



FORKARDT.COM



STANDARD PROGRAM OVERVIEW



Welcome to the World of Forkardt



EXPERIENCED

With 100 years of experience, we are YOUR ideal partner for designing and manufacturing “Made in Germany” workholding solutions that keep pace with increasing manufacturing demands.

FIRST CLASS

We ensure innovation, precision and accuracy in the most demanding applications. In doing so, we continually invest in our manufacturing facilities and employees to provide you with a high level of service and quality.

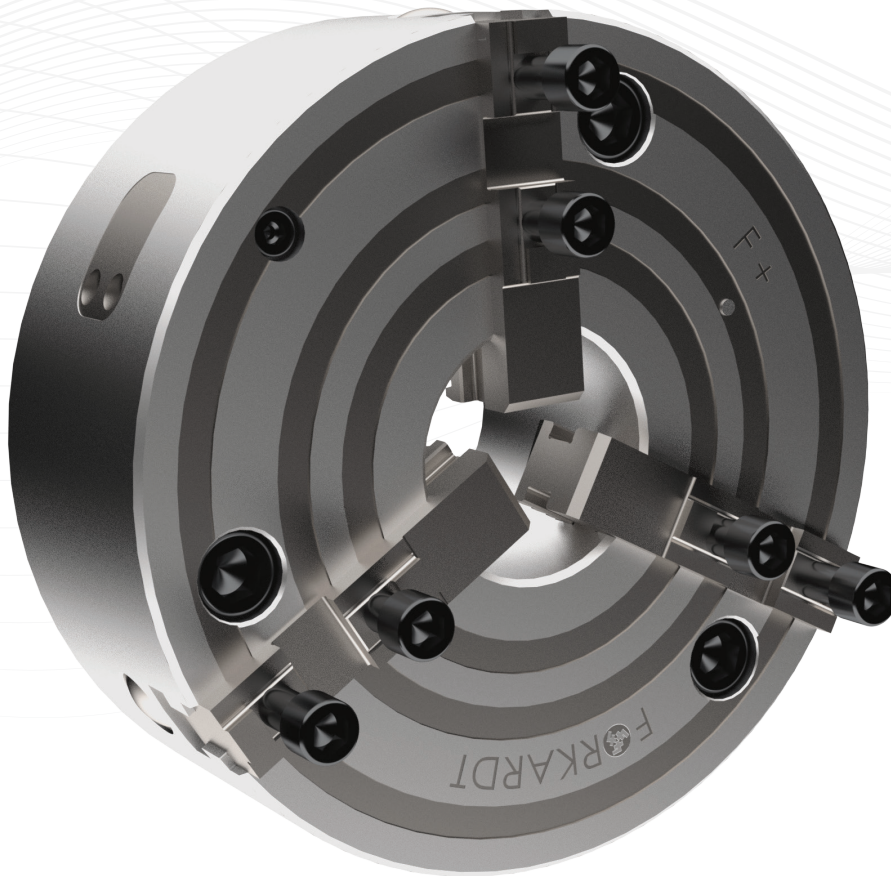
UNIQUE

We are world leaders in the development, manufacture and distribution of precise, advanced clamping solutions. Our goal is to provide you with the ideal clamping equipment for your individual machining needs.

FORKARDT® Total Program



The Original Manual Chuck



Description

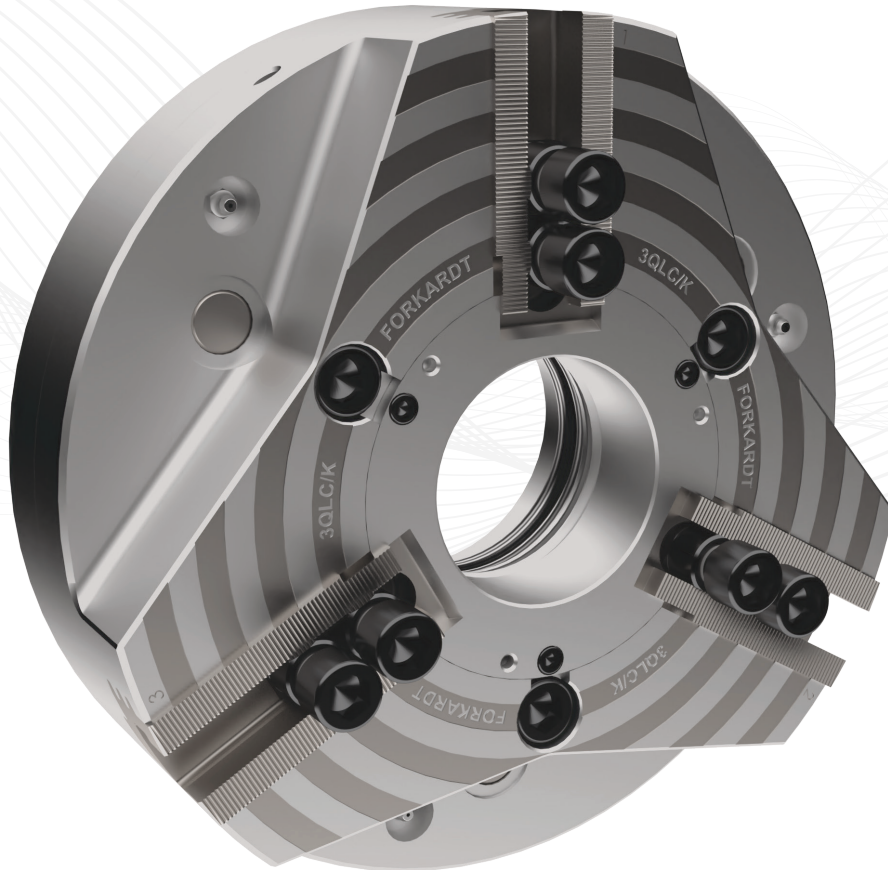
Our Forkardt F+ is a universal manual chuck and is based on the wedge bar principle invented by Forkardt. It features a quick-change jaw system and is compatible with virtually all lathes.

Areas of Application

- Universal chuck for conventional and NC-controlled machines
- Working with jaw units for small batch sizes

The Advantages

- High accuracy
- Quick jaw change
- Longest service life
- Nitrided chuck body
- High clamping force
- Successfully in use worldwide for decades
- Simplest handling
- With large bore



Description

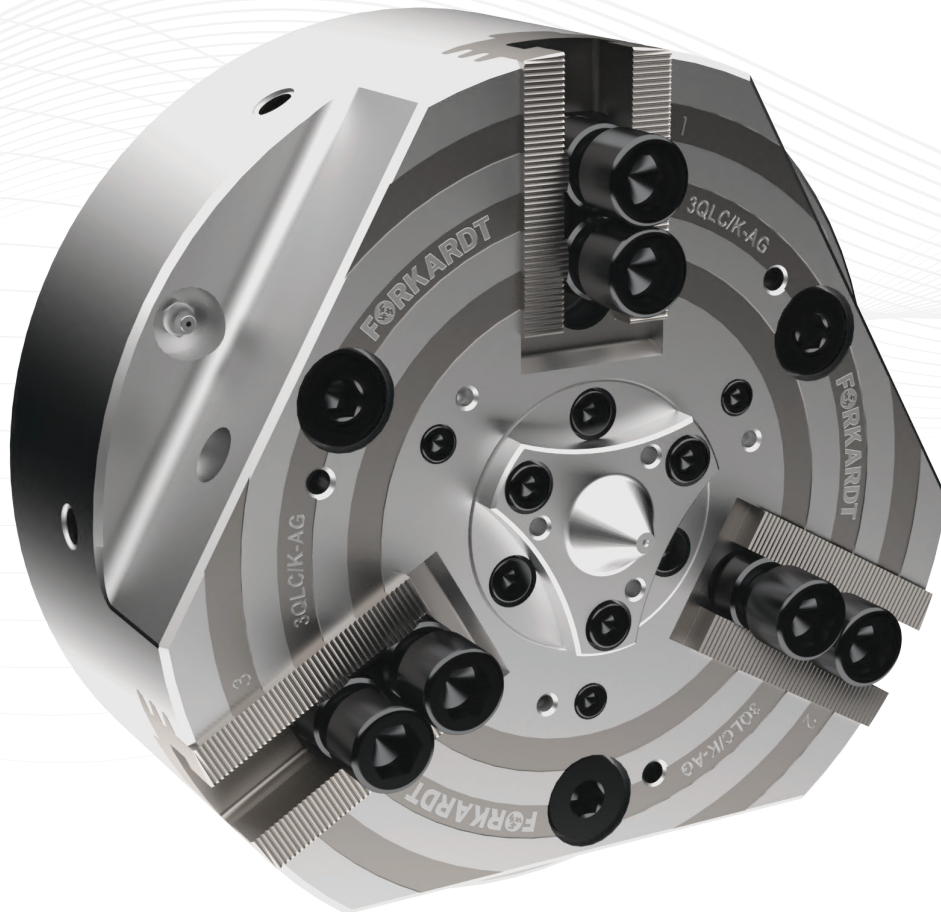
The QLC is a highly efficient wedge hook chuck. It is actuated axially via hydraulic or pneumatic cylinder. It is suitable as a universal power chuck for almost all turning options.

Areas of Application

- Medium to large batch size
- Suitable for use from heavy machining to finish machining

The Advantages

- Lower unit costs - through reduction of machining times
- 20% higher speeds than conventional chucks due to centrifugal force compensation
- High concentricity - due to backlash-free wedge hook mechanism
- Low maintenance - due to multiple profile jaw guidance
- Forced lubrication
- Optional quick jaw change



Description

The QLC-AG power chuck is designed for machining shaft parts. The chuck has a compensating clamping jaws and an axial pull-down. The centering tips are easily exchangeable and with the use of a centering sleeve the balancing chuck becomes a centering chuck.

Areas of Application

- Medium to large series
- Shaft Machining

The Advantages

- Smooth compensation at high clamping forces
- Pull back effect for optimum fit on the center
- Exchangeable and finely adjustable centering inserts
- Convertible to centralizing clamping for general machining



Description

The QLC-LS power chuck is designed to provide up to 95% more clamping stroke. It is particularly suitable for machining workpieces with difficult geometry for overlapping clamping.

Areas of Application

- Medium to large series
- Workpieces with large diameter variations
- Parts with difficult geometry (overlapping clamping)

The Advantages

- 2- and 3-jaw design
- Up to 95% larger clamping stroke - thus fewer jaw changes necessary
- Very low lubricant loss
- Nitrided, extremely robust chuck body

FORKARDT® Total Program

QLC KS

Extra large bore



Description

QLC-KS power chuck is a high efficiency wedge hook chuck of high productivity with extra large through hole.

Areas of Application

- Medium to large series
- Especially for bar feeding
- Tube processing

The Advantages

- Large bore for machining large workpieces
- Optimum ratio between bore and outside diameter
- Approx. 40% larger bore than comparable chucks due to short multiple jaw guide

FORKARDT® Total Program

QLC LM

Low maintenance



Description

The QLC-LM power chuck is the low-maintenance variant in the QLC family. It is hermetically sealed and thus prevents lubricant leakage and the ingress of dirt and chips.

Areas of Application

- Medium to large series
- Dry and cast machining
- Finish machining

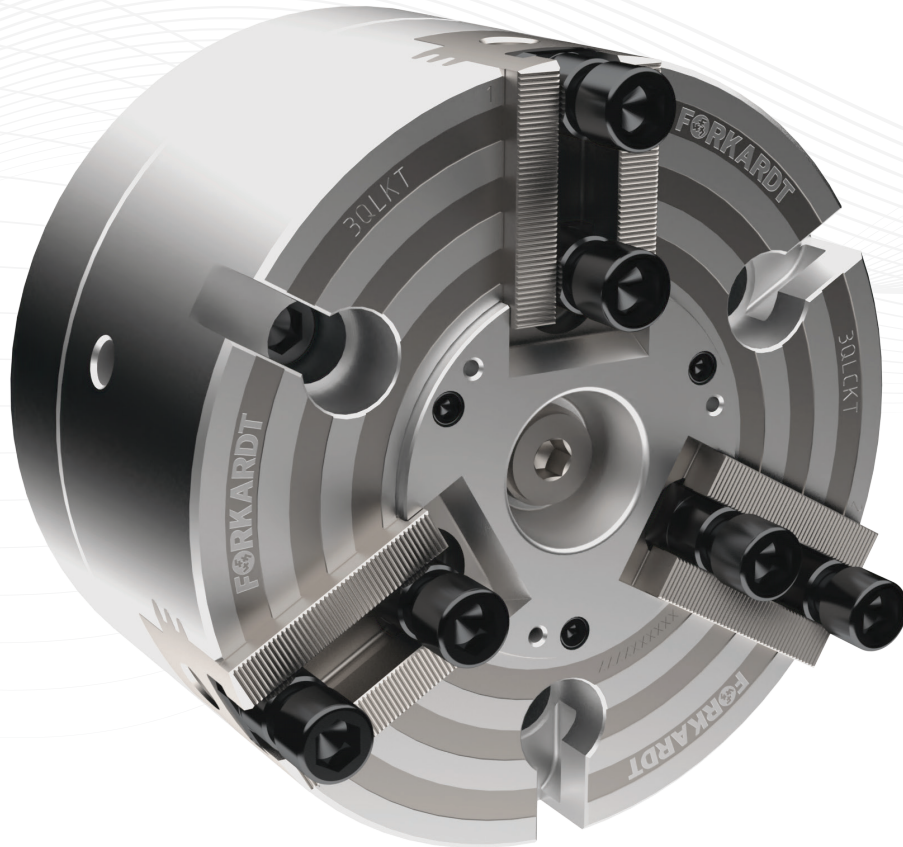
The Advantages

- High accuracy
- Low maintenance - completely sealed
- QLC principle - centrifugal force compensation
- Standardized jaw connection KDIN

FORKARDT® Total Program

QLC KT

Heavy machining



Description

In order to meet the high demands of modern heavy machining, a full version of the proven QLC chuck has been developed. By combining the proven QLC guide with the robustness of elements of the KT chuck, a chuck characteristic has been achieved that is optimally suited for the heaviest machining. The chucks of the KT series are designed for particularly high clamping forces with simultaneously high clamping accuracy.

Areas of Application

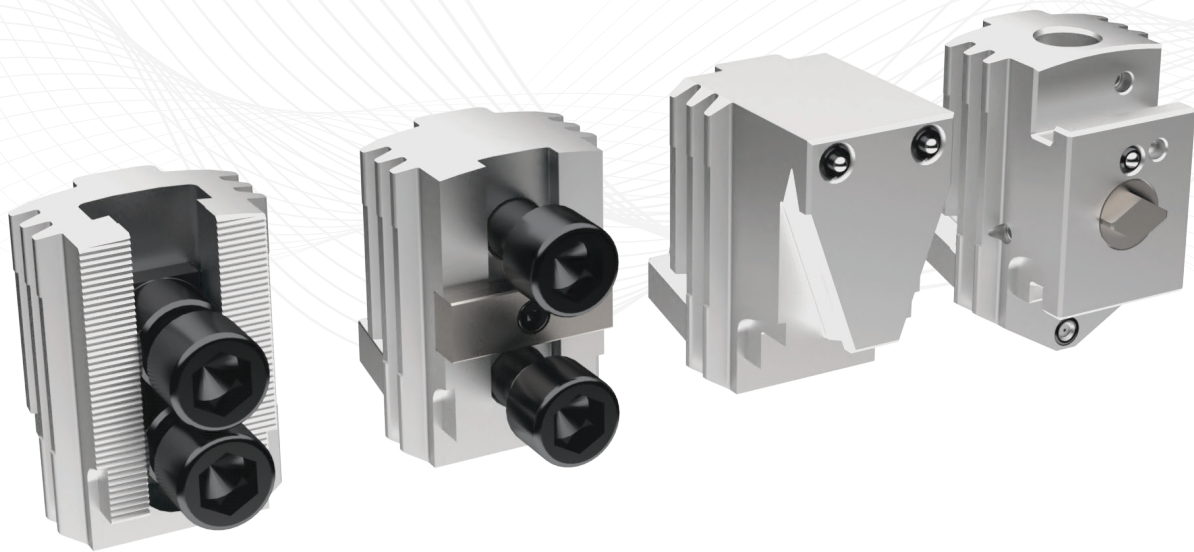
- Medium to large series
- Heavy-duty clamping

The Advantages

- Up to 15% higher clamping forces than comparable chucks due to optimized chuck mechanics

Jaw Connections

QLC Series



Inch serration / Metric serration

- Common standard jaw connection

Cross offset KDIN

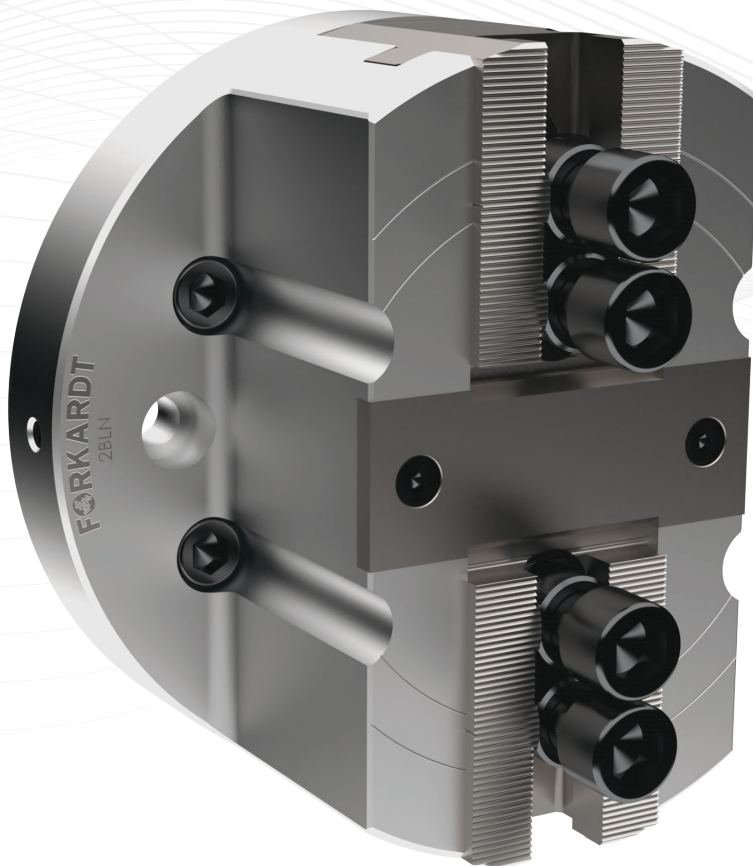
- For high repeatability when changing jaws

Quick jaw change system MIR

- Fast jaw change connection for small batch sizes
- Jaws can be changed without tools

Quick jaw change system SWB

- Fast jaw change connection for small batch sizes
- For internal and external clamping
- Jaws are changed using a special key



Description

The BLN is a wedge hook power chuck. It is actuated axially by a hydraulic or pneumatic cylinder and has a reinforced wedge hook mechanism. Two-jaw chucks are mainly used for machining irregularly shaped workpieces and are therefore equipped with mold jaws in most cases.

Areas of Application

- For machining irregularly shaped workpieces
- Clamping across projections (comprehensive clamping)
- Comprehensive clamping for spherical parts
- Long jaw travel

The Advantages

- Offset chuck body for weight savings
- Jaw guide and internal parts made of high quality hardened steel for long service life
- Fine serrated jaw mount for easy alignment and quick changeover
- Long jaw stroke for overlapping and/or full circumferential clamping

The universal chuck with quick jaw change



Description

The FNC+ is the next generation of our FNC quick jaw change power chuck. To meet the increased requirements of modern manufacturing, we have completely redeveloped the concept of the FNC series.

What's New

- Enlarged bore
- Increased rigidity
- Improved jaw locking mechanism
- Weight reduction
- Improved piston
- Efficiency improvement
- Straight and angled jaw designs

Areas of Application

- Medium and small series
- Frequent jaw change
- Especially suitable for integrated milling operations

The Advantages

- High speed
- Weight optimized
- Jaw quick-change system
- Jaw changeover times are reduced to a few seconds
- Jaw sets from existing F+ chucks can be reused
- No interference problems during milling
- High concentricity and repeatability combined with long service life
- Highest clamping forces due to chuck piston with heavy-duty trapezoidal wedge hook



Description

The FNCA is a 2 x 2 jaw power chuck and was designed to be able to clamp all geometric shapes. The jaws can be changed over in just a few seconds.

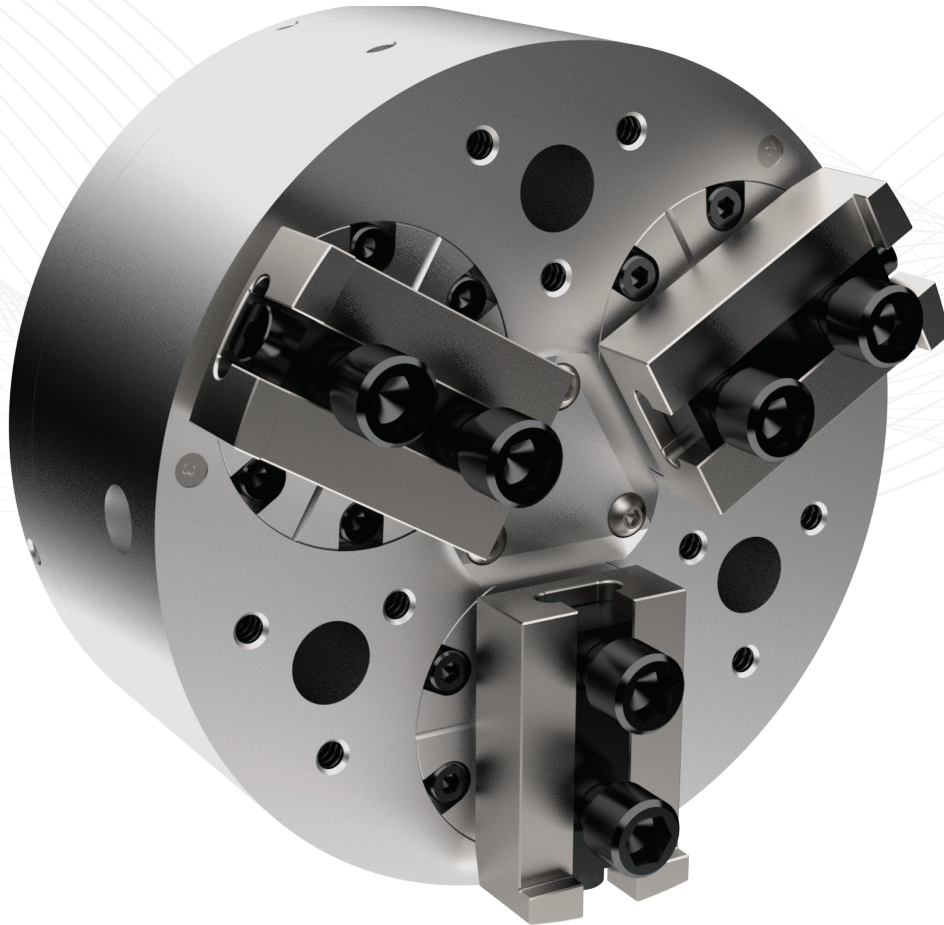
Areas of Application

- Medium and small series
- Frequent retooling
- Especially suitable for asymmetrical workpieces

The Advantages

- High speed
- Jaw quick-change system
- Jaw changeover times are reduced to a few seconds
- Standard jaw connection (manufacturer-independent)
- 2x2 compensating clamping
- High concentricity and repeatability combined with long service life
- Highest clamping forces due to chuck piston with heavy-duty, trapezoidal wedge hook
- Optionally available with coolant nozzle in the center

Ball lever chuck with pull-down and compensating clamping



Description

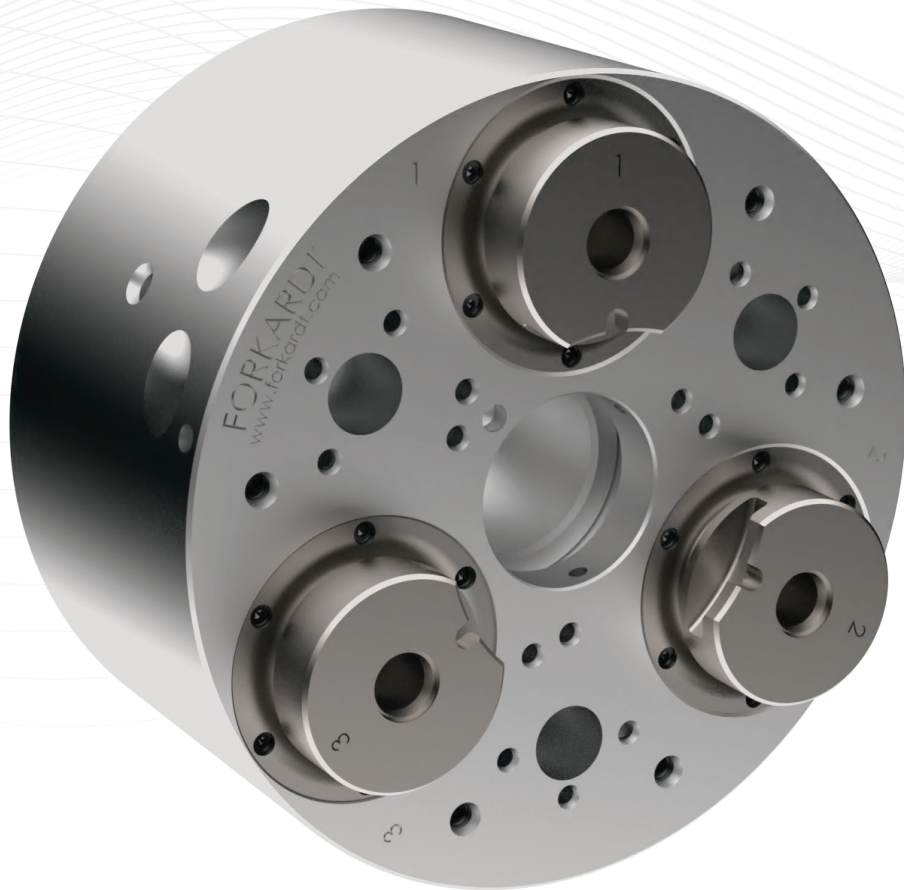
The UBL is a ball lever chuck with a pull-down effect. The hermetic seal ensure insensitivity to dirt and makes the chuck low-maintenance. It can be supplied either in a centralizing or in a compensating clamping version.

Areas of Application

- Automotive: compressor components, brake discs, transmission housings

The Advantages

- Retraction function
- Easy change between internal and external clamping
- Sealed and filled with coupling grease for maximum performance
- Quick changeover of different clamping jaws for a wide range of workpieces
- Versions for centric and compensating clamping function
- Centric chucks for positioning the workpiece on the rotary axis
- Compensating chucks allow workpieces to be clamped independently of the clamping center



Description

The LS power chuck has been designed for the production of premachined and finished mass-produced parts. LS provides high clamping force at high speeds with pull-down function against a workpiece stop on the chuck face. It is also hermetically sealed.

Areas of Application

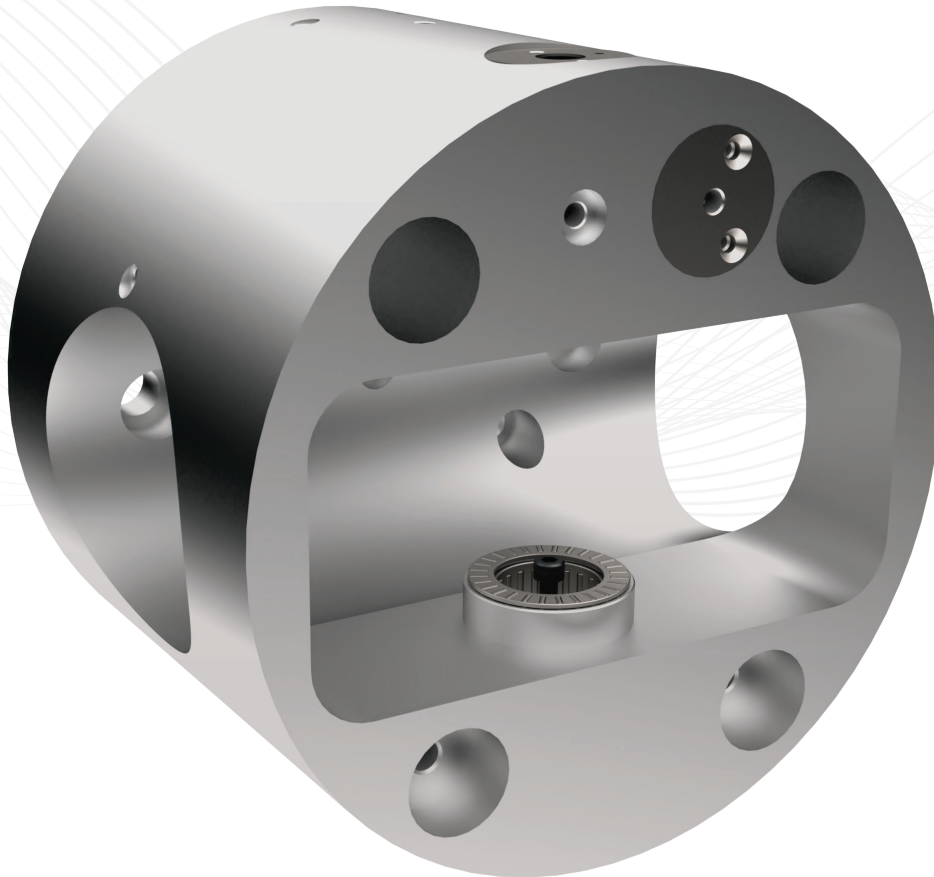
- Mass production
- Production of premachined and finished mass-produced parts

The Advantages

- Centralizing / compensating clamping with pull-down effect against defined stop on chuck
- Exceptional concentricity
- Fully sealed, low maintenance chuck design
- High speeds and clamping forces despite compact design
- Set-up time optimization through the use of quick-change jaw systems

HSR(T)

Swing chuck - all-round machining



Description

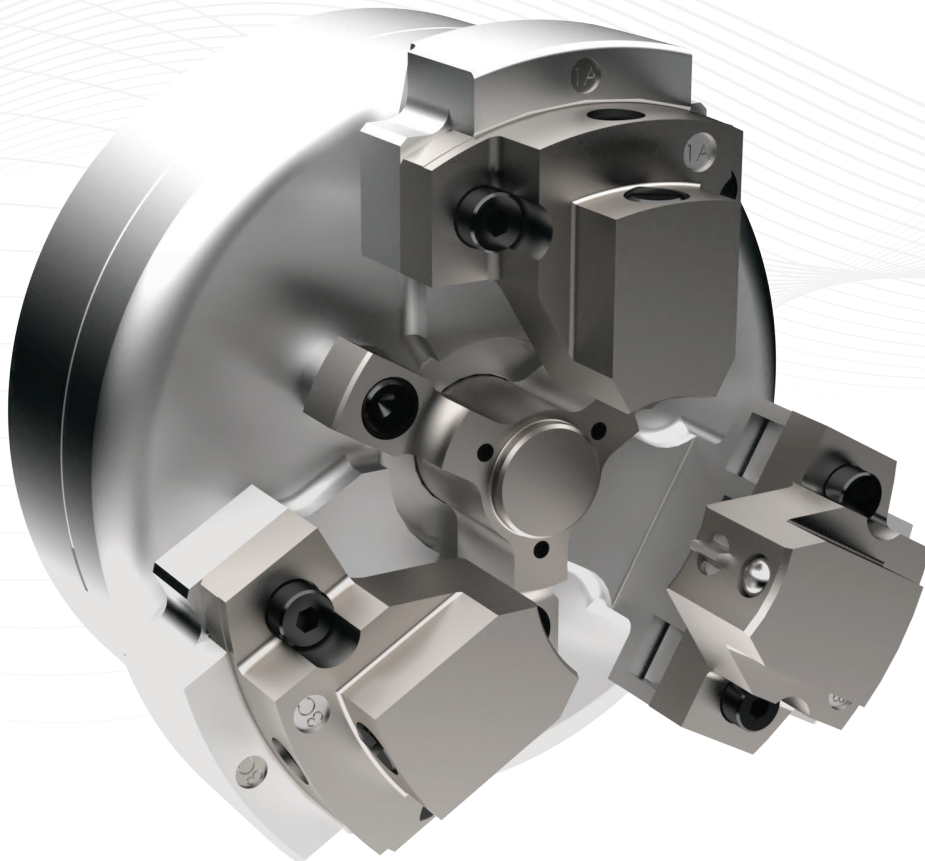
The manufacture and machining of workpieces with intersecting axes requires a clamping solution that is adapted to the special features of such workpiece types. The HSR(T) is a hydraulic console chuck. The clamping force is provided by the hydraulic piston.

Areas of Application

- High volume production
- Multiple machining of one component
- Hydraulic fittings, wedge gate valve housings, high pressure fittings, pump housings
- Automotive and hydraulic industry

The Advantages

- Strong and accurate position locking
- Pivot position 4 x 90° or 3 x 120° possible
- Accuracy in machining up to 0.03mm
- Optional hydraulic centrifugal force compensation - highest speeds
- Optional dynamic pressure control for checking the position accuracy
- Optional centralizing clamping for automatic loading
- Optionally also available as centric 8 x 45° version
- Strong and accurate position locking
- Pivot position 4 x 90° or 3 x 120° possible



Description

The PLD is a diaphragm chuck designed primarily for volume production of gear components. It is hermetically sealed and has high repeatability.

Areas of Application

- Clamping of Gears of all kinds
- Straight and helical gears
- Hard turning
- Grinding operations

The Advantages

- For various numbers of teeth
- Adaptation to all tooth widths
- Synchronizing pins for automatic loading (optional)
- Highest accuracy
- Pulls the gear onto a fixed stop
- Low maintenance
- Lightweight construction



Description

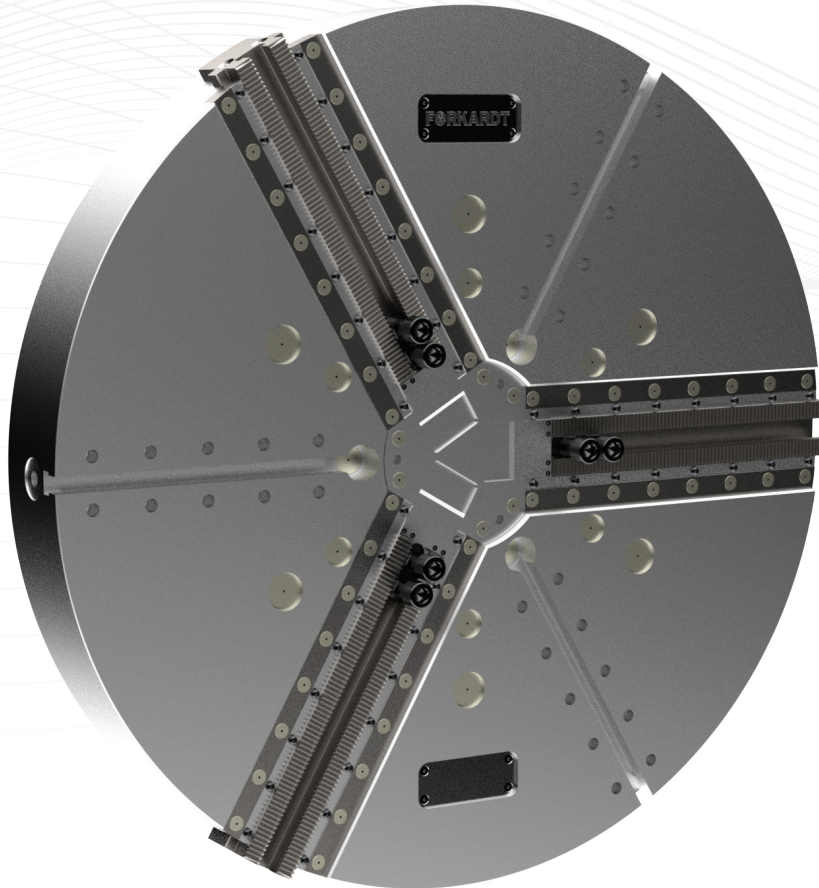
The ALD is a lever type power chuck. It offers a compensating or centralizing clamping with active pulldown. It is also hermetically sealed and therefore requires very little maintenance.

Areas of Application

- Automotive industry
- Shaft machining
- Series production

The Advantages

- Balancing or centric clamping
- Low maintenance due to sealed chuck body with oil filling
- Parts are positioned with a fixed or spring-loaded center with fixed driver discs
- Lever chuck with defined pull-down effect



Description

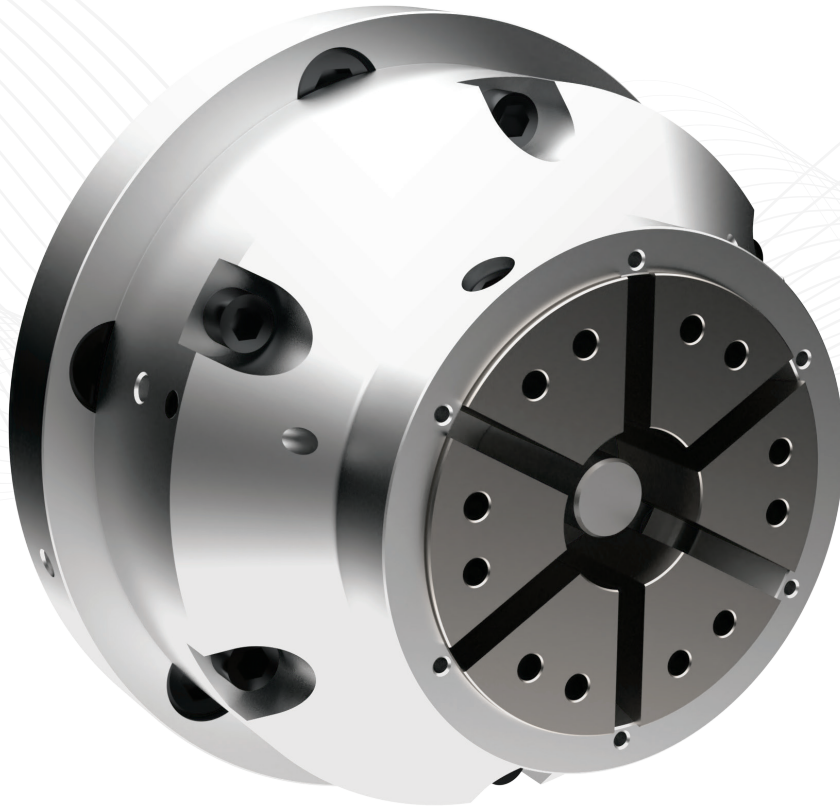
The KS power chuck features a universal application capability. A reinforced wedge hook mechanism allows for enormous clamping forces and use in the most demanding machining applications with consistently high repeatability. Also available with single jaw adjustment.

Areas of Application

- Small to medium batch sizes
- Heavy machining of large workpieces

The Advantages

- Energy savings due to lighter weight castings. This also allows a higher workpiece weight.
- Consistently high clamping force due to improved lubrication
- Up to 70% greater clamping forces than conventional wedge hook chucks
- Easy mounting on standard DIN or ASA spindle lugs
- Standard and special jaws for difficult workpiece shapes
- Ruggedly designed for extreme production environments and heavy-duty machining
- Seals on jaw guides prevent dirt and chips from entering the chuck body



Description

The modular FlexC® clamping system enables the use of different clamping concepts combined with minimal setup effort. The changeover from collet to mandrel takes less than 1 minute. The compact design of the collet chucks reduces the interfering contours in the machine and leads to an increase in the working area.

Areas of Application

- Turning or milling on the outside diameter
- Stationary machining centers
- Roughing
- Finishing
- Grinding

The Advantages

- Compact design leads to an increase of the working space
- Large clamping range +/- 0.5mm
- True parallel clamping, resulting in high clamping forces and less deformation of the workpieces
- Easy to set up, resulting in higher machine availability
- Low mass moment of inertia leads to higher dynamics
- Retraction function increases the face contact and improves the achievable accuracies
- Modular design enables interchangeability and increases flexibility

FORKARDT® Total Program

RimLok

The comprehensive clamping system



Description

Rim Lok is a collet chuck with the taper angle principle. Rim Lok is designed for second and final turning operations. The lightweight, compact design fits most standard CNC lathes and the chuck can be operated with any conventional clamping cylinder.

Areas of Application

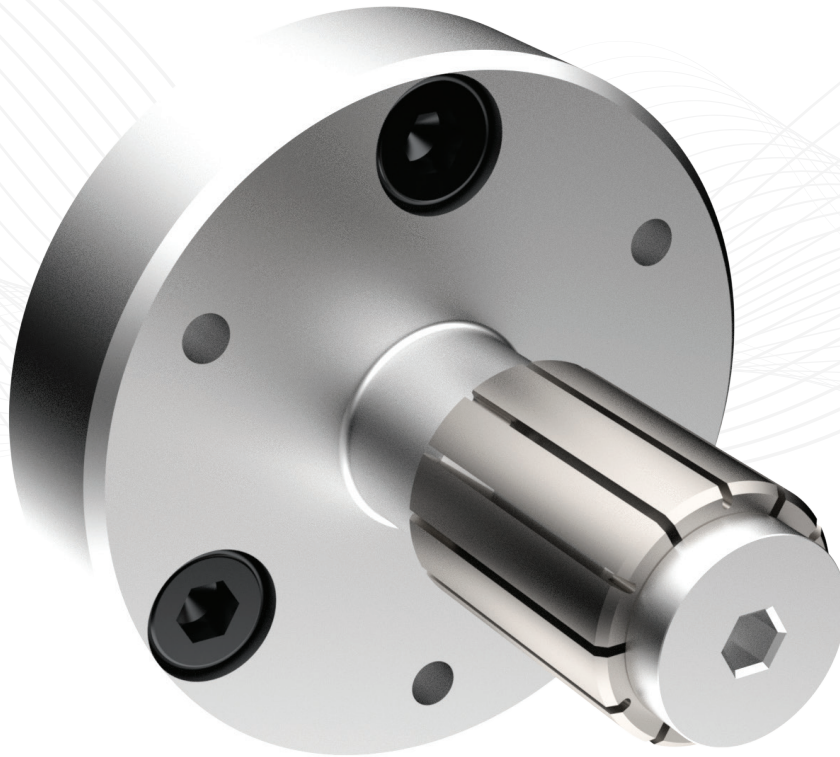
- Ideal for gears and gearbox housings
- Particularly suitable for deformation-sensitive workpieces

The Advantages

- For internal and external clamping
- High speed
- High clamping force
- Active pull down
- Sealed design
- High accuracy
- Air system control

EM-Precision Mandrel

Flexibility due to exchangeable clamping sleeves



Description

The EM mandrels are also designed according to the taper-angle principle. The clamping sleeves are modularly exchangeable without readjustment and can also be ground in by yourself. The double taper expansion of the clamping sleeves by 0.8 mm creates the desired, perfect clamping geometry.

Areas of Application

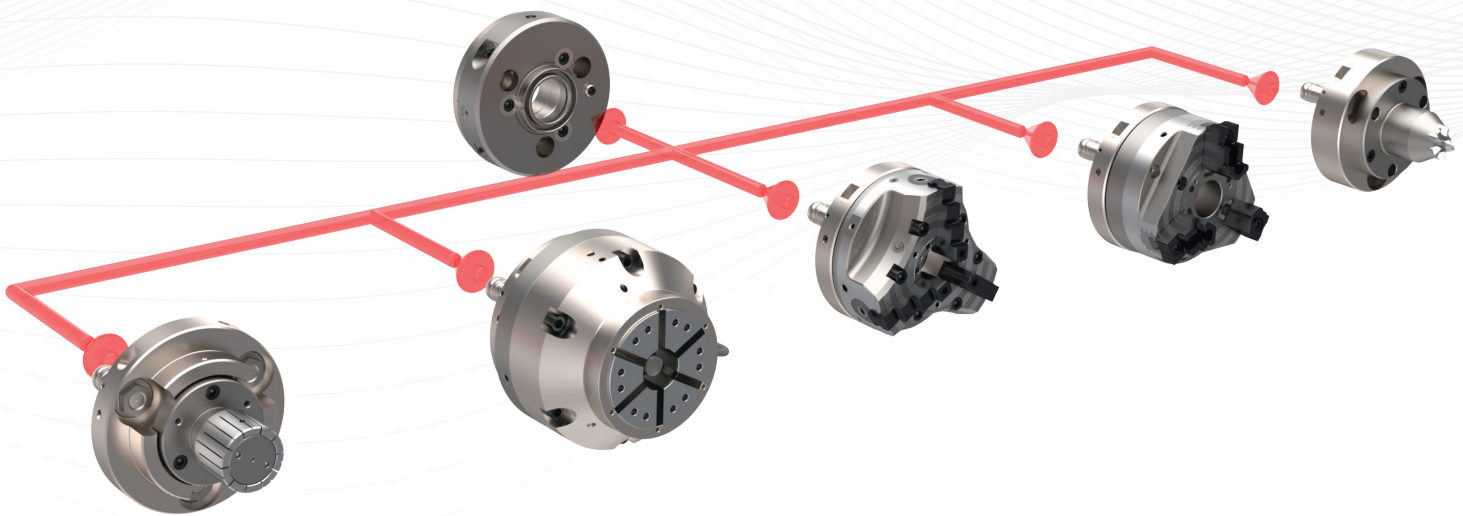
- Differential case
- Rotors
- Ball joints
- Pistons
- Gear blanks
- Pump housing
- Printing plates
- Brake drums for the front of the vehicle

The Advantages

- Expansion of the clamping sleeves of 0.8 mm
- Suitable for automatic loading
- Repeat clamping accuracy less than 0.012 mm
- Sealing of sleeve slots (vulcanization) available as standard
- Pull-down effect
- Simple and safe handling due to stroke limitation

ForChange

The setup time killer



Description

Our ForChange enables easy and fast tool-free changing of your workholding equipment on the machine - optionally also suitable for fully automatic changing - with a change repeatability $<0.01\text{mm}$

Areas of Application

- Small batch production
- Single part production
- Frequent setup

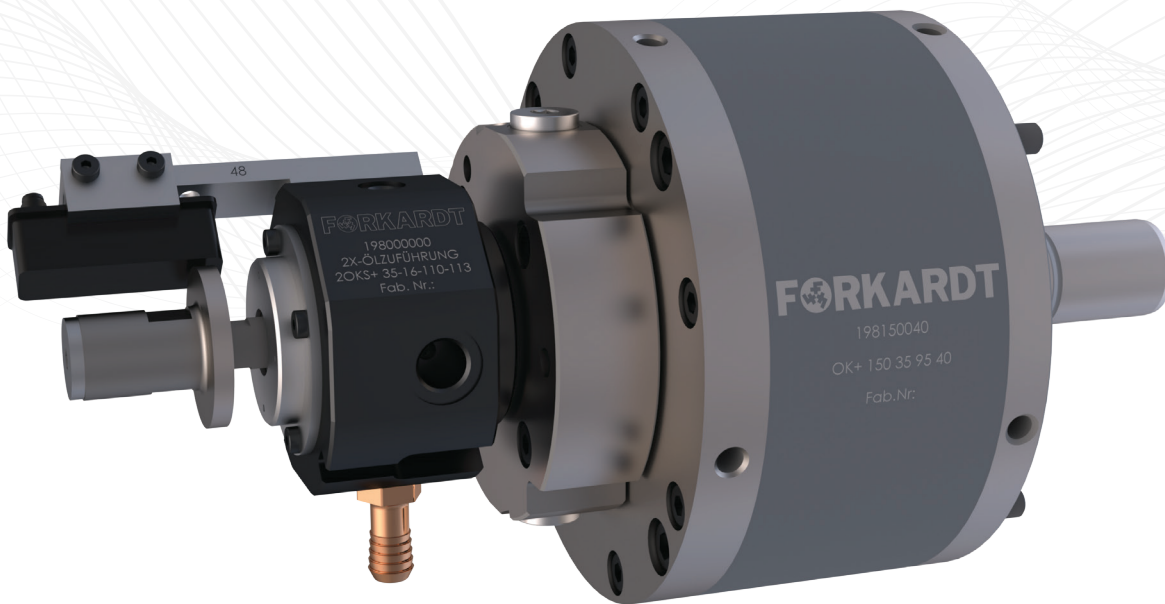
The Advantages

- Faster change of clamping devices
- High changeover accuracy
- Can be retrofitted to existing machine and exist chucks
- Utilization of the machine increases considerably
- Set-up costs are no longer a relevant factor
- Easy handling
- Can be automated
- Modular design

FORKARDT® Total Program

Cylinder OKRJ+

Hydraulic power unit



Description

The OKRJ+ is a hydraulic cylinder in lightweight construction. Including rotary union, travel control / travel measuring system and 2 check valves.

Areas of Application

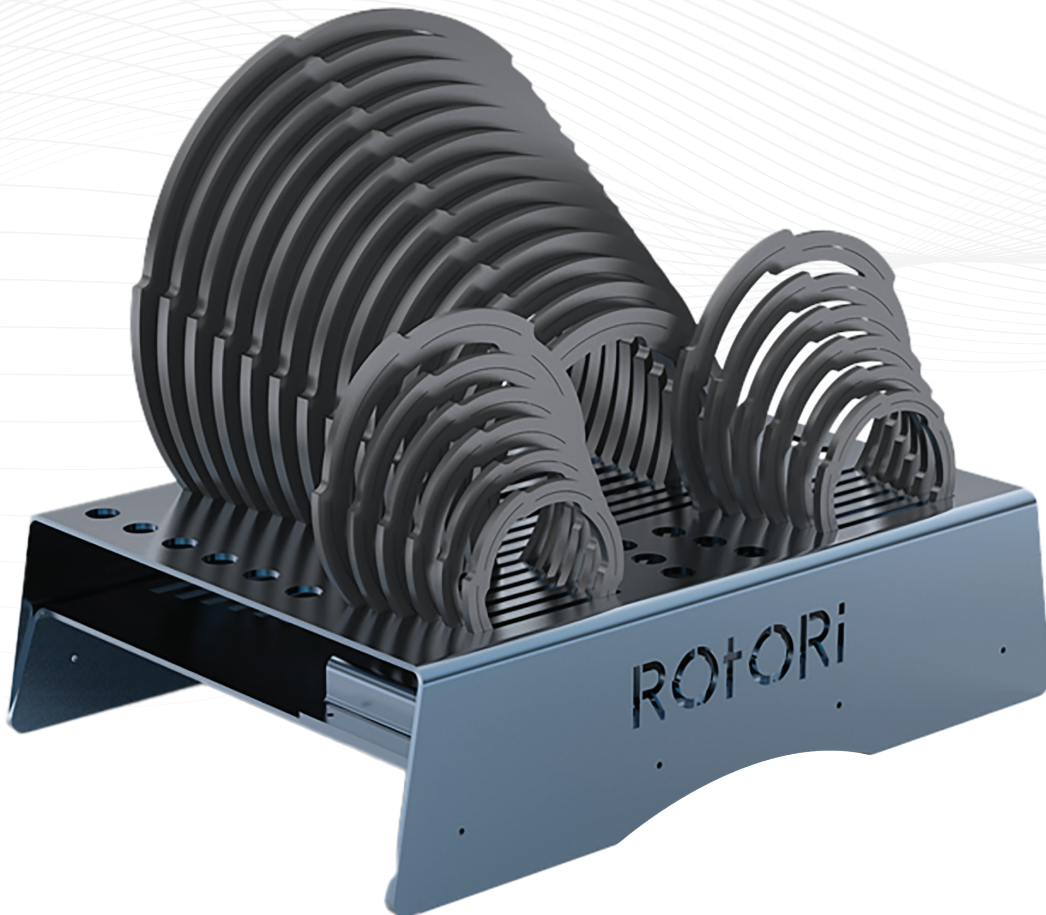
- Power clamping devices

The Advantages

- Maintenance-free - completely sealed
- Lightweight construction
- Low mass moment of inertia - save energy when accelerating and braking the machine
- Highest speeds due to special rotary union
- Passage for various media such as air or water
- Connection for Deublin feed (standardized)
- Modular system

Jaw Boring Rings Rotori

Turn out economically



Description

With the help of the Rotori boring rings, it is possible to precisely bore out clamping jaws under clamping pressure or to grind out hard clamping jaws. Due to the stepless adjustment possibility via the cam segments, it is possible to remove exactly as much material as is necessary. Further re-setting of the clamping point is possible due to the patented cam segments. This saves time and tool costs.

Areas of Application

- Turning out clamping jaws

The Advantages

- Internal and external clamping with one ring
- Stepless clamping range for all sizes
- 1/10 mm exact infeed of the turning diameter
- Low set-up costs due to RotoFix clamping bolts
- High cost savings on clamping jaws
- Optimal accessibility of the turning tool
- Fast and flexible handling
- Suitable for chuck sizes 80 to 1200 mm
- Turning of 2-, 3-, 4- and 6-jaw chucks

Notes

[illegible]

Notes

FORKARDT® **SPANNTECHNIK WELTWEIT**

Michigan, USA ○

○ Reutlingen, Germany
○ Noisy-Le-Sec, France

○ Shanghai, China