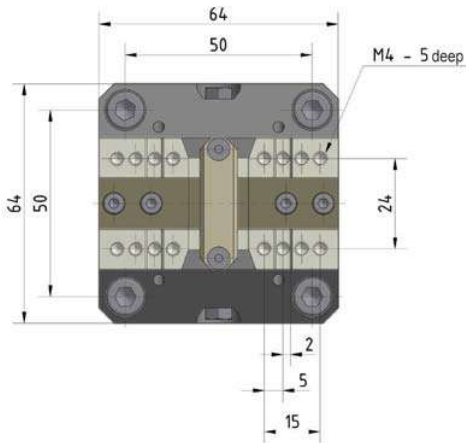
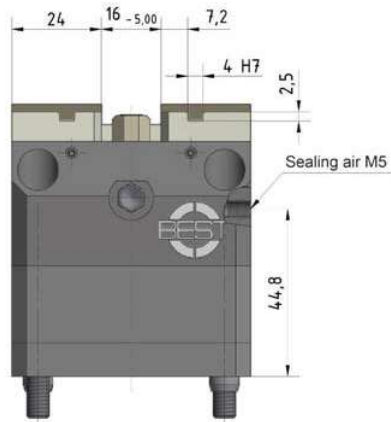
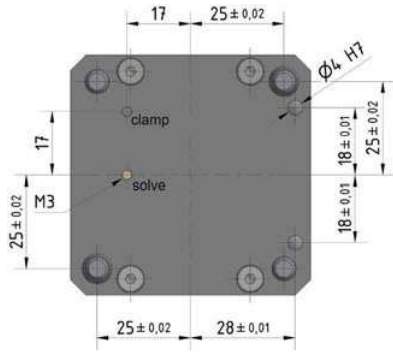
### Matching blank jaw:

Order number:	301-0060-002
Dimensions (WxLxH):	60 x 45 x 30 mm
Material:	16 MnCr5

### Seal set (for maintenance):

Order number:	100.350.100
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### 5.1.1.10 Pneumatic centric vice special size BSPD-64-KV (with double piston)



#### Technical data:

Order number:	152-0064-001
Designation:	BSPD-64-KV
Dimensions (LxWxH):	64 x 64 x 70.8 mm
Weight:	1.8 kg
Clamping range:	0–55 mm
Stroke per jaw:	2.5 mm
Max. actuating pressure:	9 bar
Min. actuating pressure.:	1 bar
Max. clamping force:	8 kN at 9 bar
Air consumption (6 bar):	372 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	On the side and underside

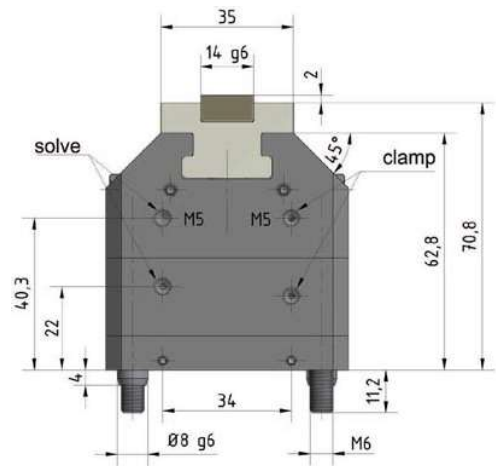
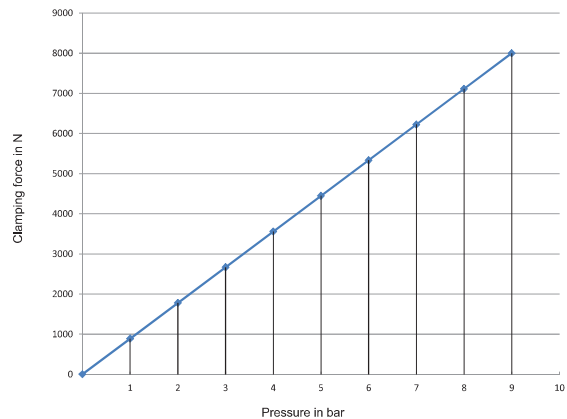


Diagramme clamping force BSPD-64



#### Optional additional functions:

- Fixed jaw
- Sealing air connection
- Clamping path monitoring

See optional additional functions, page 88.

Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

#### Matching blank jaw:

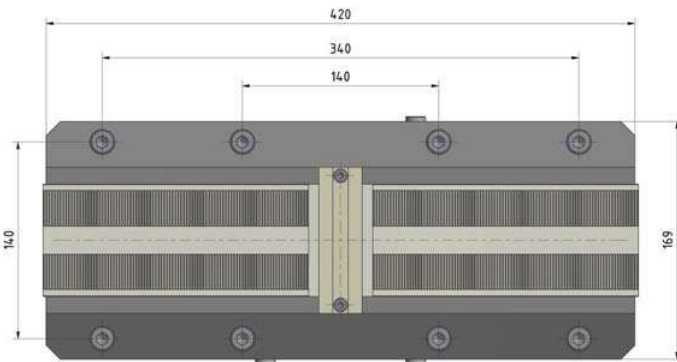
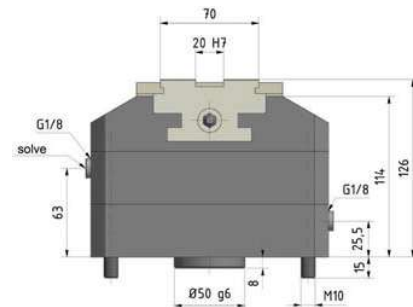
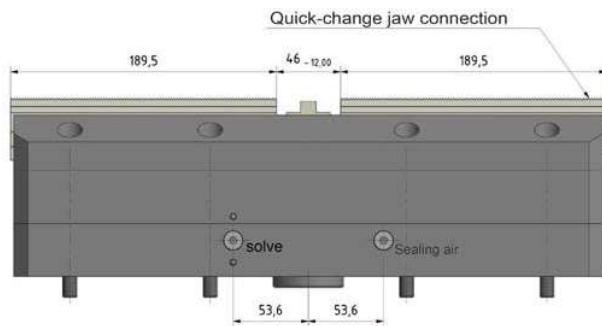
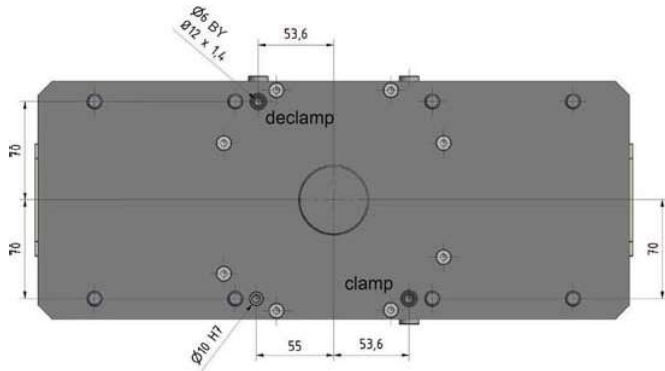
Order number:	301-0034-001
Dimensions (WxLxH):	36 x 29 x 18 mm
Material:	16 MnCr5

#### Seal set (for maintenance):

Order number:	100.352.064
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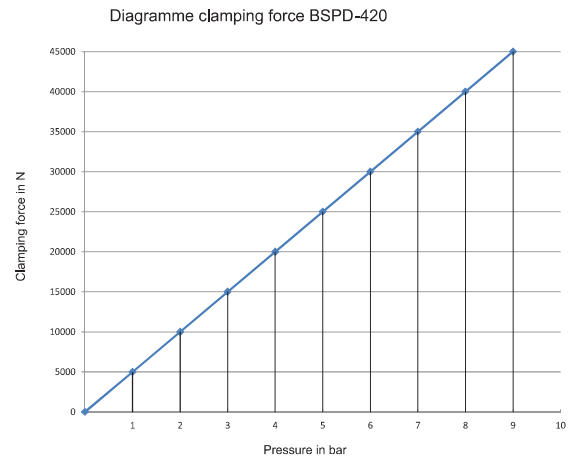


### 5.1.1.11 Pneumatic centric vice special size BSPD-420-SWBA [with double piston]



#### Technical data:

Order number:	152-0420-002
Designation:	BSPD-420-SWBA
Dimensions (LxWxH):	420 x 169 x 129 mm
Weight:	54 kg
Clamping range:	20–410 mm
Stroke per jaw:	6 mm
Max. actuating pressure:	9 bar
Min. actuating pressure:.	1 bar
Max. clamping force:	45 kN at 9 bar
Air consumption (6 bar):	4557 cm <sup>3</sup> per double stroke
Jaw connection:	Quick-change
Air connections:	On the side and underside



#### Optional additional functions:

- Fixed jaw
- Sealing air connection
- Clamping path monitoring

See optional additional functions, page 88.  
Please let us know if you require one of the additional functions so that we can take this into consideration in the offer.

#### Matching jaws:

Pages 32 to 34

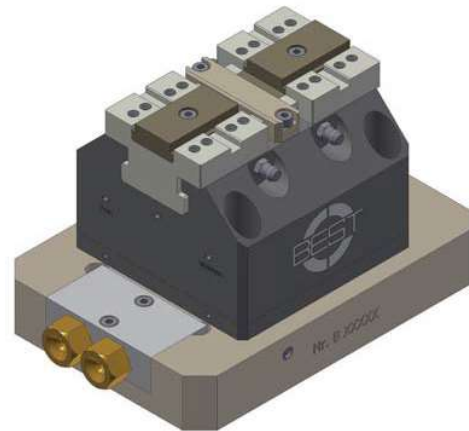
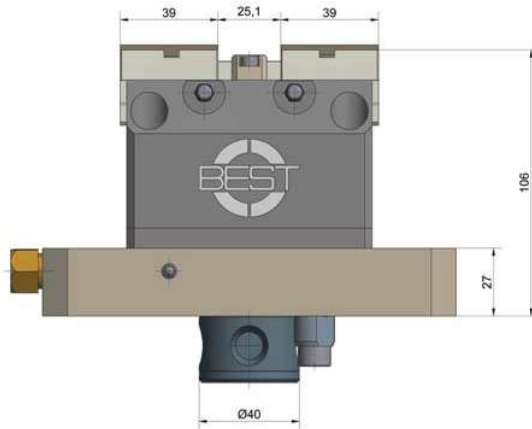
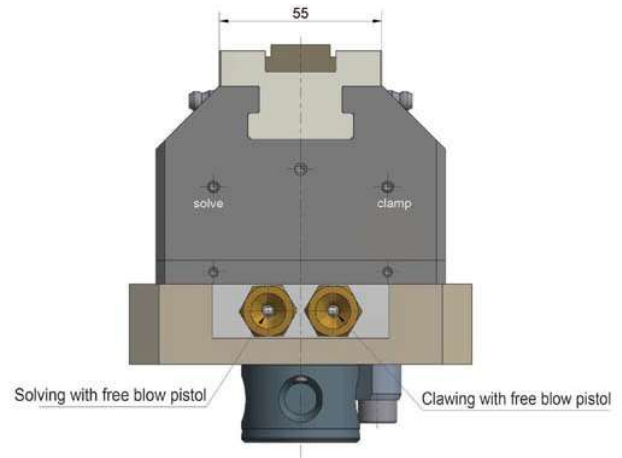
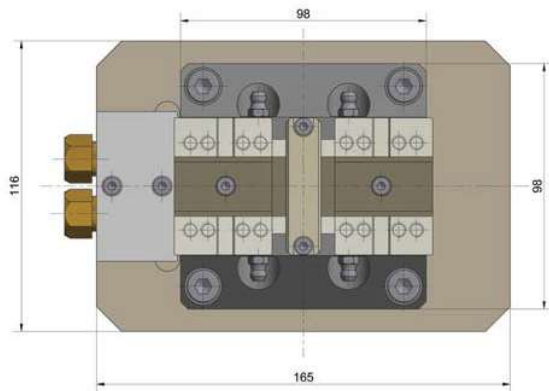
#### Seal set (for maintenance):

Order number:	100.352.170
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## 5.1.1.12 Pneumatic centric vice with maintenance of pressure

### Principle of function:

- Pneumatic centric vice (in this example here, vice BSP-100, see Page 58) on a pallet with pressure maintenance valve
- The workpiece can be prepared externally
- Clamping and releasing occurs by means of a blowing-out pistol
- The pallet can be mounted to a Realpoint baseplate (see Page 46) onto the machine (no alignment to the machine is thus necessary)
- **No compressed air is necessary during the processing**
- Clamping pressure is maintained through pressure maintenance valve

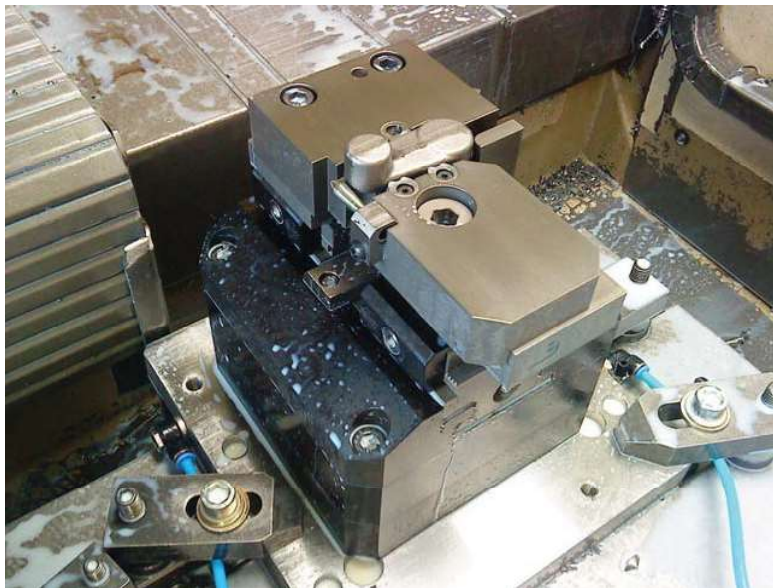


**Order number: 915-0100-001**

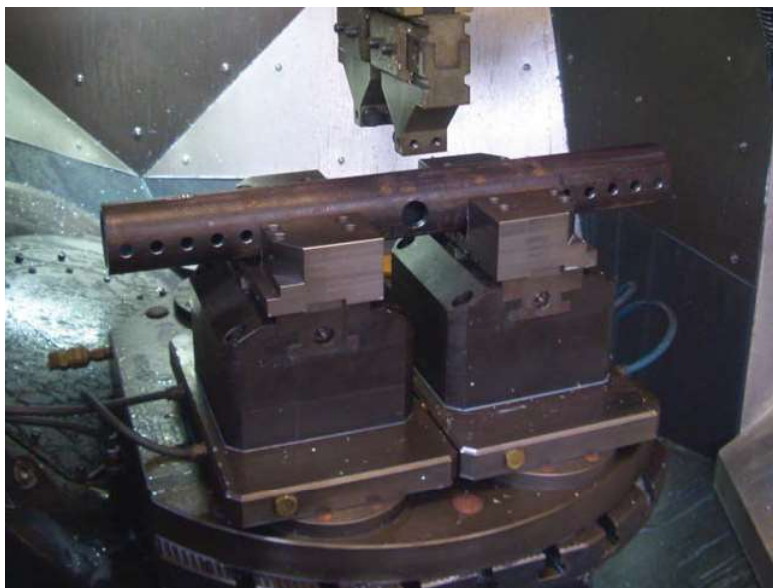
Vice BSP-100 incl. pallet with pressure maintenance valve

This solution is also possible with other vice sizes. Let us know what your requirements are and we will be happy to work out a solution for you.

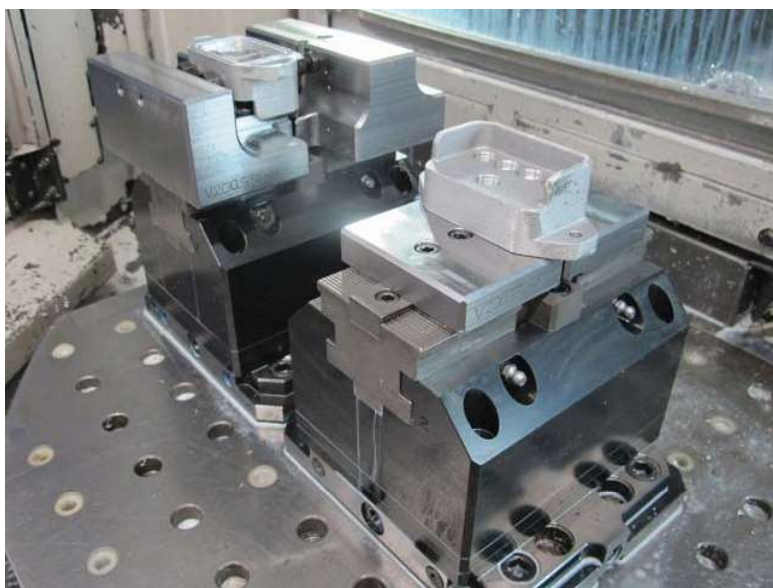
## 5.1.2 Sample applications



BSPD-170 with workpiece-specific claws. A blank cast is with large tolerance deviation is clamped. Two drill holes are set that must fit precisely to each other. The jaws have grip inserts, one jaw moves like a pendulum towards the workpiece.



2 BSPD-170 vices clamping a shaft. The loading takes place via a robot.

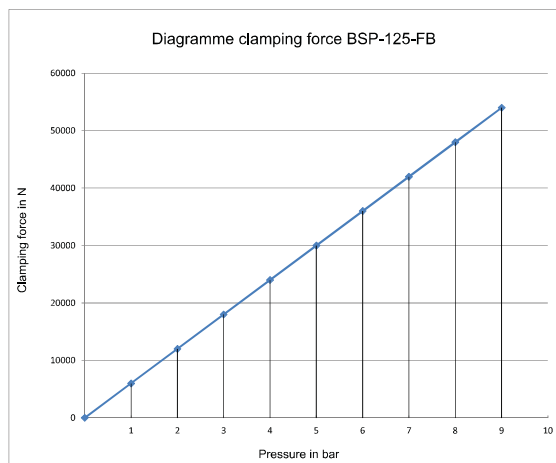
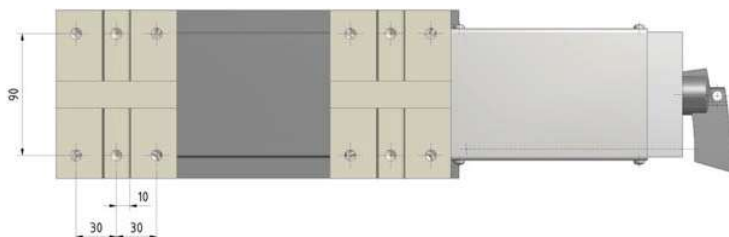
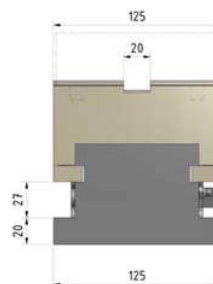
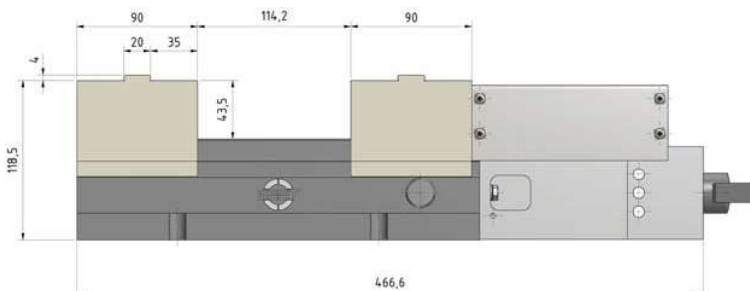
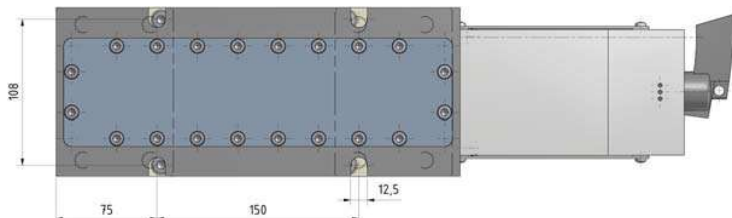


2 pieces BSP-160 with special jaws connection, adapted to a jaws interface specified by the customer. The vices are mounted on a LANG zero-point plate. Workpiece-specific jaws clamp the workpiece.

## 5.1.3 Pneumatic vice BSP-125-FB

### Technical data:

Order number:	151-0125-001
Designation:	BSP-125-FB
Dimensions (LxWxH):	467 x 125 x 118.5 mm
Weight:	26 kg
Clamping range:	0–222 mm
Jaw lift:	3 mm
Adjustment range of clamping jaws:	114 mm
Max. actuating pressure:	9 bar
Min. actuating pressure.:	1 bar
Max. clamping force:	54 kN at 9 bar
Air consumption (6 bar)	5200 cm <sup>3</sup> per double stroke
Jaw connection:	Tongue and groove
Air connections:	on the side



### Matching stepped jaws:

Order number:	301-0125-012
Dimensions (WxLxH):	125 x 87 x 40 mm Level with 52 x 20 (LxH)



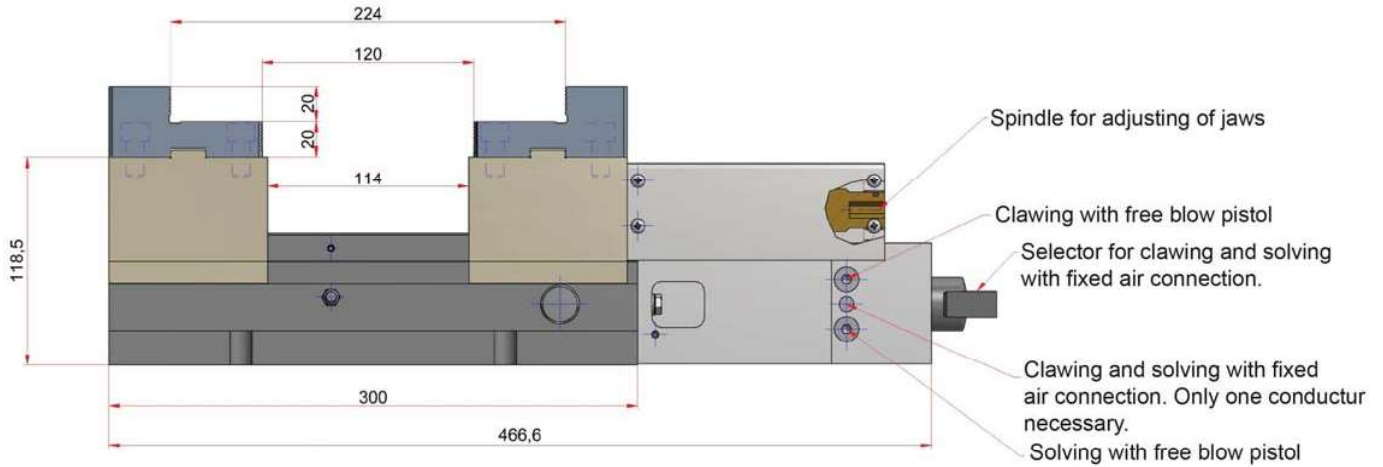
### Matching blank jaw:

Order number:	301-0125-011
Dimensions (WxLxH):	125 x 87 x 50 mm
Material:	16 MnCr5



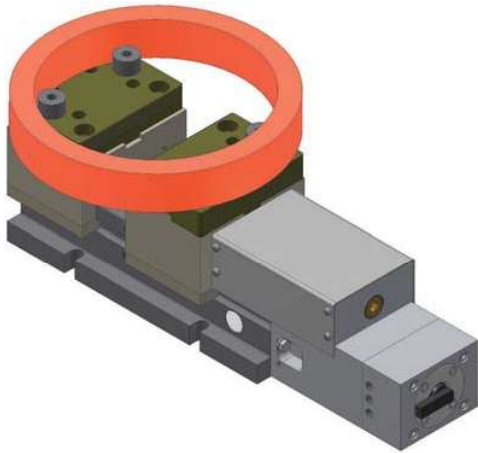
**Principle of function:**

- Vice with fixed jaw
- Articulate clamping jaw is roughly pre-set via a threaded spindle
- Through compressed air clamping is carried out via sluice valve and clamping lever
- Adjustment area via spindle is 114 mm. Jaw lift via compressed air 3 mm
- **No compressed air is necessary during the processing**
- Tension pressure is maintained through self-attenuation

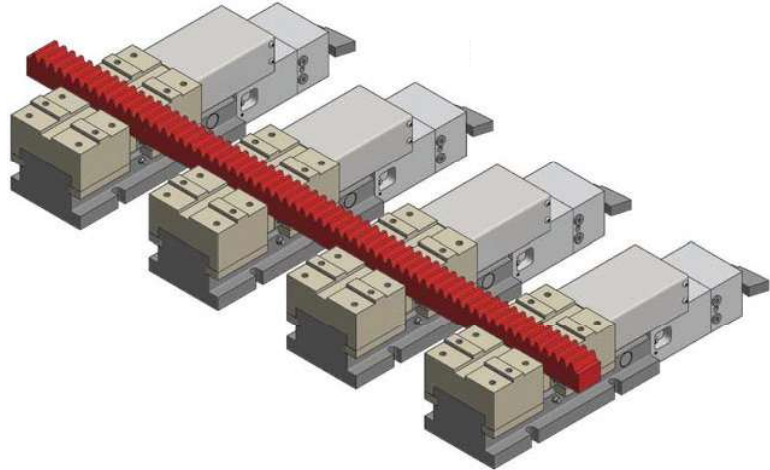


**Application options:**

Interior clamping, exterior clamping, parallel clamping, installation aid at the workstation



Interior clamping



Parallel clamping

