



COMPANY PROFILE

ENGLISH



## OUR COMPANY

**OMIL**, Officine Meccaniche Isidoro Lolio, was founded on 3 July 1963, and **today celebrated its 60th birthday.**

1959 to 1963 were the years of the Italian 'economic boom': accelerated industrialisation concentrated in the North but with major developments in the South. **It is in this context that our story begins, a story within the history of the most obvious period of exultation that Italy has ever known.**

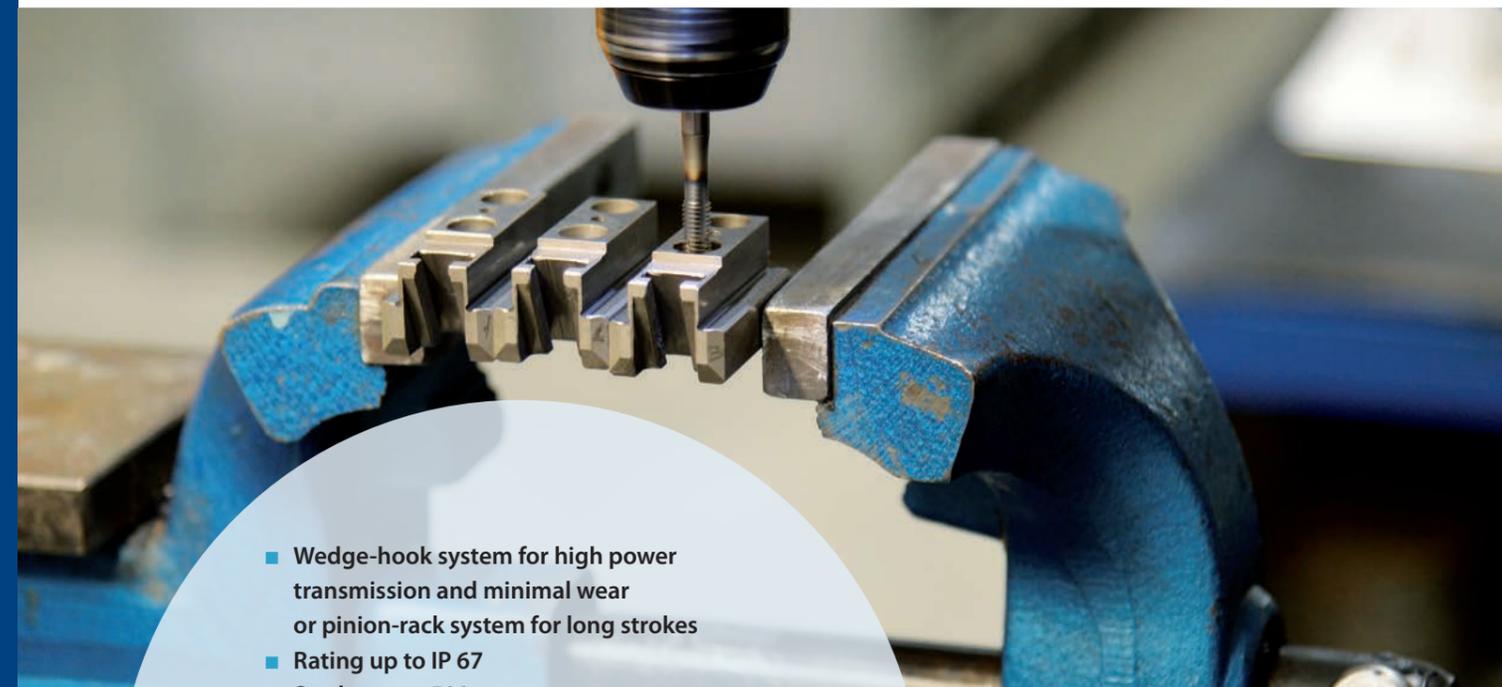
The modern era of **OMIL** began in Settimo Torinese, when Isidoro Lolio, joined by his son **Maurizio** at the helm of the company, faced a very complex period for the Italian economy and entrepreneurship due to the global changes taking place. **Ours is a story of passion, willpower and unyielding stubbornness** in the face of moments that would prove to be a continuous challenge full of commitments and efforts often at the limit of bearable.

**In OMIL's 60th year, our thoughts are with Mr Isidoro, who worked hard and to the end in the company, gathering information, taking an active part in the cause of his own creation with indomitable curiosity and passion, becoming an example and inspiration for all those involved.**

Loyalty, consistency, politeness and respect are the fundamental values that set him apart and that guide our choices and actions, driving us to propose ourselves more and more as your technical and commercial partner in gripping systems and obtain better conditions for your purchases and production.

**We work every day with undiminished enthusiasm and that desire for innovation that has continued to inspire us for 60 years.**

Today, in the field of **medium-heavy parts handling**, OMIL has become one of the **benchmarks** thanks to its **wide range of standard and special products**. The strong position achieved also depends on the **technology** and **reliability of products** such as **gripping parts in harsh environments** such as **die-casting** or **hot stamping**.



- Wedge-hook system for high power transmission and minimal wear or pinion-rack system for long strokes
- Rating up to IP 67
- Stroke up to 500 mm
- Temperatures up to 130°C
- Weight-optimized due to the use of high-strength aluminium alloy, hard-anodized
- Safety device for gripping force maintenance
- Handling up to 100 kg
- Gripping symmetries up to +/-0.015 mm
- Anti-corrosion
- Multiple position monitoring
- Through-holes up to 105.5 mm
- Standard 2-3-4 finger solution

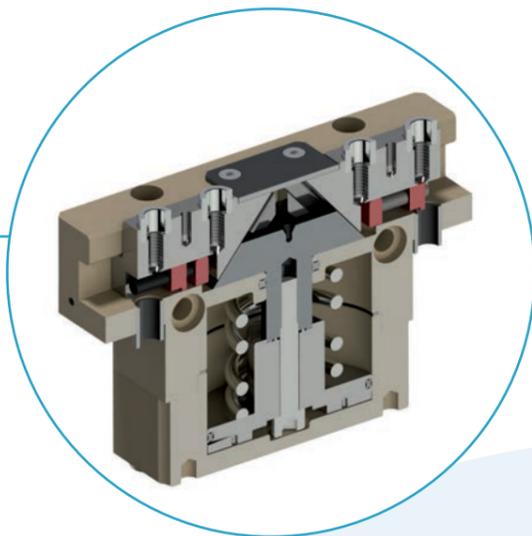




### SAFETY DEVICE FOR GRIPPING FORCE MAINTENANCE

The gripping force maintenance device ensures that a minimum gripping force will be applied even if there is a drop in pressure. Safety device can also be used to increase gripping force or for a single-acting grip.

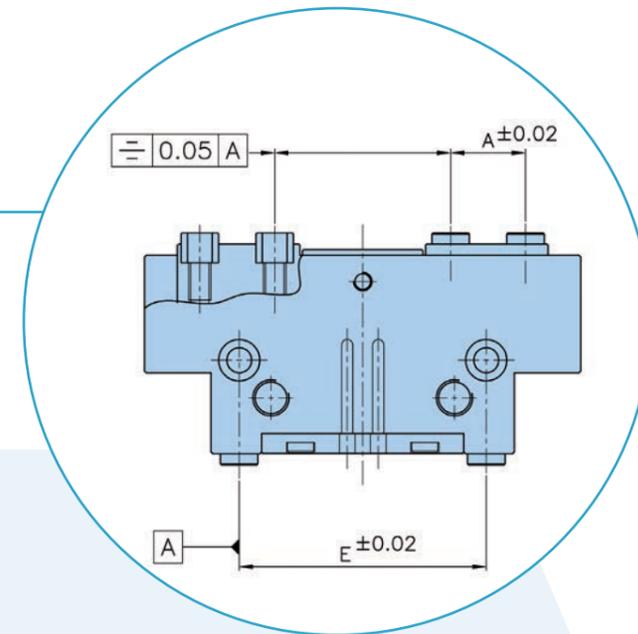
**MC:** acts as a closing force  
**MA:** acts as an opening force



### PRECISION VERSION UP TO 0.015

Increases symmetry accuracy between the gripping axis of the base fingers and the reference axis of the body.

**HP:** version with accuracy +/- 0.025 mm  
**Z:** version with accuracy +/- 0.015 mm



### STROKES UP TO 500 mm

Using the pinion-rack principle, it is possible to achieve **synchronised long strokes and low weight.**

**LSPG 60-250:** 2 fingers stroke 500  
**MCL 63:** 3 fingers stroke 320



### HARSH ENVIRONMENTS WITH IP 67 GRIPPERS

Our solutions **increase the standard degree of protection of grippers against penetration** substances.

**Recommended for harsh environments** from the loading and unloading machines, such as in the case of sanitary blocks, grinding machines, lathe or milling machine, to handling tasks in painting plants, in powder-processing or underwater. Eliminates production stoppages for greasing or cleaning.



### 2-FINGER GRIPPER WITH 10,000 N FORCE

Our **PSG 2-finger**, 6 bar pneumatic gripper provides **reliable gripping force** for handling parts.



### FINGERS UP TO 900 mm

Our **GPRS** grippers allow the application of **very long fingers for handling.**



### 2-, 3-, 4-FINGER MINI GRIPPERS

- 55 g and 30 N **2-finger gripper**
- 70 g and 70 N **3-finger gripper**
- 80 g and 55 N **4-finger gripper**





### ANTI-CORROSION

It increases the corrosion resistance of functional parts.



### RADIAL GRIPPERS 0°-180° OPENING

Kinematic for centric gripping with large opening/closing movements. In the process, the two pins move in unison and relative to the groove in the top jaws. **In the gripping moment the largest lever arm enables the transmission of a maximum gripping force. The integrated damping system optimises working time.** Larger surfaces ensure that performance is maintained for a longer period of use.



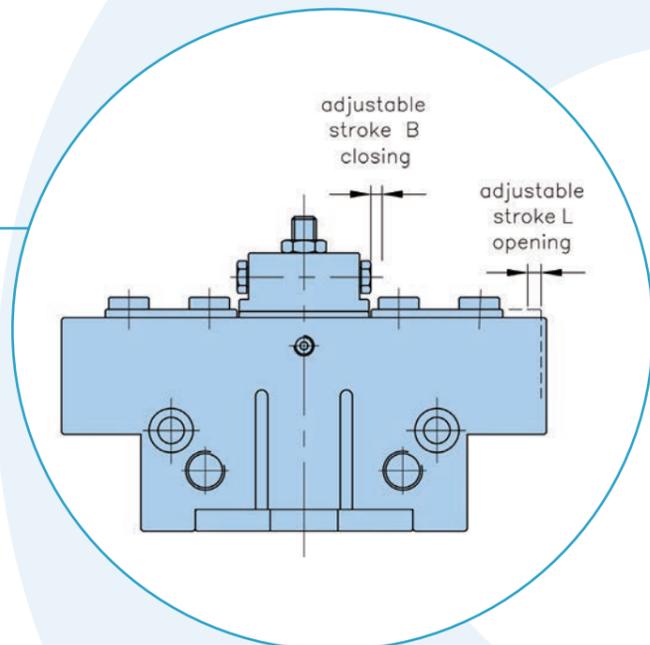
### MONITORING FOR MULTIPLE POSITIONS

Magnetic position sensor, **monitoring for any number of position.** Electrical setting of measuring ranges. Check set up of the gripper with T-Slot.

### STROKE LIMITATION

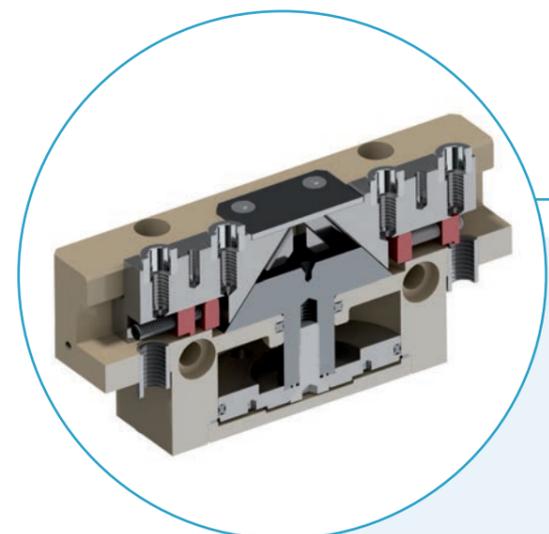
Solution for **limiting the opening/closing stroke of the base fingers** (e.g. workpiece not to be deformed)

**AST:** solution for stroke adjustment/limitation



### 3-FINGER GRIPPERS, SELF-CENTRING

**Self-centring grippers for handling round parts. Wedge-hook system allows transmission of a high force, efficiency over a long interval and precise self-centring gripping.**



### INDUCTIVE POSITION MONITORING

The basic version of the gripper has slots for magnetic sensors. **The 'settable kits' B5 and B8 allow the use of inductive proximity switches to control the position of the base fingers.**

### 4-FINGER GRIPPERS, SELF-CENTRING

Flexible self-centring grippers.





### CENTRAL THROUGH-HOLE

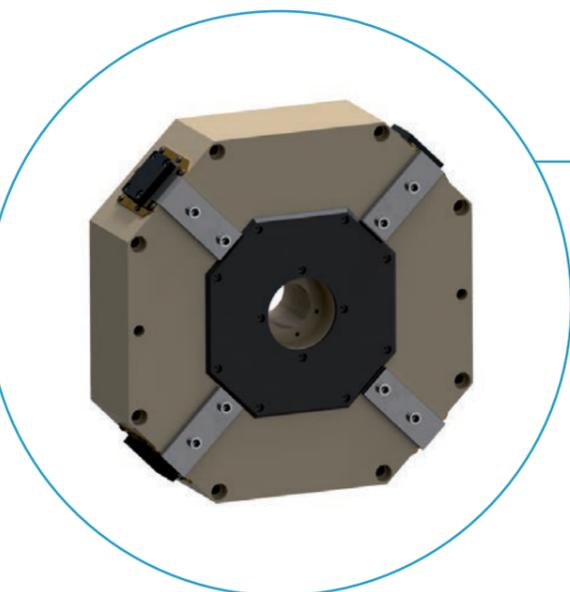
Standard grippers with **through-hole up to 60.5 mm and on request up to 105.6 mm.**

Central hole useful for making workpiece, feeding pipes, applying sensors, using recognition systems, referencing workpiece, cleaning the workpiece, etc.



### TY JAW QUICK-CHANGE SYSTEM

Allows the upper **finger to be replaced quickly.** It offers a clamping and **reference solution.**



### CUSTOMISED SOLUTIONS

Drawing on decades of experience, we are able to provide **customised grippers on the customer's application.**

**Example of an MCX 400 4-finger gripper, features:**

- 75 mm stroke per finger
- IP 55 rating
- Through-hole

### VMP PRESSURE MAINTENANCE VALVE

In emergency stop situations, the pressure maintenance valve **ensures the temporary holding of the pressure in the piston chamber.**

**Max. pressure lost for the switch 0.5 bar,** subsequently pressure **lost per hour of 0.1 bar.**



### FINGER BLANKS

Can be reworked by the customer.

**GS:** aluminium version

**GC:** steel version



### JUS UNIVERSAL INTERMEDIATE JAW

It allows **quick and safe adjustment of the upper finger position without losing the reference.**



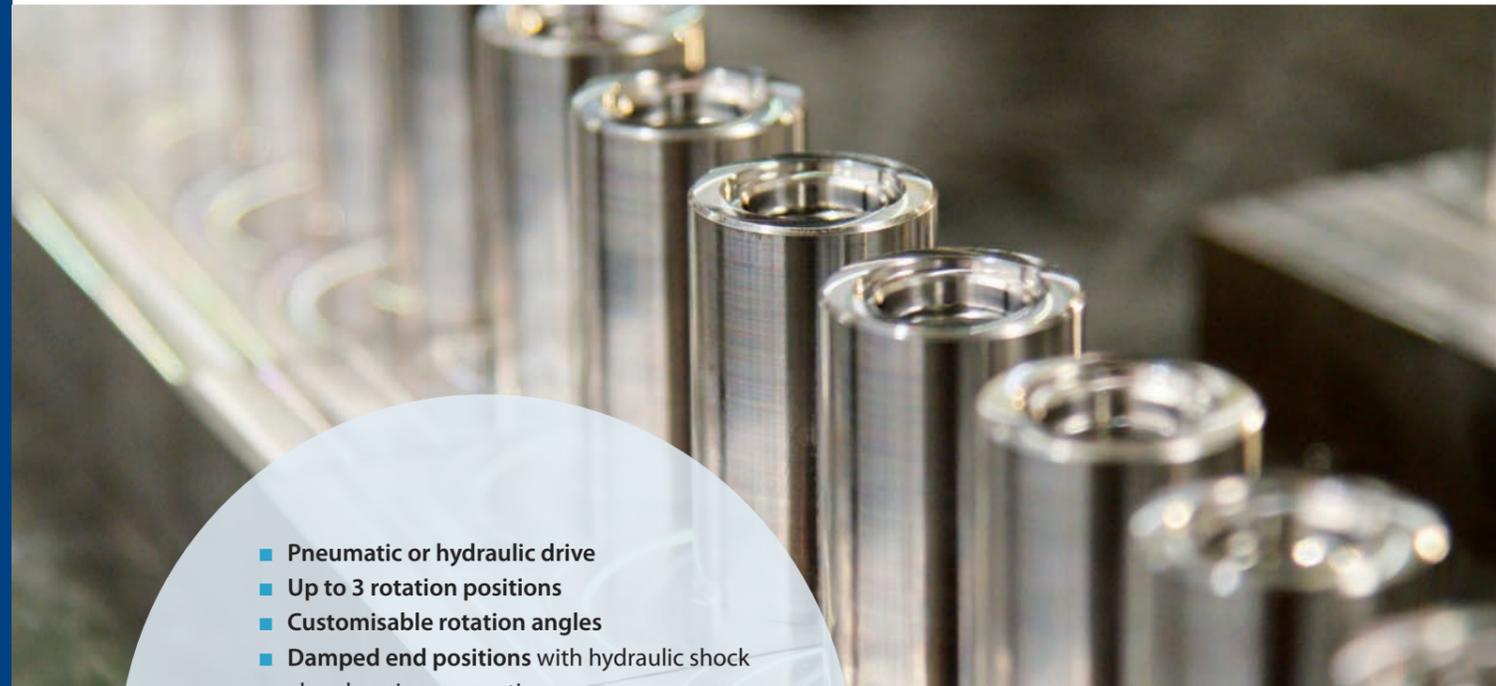
### STROKE CONTROL

Various stroke control solutions are optionally available:

- **electronic magnetic switch**
- **inductive proximity switch**
- **magnetic multi-position**



**OMIL rotary actuators** are made of hard-anodized aluminium alloy. Double adjustment-screw, hydraulic shock absorbers, fluid feed-through, and specific rotation angles on request make them **reliable, efficient** and **customisable products**.



- Pneumatic or hydraulic drive
- Up to 3 rotation positions
- Customisable rotation angles
- Damped end positions with hydraulic shock absorbers in pneumatics
- Fluid feed-through
- Optimisation of rotation times
- IP 67 solutions
- Position control
- Double command cylinder
- Adjustment positions  $\pm 3^\circ$   
(End and center position)
- Electric rotary distributor on request



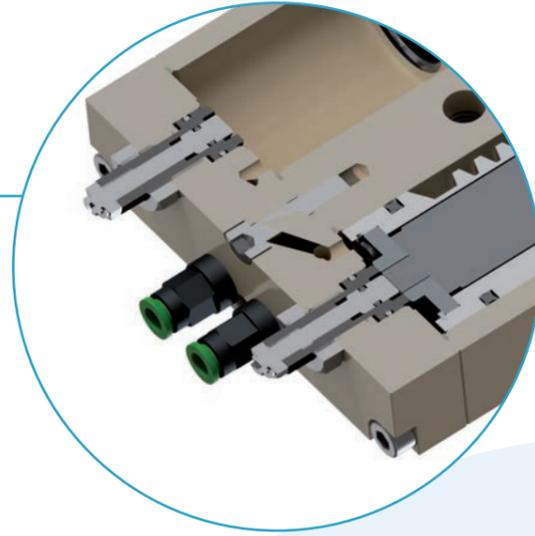
# ROTARY ACTUATORS





### OPTIMISATION OF ROTATION TIMES

The solution with the double adjustment-screw, one to change the angle and one to reduce the absorption capacity of the hydraulic shock absorbers, allows the cycle time to be optimised. Increase the efficiency of your system by eliminating unnecessary damping time.



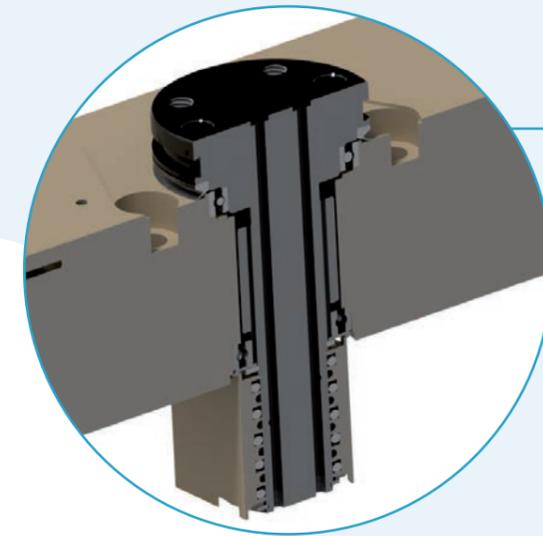
### COMPACT ROTARY ACTUATOR

They allow the swivel unit's overall to be contained.



### UP TO 3 CUSTOMISABLE AND ADJUSTABLE POSITIONS

Solutions up to three 3-position rotations that can be customised within the total 180° on specific request. Damping is maintained by hydraulic shock absorbers on all positions even for customised versions.

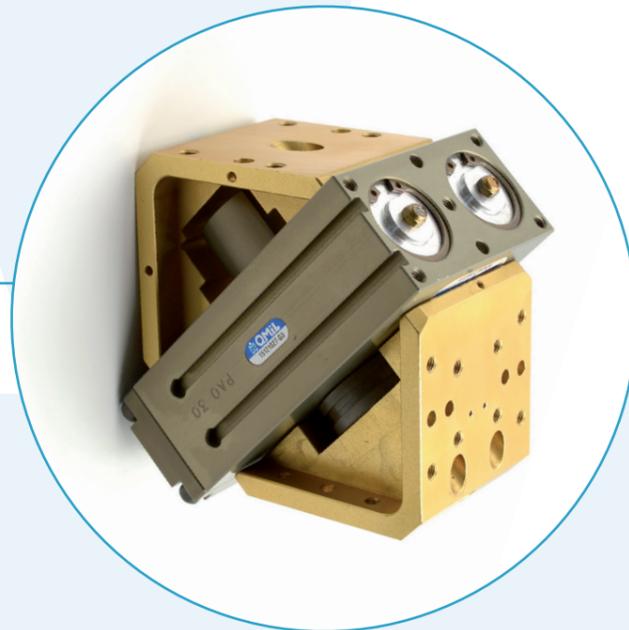


### ELIMINATION OF HOSES INTERFERENCE

Fluid feed-through can be used for gases, liquids and vacuum. Up to 8-way solutions eliminate tube wear, which is often the cause of production downtime, and interference.

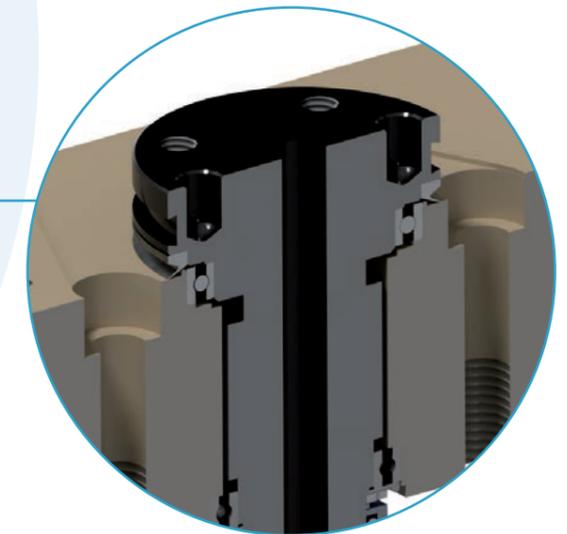
### COMPACT SWIVEL HEAD

Compact solution for tipping workpieces complete with fluid feed-through.

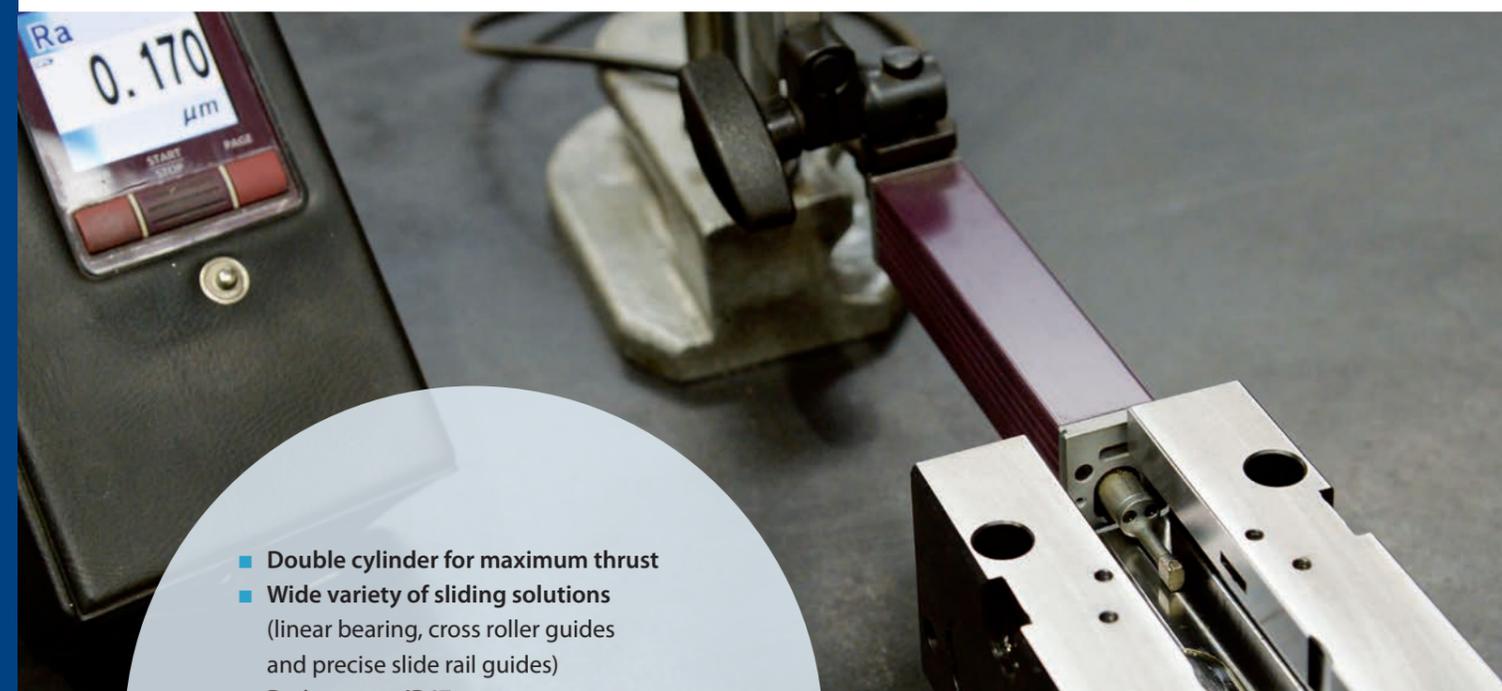


### HARSH ENVIRONMENTS WITH IP 67

Our solution increases the standard degree of protection of the rotary actuators against penetration substances. Recommended for harsh environments from the loading and unloading machines, such as in the case of sanitary blocks, lathe or milling machine, to handling tasks in painting plants or in powder-processing. Eliminates production stoppages for greasing or cleaning.



**OMIL solutions allow precise, protected, fast, controlled sliding for maximum efficiency. All sliding parts are treated to maintain longtime performance.**



- Double cylinder for maximum thrust
- Wide variety of sliding solutions (linear bearing, cross roller guides and precise slide rail guides)
- Rating up to IP67
- Damped end positions with hydraulic shock absorbers
- Adjustment of end positions
- Position control



The **OMIL grippers swivel unit** is a compact product ideal for reducing machine space requirements. **In one product we have a parallel gripper and an adjustable swivel unit** without bulky tubes.

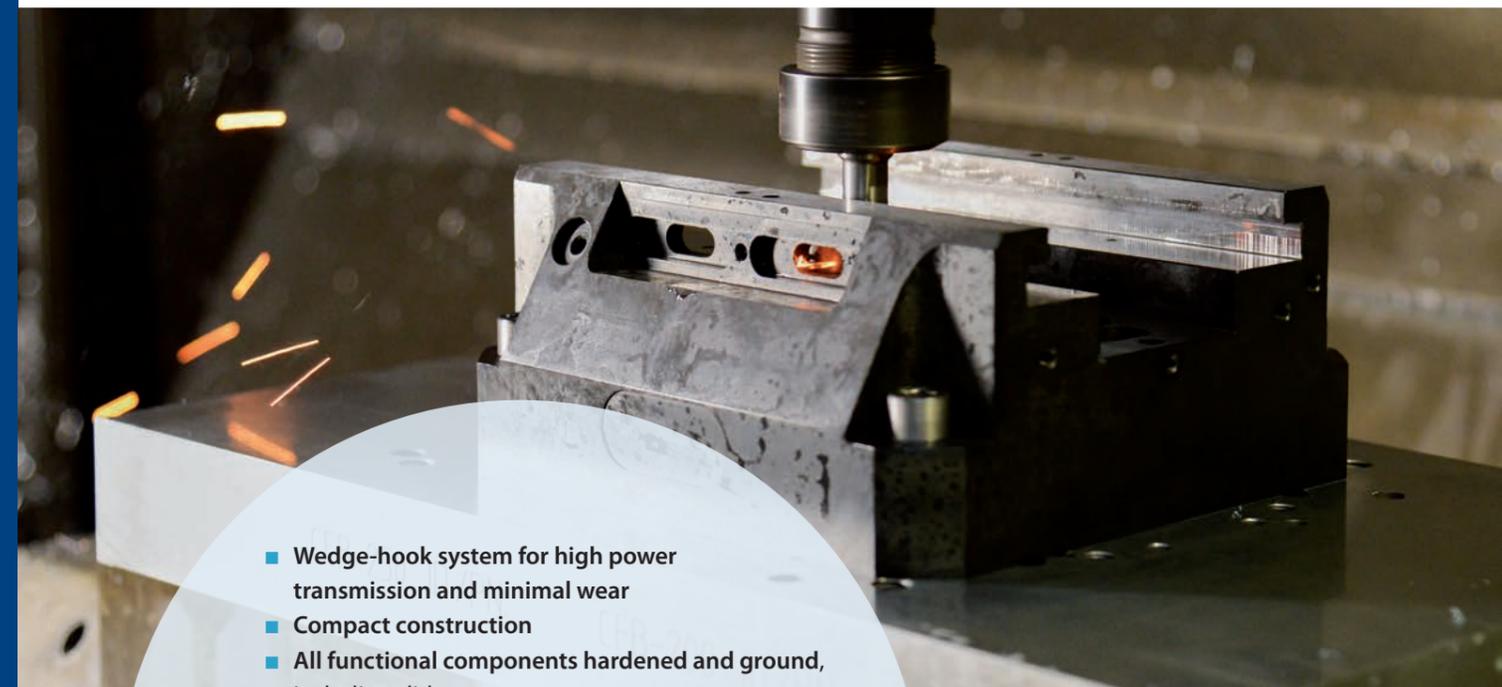


- Wedge-hook system for high power transmission and minimal wear
- Standard and customisable rotation angles
- Adjustment of end positions
- Elimination of hoses interference
- Precise angle positions 0.07°
- Gripping force maintenance
- Multi-sided mounting
- Final damping positions
- Position control

## GRIPPERS SWIVEL UNIT



OMIL offers a complete product line for maximum production. Metal chips protection, central lubrication and hardened internal slideways make our products suitable for three-shift production.



- Wedge-hook system for high power transmission and minimal wear
- Compact construction
- All functional components hardened and ground, including slideways
- Clamping force up to 200,000 N
- Adjustable clamping force by pressure
- Lubricated sliding surfaces (closed pockets)
- Metal chips protection up to IP 55 rating (non-degradable)
- Service pressures up to 250 bars
- Jaw strokes up to 150 mm
- Jaw position monitoring
- Workpiece presence
- Versions with symmetry  $\pm 0.01$  mm



## SELF-CENTERING VISES





**FROM PROJECT TO PRODUCT**

You get a product **developed according to the specifications of your application.**



**CLAMPING FORCE MAINTENANCE**

Mechanical spring device or pressure maintenance valve **to maintain a minimum clamping force** in the event of a **drop of pressure.**



**METAL CHIPS PROTECTION UP TO IP 55**

Our solutions with pre-loaded bronze metal scrapers and gaskets **increase the standard degree of protection against penetration.** The metal scraper solution **avoids the degradation of the rubber** with which the scrapers are normally made and **ensures protection for millions of cycles.** Finally, **oil mist lubrication** via pressurisation inlets **promotes IP 55 protection and complete lubrication of all surfaces.**

**NEW** VERSION 250 bars

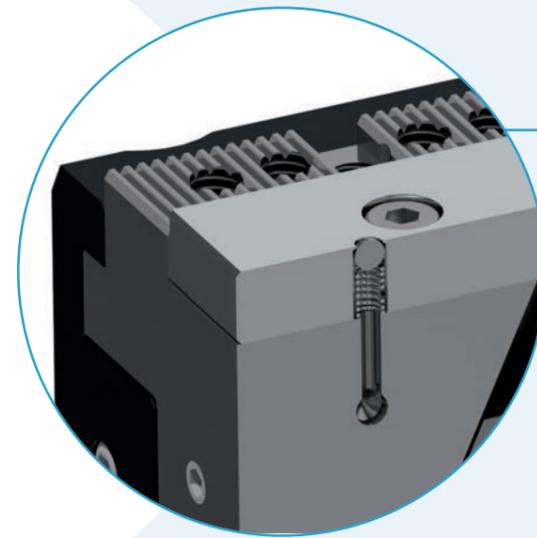


**INDUCTIVE MONITORING OF BASE JAW POSITION**

**Operator-settable base jaw position control** via inductive proximity switch, **position adjustable.**

**WORKPIECE PRESENCE CONTROL**

**Workpiece presence control through the base vises.** By blowing air, it is possible **to check the presence of the workpiece and clean the clamping surface.**

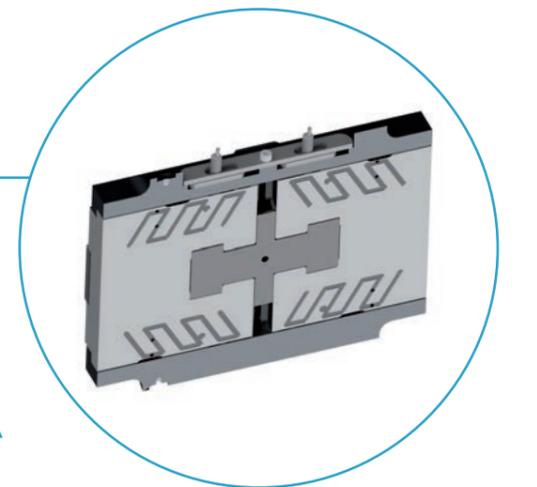


**PNEUMATIC MONITORING OF BASE JAW POSITION THROUGH DYNAMIC PRESSURE**

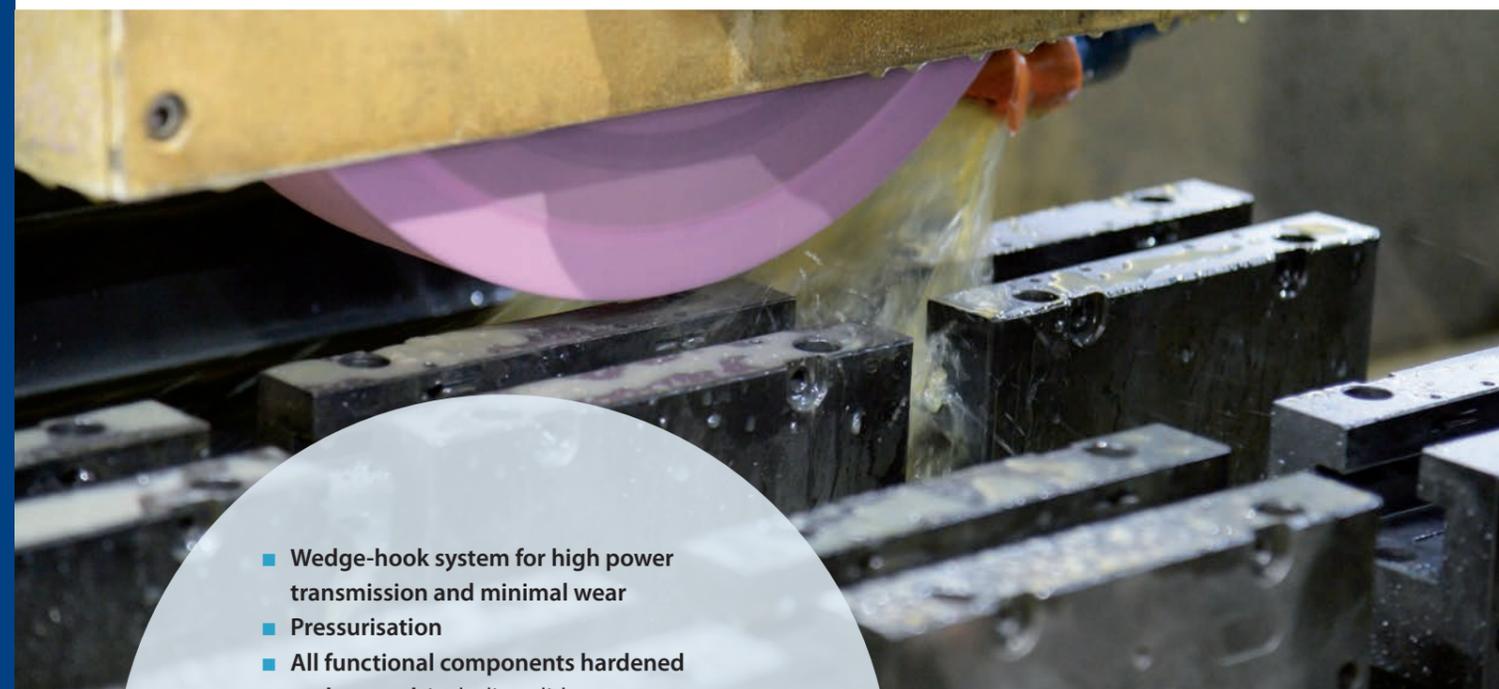
**Control of up to 3 base jaw positions** by pressure variation.

**LUBRICATION OF SLIDING SURFACES**

**"Closed" lubrication pockets** in the base jaws **ensure that performance is maintained over an extended range of time.**



3- and 4-jaws-clamping-chucks for clamping workpieces during machining process. Self-centring solutions for referential clamping of workpieces. Wedge-hook system and hardened and ground guides make the chucks efficient.



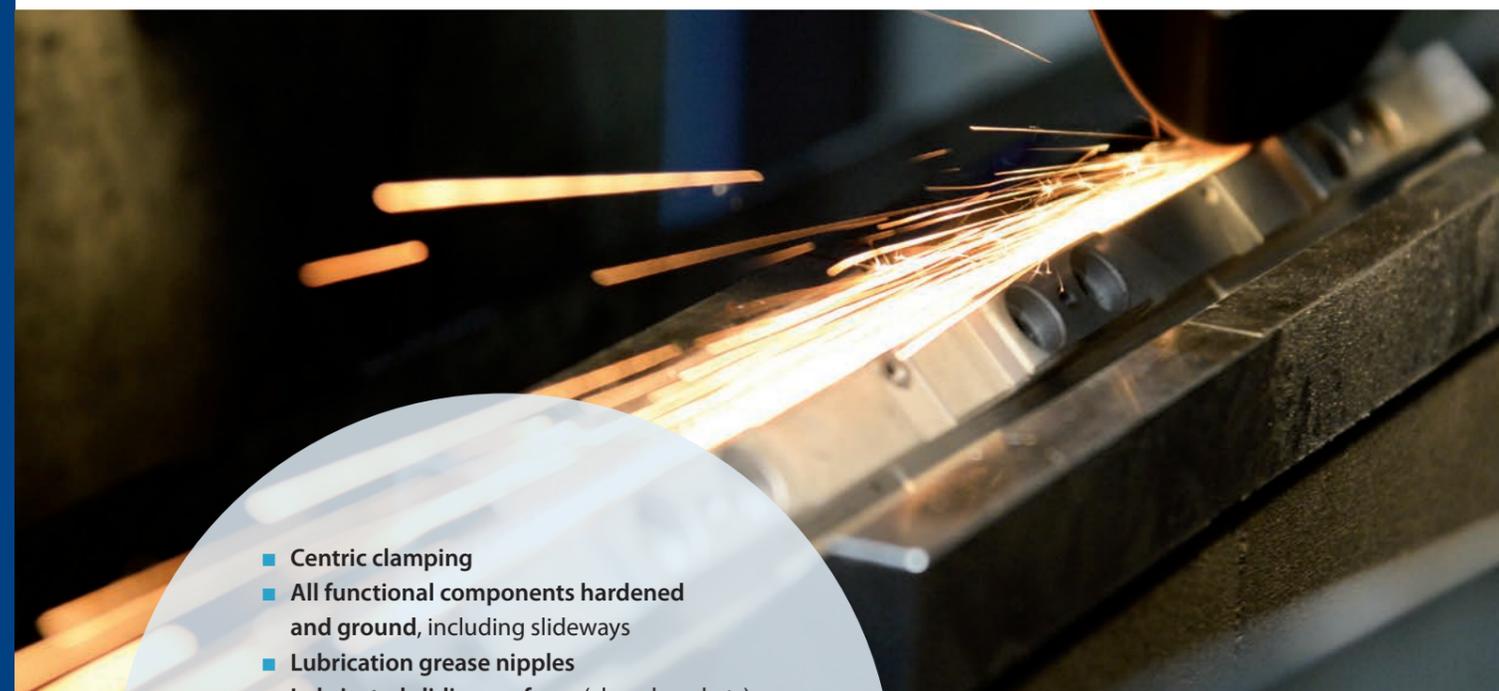
- Wedge-hook system for high power transmission and minimal wear
- Pressurisation
- All functional components hardened and ground, including slideways
- Lubrication grease nipples
- Lubricated sliding surfaces (closed pockets)
- Air or oil supply from 2 sides
- Central through-hole up to 60.5 mm
- Jaw strokes up to 50 mm
- Position monitoring

NOTA: max. 100 rpm

## SELF-CENTERING CHUCKS



**OMIL manual vises** utilise the **material expertise and technology of automatic vises** for efficient production.



- Centric clamping
- All functional components hardened and ground, including slideways
- Lubrication grease nipples
- Lubricated sliding surfaces (closed pockets)
- Customised solutions on request
- Repeatability +/-0.01 mm
- Jaw strokes up to 150 mm
- Nitrided 42NiCrMo4 screw
- Provision for vise quick-change
- Top jaws blanks
- Serrated jaws





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