

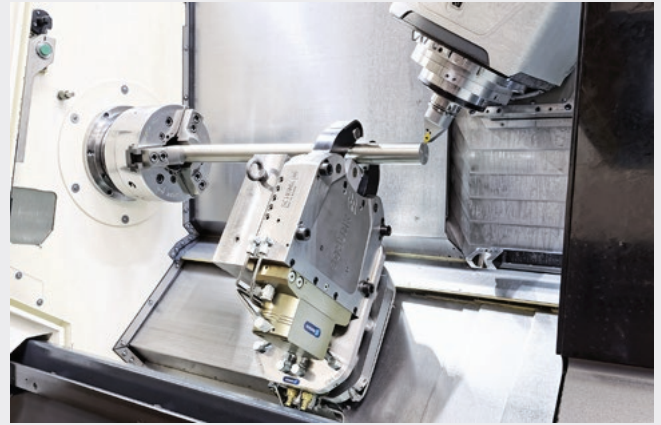


# **ZENTRICO THL-A plus**

**Self-centering steady rests  
with rear cylinder and  
swing-out lever arm**

# Self-centering steady rests with swing-out lever arm and high clamping forces

Hydraulically actuated, self-centering steady rests with high clamping forces to support long workpieces on lathes. For a quick change, these can also be combined with a steady rest quick-change. The great advantage of the swing-out lever arm is that larger diameters can be loaded automatically than with the standard steady rest.



## Advantages – Your benefits

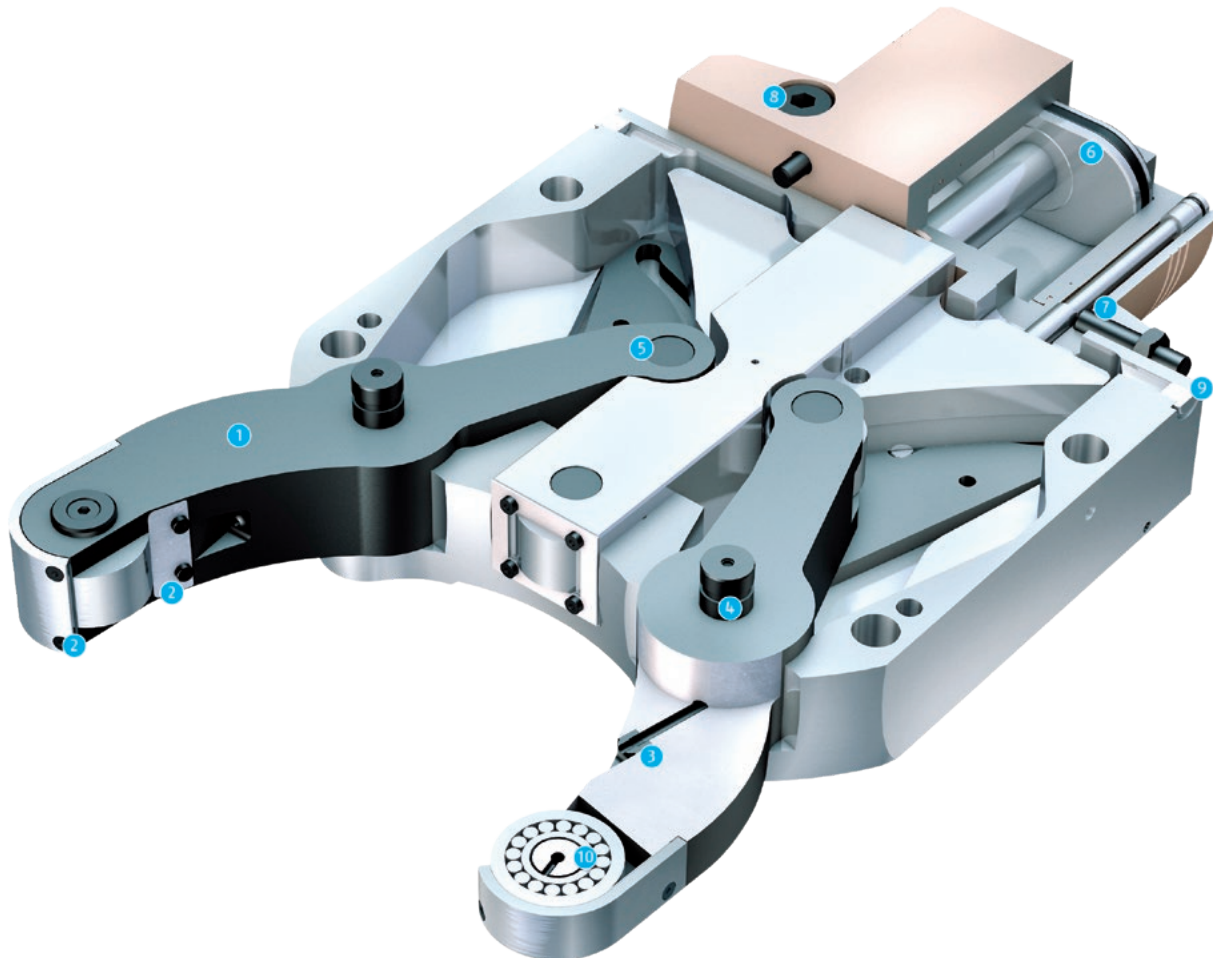
- + Precision-lever steady rest for top quality demands**  
Allows excellent machining results
- + Highly precise lever kinematics**  
High centering and repeat accuracy
- + Serially sealed against chips and air purge connection as a standard**  
Ensure higher process reliability and extended maintenance intervals
- + Roller rinsing as standard**  
To avoid contamination and chip nesting
- + Optimized lubrication system due to central lubrication**  
Easy supply and long lifetime
- + Hydraulic connections at the rear and side of the cylinder**  
Easy attachment to almost any machine
- + Integrated safety valve and end position control**  
Maximum operating safety
- + Monitoring of the piston position optionally available**  
Shorter cycle times and collision protection
- + Compatible with all commercially available steady rests**  
Easy exchange of steady rests without any additional special parts
- + All sides of the functional parts are hardened and ground**  
Ensures a long service life

## Technical data

| Description    | Clamping range<br>[mm] | Operating pressure<br>[bar] | Max. clamping force<br>[kN] | Centering accuracy<br>[mm] | Repeat accuracy<br>[mm] |
|----------------|------------------------|-----------------------------|-----------------------------|----------------------------|-------------------------|
| THL-A plus 100 | 4 – 52                 | 6 – 50                      | 1                           | < 0.02                     | < 0.005                 |
| THL-A plus 200 | 8 – 80                 | 8 – 60                      | 3.5                         | < 0.02                     | < 0.005                 |
| THL-A plus 300 | 12 – 130               | 8 – 60                      | 10                          | < 0.04                     | < 0.007                 |
| THL-A plus 310 | 20 – 150               | 8 – 60                      | 10                          | < 0.04                     | < 0.007                 |
| THL-A plus 320 | 54 – 182               | 8 – 60                      | 10                          | < 0.04                     | < 0.007                 |
| THL-A plus 400 | 35 – 220               | 8 – 60                      | 15                          | < 0.05                     | < 0.01                  |
| THL-A plus 500 | 50 – 268               | 8 – 60                      | 15                          | < 0.06                     | < 0.01                  |
| THL-A plus 510 | 95 – 310               | 8 – 60                      | 15                          | < 0.06                     | < 0.01                  |

## Function of THL plus

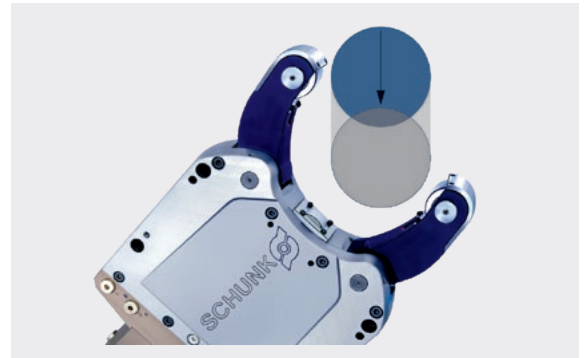
The axially movable oval piston is connected directly to the control cam. The cam segment transmits the force to the two levers and generates a centering movement that is synchronous to the rotational axis of the workpiece.



- 1 Lever drive**  
Offers constantly high centering and repeat accuracy in operation
- 2 Sealed with double, extremely robust chip protection**  
This allows a longer service life at highest precision
- 3 Roller rinsing as standard**  
To clean chips from the roller and workpiece for an optimal clamping surface
- 4 Stable lever bearing**  
For consistently rigid centering
- 5 Swing-out lever arm**  
For more loading space
- 6 Oval piston cylinder**  
A slim cylindrical design minimizes interfering contour of the steady rest
- 7 Standard version ready for installation of piston position monitoring**  
For monitoring of the end positions or the permanent position of the lever arms
- 8 Safety check valve**  
Short-term clamping force maintenance even when the system pressure drops
- 9 Air purge connection**  
Minimized dirt entry into the steady rest due to permanent overpressure
- 10 Cylindrical/spherical rollers**  
For use as stationary (cylindrical) or traveling/leading steady rest

### Swing-out lever arm

THL plus steady rests from SCHUNK are already convincing in the standard version with a wide variety of features. This includes a roller rinsing, central lubrication, hydraulic connections on the side and rear of the cylinder, extremely stable chip protection at the rollers, and an air purge connection. THL-A plus steady rests offer the huge advantage of allowing the upper lever arm to be swiveled out. This allows automatic and vertical loading of larger diameters.



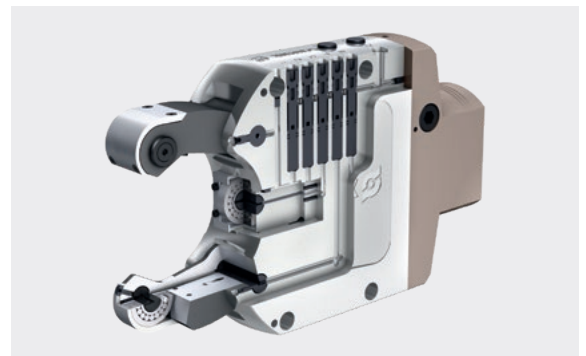
### Lateral hydraulic connections

Hydraulic lines can be additionally connected to the cylinder on the side of the THL plus steady rests. This offers a huge advantage in situations with only minimal space at the rear of the unit.



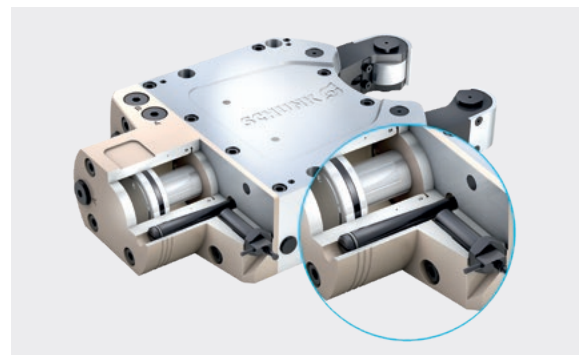
### Central lubrication

Steady rests from SCHUNK are also available with central lubrication by default. Via the central lubrication, every movable part is supplied with oil. This allows a very slim design.



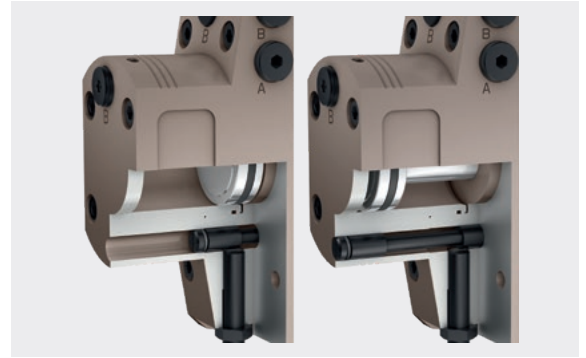
### Stroke measuring system

The stroke measuring system enables a continuous position monitoring and a partial opening of the lever arm. This shortens cycle times and protects against collisions. Power supply 24 V; output signal 0...10 V/4...20 mA



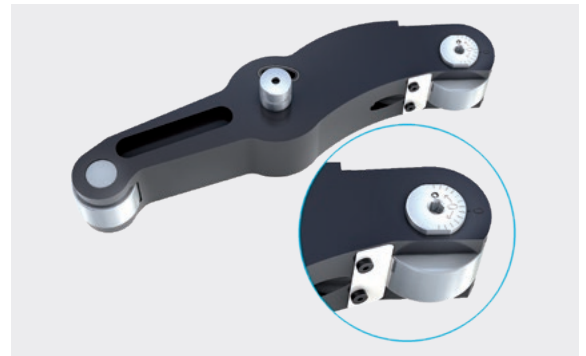
## End-position monitoring

Cylinder end position monitoring comes as standard with the ZENTRICO THL plus. A stroke measuring system is available as an option for continuous position monitoring of the lever arm.



## Roller fine adjustment

Eccentric roller pins on the steady rest arms allow quick fine adjustment of the center.



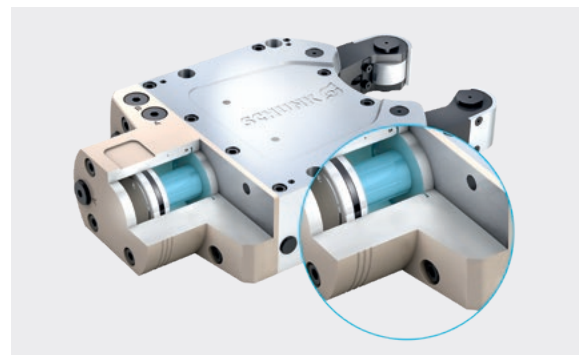
## Roller rinsing

ZENTRICO THL plus steady rests come fitted with a roller rinsing system as standard. The jet is aimed between the roller and the workpiece in order to prevent chips from getting jammed there.



## Pneumatic version (optional)

A pneumatic version of the ZENTRICO THL plus steady rests is also available as well as the hydraulic variant. These are ideal for the use in handling technology, at stationary workplaces, on conventional lathes and much more.





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## Technical data

| Description        | ID                      | Type of lubrication | Rollers     | Clamping range<br>[mm] | Max. clamping force/roller<br>[kN] | Weight<br>[kg] |
|--------------------|-------------------------|---------------------|-------------|------------------------|------------------------------------|----------------|
| THL-A plus 200 Z-Z | <a href="#">0825221</a> | Central lubrication | cylindrical | 8 – 80                 | 3.5                                | 15.8           |
| THL-A plus 200 Z-B | <a href="#">0825223</a> | Central lubrication | spherical   | 8 – 80                 | 3.5                                | 15.8           |
| THL-A plus 200 M-Z | <a href="#">0825222</a> | Manual lubrication  | cylindrical | 8 – 80                 | 3.5                                | 15.8           |
| THL-A plus 200 M-B | <a href="#">0825224</a> | Manual lubrication  | spherical   | 8 – 80                 | 3.5                                | 15.8           |

## Scope of delivery

Steady rest, mounting screws, eye bolts and operating manual; without proximity switch for stroke monitoring

## Notes

### Maximum workpiece speed

The maximum workpiece speed in relation to the steady rest depends on the permissible circumferential speed of the steady rest rollers. The cutting speed on the clamping diameter is the same as the circumferential speed of the rollers.

### Pneumatic steady rest version

The pneumatically operated steady rest version is available on request.

### Use of cylindrical rollers

Cylindrical rollers are mainly used in stationary steady rests or applications.

### Use of spherical rollers

Spherical rollers are mainly used in trailing or leading steady rests.

### Roller rinsing

Coolant or compressed air can be used as the medium for roller rinsing.

## Further technical data

| Description    | Operating pressure<br>[bar] | Centering accuracy<br>[mm] | Repeat accuracy<br>[mm] | Max. circumferential speed<br>[m/min] |
|----------------|-----------------------------|----------------------------|-------------------------|---------------------------------------|
| THL-A plus 200 | 8 – 60                      | < 0.02                     | < 0.005                 | 605                                   |



## Accessories

### Stroke measuring system

Enables a continuous position monitoring and a partial opening of the lever arms.



| Suitable for   | Description        | ID                      |
|----------------|--------------------|-------------------------|
| THL-A plus 200 | APS THL-A plus 200 | <a href="#">0820532</a> |

### Roller fine adjustment

Allows fast fine adjustment of the center via eccentric roll pins at the arms of the steady rest.



| Suitable for   | Description      | ID                      |
|----------------|------------------|-------------------------|
| THL-A plus 200 | RFV THL plus 200 | <a href="#">0820512</a> |

### Cylindrical rollers

Sealed rollers for stationary use on the steady rests. Special rollers and coated rollers are available on request.



| Suitable for   | Description | ID                      |
|----------------|-------------|-------------------------|
| THL-A plus 200 | LFR-Z 200   | <a href="#">0820501</a> |

### Spherical rollers

Sealed rollers for stationary use on travelling (leading) steady rests. Special rollers and coated rollers are available on request.



| Suitable for   | Description | ID                      |
|----------------|-------------|-------------------------|
| THL-A plus 200 | LFR-B 200   | <a href="#">0820551</a> |

## Grease

### LINOMAX plus

High-performance grease as standard for regularly lubricating SCHUNK manual and power lathe chucks and steady rests.



| Bundle    | Description            | ID                      |
|-----------|------------------------|-------------------------|
| Cartridge | LINOMAX plus cartridge | <a href="#">1342585</a> |
| Can       | LINOMAX plus can       | <a href="#">1342586</a> |
| Bucket    | LINOMAX plus bucket    | <a href="#">1342587</a> |

### Grease gun

Auxiliary tools for lubrication of all kinds of SCHUNK products. The grease gun can be used for cartridges of all types of SCHUNK grease.



| Bundle    | Description | ID                      |
|-----------|-------------|-------------------------|
| Cartridge | Grease gun  | <a href="#">9900543</a> |







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