



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) [kN]	Operating pressure [bar]	Stroke/jaw [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"

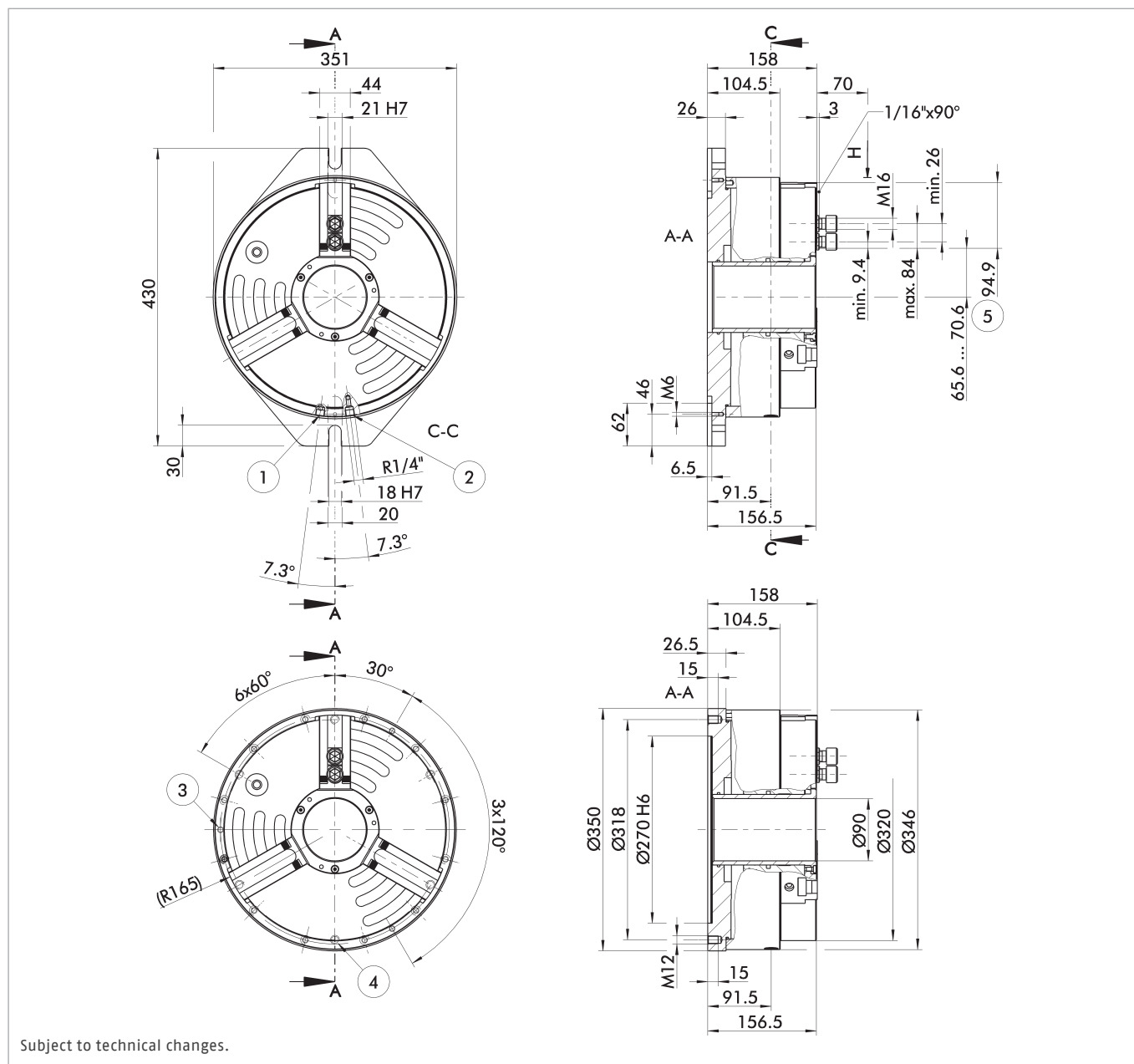
Scope of delivery

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) [kN]	Actuation pressure [bar]	Stroke per jaw [mm]	Weight [kg]
ROTA TPS 315-90 Z-SV90°	0816166	Centering recess	140	3 - 8	5	82
ROTA TPS 315-90 K-SV90°	0816167	Consol plate	140	3 - 8	5	82

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

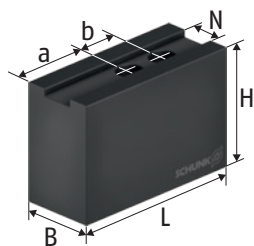


- ① Air connection R1/4 for opening the chuck
- ② Air connection R1/4 for closing the chuck
- ③ Disassembly thread M8

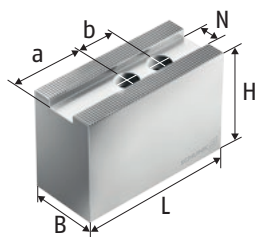
- ④ Mounting thread M12
- ⑤ Distance to center of first tooth

Soft top jaws

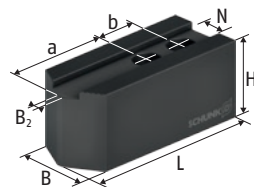
with fine serration 90°



CWB
Soft top jaws



SWB-AL
Soft top jaws



SWBL
Soft top jaws

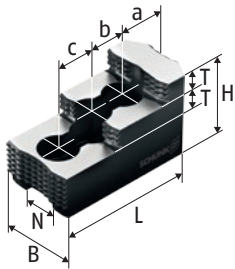
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA TPS 315-90	SWBL 315	0120156	21	50	50	140	82	28	M16	6.5
ROTA TPS 315-90	CWB 251	0100012	21	50	60	95	52	28	M16	5.2
ROTA TPS 315-90	SWB 250	0120105	21	50	80	120	62	28	M16	9.2
ROTA TPS 315-90	SWB-AL 250	0168102	21	50	80	120	62	28	M16	3.3

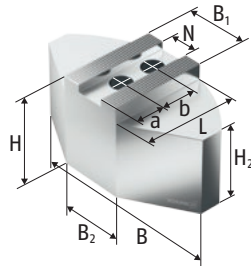
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Hard stepped top jaws, Full grip jaws

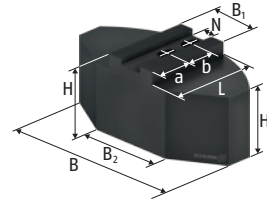
with fine serration 90°



SHB
Hard stepped top jaws



SWB-SA
Full grip jaws



SWB-SM
Full grip jaws

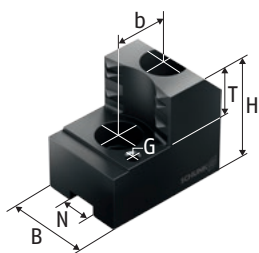
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	B1 [mm]	H [mm]	H2 [mm]	L [mm]	T [mm]	a [mm]	b [mm]	c [mm]	Screws	m/SET [kg]
ROTA TPS 315-90	SWB-SA 315	0170104	21	240	50	78	63	117		70	28		M16	11.0
ROTA TPS 315-90	SWB-SM 315	0169104	21	240	50	70	55	110		60	28		M16	26.6
ROTA TPS 315-90	SHB 315	0121111	21	50		58		128	14	46	30	30	M16	4.6

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 315-90	51 - 147	348	SZA 31-10	0138184	21	50	58	115.4	25	M8	28	M16	3.4
ROTA TPS 315-90	109 - 205	349	SZA 31-11	0138185	21	50	58	92.1	25	M8	28	M16	3.4
ROTA TPS 315-90	174 - 271	347	SZA 31-12	0138186	21	50	58	87.3	25	M8	28	M16	3.2
ROTA TPS 315-90	238 - 320	392	SZA 31-13	0138187	21	50	58	111.1	25	M8	28	M16	4.7

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T-nut

with fine serration 90°



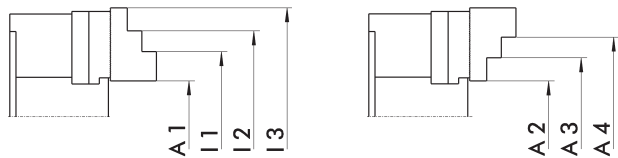
NS
T-nut

Chuck type	Description	ID	N	B	H	H1	L	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]	[mm]	[mm]		[Nm]
ROTA TPS 315-90	NS 164	0143108	21	28.4	30	11	24.3	M16 x 35	150

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Hard stepped top jaws

with fine serration 90°



Jaw position I

Jaw position II

O.D. clamping

Chuck type	Description	ID	A1 [mm]	A2 [mm]	A3 [mm]	A4 [mm]
ROTA TPS 315-90	SHB 315	0121111	20 - 160	54 - 150	146 - 242	238 - 320

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA TPS 315-90	SHB 315	0121111	89 - 186	181 - 277	273 - 380

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 315-90	IFT Set	1404235

Maintenance unit

For processing the required compressed air.



Suitable for	Description	ID
ROTA TPS 315-90	WEH 1/4"	0890021

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	1342585
Can	LINOMAX plus can	1342586
Bucket	LINOMAX plus bucket	1342587

Pressure measuring unit

For checking pressure tightness.



Suitable for	Description	ID
ROTA TPS 315-90	DMG Ø20-NPT1/4"	8702679

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	9900543



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