

CONVENTIONAL WORKHOLDING

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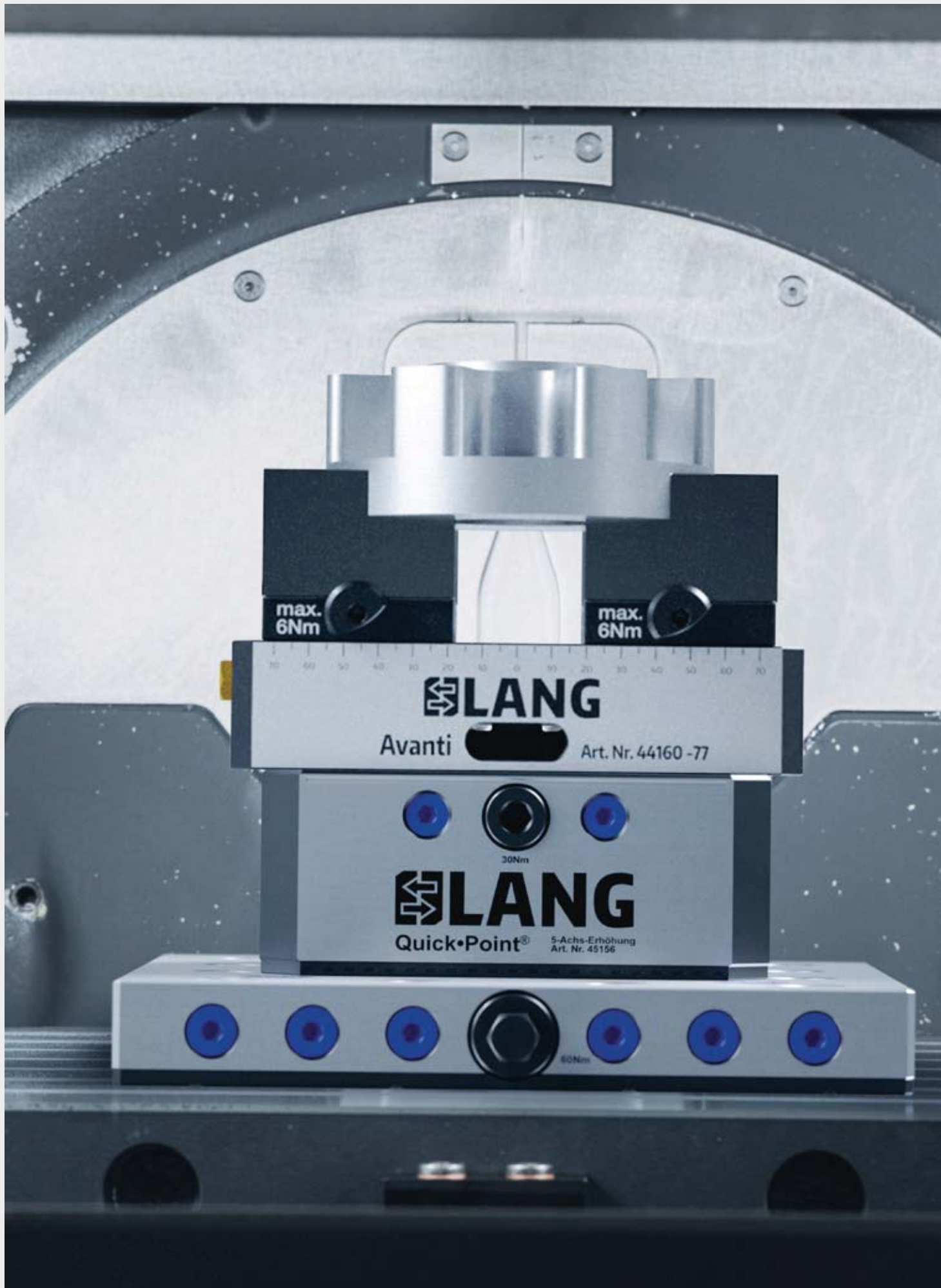
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Conventional Workholding

While the strengths of Makro-Grip stamping technology with its 5-Axis Vices are mainly seen in the processing of unmachined parts, clamping devices of the “Conventional Workholding” category offer multitude options for smooth clamping of round or shaped components. All “Conventional Workholding” vice components use the same base body as the Makro-Grip® 5-Axis Vice, are compatible and interchangeable. Different jaw types of “Conventional Workholding” are perfectly suited for the demanding machining of the 6th side and expand clamping possibilities in order to completely machine a workpiece.

→ Flexibility

One vice body for all jaw types

→ Versatility

Suitable for almost any clamping task in milling

→ Setup Time Reduction

Fast jaw change over a variety of clamping configurations

Preci-Point Collet Chuck

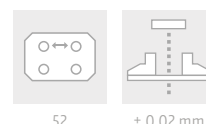
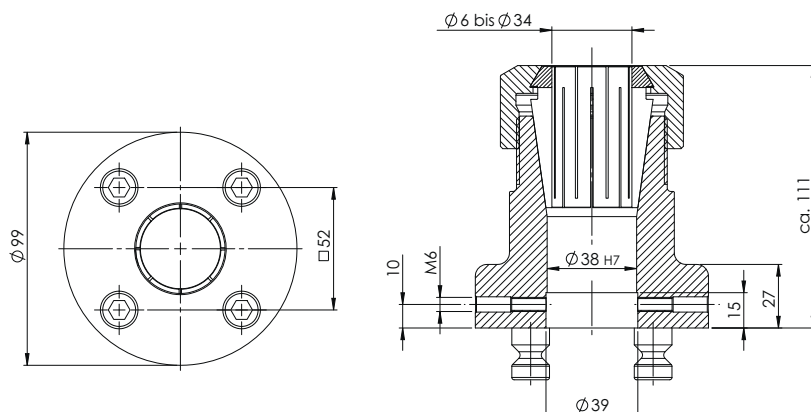
The new collet chuck with ideal accessibility for milling round parts

NEW



- 1 Commercial collet ER 50 for \varnothing 6 – 34 mm
- 2 M6 tapped hole to use an endstop
- 3 Robust, case-hardened and coated base body
- 4 Integrated with clamping studs for precise clamping in the Quick-Point® zero-point clamping system

Preci-Point Collet Chuck



PRECI-POINT COLLET CHUCK

ITEM NO.	DIMENSIONS	WEIGHT	PRICE
41052	Ø 99 × 111 mm	3.0 kg	

Included: 4 × Quick-Point® clamping studs Ø 16 mm and screwcap.

Collets for ER 50



PRECI-POINT COLLETS (DIN 6499-B / ISO 15488)

ITEM NO.	MAX. CLAMPING RANGE	PRICE
41000-06 to 41000-34	Ø 6 bis Ø 34	

The collets are available in 1 mm steps for Ø 6 to Ø 34 mm.

The extension of the item number refers to the max. clamping range of the collet.

Example: Collet with max. Ø 20 mm has the item number 41000-20.

Clamping range: -1,0 mm

Clamping Wrench for ER 50

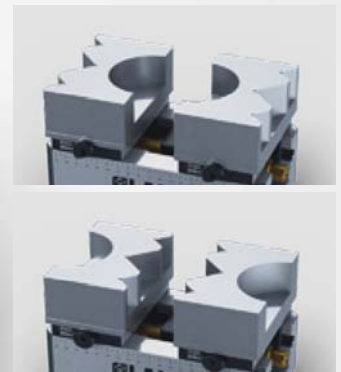
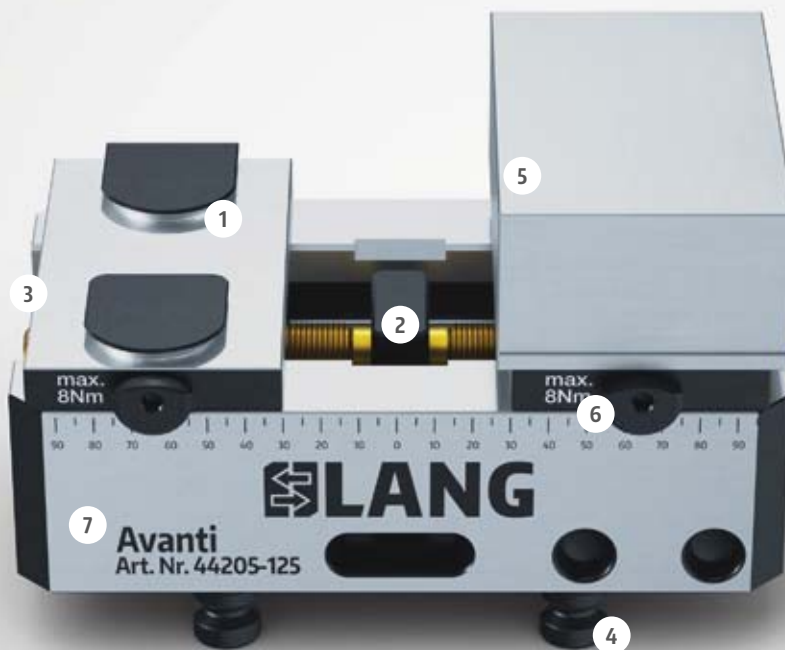


PRECI-POINT CLAMPING WRENCH

ITEM NO.	PRICE
41052-03	

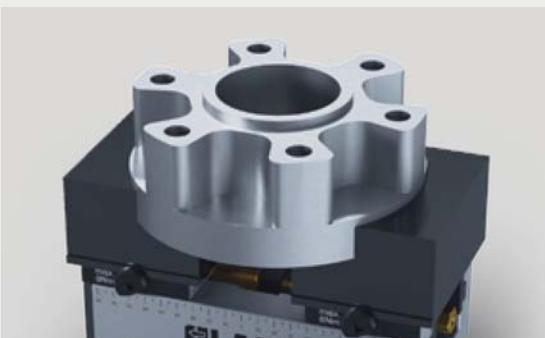
Avanti Technology

The universal vice with great handling characteristics and unbeatable add-on jaw prices!



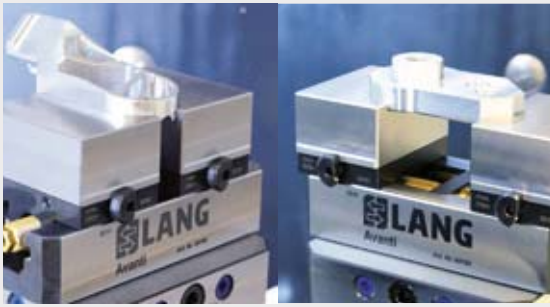
Large-volume steel or aluminium add-on jaw allows contours to be added on both sides of the jaws to use it for two different clamping applications.

- 1 Precise positioning of jaws thanks to patented clamping interface
- 2 Centring accuracy ± 0.02 mm
- 3 Double guided jaws
- 4 Integrated with clamping studs for precise clamping in the Quick-Point® zero-point clamping system
- 5 Add-on jaws available in steel or aluminium
- 6 Changing the jaws rapidly with only one screw (internal hexagon 5 mm)
- 7 Rigid and sturdy base – but still lightweight and handy



If the maximum clamping diameter ($\varnothing 34$ mm) of the Preci-Point Collet Chuck is not enough, the Avanti vice is a great choice to clamp round stock with a larger diameter. There is also a chance to customise add-on jaws with more height through our customising department (see page 136).

Avanti Quick Jaw Exchange System applications



Independent from the alignment of the workpiece a great variety of profiles can be clamped for best accessibility with the patented quick jaw exchange system. By adding contours on both sides of the jaws and through their maximum usable volume add-on jaws can be used twice.



How to prepare add-on jaws:

In order to get the best results when machining with the Avanti we recommend you simulate the future clamping setup as accurately as possible.

We suggest clamping a precision block at maximum torque between the top jaws while machining the workpiece contour into the add-on jaws.



Tip for your benefit:

Avanti adaptor jaw to use own clamping fixtures

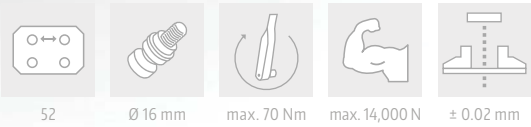
As an interface for customised clamping fixtures such as prisms, a special Avanti adaptor jaw can be offered and manufactured upon request, making the system even more versatile.

An individual borehole pattern (e.g. tapped holes or fittings) enables the simple assembly of your clamping fixture. Combine the benefits of the Avanti quick jaw exchange system with your own fixtures!

Avanti 77

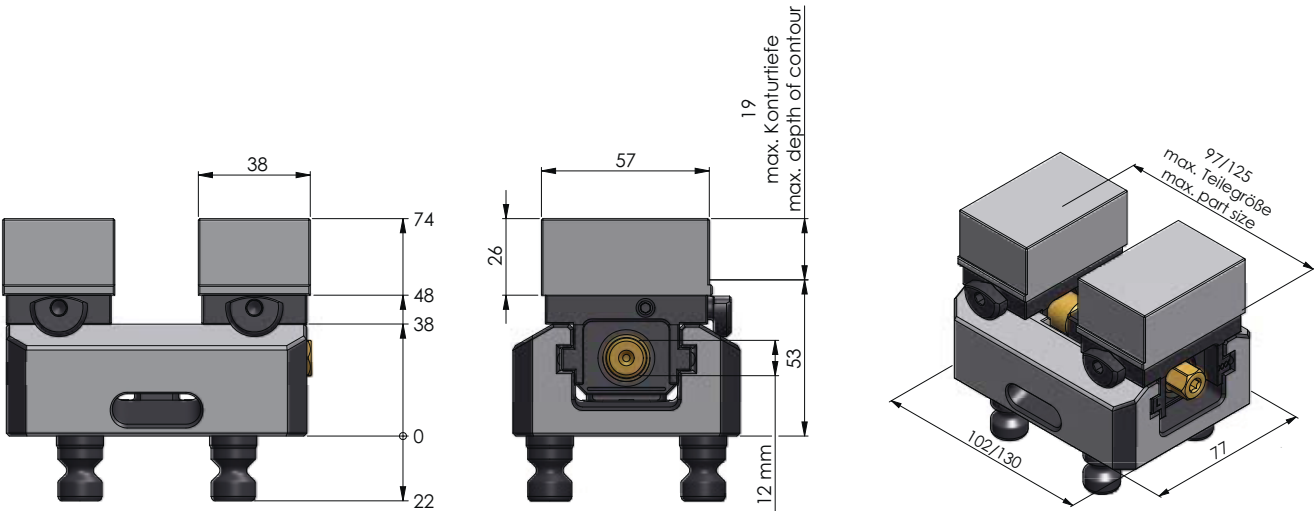


AVANTI 77, JAW WIDTH 46 MM



ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
44085-46	102 mm	97 mm	2.2 kg		44065
44120-46*	130 mm	125 mm	2.6 kg		44105

*automatable

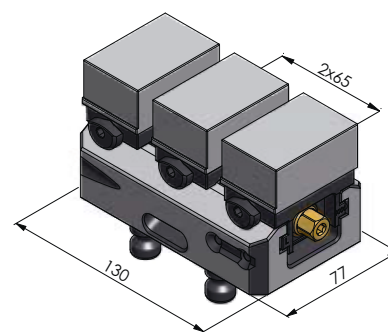
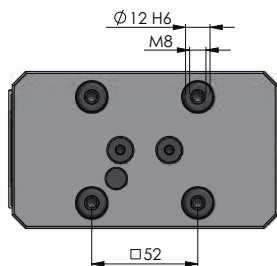




AVANTI 77 BASE JAWS, JAW WIDTH 46 MM

ITEM NO.	DIMENSIONS	WEIGHT	UNIT	PRICE	COMPARABLE PREVIOUS VERSION
44771-46	55 × 36 mm	0.6 kg	1 pair		44461

NEW



CENTRE BASE JAW + SPINDLE FOR AVANTI 77, JAW WIDTH 46 MM

ITEM NO.	SPINDLE LENGTH (+Ø)	FOR AVANTI	WEIGHT	PRICE
44120-TG46	135 mm (Ø 16 mm)	44120-46	0.5 kg	



AVANTI 46 ADD-ON JAWS, SOFT

ITEM NO.	MATERIAL	DIMENSIONS	WEIGHT	UNIT	PRICE
44468-26	Steel (16MnCr5)	57 × 38 × 26 mm	0.6 kg	1 pc.	
44469-26	Aluminium (F50)	57 × 38 × 26 mm	0.2 kg	1 pc.	

Add-on jaws fit the new base jaw version and also the previous one.

Avanti 77



AVANTI 77, JAW WIDTH 77 MM



52



Ø 16 mm



max. 70 Nm



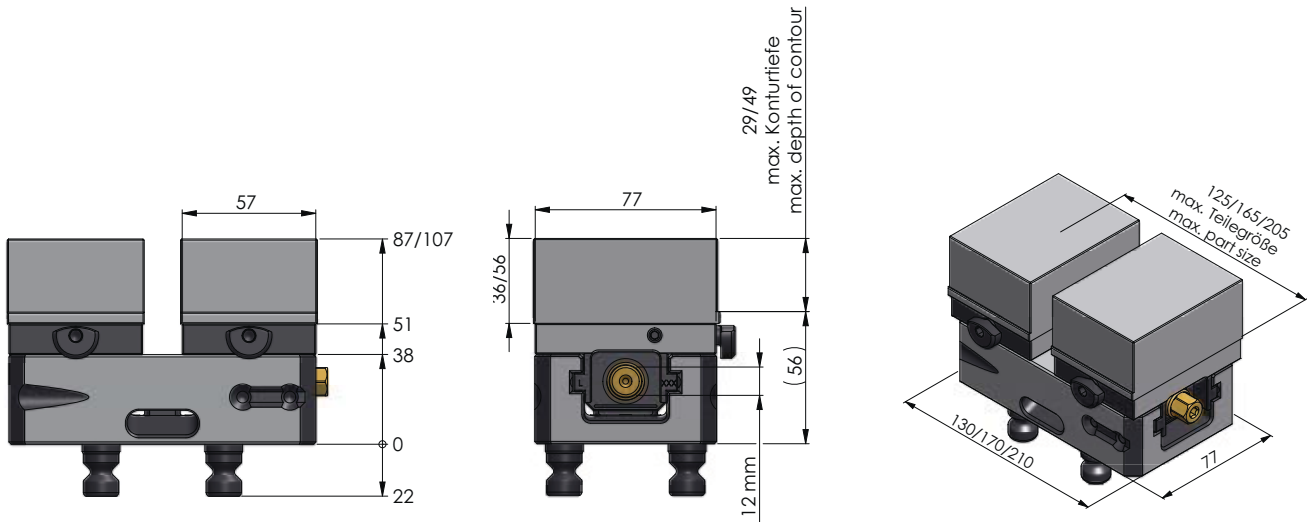
max. 14,000 N



± 0.02 mm

ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
44120-77*	130 mm	125 mm	3.5 kg		44120
44160-77	170 mm	165 mm	4.2 kg		44160
44200-77	210 mm	205 mm	4.8 kg		44200

*automatable

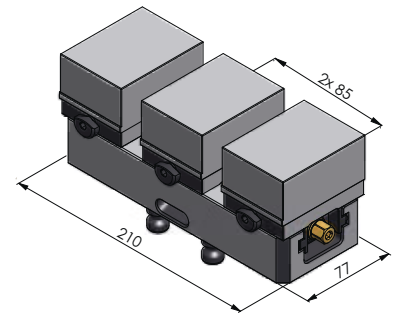
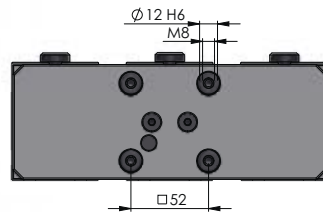




AVANTI 77 BASE JAWS, JAW WIDTH 77 MM

ITEM NO.	DIMENSIONS	WEIGHT	UNIT	PRICE	COMPARABLE PREVIOUS VERSION
44771-77	77 × 57 mm	1.4 kg	1 pair		44771

NEW



CENTRE BASE JAW + SPINDLE FOR AVANTI 77, JAW WIDTH 77 MM

ITEM NO.	SPINDLE LENGTH (+Ø)	FOR AVANTI	WEIGHT	PRICE
44200-TG77	215 mm (Ø 16 mm)	44200-77	0.9 kg	



AVANTI 77 ADD-ON JAWS, SOFT

ITEM NO.	MATERIAL	DIMENSIONS	WEIGHT	UNIT	PRICE
44778-36	Steel (16MnCr5)	78 × 58 × 36 mm	0.6 kg	1 pc.	
44779-36	Aluminium (F50)	78 × 58 × 36 mm	0.2 kg	1 pc.	
44778-56	Steel (16MnCr5)	78 × 58 × 56 mm	0.9 kg	1 pc.	
44779-56	Aluminium (F50)	78 × 58 × 56 mm	0.3 kg	1 pc.	

Add-on jaws fit the new base jaw version and also the previous one.

Avanti 125

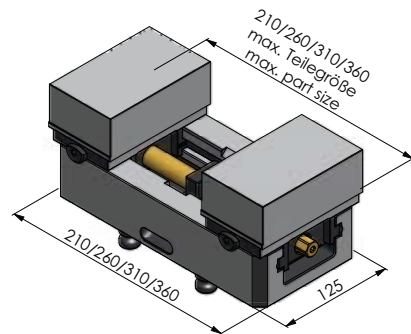
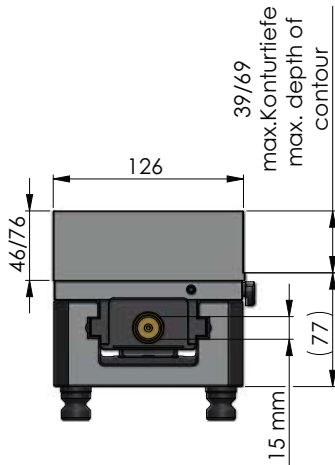
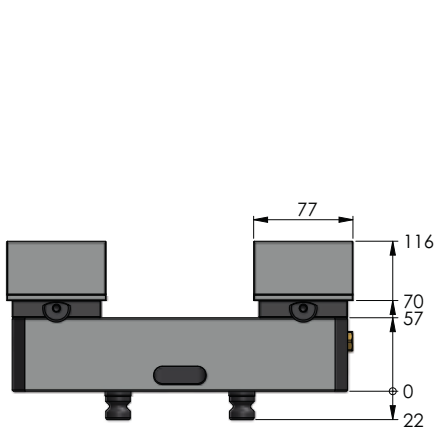


AVANTI 125, JAW WIDTH 125 MM



ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
44205-125*	210 mm	210 mm	11.3 kg		44205
44255-125	260 mm	260 mm	13.2 kg		44255
44305-125	310 mm	310 mm	15.1 kg		44305
44355-125	360 mm	360 mm	16.9 kg		44355

*automatable

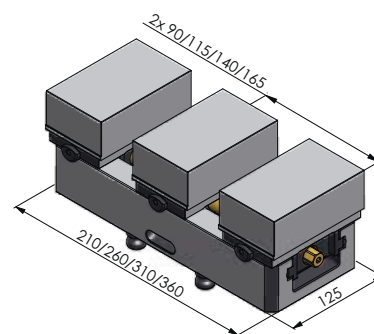
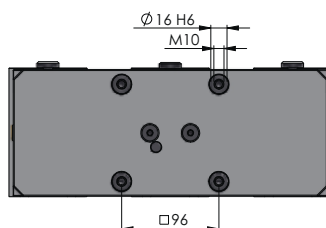




AVANTI 125 BASE JAWS

ITEM NO.	DIMENSIONS	WEIGHT	UNIT	PRICE	COMPARABLE PREVIOUS VERSION
44251-125	125 × 69 mm	3.7 kg	1 pair		44251

NEW



CENTRE BASE JAW + SPINDLE FOR AVANTI 125

ITEM NO.	SPINDLE LENGTH (+Ø)	FOR AVANTI	WEIGHT	PRICE
44255-TG125	264 mm (Ø 20 mm)	44255-125	2.1 kg	
44305-TG125	314 mm (Ø 20 mm)	44305-125	2.2 kg	
44355-TG125	364 mm (Ø 20 mm)	44355-125	2.3 kg	

AVANTI 77 ADD-ON JAWS, SOFT

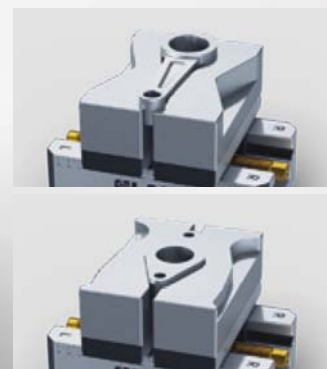
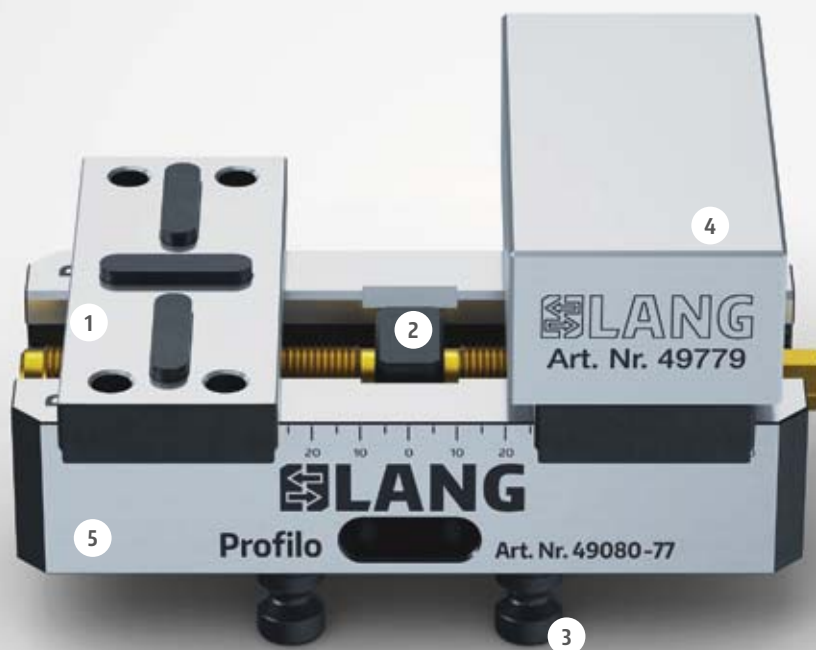


ITEM NO.	MATERIAL	DIMENSIONS	WEIGHT	UNIT	PRICE
44258-46	Steel (16MnCr5)	126 × 77 × 46 mm	3.3 kg	1 pc.	
44259-46	Aluminium (F50)	126 × 77 × 46 mm	1.1 kg	1 pc.	
44258-76	Steel (16MnCr5)	126 × 77 × 76 mm	5.5 kg	1 pc.	
44259-76	Aluminium (F50)	126 × 77 × 76 mm	1.8 kg	1 pc.	

Add-on jaws fit the new base jaw version and also the previous one.

Profilo Technology

Your clamping system for all shaped parts



Large-volume steel or aluminium add-on jaw allows contours to be added on both sides of the jaws to use it for two different clamping applications.

- 1 Case-hardened, double guided base jaws with keyways
- 2 Centring accuracy ± 0.02 mm
- 3 Integrated with clamping studs for precise clamping in the Quick-Point® zero-point clamping system
- 4 Add-on jaws available in steel or aluminium
- 5 Rigid and sturdy base - but still lightweight and handy

Mounting options



Soft add-on jaws mounted from beneath with 4 screws.

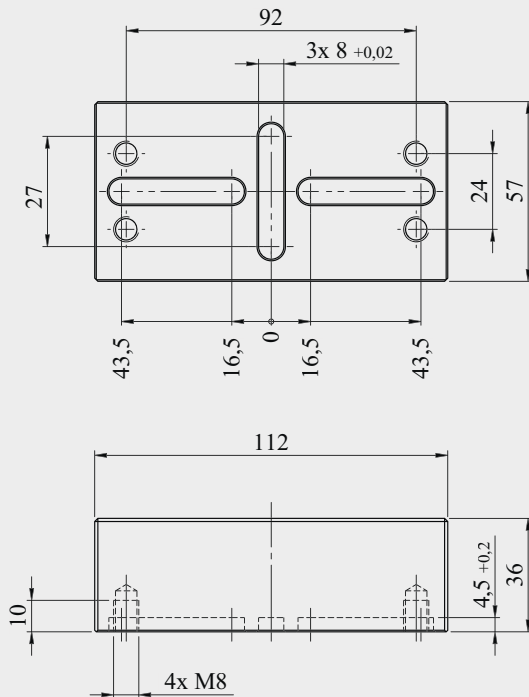


Thanks to threads in the base jaws, add-on jaws can also be mounted from the top for better accessibility towards the screws.

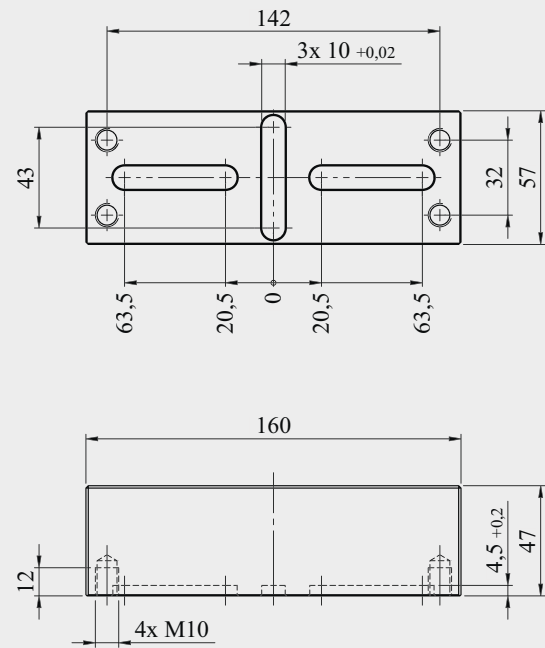
Self-made Profilo add-on jaws

The versatile Profilo system allows you to manufacture your own, customised add-on jaws for your LANG vice. The drawings below show you how to machine your jaws. The drawings and 3D models can also be downloaded from our website.

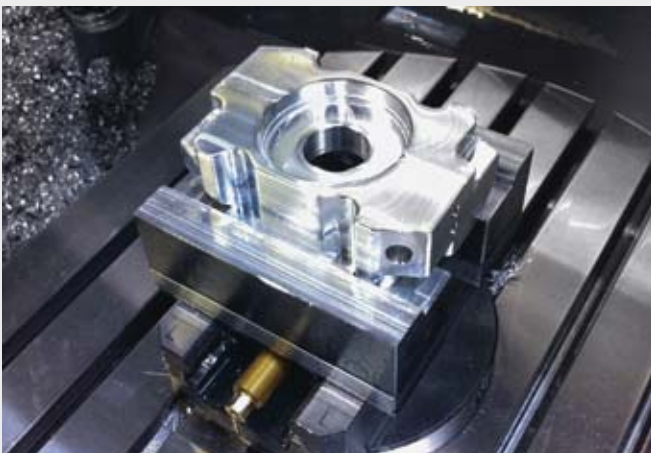
Profilo 77:



Profilo 125:




Applications



Profilo 77



PROFILO 77




52




Ø 16 mm



max. 70 Nm

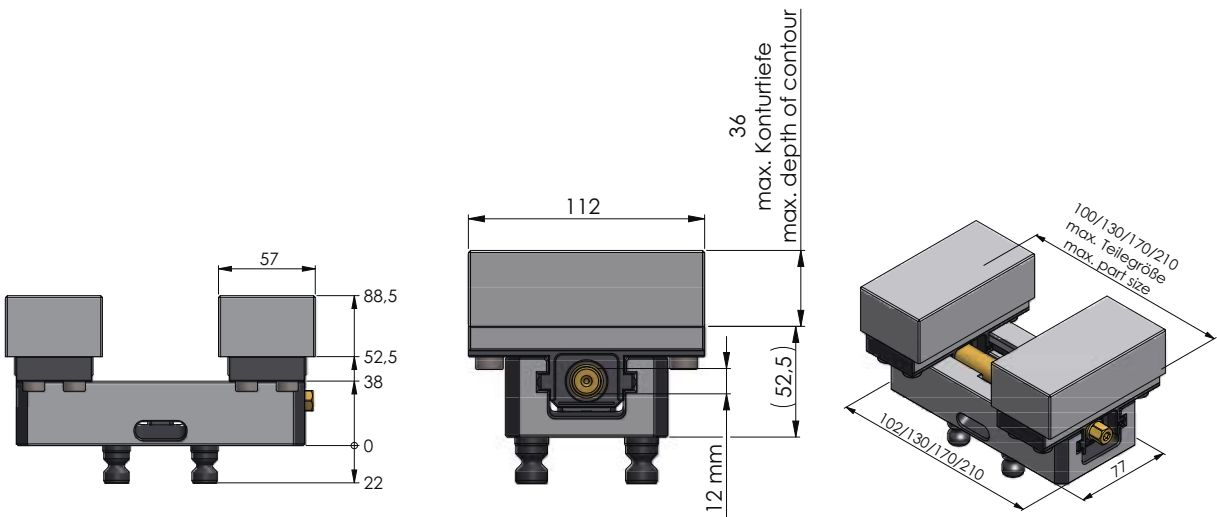


max. 14,000 N



± 0.02 mm

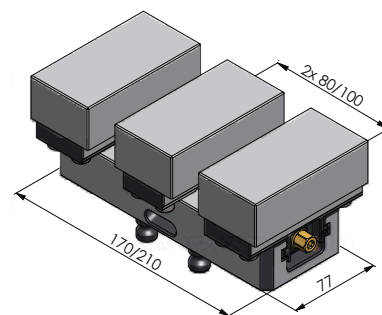
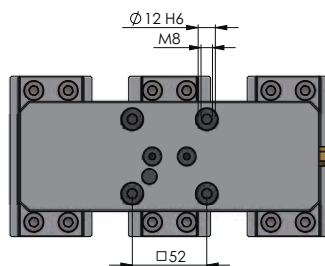
ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
49010-77	102 mm	100 mm	3.2 kg		49010
49040-77	130 mm	130 mm	3.6 kg		49040
49080-77	170 mm	170 mm	4.3 kg		49080
49120-77	210 mm	210 mm	5.0 kg		49120





PROFILO 77 BASE JAWS

ITEM NO.	DIMENSIONS	WEIGHT	UNIT	PRICE	COMPARABLE PREVIOUS VERSION
49077	112 × 46 mm	1.6 kg	1 pair		49771



CENTRE BASE JAW 112 × 46 MM + SPINDLE FOR PROFILO 77

ITEM NO.	SPINDLE LENGTH (+Ø)	FOR PROFILO	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
49080-TG77	175 mm (Ø 16 mm)	49080-77	0.9 kg		49080-TG
49120-TG77	215 mm (Ø 16 mm)	49120-77	1.0 kg		49120-TG



PROFILO 77 ADD-ON JAWS, SOFT

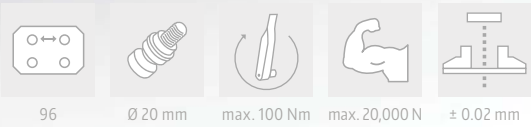
ITEM NO.	MATERIAL	DIMENSIONS	WEIGHT	UNIT	PRICE
49778	Steel (16MnCr5)	112 × 57 × 36 mm	1.8 kg	1 pc.	
49779	Aluminium (F50)	112 × 57 × 36 mm	0.7 kg	1 pc.	

Add-on jaws fit the new base jaw version and also the previous one.

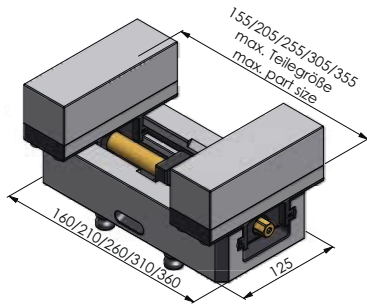
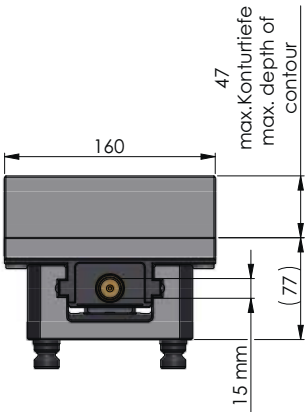
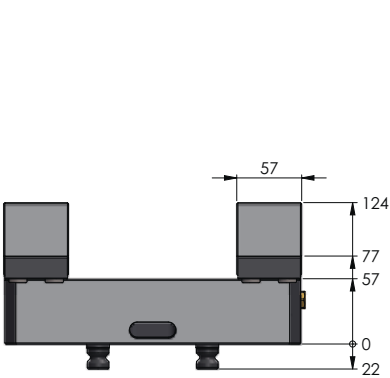
Profilo 125



PROFILO 125



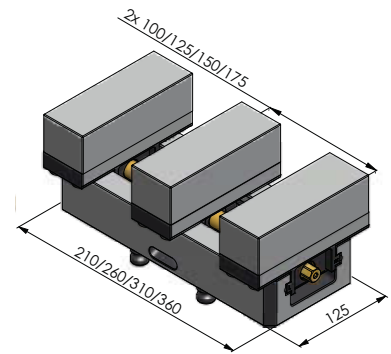
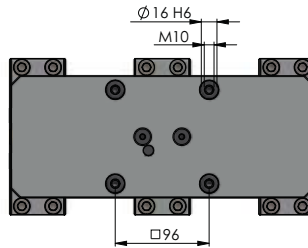
ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
49050-125	160 mm	155 mm	10.1 kg		49050
49100-125	210 mm	205 mm	11.9 kg		49100
49150-125	260 mm	255 mm	13.8 kg		49150
49200-125	310 mm	305 mm	15.7 kg		49200
49250-125	360 mm	355 mm	17.5 kg		49250





PROFILO 125 BASE JAWS

ITEM NO.	DIMENSIONS	WEIGHT	UNIT	PRICE	COMPARABLE PREVIOUS VERSION
49125	160 × 57 mm	4.3 kg	1 pair		49251



CENTRE BASE JAW 160 × 57 MM + SPINDLE FOR PROFILO 125

ITEM NO.	SPINDLE LENGTH (+Ø)	FOR PROFILO	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
49100-TG125	214 mm (Ø 20 mm)	49100-125	2.5 kg		49100-TG
49150-TG125	264 mm (Ø 20 mm)	49150-125	2.6 kg		49150-TG
49200-TG125	314 mm (Ø 20 mm)	49200-125	2.7 kg		49200-TG
49250-TG125	364 mm (Ø 20 mm)	49250-125	2.9 kg		49250-TG

PROFILO 125 ADD-ON JAWS, SOFT

ITEM NO.	MATERIAL	DIMENSIONS	WEIGHT	UNIT	PRICE
49258	Steel (16MnCr5)	160 × 57 × 47 mm	3.3 kg	1 pc.	
49259	Aluminium (F50)	160 × 57 × 47 mm	1.2 kg	1 pc.	

Add-on jaws fit the new base jaw version and also the previous one.

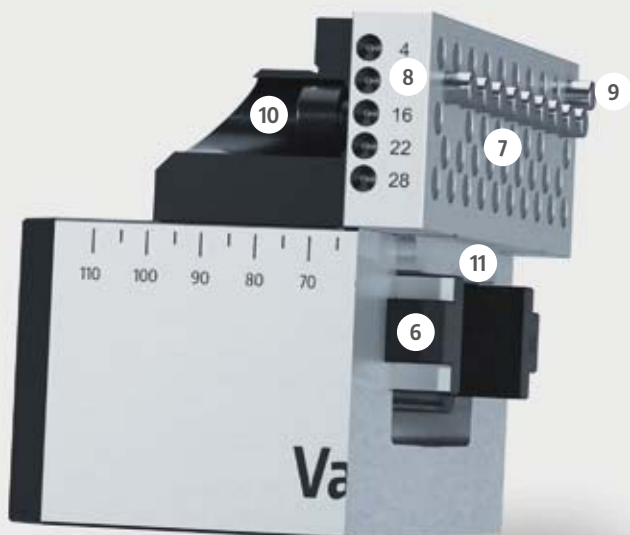


Vario-Tec Technology

The convenient and versatile clamping solution for (semi-)finished parts.



- 1 Centring accuracy ± 0.02 mm
- 2 Channels for blowing out pins
- 3 Rigid and sturdy base for great longevity
- 4 Lateral swarf/coolant drain in the base body
- 5 Integrated with clamping studs for precise clamping in the Quick-Point® zero-point clamping system



- 6 Double guided jaws
- 7 Positioning accuracy of pins ± 0.01 mm
- 8 Pins are blown out row by row with compressed air
- 9 Support and resting possibilities. Parallels are not needed
- 10 Jaws are sealed up front and mounted from behind through the carrier jaw. No swarf clogging possible!
- 11 Pin jaws are guided in the base for a highly accurate location to one another.

Applications



Pins not needed are simply pushed back by hand. The remaining pins act as a support and resting system. Parallels and additional endstops which affect accessibility in a negative way are not needed.



Resting a workpiece on only two pins ensures great freedom to machine until close to the edge of the workpiece and inner surfaces of the clamping pin jaws.

Maintenance recommendation



In order to keep up the proper function of the system the pins should be blown out when not needed to prevent jamming caused by the coolant. Furthermore we recommend applying a multi-purpose oil on the pins occasionally.

Vario-Tec 77



VARIO-TEC 77


52


Ø 16 mm

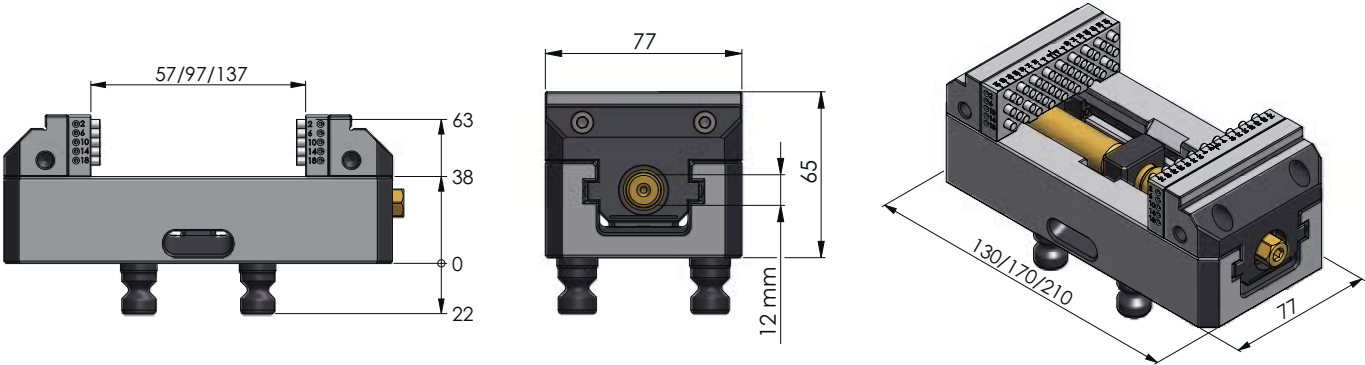

max. 70 Nm

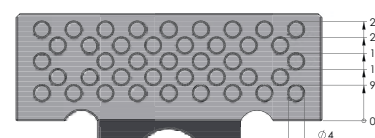
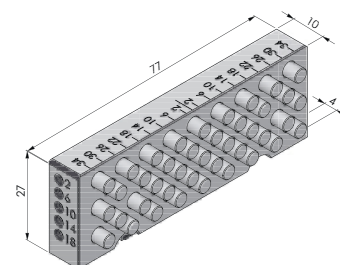

max. 14,000 N


± 0.02 mm

ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
42057-77*	130 mm	55 mm	3.3 kg		42057
42097-77	170 mm	95 mm	4.0 kg		42097
42137-77	210 mm	135 mm	4.6 kg		42137

*automatable





The jaws are fixed with screws from behind ($2 \times M6$, distance of 48 mm), so they are sealed up front. Hence swarf clogging has no chance!

VARIO-TEC 77 SPARE JAWS

ITEM NO.	DESCRIPTION	UNIT	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
42018-77	Spare Jaws	1 set (2 pin jaws + 2 carrier jaws)	1.2 kg		42077

ACCESSORIES VARIO-TEC 77



ITEM NO.	DESCRIPTION	UNIT	PRICE
20000	Spare pins $\varnothing 4$ mm	5 pcs.	
200009	O-Rings $\varnothing 2 \times 1.5$ mm for spare pins $\varnothing 4$ mm	100 pcs.	
20004	Air pressure pistol	1 pc.	

Vario-Tec 125



VARIO-TEC 125



96



Ø 20 mm



max. 100 Nm



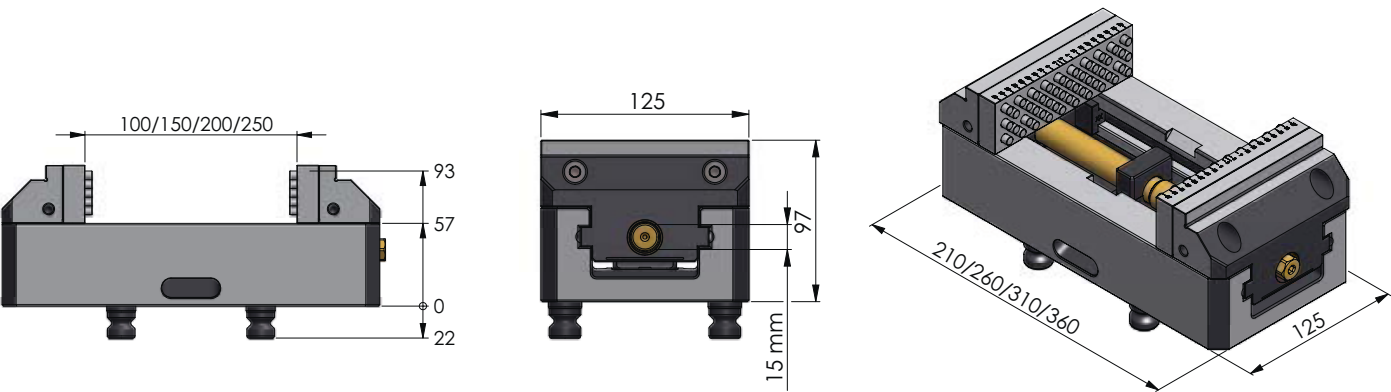
max. 20,000 N

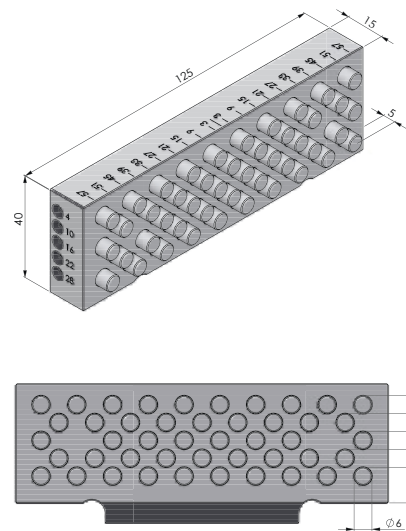


± 0.02 mm

ITEM NO.	BASE LENGTH	MAX. CLAMPING RANGE	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
42102-125*	210 mm	100 mm	12.3 kg		42102
42152-125	260 mm	150 mm	14.2 kg		42152
42202-125	310 mm	200 mm	16.0 kg		42202
42252-125	360 mm	250 mm	17.9 kg		42252

*automatable





The jaws are fixed with screws from behind (2 × M 8, distance of 84 mm), so they are sealed up front. Hence swarf clogging has no chance!

VARIO-TEC 125 SPARE JAWS

ITEM NO.	DESCRIPTION	UNIT	WEIGHT	PRICE	COMPARABLE PREVIOUS VERSION
42018-125	Spare Jaws	1 set (2 pin jaws + 2 carrier jaws)	4.7 kg		42125

ACCESSORIES VARIO-TEC 125



ITEM NO.	DESCRIPTION	UNIT	PRICE
20001	Spare pins Ø 6 mm	5 pcs.	
200010	O-Rings Ø 3.5 × 2 mm for spare pins Ø 6 mm	100 pcs.	
20004	Air pressure pistol	1 pc.	