

CENTRE CLAMPING HAS NEVER BEEN SO EASY.

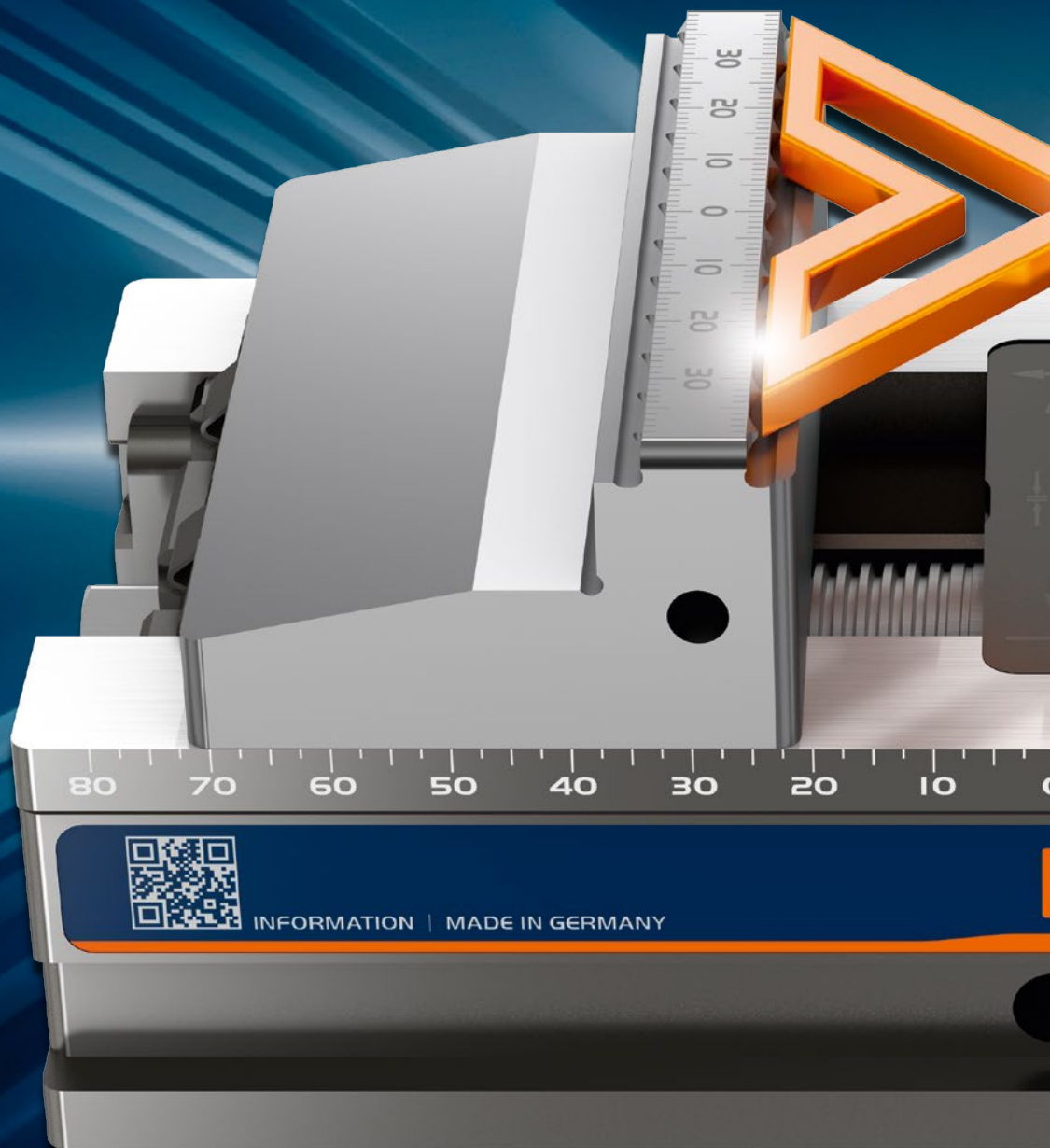
The new GARANT XTRIC – a revolution for clamping blank parts and finished parts.

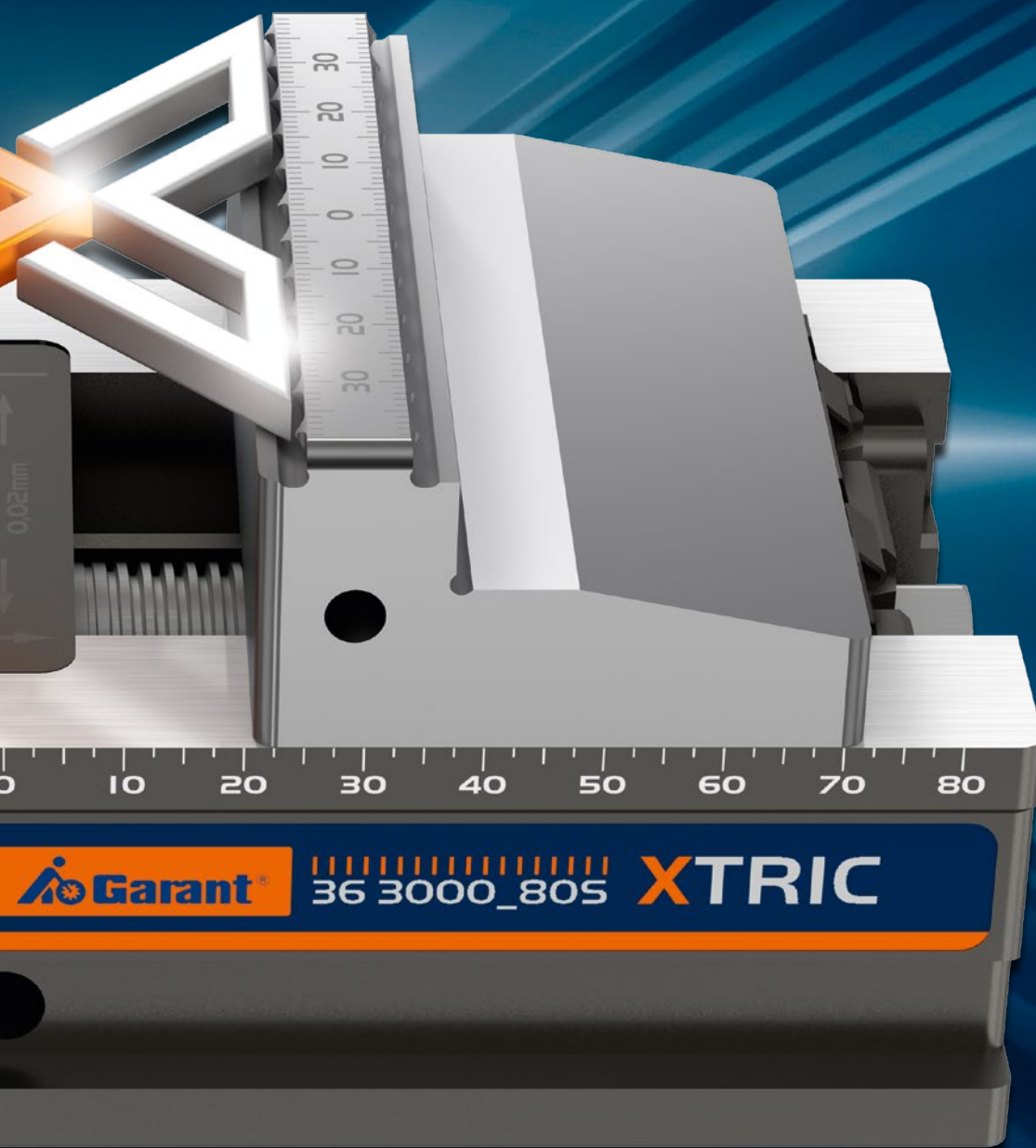


It's not a trick. It's a XTRIC.

THE REVOLUTIONARY CENTRING VICE FROM GARANT.

The new GARANT XTRIC is a multi-function vice and is particularly easy to use. The unique clamping concept with quick-change system for the jaws saves you much time when clamping blank parts and finished parts. The versatile attachment options offer great scope for flexible handling. All this combined with very high precision and quality – Made in Germany.





Xcellent centric: Discover the advantages of the unique centring capability.

PERFECTLY ALIGN MULTIPLE VICES TO EACH OTHER – THIS HAS NEVER BEEN SO EASY.

XPRESS

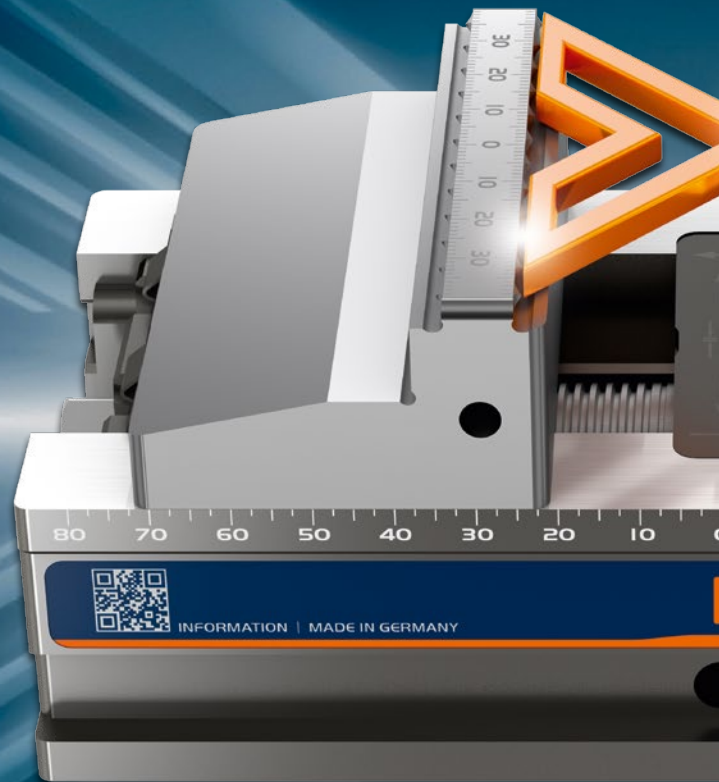
- Click system for quick and easy inter-change of jaws.
- No tools required for changing jaws.

XCELLENT CENTRIC

- Adjustment of the clamping centre in the μ range, especially for clamping components using multiple XTRIC vices.

XACTLY PRECISE

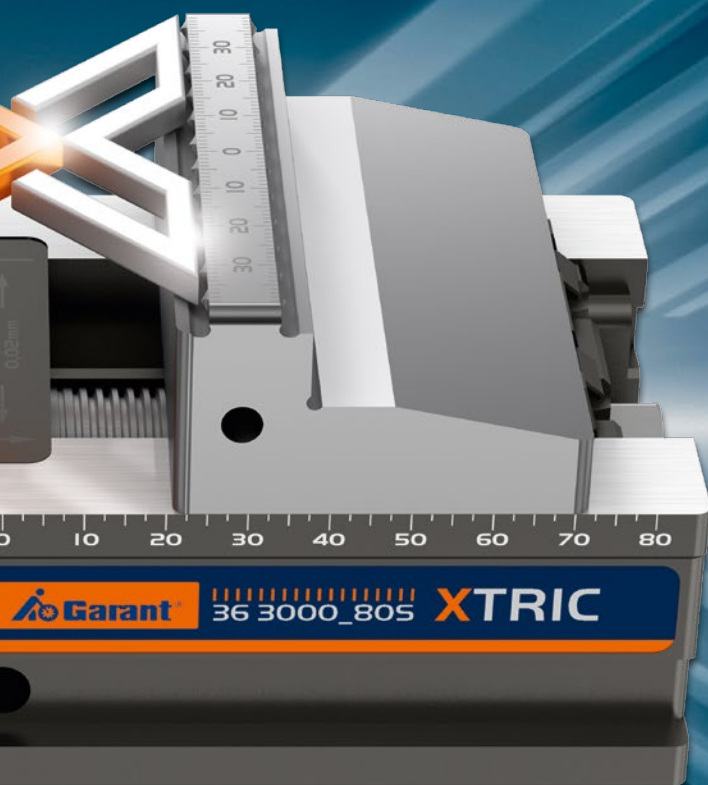
- Minimal and uniform lifting of the jaws and the component.
- Suitable for clamping finished parts (see Page 9).





VIDEO

GARANT XTRIC in Action:
<http://ho7.eu/XTRIC>



XTRA STRONG

- 25 kN clamping force.
- Special GARANT tooth form saves time – no pre-indentation necessary.
- Chromium-plated spindle.

XTREMELY VARIABLE

- Compatible with all zero point clamping systems.
- Directly adaptable on the positioning system „LANG“.

XCLUSIVE

- Available only from the Hoffmann Group.
- Satisfies the very highest quality requirements.
- Environmentally-responsible sustainable manufacturing and packaging.

Xact: GARANT XTRIC

VERY HIGH PRECISION THANKS TO THE DOVETAIL GUIDE BETWEEN SPINDLE NUT AND TOP JAW.

Top jaws with optimised contour design

- Optional coating for process reliability in machining.
- Hardened and ground.
- Very good repetition accuracy < 0.01 mm.

100 % centred

- Centring adjustment for perfect centring.

Spindle nut with or without pivot function

- The size code P stands for pivoting jaw.
- The pivot function nut permits pivoting by $\pm 2^\circ$.
- Use of the pivot function nut offers increased security for components such as sawn parts.

Laser-engraved graduations

- For pre-positioning of the clamping jaws.

Different base lengths

- Choose the right length for every machine.

Clamping edge

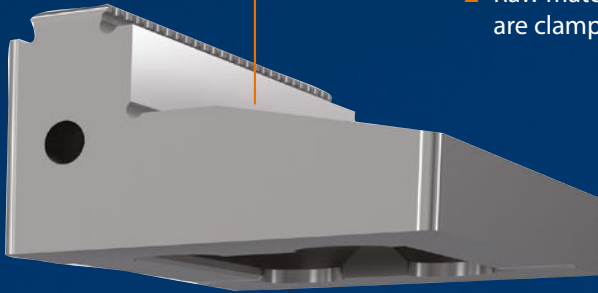
- Perfect for stepless adjustable clamps.

Special underside

- Hole pattern suitable for the "LONG" positioning system.
- Can be clamped to the GARANT ZeroClamp using the adapter.

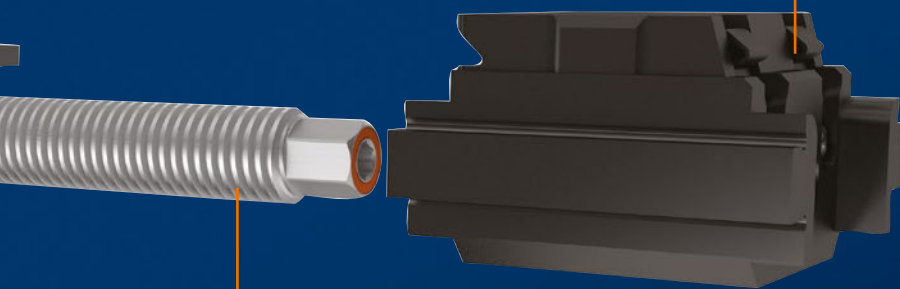
Various different top jaws

- Finished parts clamped using pairs of parallels.
- Raw materials and finished parts are clamped using the same jaw.



Clamping jaw quick-change system

- Clamping jaw quick-change in seconds without tools by clicking on to the dovetail guide.



Chromium-plated spindle

- Maximum tightening torque 85 Nm generates 25 kN clamping force, linear clamping path.
- Internal clamping available by switching the spindle nuts.



Longitudinal slots

- Quick and easy alignment of the machine tool table.

GARANT XTRIC: At a click!

OPERATING CONVENIENCE MEETS PRECISION AND FLEXIBILITY –
FOR A TOTALLY NEW USER EXPERIENCE!

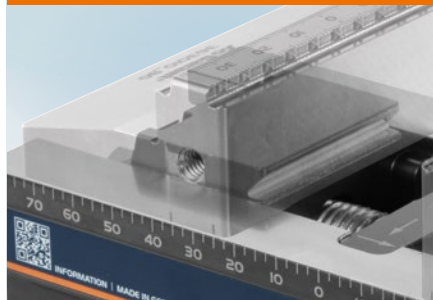
The new jaw changing system combines process reliability, ...

STANDARD



Using the quick-change system, both jaws can be **changed or reversed** in a few seconds.

CLICK MECHANISM



The click mechanism via the **dovetail** and **two spring plates** ensures interchange accuracy in the μ range. No need to remove and re-thread the spindle nut.

... Speed, ...

EITHER



OR

XTRA QUICK

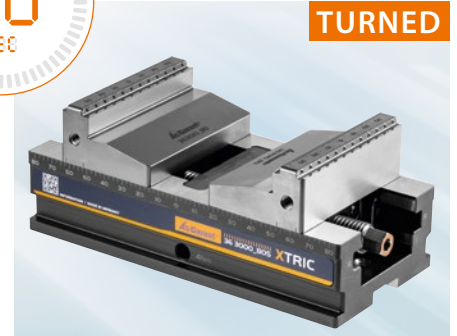


It's your choice: **Jaw change** without using tools or with the aid of a screwdriver.

First insert the top jaw into the dovetail jaw and press it down with the spring plates.



TURNED



The clamping range can be changed over quickly and easily, or the jaws can be exchanged.

... Clamping distance variability, ...



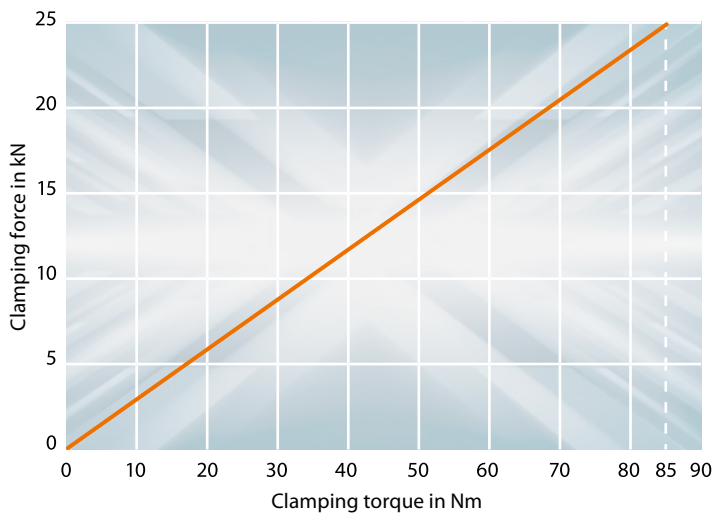
Standard



Turned

GARANT XTRIC		Size 80S		Size 80SP		Size 80M		Size 80MP	
		Standard	Turned	Standard	Turned	Standard	Turned	Standard	Turned
Clamping capacity	mm	0 – 76	74 – 144	0 – 76	74 – 144	0 – 126	74 – 194	0 – 126	74 – 194

... Clamping force ...



LINEAR CLAMPING PROCESS

At maximum clamping force with the correct gripper jaw, no pre-indentation of the component is necessary. Ideal for clamping **blank parts**, because the **25 kN** can be applied directly to the component.

Unlike for other manufacturers, the stated clamping force is not „made to look better“ using the arithmetical sum.

ARITHMETICAL SUM:

This describes the individual forces on the clamping jaws. On the XTRIC it is thus 50kN.

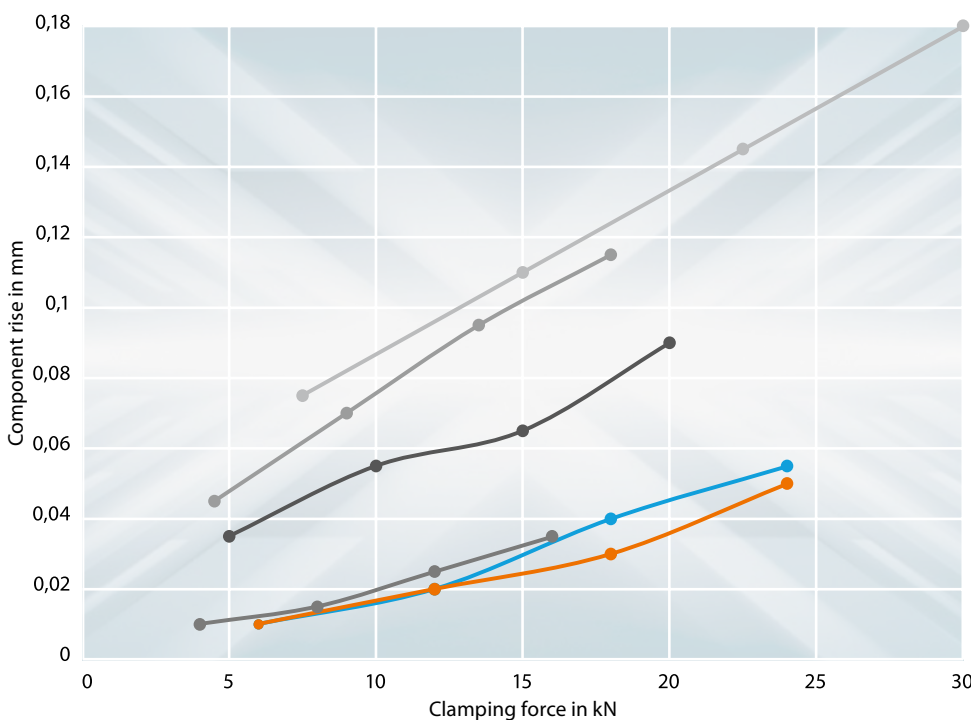
○ The actual clamping force is manipulated by this.

... and clamping accuracy.

For clamping, the jaw is pushed along the specially shaped dovetail in the guide track, thus producing a pull-down effect. This creates **minimal jaw lift-off** whilst **achieving very high clamping accuracy**.

The GARANT XTRIC is suitable for any type of machining, even for **clamping finished parts**.

Even at the maximum clamping force of 25 kN the component rises up only minimally.



IN COMPARISON TO THE COMPETITION, AT A COMPARABLE PRICE, THE CLAMPING ACCURACY IS MANY TIMES BETTER.

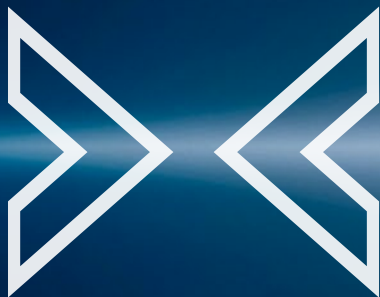
Xtremely variable:
suitable for every clamping situation.

PIVOTING JAW FUNCTION



- Optimum for blank parts (be they saw-cut, castings, flame-cut and many more.)
- Suitable also as a fixed jaw for standard clamping.

CENTRING ADJUSTMENT

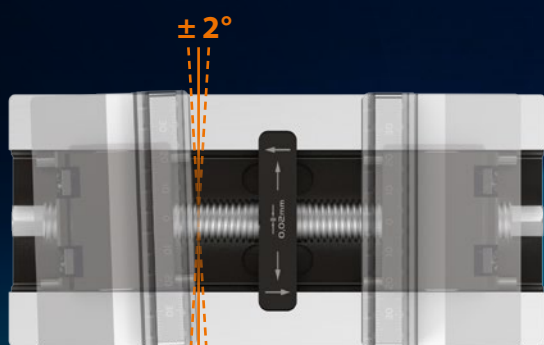


- The centre itself can be adjusted to suit the production requirements with a few movements of the hand.
- Adjustment 5/10 mm each side (1 mm in total) by means of scale graduations on the spindle bearing.

INTERNAL CLAMPING



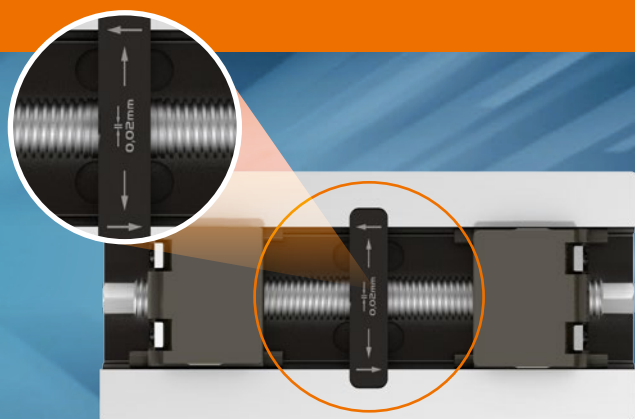
- No interference contours, so optimum accessibility of the workpiece.
- 5-face machining in a single set-up.
- (Milling) pocket clamping possible.



Version "P" (= pivot jaw)

NOTE:

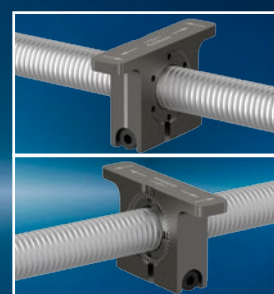
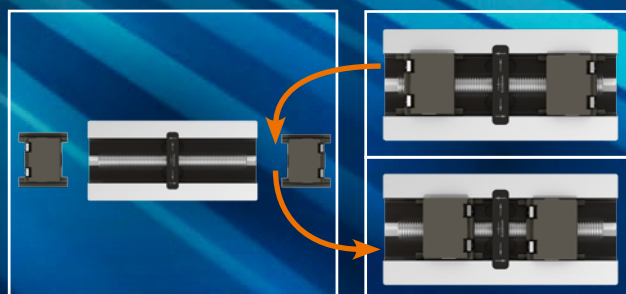
The pivoting jaw automatically adapts to the face of the workpiece, and can also be used without problems for finished parts.



Spindle bearing



After the screw has been released, the centre can be adjusted using a pin wrench. After this the screw is retightened.


Internal clamping and
milled pocket clamping


The spindle nuts are run out fully and the jaws turned through 180 degrees.

Xclusively tested.

THE GARANT XTRIC PERFORMED IMPRESSIVELY IN A PRACTICAL TEST.



With them, the new GARANT XTRIC has its first fans: Philipp (left) and Michael Ramerseder during the APM practical test.

“The accuracy and the flexible quick-change system for the jaws to vary the clamping range in seconds impressed us.”

Philipp Ramerseder, Managing Director
APM Maschinenbau GmbH, Perlesreut/Prombach

APM Maschinenbau tested the new GARANT XTRIC centring vice for us.

APM is an innovative company in the machine tool building sector. It produces individual parts and assemblies through to final installation of jigs and fixtures.

The company management team consists of Michael and Philipp Ramerseder, who in 2014 at the ages of 22 and 20 took the risky step into self-employment.

APM specialises in a wide range of workpieces and materials; these tend to be characterised by complex requirements, diverse sequences of operations and very high precision. Efficient unmanned series production is also achieved by a degree of automation of nearly 50 %.

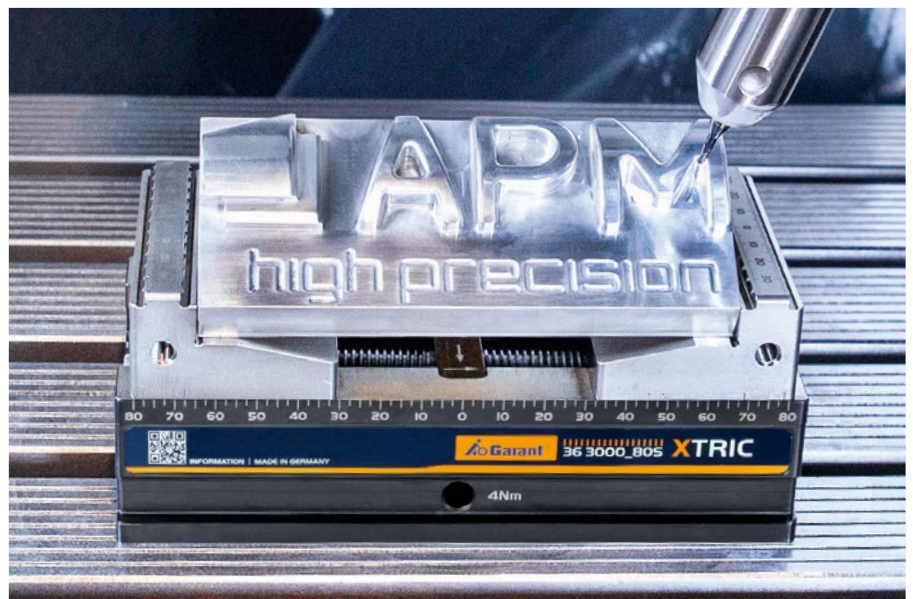
The two brothers are very careful about the cost-effectiveness of their company. Overall equipment effectiveness achieved by qualified personnel and the latest machines is one of the

formulae for success and remaining competitive in the future. The use of special and innovative production technologies – in conjunction with the latest generation of CAM and ERP software – ensure cost-effective and traceable order processing.

The APM customer base includes well-known companies in the fields of

automotive manufacture and machine tool building.

The main focus of the company is particularly in the sectors of machine tool building and special machine tool building, together with electrical machinery and information processing equipment and manufacture of large plants.



The GARANT XTRIC ensures “high precision” – and thus is a perfect fit for the quality expectations that the company APM has for its own products.

QUALITY CHECK



Kühberger Metalltechnik GmbH, founded in 2011 by Werner Kühberger and certified to DIN EN 1090, currently has a production area of approx. 1500 square metres and employees a staff of 44.

The company run by Werner Kühberger and Christian Knödseder believes that enthusiastic and motivated employees are a major asset. The company offers individual solutions from a single source – from prototypes to large series production. The use of the latest CNC technology allows even the most demanding requirements to be satisfied. In 2015 the company was awarded the “Best Start-up Company” prize for Lower Bavaria. The planning and execution of a variety of metal-work items such as balconies, stair-cases, terrace roofs, carports, fences etc. is as much part of our portfolio as machine systems, test bench fittings, safety cladding, acoustic cladding and complete turn-key installations for applications in special machine tools.

A strong partner such as the Hoffmann Group is extremely important for the company, so that



At Kühberger the GARANT XTRIC is used both as a free-standing unit on a machine and also incorporated in a ZeroClamp automation system on another machine.

we can offer our clients consistently high quality and service. The long-standing relationship with Hoffmann and the intensive exchanges with the Application Technician Stefan Wanninger permit us to create a succession of innovative solutions in manufacturing. “No other dealer can offer competent advice and a product portfolio to match the service we receive from Hoffmann.”, says Christian Knödseder.

A DMG milling machine has recently

been equipped with ZeroClamp automation. The GARANT XTRIC will now be integrated into the automation solution. The gripper will automatically feed parts into the XTRIC centring vice and remove parts from it. Kühberger hopes that this will enable it to develop new markets, broaden its customer base and install further automated solutions.

The decision for the GARANT XTRIC system is thus key for the future of the company.



Werner Kühberger and Christian Knödseder have also tested the GARANT XTRIC and are enthusiastic.

“The GARANT XTRIC offers an unbeatable price-performance ratio which we have never previously encountered. New features such as the changing of jaws have absolutely convinced us.”

Christian Knödseder, Managing Director
Kühberger Metalltechnik GmbH, Waldkirchen



Xtric centring vice

- Very good accessibility and perfectly symmetrical.
- All functional faces hardened and ground.
- Central alignment delivers perfectly centred clamping.
- Clamps raw materials and finished parts with the least possible backstroke of the jaws / component.
- Supplied with holes for LANG positioning system, **can be adapted to GARANT ZeroClamp using an intermediate plate.**
- Jaws can be changed without using tools. Changing the jaws may result in a change of clamping capacity.

Suitable for: Top jaws No. 363010 – 363034.

Application: Perfect for 5-face machining. Centred clamping.

Supplied with: Base rail, spindle, spindle nuts.

Optional extras: Hexagon screwdriver No. 627424 size 3, pin wrench 628600 size 2, torque wrench No. 656050 size 120, hexagon socket No. 642229 size 10, stepless adjustable clamps No. 363081 size 80.

Note: Suitable top jaws No. 363010 – 363034 not included in the scope of supply. Clamping situation S2 arises by reversing the jaws.

On request available from October 2019 also in jaw width 125!

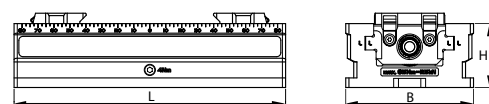


363000_80SP

Please order top jaws separately



Large capacity range S1 – S2 with the same Xtric and the respective accessories.



Type		80S	80SP	80M	80MP
310 36 3000	Centring vice basic device Xtric	XXX	XXX	XXX	XXX
Clamping force up to maximum	kN	25			
Weight	kg	3.2	3.2	3.9	3.9
L	mm	170	170	220	220
B	mm	80			
H	mm	40			
S1	mm	0 – 76	0 – 76	0 – 126	0 – 126
S2	mm	74 – 144	74 – 144	74 – 194	74 – 194
Cross-slot n	mm	20			
Swing angle	degrees	–	±2	–	±2
Maximum torque	N-m	85			
Width across flats	mm	5 and 10			
Colour code for suitable accessories		■	■	■	■



Xtric accessories

Combination top jaws

1 piece

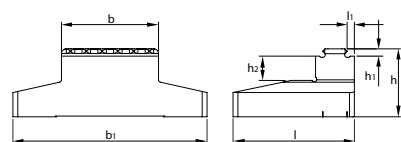
Combination jaws with grip serrations and a smooth clamping face.

363012/3016 – Jaws with a smooth step.

363014/3016/3022 – With coating on the smooth clamping face for optimum retaining force.

363018/3022/3030 – Pre-impression of the serrated contour necessary.

for type		40C	80
310 36 3010	Standard top jaw	–	XXX
310 36 3012	Top jaw, smooth	–	XXX
310 36 3014	Standard top jaw, coated	–	XXX
310 36 3016	Top jaw, smooth coated	–	XXX
310 36 3018	Top jaw system, LANG	–	XXX
310 36 3022	Top jaw system, LANG, coated	–	XXX
310 36 3026	Standard top jaw, width-reduced	XXX	–
310 36 3030	Top jaw system, LANG, width-reduced	XXX	–
b	mm	40	–
b ₁	mm	80	–
h	mm	28	–
h ₁	mm	3	–
h ₂	mm	10	–
l	mm	50	–
l ₁	mm	3	–
suitable for colour code		■	■



363026



GARANT tooth (363010)



LANG tooth (363018)



363010



363012



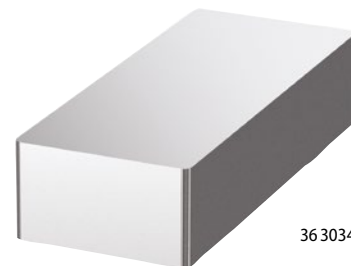
363026

Colour code: ■ xtric

Soft top jaws**1 piece****Application:** For realising customised contours and for machining sensitive components.

Note: Dovetail guide available for quick change of jaws.
Version 120S of steel and 120A of aluminium.
Article 363034 120A may be clamped only to max. 34Nm. (34Nm=1t)

Type	310	36 3034	w	h	l	suitable for colour code
		Soft top jaw	mm	mm	mm	
120S		XXX	120	28	50	■
120A		XXX	120	28	50	■



36 3034

Adapter plates for zero-point clamping systems**1 piece****Application:** For adaptation of the Xtric to indexed clamping pots.

Note: See the photo for the hole pattern of the Xtric. Suitable for LANG positioning system with pitch 52mm.

For clamping pot Ø	mm	120	138
310 36 3080	Adapter plate	XXX	XXX
Mounting hole		25H6M10	
suitable for colour code		■	■



36 3080



Underside Xtric

Pairs of parallels, magnetic for clamping finished parts

Note: Sizes 20C and 22C were modified to suit the contour of the reduced-thickness jaws

Height	mm	5	7	10	15	20	20C	22	22C
310 36 3075	Pair of parallels magnetic	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Length	mm	80							
Width	mm	2.5							
suitable for colour code		■	■	■	■	■	■	■	■



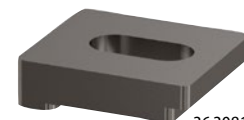
36 3075_22



36 3075_22C

Steplessly adjustable clamp**1 piece**

for type	310	36 3081	B	H	L	suitable for colour code
		Steplessly adjustable clamp	mm	mm	mm	
80		13.82	40	12	45	■



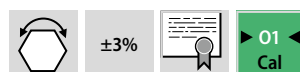
36 3081

Hexagon screwdriver with T-handle

Hexagon	mm	5
61C 62 7424	Hexagon screwdriver with T-handle and ball point	XXX
Blade length	mm	125
overall length	mm	187



62 7424

Torque wrench with setting scale - automatic triggering

65 6050

maximum torque	N-m	120
61E 65 6050	Torque wrench with reversible ratchet	XXX
Overall length L	mm	409
Torque range	N-m	20 – 120
Scale graduation, 1 graduation =	N-m	1
Weight	g	1000
Square drive	inch	1/2

Hexagon sockets

Width across flats	mm	10
61A 64 2229	Hexagon socket, 1/2 inch	XXX
Ø drive output end	mm	15.4
Length	mm	38



HT Drive profile

64 2229

Colour code: ■ xtric

NATURE SHOWS US WONDERFUL CLAMPING CONCEPTS.

NOW WE OFFER THEM FOR YOUR PRODUCTION SYSTEMS.



Model: GARANT 5-axis vice Xpent

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www.garant-tools.com



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