



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.



- | | |
|--|---|
| <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 |
|--|---|

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

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

Description	ID	Mounting	Max. clamping force (at 6 bar) [kN]	Actuation pressure [bar]	Stroke per jaw [mm]	Weight [kg]
ROTA TPS 125-26 Z-SV90°	0816126	Centering recess	22	3 – 8	3	12
ROTA TPS 125-26 K-SV90°	0816127	Consol plate	22	3 – 8	3	12

Technical drawing of the 120 H6 pump assembly, showing four views: front, top, side, and cross-section.

Front View (Top): Shows the pump housing with a central shaft and three curved blades. Dimensions include a total width of 161, a central shaft diameter of 24 (11 H7), and a total height of 220. The blades are spaced at 13° angles. A cross-section line C-C is indicated.

Top View (Bottom): Shows the pump housing from above. Dimensions include a total width of 161, a central shaft diameter of 24 (11 H7), and a total height of 220. The blades are spaced at 13° angles. A cross-section line A-A is indicated.

Side View (Right): Shows the pump housing with a central shaft and three curved blades. Dimensions include a total width of 104, a central shaft diameter of 24 (11 H7), and a total height of 220. The blades are spaced at 13° angles. A cross-section line A-A is indicated.

Cross-Section View (Bottom Right): Shows the internal components of the pump assembly. Dimensions include a total width of 103, a central shaft diameter of 24 (11 H7), and a total height of 220. The blades are spaced at 13° angles. A cross-section line A-A is indicated.

Subject to technical changes.

- | | |
|---|-------------------------------------|
| ① Air connection R1/8 for opening the chuck | ④ Mounting thread M8 |
| ② Air connection R1/8 for closing the chuck | ⑤ Distance to center of first tooth |
| ③ Disassembly thread M6 | |

Stationary 3-jaw chuck, pneumatically actuated

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

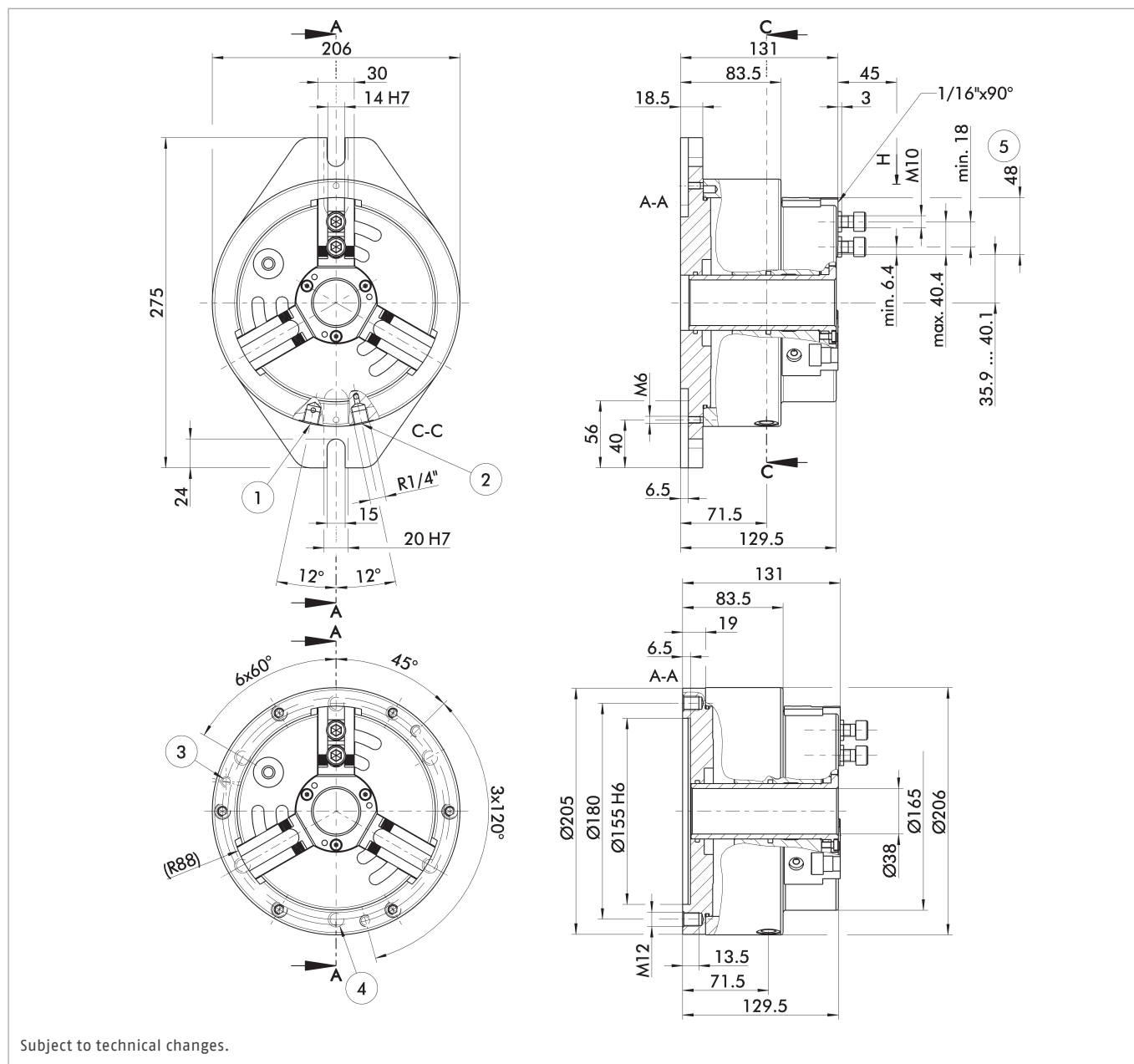
Scope of delivery

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 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

Stationary 3-jaw chuck, pneumatically actuated

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

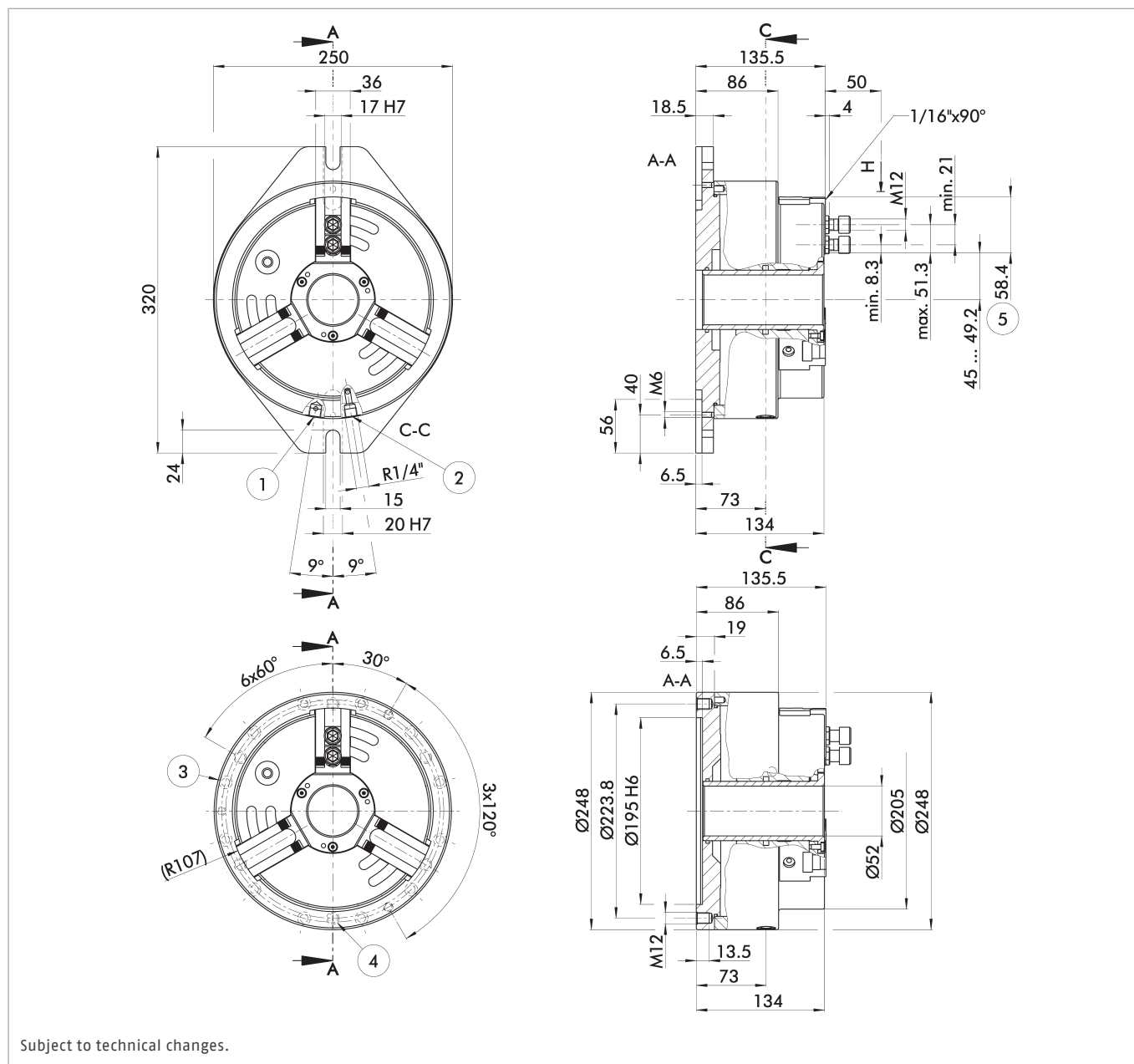
Scope of delivery

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 200-52 Z-SV90°	0816146	Centering recess	68	3 - 8	4.2	34
ROTA TPS 200-52 K-SV90°	0816147	Consol plate	68	3 - 8	4.2	34

$P_{min} = 3$ 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

Stationary 3-jaw chuck, pneumatically actuated

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

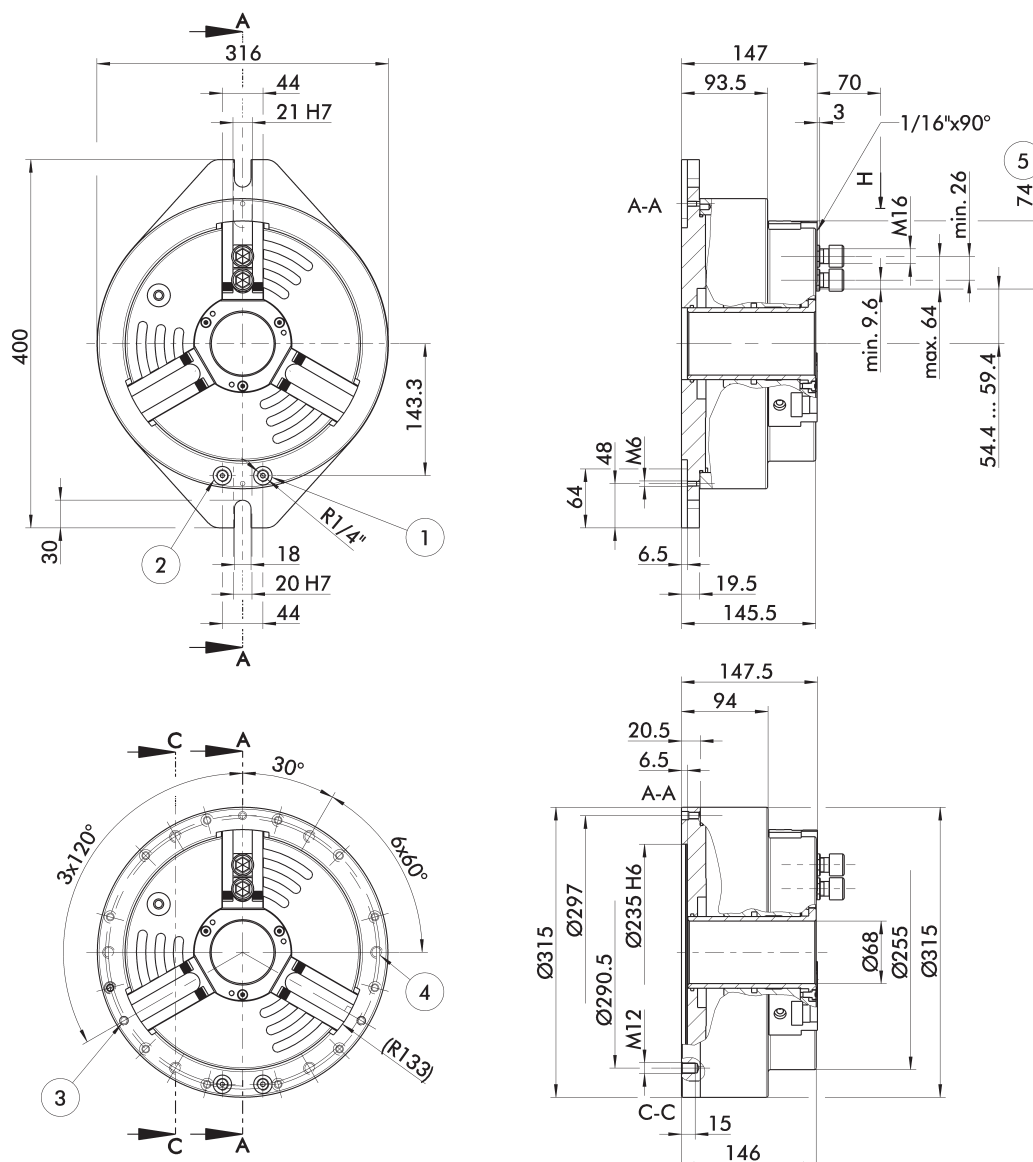
Scope of delivery

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 250-68 Z-SV90°	0816156	Centering recess	105	3 - 8	5	60
ROTA TPS 250-68 K-SV90°	0816157	Consol plate	105	3 - 8	5	60

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



Subject to technical changes.

- 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

Stationary 3-jaw chuck, pneumatically actuated

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

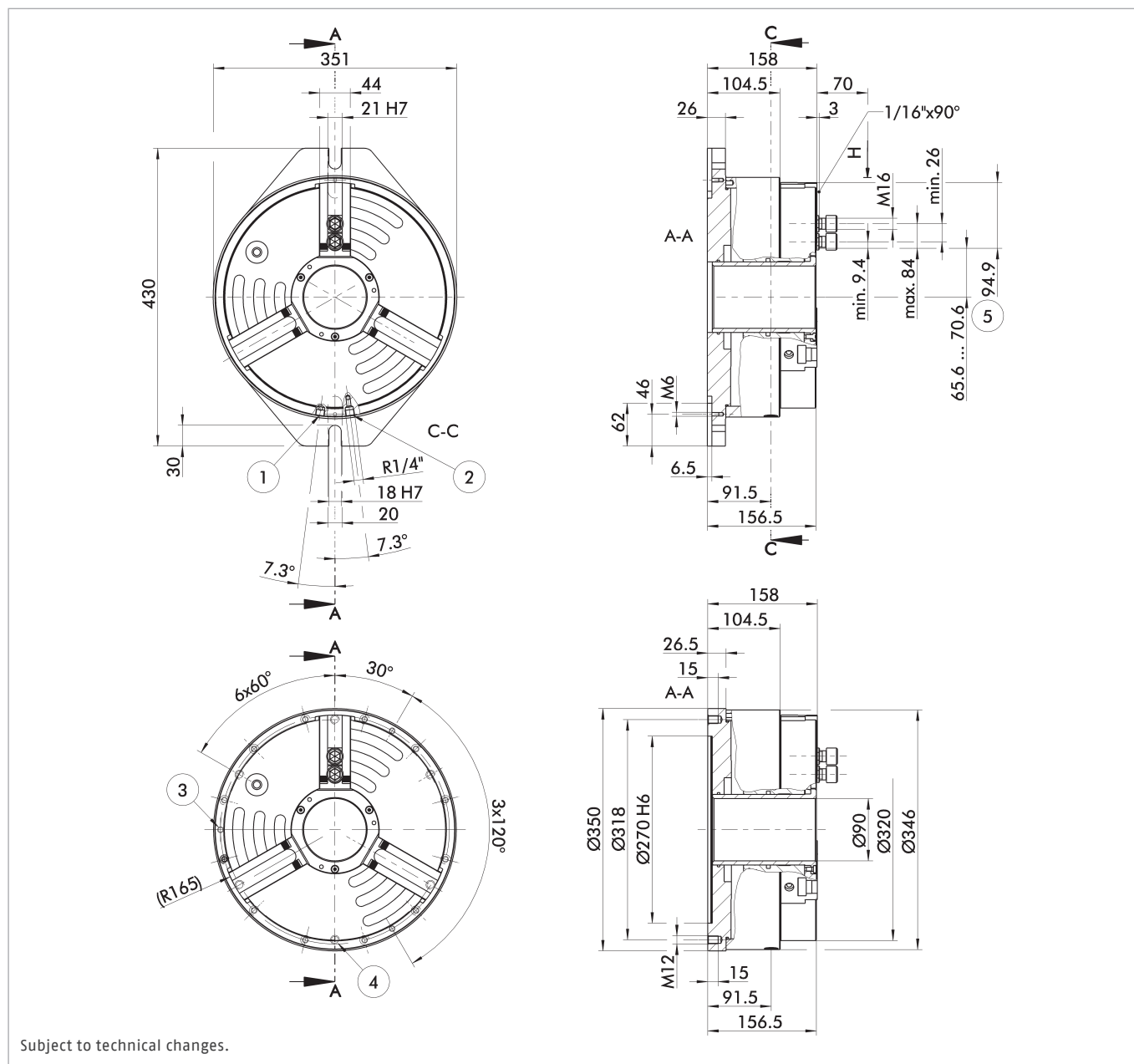
Scope of delivery

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

Stationary 3-jaw chuck, pneumatically actuated

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

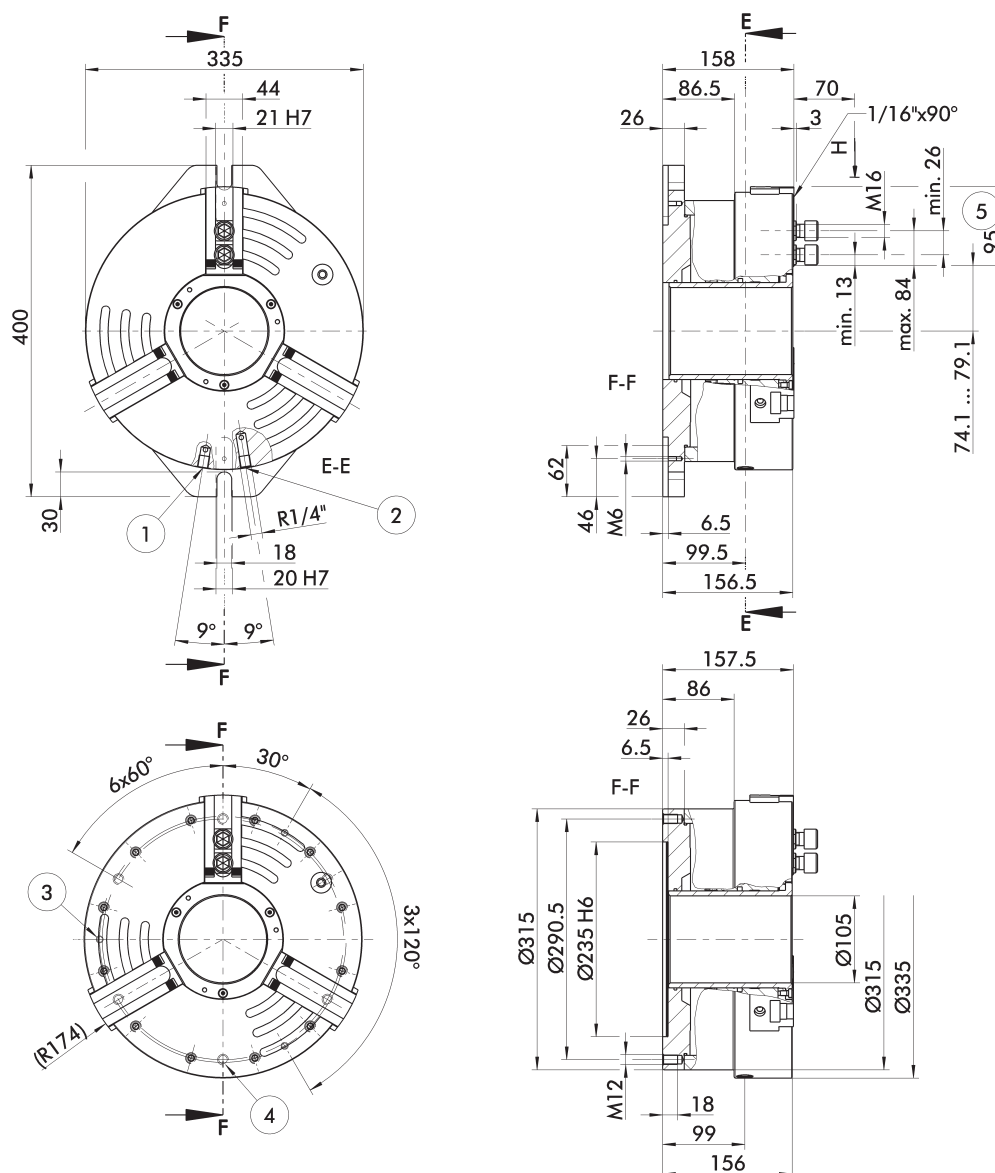
Scope of delivery

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 315-105 Z-SV90°	88000785	Centering recess	100	3 - 8	5	72
ROTA TPS 315-105 K-SV90°	88000779	Consol plate	100	3 - 8	5	72

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

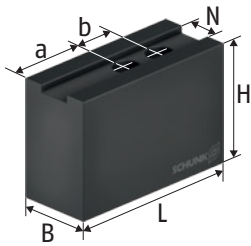


Subject to technical changes.

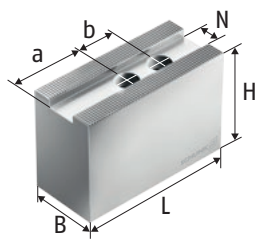
- ① Air connection R1/4 for opening the chuck
- ② Air connection R1/4 for closing the chuck
- ③ Disassembly thread M8
- ④ Mounting thread M12
- ⑤ Distance to center of first tooth

Soft top jaws

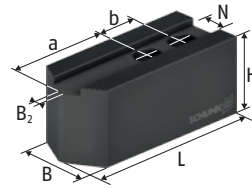
with fine serration 90°



SP-WB
Soft top jaws



SWB-AL
Soft top jaws



SWBL
Soft top jaws

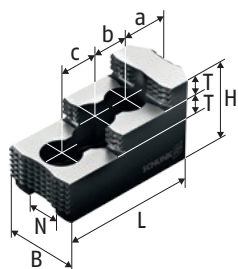
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA TPS 125-26	SP-WB 125	0124100	11	30	40	55.5	27.5	18	M8	1.3
ROTA TPS 160-38	SWBL 165	0120152	14	35	40	80	45	20	M10	2.1
ROTA TPS 160-38	SWB 165	0120101	14	35	60	68	33	20	M10	2.5
ROTA TPS 160-38	SWB-AL 165	0168105	14	35	60	80	45	20	M10	1.2
ROTA TPS 200-52	SWBL 200	0120153	17	35	40	98	61	22	M12	2.6
ROTA TPS 200-52	CWB 200	0100006	17	40	40	90	43	22	M12	2.7
ROTA TPS 200-52	SWB 200	0120104	17	40	60	90	43	22	M12	4.1
ROTA TPS 200-52	SWB-AL 200	0168101	17	40	60	90	43	22	M12	1.5
ROTA TPS 250-68	SWBL 250-21	0120155	21	50	50	120	72	28	M16	5.4
ROTA TPS 250-68	CWB 251	0100012	21	50	60	95	52	28	M16	5.2
ROTA TPS 250-68	SWB 250	0120105	21	50	80	120	62	28	M16	9.2
ROTA TPS 250-68	SWB-AL 250	0168102	21	50	80	120	62	28	M16	3.3
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
ROTA TPS 315-105	SWBL 315	0120156	21	50	50	140	82	28	M16	6.5
ROTA TPS 315-105	CWB 251	0100012	21	50	60	95	52	28	M16	5.2
ROTA TPS 315-105	SWB 250	0120105	21	50	80	120	62	28	M16	9.2
ROTA TPS 315-105	SWB-AL 250	0168102	21	50	80	120	62	28	M16	3.3

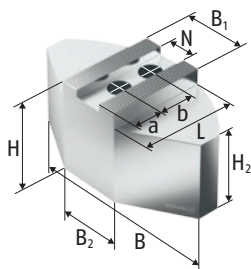
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Hard stepped top jaws, Full grip jaws

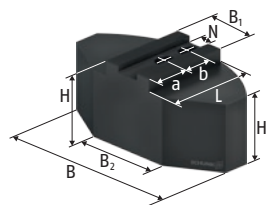
with fine serration 90°



SHB
Hard stepped top jaws



SWB-SA
Full grip jaws



SWB-SM
Full grip jaws

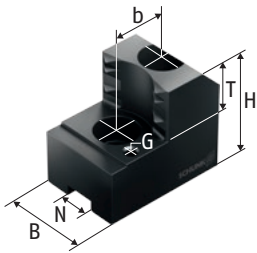
Technical data

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 125-26	SHB 125	0125100	11	26		40		58.5	9	14.5	16	16	M8	0.7
ROTA TPS 160-38	SWB-SA 165	0170099	14	120	40	58	48	59.5		25	20		M10	2.2
ROTA TPS 160-38	SWB-SM 165	0169099	14	120	40	60	50	59.5		24.5	20		M10	6.0
ROTA TPS 160-38	SHB 165	0121101	14	30		46		79.7	11	16.6	22	22	M10	1.3
ROTA TPS 200-52	SWB-SA 200	0170101	17	140	40	58	48	72.5		35	22		M12	3.1
ROTA TPS 200-52	SWB-SA 201	0170106	17	140	40	75	65	72.5		35	22		M12	4.2
ROTA TPS 200-52	SWB-SM 200	0169101	17	140	40	60	50	69.5		35	22		M12	8.6
ROTA TPS 200-52	SWB-SM 201	0169106	17	140	40	75	65	69.5		35	22		M12	11.5
ROTA TPS 200-52	SHB 210	0121102	17	40		49		84.3	12	28.7	19	19	M12	2.0
ROTA TPS 250-68	SWB-SA 250-21	0170103	21	180	50	78	63	87.5		40	28		M16	6.3
ROTA TPS 250-68	SWB-SA 251	0170107	21	180	50	100	85	87.5		40	28		M16	8.3
ROTA TPS 250-68	SWB-SM 250-21	0169103	21	180	50	70	55	80		29	28		M16	14.5
ROTA TPS 250-68	SWB-SM 251	0169107	21	180	50	100	85	80		30	28		M16	22.0
ROTA TPS 250-68	SHB 250	0121105	21	50		58		103.5	14	34	25	25	M16	3.5
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
ROTA TPS 315-105	SWB-SA 315	0170104	21	240	50	78	63	117		70	28		M16	11.0
ROTA TPS 315-105	SWB-SM 315	0169104	21	240	50	70	55	110		60	28		M16	26.6
ROTA TPS 315-105	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

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	0122260	14	30	47	71.5	20	M6	20	M10	1.2
ROTA TPS 160-38	54 - 84	185	SZA 17-2	0122261	14	30	47	61.9	20	M6	20	M10	1.0
ROTA TPS 160-38	80 - 111	187	SZA 17-3	0122262	14	30	47	58.7	20	M6	20	M10	1.0
ROTA TPS 160-38	106 - 137	195	SZA 17-4	0122263	14	35	47	60.3	20	M6	20	M10	1.2
ROTA TPS 200-52	33 - 76	225	SZA 20-14	0138195	17	35	50	85	25	M6	22	M12	1.8
ROTA TPS 200-52	60 - 104	225	SZA 20-15	0138196	17	35	50	72.9	25	M6	22	M12	1.5
ROTA TPS 200-52	89 - 134	225	SZA 20-16	0138197	17	40	50	65.1	25	M6	22	M12	1.5
ROTA TPS 200-52	116 - 161	227	SZA 20-17	0138198	17	40	50	66.7	25	M6	22	M12	1.6
ROTA TPS 200-52	146 - 191	251	SZA 20-18	0138199	17	40	50	71.4	25	M6	22	M12	1.8
ROTA TPS 250-68	53 - 108	276	SZA 25-37	0138180	21	50	58	95.9	25	M8	28	M16	3.3
ROTA TPS 250-68	93 - 148	276	SZA 25-38	0138181	21	50	58	81	25	M8	28	M16	2.9
ROTA TPS 250-68	142 - 198	279	SZA 25-39	0138182	21	50	58	76.2	25	M8	28	M16	2.7
ROTA TPS 250-68	189 - 245	316	SZA 25-40	0138183	21	50	58	90.5	25	M8	28	M16	3.2
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
ROTA TPS 315-105	74 - 164	365	SZA 31-10	0138184	21	50	58	115.4	25	M8	28	M16	3.4
ROTA TPS 315-105	132 - 222	366	SZA 31-11	0138185	21	50	58	92.1	25	M8	28	M16	3.4
ROTA TPS 315-105	198 - 288	364	SZA 31-12	0138186	21	50	58	87.3	25	M8	28	M16	3.2
ROTA TPS 315-105	262 - 335	407	SZA 31-13	0138187	21	50	58	111.1	25	M8	28	M16	4.7

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

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 125-26	NS 81	0143100	11	15.9	21	7	14.3	M8 x 30	30
ROTA TPS 160-38	NS 102	0143101	14	19.8	25.5	8.5	17.3	M10 x 35	50
ROTA TPS 200-52	NS 126	0143102	17	22.4	27	9	19.3	M12 x 35	70
ROTA TPS 250-68	NS 164	0143108	21	28.4	30	11	24.3	M16 x 35	150
ROTA TPS 315-90	NS 164	0143108	21	28.4	30	11	24.3	M16 x 35	150
ROTA TPS 315-105	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 125-26	SHB 125	0125100	8 - 52	20 - 56	58 - 93	90 - 125
ROTA TPS 160-38	SHB 165	0121101	10 - 54	22 - 58	71 - 108	115 - 152
ROTA TPS 200-52	SHB 210	0121102	14 - 102	40 - 94	90 - 140	136 - 198
ROTA TPS 250-68	SHB 250	0121105	20 - 126	46 - 131	128 - 205	201 - 255
ROTA TPS 315-90	SHB 315	0121111	20 - 160	54 - 150	146 - 242	238 - 320
ROTA TPS 315-105	SHB 315	0121111	27 - 177	78 - 174	170 - 266	262 - 335

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA TPS 125-26	SHB 125	0125100	53 - 90	85 - 127	122 - 169
ROTA TPS 160-38	SHB 165	0121101	74 - 120	118 - 164	168 - 210
ROTA TPS 200-52	SHB 210	0121102	87 - 137	133 - 185	181 - 265
ROTA TPS 250-68	SHB 250	0121105	71 - 148	143 - 228	223 - 325
ROTA TPS 315-90	SHB 315	0121111	89 - 186	181 - 277	273 - 380
ROTA TPS 315-105	SHB 315	0121111	97 - 193	189 - 284	280 - 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 125-26	IFT Set	1404235
ROTA TPS 160-38		
ROTA TPS 200-52		
ROTA TPS 250-68		
ROTA TPS 315-90		
ROTA TPS 315-105		

Maintenance unit

For processing the required compressed air.



Suitable for	Description	ID
ROTA TPS 125-26	WEH 1/4"	0890021
ROTA TPS 160-38		
ROTA TPS 200-52		
ROTA TPS 250-68		
ROTA TPS 315-90		
ROTA TPS 315-105		

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 125-26	DMG Ø12-NPT1/4"	8702678
ROTA TPS 160-38		
ROTA TPS 200-52		
ROTA TPS 250-68		
ROTA TPS 315-90		
ROTA TPS 315-105	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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Spanntechnik KG

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