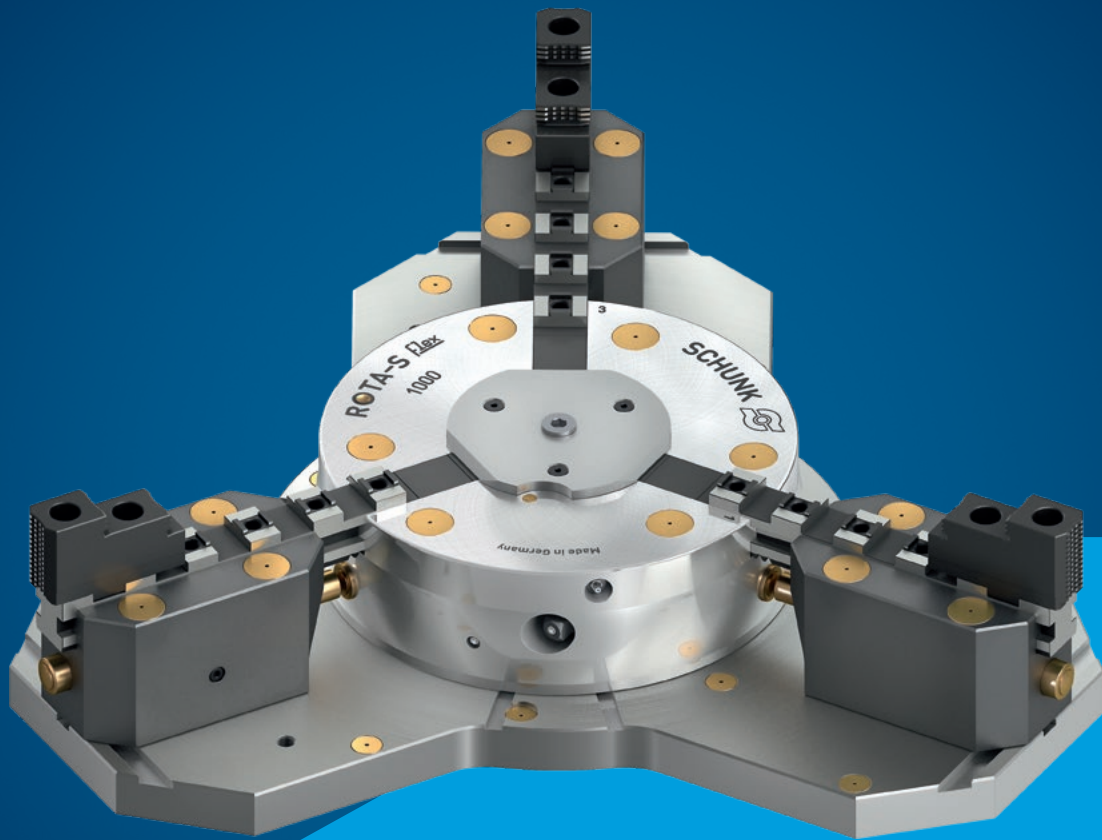




ROTA-S *flex*

**Extremely weight-reduced
manual lathe chuck for mill/
turn centers**

Flexible lightweight chuck with up to 60% weight reduction as compared to conventional 3-jaw chucks

High machine loading combined with high parts variance – the flexible and extremely weight-reduced ROTA-S flex meets precisely these requirements. The jaw quick-change system and extended guideways mean that the chuck can be converted very quickly from small to large workpiece diameters. This makes the ROTA-S flex indispensable, especially on mill/turn centers.



Advantages – Your benefits

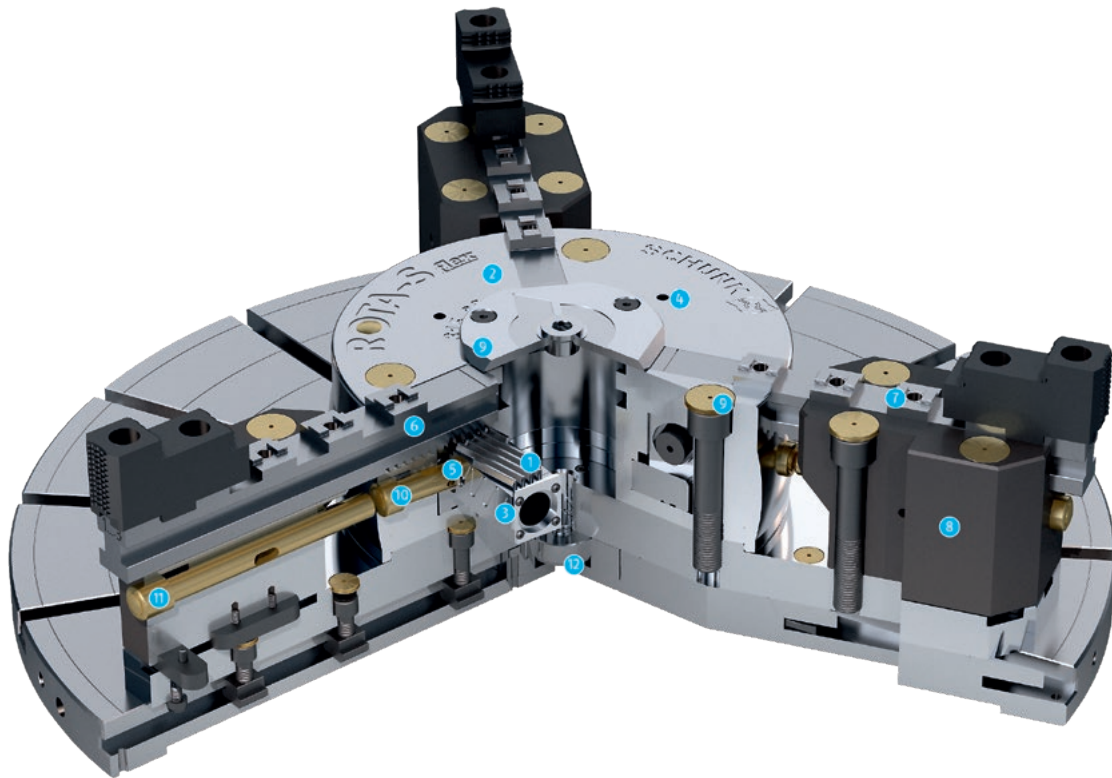
- + Convenient jaw quick-change system**
Minimizing set-up times and costs
- + High efficiency of the wedge bar system**
Process-reliable clamping due to high clamping forces
- + High jaw quick-change repeat accuracy**
No reboring of already machined jaws necessary
- + Low chuck weight**
Higher workpiece payload possible
- + Specially sealed for vertical set-ups**
Optimum protection against coolant and chips
- + Maximum flexibility due to extended guideways**
For an extremely wide clamping range
- + Visual safety devices**
Maximum operating safety
- + Optimized lubrication system**
For consistently high clamping forces
- + Angled serrated base jaws SFG**
Compatible with the ROTA-S plus and "F" system (Forkardt)
- + All sides of the functional parts are hardened and ground**
High run-out and jaw change repeat accuracy

Technical data

Description	Max. rotational speed [min ⁻¹]	Max. clamping force [kN]	Max. torque [Nm]	Stroke/jaw [mm]
ROTA-S flex 550	1000	100	120	7
ROTA-S flex 700	800	180	220	9.7
ROTA-S flex 1000	500	230	280	12
ROTA-S flex 1200	500	270	320	12
ROTA-S flex 1400	400	270	350	15

Function of ROTA-S flex

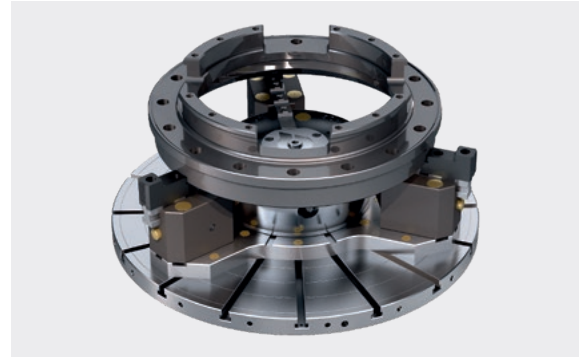
The tangentially movable wedge bars in the chuck are driven by turning the thread spindle. The wedge bars transmit the force to the base jaws, generating a jaw movement that is synchronous and radial to the axis of rotation.



- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Wedge bar actuation system
It offers high run-out accuracies even at high speeds 2 Hardened and extremely rigid base body
Therefore a longer service life at highest precision.
Even with maximum clamping force 3 Optimized lubrication system
For a high level of efficiency 4 Mounting thread
For workpiece stops or cover plates 5 Jaw quick-change system
Shortest set-up times due to individual unlocking of jaws 6 Base jaws with diagonal serration (SFG)
Compatible with the ROTA-S plus and "F" system (Forkardt) | <ul style="list-style-type: none"> 7 Standard jaw interface
For the use of standard jaws from SCHUNK 8 Exchangeable guideway extension
To increase the clamping range 9 Improved design which is insensitive to dirt
By means of targeted sealing 10 Push button for jaw change
For shortest set-up times 11 Push button extension
For quick jaw changes when using the guideway extension 12 Centering pins
For exact positioning on the machine table |
|---|---|

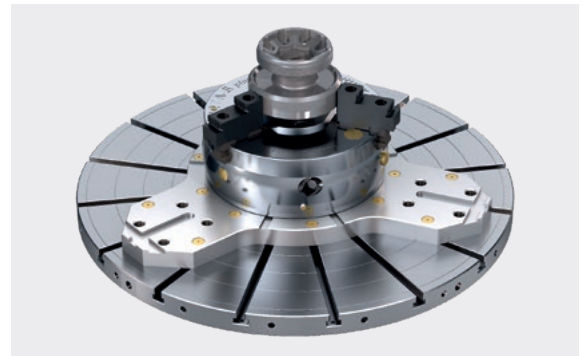
ROTA-S flex with extended guideways

Large workpieces can be precisely clamped with standard chuck jaws. The special shape permits optimal accessibility for 5-axis machining.



ROTA-S flex without extended guideways

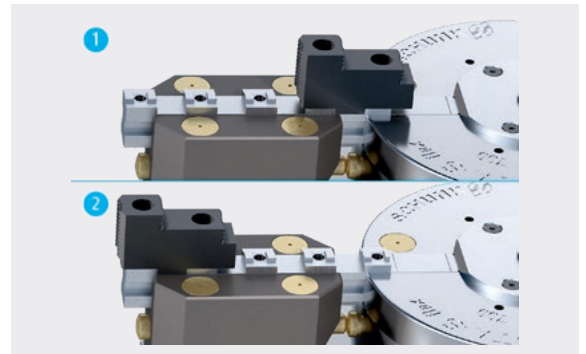
Even small workpieces can be clamped with optimal accessibility by removing the guideway extensions and using an SGF standard base jaw.



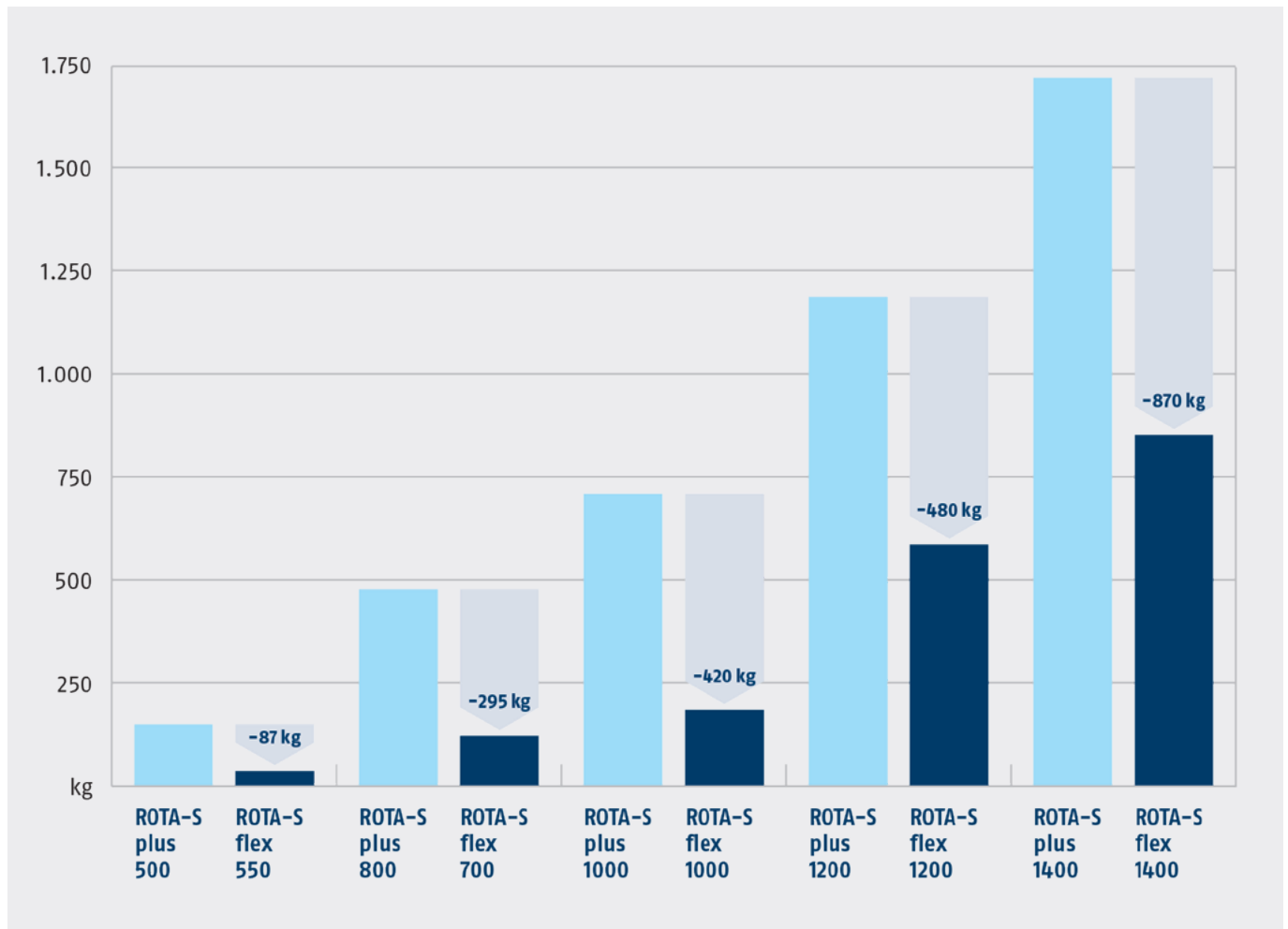
Clamping range of the ROTA-S flex

By offsetting the top jaw on the long base jaw, the ROTA-S flex can offer an extremely large clamping range. The chuck is suitable for both: O.D. and I.D. clamping.

- ❶ **Minimum clamping range**
With hard stepped jaws
- ❷ **Maximum clamping range**
With hard stepped jaws



Weight reduction by ROTA-S flex compared to ROTA-S plus



Compared with standard 3-jaw chucks, the ROTA-S flex saves up to 60% in weight. This reduces the machine load considerably – leaving a maximum payload for heavy workpieces.



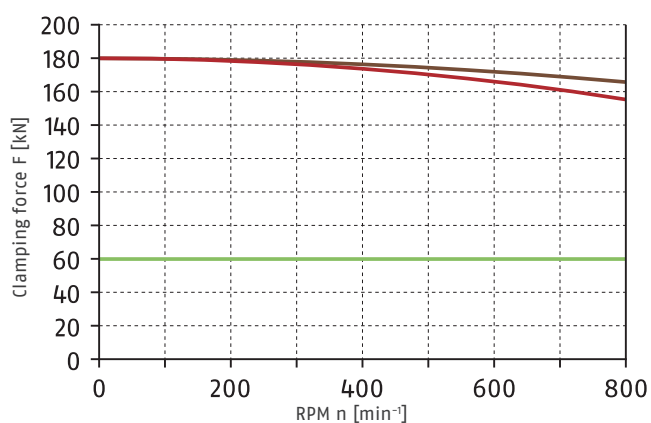
Technical data

ID	Lathe chuck used	Max. rotational speed [min ⁻¹]	Max. clamping force [kN]	Max. torque [Nm]	Stroke/jaw [mm]	Max. rotary table torque [Nm]	Weight [kg]
0814820	ROTA-S plus 2.0 315	800	180	220	9.7	2000	170

Scope of delivery

Chuck, guideway extensions, long base jaws, short base jaws, centering pins, chuck cover, ratchet wrench, adapter for ratchet wrench, eye bolts, mounting screws, nuts for T-slot, bore cover plate, operating manual; without top jaws

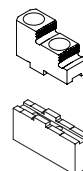
Clamping force-RPM-diagram



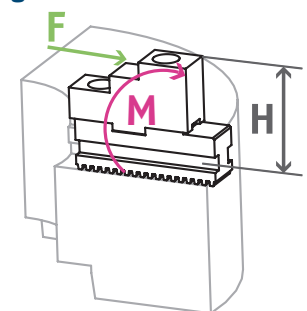
Required minimum clamping force F_{spmin} 33%

SHF 315
3.3 kg

SFA 315
5.6 kg



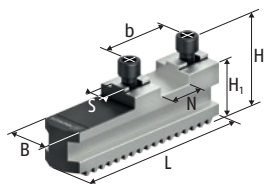
Load of base jaw guidance



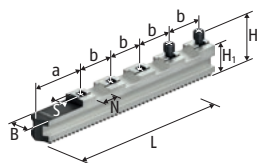
$$M_{max} = 4400 \text{ Nm}$$

Base jaws

with angled serration



SFGF-K
Base jaws



SFGF-L
Base jaws

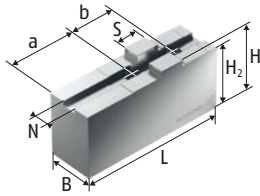
Technical data

Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H1 [mm]	L [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S flex 700	SFGF-K 700	0814826	26	12	32	45	42	136	51	M12x1.5	2.8
ROTA-S flex 700	SFGF-L 700	0814825	26	12	32	45	42	311	54	M12x1.5	7.1

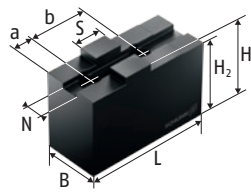
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Soft top jaws

with tongue and groove



SFA-AL
Soft top jaws



SFA
Soft top jaws

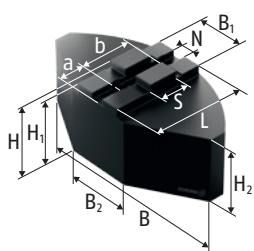
Technical data

Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H2 [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S flex 700	SFA 315	0153103	12	26	35	60	54	145	60	54	M12	5.6
ROTA-S flex 700	SFA-AL 315	0172104	12	26	40	60	54	145	60	54	M12	2.4
ROTA-S flex 700	SFA 315-C1	0154108	12	26	40	60	54	110	40	54	M12	4.9
ROTA-S flex 700	SFA 315-C2	0154109	12	26	40	60	54	145	75	54	M12	6.6
ROTA-S flex 700	SFA 315-C3	0154110	12	26	40	100	94	145	75	54	M12	11.4
ROTA-S flex 700	SFA 315-C4	0154111	12	26	40	120	114	145	75	54	M12	13.8
ROTA-S flex 700	SFA 315-C5	0154112	12	26	40	150	144	145	75	54	M12	17.5
ROTA-S flex 700	SFA 315-C51	0154123	12	26	50	80	74	145	75	54	M12	11.4
ROTA-S flex 700	SFA 315-C6	0154113	12	26	60	60	54	110	40	54	M12	7.6
ROTA-S flex 700	SFA 315-C7	0154114	12	26	80	60	54	110	40	54	M12	10.3
ROTA-S flex 700	SFA 315-C8	0154115	12	26	80	80	74	110	40	54	M12	14.0

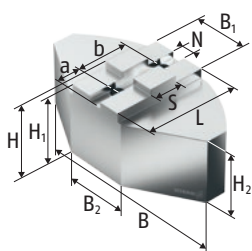
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Hard stepped top jaws, Full grip jaws

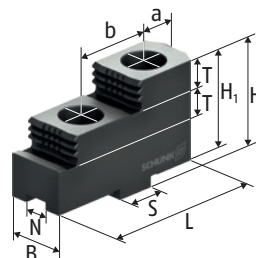
with tongue and groove



SFA-SM
Full grip jaws



SFA-SA
Full grip jaws



SHF
Hard stepped top jaws

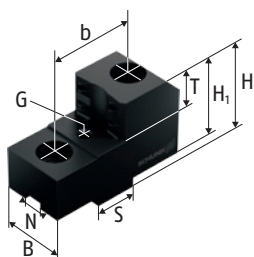
Technical data

Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	B1 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	T [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S flex 700	SFA-SA 315	0174103	12	26	240	45	75	69	60	117		49.75	54	M12	8.0
ROTA-S flex 700	SFA-SM 315	0173103	12	26	240	45	75	69	60	110		41	54	M12	29.2
ROTA-S flex 700	SHF 315	0155103	12	26	36		62	56		105	15	22.3	54	M12	3.3

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

Claw jaws

with tongue and groove



SZKA
Claw jaws

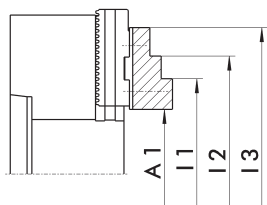
Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	S	B	H	H1	L	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[kg]
ROTA-S flex 700	120 - 557	755	SZKA 321	0139166	12	26	40	59	53	108	25	M8	54	M12	3.1
ROTA-S flex 700	230 - 666	765	SZKA 324	0139169	12	26	40	59	53	90	25	M8	54	M12	2.8

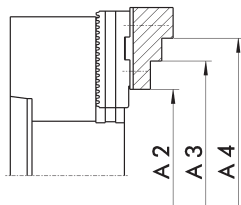
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Hard stepped top jaws

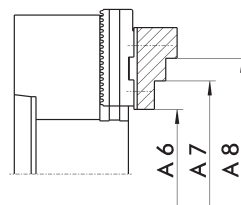
with tongue and groove



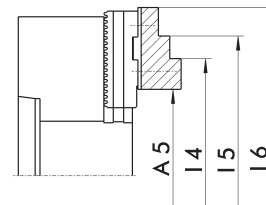
Position of base jaws II



Position of base jaws I



Position of base jaws II



Position of base jaws I

O.D. clamping

Chuck type	Description	ID	A1 [mm]	A3 [mm]	A4 [mm]
ROTA-S flex 700	SHF 315	0155103	122 - 561	130 - 568	238 - 678

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]
ROTA-S flex 700	SHF 315	0155103	203 - 643	313 - 752

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-S flex 700	IFT Set	1404235

Extension set for large chucks

For use as an extension of the IFT measuring head for measuring the jaw clamping force of large chucks of Ø 400 mm and more.



Suitable for	Description	ID
ROTA-S flex 700	IFT adapter set	1498512

Torque wrench

Torque wrench for actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 700	SSH-D-1/2" 60-300	1301281

Ratchets

Ratchet for fast actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 700	SSH-K 1/2"-350	1151118

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

Hexagon spanner wrench adapter with ejector

For use as an attachment for a torque wrench and ratchet for actuating SCHUNK manual lathe chucks with hexagonal connection.



Suitable for	Description	ID
ROTA-S flex 700	SAS-I 1/2"-SW16	8705471

Centering pins

For precise alignment of SCHUNK ROTA-S flex manual lathe chucks on the machine table.



Suitable for	Description	ID
ROTA-S flex 700	ZTB Ø32	0814847
ROTA-S flex 700	ZTB Ø50	0814827

Cover plate

For covering up the fastening screws of the chuck body as well as the guideway extensions.



Suitable for	Description	ID
ROTA-S flex 700	VSD M12	40009901

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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