



## **ROTA TPS**

**Pneumatic power lathe  
chucks for stationary  
applications**

# Pneumatically actuated power lathe chucks with integrated pneumatic cylinder for powerful clamping at 6 bar

ROTA TPS stands for precise clamping of round workpieces on stationary machine tools. Particularly, if there are no hydraulic systems, these lathe chucks are suitable as an adequate replacement. The power lathe chucks can be adapted quickly and easily to any machine table by using a console plate. The special feature is the integrated pneumatic cylinder, which allows the chucks to be built very low and thus enables maximum utilization of the machine room. From an air pressure of only 6 bar it is already possible to achieve high clamping forces, which can easily be adapted to the particular task and enable workpiece clamping in a reliable process.



## Advantages – Your benefits

- + Precision wedge-hook power lathe chuck for highest quality requirements**  
Allows excellent machining results
- + High efficiency of the wedge hook system**  
Process-reliable clamping due to high clamping forces
- + Optimized lubrication system**  
Consistently high clamping forces ensured
- + Pneumatic cylinder integrated in the chuck**  
No additional backside cylinder is necessary
- + Mounting via console plate**  
Adapts quickly and easily to any machine table
- + High clamping forces at system pressure**  
Ensure process reliability during machining
- + All sides of the functional parts are hardened and ground**  
Ensures a long service life

## Technical data

| Description      | Max. clamping force (at 6 bar)<br>[kN] | Operating pressure<br>[bar] | Stroke/jaw<br>[mm] |
|------------------|----------------------------------------|-----------------------------|--------------------|
| ROTA TPS 125-26  | 22                                     | 3 - 8                       | 3                  |
| ROTA TPS 160-38  | 39                                     | 3 - 8                       | 4.2                |
| ROTA TPS 200-52  | 68                                     | 3 - 8                       | 4.2                |
| ROTA TPS 250-68  | 105                                    | 3 - 8                       | 5                  |
| ROTA TPS 315-90  | 140                                    | 3 - 8                       | 5                  |
| ROTA TPS 315-105 | 100                                    | 3 - 8                       | 5                  |

## Function ROTA TPS

The piston that is positively guided in to the chuck is shifted by feeding in compressed air. The wedge hook system converts this axial movement of the chuck piston into a radial movement of the base jaws. Due to the use of a double-acting cylinder, the workpieces can be clamped externally and internally.



- ❶ **Wedge hook drive**  
Offers constantly high clamping forces in operation
- ❷ **Hardened and extremely rigid base body**  
Therefore a longer service life at highest precision.  
Even with maximum clamping force
- ❸ **Large through-hole**  
For machining of all standard raw material diameters
- ❹ **Optimized lubrication system**  
For a high level of efficiency
- ❺ **Low height design**  
Expands your machine's workspace
- ❻ **Standard jaw interface**  
Large selection of standardized top jaws from SCHUNK
- ❼ **Adaptation to the machine table**  
Either via a console plate or straight recess mount
- ❽ **Improved design which is insensitive to dirt**  
By means of targeted sealing
- ❾ **Integrated pneumatic cylinder**  
No additional backside cylinder is necessary
- ❿ **Pneumatic system**  
Actuation with up to 6 bar

## Stationary 3-jaw chuck, pneumatically actuated

With base plate "K" or with straight recess mount "Z"

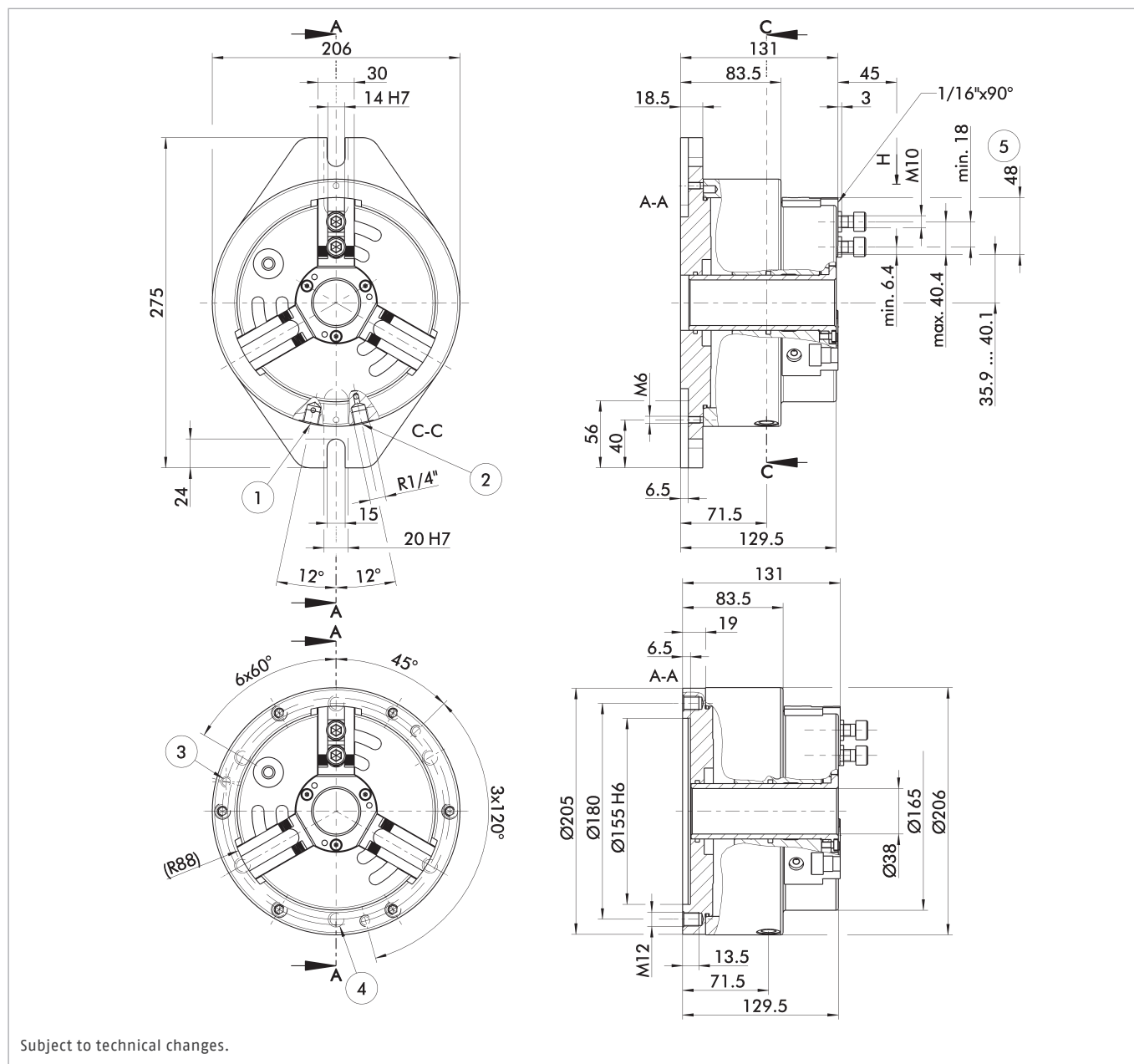
### Scope of delivery

Power lathe chuck, studs, T-nuts, straight fitting, elbow-union, assembly tool, operating manual; without top jaws

### Technical data

| Description             | ID      | Mounting         | Max. clamping force (at 6 bar)<br>[kN] | Actuation pressure<br>[bar] | Stroke per jaw<br>[mm] | Weight<br>[kg] |
|-------------------------|---------|------------------|----------------------------------------|-----------------------------|------------------------|----------------|
| ROTA TPS 160-38 Z-SV90° | 0816136 | Centering recess | 39                                     | 3 - 8                       | 4.2                    | 23             |
| ROTA TPS 160-38 K-SV90° | 0816137 | Consol plate     | 39                                     | 3 - 8                       | 4.2                    | 23             |

$P_{min} = 3$  bar (for lower clamping forces, a clamping force reduction can be offered as an option)



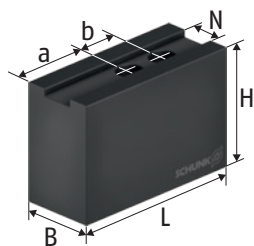
- ① Air connection R1/4 for opening the chuck
- ② Air connection R1/4 for closing the chuck
- ③ Disassembly thread M8

- ④ Mounting thread M12
- ⑤ Distance to center of first tooth

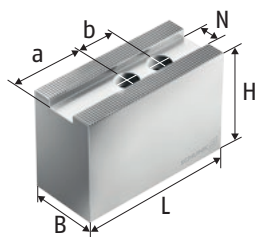


## Soft top jaws

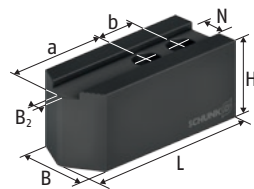
with fine serration 90°



SWB  
Soft top jaws



SWB-AL  
Soft top jaws



SWBL  
Soft top jaws

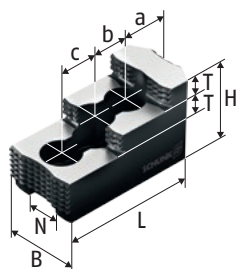
### Technical data

| Chuck type      | Description | ID                      | N<br>[mm] | B<br>[mm] | H<br>[mm] | L<br>[mm] | a<br>[mm] | b<br>[mm] | Screws | m/SET<br>[kg] |
|-----------------|-------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA TPS 160-38 | SWBL 165    | <a href="#">0120152</a> | 14        | 35        | 40        | 80        | 45        | 20        | M10    | 2.1           |
| ROTA TPS 160-38 | SWB 165     | <a href="#">0120101</a> | 14        | 35        | 60        | 68        | 33        | 20        | M10    | 2.5           |
| ROTA TPS 160-38 | SWB-AL 165  | <a href="#">0168105</a> | 14        | 35        | 60        | 80        | 45        | 20        | M10    | 1.2           |

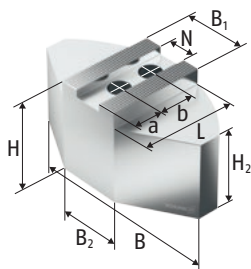
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Hard stepped top jaws, Full grip jaws

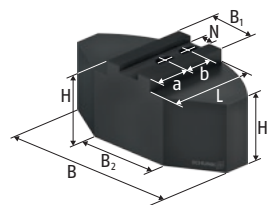
with fine serration 90°



SHB  
Hard stepped top jaws



SWB-SA  
Full grip jaws



SWB-SM  
Full grip jaws

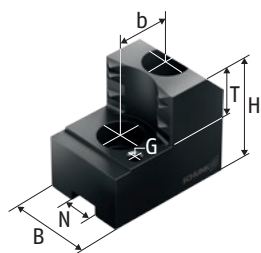
### Technical data

| Chuck type      | Description | ID                      | N<br>[mm] | B<br>[mm] | B1<br>[mm] | H<br>[mm] | H2<br>[mm] | L<br>[mm] | T<br>[mm] | a<br>[mm] | b<br>[mm] | c<br>[mm] | Screws | m/SET<br>[kg] |
|-----------------|-------------|-------------------------|-----------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA TPS 160-38 | SWB-SA 165  | <a href="#">0170099</a> | 14        | 120       | 40         | 58        | 48         | 59.5      |           | 25        | 20        |           | M10    | 2.2           |
| ROTA TPS 160-38 | SWB-SM 165  | <a href="#">0169099</a> | 14        | 120       | 40         | 60        | 50         | 59.5      |           | 24.5      | 20        |           | M10    | 6.0           |
| ROTA TPS 160-38 | SHB 165     | <a href="#">0121101</a> | 14        | 30        |            | 46        |            | 79.7      | 11        | 16.6      | 22        | 22        | M10    | 1.3           |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

## Claw jaws

with fine serration 90°



SZA  
Claw jaws

### Technical data

| Chuck type      | Clamping range ØD | Swing diameter SDmax | Description | ID                      | N    | B    | H    | L    | T    | G  | b    | Screws | m/SET |
|-----------------|-------------------|----------------------|-------------|-------------------------|------|------|------|------|------|----|------|--------|-------|
|                 | [mm]              | [mm]                 |             |                         | [mm] | [mm] | [mm] | [mm] | [mm] |    | [mm] |        | [kg]  |
| ROTA TPS 160-38 | 32 - 61           | 183                  | SZA 17-1    | <a href="#">0122260</a> | 14   | 30   | 47   | 71.5 | 20   | M6 | 20   | M10    | 1.2   |
| ROTA TPS 160-38 | 54 - 84           | 185                  | SZA 17-2    | <a href="#">0122261</a> | 14   | 30   | 47   | 61.9 | 20   | M6 | 20   | M10    | 1.0   |
| ROTA TPS 160-38 | 80 - 111          | 187                  | SZA 17-3    | <a href="#">0122262</a> | 14   | 30   | 47   | 58.7 | 20   | M6 | 20   | M10    | 1.0   |
| ROTA TPS 160-38 | 106 - 137         | 195                  | SZA 17-4    | <a href="#">0122263</a> | 14   | 35   | 47   | 60.3 | 20   | M6 | 20   | M10    | 1.2   |

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## T-nut

with fine serration 90°



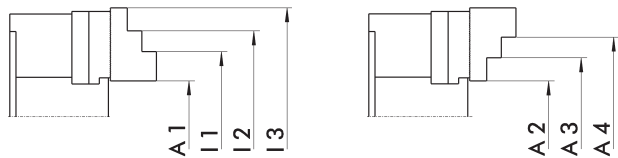
NS  
T-nut

| Chuck type      | Description | ID                      | N    | B    | H    | H1   | L    | Cyl.-screw | Max. adm. tightening torque |
|-----------------|-------------|-------------------------|------|------|------|------|------|------------|-----------------------------|
|                 |             |                         | [mm] | [mm] | [mm] | [mm] | [mm] |            | [Nm]                        |
| ROTA TPS 160-38 | NS 102      | <a href="#">0143101</a> | 14   | 19.8 | 25.5 | 8.5  | 17.3 | M10 x 35   | 50                          |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

## Hard stepped top jaws

with fine serration 90°



Jaw position I

Jaw position II

### O.D. clamping

| Chuck type      | Description | ID                      | A1<br>[mm] | A2<br>[mm] | A3<br>[mm] | A4<br>[mm] |
|-----------------|-------------|-------------------------|------------|------------|------------|------------|
| ROTA TPS 160-38 | SHB 165     | <a href="#">0121101</a> | 10 - 54    | 22 - 58    | 71 - 108   | 115 - 152  |

### I.D. clamping

| Chuck type      | Description | ID                      | I1<br>[mm] | I2<br>[mm] | I3<br>[mm] |
|-----------------|-------------|-------------------------|------------|------------|------------|
| ROTA TPS 160-38 | SHB 165     | <a href="#">0121101</a> | 74 - 120   | 118 - 164  | 168 - 210  |

## Accessories

### Clamping force tester

For measuring the jaw clamping force of 2, 3 and 6-jaw chucks up to 6,000 RPM.



| Suitable for    | Description | ID                      |
|-----------------|-------------|-------------------------|
| ROTA TPS 160-38 | IFT Set     | <a href="#">1404235</a> |

### Maintenance unit

For processing the required compressed air.



| Suitable for    | Description | ID                      |
|-----------------|-------------|-------------------------|
| ROTA TPS 160-38 | WEH 1/4"    | <a href="#">0890021</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> |

### Pressure measuring unit

For checking pressure tightness.



| Suitable for    | Description     | ID                      |
|-----------------|-----------------|-------------------------|
| ROTA TPS 160-38 | DMG Ø20-NPT1/4" | <a href="#">8702679</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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