



MAKRO-GRIP® RAW PART CLAMPING



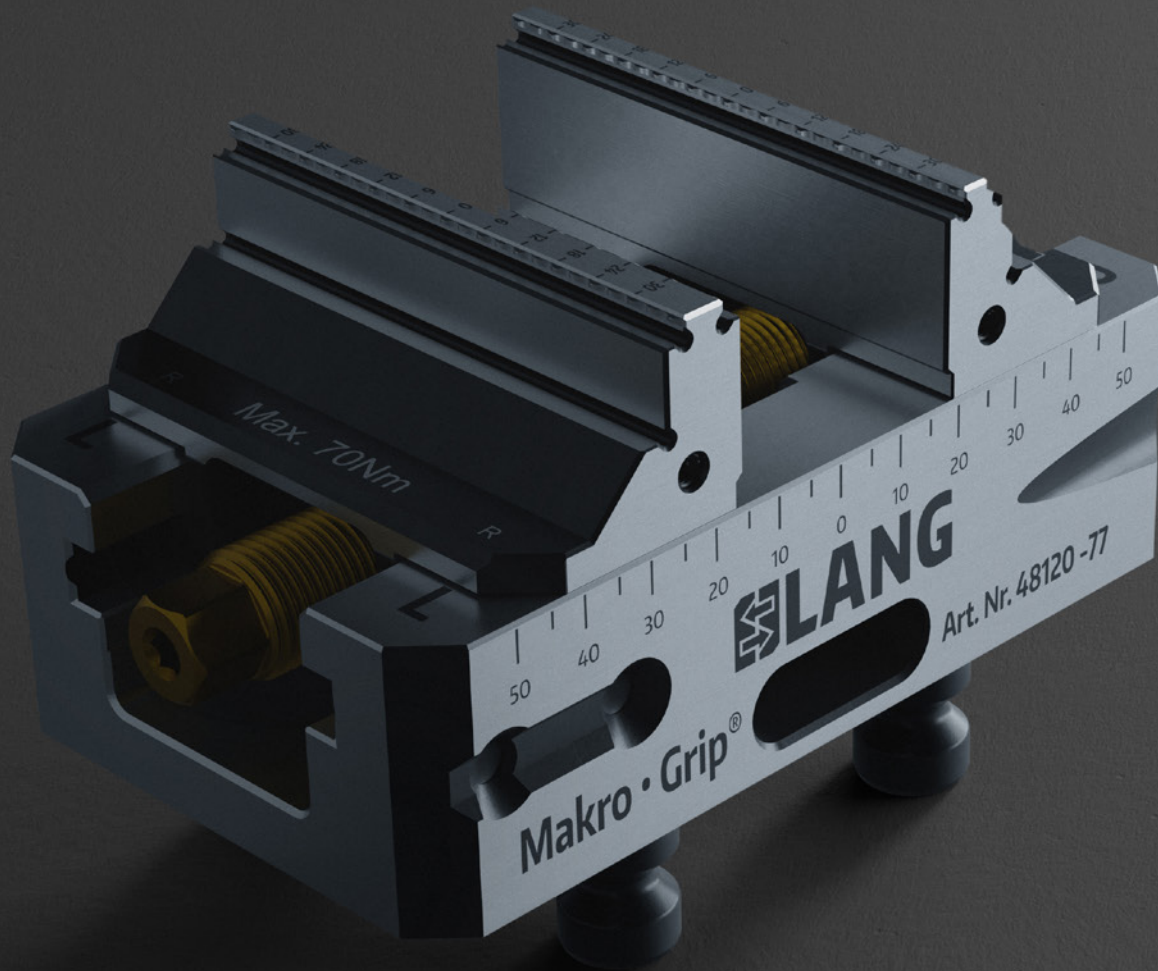
28 Makro•Grip® 5-Axis Vises

36 5-Axis Vises 77

44 5-Axis Vises 125

54 Makro•Grip® Dual-Clamping Vise

56 Retrofitting kit for 5-Axis Vise



simple.
reliable.
gripping.

Unbeatable combination of compactness and holding power

3 reasons why the Makro·Grip® is perfectly fitted for 5-sided machining:

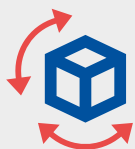
ACCESSIBILITY

HOLDING POWER

PROCESS RELIABILITY

External pre-stamping enables a workpiece to be held reliably in the Makro·Grip® 5-Axis Vise with low clamping pressure. Deformation and distortion of the material during clamping are therefore excluded and wear on the clamping device is reduced to a minimum. Its compact design and the use of the form-fit technology make the 5-Axis Vise ideal for 5-sided machining.

Benefits of the Makro·Grip® 5-Axis Vise:



Ideal accessibility
in 5-sided machining



Highest holding forces
at low clamping pressure



Distortion-free and
wear-free clamping



High material savings
due to minimal clamping
edge requirements



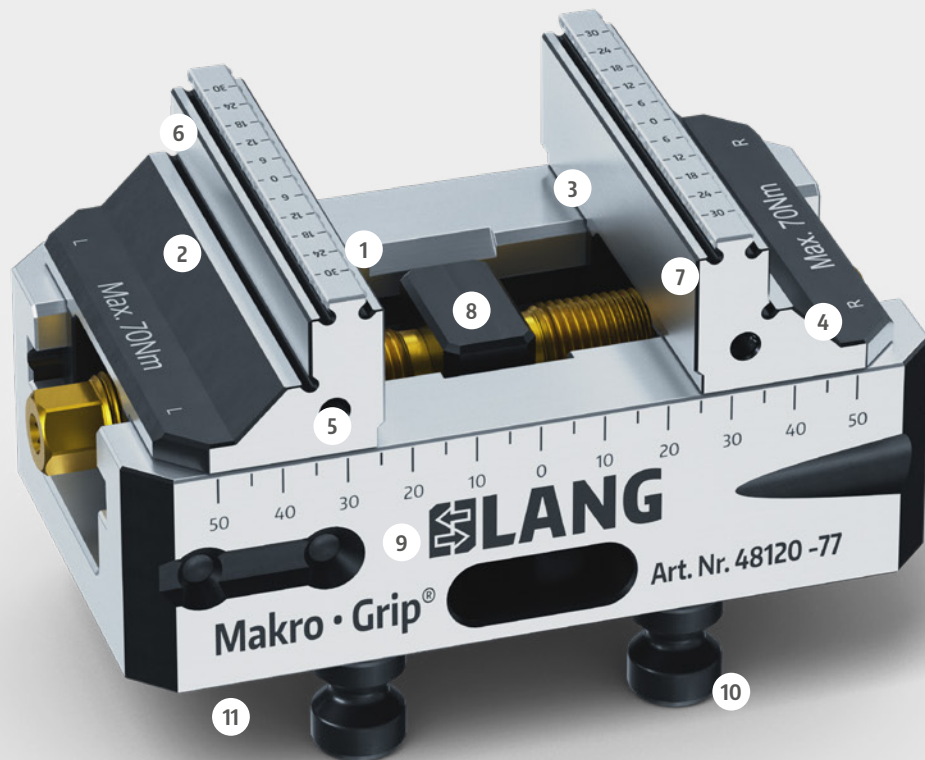
Process reliability
and consistent
clamping quality



Ergonomic handling
thanks to low weight vises

Makro·Grip® Technology

Compact and unmatched holding power for the 5-sided machining of blanks and unfinished parts



- 1 Makro·Grip® jaws with double-sided serration (same serration for all types of vises)
- 2 Additional clamping support for non-stamped parts
- 3 Special Tungsten-Carbide Coating can be applied on the plain clamping surfaces in order to increase friction when clamping non-stamped parts
- 4 Clamping jaws milled from solid case-hardened steel for maximum stability
- 5 Thread for mounting an endstop
- 6 The reversible jaws are changed over within one minute. A larger clamping range is achieved and interferences are eliminated
- 7 Clamping edge requirement of 3 mm guarantees ideal accessibility for tools and enormous material savings
- 8 Centering accuracy ± 0.02 mm
- 9 Rigid and sturdy base for great longevity. All LANG jaw types within the size group can be mounted to this base
- 10 Integrated with clamping studs for precise clamping in the Quick·Point® zero-point clamping system
- 11 Additional bores/threads can be drilled in the bottom of the base body to adapt the Makro·Grip® 5-Axis Vise to other zero-point systems

Makro-Grip® serration

All Makro-Grip® clamping jaw sizes use the double-sided serration. The minimum clamping depth of only 3 mm (other depths are available on request) guarantees ideal accessibility and enormous material savings. The Makro-Grip® serration offers exceptional reproducibility, which is particularly advantageous when workpieces have to be clamped again for reworking tasks.



Reversible clamping jaws

The reversible clamping jaws of the Makro-Grip® 5-Axis Vise are changed over within one minute. Thus, a larger clamping range is achieved and interferences are eliminated. Opposed to conventional vises whose top jaws are often mounted to the jaw guide, the Makro-Grip® jaws are milled from solid, which results in enormous stability advantages.



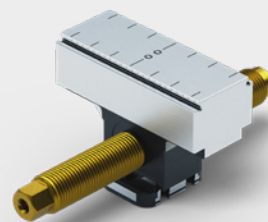
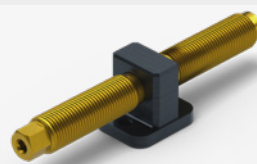
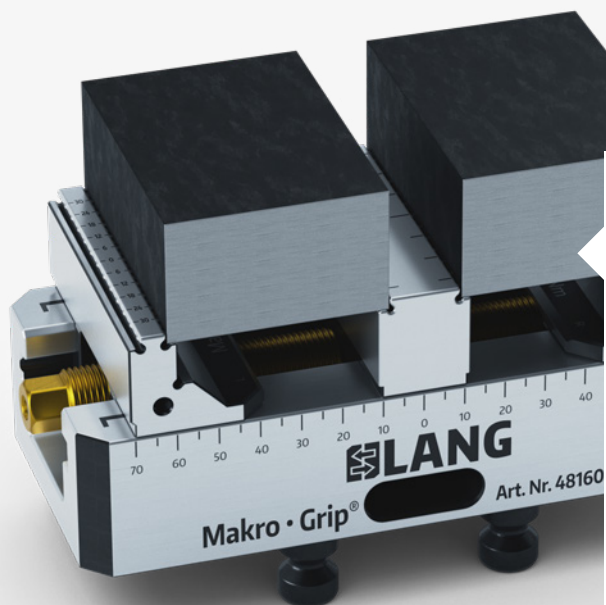
Robust and automation-ready

The tapered grooves on the side surface of the Makro·Grip® 77 (length 130 mm), as well as the front-end bores in the base body of the Makro·Grip® 125 (length 210 mm) are used to hold and store the 5-Axis Vise on the RoboTrex automation trolleys. Due to the upright mounting of the vises, the RoboTrex storage medium offers an excellent ratio of space requirement and storage capacity. The 5-Axis Vises are also equipped with grooves for the RoboTrex gripper.

Integrated zero-point adaptation

All LANG vise versions are equipped with clamping studs for precise clamping in the Quick-Point® zero-point clamping system. They are clamped with a repeat accuracy of < 0.005 mm and holding forces of up to up to 6,000 kg.





Single or multiple clamping

Due to the encapsulated center piece, the guide of the TIN-coated threaded spindle is protected against dirt and chips. Replacing the center piece / spindle set with a center jaw conversion kit, the Makro-Grip® is transformed into a multiple clamping vise, in which several workpieces can be clamped simultaneously.

Additional clamping possibilities

With their plain surfaces and clamping steps, Makro-Grip® jaws also offer various clamping options for 2nd operations or for workpieces that are not to be pre-stamped. Makro-Grip® clamping jaws are available with or without serration and are equipped with threaded holes on their side face to attach endstops. Besides, a special Tungsten-Carbide coating can be applied on the plain clamping surfaces in order to double the friction force when clamping non-stamped parts.



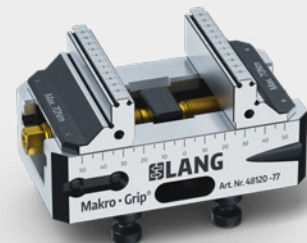
Different versions of the 5-Axis Vise

Makro•Grip® 5-Axis Vise 77

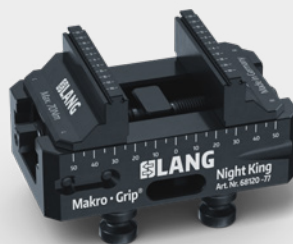
Base width:
77 mm



Jaw width: 46 mm
Base lengths: 102 / 130 mm



Jaw width: 77 mm
Base lengths:
102 / 130 / 170 / 210 mm



Jaw width: 77 mm
Base length: 130 mm

Makro•Grip® Night King:
A pure 5-Axis Vise for automated
manufacturing with RoboTrex.

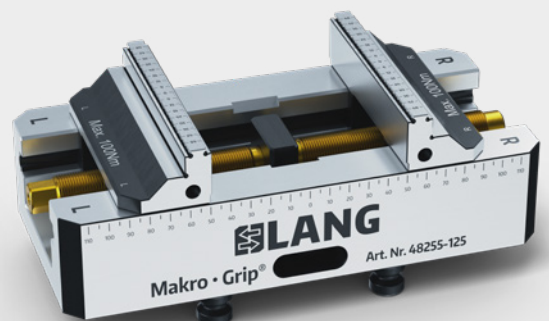
To be found in the automation brochure.

Makro•Grip® 5-Axis Vise 125

Base width:
125 mm



Jaw width: 77 mm
Base lengths: 160 / 210 mm

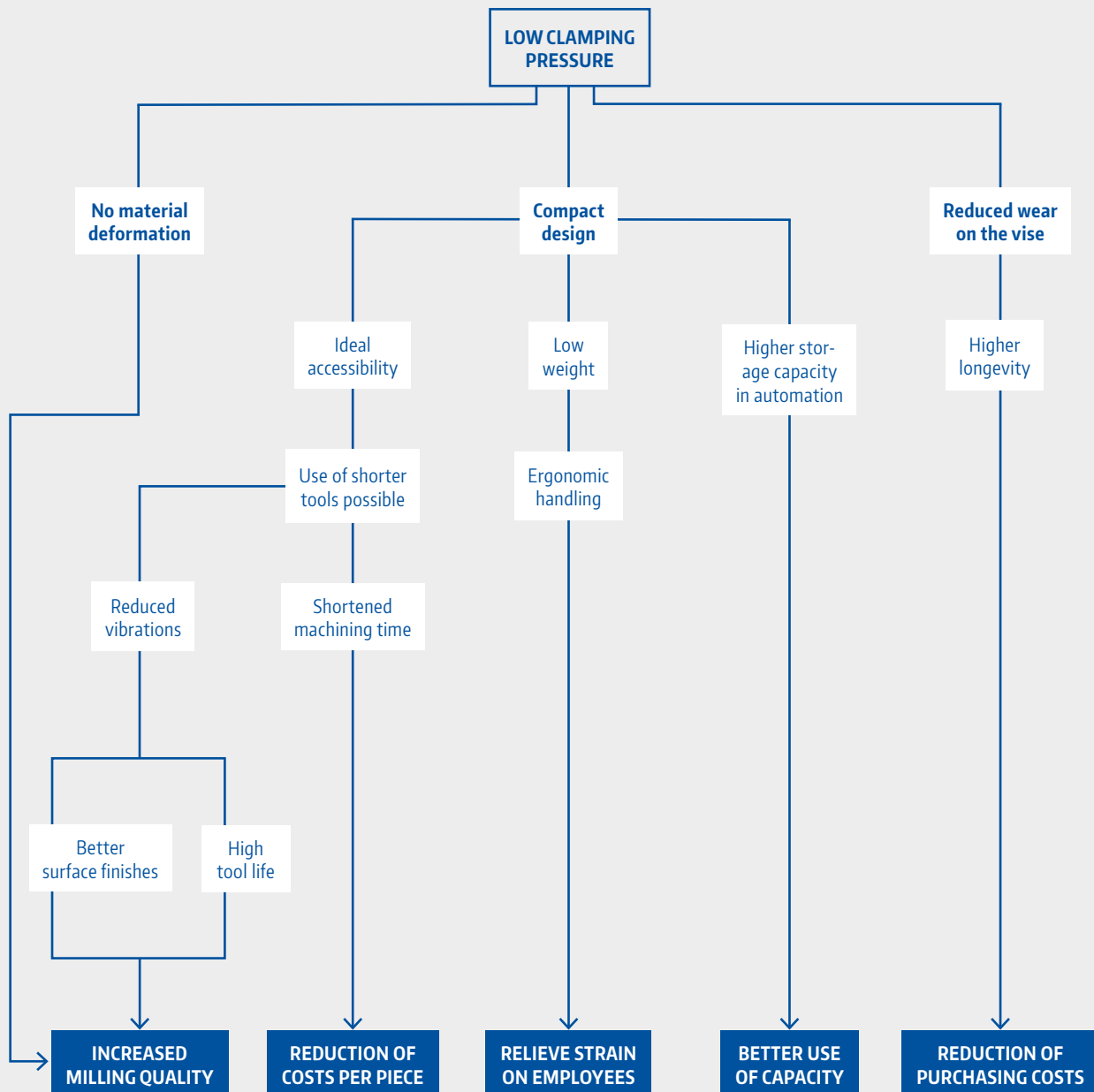


Jaw width: 125 mm
Base lengths:
160 / 210 / 260 / 310 / 360 mm

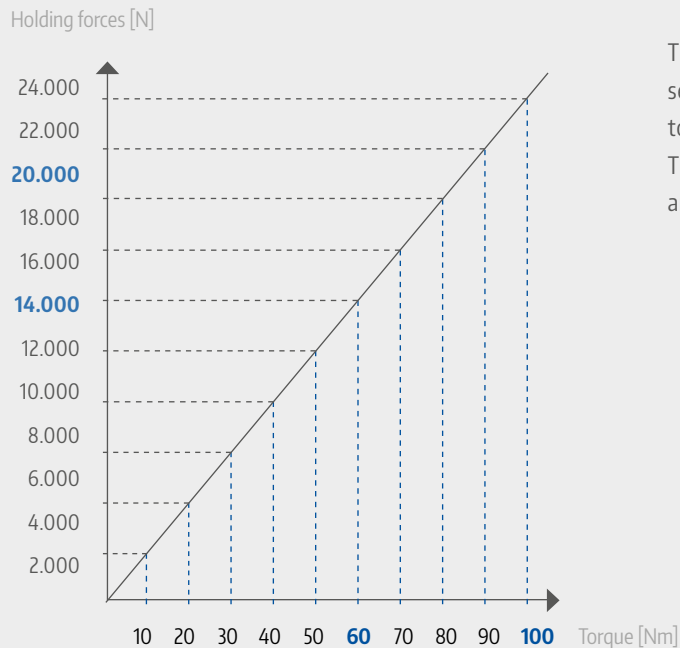
The benefits of pre-stamping on the clamping process

The external pre-stamping of the workpiece relieves the 5-Axis Vise. While conventional machining vises with serration have to work double duty (1. indent the material, 2. hold the workpiece), the Makro-Grip® 5-Axis Vise's function is limited to only holding

the workpiece. The compact build of the Makro-Grip® 5-Axis Vise is possible due to the requirement of much lower clamping forces. The resulting advantages are shown below.



Clamping pressure – holding force ratio



Thanks to the form-fit clamping technology, workpieces can be securely clamped with low clamping pressure. Deformation and distortion of the material while clamping and releasing is impossible! This diagram highlights the relation between the actuation torque and the resulting holding forces.

Applications

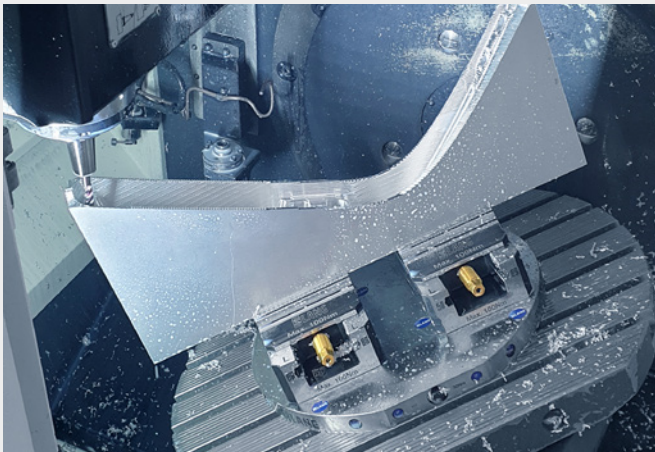


Image: Aximech AB

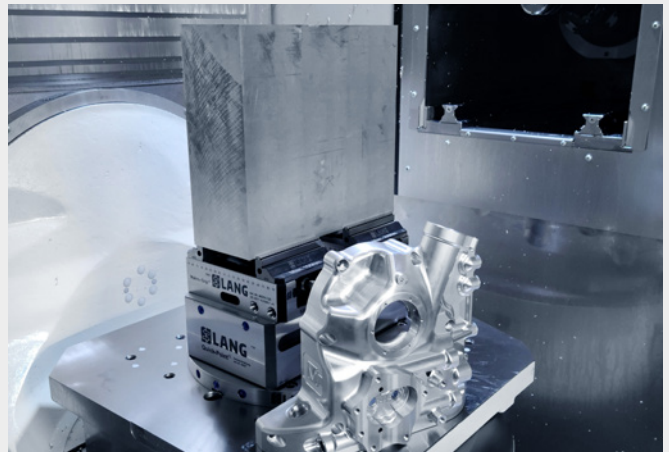


Image: Chips Motorsports LLC

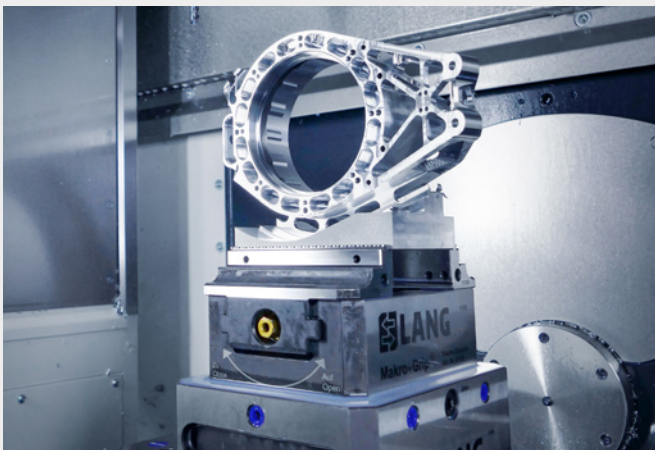
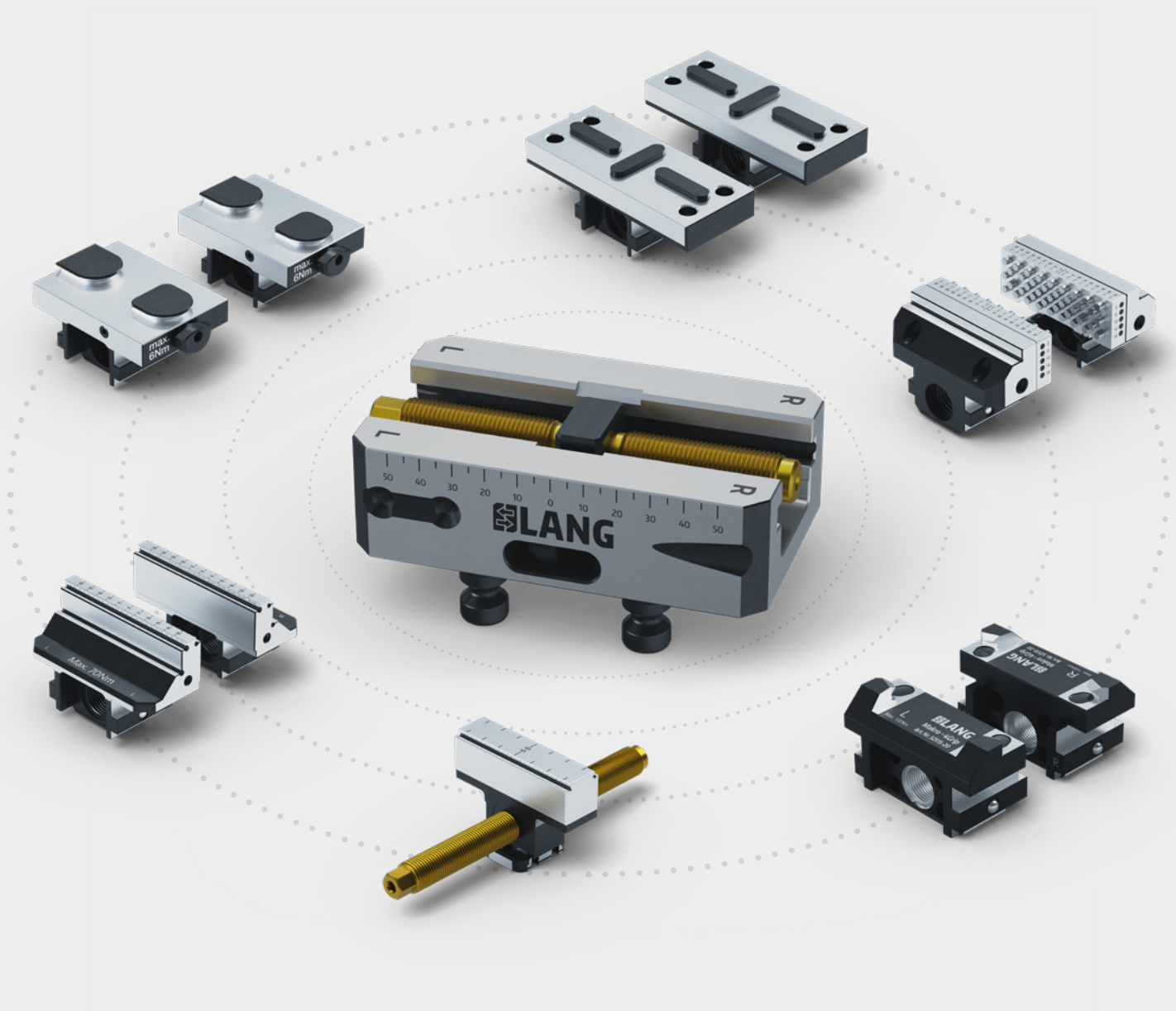


Image: Donner GmbH The Qualifactory
34



Image: Nueva Precision

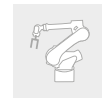


One base, many clamping jaw options

A fitting solution for any challenging clamping task – with only one vise base! All LANG vises use the same base in different lengths and widths. This guarantees that all jaw types are interchangeable and compatible to each other. It also means that you do not necessarily

have to invest in two vises. The interchangeability of the jaws allows you to build a flexible "vise fleet" regardless of the vise type you start with. Additional jaws can be added at a later time according to demand and application.

Makro·Grip® 5-Axis Vise 77



MAKRO·GRIP® 5-AXIS VISE 77, JAW WIDTH 46 MM



52



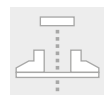
Ø 16 mm



max. 60 Nm

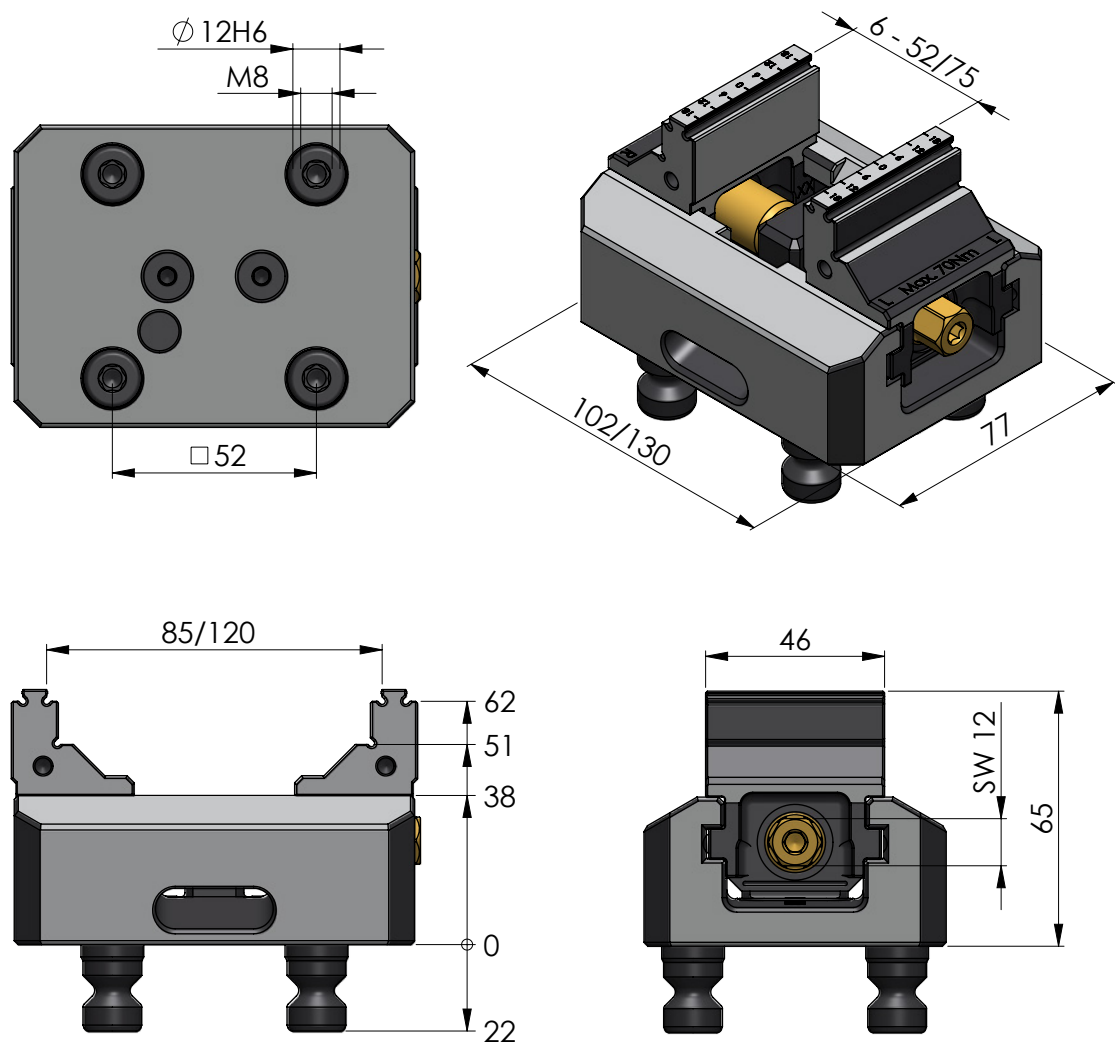


max. 14.000 N



± 0.02 mm

ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48085-46	102 mm	0 – 85 mm	2.1 kg
48120-46	130 mm	0 – 120 mm	2.6 kg



Spare parts and accessories



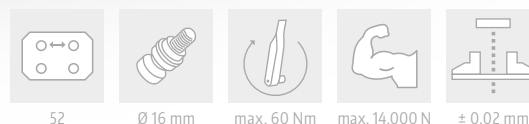
Spare jaws and compatible jaw types can be found on pages 40 – 43.

Spindles and other accessories such as wrenches can be found on pages 52 / 53.

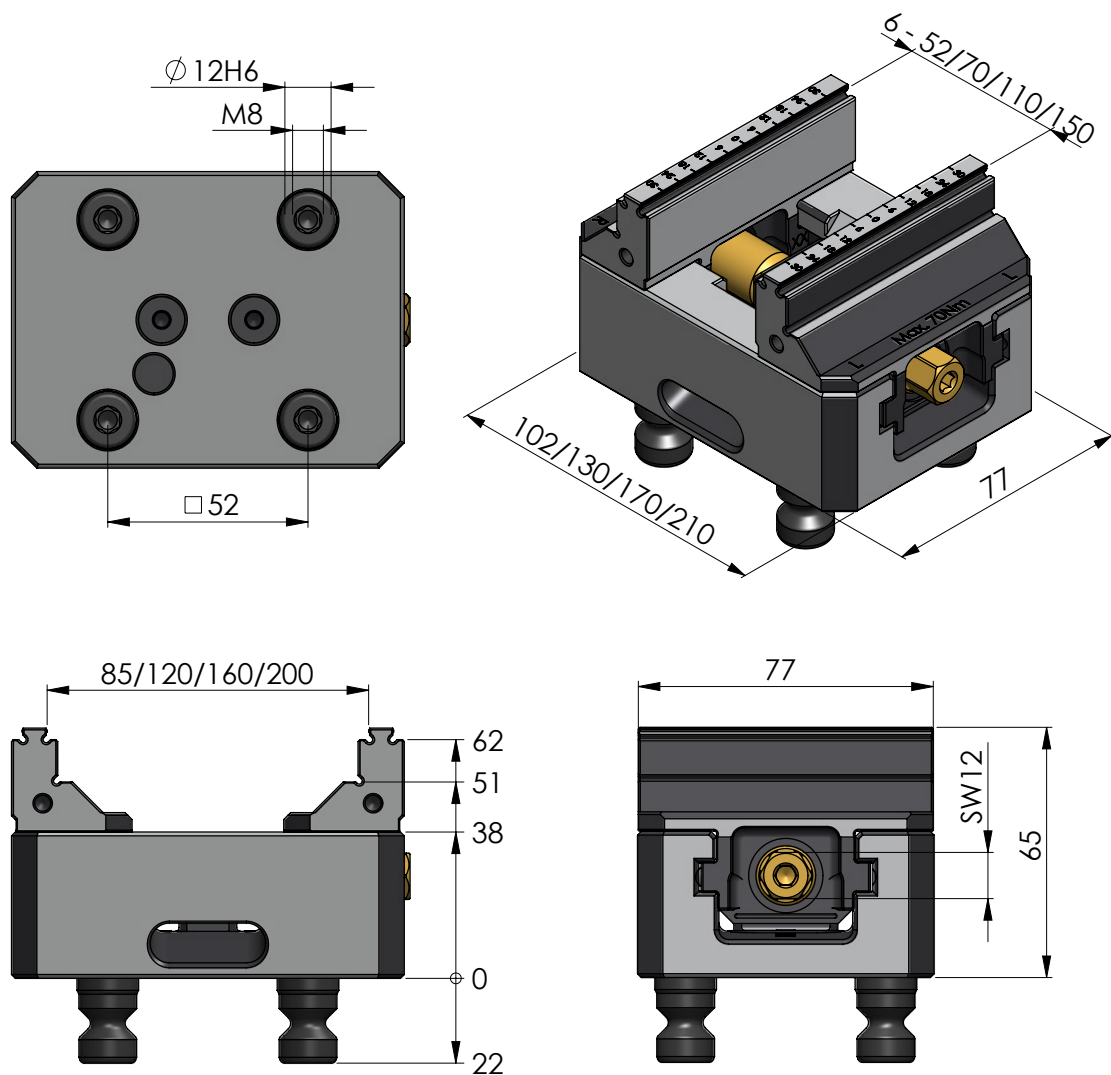
Makro·Grip® 5-Axis Vise 77



MAKRO·GRIP® 5-AXIS VISE 77, JAW WIDTH 77 MM



ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT	COMPARABLE PREVIOUS VERSION
48085-77	102 mm	0 – 85 mm	2.4 kg	47085
48120-77	130 mm	0 – 120 mm	2.9 kg	47120
48160-77	170 mm	0 – 160 mm	3.6 kg	47160
48200-77	210 mm	0 – 200 mm	4.2 kg	47200



Spare parts and accessories



Spare jaws and compatible jaw types can be found on pages 40 – 43.



Spindles and other accessories such as wrenches can be found on pages 52 / 53.

Makro·Grip® 5-Axis Vise 77

Available Clamping Jaws

The Makro·Grip® spare jaws milled from solid material with jaw widths of 46 mm and 77 mm are suitable for all LANG vise types with a base body width of 77 mm. Thanks to the serration on both sides, the spare jaws can be reversed to achieve a clamping range that corresponds to almost the entire length of the base body, thus ensuring ideal accessibility with low interference contours. Workpieces can be held in the serration at a clamping depth of 3 mm by form-fit. In addition, the replacement jaws offer smooth clamping possibilities for the second operation.

If a form-fit clamping via the Makro·Grip® serration, in which the gripping contour remains in the workpiece, is not possible or desired, but you still want to benefit from the minimum clamping depth of 3 mm, workpieces can be clamped plainly with spare jaws without serration.



SPARE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77, JAW WIDTH 46 MM

ITEM NO.	TYPE	FOR	WEIGHT	UNIT
48077-4620	with Makro·Grip® serration	48120-46	0.5 kg	1 pair
48077-4622	with plain clamping step	48120-46	0.5 kg	1 pair
48085-4620	with Makro·Grip® serration	48085-46	0.5 kg	1 pair
48085-4622	with plain clamping step	48085-46	0.5 kg	1 pair



SPARE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77, JAW WIDTH 77 MM

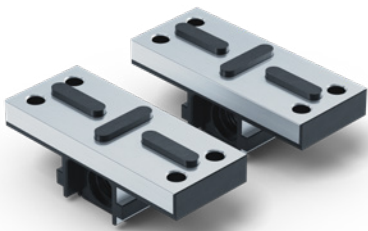
ITEM NO.	TYPE	FOR	WEIGHT	UNIT
48077-7720	with Makro·Grip® serration	48120-77 / 48160-77 / 48200-77	0.8 kg	1 pair
48077-7722	with plain clamping step	48120-77 / 48160-77 / 48200-77	0.8 kg	1 pair
48085-7720	with Makro·Grip® serration	48085-77	0.8 kg	1 pair
48085-7722	with plain clamping step	48085-77	0.8 kg	1 pair



AVANTI BASE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77

ITEM NO.	FOR	WEIGHT	UNIT
44771-46	48085-46 / 48120-46	0.6 kg	1 pair
44771-77	48120-77 48160-77 / 48200-77	1.4 kg	1 pair

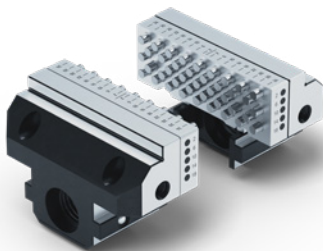
The patented interface of the Avanti base jaws ensures highly accurate positioning of the top jaws, which are clamped with just one screw and allow jaws to be changed in a matter of seconds. Since all LANG vises use the same base body, the Avanti base jaws are compatible with the Makro·Grip® 5-Axis Vise and can be used on it as a complementary pair of jaws for the rear-side machining.



PROFILO BASE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77

ITEM NO.	FOR	WEIGHT	UNIT
49077	all Makro·Grip® 77, jaw width 77 mm	1.6 kg	1 pair

Top jaws are positioned on the Profilo base jaws via feather keys and fastened from below with four screws. In addition to top jaws available from LANG, self-made top jaws can also be used on them. Since all LANG vises use the same base body, the Profilo base jaws are compatible with the Makro·Grip® 5-Axis Vise and can be used on the latter as a complementary pair of jaws for the rear-side machining.



VARIO·TEC JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77

ITEM NO.	FOR	WEIGHT	UNIT
42018-77	48120-77 / 48160-77 / 48200-77	1.2 kg	1 Set (2 pin jaws + 2 carrier jaws)

The Vario-Tec spare jaw pair consists of two pin jaws and two carrier jaws, which are guided in the centering vise. The pin jaws are attached to the receiving jaws from the rear, so that the pin jaws are completely closed up front and clogging is avoided. Since all LANG vises use the same base body, the Vario-Tec jaw set is compatible with the Makro·Grip® 5-Axis Vise and can be used on the latter as a complementary pair of jaws for the rear-side machining.

Makro·4Grip 77 Clamping Jaws

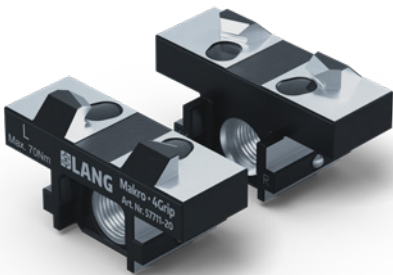
Makro·4Grip clamping jaws are used to hold pre-stamped round workpieces by form-fit. The clamping jaws are available for all vise types and lengths. The pair of jaws grips the pre-stamped workpiece at a total of 4 clamping points with a holding force of 14 kN. Depending on the base body length, workpieces with a diameter between Ø 36 - 115 mm can be clamped. 3D view models for the individual clamping ranges can be found on the respective product page.



MAKRO·4GRIP 77 CLAMPING JAWS, JAW WIDTH 52 MM, ITEM NO. 57708-20

FOR MAKRO·GRIP® 77	CLAMPING RANGE
48085-46 / -77	Ø 36 – 60 mm
48120-46 / -77	Ø 36 – 85 mm
48160-77	Ø 36 – 115 mm
48200-77	Ø 36 – 115 mm
47085*	Ø 43 – 60 mm
47120*	Ø 43 – 85 mm
47160*	Ø 43 – 115 mm
47200*	Ø 43 – 115 mm

* former Makro·Grip® versions



MAKRO·4GRIP 77 CLAMPING JAWS, JAW WIDTH 77 MM, ITEM NO. 57711-20

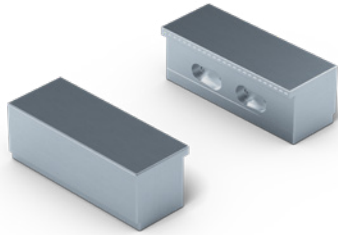
FOR MAKRO·GRIP® 77	CLAMPING RANGE
48085-46 / -77	Ø 54 – 80 mm
48120-46 / -77	Ø 54 – 115 mm
48160-77	Ø 54 – 115 mm
48200-77	Ø 54 – 115 mm
47085*	Ø 65 – 80 mm
47120*	Ø 65 – 115 mm
47160*	Ø 65 – 115 mm
47200*	Ø 65 – 115 mm

* former Makro·Grip® versions

Makro·Grip® 77 Contour Jaws

NEW

The latest generation of Makro·Grip® contour jaws offers convincing ease of use. The contour jaws are attached without changing the Makro·Grip® clamping jaws and without tools, which guarantees a pleasant setup process in seconds. In the process, the contour jaws snap into the Makro·Grip® serration with their stamping contour and hold them in position. Magnets finally pull the contour jaws towards the clamping jaws and ensure a firm fit.

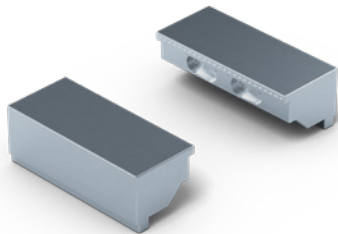


CONTOUR JAWS, ALUMINIUM FOR MAKRO·GRIP® 5-AXIS VISES 77

ITEM NO.	JAW WIDTH	FOR	WEIGHT	UNIT
48409-77	77 mm	inside	0.3 kg	1 pair

Suitable magnets are available separately, as is the assembly tool.

FOR MAKRO·GRIP®	CLAMPING RANGE
48085-77	x
48120-77	50 mm
48160-77	90 mm
48200-77	130 mm
48155-77	40 mm
48205-77	90 mm



CONTOUR JAWS, ALUMINIUM FOR MAKRO·GRIP® 5-AXIS VISES 77

ITEM NO.	JAW WIDTH	FOR	WEIGHT	UNIT
48419-77	77 mm	outside	0.3 kg	1 pair

Suitable magnets are available separately, as is the assembly tool.

FOR MAKRO·GRIP®	CLAMPING RANGE
48085-77	60 mm
48120-77	100 mm
48160-77	140 mm
48200-77	180 mm
48155-77	-
48205-77	-



CONTOUR JAWS ACCESSORIES

ITEM NO.	DESCRIPTION	WEIGHT	UNIT
48410	Magnet Set	0.02 kg	Set of 10
48420	Magnet Assembly Tool	0.01 kg	1 piece

Suitable for all sizes of Makro·Grip® Contour Jaws.

Makro·Grip® 5-Axis Vise 125



MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 77 MM



96



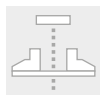
Ø 20 mm



max. 100 Nm

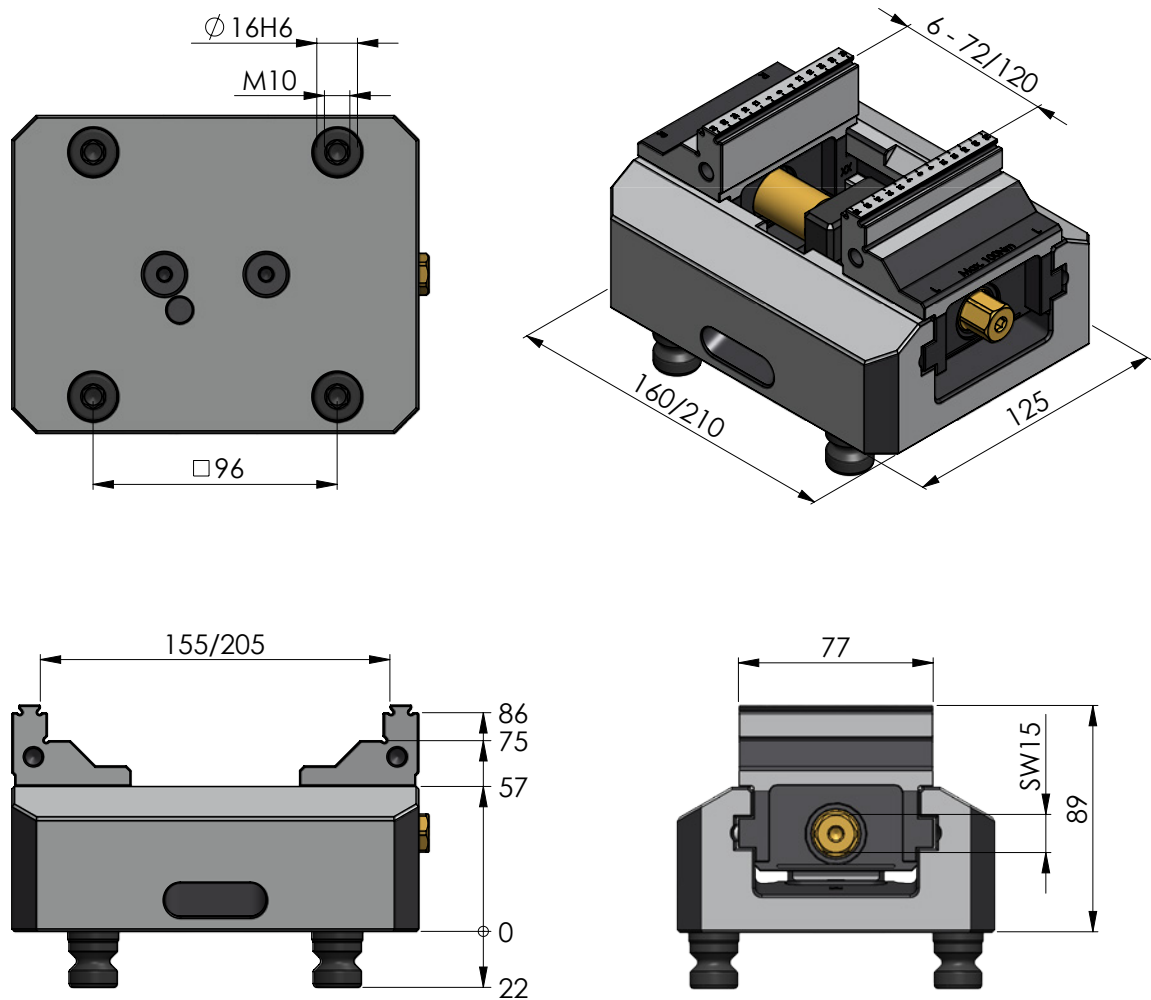


max. 20.000 N



± 0.02 mm

ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT
48155-77	160 mm	0 – 155 mm	7.4 kg
48205-77	210 mm	0 – 205 mm	9.1 kg



Spare parts and accessories



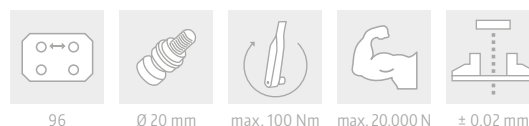
Spare jaws and compatible jaw types can be found on pages 48 – 51.

Spindles and other accessories such as wrenches can be found on pages 52 / 53.

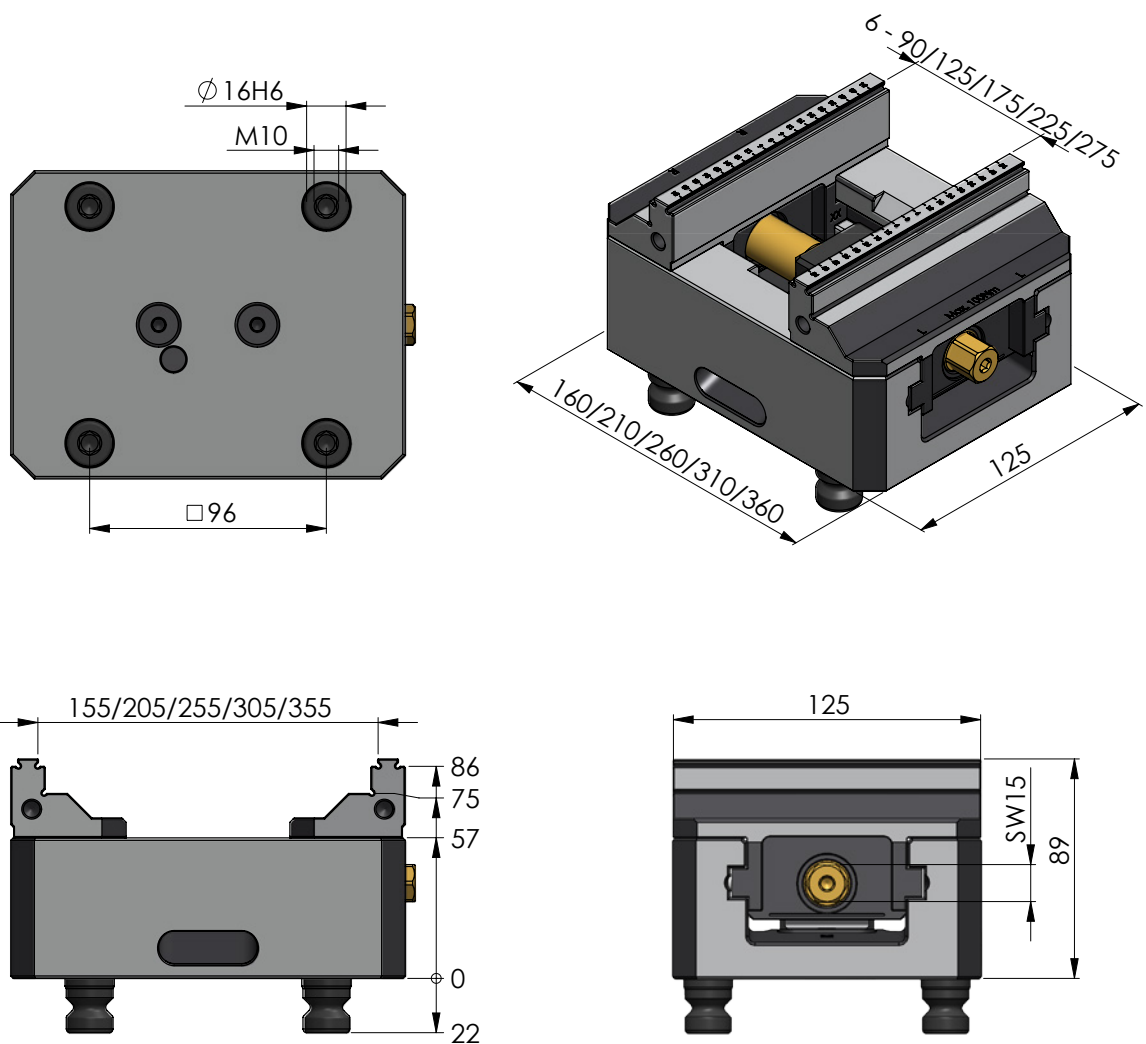
Makro·Grip® 5-Axis Vise 125



MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 125 MM



ITEM NO.	BASE LENGTH	CLAMPING RANGE	WEIGHT	COMPARABLE PREVIOUS VERSION
48155-125	160 mm	0 – 155 mm	8.4 kg	47155
48205-125	210 mm	0 – 205 mm	10.1 kg	47205
48255-125	260 mm	0 – 255 mm	12.1 kg	47255
48305-125	310 mm	0 – 305 mm	13.9 kg	47305
48355-125	360 mm	0 – 355 mm	15.7 kg	47355



Spare parts and accessories



Spare jaws and compatible jaw types can be found on pages 48 – 51.

Spindles and other accessories such as wrenches can be found on pages 52 / 53.

Makro·Grip® 5-Axis Vise 125

Available Clamping Jaws

The Makro·Grip® spare jaws milled from solid material with jaw widths of 77 mm and 125 mm are suitable for all LANG vise types with a base body width of 125 mm. Thanks to the serration on both sides, the spare jaws can be reversed to achieve a clamping range that corresponds to almost the entire length of the base body, thus ensuring ideal accessibility with low interference contours. Workpieces can be held in the serration at a clamping depth of 3 mm by form-fit. In addition, the replacement jaws offer smooth clamping possibilities for the second operation.

If a form-fit clamping via the Makro·Grip® serration, in which the gripping contour remains in the workpiece, is not possible or desired, but you still want to benefit from the minimum clamping depth of 3 mm, workpieces can be clamped plainly with these spare jaws without serration.



SPARE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 77 MM

ITEM NO.	TYPE	FOR	WEIGHT	UNIT
48125-7720	with Makro·Grip® serration	all Makro·Grip® 125, jaw width 77 mm	2.0 kg	1 pair
48125-7722	with plain clamping step	all Makro·Grip® 125, jaw width 77 mm	2.0 kg	1 pair



SPARE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 125 MM

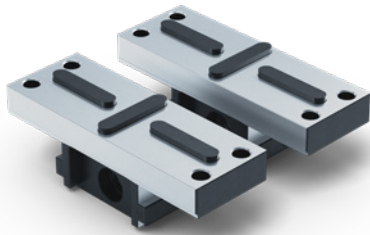
ITEM NO.	TYPE	FOR	WEIGHT	UNIT
48125-2520	with Makro·Grip® serration	all Makro·Grip® 125, jaw width 125 mm	2.6 kg	1 pair
48125-2522	with plain clamping step	all Makro·Grip® 125, jaw width 125 mm	2.6 kg	1 pair



AVANTI BASE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 125

ITEM NO.	FOR	WEIGHT	UNIT
44251-125	all Makro-Grip® 125, jaw width 125 mm	3.6 kg	1 pair

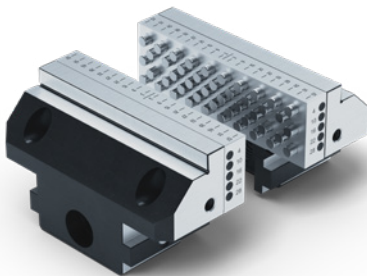
The patented interface of the Avanti base jaws ensures highly accurate positioning of the top jaws, which are clamped with just one screw and allow jaws to be changed in a matter of seconds. Since all LANG vises use the same base body, the Avanti base jaws are compatible with the Makro-Grip® 5-Axis Vise and can be used on it as a complementary pair of jaws for the rear-side machining.



PROFILO BASE JAWS FOR MAKRO·GRIP® 5-AXIS VISE 125

ITEM NO.	FOR	WEIGHT	UNIT
49125	all Makro-Grip® 125, jaw width 125 mm	4.2 kg	1 pair

Top jaws are positioned on the Profilo base jaws via feather keys and fastened from below with four screws. In addition to top jaws available from LANG, self-made top jaws can also be used on them. Since all LANG vises use the same base body, the Profilo base jaws are compatible with the Makro-Grip® 5-Axis Vise and can be used on the latter as a complementary pair of jaws for the rear-side machining.



VARIO·TEC JAWS FOR MAKRO·GRIP® 5-AXIS VISE 77

ITEM NO.	FOR	WEIGHT	UNIT
42018-125	all Makro-Grip® 125, jaw width 125 mm	4.6 kg	1 Set (2 pin jaws + 2 carrier jaws)

The Vario-Tec spare jaw pair consists of two pin jaws and two carrier jaws, which are guided in the centering vise. The pin jaws are attached to the receiving jaws from the rear, so that the pin jaws are completely closed up front and clogging is avoided. Since all LANG vises use the same base body, the Vario-Tec jaw set is compatible with the Makro-Grip® 5-Axis Vise and can be used on the latter as a complementary pair of jaws for the rear-side machining.

Makro·4Grip 125 Clamping Jaws

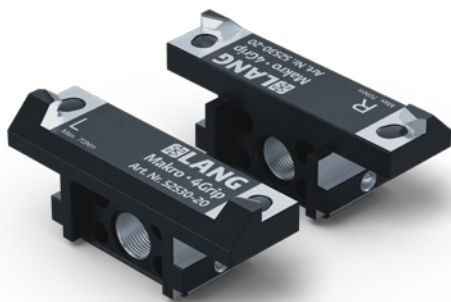
Makro·4Grip clamping jaws are used to hold pre-stamped round workpieces by form-fit. The clamping jaws are available for all vise types and lengths. The pair of jaws grips the pre-stamped workpiece at a total of 4 clamping points with a holding force of 20 kN. Depending on the base body length, workpieces with a diameter between Ø 115 - 300 mm can be clamped. 3D view models for the individual clamping ranges can be found on the respective product page.



MAKRO·4GRIP 125 CLAMPING JAWS, JAW WIDTH 90 MM, ITEM NO. 52515-20

FOR MAKRO·GRIP® 125	CLAMPING RANGE
48155-77 / -125	-
48205-77 / -125	Ø 115 - 130 mm
48255-125	Ø 115 - 180 mm
48305-125	Ø 115 - 180 mm
48355-125	Ø 115 - 180 mm
47155*	-
47205*	Ø 115 - 130 mm
47255*	Ø 115 - 180 mm
47305*	Ø 115 - 180 mm
47355*	Ø 115 - 180 mm

* former Makro·Grip® versions



MAKRO·4GRIP 125 CLAMPING JAWS, JAW WIDTH 128 MM, ITEM NO. 52530-20

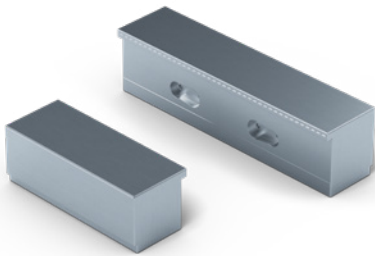
FOR MAKRO·GRIP® 125	CLAMPING RANGE
48155-77 / -125	-
48205-77 / -125	Ø 180 - 200 mm
48255-125	Ø 180 - 245 mm
48305-125	Ø 180 - 290 mm
48355-125	Ø 180 - 300 mm
47155*	-
47205*	Ø 180 - 200 mm
47255*	Ø 180 - 245 mm
47305*	Ø 180 - 290 mm
47355*	Ø 180 - 300 mm

* former Makro·Grip® versions

Makro·Grip® 77 and 125 Contour Jaws

NEW

The latest generation of Makro·Grip® contour jaws offers convincing ease of use. The contour jaws are attached without changing the Makro·Grip® clamping jaws and without tools, which guarantees a pleasant setup process in seconds. In the process, the contour jaws snap into the Makro·Grip® serration with their stamping contour and hold them in position. Magnets finally pull the contour jaws towards the clamping jaws and ensure a firm fit.

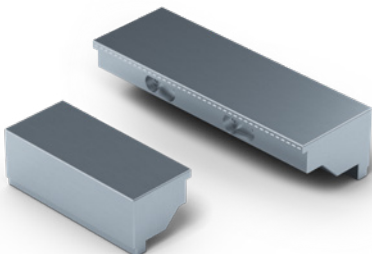


CONTOUR JAWS, ALUMINIUM FOR MAKRO·GRIP® 5-AXIS VISES 77 / 125

ITEM NO.	JAW WIDTH	FOR	WEIGHT	UNIT
48409-77	77 mm	inside	0.3 kg	1 pair
48409-125	125 mm	inside	0.6 kg	1 pair

Suitable magnets are available separately, as is the assembly tool.

FOR MAKRO·GRIP®	48409-77	48409-125	FOR MAKRO·GRIP®	48409-77	48409-125
	CLAMPING RANGE:			CLAMPING RANGE	
48085-77	x	x	48155-125	x	40 mm
48120-77	50 mm	x	48205-125	x	90 mm
48160-77	90 mm	x	48255-125	x	140 mm
48200-77	130 mm	x	48305-125	x	190 mm
48155-77	40 mm	x	48355-125	x	240 mm
48205-77	90 mm	x			



CONTOUR JAWS, ALUMINIUM FOR MAKRO·GRIP® 5-AXIS VISES 77 / 125

ITEM NO.	JAW WIDTH	FOR	WEIGHT	UNIT
48419-77	77 mm	outside	0.3 kg	1 pair
48419-125	125 mm	outside	0.6 kg	1 pair

Suitable magnets are available separately, as is the assembly tool.

FOR MAKRO·GRIP®	48419-77	48419-125	FOR MAKRO·GRIP®	48419-77	48419-125
	CLAMPING RANGE			CLAMPING RANGE	
48085-77	60 mm	x	48155-125	x	120 mm
48120-77	100 mm	x	48205-125	x	170 mm
48160-77	140 mm	x	48255-125	x	220 mm
48200-77	180 mm	x	48305-125	x	270 mm
48155-77	x	x	48355-125	x	320 mm
48205-77	x	x			



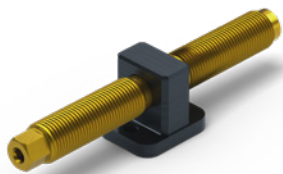
CONTOUR JAWS ACCESSORIES

ITEM NO.	DESCRIPTION	WEIGHT	UNIT
48410	Magnet Set	0.02 kg	Set of 10
48420	Magnet Assembly Tool	0.01 kg	1 piece

Suitable for all sizes of Makro·Grip® Contour Jaws.

Makro·Grip® 5-Axis Vises

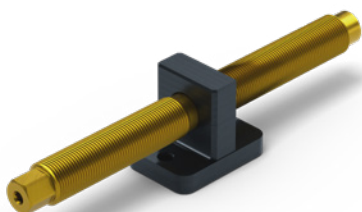
Spare Parts



SPARE SPINDLE + CENTER PIECE FOR MAKRO·GRIP® 5-AXIS VISE 77

ITEM NO.	FOR	SPINDLE LENGTH	WEIGHT
4877100	48085-46 / 48085-77	100 mm	0.2 kg
4877135	48120-46 / 48120-77	135 mm	0.3 kg
4877175	48160-77	175 mm	0.3 kg
4877215	48200-77	215 mm	0.4 kg

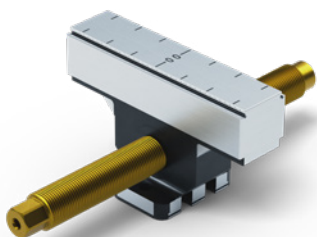
Threaded spindle with low-wear TIN coating with internal hexagon (size 5) and external hexagon (size 12).



SPARE SPINDLE + CENTER PIECE FOR MAKRO·GRIP® 5-AXIS VISE 125

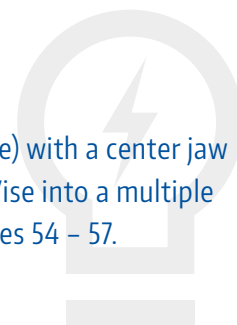
ITEM NO.	FOR	SPINDLE LENGTH	WEIGHT
4825164	48155-77 / 48155-125	164 mm	0.6 kg
4825214	48205-77 / 48205-125	214 mm	0.7 kg
4825264	48255-125	264 mm	0.8 kg
4825314	48305-125	314 mm	0.9 kg
4825364	48355-125	364 mm	1.0 kg

Threaded spindle with low-wear TIN coating with internal hexagon (size 5) and external hexagon (size 15)



Practical hint:

Replacing the center piece (+ threaded spindle) with a center jaw (+ threaded spindle) transforms your 5-Axis Vise into a multiple clamping vise. For more information, see pages 54 – 57.



Makro·Grip® 5-Axis Vises

Accessories



WRENCH FOR MAKRO·GRIP® 5-AXIS VISE

ITEM NO.	FOR	VICE SIZE	WRENCH SIZE
45500	External Hexagon	77	12 mm
45501	External Hexagon	125	15 mm
45505	Internal Hexagon	77 / 125	5 mm

Wrenches for pre-adjusting the clamping range, initial clamping setting (external hexagon) and reversing the clamping jaws (internal hexagon).



HEXAGON SOCKET

ITEM NO.	SQUARE DRIVE	VICE SIZE	WRENCH SIZE
45508	3/8"	77	12 mm
45509	3/8"	125	15 mm

Hexagon Socket (DIN 3120) for a consistent and safe clamping process.

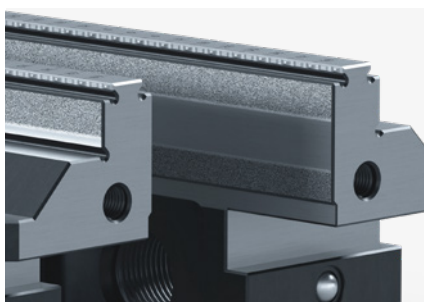


CORDLESS DRILL ATTACHMENT

ITEM NO.	FOR	SIZE
47005	Internal Hexagon	5 mm

The cordless drill attachment is used to achieve centering accuracy of the jaws easier when exchanging them, especially with longer vise bases. You will also speed-up the exchange or reversal of jaws by using the cordless drill attachment.

Service



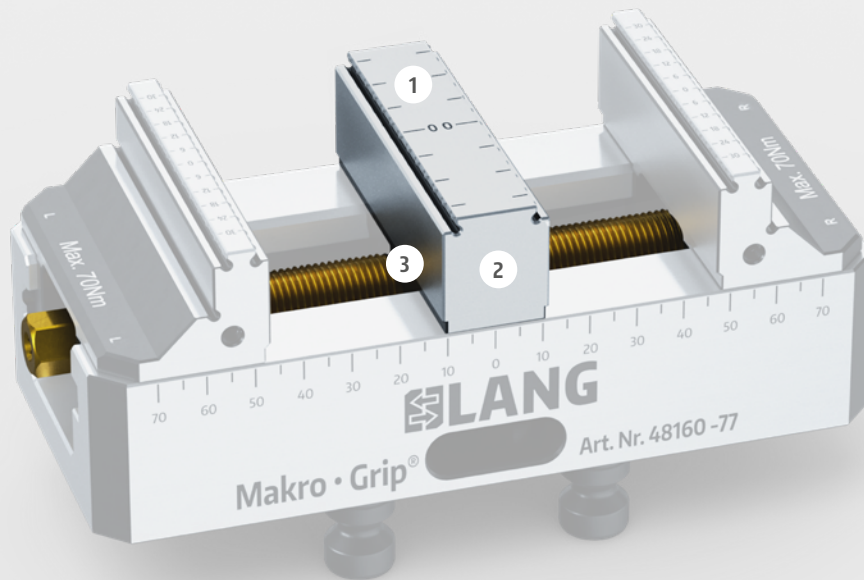
TUNGSTEN-CARBIDE-COATING FOR MAKRO·GRIP® JAWS

ITEM NO.	JAW WIDTH	QUANTITY
45046-17	46 mm	per pair
45077-17	77 mm	per pair
45125-17	125 mm	per pair

A special Tungsten-Carbide-Coating can be applied on the jaws' planar surfaces in order to intensify the friction when clamping non-stamped workpieces.

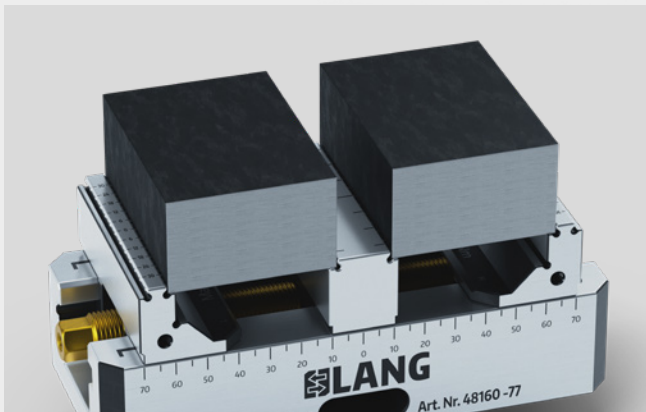
(Attention: Included in price is only the coating, not the jaws.)

Makro·Grip® Dual Clamping Vise – Retrofitting Kit for 5-Axis Vises



Please read all about the Makro·Grip® 5-Axis Vise's features on page 28.

- 1 Scope of delivery: Center jaw with double-sided serration and threaded spindle
- 2 For jaw widths 46 and 77 mm we offer a narrow (17 mm) and a wider (27 mm) version in order to increase the clearance between the workpieces and thus to be able to use larger tool diameters.
- 3 Conception of the center piece allows to clamp workpieces with 2 mm variance in length (cutting tolerance)



Clamping multiple parts in the 5-Axis Vise increases the spindle running times of the machine tool.



The center jaw can also be mounted to the Makro·Grip® 5-Axis Vise for RoboTrex automation. This increases the capacity of the automation system significantly.

Transform your Makro-Grip® 5-Axis Vise into a Dual Clamping Vise



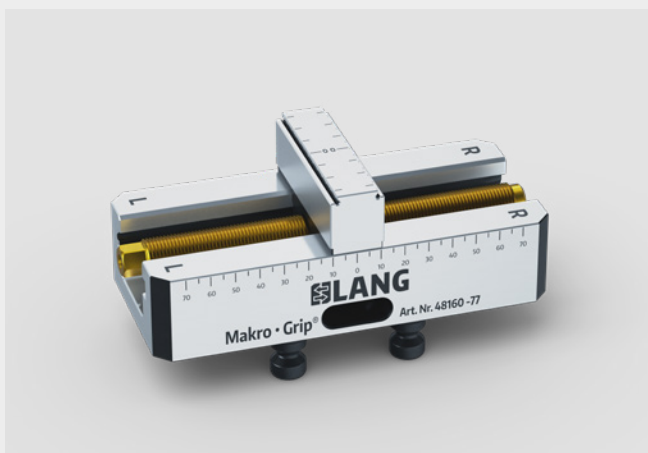
Unscrew the Makro-Grip® jaws from the base using a hexagon wrench (internal 5 mm).



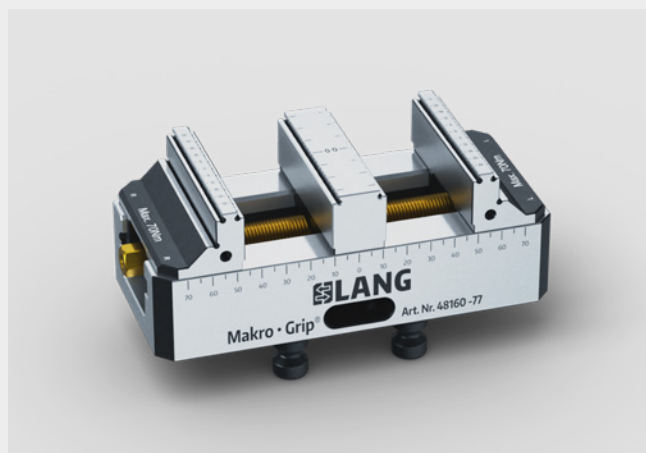
Flip base and remove the two screws.



Remove spindle and center piece.



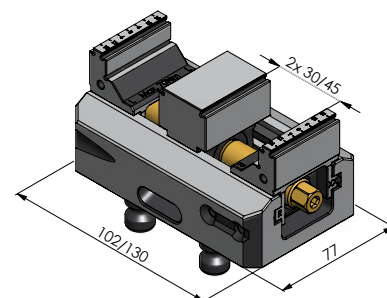
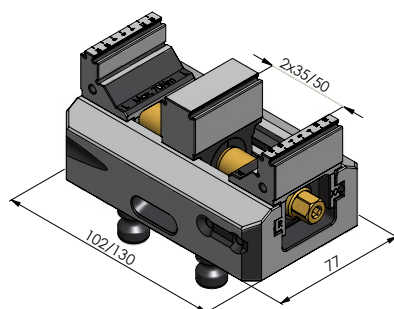
Insert center jaw and spindle and tighten the screws on the bottom side.



Assemble the Makro-Grip® jaws back onto the base. You are now able to use your Makro-Grip® 5-Axis Vise as a dual vise.

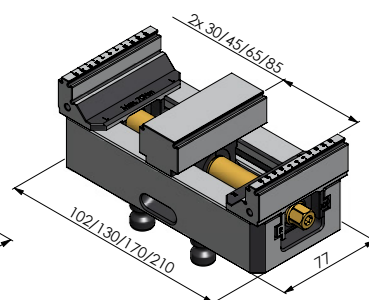
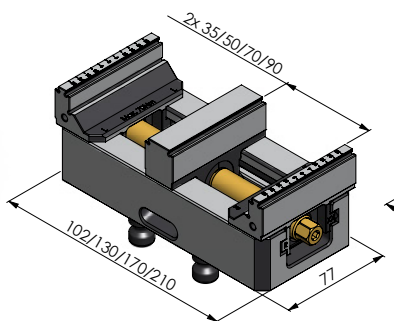
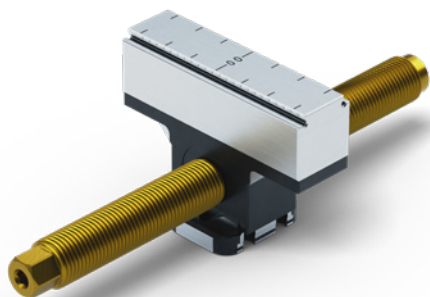
Makro-Grip® 5-Axis Vise 77

Center Jaw and Spindle



CENTER JAW AND SPINDLE FOR MAKRO-GRIP® 5-AXIS VISE 77, JAW WIDTH 46 MM

ITEM NO.	FOR MAKRO-GRIP®	CENTER JAW WIDTH	SPINDLE LENGTH	CLAMPING RANGE
48085-TG4617	48085-46	17 mm	100 mm	2 × 35 mm
48085-TG4627	48085-46	27 mm	100 mm	2 × 30 mm
48120-TG4617	48120-46	17 mm	135 mm	2 × 50 mm
48120-TG4627	48120-46	27 mm	135 mm	2 × 45 mm

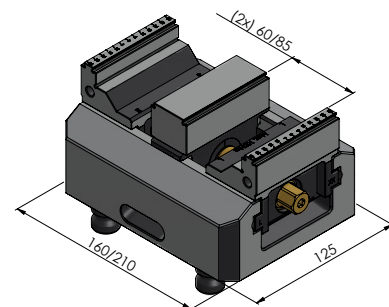
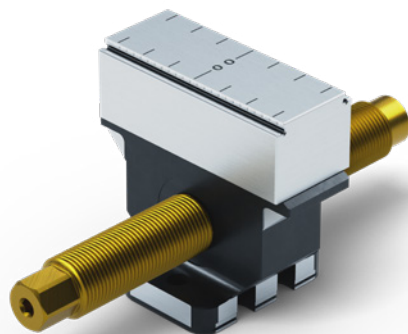


CENTER JAW AND SPINDLE FOR MAKRO-GRIP® 5-AXIS VISE 77, JAW WIDTH 77 MM

ITEM NO.	FOR MAKRO-GRIP®	CENTER JAW WIDTH	SPINDLE LENGTH	CLAMPING RANGE
48085-TG7717	48085-77	17 mm	100 mm	2 × 35 mm
48085-TG7727	48085-77	27 mm	100 mm	2 × 30 mm
48120-TG7717	48120-77	17 mm	135 mm	2 × 50 mm
48120-TG7727	48120-77	27 mm	135 mm	2 × 45 mm
48160-TG7717	48160-77	17 mm	175 mm	2 × 70 mm
48160-TG7727	48160-77	27 mm	175 mm	2 × 65 mm
48200-TG7717	48200-77	17 mm	215 mm	2 × 90 mm
48200-TG7727	48200-77	27 mm	215 mm	2 × 85 mm

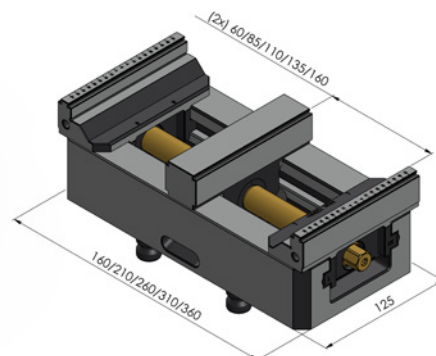
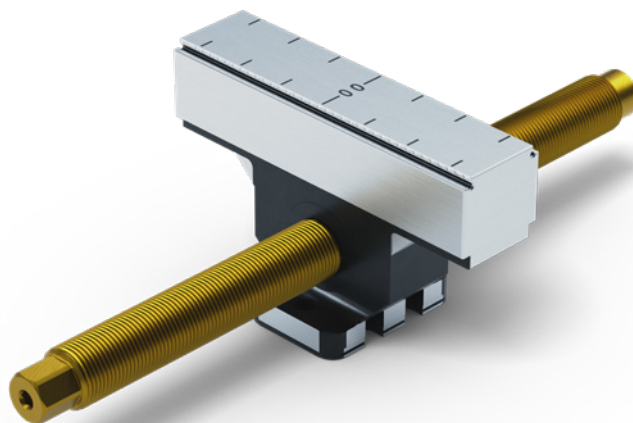
Makro·Grip® 5-Axis Vise 125

Center Jaw and Spindle



CENTER JAW AND SPINDLE FOR MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 77 MM

ITEM NO.	FOR MAKRO·GRIP®	CENTER JAW WIDTH	SPINDLE LENGTH	CLAMPING RANGE
48155-TG7727	48155-125	27 mm	164 mm	2 × 60 mm
48205-TG7727	48205-125	27 mm	214 mm	2 × 85 mm



CENTER JAW AND SPINDLE FOR MAKRO·GRIP® 5-AXIS VISE 125, JAW WIDTH 125 MM

ITEM NO.	FOR MAKRO·GRIP®	CENTER JAW WIDTH	SPINDLE LENGTH	CLAMPING RANGE
48155-TG2527	48155-125	27 mm	164 mm	2 × 60 mm
48205-TG2527	48205-125	27 mm	214 mm	2 × 85 mm
48255-TG2527	48255-125	27 mm	264 mm	2 × 110 mm
48305-TG2527	48305-125	27 mm	314 mm	2 × 135 mm
48355-TG2527	48355-125	27 mm	364 mm	2 × 160 mm