LANG TECHNIK

simple. gripping. future.

WORKHOLDING FOR NEW PERSPECTIVES

LANG Technik – Company History

2015
Completion of the new training and technology centre in Neuhausen, Germany

2016
Launch of new corporate design

Extension of manufacturing capacities by a new department which allows modifications of LANG products

2013
The Eco·Compact 20 machine tool automation system is introduced to the market

Construction of an additional production facility and office building in Holzmaden

2014
Relocation of our administration/sales/ shipping/warehouse departments to the new Headquarters in Holzmaden

2010
Expansion of the production floor at the Holzmaden premises

2009
Completion of the first production factory in Holzmaden

Introduction of the Eco·Compact 10 machine tool automation at LANG's open house

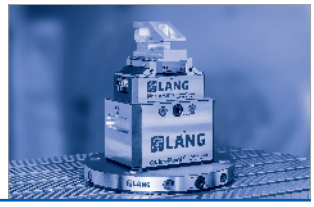
2008
Ground-breaking ceremony for the new premises in 73271 Holzmaden/Germany

Our USA subsidiary LANG Technovation is established in Waukesha, WI

The company name is changed to LANG Technik

2007
The Eco·Tower 60 machine tool automation is introduced at the EMO trade fair in Hannover

2001
In short time intervals the form-closure stamping technology along with the Makro·Grip® workholding and the Quick·Point® zero-point clamping system are introduced to the market



1999
Clean·Tec cleaning fan is introduced to the market

1997
Introduction of the Vario-Tec system to the market – our first own product – at the EMO trade fair in Hannover

1989
Building of Headquarters in 73765 Neuhausen/Germany, Zabergaeustr. 5

1985
Guenter Lang takes over as the CEO

1986
Name change to LANG Werkzeugtechnik

1982 – 2000
Contract manufacturing, toolmaking and general mechanical components

1982
LANG Werkzeugbau is founded by Josef Lang

Dear customer,

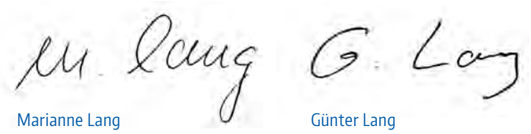
Two years have gone by since the release of the last catalogue. A time that was marked by a good partnership and collaboration with you. We want to thank you for this with new products, in which once again a lot of innovation has been incorporated.

This time however, is also marked by shortage of skilled labor and high competitiveness. Therefore, one of our key concerns is still the automation of CNC milling machines. With two completely new systems, Robo·Shelf and Robo·Trex, we are setting new standards for simple automation and shorter set-up times.

Through continuous dialogues with distributors and customers, we have decided to establish a separate department for special production in our former headquarters in Neuhausen. We can now focus our product range even more to fulfill your needs and meet your production requirements. The building has been completely modified for this and is also home to a training and technology center, where our latest workholding and automation systems can be seen in action, all the time.

We would like to express our thankfulness to our partners in Germany and abroad. Through their commitment and high level of expertise you are well informed and managed as a customer. We also want to sincerely thank all the employees who work day after day with great vigor and commitment to ensure the quality of the products and constantly work at ongoing developments.

For the next two years we are confident that the global economy will continue to develop positively and we hope that our products continue to help optimise your manufacturing processes.



Marianne Lang
CEO

Günter Lang
CEO

New Products **2017**

P. 22

ZERO-POINT CLAMPING SYSTEM
Quick·Point® **52 Multi Grid Plate**

NEW

The Quick·Point® Multi Grid Plates are now available for the small 52 mm system. The 4-fold Grid Plate 52 is available in two different versions. One version equipped with Ø 20 mm clamping studs that serves as an adapter plate to turn a simple Quick·Point® 96 clamping into the smaller 52 mm Quick·Point® Multi Clamping solution. Similarly, there is the 4-fold Grid Plate 52 mm with integrated mounting bores to mount it directly on the machine table.

P. 73

STAMPING TECHNOLOGY – CLAMPING RAW PARTS
Makro·Grip® **Stamping Unit on Trolley**

NEW

Our Standard Stamping Unit with a clamping range of up to 245 mm is now available on a new mobile trolley. It features a generous amount of space on both sides of the stamping vice which can be used to store tools or for the setup of clamping devices. Since the Stamping Unit is positioned transversely on the trolley, the operator is closer to the station, which makes the operation easier and more enjoyable. Take advantage of the benefits of a mobile Stamping Unit at really affordable prices!

P. 144

AUTOMATION
Robo·Trex **Automation**

NEW

The new Robo·Trex Automation System is the first LANG automation based on the small Quick·Point® 52 system. Two new vices were developed for the Robo·Trex with a jaw width of 46 and 77 (see Product News: Makro·Grip® Robo), which function with workpieces weighing up to 12 kg. Four specially designed workshop trolleys serve as a vice memory of the system, on which the vices are mounted vertically for optimal use of space in order to be picked up by the robot.

P. 148

AUTOMATION
Makro·Grip® **Robo 5-Axis-Vice**

NEW

The new raw part clamping vice features a lateral gripper groove for our two robotic automation solutions. In addition, the base bodies were provided with a swarf/coolant drain and have an optimised spindle bearing for increased repeatability. The jewel among raw part clamping vices is certainly the Makro·Grip® Robo 77 with jaw width 46, which provides an ideal access for the production of small parts and on top has increased clamping force when compared to the regular Makro·Grip® 5-Axis Vice 46.

P. 150

AUTOMATION
Robo·Shelf **Automation**

NEW Available spring 2017

The Robo·Shelf Automation impresses by the versatility in terms of mounting options and workpiece sizes. The automated robot is able to work with weights up to 60 kg and supplies the machine tool directly with vices and/or own fixtures/pallets. Depending on the machine interface each pallet slot of the shelving system can be selected individually on the machine tool.

WE DEFINE SIMPLE AS SIMPLIFYING YOUR EVERYDAY WORK.

Whether you are investing, controlling production or re-equipping machines, with LANG Technik your work will consistently become a great deal easier. All of our products are safe and easy to use. Being modular, they build onto each other, complement each other perfectly and are seamlessly combinable with machinery and components from other manufacturers. We keep our eye on the big picture in order to sustainably optimise your processes, paying particular attention to the fact that with our solutions you remain free to adapt to your changing requirements, products and future process developments.

A great example is our modular Quick·Point® zero-point clamping system. It can be equipped to almost any machine tool and with only 27 mm height it is one of the lowest systems on the market.

simple

We define **simple** as simplifying your everyday work.

WE DEFINE FUTURE AS GIVING YOU A HEAD START, EVERY DAY.

As a family company we do not think in quarters, but in generations. We want to contribute our expertise so that our customers can exist in future markets through high quality and low costs. At LANG Technik, we started very early in automating equipment and clamping devices. This is the key to longer machine running times, more efficient production and higher competitiveness.

Today we offer a variety of flexible automation systems that can be easily integrated into your existing production environment – regardless of whether you are already manufacturing fully automated or you are only at the beginning stages of this development. Our solutions can be equipped to almost any machine tool. They are extremely compact, flexible and operating them does not require a lot of training. The immediate increase to your profitability combined with comparatively lower costs ensures a very fast return on investment.

future

We define **future** as giving you a head start, every day.

WE DEFINE GRIPPING AS HANDLING THINGS DIFFERENTLY.

One who wants to revolutionise technologies must not cling to the "old familiar" but should seek out new ventures. For a long time, clamping technology was just about how you can hold a workpiece more firmly. With the experience of our own production practices, we've approached the topic differently. We've asked ourselves how we can increase the quality of the milled part while reducing unit costs. The answer does not lie in traditional clamping because higher pressure leads to more wear, more deformation and more material usage; therefore, we have searched for ways to absolutely and securely clamp the workpiece with less pressure.

The result is our patented form-closure technology. The workpiece is pre-stamped prior to the machining process. It uses form-closure to precisely align with the clamping system. This unique principle ensures maximum holding forces at minimal clamping pressures. The pre-stamping process takes less than 5 seconds and offers a lot of other convincing advantages.

gripping

We define **gripping** as handling things differently.

We take it personal.

Your goals, needs and wishes are our main focus. You drive us to boldly break new ground, transform setbacks into technological advances and continuously improve for you. For over three decades LANG Technik has been your reliable partner – working close with you, willing to assist with your daily challenges and always within reach when and if you have needed us. Because we want to understand what you truly care about, we listen to you very carefully and are always open to your ideas, suggestions and, of course, also criticism. Please talk to us – honestly, directly and trusting. This is the best foundation to reach outstanding results together. Why complicate it when it's so easy?

Contents

simple. gripping. future.

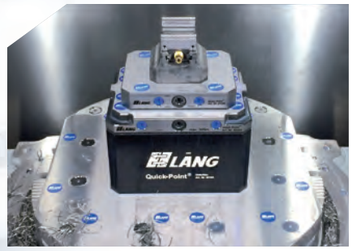
ZERO-POINT CLAMPING SYSTEM

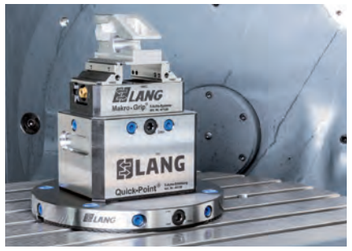
Aerospace: Our products are used by leading aircraft manufacturers and aerospace organisations. These companies appreciate not only the versatility and modularity but moreover the enormous saving potential of branch typical expensive materials and the process-safe clamping of the often sensitive deformable workpieces.

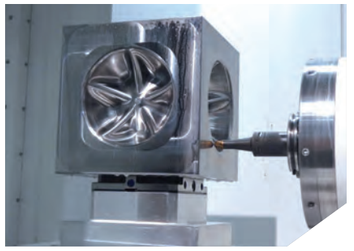
Quick·Point®
Zero-Point Clamping System

Benefits

Applications







At a glance

- Enormous reduction in set-up times
- Easy mounting of clamping studs in workpieces, fixtures and other clamping devices
- Extremely flexible due to individual alignment on the machine-tool table
- One of the lowest zero-point clamping systems on the market (height: 27 mm)
- High process reliability with a repeatability of 5 µm and a clamping force of 6.000 kg

Quick·Point® **Zero-Point Clamping System**

Simple, precise and clamping forces of 6.000 kg!
One of the lowest zero-point systems on the market (height: 27 mm)

1 Highly precise: repeatability < 0.005 mm

2 Cover discs for mounting bores

3 Robust mechanical clamping with one actuation screw (torque: 30 Nm)

4 Rigid, compact base plate made of case-hardened and ground steel

5 4x M 5 threads used as positioning support for vices.
More information on page 22

6 Height: 27 ± 0.01 mm

Technical specifications and compatibility

To simplify specifications we use these icons to highlight technical information and the compatibility of the products:

Grid system:
Actual dimension of the zero-point system

Vice size:
Width of the vice jaws

Mounting bores:
Individual mounting bores and keyways are possible

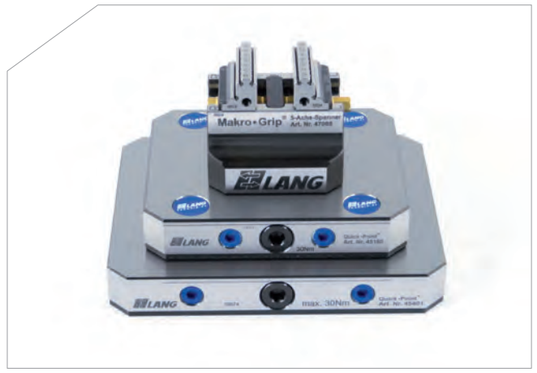
Clamping stud size:
Diameter of the clamping studs

Quick-Lock:
The fast actuation system can be attached

Prepared for automation:
Product can be used in our automation systems

The Multi Grid Plates shorten set-up times by clamping up to 16 clamping studs (for example four vices or fixtures) with only one actuation screw simultaneously.

Easy adaptation of different clamping vices, fixtures or workpieces by separate available clamping studs.



The modular concept of our Quick·Point® system allows to change quickly and easily from the 96 to 52 grid with adaptor plates.

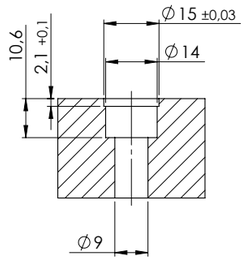
With the new 5-Axis Riser you can create the necessary distance to the machine table for 5-face machining. The massive steel body provides more stability and does not require an additional interface for clamping devices.

Quick-Lock fast actuation system as optional accessory kit.

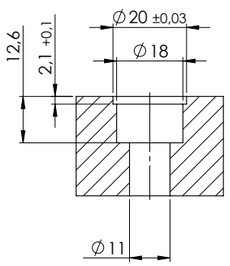
The operation of the Quick·Point® system can be done manually or automatically, for example by pneumatic pressure.

Set mounting bores

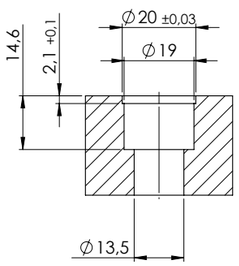
All our Quick·Point® plates with an integrated hole pattern for mounting on the machine table are also available without mounting bores. The case-hardened zero-point plates (57 HRC, 0.7 mm deep) can be drilled individually to match the T-slot distance of the machine table. We offer the drilling of the holes as a service to you. Suitable bore covers can be found on page 53.



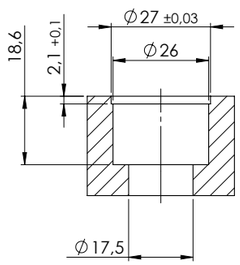
M8



M10



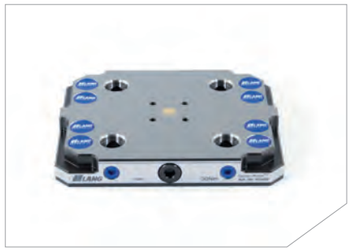
M12



M16

Quick·Point® plate with integrated mounting holes.

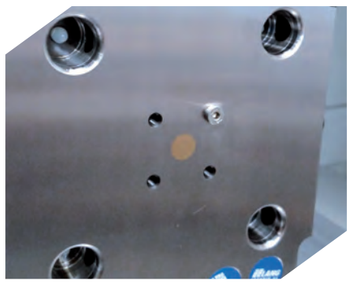
Quick·Point® plate without mounting bores. These can be applied by the customer or by LANG Technik upon request.

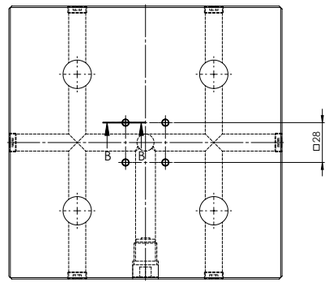


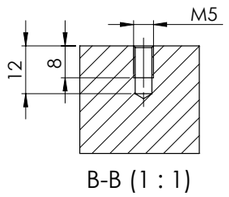
Suitable cover discs for the mounting bores can be found on page 53.

M 5 Index bores

In the Quick·Point® plates 45150 and 45400 as well as in the Quick·Tower plates 75600 and 75710 included as standard, so-called index drills can be set into all remaining zero-point plates, which serve as security from rotation. Inserting a threaded pin or screw ensures that LANG clamping devices (with an equivalent recess on the bottom) are always positioned in the correct way on the zero-point plate.





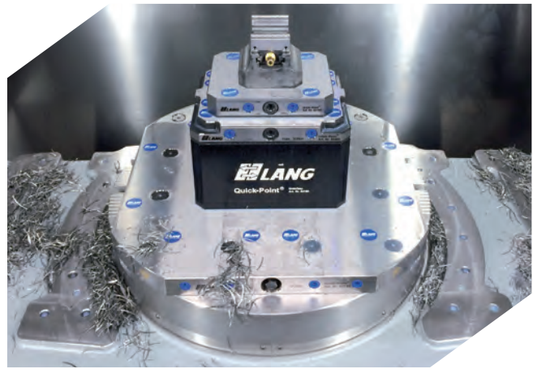


B-B (1 : 1)

Custom corner radius for Quick·Point® grid / multi-fold plates

Upon request, we can adjust the zero point system (multi grid or individual grid plates in a row) to round tables of the machine tool by cutting off the corners. A clean solution that avoids in most cases a protrusion of the zero-point plates to the machine table.

NEW



Custom corner radius for Quick·Point® grid / multi-fold plates

Item No.	Quantity	Price
45043-01	Cut off 1 corner	
45043-02	Cut off 2 corners	
45043-04	Cut off 3 corners	

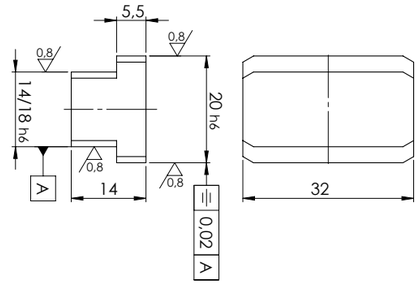
Slot Key DIN 6323

To make the assembly and alignment of the Quick·Point® plates as easy as possible, we offer slot keys for the plates' 20H7 keyways matching your table's t-slots (14 or 18 mm).

NEW

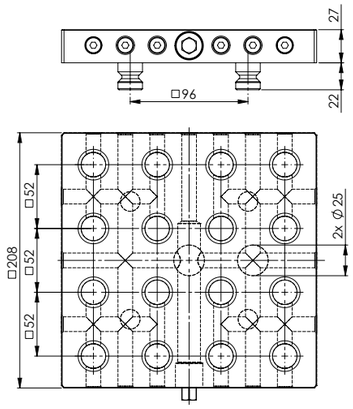
Slot key for the alignment of Quick·Point® plates

Item No.	Description	Quantity	Price
452014	20 to 14 mm	1 pc.	
452018	20 to 18 mm		



Quick·Point® **52 Multi Grid Plates**

NEW

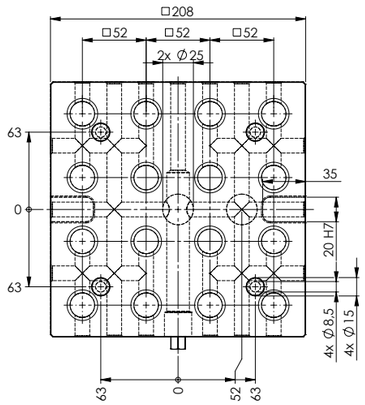


Quick·Point® 52 4-fold Grid Plate, without mounting bores

Item No.	Dimensions	Weight	Price
45640	208 x 208 x 27 mm	8.2 kg	
45644	Set mounting bores according to customer's request		
45642	Set keyways according to customer's request		

4 clamping studs Ø 20 mm included, for adapting the plate to the Quick·Point® 96 system

NEW



Quick·Point® 52 4-fold Grid Plate

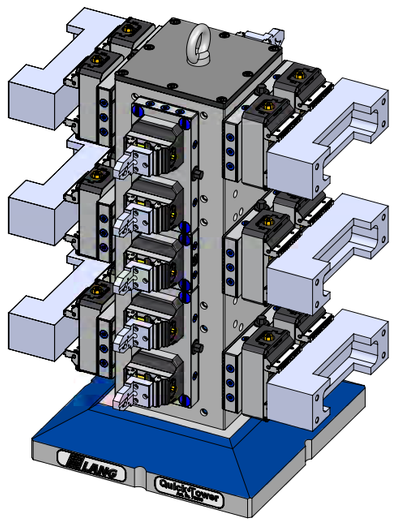
Item No.	Dimensions	Mounting Bores	Weight	Price
45641	208 x 208 x 27 mm	126 x 126 mm	8.0 kg	

NEW

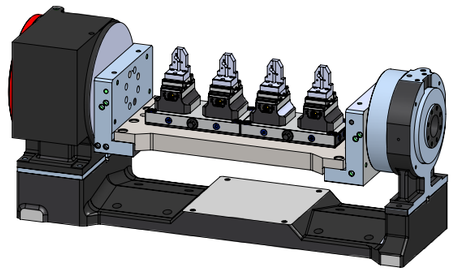
Quick·Point® 52 Quick-Lock for 4-fold Grid Plate

Item No.	Weight	Price
45452	0.9 kg	

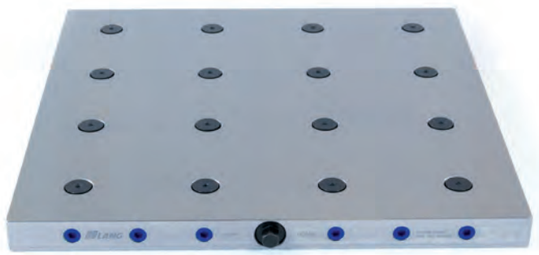
Double Grid Plate 52 upon request

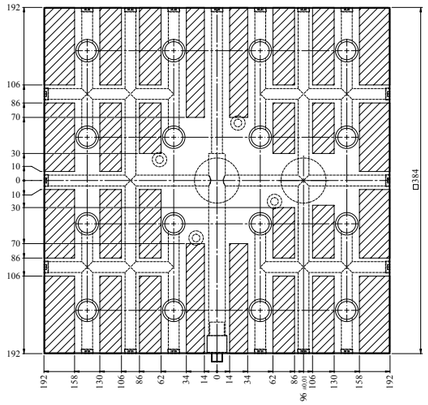


Optionally, the Quick·Point 52® multi grid plate could be manufactured as a double plate. This version would be ideal for the use in clamping devices such as swivel bridges or clamping towers.



Quick·Point® **96 Multi Grid Plates**





Quick·Point® 96 4-fold Grid Plate, without mounting bores

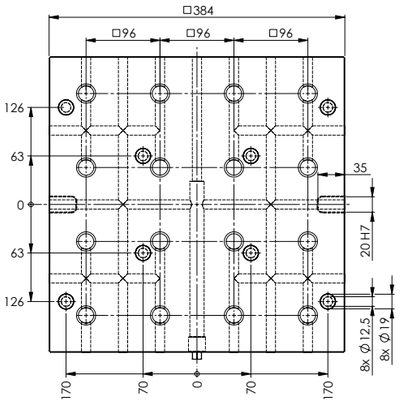
Item No.	Dimensions	Weight	Price
45740	384 x 384 x 27 mm	29.7 kg	
45044	Set mounting bores according to customer's request		
45042	Set keyways according to customer's request		

NEW

Quick·Point® 96 Quick-Lock for 4-fold Grid Plate

Item No.	Weight	Price
45496	1.0 kg	

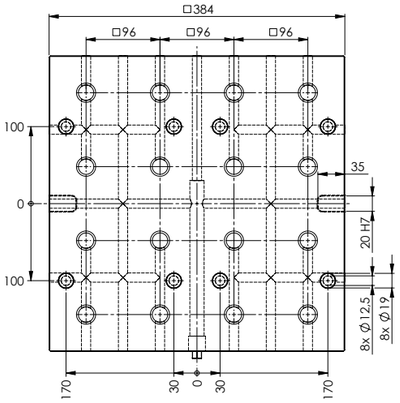
NEW



Quick·Point® 96 4-fold Grid Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45741	384 x 384 x 27 mm	for 63 mm t-slot distance	29.2 kg	

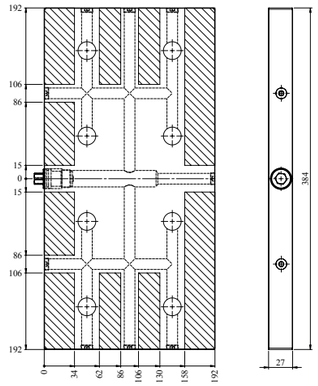
NEW



Quick·Point® 96 4-fold Grid Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45742	384 x 384 x 27 mm	for 100 mm t-slot distance	29.2 kg	

Quick·Point® **96 Multi Grid Plates**



Quick·Point® 96 Double Grid Plate, without mounting bores

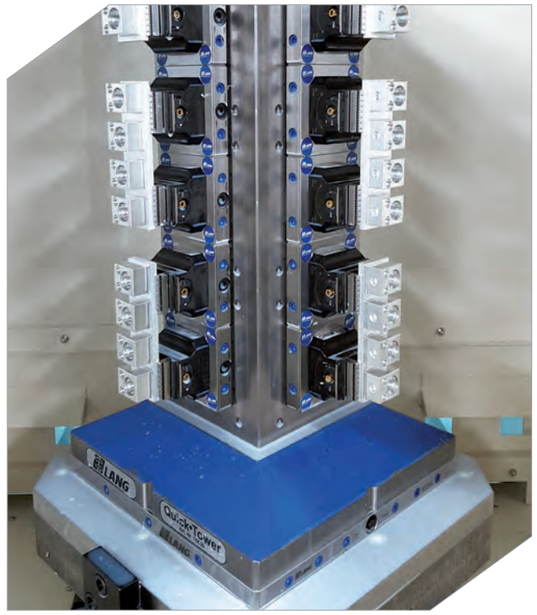
Item No.	Dimensions	Weight	Price
45720	384 x 192 x 27 mm	14.7 kg	
45024	Set mounting bores according to customer's request		
45022	Set keyways according to customer's request		

NEW

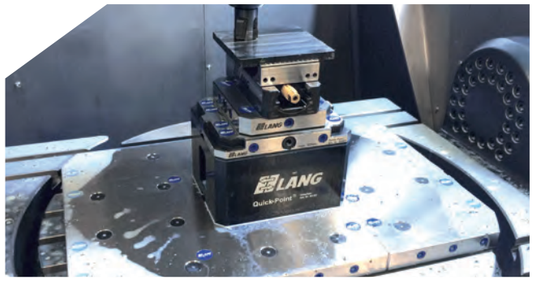
Quick·Point® 96 Quick-Lock for Double Grid Plate

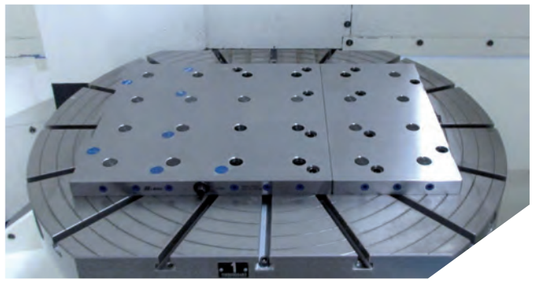
Item No.	Weight	Price
45296	0.9 kg	

Applications of Quick·Point® Multi Grid Plates



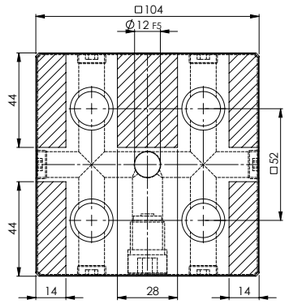
Due to the continuous zero-point pitch, the 4-fold Grid Plate 96 ensures rapid changeover of centring vices, various fixtures and also the Quick·Tower Tombstone.





Aligning grid plates numerous variations to the machine table assembly are conceivable. The available space on the machine table can be used efficiently and a maximum in flexibility can be achieved.

Quick·Point® **52 Grid Plate**

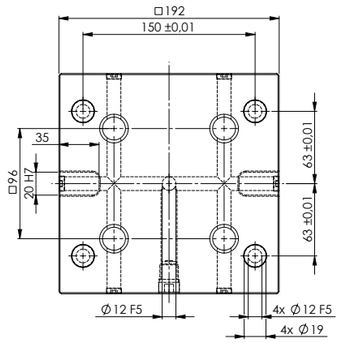


Quick·Point® 52 Grid Plate, without mounting bores

Item No.	Dimensions	Weight	Price
45600	104 x 104 x 27 mm	2.0 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **96 Grid Plates**

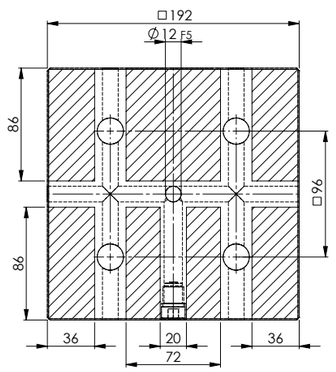
NEW



Ø 20 mm | 125 | ✓

Quick·Point® 96 Grid Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45763	192 x 192 x 27 mm	150 x 126 mm	7.0 kg	



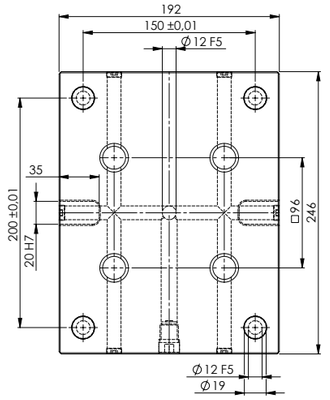
Ø 20 mm | 125 | ✓ | ✓

Quick·Point® 96 Grid Plate, without mounting bores

Item No.	Dimensions	Weight	Price
45710	192 x 192 x 27 mm	7.2 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **96 extended Grid Plates**

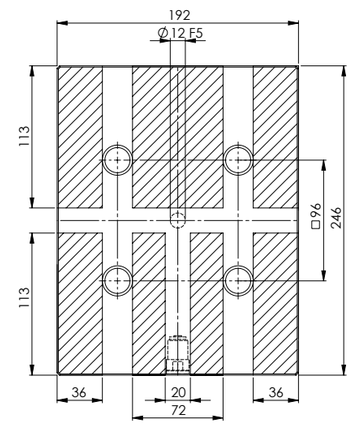
Special extended grid plate with a mounting bore pitch 200 x 150 mm to be mounted on machine-tool tables with a t-slot distance of 100 mm (also available without any mounting bores).



Ø 20 mm | 125 | ✓

Quick·Point® extended Grid Plates

Item No.	Dimensions	Mounting Bores	Weight	Price
45715	246 x 192 x 27 mm	200 x 150 mm	9.2 kg	

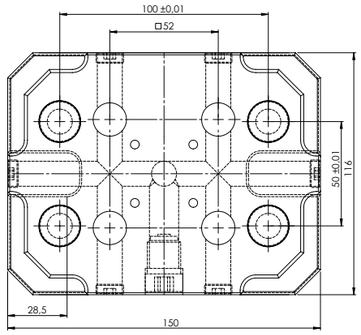


Ø 20 mm | 125 | ✓ | ✓

Quick·Point® 96 extended Grid Plate, without mounting bores

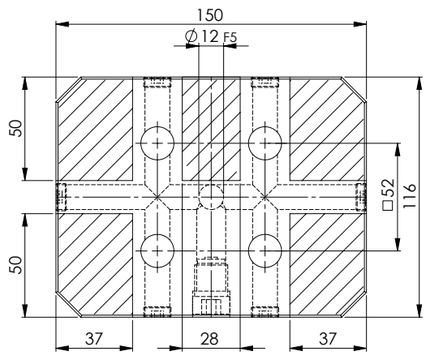
Item No.	Dimensions	Weight	Price
45716	246 x 192 x 27 mm	9.4 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **52 Plates**



Quick·Point® 52 Plate, with clamping edge

Item No.	Dimensions	Mounting Bores	Weight	Price
45150	150 x 116 x 27 mm	100 x 50 mm	2.9 kg	



Quick·Point® 52 Plate, without mounting bores

Item No.	Dimensions	Weight	Price
45151	150 x 116 x 27 mm	3.4 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **Quick-Lock 52 Fast Actuation System**

Quick·Point® 52 Quick-Lock

Item No.	Weight	Price
44552	0.3 kg	

Mechanical fast actuation system, compatible with all squared and rectangular Quick·Point® 52 Plates.

Scope of delivery: Quick-Lock device, actuation lever, washers (4 pcs.)

released

locked

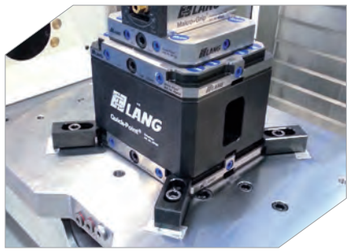
Quick·Point® **Clamps**

Quick·Point® Clamps

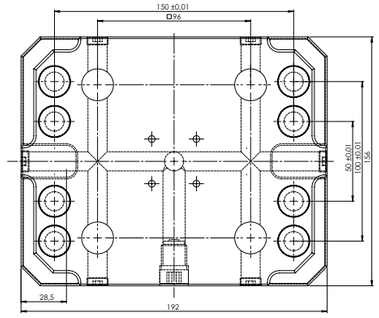
Item No.	Unit	Price
27084-01	1 pc.	

Clamps are an alternative option to mount the Quick·Point® plates 45150 and 45400 to the machine table.

Please note: Clamps are now available as single piece.

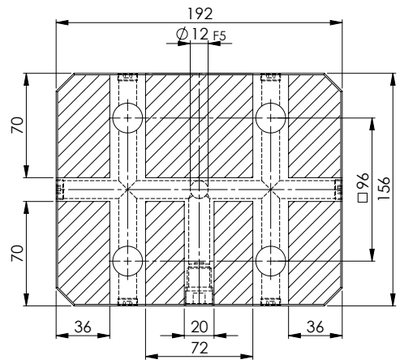


Quick·Point® **96 Plates**



Quick·Point® 96 Plate, with clamping edge

Item No.	Dimensions	Mounting Bores	Weight	Price
45400	192 x 156 x 27 mm	150 x 100 / 50 mm	5.5 kg	



Quick·Point® 96 Plate, without mounting bores

Item No.	Dimensions	Weight	Price
45401	192 x 156 x 27 mm	6.0 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **Quick-Lock 96 Fast Actuation System**

Quick·Point® 96 Quick-Lock

Item No.	Weight	Price
44596	0.4 kg	

Mechanical fast actuation system, compatible with all squared and rectangular Quick·Point® 96 Plates.

Scope of delivery: Quick-Lock device, actuation lever, washers (4 pcs.)

released

locked

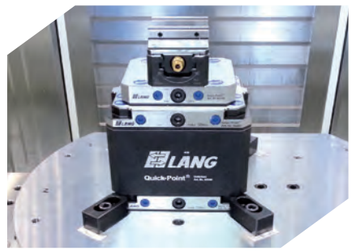
Quick·Point® **Clamps**

Quick·Point® Clamps

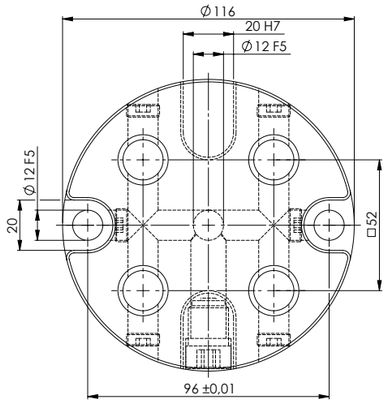
Item No.	Unit	Price
27084-01	1 pc.	

Clamps are an alternative option to mount the Quick·Point® plates 45150 and 45400 to the machine table.

Please note: Clamps are now available as single piece.



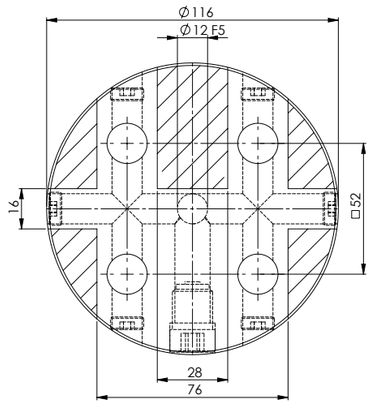
Quick·Point® **52 Round Plate**



Ø 16 mm | 46/77

Quick·Point® 52 Round Plate

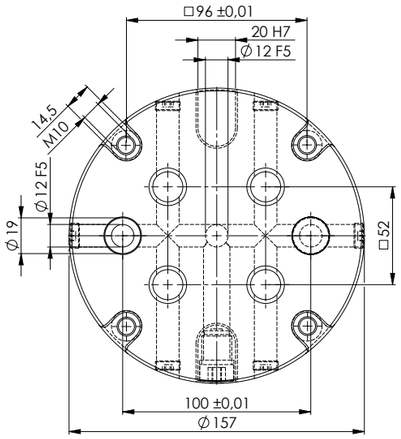
Item No.	Dimensions	Mounting Bores	Weight	Price
45750	Ø 116 x 27 mm	96 mm distance	1.9 kg	



Ø 16 mm | 46/77 | ✓

Quick·Point® 52 Plate, without mounting bores

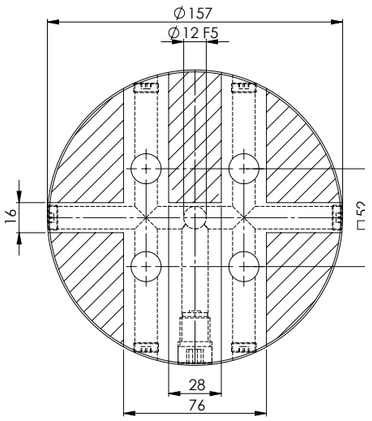
Item No.	Dimensions	Weight	Price
45751	Ø 116 x 27 mm	2.1 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		



Ø 16 mm | 46/77

Quick·Point® 52 Round Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45900	Ø 157 x 27 mm	100 mm distance	3.5 kg	

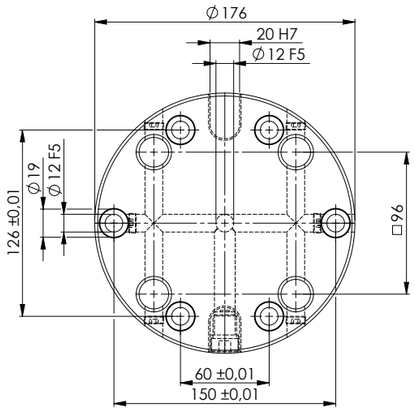


Ø 16 mm | 46/77 | ✓

Quick·Point® 52 Plate, without mounting bores

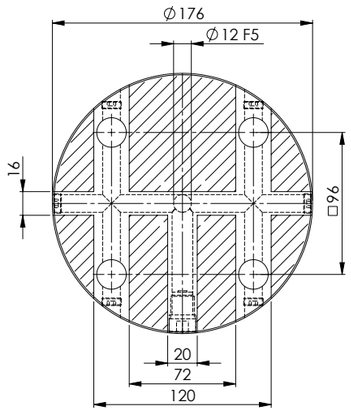
Item No.	Dimensions	Weight	Price
45901	Ø 157 x 27 mm	3.8 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

Quick·Point® **96 Round Plates**



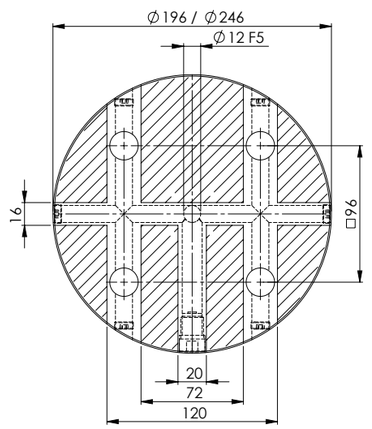
Quick·Point® 96 Round Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45800	Ø 176 x 27 mm	126 x 60 mm + 150 mm distance	4.7 kg	



Quick·Point® 96 Round Plates, without mounting bores

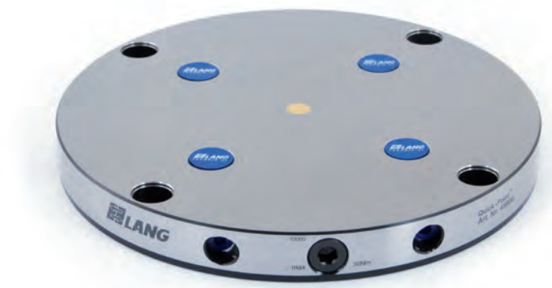
Item No.	Dimensions	Weight	Price
45801	Ø 176 x 27 mm	4.8 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

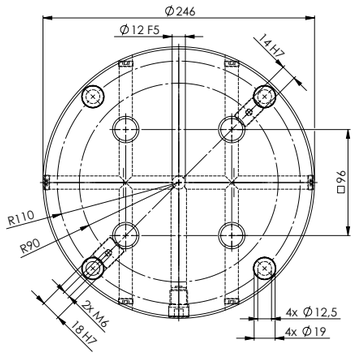


Quick·Point® 96 Round Plates, without mounting bores

Item No.	Dimensions	Weight	Price
45820	Ø 196 x 27 mm	6.0 kg	
45840	Ø 246 x 27 mm	9.5 kg	
45004	Set mounting bores according to customer's request		
45002	Set keyways according to customer's request		

NEW





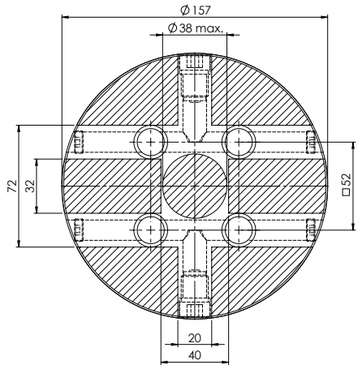
Quick·Point® 96 Round Plate

Item No.	Dimensions	Mounting Bores	Weight	Price
45890	Ø 246 x 27 mm	4 x 90° / Radius 110 mm	9.3 kg	

Quick·Point® **Plates for individual centre bores**

A centre bore with individually selectable diameter and tolerance provides the option for access to rotary joints. The maximum diameter for Quick·Point® 52 is 38 mm whereas it is 80 mm for the Quick·Point® 96 system.

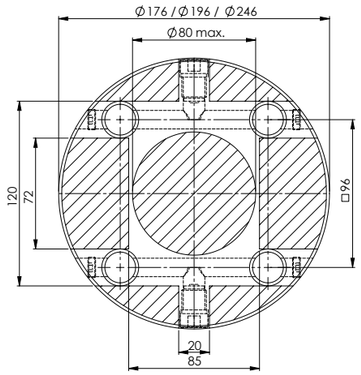
NEW



Quick·Point® 52 Round Plate for individual centre bore

Item No.	Dimensions	Max. Ø of Centre Bore	Weight	Price
45903	Ø 157 x 27 mm	38 mm	3.7 kg	
45004	Set mounting bores according to customer's request			
45002	Set keyways according to customer's request			
45009	Set centre bore according to customer's request			

NEW



Quick·Point® 96 Round Plate for individual centre bore

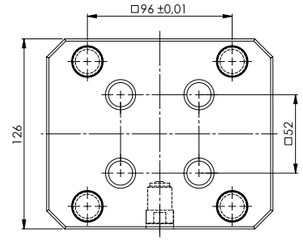
Item No.	Dimensions	Max. Ø of Centre Bore	Weight	Price
45803	Ø 176 x 27 mm	80 mm	4.8 kg	
45823	Ø 196 x 27 mm		6.0 kg	
45843	Ø 246 x 27 mm		9.5 kg	
45004	Set mounting bores according to customer's request			
45002	Set keyways according to customer's request			
45009	Set centre bore according to customer's request			

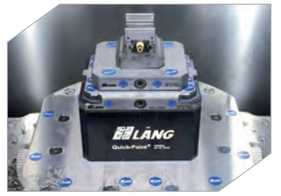
Quick·Point® **Adaptor Plates**

Utilise the modularity of the zero-point clamping system by reducing from grid system 96 mm to 52 mm with these adaptor plates.

upper interface:

lower interface:

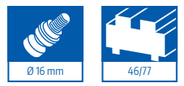




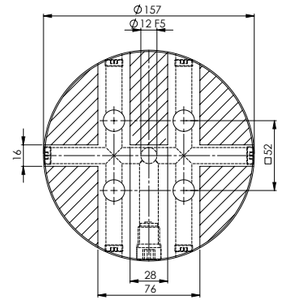
Quick·Point® Adaptor Plate, reducing from 96 mm to 52 mm grid system

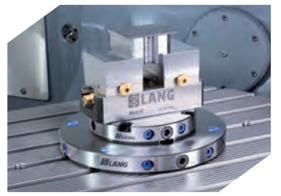
Item No.	Dimensions	Weight	Price
45160	150 x 126 mm	3.4 kg	

upper interface:



lower interface:





Quick·Point® Round Adaptor Plate, reducing from 96 mm to 52 mm grid system

Item No.	Dimensions	Weight	Price
45910	Ø 157 x 27 mm	3.7 kg	

Quick·Point® **Clamping Studs**

For individual adaption of fixtures, workpieces or existing vices onto our Quick·Point® zero-point clamping system.

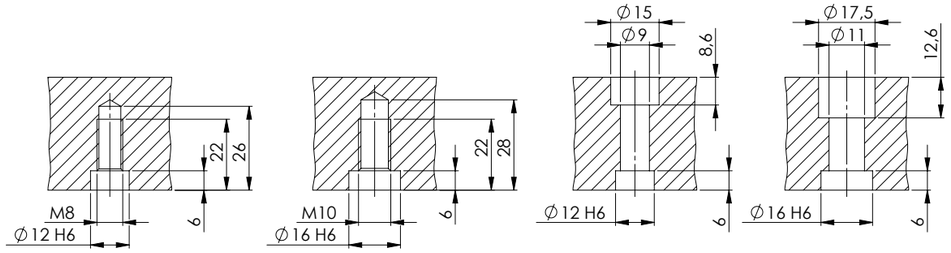
Quick·Point® Clamping Studs for individual adaption

Item No.	Description	Unit	Price
45270	Ø 16 mm for 52 mm grid system, incl. M 8 threaded pin	1 pc.	
45570	Ø 20 mm for 96 mm grid system, incl. M 10 threaded pin	1 pc.	

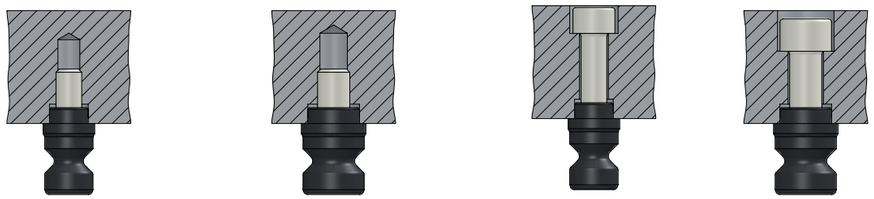
Clamping studs can be used for individual adaptation of existing vices, fixtures or workpiece in our Quick·Point® zero-point clamping system.

Attention: 4 studs are required for one Quick·Point® plate!

How it works:

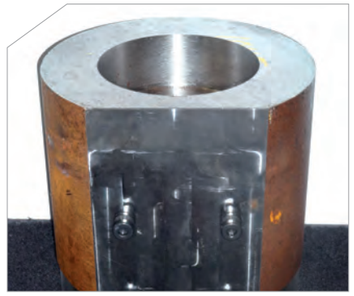


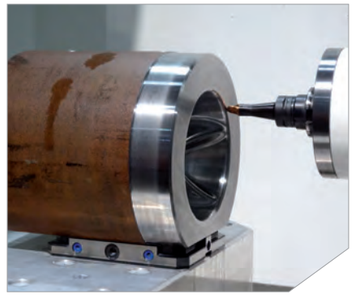
with threaded pins **with screws**



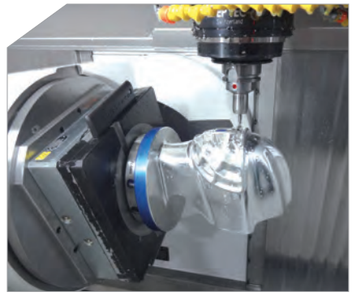
52 **96** **52** **96**

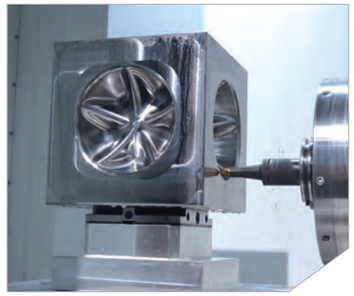
Introduce the 4 bolts with an accuracy of ± 0.01 mm into the square.



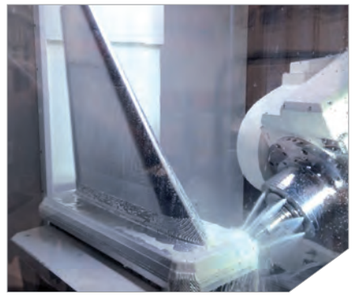


The workpiece is clamped securely without any vice directly in the zero-point system.

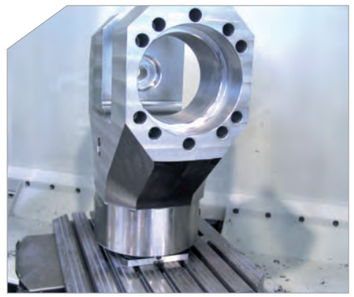


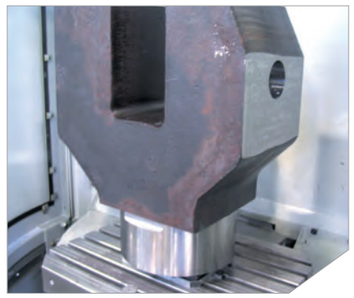


The studs need to be positioned with the dimension 52/96 ± 0.01 mm for clamping workpieces straight onto the Quick·Point® plates.



Aluminium part (weight: 1.315 kg, dimensions: 1.067 x 406 x 1.016 mm) clamped with 16 clamping studs.





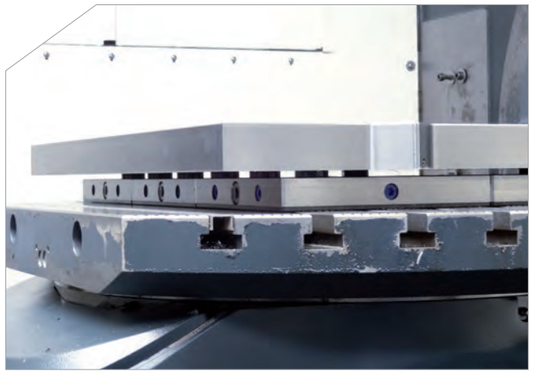
Not only highly precise but also extremely rigid: workpiece with 175 kg weight, 525 mm height. Clamped with just 4 studs in a single Quick·Point® plate.

Quick·Point® **Spacer Studs**

Spacer studs allow bringing in through holes in material which is clamped in the zero-point system. It also improves accessibility when machining edges and angles.

Quick·Point® Spacer Studs

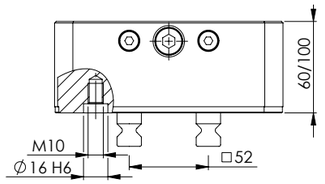
Item No.	Description	Spacer height	Unit	Price
NEW 45270-10	Ø 16 mm for 52 mm grid system	10 mm (Ø 24 mm)	1 Set (4 pcs.)	
45570-10	Ø 20 mm for 96 mm grid system	10 mm (Ø 28 mm)	1 Set (4 pcs.)	

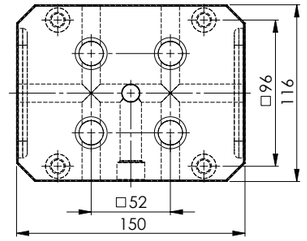


Quick·Point® **5-Axis Riser**

There is no additional interface between the solid riser and the vice and hence provides improved rigidity.

NEW





upper interface:

lower interface:

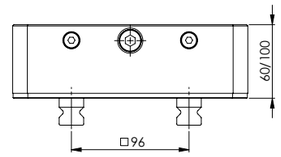
Quick·Point® 52 5-Axis Riser

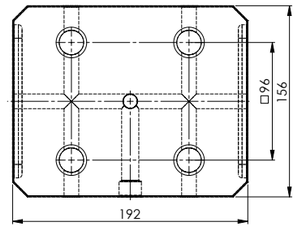
Item No.	Dimensions	Weight	Price
45156	150 x 116 x 60 mm	6.1 kg	
45157	150 x 116 x 100 mm	10.0 kg	

Included are clamping studs Ø 16 mm for being clamped onto Quick·Point® plates.

Please note: This riser also features bores for Ø 20 mm clampings studs to use this riser as an adaptor for the 96 mm grid system.

NEW





upper interface:

lower interface:

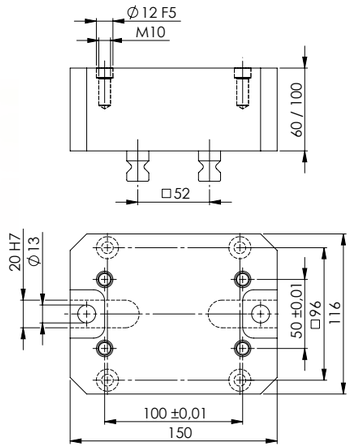
Quick·Point® 96 5-Axis Riser

Item No.	Dimensions	Weight	Price
45406	192 x 156 x 60 mm	11.2 kg	
45407	192 x 156 x 100 mm	18.1 kg	

Included are clamping studs Ø 20 mm for being clamped onto Quick·Point® plates.

Quick·Point® **Risers**

Increase accessibility to workpieces on 5-axis machine-tools. The coated aluminium body can either be mounted directly on the machine table or by a Quick·Point® plate. The lateral recess can be used for fixation, the alignment is done with 20H7 keyways. Alternatively it can be clamped onto zero-point clamping systems with 4 clamping studs.



upper interface:

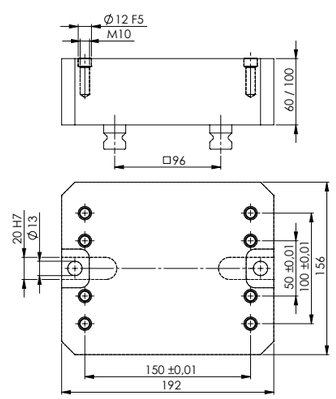
lower interface:

Riser for Quick·Point® 52 Plate

Item No.	Dimensions	Weight	Price
43060	150 x 116 x 60 mm	2.5 kg	
43100	150 x 116 x 100 mm	4.2 kg	

Suitable for Quick·Point® plate #45150
Please note: This riser also features bores for Ø 20 mm clampings studs to use this riser as an adaptor for the 96 mm grid system.

Included in delivery: 4 Quick·Point® clamping studs Ø 16 mm, 4 screws M 10 + 2 bushings Ø 12 x 12 mm (Item No. 45000-09).



upper interface:

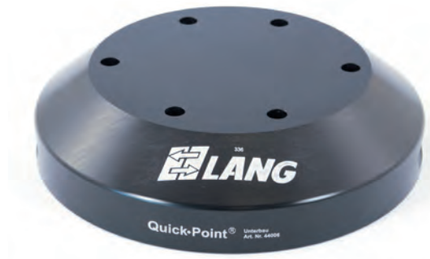
lower interface:

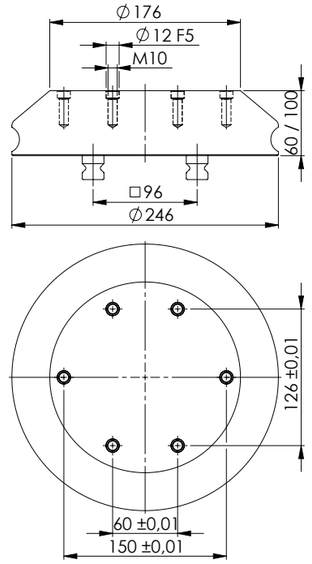
Riser for Quick·Point® 96 Plate

Item No.	Dimensions	Weight	Price
44060	192 x 156 x 60 mm	4.7 kg	
44100	192 x 156 x 100 mm	7.9 kg	

Suitable for Quick·Point® plate #45400

Included in delivery: 4 Quick·Point® clamping studs Ø 20 mm, 4 screws M 10 + 2 bushings Ø 12 x 12 mm (Item No. 45000-09).





upper interface:

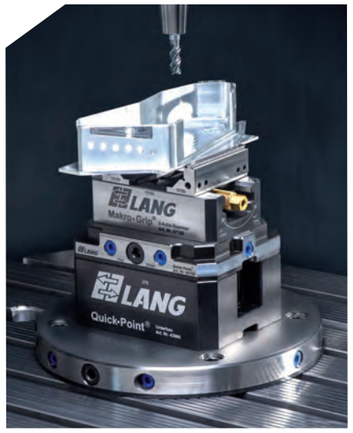
lower interface:

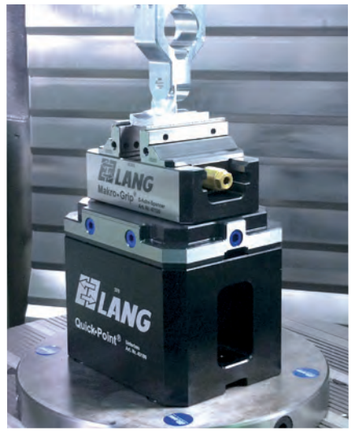
Riser, round for Quick·Point® 96 Plate

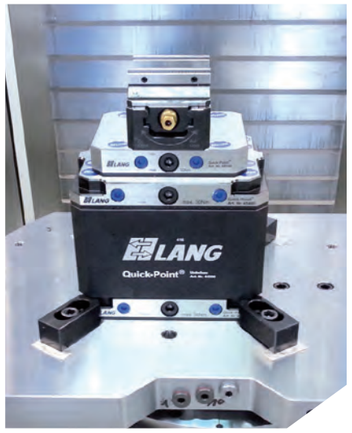
Item No.	Height	Diameter	Weight	Price
44006	60 mm	lower: 246 mm, upper: 176 mm	6.6 kg	
44010	100 mm		11.8 kg	

Suitable for Quick·Point® plate #45800. Individual mounting bores in the area of the flange possible. Included in delivery: 4 screws M 10 and 2 bushings for positioning top plate.

Included in delivery: 4 Quick·Point® clamping studs Ø 20 mm, 6 screws M 10 + 2 bushings Ø 12 x 12 mm (Item No. 45000-09).







Tri-Top **3-Face-Tombstone**

Minimises downtimes of 4- or 5-axis machine-tools!

In the Tri-Top 3-Face Tombstone vices with a maximum body length of 130 mm can be clamped.

1 Simple zero-point clamping with only one actuation screw per device (30 Nm torque)

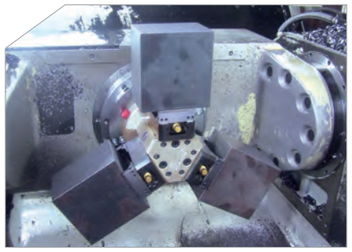
2 Longevity and precision through hardened fit bushings

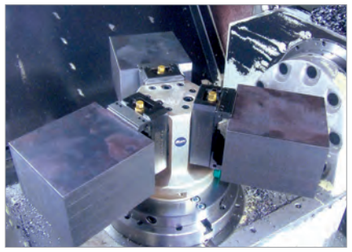
3 Lightweight aluminium base for ergonomic handling

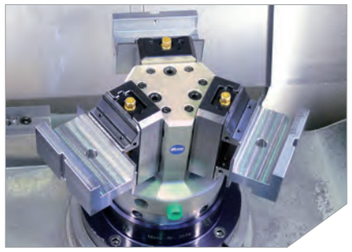
4 Integrated Quick·Point® 52 system on all 3 faces

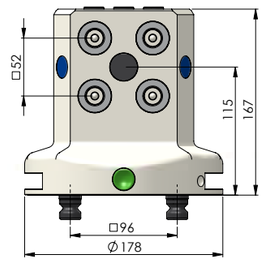
5 Applicable for LANG automation systems

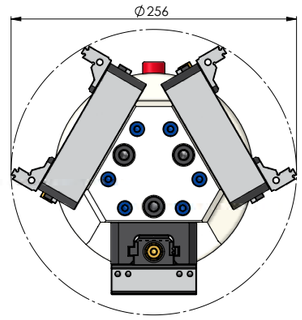
6 For fast and precise clamping, clamping studs to fit our Quick-Point® 96 plates are included

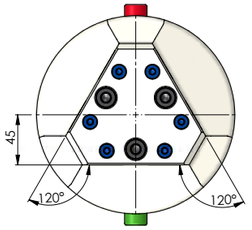


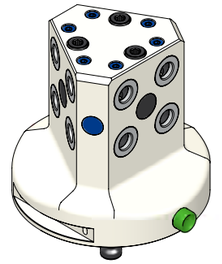










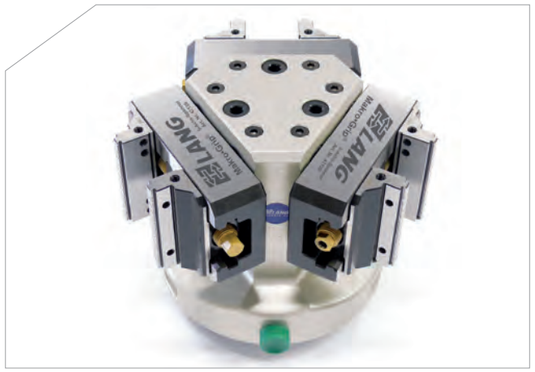


upper interface:

lower interface:

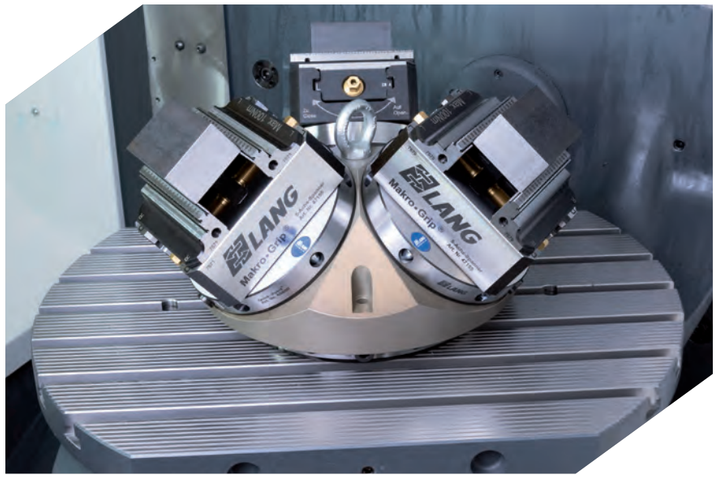
Quick·Point® Tri-Top 3-Face-Tombstone

Item No.	Dimensions	Weight	Price
45352	height: 167 mm / Ø 178 mm + bumpers	5.5 kg	

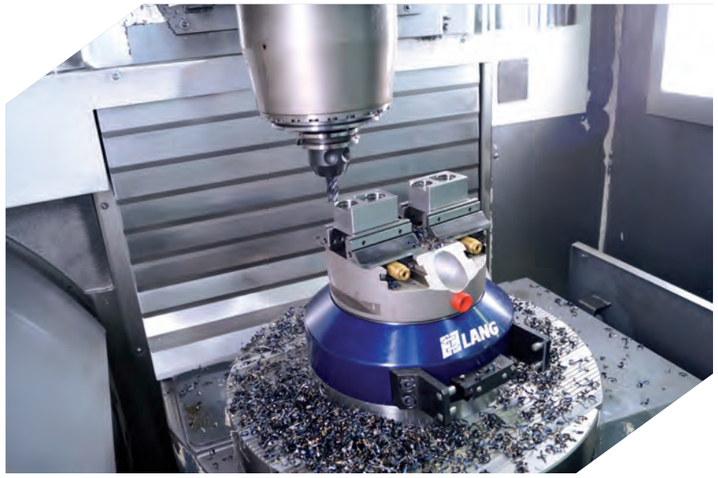


Due to the sturdy and compact design our "all-round" vices can be turned by 4x 90° with marginal interference.
For example: Tri-Top with 3x Makro·Grip® 77 (Item No. 47120, see page 86)

Customised
Multiple Clamping Systems



In order to respond to your individual needs and specific requirements even more effectively, we have created a "custom-made" department in our former headquarters in Neuhausen. The aim is to adapt the proven LANG product range even more to your needs. We offer you complete customised solutions, such as this 3-face pyramid with zero-point clamping systems, to increase machine running times.



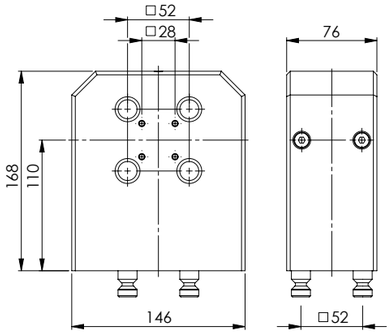
Customised solutions according to your requirements. From consultancy and design works to the final manufacture – together we will develop the proper solution for you. Just contact us!

LANG Technik GmbH

Neuhausen plant
Zabergaeustr. 5
D-73765 Neuhausen
Fon.: +49 7158 90 38 10
info@lang-technik-nh.de

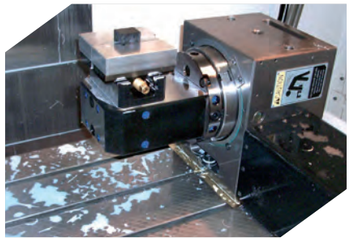
Quick·Point® **Twin Base**

The hardened and ground Twin Base is ideal for manufacturing 5-axis parts with a 3-axis machine-tool because workpieces can be positioned among 4x 90° process-safe and with high repeat accuracy.



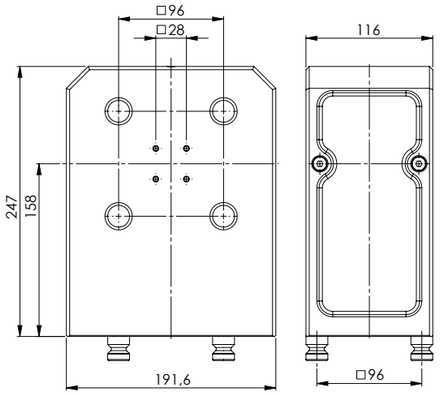
upper interface:

lower interface:



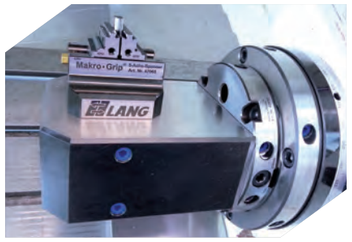
Quick·Point® Twin Base 52

Item No.	Dimensions	Weight	Price
47220	146 x 76 x 168 mm	13.9 kg	



upper interface:

lower interface:



Quick·Point® Twin Base 96

Item No.	Dimensions	Weight	Price
47520	192 x 116 x 247 mm	27.8 kg	

Quick·Point® **Support Plates**

Support plates made of non-hardened steel – for individual adaption of fixtures or other devices.

Support Plate 52

Item No.	Dimensions	Weight	Price
45275	96 x 96 x 27 mm	2.0 kg	
45277	156 x 156 x 27 mm	5.2 kg	

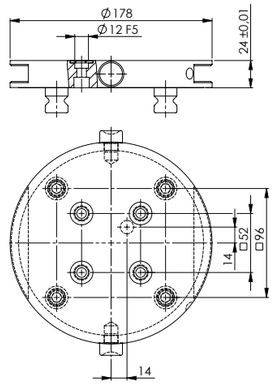
Use support plates to adapt and strip down fixtures quickly.

Support Plate 96

Item No.	Dimensions	Weight	Price
45575	156 x 156 x 27 mm	5.3 kg	
45577	192 x 192 x 27 mm	8.3 kg	

Use support plates to adapt and strip down fixtures quickly.

Quick·Point® **Automation Support Pallets**

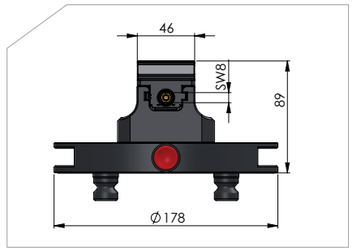


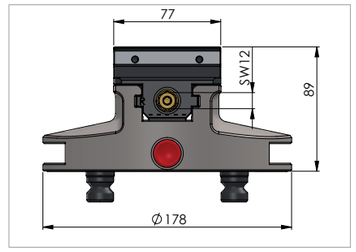
Quick·Point® Automation Support Pallet, with mounting bores

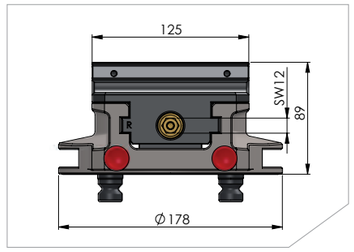
Item No.	Total height	Diameter	Weight	Price
65190	24 ± 0.02 mm	178 mm	4.4 kg	

With mounting bores to fix Makro·Grip® 46 and 77 vices directly.
The ideal support pallet for LANG vices and fixtures that do not protrude the automation gripper's fork.

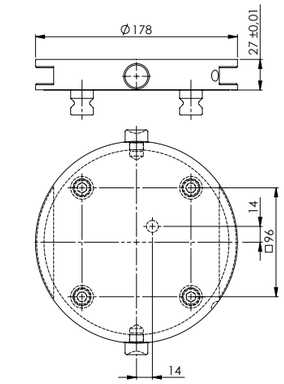
Included in delivery: 4 screws M 8, 2 bushings Ø 12 x 12 mm (Item No. 65191-04).







The combined height of the support pallet (24 mm) and a Makro·Grip® vice 46 or 77 (65 mm) on top is 89 mm. It matches the overall height of the Makro·Grip® Automation Vices 77 and 125.



Quick·Point® Automation Support Pallet, without mounting bores

Item No.	Total height	Diameter	Weight	Price
65197	27 ± 0.02 mm	178 mm	5.1 kg	

Suitable for individual fixtures, devices or workpieces. Ideal for larger devices and vices.

Quick·Point® **Accessories**

NEW

Quick·Point® Handle Bar, aluminium

Item No.	Description	Price
46081	Aluminium handle bar	

This handle bar facilitates the handling of Quick·Point® devices when setting up and dismantling. As with usual LANG clamping devices, the handle bar is clamped with two Quick·Point® 96 clamping studs in the zero-point system and is thereby especially suited for the transportation of heavier Quick·Point® systems.

NEW

Slot keys for the alignment of Quick·Point® plates

Item No.	Description	Unit	Price
452014	20 to 14 mm	1 pc.	
452018	20 to 18 mm		

To make the assembly and alignment of the Quick·Point® plates as easy as possible, we offer slot keys for the plates' 20H7 keyways matching your table's t-slots (14 or 18 mm).

Bushings for the alignment of vices and zero-point plates

Item No.	Dimensions	for screw size	Unit	Price
45000-09	Ø 12 x 12 mm	M 10	1 pc.	
65191-04	Ø 12 x 12 mm	M 8		
65191-05	Ø 16 x 15 mm	M 10		

Bushings with Item No. 45000-09 are required in the Quick·Point® base and the Quick·Tower Horizontal Tombstone to align zero-point plates. The mounting of Makro·Grip® 46 and 77 on the Automation support pallet 65190 occurs with bushings of Item No. 65191-04. For the mounting of Makro·Grip® 125 on the Automation support plates bushings with Ø 16 mm (Item No. 65191-05) are available.

Quick·Point® Cover Discs, plastic

Item No.	Diameter	Unit	Price
45008-15	Ø 15 mm	1 set (20 pcs.)	
45008-20	Ø 20 mm		
45008-27	Ø 27 mm		

Heat-resistant, fibreglass reinforced cover discs for protecting the mounting screws against material pollution.

Quick·Point® Cover Plugs, plastic

Item No.	Description	Unit	Price
45052-20	Ø 16 mm for 52 mm grid system	1 set (4 pcs.)	
45096-20	Ø 20 mm for 96 mm grid system		

Cover plugs made of plastic for the protection of the stud holes when not in use.

Quick·Point® Cover Plugs, steel

Item No.	Description	Unit	Price
45052-30	Ø 16 mm for 52 mm grid system	1 set (4 pcs.)	
45096-30	Ø 20 mm for 96 mm grid system		

Cover plugs made of steel spread the increased clamping force of multi grid plates evenly and protect stud holes not in use. They can be removed from plates with the Cover Plug Remover.

NEW

Quick·Point® Cover Plug Remover

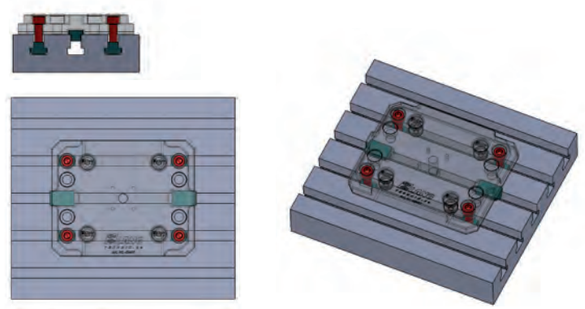
Item No.	Description	Price
45000-30	Grip with magnet	

Comfortable grip with magnet for removing steel plugs from the Quick·Point® plates.

Quick·Point® **Mounting Options**

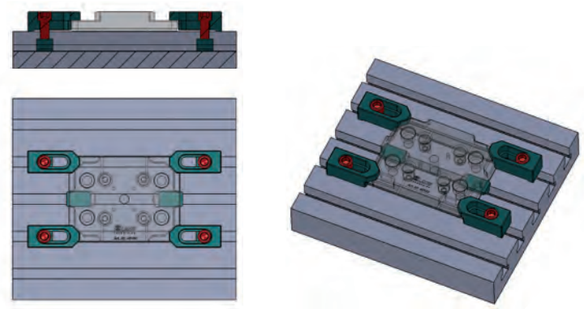
Mounting: via standard bores
Alignment: with keys

The standard Quick·Point® plates with the existing mounting bores are attached with nuts in the t-slots of the machine table. The plate will be aligned via keys. The bottom of the plate has 20H7 keyways.



Mounting: via clamps
Alignment: with keys

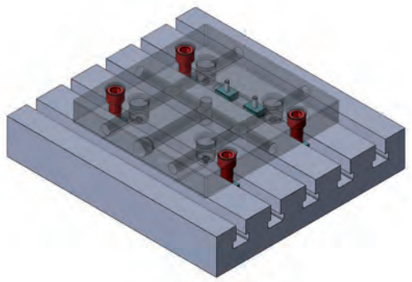
Some of the rectangular Quick·Point® plate sizes also have a version with clamping edges in addition to mounting bores. The clamping edges can be used to attach the plate with clamps to the machine table. The plate will be aligned via keyways.



Mounting: via custom mounting bores
Alignment: with keys

Each of the Quick·Point® plates is also available without mounting bores or clamping edges. This allows the modification of the plates to accomodate custom bores specific to the t-slot pattern of the machine table. In addition custom keyways can be machined into the underside of the plate (if necessary with threads for fixed attachment). These modifications can be done by LANG for an additional charge or by the customers themselves

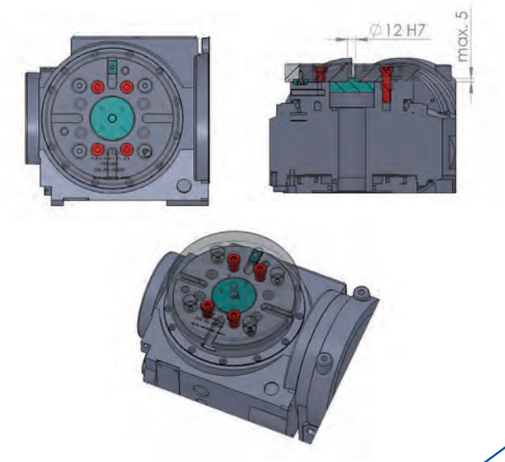
Information: Plates are case hardened to 57 HRC with a depth of 0.7 mm



Mounting: via custom mounting bores
Alignment: with keys and t-fittings

Round plates are best attached to the machine table with custom mounting bores and t-fittings. Ideally the concentric alignment is done via one t-fitting, which has on one side the measurement (12F5) of the center bore of the Quick·Point® plate and on the other side the measurement of the round machine table. It is enough to use an additional key on the underside of the Quick·Point® plate for the axial alignment.

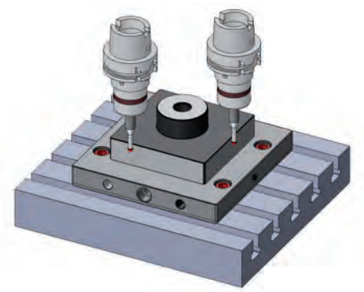
As an alternative to the t-fitting 2 keys can be used in each recess if the layout of the machine table allows it.



Quick·Point® **Alignment Options**

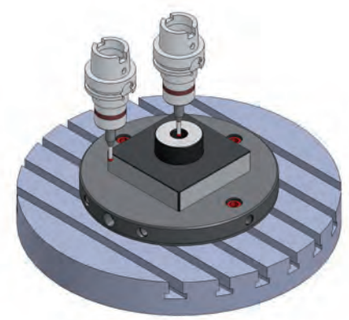
Mounting: via custom mounting bores
Alignment: with Quick·Point® gauges

The standard Quick·Point® plates with the existing mounting bores are attached with nuts in the t-slots of the machine table. The alignment is done with a highly precise Quick·Point® gauge. A probe can measure along the jig-ground sides of the gauge and the plate can be aligned accordingly.



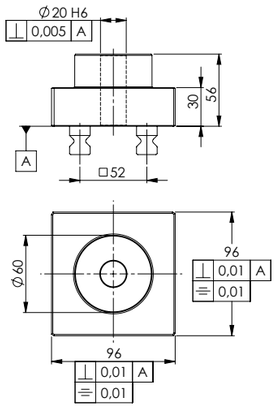
Mounting: via custom mounting bores
Alignment: with Quick·Point® gauges

The alignment can be done via the Quick·Point® gauge after the round plates are attached to the machine table with the custom bores. The probe measures along the jig-ground sides of the gauge to determine the axial aligment. The concentric alignment will be achieved with the inside diameter of the gauge.



Quick·Point® **Gauging Pallet**

Gauging pallet for quick and precise alignment of Quick·Point® plates. Recommended especially for rotary tables or chucks. Description on page 55.

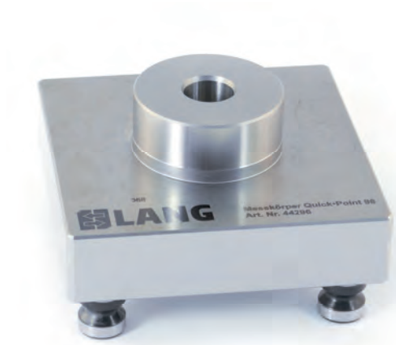


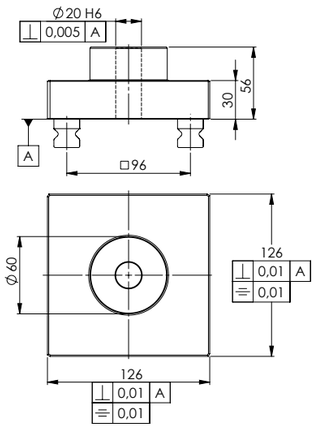
52

Gauging Pallet 52

Item No.	Dimensions	Weight	Price
44252	96 x 96 mm	2.6 kg	

For all Quick·Point® plates with grid system 52 mm. The total measuring length is 95 mm per face. Case-hardend and jig ground.





96

Gauging Pallet 96

Item No.	Dimensions	Weight	Price
44296	126 x 126 mm	4.2 kg	

For all Quick·Point® plates with grid system 96 mm. The total measuring length is 125 mm per face. Case-hardend and jig ground.

Quick·Point® **Alignment Gauge**

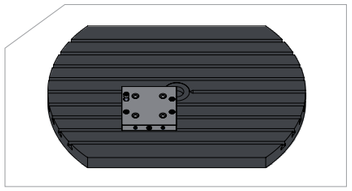
For easy and quick assembly of the Quick·Point® Grid Plates we recommend using the alignment gauge. A precise alignment and dimensional accuracy of the plates are guaranteed.

Alignment gauge for Quick·Point® Grid Plates

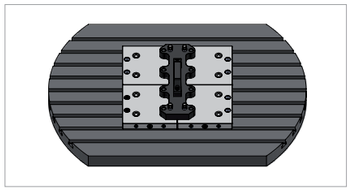
Item No.	Description	Weight	Price
44152	Alignment gauge 52	3.4 kg	
44196	Alignment gauge 96	6.5 kg	
44152-10	Alignment gauge 52 Leihgabe	-	
44196-10	Alignment gauge 96 for rent	-	

This highly precise gauge can be used for aligning Quick·Point® grid plates to each other by simply inserting the gauge in 2 or 4 plates and removing it again after tightening the mounting screws.

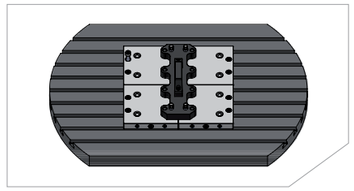
How it works:



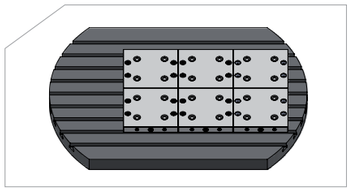
Placing the first Quick·Point® plate with the required mounting screws. These are easily applied and the Quick·Point® plate is aligned by probe or the Quick·Point® gauging pallet. Afterwards the fixing screws are tightened in the aligned position. Alternatively, the first Quick·Point® plate can also be provided with keyways, facilitating the alignment on the machine table.



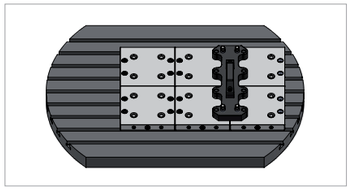
In the next step the three adjoining Quick·Point® plates are placed on the machine table and the alignment gauge is applied on all four Quick·Point® plates.



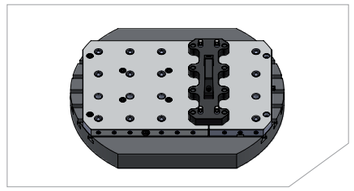
The outer accessible fixing screws of the three loose Quick·Point® plates are tightened.



If all four Quick·Point® plates are tightened the alignment gauge is taken off by the jackscrews. Next, the inner fixing screws of the three Quick·Point® plates are placed in and tightened.

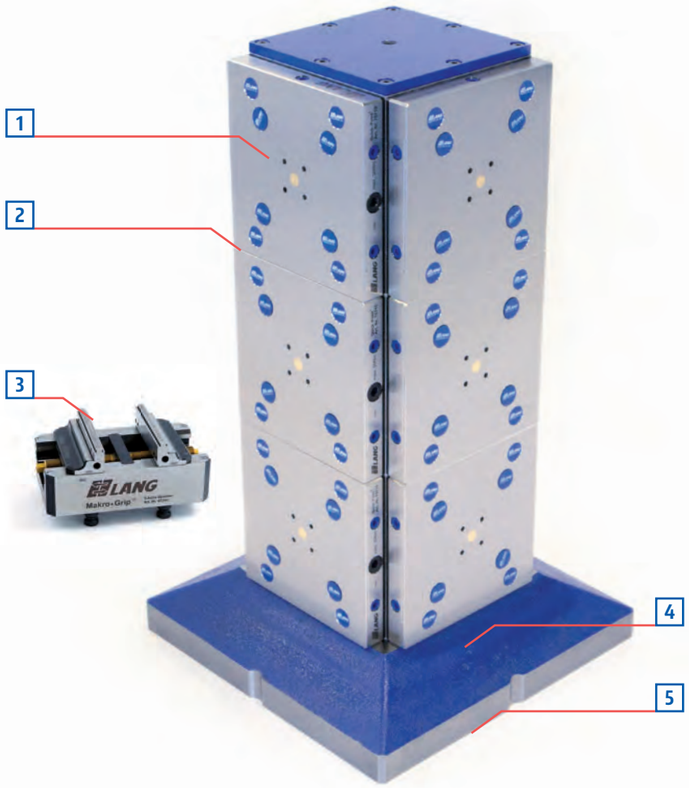


The alignment of the next Quick·Point® plates is done by the gauge synonymously.

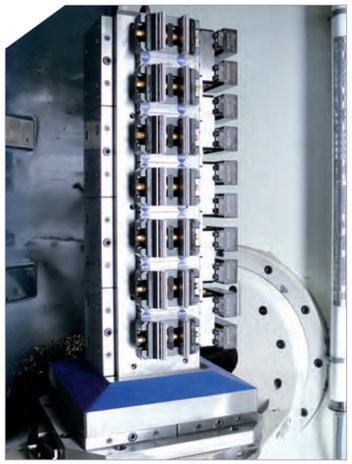


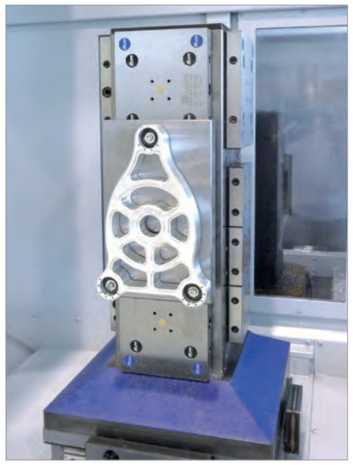
Our Quick·Point® Multi Grid Plates can also be aligned to each other using the alignment gauge.

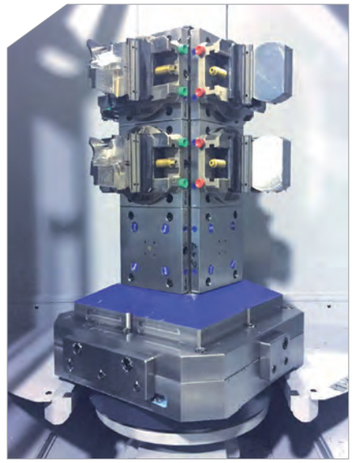
Quick·Tower – **The zero-point clamping system for horizontal machining centres**

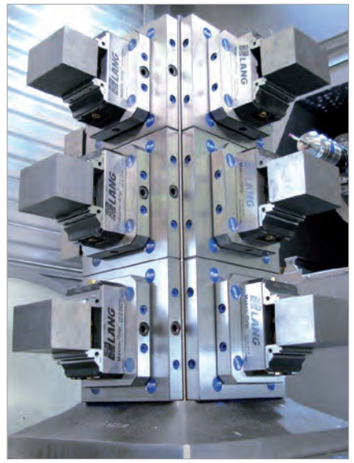


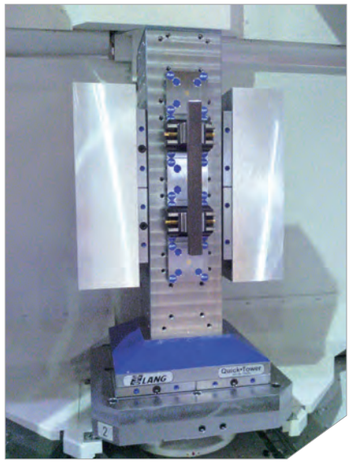
1. Quick·Point® Grid Plates 52 and 96 can be attached
2. Continuous zero-point grid on all four faces
3. Compatible with all LANG workholding devices
4. Stable and sturdy cast body
5. Mounting to the machine-tool table via 12 clamping studs onto Quick·Point® zero-point plates (e.g. 4-fold Grid Plate 96) or with base plates (more information on page 61)







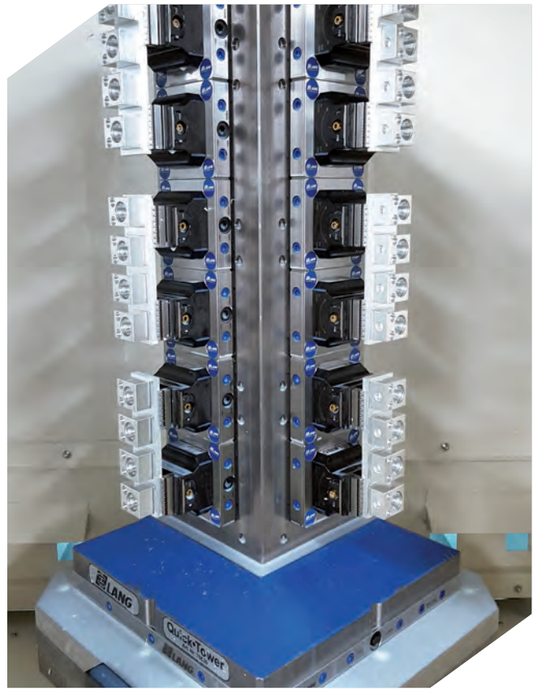




Different applications of the Quick·Tower showing single and serial parts with varying dimensions. When using Quick·Point® clamping studs in the workpiece the parts can also be clamped and processed directly in the tombstone's zero-point plates.

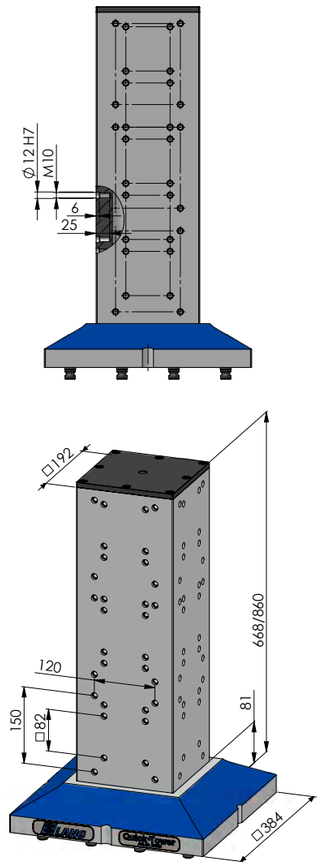
For mounting the Quick-Tower onto the machine-tool table there are basically three options:

- Quick·Point® zero-point clamping systems, e.g. 4x 45710 or 1x 45740 (see below)
- Quick·Tower sub-plate (see on page 163)
- Customised mounting bores in the Quick·Tower's base for direct assembly to the machine-tool table/pallet (price on request)



The 4-fold Grid Plate (#45740) is a precise and flexible mounting option for Quick·Towers which is also congruent with the tombstone's base. By actuating just one clamping screw the Quick·Tower is set-up and stripped down quickly and highly precise. You can find more information regarding the 4-fold Grid Plate on page 24.

Quick·Tower **Base Body**



Machined with plane parallelism of ± 0.02 mm

Grid of 150 x 120 mm is designed to mount Quick·Point® plates 75710.

Grid of 82 x 82 mm is designed to mount Quick·Point® plates 75600.

Quick·Tower Base Body

Item No.	Body Dimensions	Base Dimensions	Total height	Weight	Price
70650	192 x 192 mm	384 x 384 mm	668 mm	160 kg	
70850			860 mm	200 kg	

If you like to fix the tombstone directly onto the machine-tool table/pallet using its threads or slots just ask for an individual quotation.

Quick·Tower **Universal Base Plate**

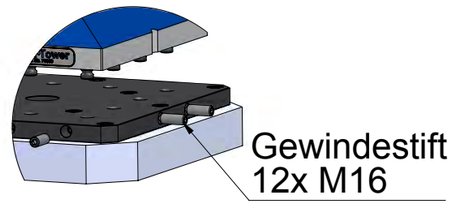
For utmost flexibility we offer two versions of base plates which serve as an interface between machine table and the Quick·Tower. This allows to utilise one standard Quick·Tower in different machine-tools and/or on different pallets. **The fixation of the Quick·Tower is done with 12x threaded pins M 16 that are located in the four lateral faces of the base plate and pull down the Quick·Tower strongly with Quick·Point® clamping studs. The alignment of the tombstone onto the base plate is realised with these studs as well.**

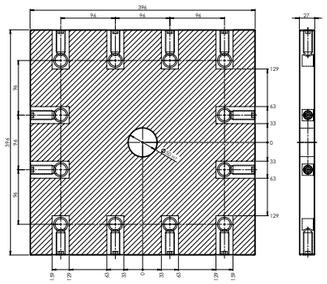
NEW

Assembly advice:

The sub plate can be aligned concentrically using the plate's Ø 50H7 through bore and the table's/pallet's centre bore accordingly. The axial alignment can be done by probing the outer faces or adding keyways for T-slot keys. The base plate is mounted to the table/pallet with DIN ISO 4762 cylinder screws.

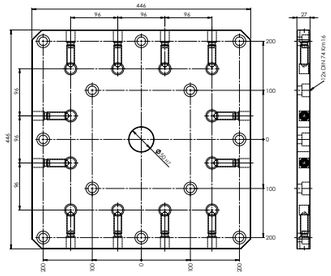
Finally the Quick·Tower is lifted into the base plate with a crane whereas the Quick·Point® clamping studs guarantee the precise alignment of the tombstone in the base plate. Nevertheless the lateral M 16 threaded pins should be tightened crosswise in order to prevent off-centre defects of the tombstone. Greasing the base plate and the machine-table may help to protect the components from corrosion.





Quick·Tower Universal Base Plate, without mounting bores

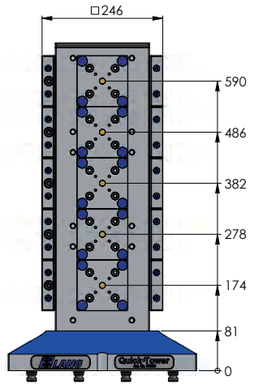
Item No.	Dimensions	Mounting Bores	Through bore	Price
70005	396 x 396 x 27 mm	-	Ø 50 H7	
70006	Set mounting bores according to customer's request			



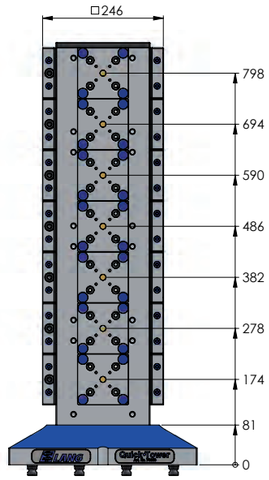
Quick·Tower Universal Base Plate, including mounting bores

Item No.	Dimensions	Mounting Bores	Through bore	Price
70008	446 x 446 x 27 mm	12x M 16, 200 mm pitch	Ø 50 H7	

13 x 52 mm grid on every face



Tower 70650, height 668 mm,
max. 5 pallets on each face



Tower 70850, height 860,
max. 7 pallets on each face

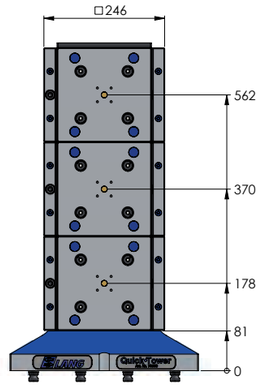
Ø 16 mm | 46/77 | ✓

Quick·Tower 52 Grid Plate

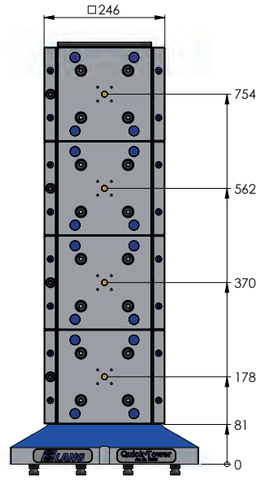
Item No.	Dimensions	Mounting Bores	Weight	Quantity	Price
75600	104 x 104 x 27 mm	82 x 82 mm	1.8 kg	1 - 10	
				11 - 25	
				26 - 49	
				> 50	

* Block pricing only applies for a purchase of Quick·Tower.
Included in delivery: 4 screws M 10 x 35, 2 bushings Ø 12 x 12 mm (Item No. 45000-09).

7 x 96 mm grid on every face



Tower 70650, height 668 mm,
max. 3 pallets on each face



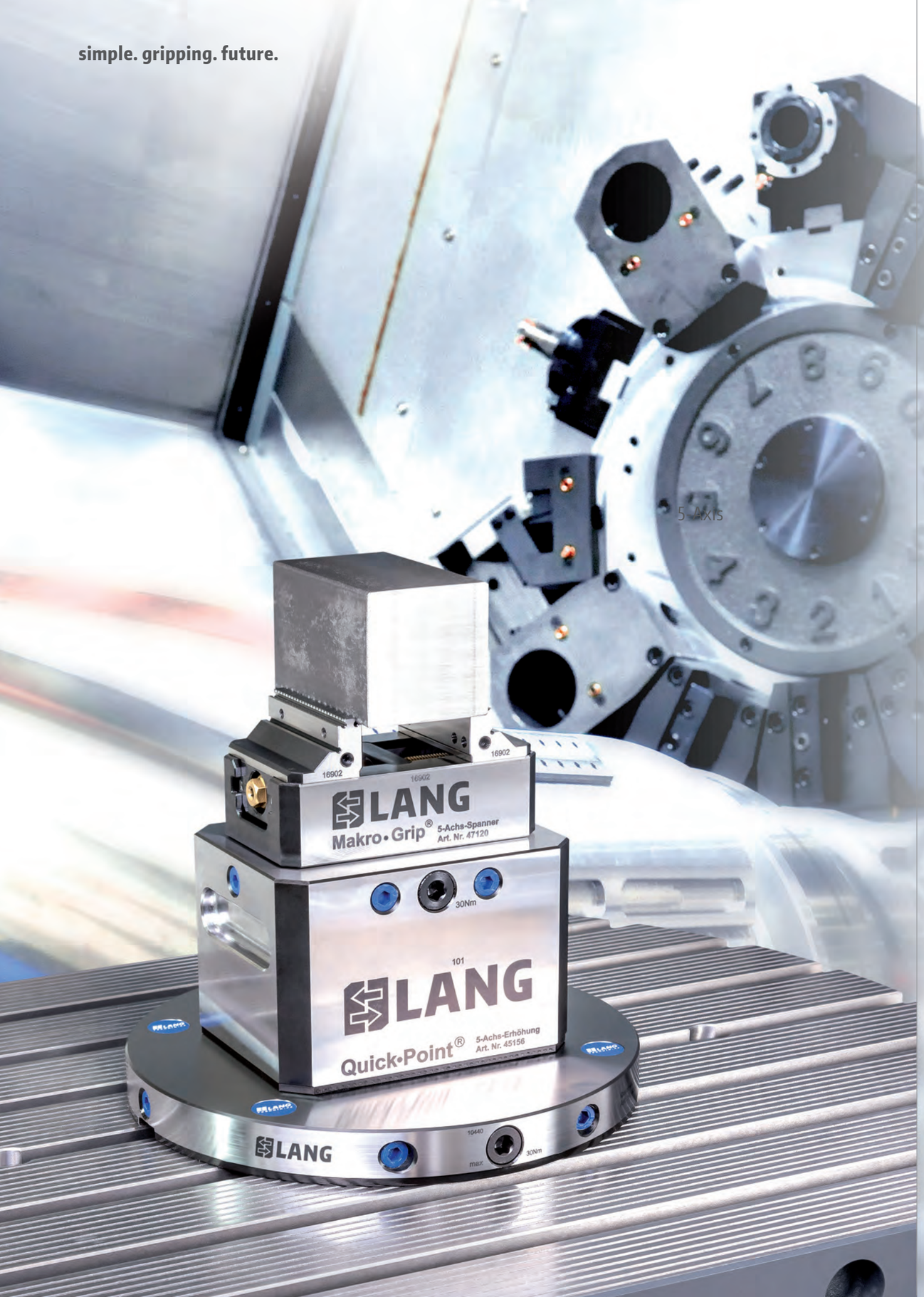
Tower 70850, height 860 mm,
max. 4 pallets on each face

Ø 20 mm | 125 | ✓

Quick·Tower 96 Grid Plate

Item No.	Dimensions	Mounting Bores	Weight	Quantity	Price
75710	192 x 192 x 27 mm	150 x 120 mm	7 kg	1 - 6	
				7 - 11	
				12 - 29	
				> 30	

* Block pricing only applies for a purchase of Quick·Tower.
Included in delivery: 4 screws M 10 x 35, 2 bushings Ø 12 x 12 mm (Item No. 45000-09).



STAMPING TECHNOLOGY - CLAMPING RAW PARTS

Engineering: As varied as the application tasks in the engineering industry are, as broad are the possible applications of our workholding products. The high reliability and innovation power combined with the simplicity and universal applicability provide not only advantages for large engineering companies, but also increase the efficiency of each supplier.

Makro·Grip®
Stamping Unit

WORKHOLDING
STAMPING TECHNOLOGY
THE ORIGINAL
AUTOMATION

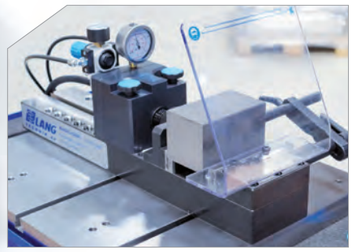
Benefits

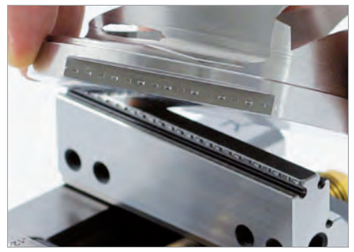
ENORMOUS MATERIAL SAVINGS

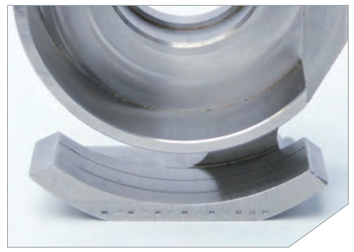
HIGHEST PROCESS RELIABILITY

INCREASED MILLING QUALITY

Applications







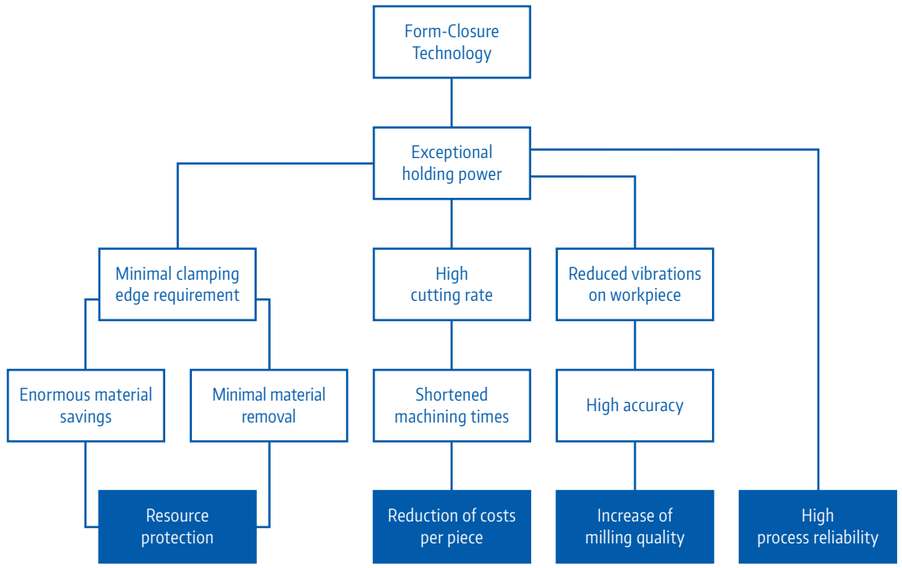
At a glance

- Patented form-closure technology
- External stamping of workpieces with up to 20t hydraulic pressure
- Minimal preparatory work required
- Tremendous material savings due to minimal clamping edge requirements

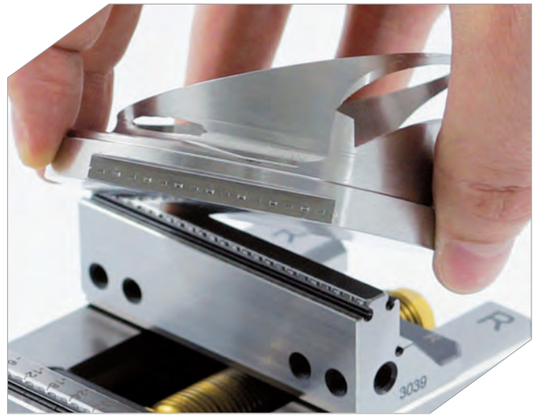
The **patented Form-Closure Technology** by LANG

The Original! Form-Closure Technology makes LANG clamping the very best in 5-axis machining. Form-Closure Technology guarantees maximum holding power with minimal clamping force. The following pages explain the stamping technique in detail and how it affects 5-face machining with the Makro·Grip® vice:

The cause and effect principle of Stamping and Form-Closure Technology:



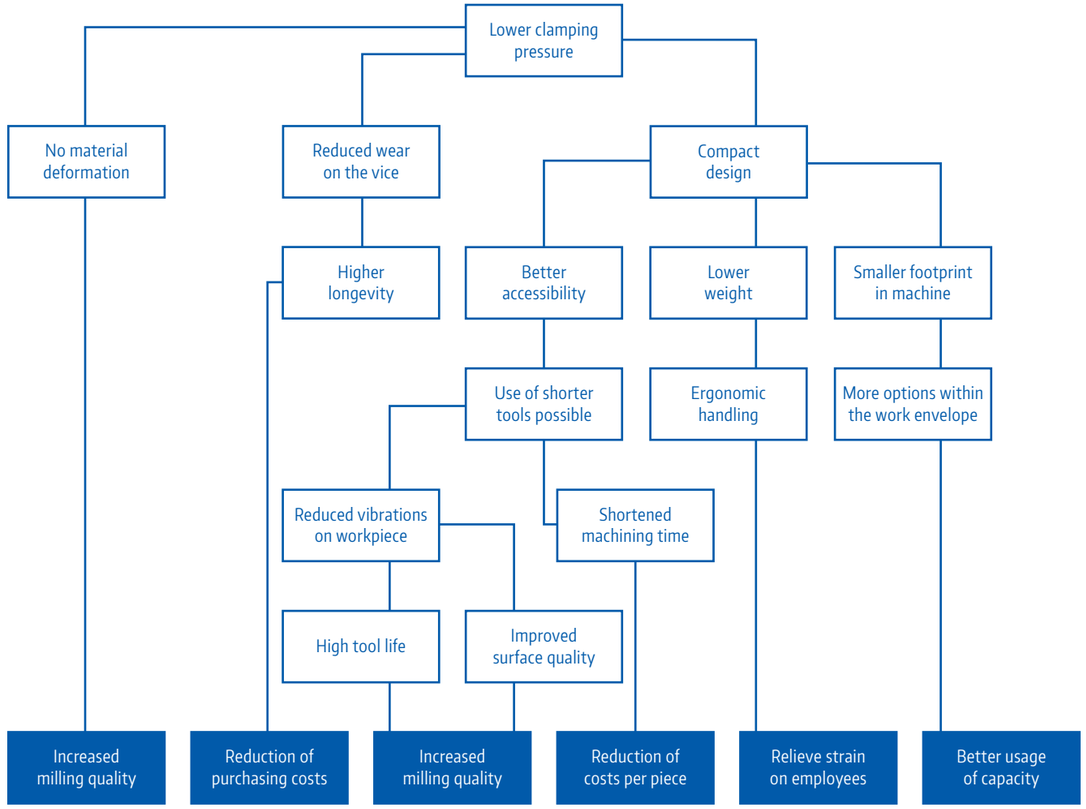
Makro·Grip® – The **compact 5-axis vice** with Form-Closure Technology



The external stamping of the workpiece relieves the 5-axis vice. While traditional machining vices with serrated teeth have to work double duty (1. indent the material, 2. hold the workpiece), the Makro·Grip® 5-axis vice's function is limited to only holding the workpiece.

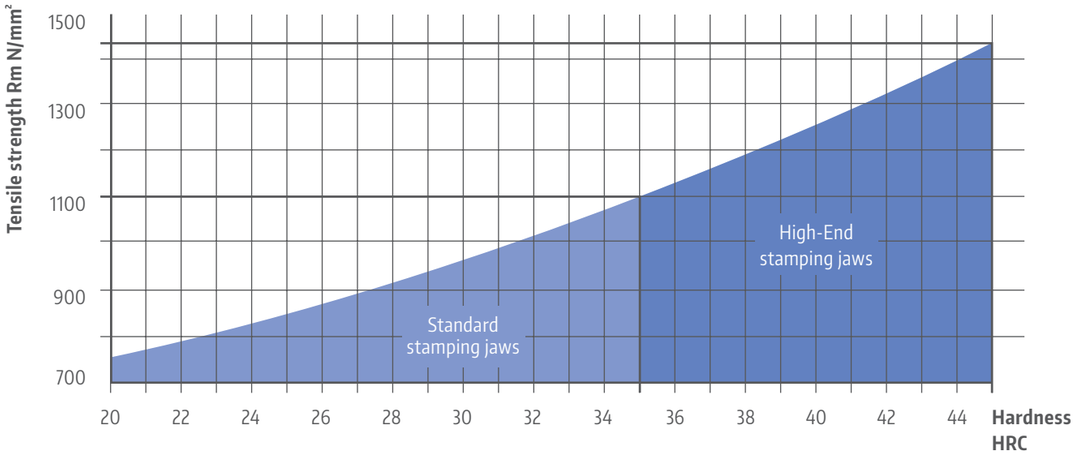
The compact build of the Makro·Grip® 5-axis vice is possible due to the requirement of much lower clamping forces. The advantages are shown over the following pages:

The cause and effect principle of the 5-axis vice:



A reliable wear-free clamping process for high-tensile materials!

In contrast to traditional machining vices, which clamp a workpiece with a maximim of 6 tons, Form-Closure Technology with external stamping adds the form-closure contour indents to the workpiece with up to 20 tons of hydraulic pressure. This allows you to clamp **even high-tensile materials up to 1500 N/mm² tensile strength** (e.g. Titanium and Inconel) reliably and virtually wear-free. Different material hardness requires different stamping jaws to extend longevity and guarantee safe clamping. Our standard jaws allow you to stamp workpieces up to 35 HRC while high-tensile materials up to 45 HRC require High-End stamping jaws.



Adjusting the stamping pressure and depth properly

Making a precise statement about the correct stamping pressure is relatively difficult due to various alloys (compositions of the material). The two major parameters are the workpiece width and its material. Basically we recommend to start always with low stamping pressure and then to slowly increase it incrementally until the right stamping depth is achieved.

With standard stamping jaws the correct stamping depth is reached when the control marks between the holding teeth have a depth of approx. 0.1 mm.

To increase longevity of the High-End stamping jaws for high-tensile materials, we recommend lower stamping pressure and accordingly less deep control marks than in materials with a tensile strength < 1.000 N/mm².

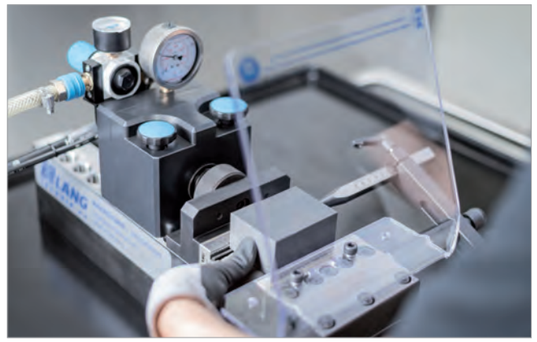
The following table should provide a rough orientation regarding the applied stamping pressure. Depending on the material and surface condition the pressure may vary substantially from this data!

Tensile strength - stamping pressure ratio

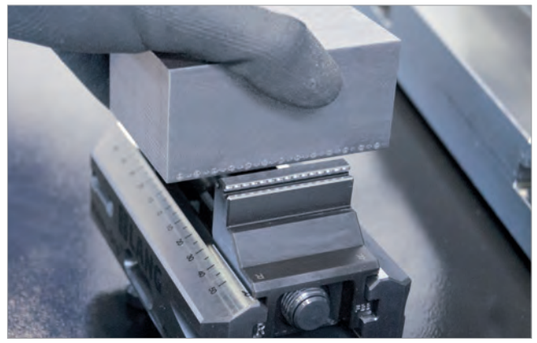
Tensile strength Rm	Length of blank (stamping width) ≤ 50 mm	Length of blank (stamping width) ≥ 126 mm
200 N/mm²	25 bar	50 bar
400 N/mm²	50 bar	100 bar
600 N/mm²	75 bar	150 bar
800 N/mm²	100 bar	200 bar
1000 N/mm²	125 bar	250 bar

Functional principle of the Stamping Technology: 5 seconds that revolutionise your machining processes!

1 Sawing of blank with minimum addition of clamping depth.

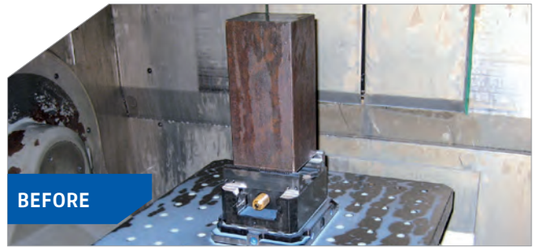


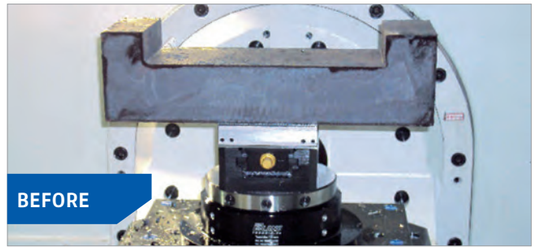
2 Stamping realised within 3–5 seconds.

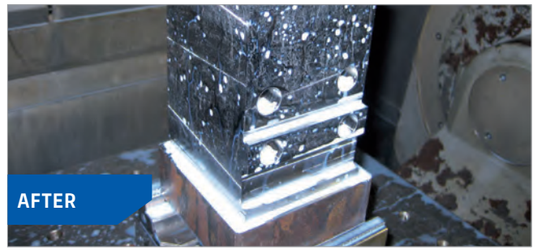


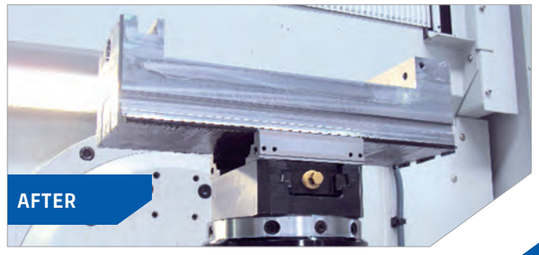
3 Correct stamping depth is reached when the control marks between indentations have a max. depth of 0.1 mm.

4 Secure holding power with low clamping force and a minimum clamping depth of only 3 mm.



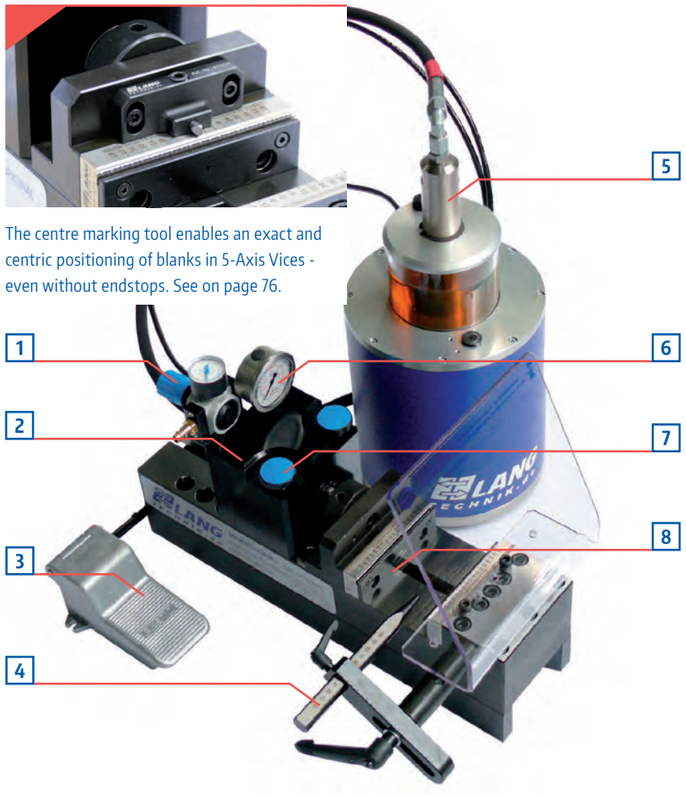






Makro·Grip® **Stamping Unit –** the ideal introduction to the Stamping Technology

The centre marking tool enables an exact and centric positioning of blanks in 5-Axis Vices - even without endstops. See on page 76.



1. Convenient adjustment of the stamping pressure
2. Robust steel hydraulic housing with integrated T-slot key
3. Operated pneumatically by hand or foot
4. Scaled endstop for quick positioning of blanks
5. Pneumatic-hydraulic power multiplier with visible oil-level display
6. Easily readable hydraulic pressure gauge
7. Quick adjustment of stamping width for different part sizes
8. Stamping jaws for all materials up to 35 HRC (45 HRC). Stamping force up to 20 tons

Makro-Grip® Stamping Unit for work benches

Scope of delivery:
- Stamping vice
- Stamping jaws with parallels, 3 mm
- Pneumatic-hydraulic power multiplier (1 - 360 bar)
- Pneumatic switch for hand or foot operation
- Gauging blocks for measuring wear of stamping teeth
- Scaled workpiece endstop
- Protection shield

Item no.	Type	Max. stamping range	Type of stamping jaws	Weight	Price
41200	Standard	245 mm	Standard stamping jaws for materials up to 35 HRC	76 kg	
41350	Extended	355 mm	Standard stamping jaws for materials up to 35 HRC	84 kg	
41200-HE	Standard	245 mm	High-End stamping jaws for materials up to 45 HRC	76 kg	
41350-HE	Extended	355 mm	High-End stamping jaws for materials up to 45 HRC	84 kg	

Stamping trolley with Makro-Grip® **Stamping Unit, standard**

NEW

1. Makro·Grip® Standard Stamping Unit with a stamping range up to 245 mm
2. T-slot plate can be retrofitted
3. Practical, rigid trolley for a flexible and mobile use
4. Broad space on the plastic tray that can be used e.g. for preparing vices or for depositing tools, etc.

Stamping trolley with Makro·Grip® Stamping Unit, standard

Scope of delivery:
- Stamping vice
- Stamping jaws with parallels, 3 mm
- Workshop trolley
- Pneumatic-hydraulic power multiplier (1 - 360 bar)
- Pneumatic switch for hand or foot operation
- Gauging blocks for measuring wear of stamping teeth
- Scaled workpiece endstop
- Protection shield

Item no.	Type	Max. stamping range	Type of stamping jaws	Weight	Price
41521	Standard	245 mm	Standard stamping jaws for materials up to 35 HRC	210 kg	
41521-HE			High-End stamping jaws for materials up to 45 HRC		

Stamping trolley with Makro·Grip® Stamping Unit, extended, on T-slot plate

NEW LOOK

1 Large stamping range up to 355 mm

2 Practical, rigid trolley for a flexible and mobile use

3 T-slot plate included allowing a second stamping unit to be retrofitted easily with marking bores or T-slots.

Stamping trolley with Makro·Grip® Stamping Unit, extended, on T-slot plate

Scope of delivery:
- Stamping vice
- T-slot plate 596 x 496 mm
- Stamping jaws with parallels, 3 mm
- Workshop trolley
- Pneumatic-hydraulic power multiplier (1 - 360 bar)
- Pneumatic switch for hand or foot operation
- Gauging blocks for measuring wear of stamping teeth
- Scaled workpiece endstop
- Protection shield

Item no.	Type	Max. stamping range	Type of stamping jaws	Weight	Price
41400	Extended	355 mm	Standard stamping jaws for materials up to 35 HRC	300 kg	
41400-HE			High-End stamping jaws for materials up to 45 HRC		
41140	Additional extended stamping vice for dual stamping		Standard stamping jaws for materials up to 35 HRC	50 kg	
41140-HE			High-End stamping jaws for materials up to 45 HRC		

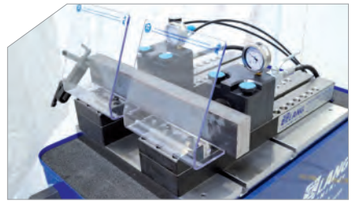
Stamping trolley with Makro·Grip® Dual Stamping Unit, extended, on T-slot plate

NEW LOOK

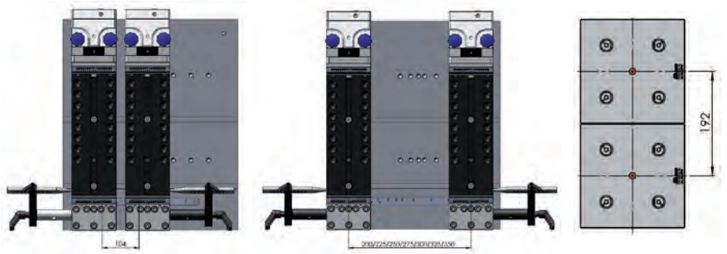
Stamping trolley with Makro·Grip® Dual Stamping Unit, extended, on T-slot plate

Scope of delivery:
- 2 stamping vices
- T-slot plate 596 x 496 mm
- 2 pairs of stamping jaws with parallels, 3 mm
- Workshop trolley
- Pneumatic-hydraulic power multiplier (1 - 360 bar)
- Pneumatic switch for hand or foot operation
- Gauging blocks for measuring wear of stamping teeth
- 2 Scaled workpiece endstop
- 2 Protection shields

Item no.	Type	Max. stamping range	Type of stamping jaws	Weight	Price
41402	Extended	2 x 355 mm	Standard stamping jaws for materials up to 35 HRC	350 kg	
41402-HE			High-End stamping jaws for materials up to 45 HRC		



The dual stamping unit is ideal for preparing long blanks with two stamping vices simultaneously and clamping these stamped parts accordingly in two 5-Axis Vices on the machine-tool table.



The distance of the two units can be adjusted individually using the T-slots or via a 25 mm pitch of marking bores.

Additionally there are marking bores to match the distance of Quick·Point® Grid Plates as well as the Makro·Grip® workholding devices.

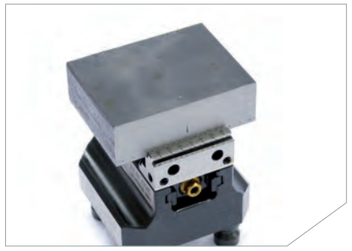
Centre Marking Tool for Stamping Unit

The centre marking tool plunges a notch above the stamping contour at the centre of the part. This marking allows the exact and centric positioning of parts in Makro·Grip® 5-Axis Vices without any endstops.

Centre Marking Tool

Item no.	Description	Price
41010	Centre marking tool	
41010-01	Spare marking stud	

The centre marking tool will be mounted to moveable jaw of the stamping unit with two M 6 x 14 screws (included).



Gauging Blocks for measuring wear of Stamping Jaws

Gauging Blocks for measuring wear of Stamping Jaws

Item no.	Description	Price
41020	3 pcs.	

Creating trust! Always the same clamping quality. To ensure consistent holding power in the clamping device, it is necessary to check the wear of the stamping teeth regularly.

Position one gauging block with slots on each side of the stamping jaws. Tighten the jaws by hand only, do not actuate the switch!

Make sure that the stamping teeth are placed in the grooves of the gauging blocks.

When the indicator block fits between the stamping contour, the jaws need to be sent in for reconditioning.

Stamping Jaws - Standard and High-End version

Standard Stamping Jaws with parallels

Item No.	For material	Clamping depth of workpiece	Price
41111	up to 35 HRC	3 mm	

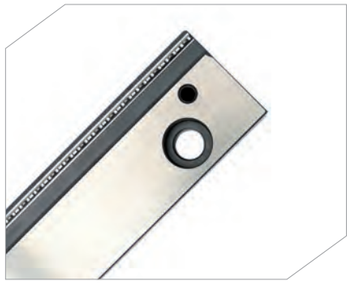
Standard stamping jaws for all materials up to 35 HRC.

High-End Stamping Jaws with parallels

Item No.	For material	Clamping depth of workpiece	Price
41112	up to 45 HRC	3 mm	

High-End stamping jaws for all high-tensile materials up to 45 HRC.

Reconditioning Stamping Jaws



Reconditioning Stamping Jaws

Item No.	Description	Price
41111-01	Standard stamping jaws	
41112-01	High-End stamping jaws	

When the stamping teeth are worn out the jaws can be reconditioned up to 6 times. During every reconditioning process the total thickness will be reduced about 0.5 mm (allowed minimum thickness of jaw: 15 mm). In order to maintain the original thickness of 18 mm we will supply suitable shims when returing the jaws.

In order to bridge the time of the reconditioning process we suggest keeping a second pair of stamping jaws in reserve!

Makro·Grip®
5-Axis Vice

WORKHOLDING
STAMPING TECHNOLOGY
THE ORIGINAL
AUTOMATION

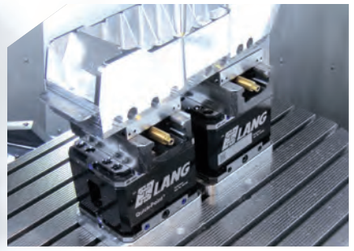
Benefits

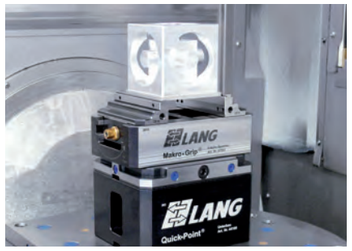
HIGHEST HOLDING POWER

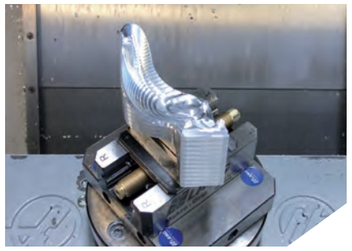
GUARANTEED PROCESS SAFETY

BEST ACCESSIBILITY

Applications







At a glance

- Best accessibility for 5-face machining operations
- Exceptional holding power with lowest clamping forces due to the patented stamping technology
- High repeat accuracy for inserting workpieces without any endstops
- Easy and flexible handling due to lightweight vices

Compact and unmatched holding power for the **5-face machining** of blanks

1. Reversible jaws equipped with double-sided holding teeth contour (same toothing for all types of vices, 3 mm clamping height) and additional clamping support for non-stamped parts
2. Centring accuracy ± 0.02 mm
3. Rigid and sturdy base - but still lightweight and handy
4. Threads for mounting individual add-on jaws, parallels or endstops
5. Double guided jaws
6. Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system

The reversible jaws are changed over within one minute. A larger clamping range is achieved and interferences are eliminated.

To keep the spindle free of chips and debris we offer spindle covers made of plastic or foam. Please see pages 84, 88, 92.

Technical specifications and compatibility

You will find icons on the specific product pages to make it more user-friendly and to highlight the technical specifications and the compatibility of our products:

Grid system: Pitch of the zero-point system

Torque: Maximum allowed torque

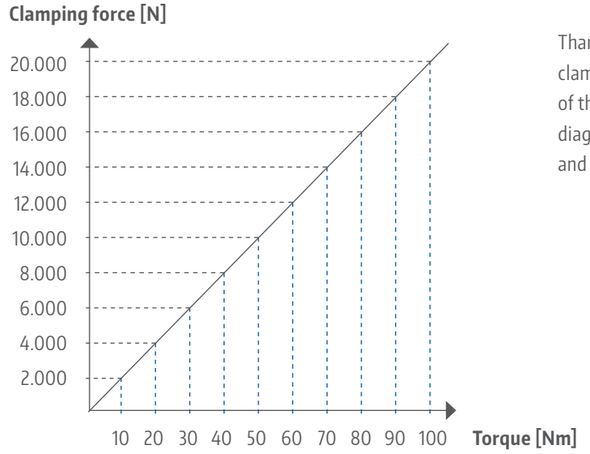
Centring accuracy: Centring tolerances of vices

Clamping stud size: Diameter of the clamping studs

Clamping force: Clamping force at maximum torque

Automatable: Automation interface included

Form-Closure Technology



Thanks to the form-closure 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 clamping pressure and the resulting clamping force.

Using a torque wrench

For a reliable and safe clamping process, we recommend the use of a conventional torque wrench.

Cordless Drill Attachment

Assembling aid for Makro·Grip® 77 and 125

Cordless Drill Attachment

Item No.	For	Price
47005	internal hexagon 5 mm	

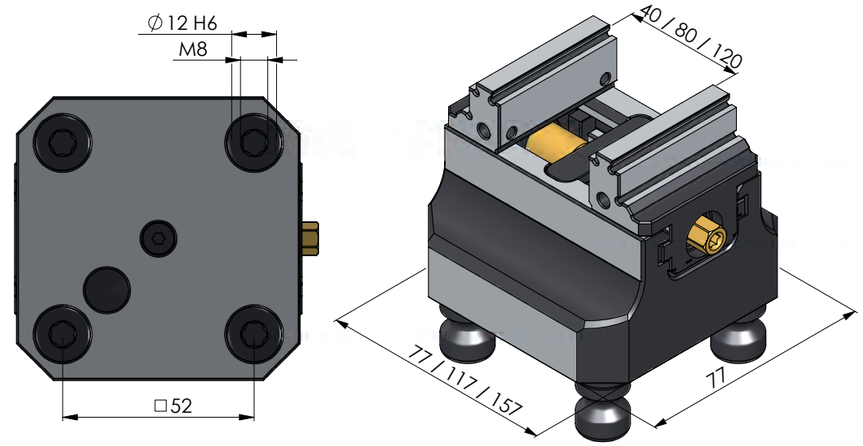
The cordless drill attachment is used to achieve centring accuracy of the jaws easier when exchanging them, especially with longer vice bases. You will also speed-up the exchange or reversal of jaws by using a cordless drill.

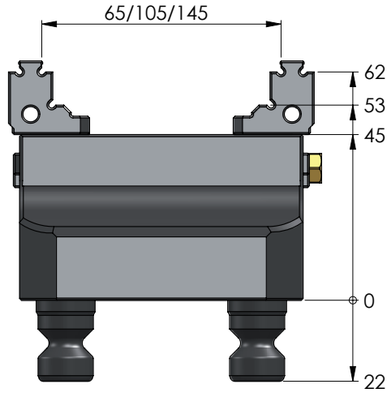
Makro·Grip® **5-Axis Vice 46**

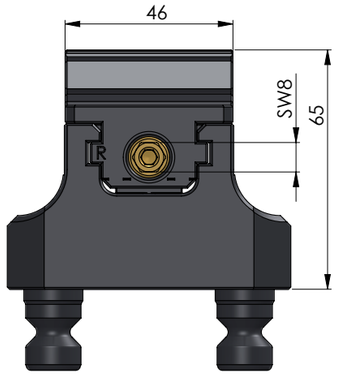
52 | Ø 16 mm | max. 30 Nm | max. 6000 N | ± 0,02 mm

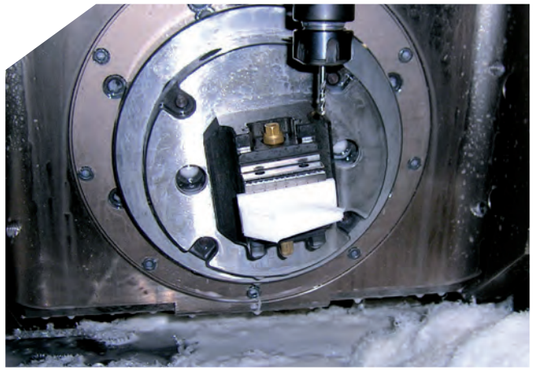
Makro·Grip® 5-Axis Vice 46

Item No.	Base length	Clamping range	Weight	Price
47065	77 mm	0 - 65 mm	1.7 kg	
47105	117 mm	0 - 105 mm	2.5 kg	
47145	157 mm	0 - 145 mm	3.3 kg	







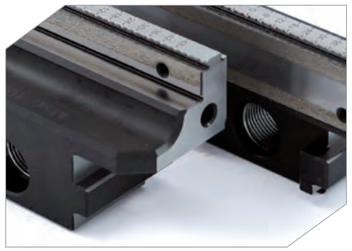


Makro·Grip® **46 Spare Parts & Accessories**

Spare jaws for Makro·Grip® 5-Axis Vice 46

Item No.	For	Weight	Quantity	Price
47046-20	all Makro·Grip® 46	0.3 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.



Tungsten-Carbide-Coating for Makro·Grip® 46 jaws

Item No.	For	Quantity	Price
45046-17	all Makro·Grip® 46	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.

Spare Spindle + Centre Piece for Makro·Grip® 5-Axis Vice 46

Item No.	For	Weight	Price
4046082	47065	0.08 kg	
4046122	47105	0.10 kg	
4046162	47145	0.12 kg	

Threaded spindle with low-wear TIN coating. Including centre piece and dowel pins.

Foam Spindle Covers for Makro·Grip® 5-Axis Vice 46

Item No.	Material	Quantity	Price
47046-80	Foam	10 pcs.	

The foam covers are placed on the spindle between the opened jaws. Upon tightening the vice, the foam is almost fully compressed returning to its original size on release.

Optionally available jaws

Avanti Base Jaws for Makro·Grip® 5-Axis Vice 46

Item No.	Dimensions	Weight	Quantity	Price
44461	55 x 36 mm	0.5 kg	1 pair	

The flexible quick jaw exchange system Avanti can be used for clamping profile parts and complements the raw part machining with Makro·Grip® gripping jaws perfectly.

More information on page 102.
Suitable add-on jaws can be found on page 105.

Profile Clamping Jaws for Makro·Grip® 5-Axis Vice 46

Item No.	Dimensions	Weight	Quantity	Price
47469	46 x 21 x 20 mm	0.4 kg	1 pair	

Sufficient steel body for optimised profile milling. Profile clamping jaws are mounted integrally on the vice. The guideways are hardened, whereas the profile block is soft.

Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 46

When assembling this kit the 5-Axis-Vice will be transformed into a dual clamping vice for processing two or more parts simultaneously.

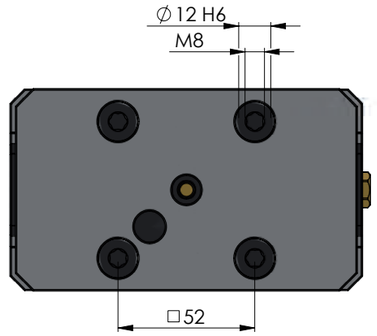
More information on page 94.

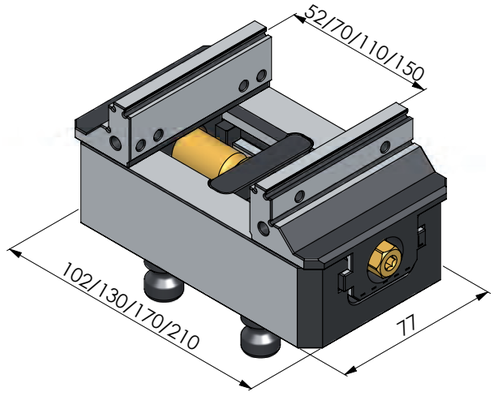
Makro·Grip® **5-Axis Vice 77**

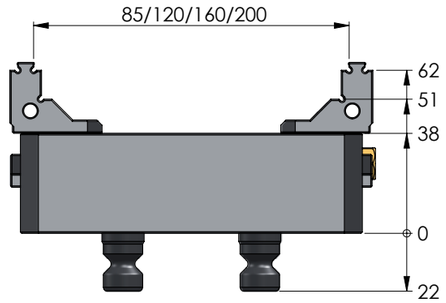
52 | Ø 16 mm | max. 70 Nm | max. 14000 N | ± 0,02 mm

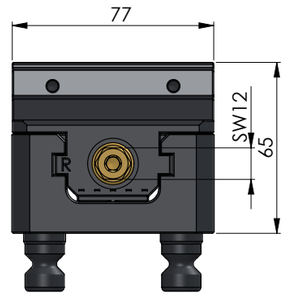
Makro·Grip® 5-Axis Vice 77

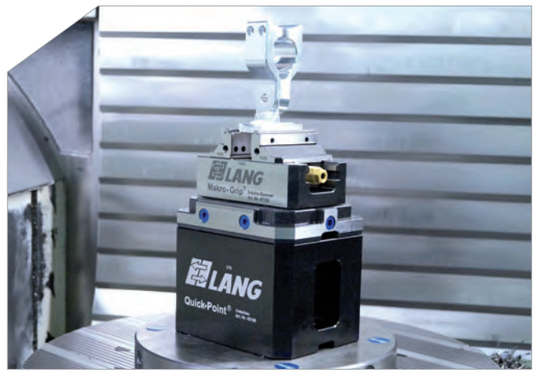
Item No.	Base length	Clamping range	Weight	Price
47085	102 mm	0 - 85 mm	2.7 kg	
47120	130 mm	0 - 120 mm	3.1 kg	
47160	170 mm	0 - 160 mm	3.7 kg	
47200	210 mm	0 - 200 mm	4.4 kg	

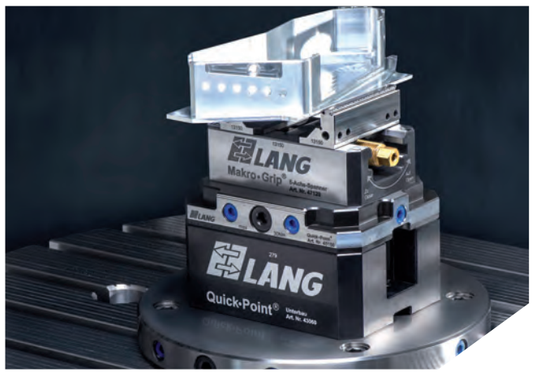










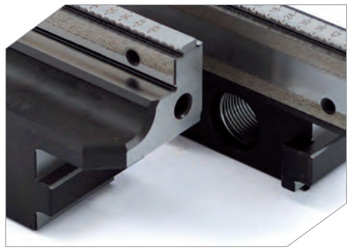


Makro·Grip® **Spare Parts & Accessories**

Spare jaws for Makro·Grip® 5-Axis Vice 77

Item No.	For	Weight	Quantity	Price
47085-20	47085	0.8 kg	1 pair	
47077-20	47120, 47160, 47200, 46160			

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.



Tungsten-Carbide-Coating for Makro·Grip® 77 jaws

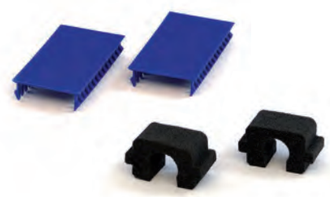
Item No.	For	Quantity	Price
45077-17	all Makro·Grip® 77	per pair	

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.

Spare Spindle + Centre Piece for Makro·Grip® 5-Axis Vice 77

Item No.	For	Weight	Price
4077102	47085	0.18 kg	
4077135	47120	0.24 kg	
4077175	47160	0.28 kg	
4077215	47200	0.34 kg	

Threaded spindle with low-wear TIN coating. Including centre piece and dowel pins.



Foam Spindle Covers for Makro·Grip® 5-Axis Vice 77

Item No.	Material	Field of application	Quantity	Price
47077-70	Plastic	Batch production	10 pcs.	
47077-80	Foam	Single piece production		

The foam covers are placed on the spindle between the opened jaws. Upon tightening the vice, the foam is almost fully compressed returning to its original size on release. Plastic covers can be trimmed to the respective clamping range.

Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 77

When assembling this kit the 5-Axis-Vice will be transformed into a dual clamping vice for processing two or more parts simultaneously.

More information on page 94.

Optionally available jaws

Avanti Base Jaws for Makro·Grip® 5-Axis Vice 77

Item No.	Dimensions	Weight	Quantity	Price
44771	77 x 57 mm	1.5 kg	1 pair	

The flexible quick jaw exchange system Avanti can be used for clamping profile parts and complements the raw part machining with Makro·Grip® gripping jaws perfectly.

More information on page 102.
Suitable add-on jaws can be found on page 107.

Profilo Base Jaws for Makro·Grip® 5-Axis Vice 77

Item No.	Dimensions	Weight	Quantity	Price
49771	112 x 46 mm	1.5 kg	1 pair	

Highly flexible base jaws for various clamping applications such as profile clamping jaws or self-made add-on jaws.

More information on page 110.
Suitable add-on jaws can be found on page 112.

Vario·Tec Jaws for Makro·Grip® 5-Axis Vice 77

Item No.	Weight	Quantity	Price
42077	1.3 kg	1 Set (2 pin jaws + 2 carrier jaws)	

The well-established positioning and resting system is now available for regular Makro·Grip® 5-Axis Vices.

More information on page 116.

Profile Clamping Jaws for Makro·Grip® 5-Axis Vice 77

Item No.	Dimensions	Weight	Quantity	Price
47779	77 x 35 x 30 mm	1.6 kg	1 pair	

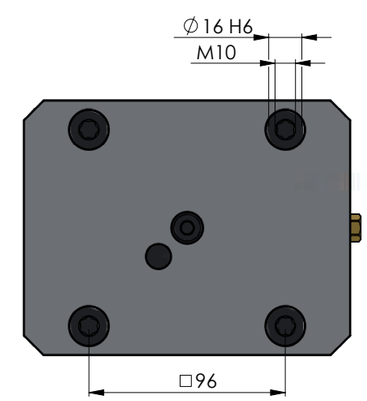
Sufficient steel body for optimised profile milling. Profile clamping jaws are mounted integrally on the vice. The guideways are hardened, whereas the profile block is soft.

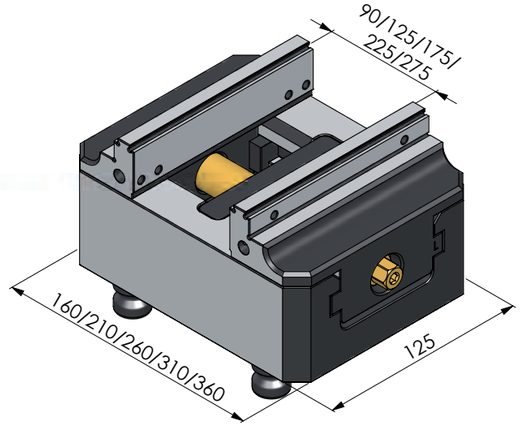
Makro·Grip® **5-Axis Vice 125**

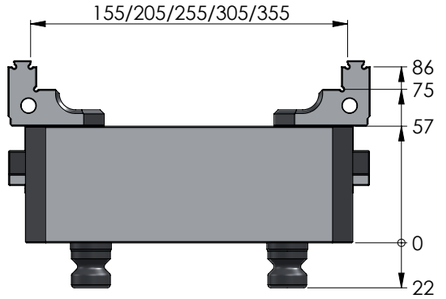
96 | Ø 20 mm | max. 100 Nm | max. 20000 N | ± 0,02 mm

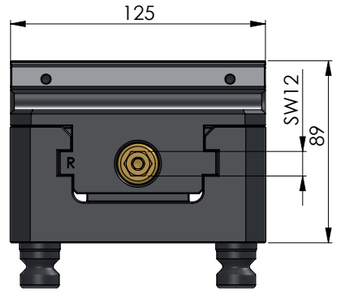
Makro·Grip® 5-Axis Vice 125

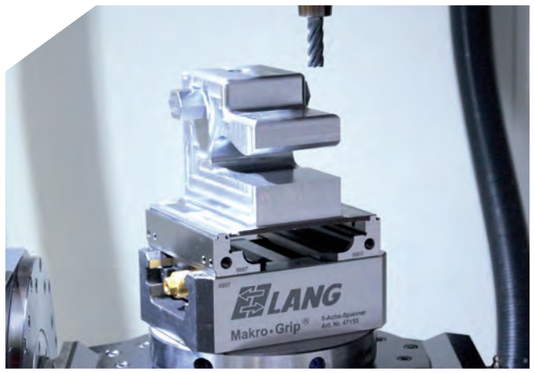
Item No.	Base length	Clamping range	Weight	Price
47155	160 mm	0 - 155 mm	9.0 kg	
47205	210 mm	0 - 205 mm	10.9 kg	
47255	260 mm	0 - 255 mm	12.8 kg	
47305	310 mm	0 - 305 mm	15.2 kg	
47355	360 mm	0 - 355 mm	17.6 kg	

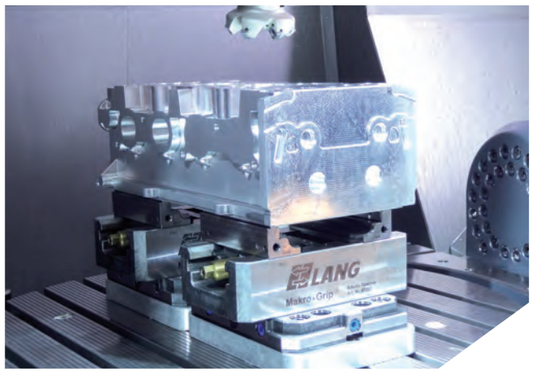










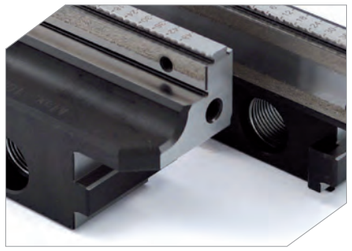


Makro·Grip® 125 Spare Parts & Accessories

Spare jaws for Makro·Grip® 5-Axis Vice 125

Item No.	For	Weight	Quantity	Price
47125-20	all Makro·Grip® 125	2.7 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.



Tungsten-Carbide-Coating for Makro·Grip® 125 jaws

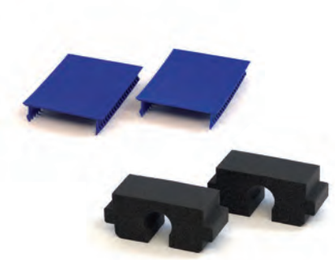
Item No.	For	Quantity	Price
45125-17	all Makro·Grip® 125	per pair	

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.

Spare Spindle + Centre Piece for Makro·Grip® 5-Axis Vice 125

Item No.	For	Weight	Price
4025165	47155	0.54 kg	
4025215	47205	0.66 kg	
4025265	47255	0.76 kg	
4025315	47305	0.86 kg	
4025365	47355	0.98 kg	

Threaded spindle with low-wear TIN coating. Including centre piece and dowel pins.



Spindle Covers for Makro·Grip® 5-Axis Vice 125

Item No.	Material	Field of application	Quantity	Price
47125-70	Plastic	Batch production	10 pcs.	
47125-80	Foam	Single piece production		

The foam covers are placed on the spindle between the opened jaws. Upon tightening the vice, the foam is almost fully compressed returning to its original size on release. Plastic covers can be trimmed to the respective clamping range.

Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 125

When assembling this kit the 5-Axis-Vice will be transformed into a dual clamping vice for processing two or more parts simultaneously.

More information on page 94.

Optionally available jaws

Avanti Base Jaws for Makro·Grip® 5-Axis Vice 125

Item No.	Dimensions	Weight	Quantity	Price
44251	125 x 69 mm	3.6 kg	1 pair	

The flexible quick jaw exchange system Avanti can be used for clamping profile parts and complements the raw part machining with Makro·Grip® gripping jaws perfectly.

More information on page 102.
Suitable add-on jaws can be found on page 109.

Profilo Base Jaws for Makro·Grip® 5-Axis Vice 125

Item No.	Dimensions	Weight	Quantity	Price
49251	160 x 57 mm	4.0 kg	1 pair	

Highly flexible base jaws for various clamping applications such as profile clamping jaws or self-made add-on jaws.

More information on page 110.
Suitable add-on jaws can be found on page 113.

Vario·Tec Jaws for Makro·Grip® 5-Axis Vice 125

Item No.	Weight	Quantity	Price
42125	4.8 kg	1 Set (2 pin jaws + 2 carrier jaws)	

The well-established positioning and resting system is now available for regular Makro·Grip® 5-Axis Vices.

More information on page 116.

Profile Clamping Jaws for Makro·Grip® 5-Axis Vice 125

Item No.	Dimensions	Weight	Quantity	Price
47259	125 x 47 x 40 mm	5.0 kg	1 pair	

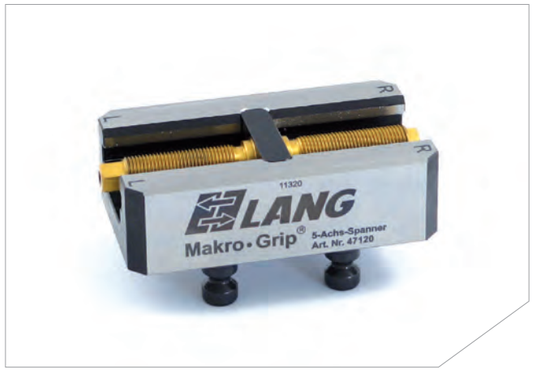
Sufficient steel body for optimised profile milling. Profile clamping jaws are mounted integrally on the vice. The guideways are hardened, whereas the profile block is soft.

Makro·Grip® **Dual Clamping Vice –** Retrofitting Kit for 5-Axis Vices

Scope of delivery: Centre jaw with 2-sided tooth contour along with the spindle. With a built in override, it is possible to clamp workpieces securely that have up to 2 mm difference (cutting tolerance) in length!

To increase the work area between the workpieces (which allows for a larger diameter tool size to be used) we offer a wider (27 mm) centre jaw for the 77 mm and 125 mm vices.

Transform your Makro·Grip® 5-Axis vice into a Dual Clamping Vice within a few seconds!



To remove the Makro·Grip® jaws from the base unit, unscrew the jaws using an Allen key.

Flip base unit and remove the centre screw with an Allen key.

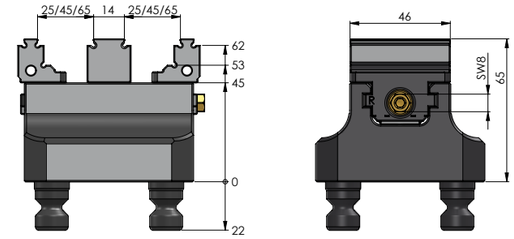
Remove spindle and centre piece. (If necessary use a mallet and drift punch.)

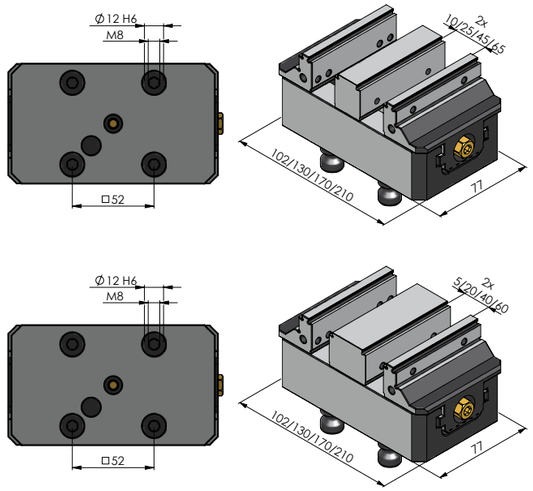
Insert the centre jaw + spindle and tighten the screw on the bottom side.

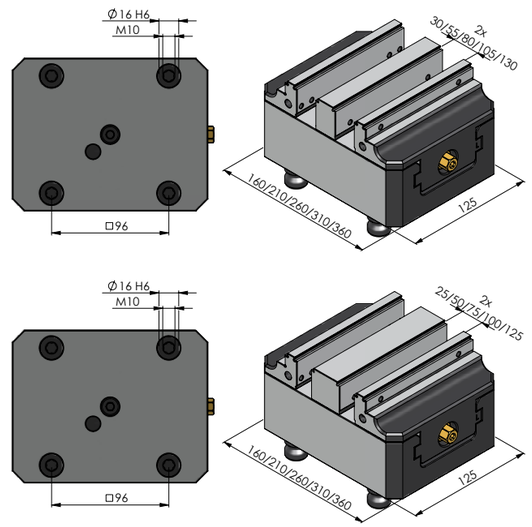
Assemble the Makro·Grip® jaws back onto the base. You are able to use your Makro·Grip® Vice as a dual vice now.

Makro·Grip® **Dual Clamping Vice Kits**

For retrofitting existing Makro·Grip® 5-Axis Vice to Dual Clamping Vices.







Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 46

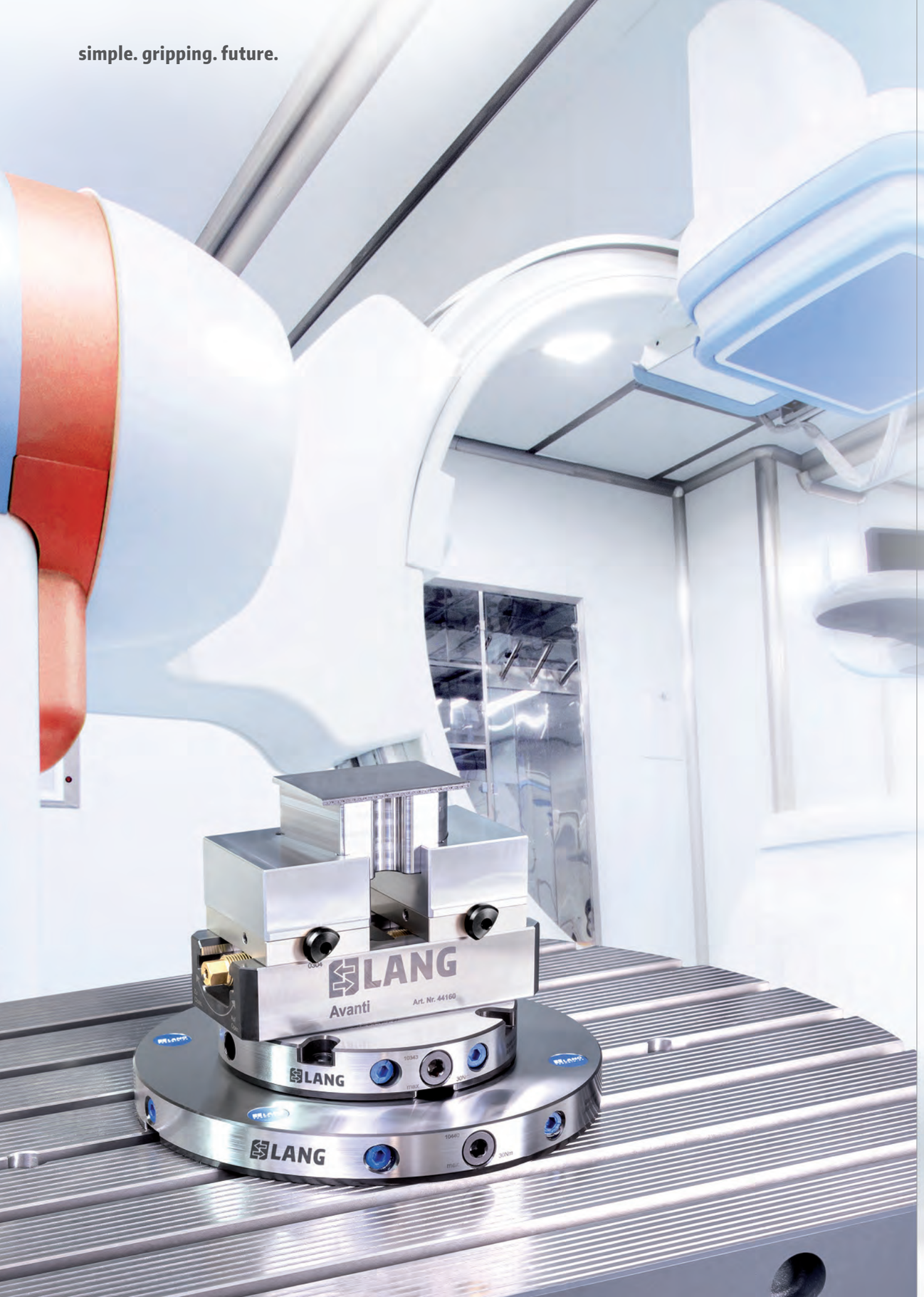
Item no.	For Makro·Grip®	Centre jaw width	Spindle length	Clamping range	Price
47065-TG	47065	14 mm	82 mm	2 x 25 mm	
47105-TG	47105	14 mm	122 mm	2 x 45 mm	
47145-TG	47145	14 mm	162 mm	2 x 65 mm	

Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 77

Item no.	For Makro·Grip®	Centre jaw width	Spindle length	Clamping range	Price
47085-TG17	47085	17 mm	102.5 mm	2 x 35 mm	
47085-TG27		27 mm		2 x 30 mm	
47120-TG17	47120	17 mm	135 mm	2 x 50 mm	
47120-TG27		27 mm		2 x 45 mm	
47160-TG17	47160	17 mm	175 mm	2 x 70 mm	
47160-TG27		27 mm		2 x 65 mm	
47200-TG17	47200	17 mm	215 mm	2 x 90 mm	
47200-TG27		27 mm		2 x 85 mm	

Centre Jaw + Spindle for Makro·Grip® 5-Axis Vice 125

Item no.	For Makro·Grip®	Centre jaw width	Spindle length	Clamping range	Price
47155-TG17	47155	17 mm	165 mm	2 x 65 mm	
47155-TG27		27 mm		2 x 60 mm	
47205-TG17	47205	17 mm	215 mm	2 x 90 mm	
47205-TG27		27 mm		2 x 85 mm	
47255-TG17	47255	17 mm	265 mm	2 x 115 mm	
47255-TG27		27 mm		2 x 110 mm	
47305-TG17	47305	17 mm	315 mm	2 x 140 mm	
47305-TG27		27 mm		2 x 135 mm	
47355-TG17	47355	17 mm	365 mm	2 x 165 mm	
47355-TG27		27 mm		2 x 160 mm	



CONVENTIONAL WORKHOLDING

Medical Industry: Reliable clamping of small, delicate parts, as well as cost-effective machining of complex workpieces made of expensive materials are the key issue in manufacturing processes in the medical industry. The full compatibility and modularity of our product range ensure safe and appropriate clamping solutions for all these tasks.

Avanti
Quick Jaw Exchange System

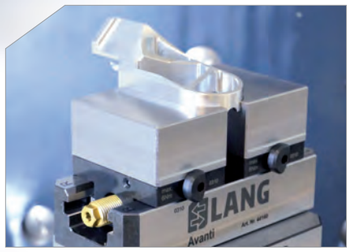
Benefits

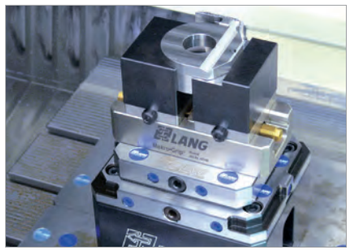
SET-UP TIME SAVINGS

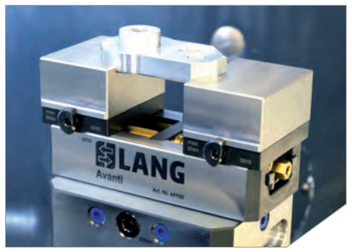
VERSATILITY

FLEXIBILITY

Applications







At a glance

- Ideal for challenging second operation tasks
- Suited for almost any milling job
- High savings in set-up time thanks to quick jaw exchange

Avanti **Quick Jaw Exchange System**

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

1 Precise positioning of jaws thanks to patented clamping interface

2 Centring accuracy ± 0.02 mm

3 Double guided jaws

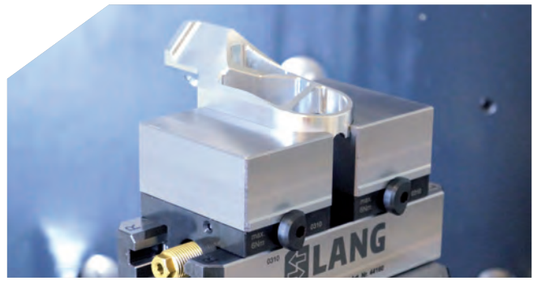
4 Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system

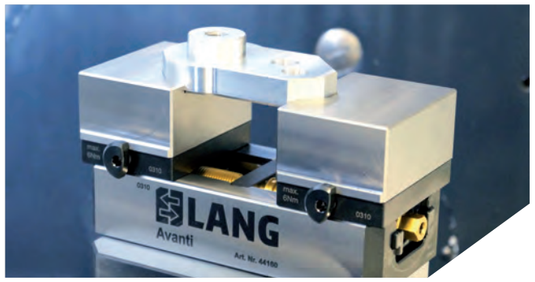
5 Add-on jaws available in steel or aluminium

6 Changing the jaws rapidly with only one screw (hexagon socket 5 mm for Avanti 46/77 and 6 mm for Avanti 125)

7 Rigid and sturdy base - but still lightweight and handy

Avanti Quick Jaw Exchange System applications





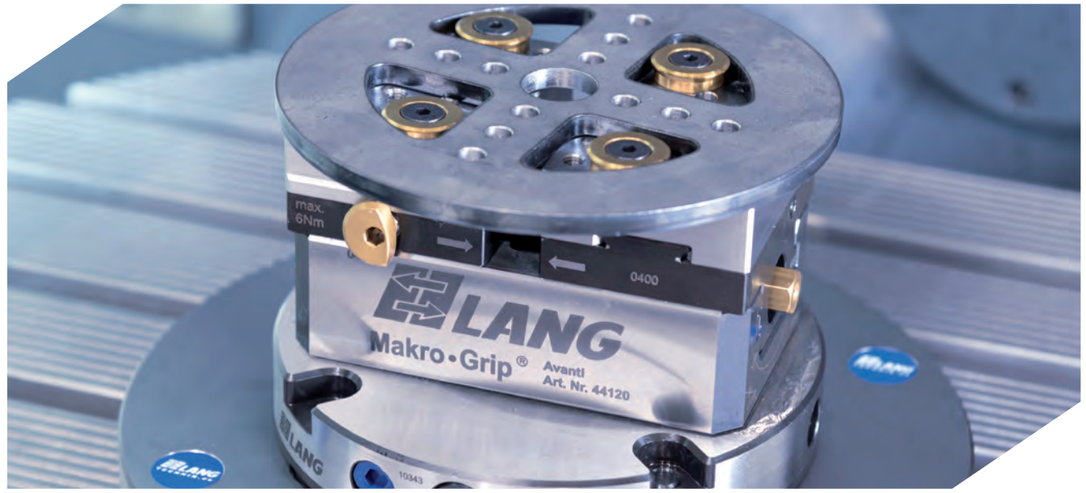
Independent from the alignment of the workpiece a great variety of profiles can be clamped at best accessibility with the patented quick jaw exchange system. By adding contours on both sides of the jaws and through their maximum usable volume add-on jaws can be used twice.

How to prepare add-on jaws:

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

We suggest using a clamping block, clamped between the top jaws while machining the workpiece contour into the add-on jaws.

One system – many applications:



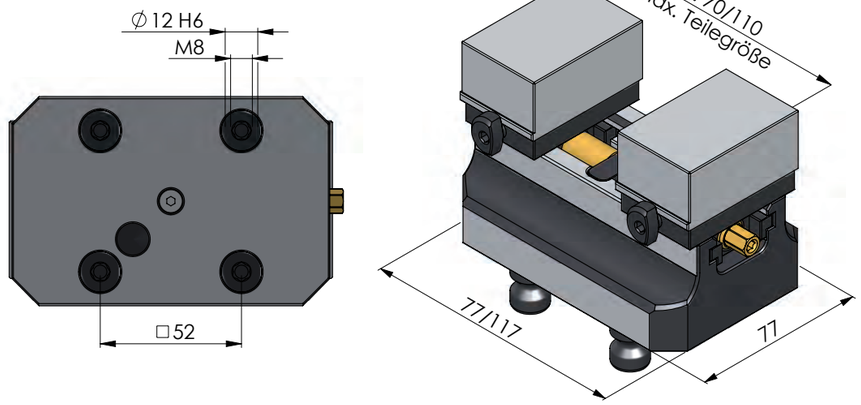
With the Avanti Quick Jaw Exchange System you are prepared! Whether finishing complex shapes, clamping round blanks or even the internal stress of thin-walled parts.

Avanti **46**

52 | Ø 16 mm | max. 30 Nm | max. 6000 N | ± 0.02 mm

Avanti 46

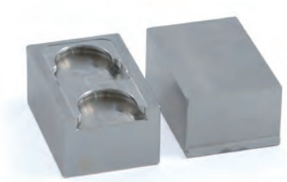
Item No.	Base length	Max. clamping range	Weight	Price
44065	77 mm	70 mm	2.0 kg	
44105	117 mm	110 mm	2.8 kg	



Avanti **46 Base Jaws and Add-on Jaws**

Avanti 46 Base Jaws

Item No.	Dimensions	Weight	Unit	Price
44461	55 x 36 mm	0.5 kg	1 pair	



Avanti 46 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
44468-26	Steel (16MnCr5)	57 x 38 x 26 mm	0.6 kg	1 pc.	
44469-26	Aluminium (F38)		0.2 kg		

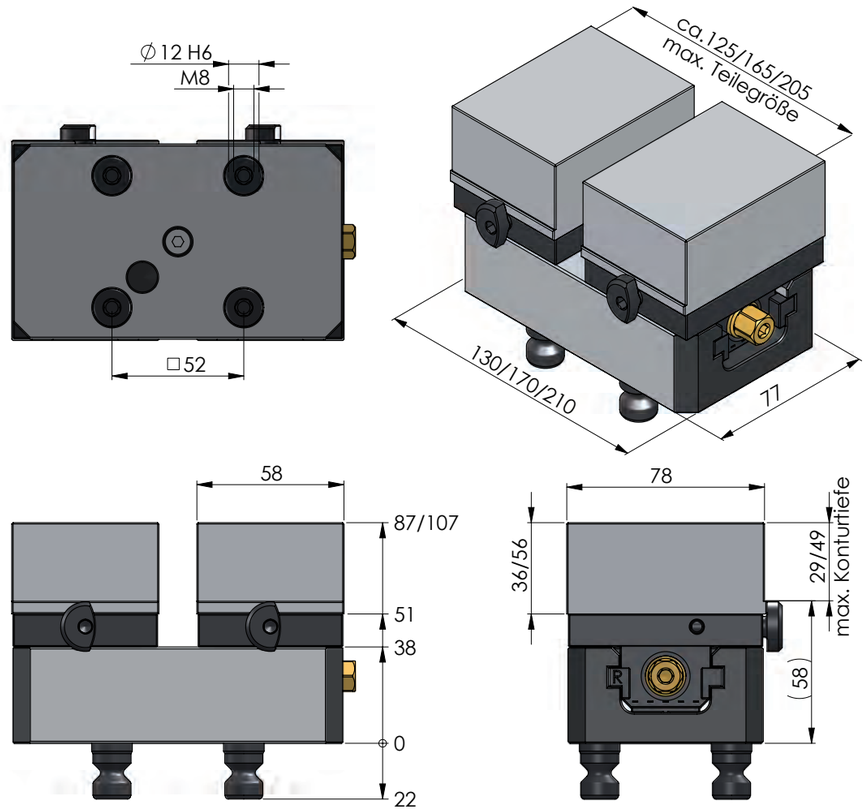
Shown here: steel

Avanti **77**

52 | Ø 16 mm | max. 70 Nm | max. 14000 N | ± 0.02 mm

Avanti 77

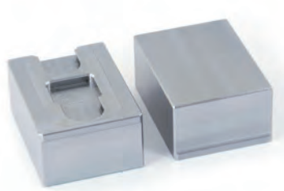
Item No.	Base length	Max. clamping range	Weight	Price
44120	130 mm	125 mm	3.7 kg	
44160	170 mm	165 mm	4.4 kg	
44200	210 mm	205 mm	5.0 kg	



Avanti **77 Base Jaws and Add-on Jaws**

Avanti 77 Base Jaws

Item No.	Dimensions	Weight	Unit	Price
44771	77 x 57 mm	1.5 kg	1 pair	



Avanti 77 Add-on Jaws, soft

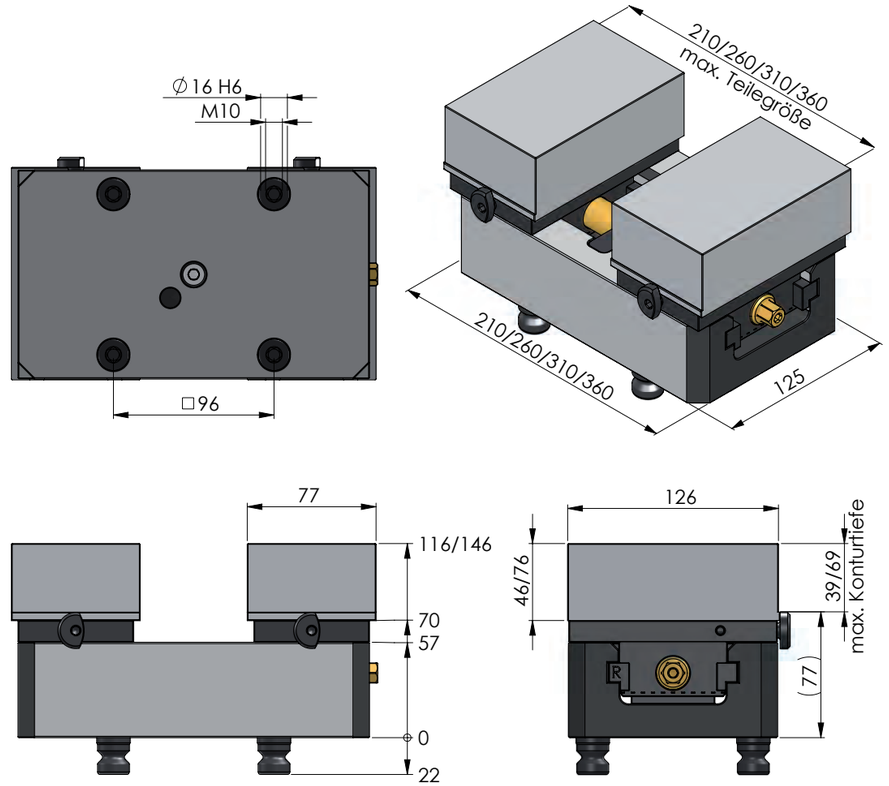
Item No.	Material	Dimensions	Weight	Unit	Price
44778-36	Steel (16MnCr5)	78 x 58 x 36 mm	0.6 kg	1 pc.	
44779-36	Aluminium (F38)		0.2 kg		
44778-56	Steel (16MnCr5)	78 x 58 x 56 mm	0.9 kg		
44779-56	Aluminium (F38)		0.3 kg		

Shown here: steel

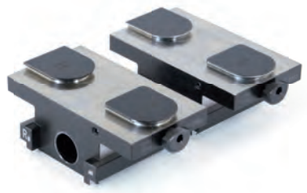
Avanti **125**

Avanti 125

Item No.	Base length	Max. clamping range	Weight	Price
44205	210 mm	210 mm	12.0 kg	
44255	260 mm	260 mm	13.9 kg	
44305	310 mm	310 mm	15.8 kg	
44355	360 mm	360 mm	17.7 kg	

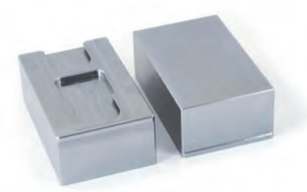


Avanti **125 Base Jaws and Add-on Jaws**



Avanti 125 Base Jaws

Item No.	Dimensions	Weight	Unit	Price
44251	125 x 69 mm	3.6 kg	1 pair	



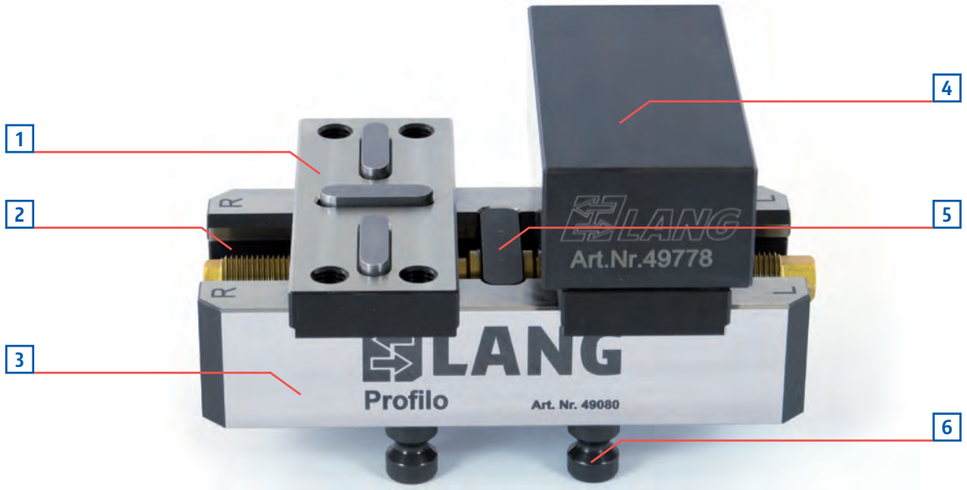
Shown here: steel

Avanti 125 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
44258-46	Steel (16MnCr5)	126 x 77 x 46 mm	3.3 kg	1 pc.	
44259-46	Aluminium (F38)		1.1 kg		
44258-76	Steel (16MnCr5)	126 x 77 x 76 mm	5.5 kg		
44259-76	Aluminium (F38)		1.8 kg		

Profilo **Contour Jaw System**

Your clamping system for all shaped parts.



1 Hardened base jaws with keyways

2 Double guided jaws

3 Rigid and sturdy base - but still lightweight and handy

4 Sufficient steel or aluminium add-on jaws

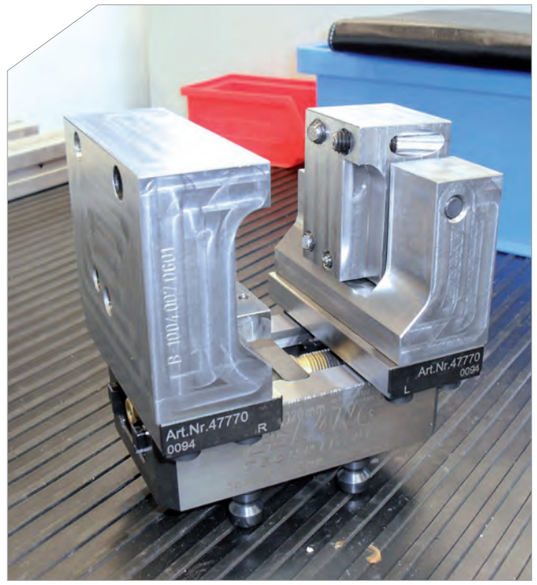
5 Centring accuracy ± 0.02 mm

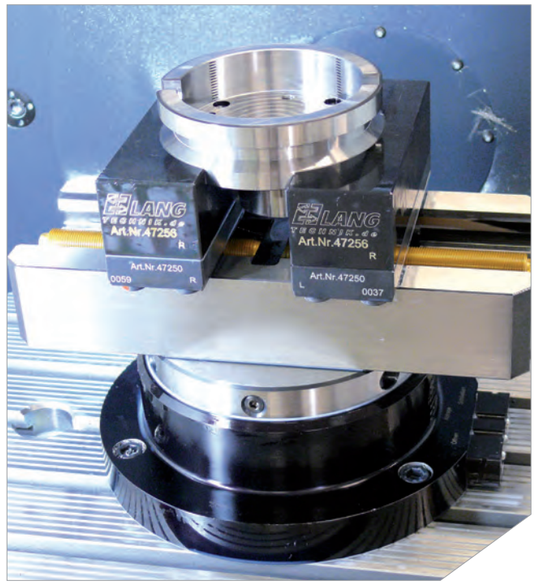
6 Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system

Mounting options:

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

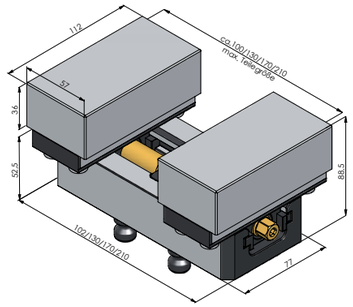
Thanks to threads in the base jaws, add-on jaws can also be mounted from the top for better accessibility towards the screws.





Besides the standard add-on jaws custom-made jaws or fixtures can be mounted on the base jaws! Drawing available upon request.

Profilo **77**



Profilo 77 Base Jaws 112 x 46 mm

Item No.	Base length	Max. clamping range	Weight	Price
49010	102 mm	100 mm	3.3 kg	
49040	130 mm	130 mm	3.7 kg	
49080	170 mm	170 mm	4.3 kg	
49120	210 mm	210 mm	5.0 kg	

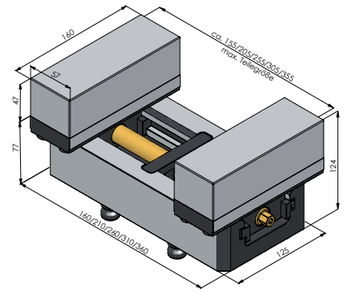
Profilo **77 Add-on Jaws**

Profilo 77 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
49778	Steel (16MnCr5)	112 x 57 x 36 mm	1.8 kg	1 pc.	
49779	Aluminium (F38)		0.7 kg		

Base jaws for Profilo 77 can be found on page 89.

Profilo **125**



Profilo 125 Base Jaws 160 x 57 mm

Item No.	Base length	Max. clamping range	Weight	Price
49050	160 mm	155 mm	10.4 kg	
49100	210 mm	205 mm	12.3 kg	
49150	260 mm	255 mm	14.2 kg	
49200	310 mm	305 mm	16.6 kg	
49250	360 mm	355 mm	19.0 kg	

Profilo **125 Add-on Jaws**

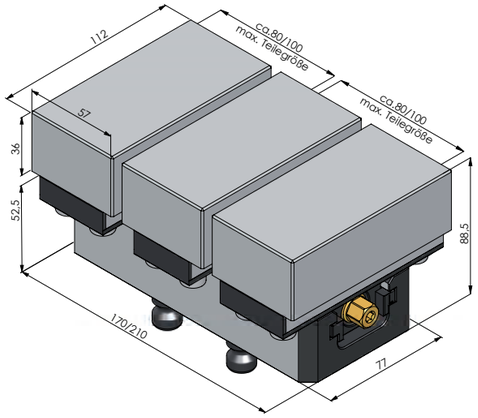
Profilo 125 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
49258	Steel (16MnCr5)	160 x 57 x 47 mm	3.3 kg	1 pc.	
49259	Aluminium (F38)		1.2 kg		

Base jaws for Profilo 125 can be found on page 93.

Profilo **Dual Clamping Vice**

Convert your Profilo into a Profilo Dual Clamping Vice.



Spindle + Centre Base Jaw 112 x 46 mm for Profilo 77

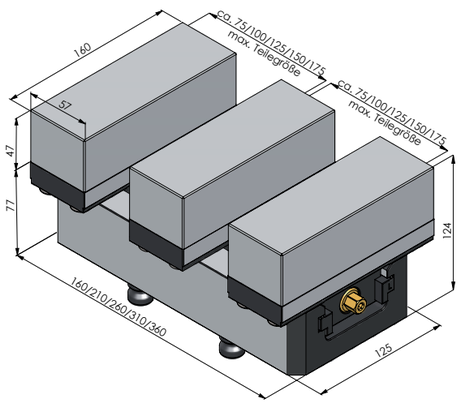
Item No.	Spindle length and Ø	for Profilo	Weight	Price
49080-TG	175 mm, Ø 16 mm	49080	1.1 kg	
49120-TG	215 mm, Ø 16 mm	49120		

Profilo **77 Add-on Jaws for dual clamping**

Shown here: steel

Profilo 77 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
49778	Steel (16MnCr5)	112 x 57 x 36 mm	1.8 kg	1 pc.	
49779	Aluminium (F38)		0.7 kg		



Spindle + Centre Base Jaw 160 x 57 mm for Profilo 125

Item No.	Spindle length and Ø	for Profilo	Weight	Price
49100-TG	215 mm, Ø 20 mm	49100	2.5 kg	
49150-TG	265 mm, Ø 20 mm	49150	2.6 kg	
49200-TG	315 mm, Ø 20 mm	49200	2.7 kg	
49250-TG	365 mm, Ø 20 mm	49250	2.9 kg	

Profilo **125 Add-on Jaws for dual clamping**

Shown here: aluminium

Profilo 125 Add-on Jaws, soft

Item No.	Material	Dimensions	Weight	Unit	Price
49258	Steel (16MnCr5)	160 x 57 x 47 mm	3.3 kg	1 pc.	
49259	Aluminium (F38)		1.2 kg		

Vario·Tec **Support and Resting System**

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

EXCLUSIVELY FOR LANG CENTRING VICES

1 Position accuracy of pins: ± 0.01 mm

2 Pins are blown out with compressed air row by row

3 Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system

4 Jaws (mounted from behind) equipped with the patented Vario·Tec pins

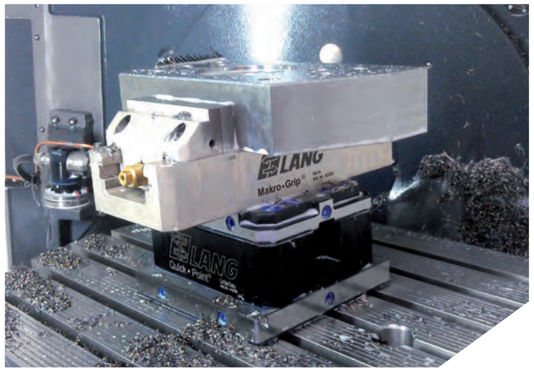
5 Double, extended guidance of jaws

6 Centring accuracy ± 0.02 mm

How it works:

The pins are blown out with compressed air row by row at high accuracy (± 0.01 mm). Pins not needed are simply pushed back by hand.

Vario·Tec applications



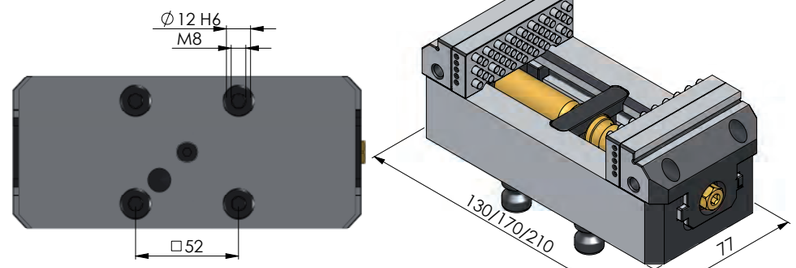
Recommendation:

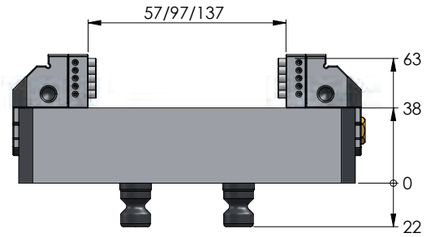
In order to keep up the proper function of the system the pins should be blown out when not needed to prevent jamming caused by the coolant. Furthermore we recommend applying a multi-purpose oil on the pins occasionally.

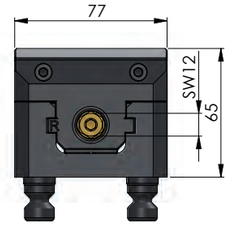
Vario·Tec **77**

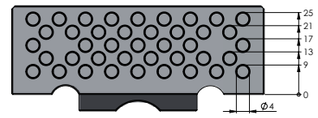
Vario·Tec 77

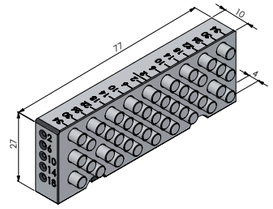
Item No.	Base length	Max. clamping range	Weight	Price
42057	130 mm	55 mm	3.5 kg	
42097	170 mm	95 mm	4.1 kg	
42137	210 mm	135 mm	4.8 kg	











The jaws are fixed with screws from behind (2x M 6, distance of 48 mm), so they are closed up front. Hence swarf clogging has no chance!

Accessories Vario·Tec 77

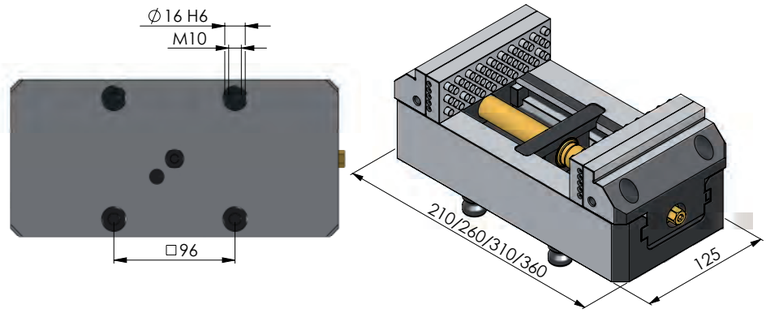
	Item No.	Description	Unit	Price
	42077	Spare Jaws Vario·Tec 77	1 set (2 pin jaws + 2 carrier jaws)	
	20000	Spare pins Ø 4 mm	5 pcs.	
	200009	O-Rings Ø 2 x 1.5 mm for spare pins Ø 4 mm	100 pcs.	
	20004	Air pressure pistol	1 pc.	

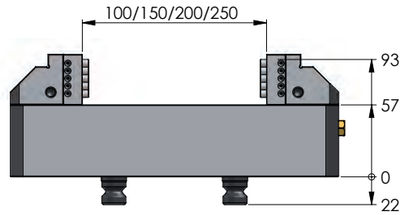
Vario·Tec **125**

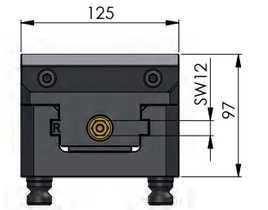
96 | Ø 20 mm | max. 100 Nm | max. 20000 N | ± 0,02 mm

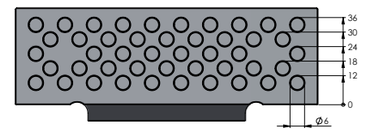
Vario·Tec 125

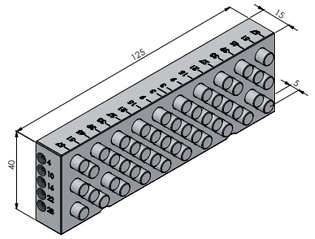
Item No.	Base length	Max. clamping range	Weight	Price
42102	210 mm	100 mm	12.1 kg	
42152	260 mm	150 mm	14.0 kg	
42202	310 mm	200 mm	16.3 kg	
42252	360 mm	250 mm	18.4 kg	











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

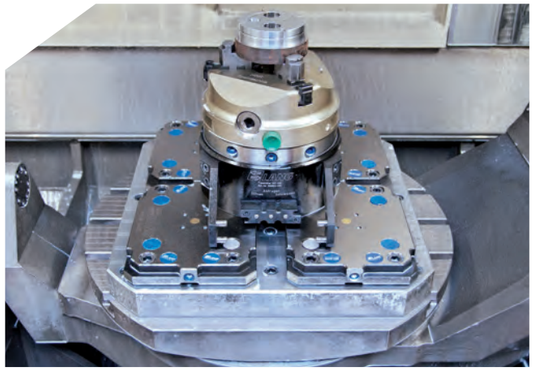
Accessories Vario·Tec 125

	Item No.	Description	Unit	Price
	42125	Spare Jaws Vario·Tec 125	1 set (2 pin jaws + 2 carrier jaws)	
	20001	Spare pins Ø 6 mm	5 pcs.	
	200010	O-Rings Ø 3.5 x 2 mm for spare pins Ø 6 mm	100 pcs.	
	20004	Air pressure pistol	1 pc.	

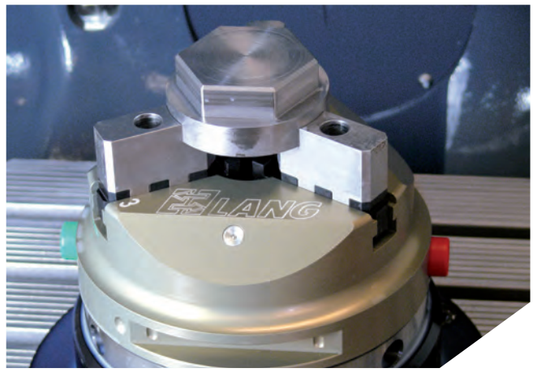
Ino·Grip **Compact 3-jaw-chuck**

The automatable chuck for milling round parts.

1. Repeatability 0.04 mm (even better when jaws are milled under clamping pressure)
2. Wear-resistant coated aluminium base body
3. Automation interface can also be used as an ergonomic recessed grip
4. Hand-operated scroll chuck
5. Actuation screw
6. Coloured bumpers for indicating correct side when loading the storage tower/table
7. Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system



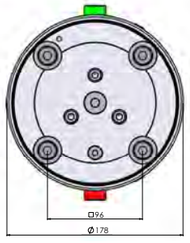
Round raw part clamped with gripping jaws.

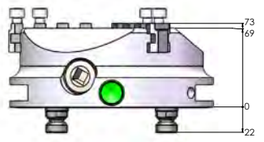


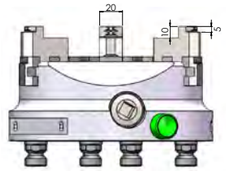
Round part clamped with adjusted soft jaws.

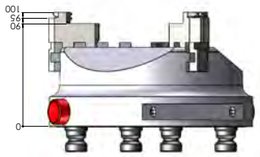
3-jaw-chuck with hard gripping jaws.

3-jaw-chuck with soft top jaws.









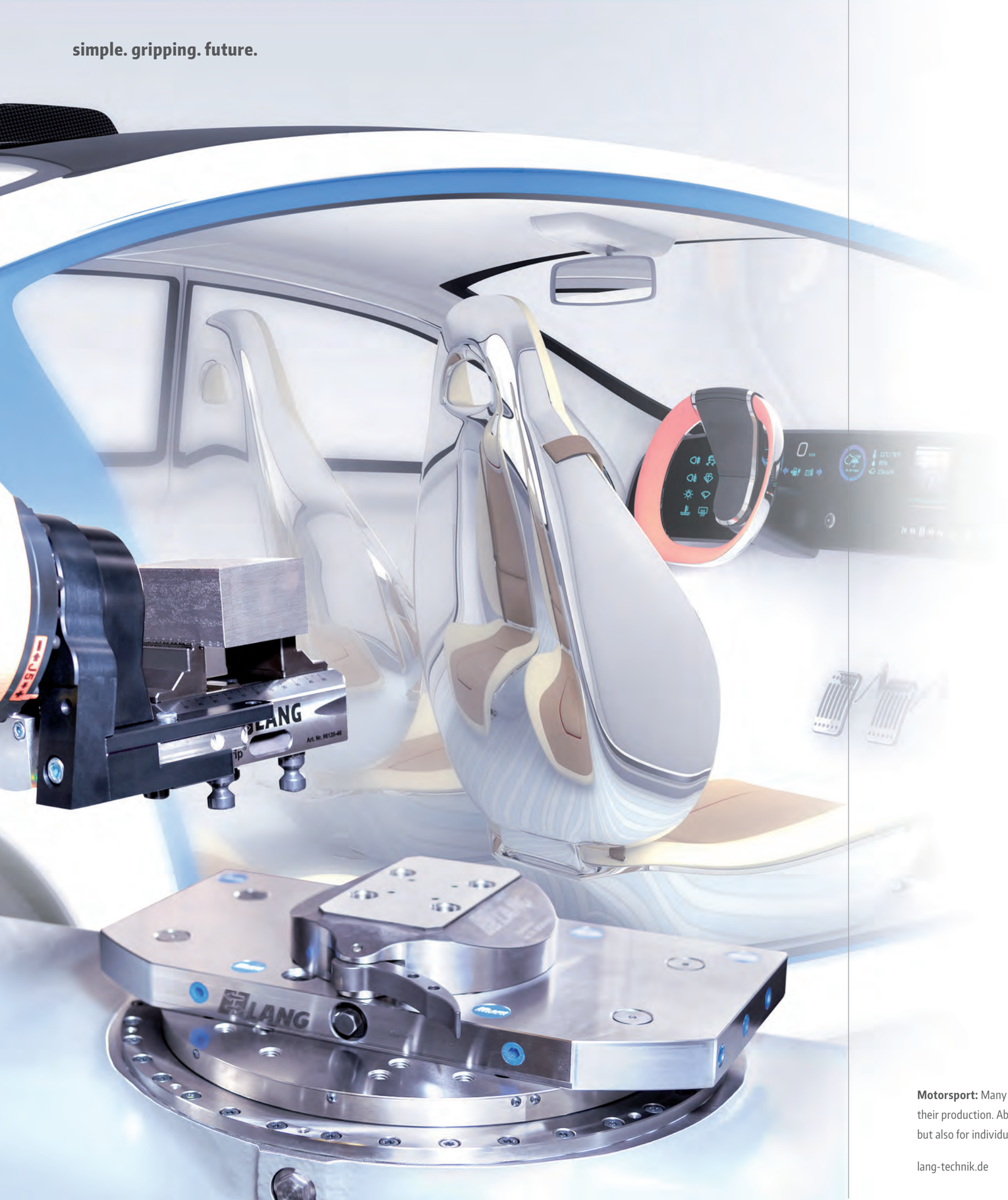
Ino·Grip Compact 3-jaw-chuck

Item No.	Dimensions	Clamping range	Weight	Price
51160	Ø 178 x 73 mm	Depending on jaw type	5.0 kg	

Ino·Grip **Top Jaws**

Top Jaws for Ino·Grip Compact 3-jaw-chuck

Item No.	Description	Clamping range	Weight	Price
51161	FU16, hard	30 - 160 mm	0.4 kg	
51162	FI16, soft	5 - 160 mm	0.7 kg	



AUTOMATION

Motorsport: Many companies in the automotive industry or the world of motorsport, use the products from LANG for years to increase the efficiency of their production. Above all Formula 1 racing teams - they appreciate the flexibility of our clamping and automation solutions not only for mass production, but also for individual parts and small series in the prototype production.

Machine-Tool **Automation**

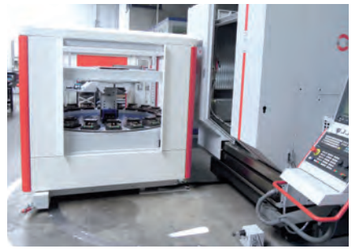
Benefits

MAXIMUM CAPACITY UTILISATION

SIMPLICITY

QUICK AMORTISATION

Applications



At a glance

- Can be attached to almost all machining centres
- Side or front loading of machine tool possible
- Small space requirements, flexible positioning towards machine tool
- Manual operation of machine tool still possible
- No additional medium inside of the machine tool necessary
- Simple and user-friendly functional principle
- Favourable purchase pricing, quick amortisation

The necessity of **automated manufacturing**

Increasing competition, cost pressures and skills shortages are challenges which have resulted in the fact that many manufacturing companies increased the degree of automation in recent years.

Meanwhile, a large number of companies mastered the balancing act between maintaining good processes and a targeted modernisation successful and consider themselves well equipped for the challenges of tomorrow. Automation people argue with the machine running times, increasing efficiency and lower costs per piece, when they describe the positive impact on their manufacturing processes.

An alarmingly high number of companies have not yet taken this step or have not perceived it as necessary. The subject of automation is approached hesitantly with concerns about small batch sizes, age of the machinery or simply the fear of major change.

Because of the past decade in which we have driven automation of our production processes consistently, we are convinced that these concerns are often unfounded. The reasons for that are presented to you below.

Low batch sizes and/or short machining times

Scenarios which each production company only knows too well, are short machining times, forcing the operator to wait in front of the machine for the next workpiece change or machine stoppages caused by other activities of the operator, who cannot keep pace with the fast pulsing.

However, this rather inefficient processes can turn into cash with an appropriate automation solution. Automated production processes do not only serve to expand an unmanned shift, but also optimise processes during the day.

The operator of the automation system gains a new window of time, often large enough to pursue other upstream/downstream activities increasing productivity during machine processing times, even with processing times of only 5 minutes and batch sizes as little as 10 parts.

Machine Tools we already have equipped:

Alzmetall, Bridgeport, Brother, Chiron, DMG, Doosan, Emco, Fanuc, Feeler, Fehlmann, Grob, GMC, Haas, Hedelius, Hermle, Hitachi Seiki, Hurco, Hyundai, Matec, Matsuura, Mazak, Mikron, Mitsui Seiki, Mori Seiki, OKK, Okuma, Quaser, Spinner, Stama, YCM, uvm.

We are sure your machine tool will look great with a LANG Automation, too!

Restructuring of habitual manufacturing processes

Long before the automated production the modern CAD/CAM systems and sophisticated tool technology in the machining industry have established. The realised average increases in value and improved machining strategies quickly lead to significantly lower processing times. However, this potential is unfortunately seldom used if e.g. machine tools rest after the end for 12 hours or more.

Even without increased staffing the machine running times can be dramatically increased through the support of automation, making the added value of CAD/CAM and tool count even more. This has a positive effect on the machine hour rate which is correspondingly lower.

Age and suitability of existing machines

SMEs in particular encounter with a corresponding order situation often at capacity limits. The obvious solution to this problem is usually the purchase of new machine tools and consequently increasing the staff. These mind games are legitimate, since new tools generally stand for an increase in productivity and increased reliability.

Companies which have no experience in the field of automated production, go the known way and invest in a new machine tool. The high cost factor is rarely questioned.

Since the adaptation of an existing machine to an automation system seems too complex and expensive, the optimisation and automation of the existing machinery is often disregarded.

This is exactly where LANG automation systems can make an impact! These do not require complex signal interfaces, automatically opening doors or media sources in the machine table. To get started with a LANG Automation you merely need a free, acknowledgeable M-function.

This simplicity is also reflected in the operation of the automation systems. Since our focus is on the process safe input and change of the workpiece, we consciously avoid complex automation solutions. This results in a significant reduction in training expenses. The exclusive use of components from renowned manufacturers and the overall small number of components used, have a positive effect on the equipment reliability and service costs.

With brilliant simplicity and high efficiency our automation systems have a significant effect on your production today and prepare you for tomorrow's challenges.

Eco·Compact 20 **Automation**

The proven Eco·Compact 20 automation system impresses with its simplicity and great usability, making it an ideal introduction to the automated production. This fact is reflected in particular in its low purchasing costs and the quick amortisation. The communication to the machine tool functions via an acknowledgeable M-code. The resulting low installation and training effort ensures that customers make money from the first day of use. The whole flexibility of the automation system is shown by the fact that after connecting the Eco·Compact 20, the machine tool can be used both in the automated and in the manual mode. The additionally available pivoting device (see picture p. 145: Hermle C400) leaves the possibility open to continue operating the machine tool manually if needed.

1 Large loading door for great accessibility, also suitable for crane loading

2 Loading weight for y-axis: 40 kg, travel up to 1.200 mm

3 Storage table with a capacity of 20 pallets

4 Customised position of loading door acccording to requirements

5 Optionally available with slide rails to ensure accessibility to machine tool even when loaded through the front door

6 Elaborated operation panel

7 The loading arm (standard position: 0°) can be shifted and fixed in an angle of 9° or 18° in order to load machine tables that are hard to reach

8 Right or left loading position can be chosen

9 Transportation by fork lift or crane

10 Remarkably small footprint: 2x2 m

Eco·Compact 20 Automation

Item No.	Max. quantity of pallets	Weight	Price
68820	20	1.400 kg	

Machine tool and automation **in perfect harmony**

Choose the colour of the operation panel frame, the window stickers as well as the corner cappings individually! Adapt the design of your Eco·Compact 20 to the design of your machine tool without any surcharge! Further colour combinations on request.

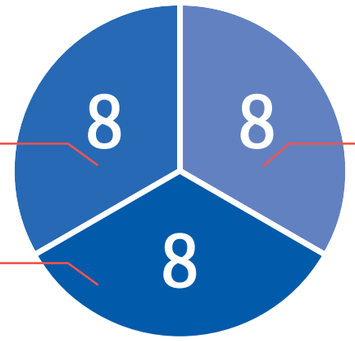
Quick amortisation –

Expansion of a one-shift operation: Maximisation of manufacturing capacities and modernisation of processes

The diagram below is based on customer's and own manufacturing experiences.

One-shift-operation (approx. 8 hours).
Thereof: Downtimes (approx. 1 hour)
due to tool adjustment and other logistic tasks

Additional machine running time of 8 hours thanks to automated manufacturing processes



Downtimes (8 hours)
Average value! Depending on batch sizes and running time of manufactured parts the unmanned shift can not always be completely covered.

Sample calculation with common parameters:

Assuming an **hourly machine rate of 60 EUR** and a realistic, **additional machine running time of 8 hours** in the evening and night hours a **gain of 480 EUR** is created daily. Calculated using 46 working weeks a year, 5 days per week, **within only 7-8 months a return on investment would be realised** on our automation system Eco·Compact 20! Even with considerably less machining time, you can achieve enormous gains. We would appreciate the opportunity to prepare you a customised, **personal return on investment calculation** – just ask your sales representative!

Eco·Compact 20 – Selection of **realised applications:**

Haas UMC 750

Fanuc Robodrill

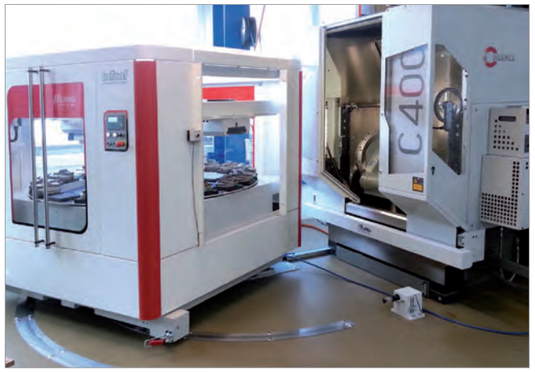
DMU 50

DMU 50 eVolution

Hermle C 22 U

Spinner U 620

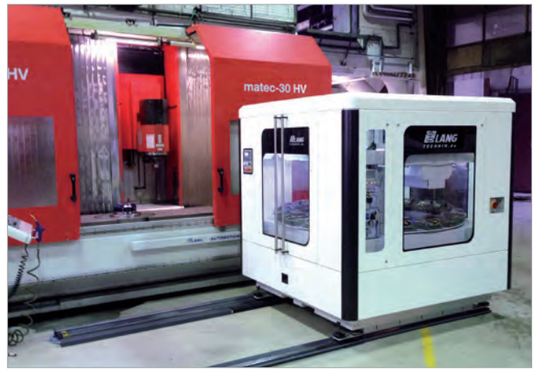
DMU 60 evo



Hermle C 400

Fehlmann Versa 825

Grob G 350



Matec 30 HV

Spinner U 620 & DMU 50 ecoline

Quick·Point® **Automation Base Tower**

Pneumatic-mechanical zero-point clamping system -
Matching interface for the Eco·Compact 20

NEW LOOK!

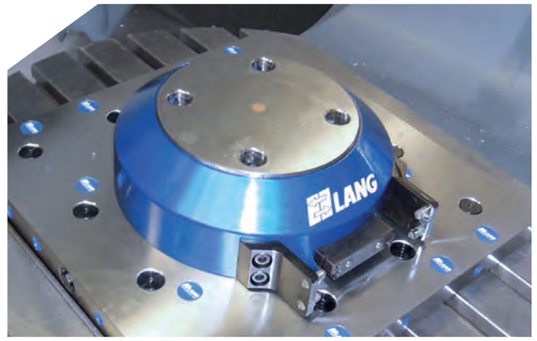
1. Ground, even surface – easy to clean
2. Guide rails guarantee troublefree loading with pallets - independent of pallet weight
3. Highest clamping force with the patented wedge system
4. Elevated pneumatic interface with optimal accessibility for the automatic opening, closing and retrieval of clamping situations
5. Interface adaptor for manual operation of the base tower. Can be connected to a pneumatic hose or operated directly with an air pressure pistol

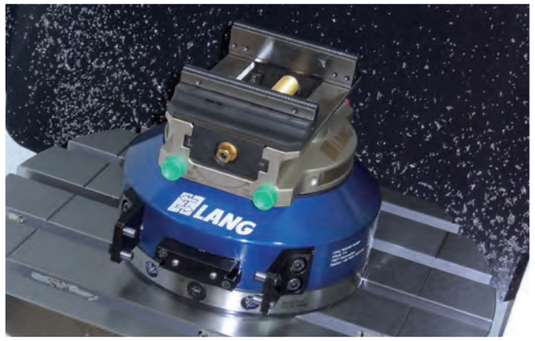
Quick·Point® Automation Base Tower, incl. clamping studs Ø 20 mm

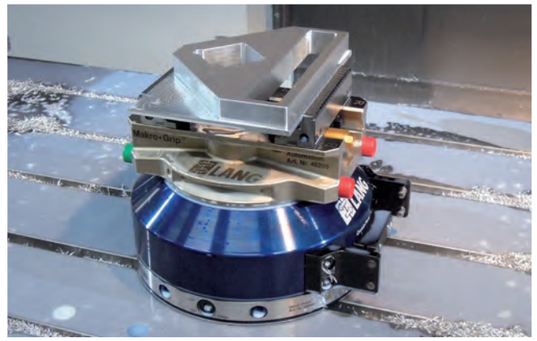
Item No.	Height	Diameter	Weight	Price
46080	80 mm	bottom: 246 mm / top: 176 mm	12.6 kg	

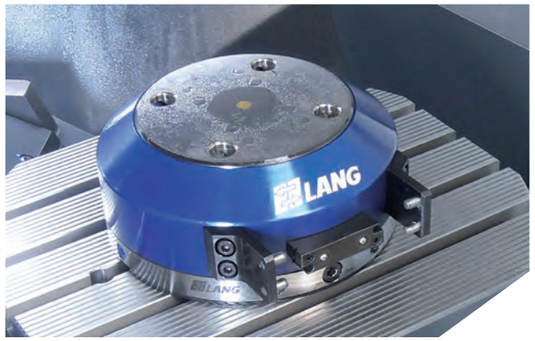
Clamping studs are included for a quick change over. In addition a 40H7 centre bore for precise positioning of the base tower is included.

Including an aluminium handle bar for a quick change over of the tower.

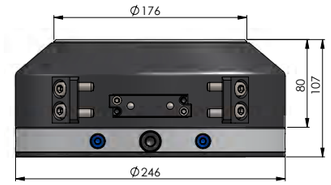








Mounting options of the Quick·Point® Automation Base Tower



Mounting option 1

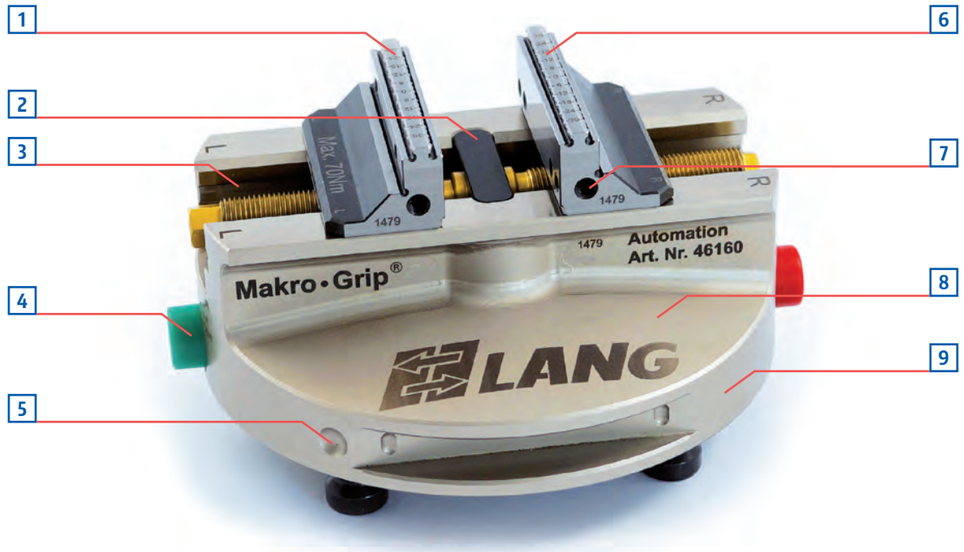
Mounting option 2

The Quick·Point® automation base tower comes with clamping studs attached, which allows the machine operator to quickly and precisely exchange the base tower in seconds with use of our Quick·Point® zero-point system. The total height of this clamping set-up is 107 mm (80 mm base tower, 27 mm Quick·Point® plate).

It is also possible to add mounting bores to the angled surface of the aluminium base tower. The bore pattern can be added according to the T-slots of the maching table. Using this method of attaching the base tower directly to the machine table, the set-up height is only 80 mm.

Makro·Grip® **Automation Vice**

The 5-Axis Vice for automated manufacturing.

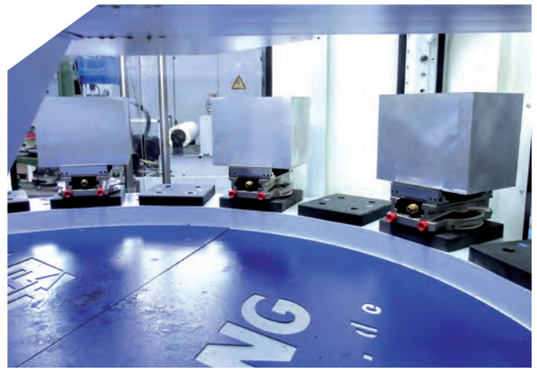


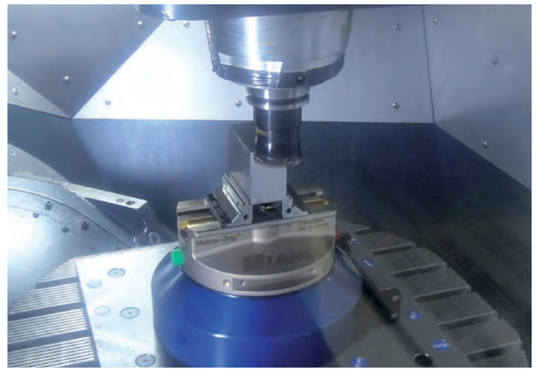
1. Reversible jaws with Makro·Grip® holding teeth
2. Centring accuracy ± 0.02 mm
3. Double guided jaws
4. Coloured bumpers for indicating correct side when loading the storage tower/table
5. Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system
6. Additional clamping support for non-stamped or semi-finished parts
7. Threads for mounting endstops
8. Integrated automation interface can also be used as an ergonomic recessed grip
9. Corrosion-resistant, sturdy and handy steel body

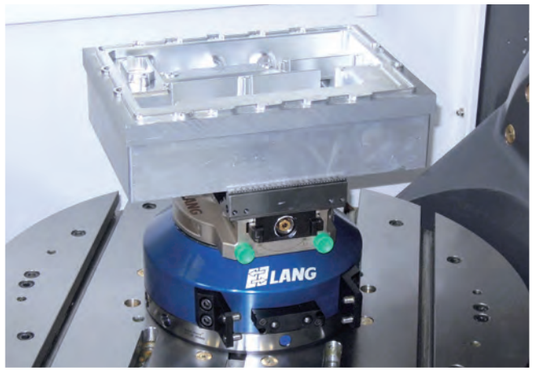
At a glance:

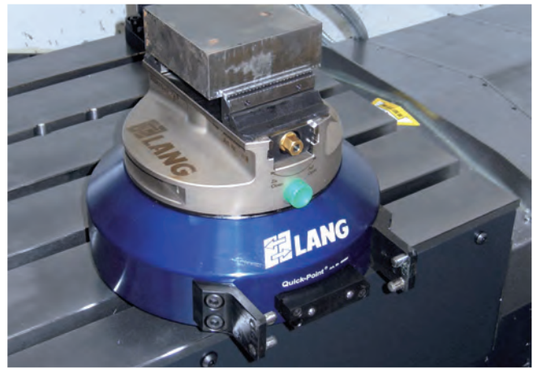
- Best accessibility for 5-face-machining
- Exceptional holding power with lowest clamping forces due to the patented stamping technology
- Compact design and low weight for easy and ergonomic handling
- Integrated zero-point interface
- Perfect conveying of swarf thanks to a smooth transition from vice to automation base tower

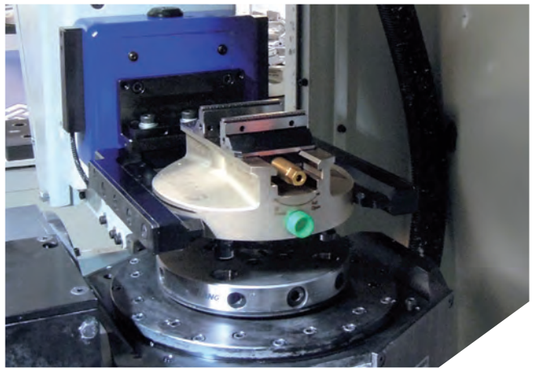
Applications of Makro·Grip® Automation Vices



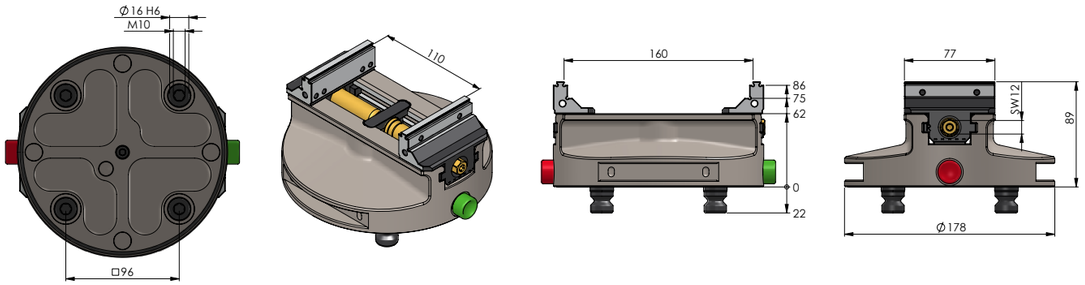








Makro·Grip® **77 Automation Vice**



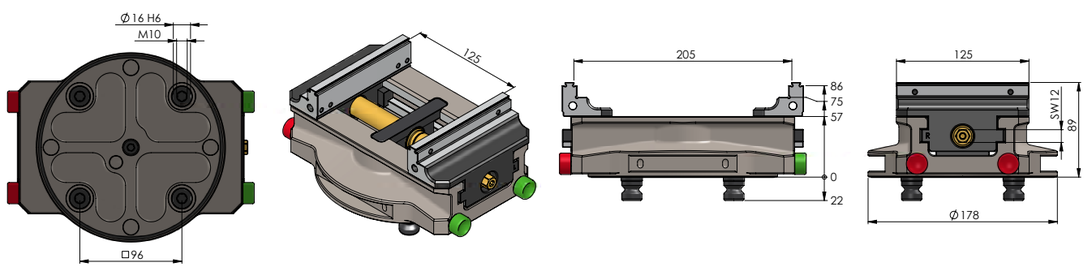
96 | Ø 20 mm | max. 70 Nm | max. 14000 N | ± 0,02 mm

Makro·Grip® 77 Automation Vice

Item No.	Base length	Clamping range	Weight	Price
46160	170 mm	0 - 160 mm	7.2 kg	

Suitable spare jaws for the Makro·Grip® Automation Vice 77 can be found on page 88/89.

Makro·Grip® **125 Automation Vice**



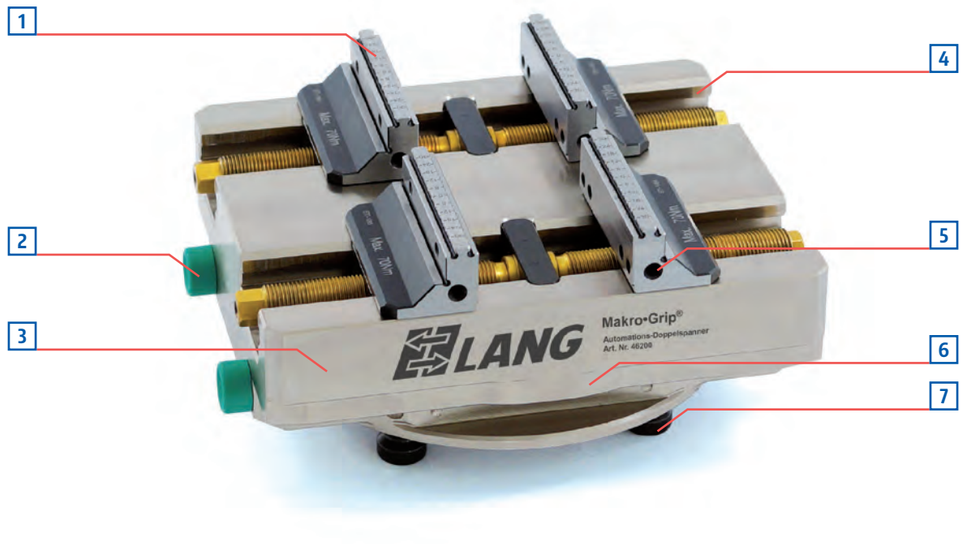
96 | Ø 20 mm | max. 100 Nm | max. 20000 N | ± 0,02 mm

Makro·Grip® 125 Automation Vice

Item No.	Base length	Clamping range	Weight	Price
46205	210 mm	0 - 205 mm	9.4 kg	

Suitable spare jaws for the Makro·Grip® Automation Vice 125 can be found on page 92/93.

Makro·Grip® **77 Automation Dual Vice**



1 Reversible jaws with Makro·Grip® holding teeth

2 Coloured bumpers for indicating correct side when loading the storage tower/table

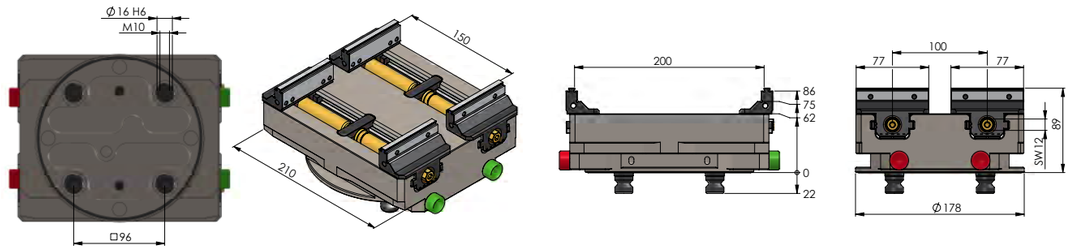
3 Corrosion-resistant, rigid steel body with integrated interface for automation gripper

4 Double guided jaws

5 Threads for mounting endstops

6 Integrated automation interface can also be used as an ergonomic recessed grip

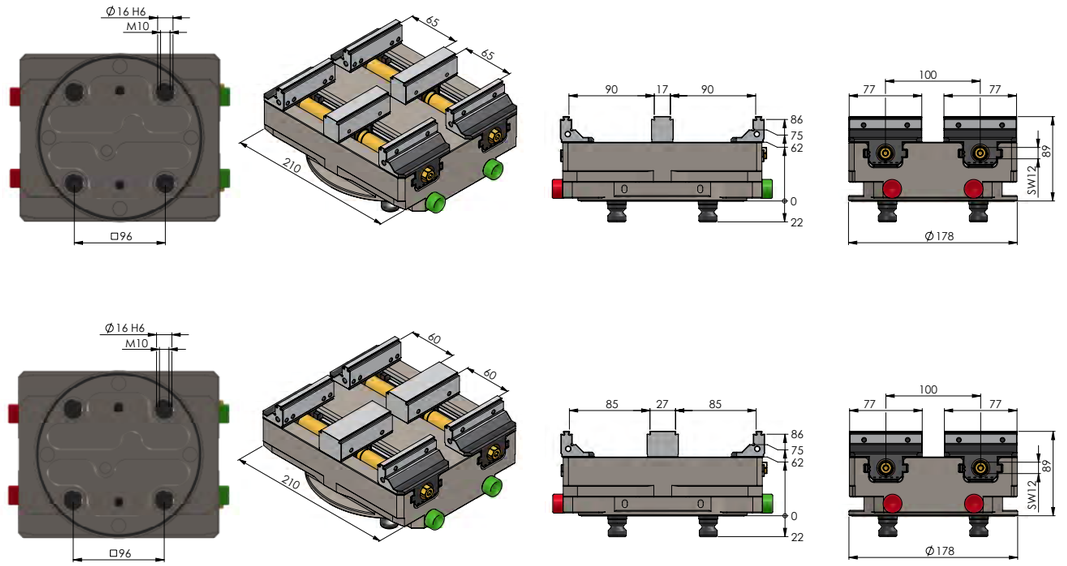
7 Equipped with clamping studs for precise clamping in the Quick·Point® zero-point clamping system



Makro·Grip® 77 Automation Dual Vice

Item No.	Total length	Clamping range	Weight	Price
46200	210 mm + bumpers	2 x 0 - 200 mm	13.5 kg	

Retrofitting kit for converting the Dual Automation Vice into a 4-fold Clamping Vice

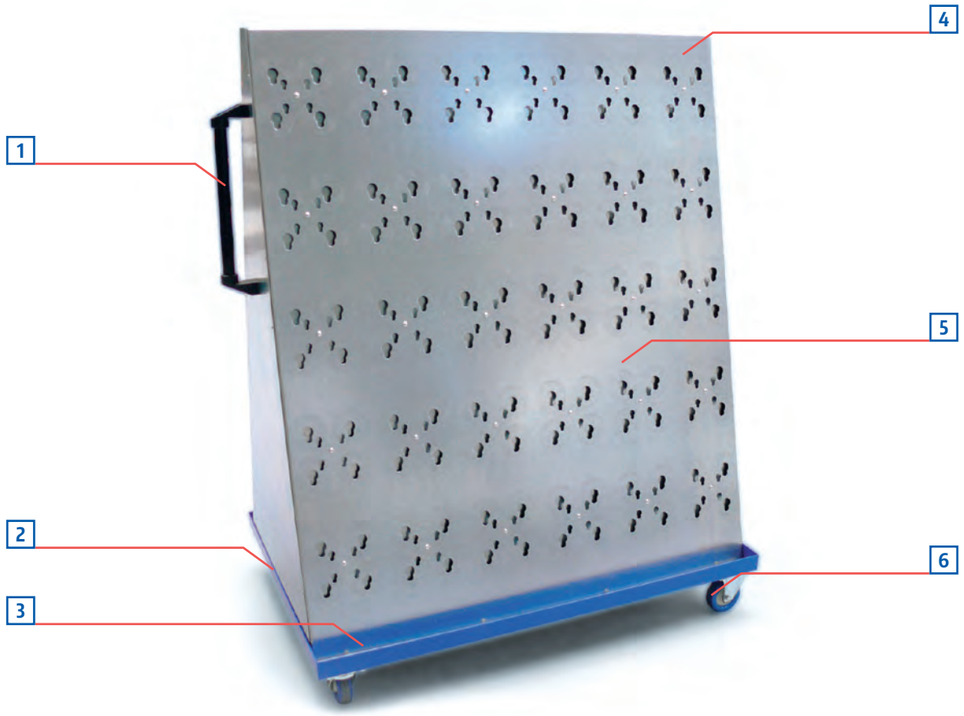


Adaption set (middle jaw + thread spindle)

Item No.	Clamping range	Quantity	Weight	Price
46200-TG17	4 x 90 mm	2 centre jaws incl. thread spindle	2 x 0.7 kg	
46200-TG27	4 x 85 mm		2 x 0.9 kg	

Makro·Grip® **Mobile Storage Unit**

Space-saving stocking solution for pallets and fixtures.



1 Convenient handle for pushing and pulling the unit

2 Base dimensions 1200 x 1800 mm: ideal for transport on Euro pallets

3 Powder coated coolant collecting tray with integrated coolant drain screw

4 Space to hold up to 60 devices (30 devices on each side)

5 Non-corrosive galvanised sheet steel

6 Easy moving of the storage unit with rubberised casters

Makro·Grip® Mobile Storage Unit

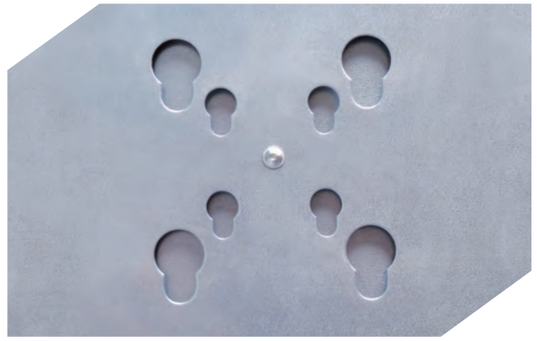
Item No.	Capacity	Dimensions	Weight	Price
61060	max. 60 clamping devices	1.200 x 800 x 1.500 mm	160 kg	

Your vices & fixtures always within reach with the mobile storage unit.

Storage unit fully loaded with 60 vices (30 vices on each side).

The storage unit can not only hold automation vices but also regular 5-Axis Vices.

Makro·Grip® mobile storage unit positioned next to a LANG automtion system.



For all LANG workholding and fixtures with Quick·Point® grid system 52 and 96 mm.

Robo·Trex **Automation**

NEW

1 Modern articulated robot with handling gripper for workpieces up to 12 kg

2 Shop trolley with patented vice storage. 2 different types with a capacity of 30 (part size max. 120 x 120 x 100 mm) and 42 (part size max. 120 x 100 x 70 mm)

3 Automated entry system for shop trolley

4 Small space requirements from 1.70 m x 2.20 mm

5 Self-explanatory operation control with touch panel. Individual NC programmes of the machine tool can be assigned to each trolley.

Robo·Trex Automation

Item No.	Basic equipment	Price
66000	Complete robotic automation system incl. enclosure, trolley entry system and 1 shop trolley	

Robo·Trex applications

The Robo·Trex automation system can be attached to existing machine tools. It communicates with the machine tool via one acknowledgeable M-function. Loading is done through the machine door or an integrated side window.

Optionally the Robo·Trex system is available with 4 shop trolleys. Thereby the storage capacity increases to 120/168 vices depending on the part size. The maximum space requirement is listed as 2.20 x 3.70 m.

The patented, edgewise mounting of the Makro·Grip® Robo ensures maximum utilisation of space. The perfect accessibility to the clamping device allows exchanging workpieces, without taking the vice out.

The clamping of parts with excess witdh is also conceivable by occupancy of e.g. every other storage space.

For the special storage on the trolley and for the gripping through the handling robot, clamping grooves are applied on both lateral sides of the Makro·Grip® Robo 77. In between is a practical swarf and coolant drain.

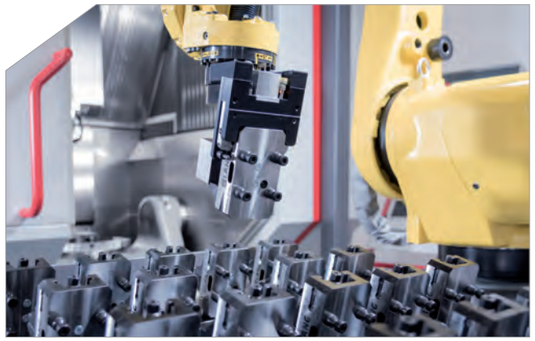
Robo·Trex **Automation**

External preliminary set of the shop trolleys, excellent maneuverability and an integrated entry system enable a fast loading of the Robo·Trex automation by simple trolley exchange.

The storage capacity per trolley is 30 (part size max. 120 x 120 x 100 mm) or 42 vices (part size max. 120 x 100 x 70 mm).

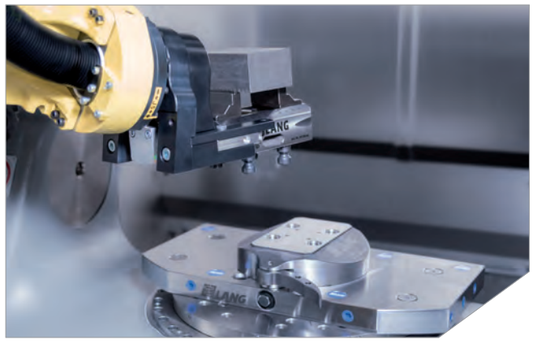
The self-explanatory control via touch panel enables easy operation of the automation system, which reduces training costs to a minimum.

With a one-click dialing the workshop trolleys can be easily selected or deselected. In addition, an allocation of individual NC programmes of the machine tool is possible.



Modern articulated robot with integrated LANG gripper ensures easy accessibility to the machine table.

Due to the direct engagement of the vices additional support pallets are not needed.



Due to the low built of the zero-point clamping system, placed 5-axis tables (3+2) can be excellently automated as well.

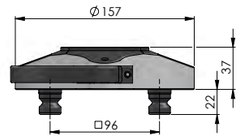
The control of the zero-point clamping system can be done either pneumatically through the machine tool or mechanically through the robot.

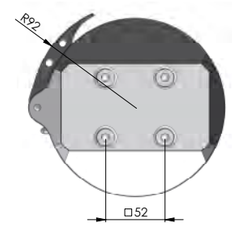
Robo·Trex **Automation Trolley**

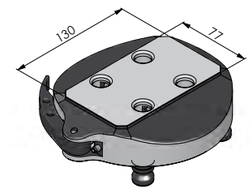
Robo·Trex Automation Trolley

Item No.	Storage capacity	Part size	Weight	Price
66030	30	120 x 120 x 100 mm	167 kg	
66042	42	120 x 100 x 70 mm	170 kg	

Robo·Trex **Zero-Point Plate**







Robo·Trex Zero-Point Plate

Item No.	Dimensions	Weight	Price
66500	Ø 157 x 37 mm	4.8 kg	

Clamping/releasing of the zero-point plate is done mechanically by the robot.

Note: There is also a pneumatic type of zero-point plate available. Due to the individual adaptation to the machine tool the design may vary. Prices upon request.

Makro·Grip® **Robo 77**

The new raw part clamping vice for the Robo·Trex Automation.

Technical features:

- Gripper groove for robots, as well as adaptation for placement on the shop trolley
- Lateral swarf/coolant drain in the base body
- Optimised spindle bearings for high repeatability
- Increased clamping force of the Makro·Grip® Robo 77 with jaw width 46 mm
- Makro·Grip® reversible jaws for use of the patented stamping technology
- Integrated Quick·Point® 52 zero-point adaptation

Makro·Grip® Robo 77 - Jaw width 46 mm

Item No.	Base length	Jaw width	Clamping range	Weight	Price
66120-46	130 mm	46 mm	0 - 120 mm	2.5 kg	

Spare jaws for Makro·Grip® Robo 77 - Jaw width 46 mm

Item No.	Weight	Unit	Price
66120-4620	0.6 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.

Makro·Grip® Robo 77 - Jaw width 77 mm

Item No.	Base length	Jaw width	Clamping range	Weight	Price
66120-77	130 mm	77 mm	0 - 120 mm	2.9 kg	

Spare jaws for Makro·Grip® Robo 77 - Jaw width 77 mm

Item No.	Weight	Unit	Price
66120-7720	0.8 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.

Robo·Shelf **Automation**

NEW Release in spring 2017

1 Shelving system with up to 108 pallet slots

2 Modern articulated robot with handling weight of up to 60 kg (incl. clamping device/pallet)

3 Footprint 3.60 m x 3.20 m

4 Maintaining accessbility towards machine tool thanks to safety door

5 Self-explanatory control with touch panel

6 Loading station for an ergonomic preparation of the automation system

Robo·Shelf Automation

Item No.	Basic equipment	Price
63000	Complete shelving system with 81 pallet/vice slots incl. industrial robot	

Robo·Shelf applications

The Robo·Shelf automation system can load the machine tool both from the machine door and from a side window. The full accessibility to the machine tool is ensured by a safety door. Thus, the option for a manual operation mode without automation remains. The Robo·Shelf works with almost any (existing) machine tool.

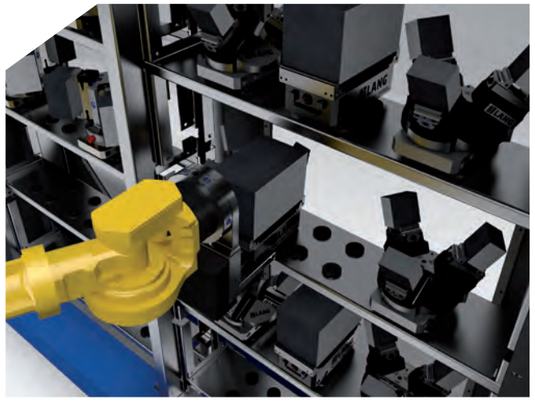
As already shown on the Eco·Compact 20 automation system, the option also exists with the Robo·Shelf of modifying defined elements of the shelving system to the colour of the machine tool. Ask us about it!

Shelves in flexible height for different part sizes and max. capacity utilisation:

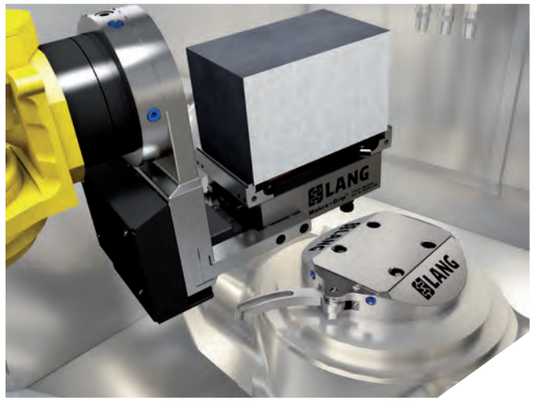
- Distance of the shelves 330 mm: **max. 81 Makro·Grip® 125 or 54 pallets (max. pallet size of 400 x 300 mm)**
- Distance of the shelves 230 mm: **max. 108 Makro·Grip® 125 or 74 pallets (max. pallet size of 400 x 300 mm)**

Self-made pallets can also be used.

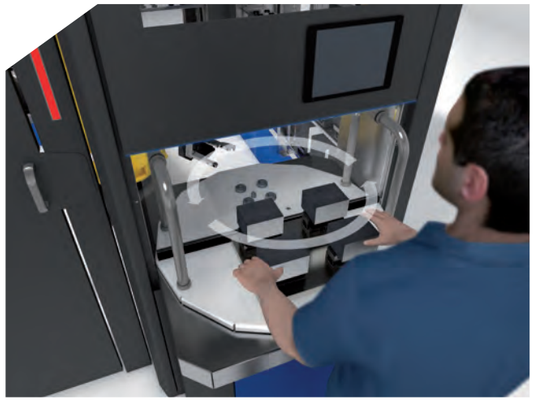
Robo·Shelf applications



Depending on the machine tool interface each pallet slot can be assigned to a program. Alternatively, pallet slots that have been previously assigned by the control of the automation can be called up via an acknowledgeable M-function.



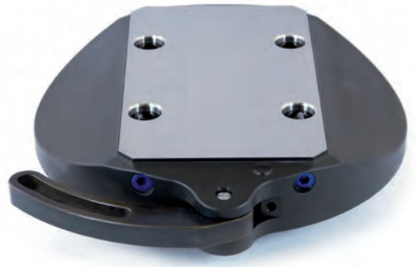
The control of the zero-point clamping system can be done either pneumatically by the machine tool or mechanically by the robot.

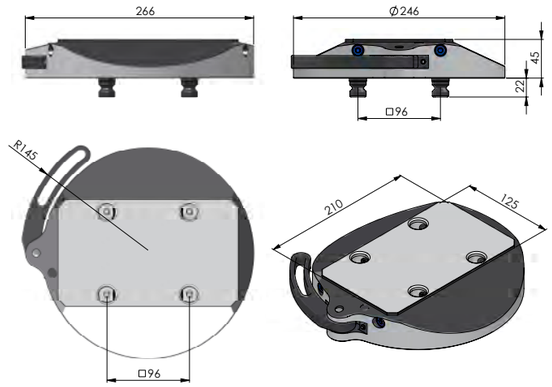


The setup station with turntable allows a simple and uncomplicated assembly of the shelving system. While the operator loads the clamping device, the removal/supply is done at the same time by the robot.

On a footprint of only 3.60 x 3.20 m, the operator has up to 108 available pallet slots.

Robo·Shelf **Zero-Point Plate**





Robo·Shelf Zero-Point Plate

Item No.	Dimensions	Weight	Price
63500	Ø 246 x 45 mm	14.0 kg	

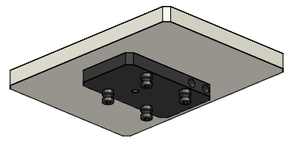
Clamping/releasing of the zero-point plate is done mechanically by the robot.

Note: There is also a pneumatic type of zero-point plate available. Due to the individual adaptation to the machine tool the design may vary. Prices upon request.

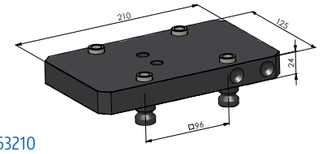
Robo·Shelf **Support System**

For mounting own fixtures or clamping devices.

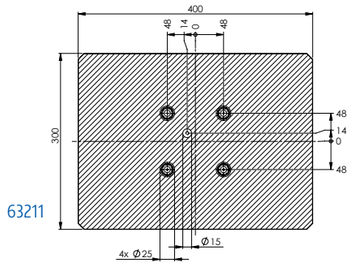
Utilising the support system own fixtures and clamping systems of other manufacturers can be used with the Robo·Shelf Automation. The Support Base Plate's scope of delivery is: 4x clamping studs Ø 20 mm, 4x bushings Ø 16 mm, 4x threaded pins M 10, 4x M 10 cylinder screws.



63212



63210



63211

Robo·Shelf Support System

Item No.	Description	Dimensions	Weight	Price
63212	Robo·Shelf Support System (Support Base Plate + Aluminium Pallet)	400 x 300 x 54 mm	14.6 kg	
63210	Robo·Shelf Support Base Plate	210 x 125 x 24 mm	5.0 kg	
63211	Robo·Shelf Aluminium Pallet	400 x 300 x 30 mm	9.6 kg	

Makro·Grip® **Robo 125**

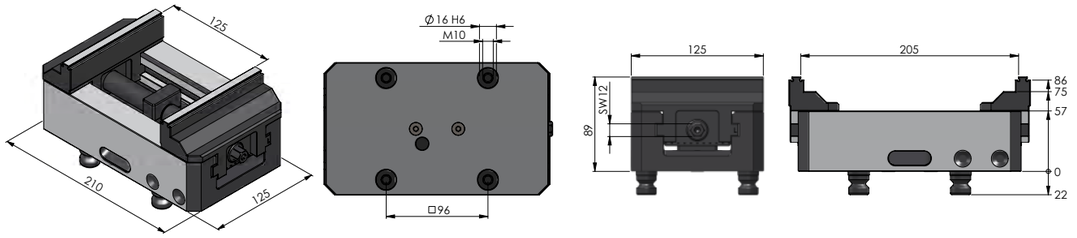
Makro·Grip® Robo 125 - Jaw Width 77 mm

Item No.	Base length	Jaw width	Clamping range	Weight	Price
63205-77	210 mm	77 mm	0 - 205 mm	9.3 kg	

Spare jaws for Makro·Grip® Robo 125 - Jaw Width 77 mm

Item No.	Weight	Unit	Price
63205-7720	2.2 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.



Makro·Grip® Robo 125 - Jaw Width 125 mm

Item No.	Base length	Jaw width	Clamping range	Weight	Price
63205-125	210 mm	125 mm	0 - 205 mm	10.4 kg	

Spare jaws for Makro·Grip® Robo 125 - Jaw Width 125 mm

Item No.	Weight	Unit	Price
63205-2520	2.8 kg	1 pair	

In order to achieve best centring accuracy it is necessary to replace both jaws in case of a damage.

CLEANING FAN

Energy sector: Special procedures in the machining of workpieces require special needs for the clamping technology. This way many companies in the energy sector, in particular manufacturers of gas turbines, find the answer to their clamping problems at LANG. We offer solutions for the entire process – from the clamping of the blank piece to the automatic cleaning of the finished component.

Clean·Tec
Cleaning Fan

Benefits

CLEANLINESS

HIGH ENERGY SAVING

AUTOMATIC CLEANING

Applications

At a glance

- Quick and easy cleaning of workpieces, fixtures and machine tool tables
- No swarf and coolant outside the machine tool
- Saving expensive compressed air

Clean·Tec **Cleaning Fan**

Save expensive compressed air – use Clean·Tec!

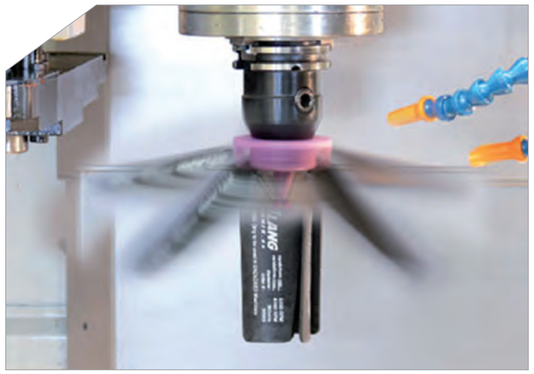
Move the rotating fan with a distance of 100 - 150 mm above the workpiece and apply a feed rate of 3 - 10 m/min. Then return to the tool change position.

Turn clockwise to clean the parts. By revolving the spindle the wings will unfold. Please accelerate in 2 steps:
1. accelerate to 2,000 RPM
2. accelerate to required RPM
(Clean·Tec works efficiently starting at 4,000 RPM already!)

1 Fibreglass compound body with steel centre core. Can be clamped in every common shank Ø 20 mm.

2 Rigid retaining springs for the secure folding of blades after the cleaning process.

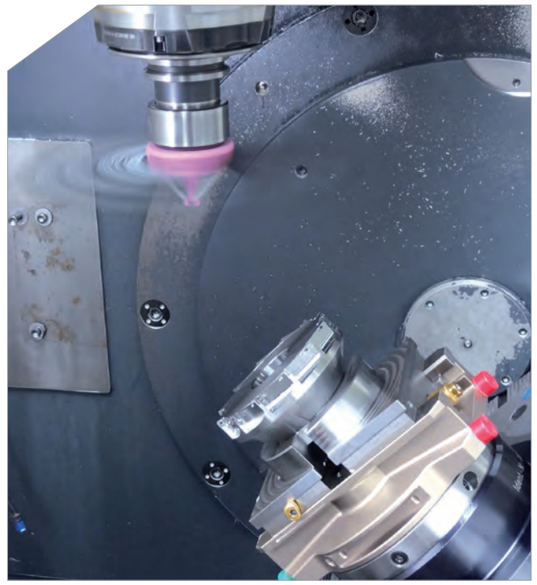
3 Strong and wear-resistant carbon fibre wings for best durability - even with tough chipping.



The Clean·Tec wings unfold and close automatically by switching the machine tool spindle on and off.

Clean·Tec **Cleaning Fan**

A "must-have" for automated manufacturing processes!



Ideal for cleaning workpieces prior to an automatic unloading.

Workpieces and fixtures can be cleaned with coolant using the supply through the spindle.

Clean·Tec is stored just like a common tool in the tool magazine and selected automatically via CNC programme.

Clean·Tec **Cleaning Fan**

Clean·Tec 160

Item No.	Ø with unfolded wings	RPM range	Price
30160	160 mm	6.000 - 12.000 rpm	

Clean·Tec 260

Item No.	Ø with unfolded wings	RPM range	Price
30260	260 mm	5.000 - 8.000 rpm	

Clean·Tec 330

Item No.	Ø with unfolded wings	RPM range	Price
30330	330 mm	3.000 - 8.000 rpm	

Spare Part Kit, 4 pcs. fibreglass wings and springs

Item No.	for	Price
30164	30160	
30264	30260	
30334	30330	

LANG Technik supports “Bild hilft e.V. ‚Ein Herz für Kinder‘”

Corporate vision is closely connected with social responsibility. As a family owned company, we strive to place some of the commercial success we have back into the community. The development and sponsorship of our children is very important, especially for our social and commercial future. For this reason, we have for years supported different projects that support and strengthen our next generations.

Along with sponsoring activities of local clubs and financially supporting social institutions, our company also engages in the “Ein Herz für Kinder” (campaign for children). “Ein Herz für Kinder” was founded 38 years ago by the Axel Springer Verlag.

With every Clean·Tec fan sold, 2 Euros will be donated to the “Herz für Kinder” foundation.

When you decide to purchase a Clean·Tec fan to clean your workpieces and workholding fixtures efficiently, you also help to contribute. A small donation will be made to where it is urgently needed.

LANG TECHNIK
simple. gripping. future.

EIN HERZ FÜR KINDER

38 years ago publisher Axel Springer “BILD hilft e.V.” founded “Ein Herz für Kinder”, first only as a campaign for more traffic safety. The special thing about it: every Euro cent gets distributed directly without any deduction to where the help is needed. With these donations needy children in Germany and across the entire world are assisted with the knowledge: you are not alone!

“Ein Herz für Kinder” creates hope and stands for universal, borderless and fast help. “Ein Herz für Kinder” supports for example soup kitchens, homes for children, schools, orphanages, kindergartens, organises presents for Christmas and clinics with important medical care and machinery. This support also includes educations, preventions, sports programmes and carries over into other countries. For children that are sick and cannot get adequate treatment near home the Bild-Hilfsorganisation supports them with life-saving operations abroad.

Once a year the “Ein Herz für Kinder” Gala is broadcast live on ZDF where the individual projects are introduced and donations are requested.

Imprint

Titel:
LANG Catalogue 2017/18 (Issue #7)
Date of printing 8/2016
All stated prices are valid until publication of new catalogue.

Editor:
LANG Technik GmbH
Albstraße 1-4
D-73271 Holzmaden

Fon: +49 (0)7023/ 95 85- 0
Fax: +49 (0)7023/ 95 85- 100

Internet: www.lang-technik.de
E-Mail: info@lang-technik.de
E-Mail Sales: sales@lang-technik.de

LANG TECHNIK

simple. gripping. future.

lang-technik.de
info@lang-technik.de