



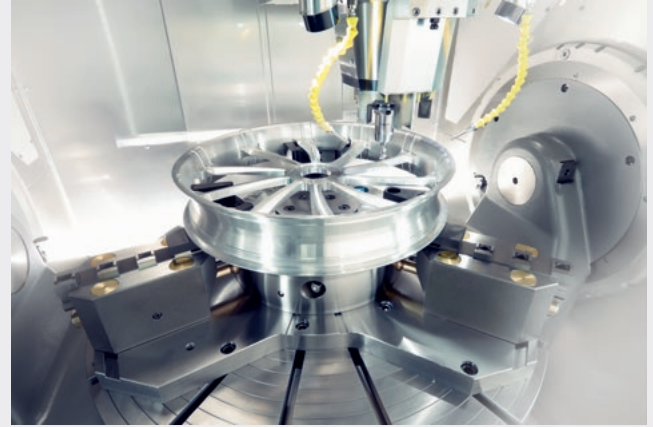
ROTA-S *flex*

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

Hand in hand for tomorrow

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

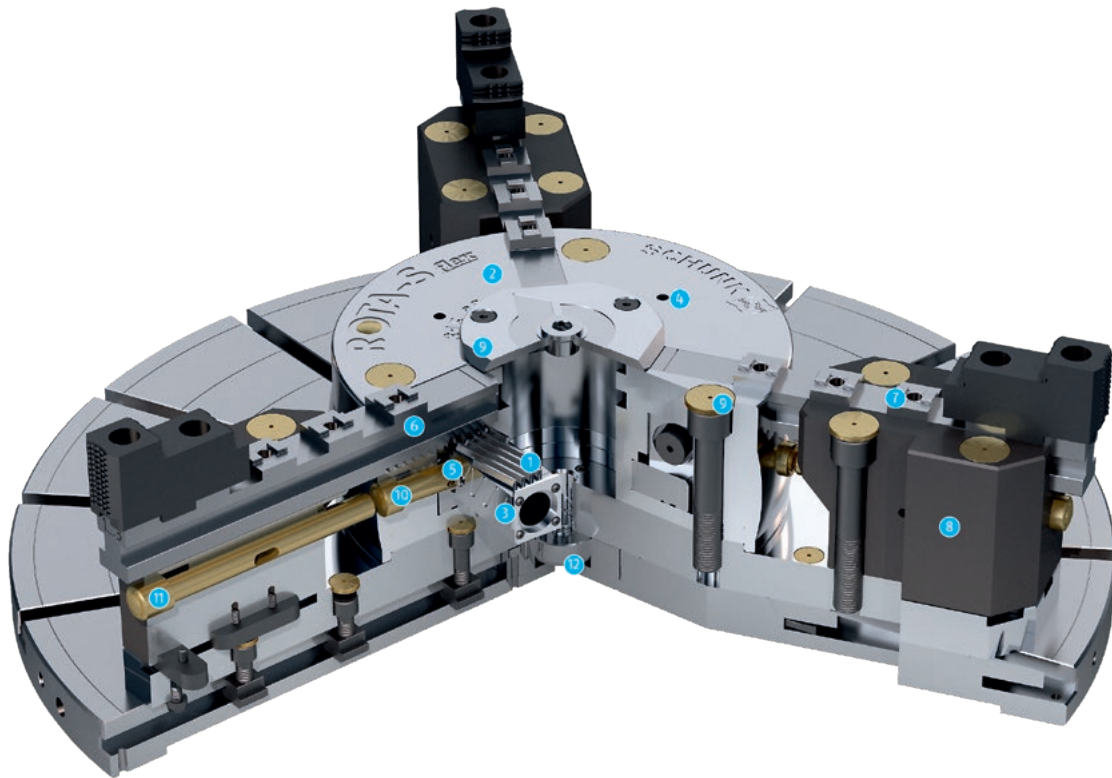
- + Convenient jaw quick-change system**
Minimizing set-up times and costs
- + High efficiency of the wedge bar system**
Process-reliable clamping due to high clamping forces
- + High jaw quick-change repeat accuracy**
No reboring of already machined jaws necessary
- + Low chuck weight**
Higher workpiece 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

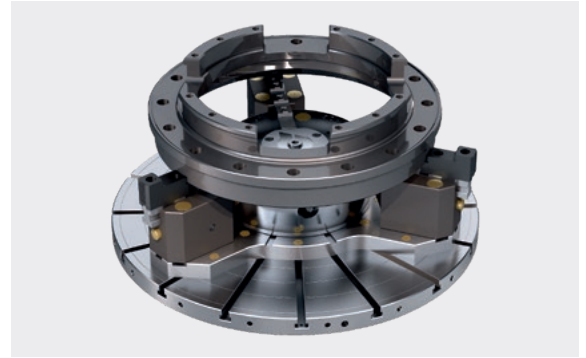
The tangentially movable wedge bars in the chuck are driven by turning the thread spindle. The wedge bars transmit the force to the base jaws, generating a jaw movement that is synchronous and radial to the axis of rotation.



- | | |
|--|--|
| <p>1 Wedge bar actuation system
It offers high run-out accuracies even at high speeds</p> <p>2 Hardened and extremely rigid base body
Therefore a longer service life at highest precision.
Even with maximum clamping force</p> <p>3 Optimized lubrication system
For a high level of efficiency</p> <p>4 Mounting thread
For workpiece stops or cover plates</p> <p>5 Jaw quick-change system
Shortest set-up times due to individual unlocking of jaws</p> <p>6 Base jaws with diagonal serration (SFG)
Compatible with the ROTA-S plus and "F" system (Forkardt)</p> | <p>7 Standard jaw interface
For the use of standard jaws from SCHUNK</p> <p>8 Exchangeable guideway extension
To increase the clamping range</p> <p>9 Improved design which is insensitive to dirt
By means of targeted sealing</p> <p>10 Push button for jaw change
For shortest set-up times</p> <p>11 Push button extension
For quick jaw changes when using the guideway extension</p> <p>12 Centering pins
For exact positioning on the machine table</p> |
|--|--|

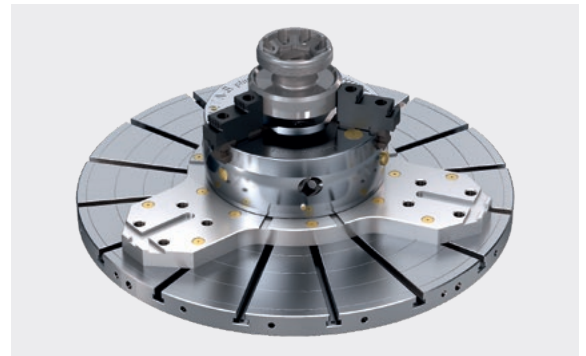
ROTA-S flex with extended guideways

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

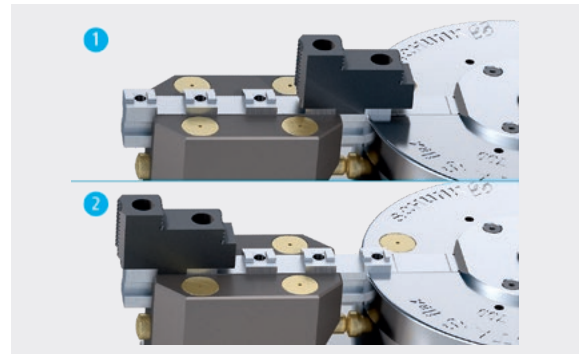
Even small workpieces can be clamped with optimal accessibility by removing the guideway extensions and using an SGF standard base jaw.



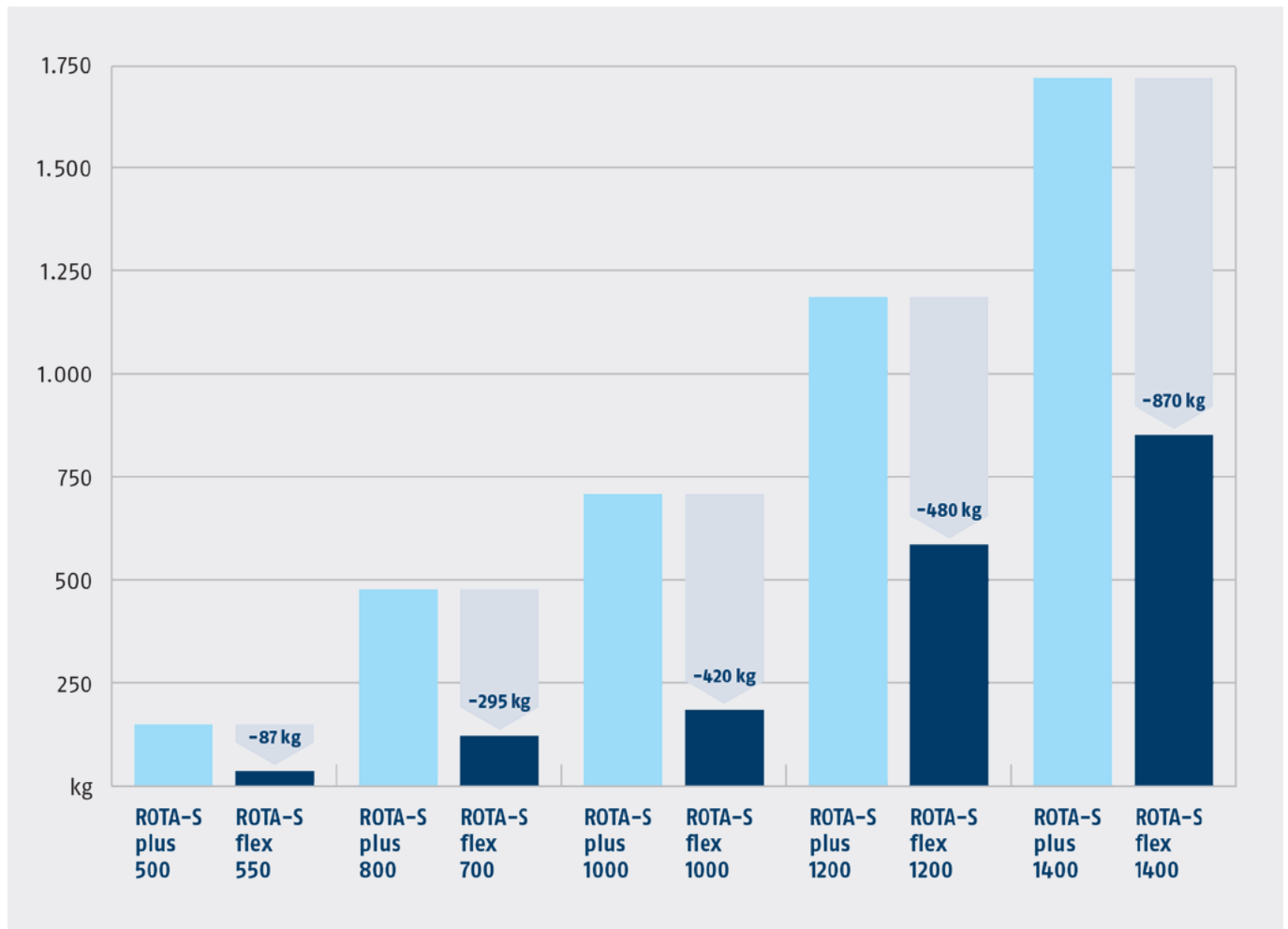
Clamping range of the ROTA-S flex

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.

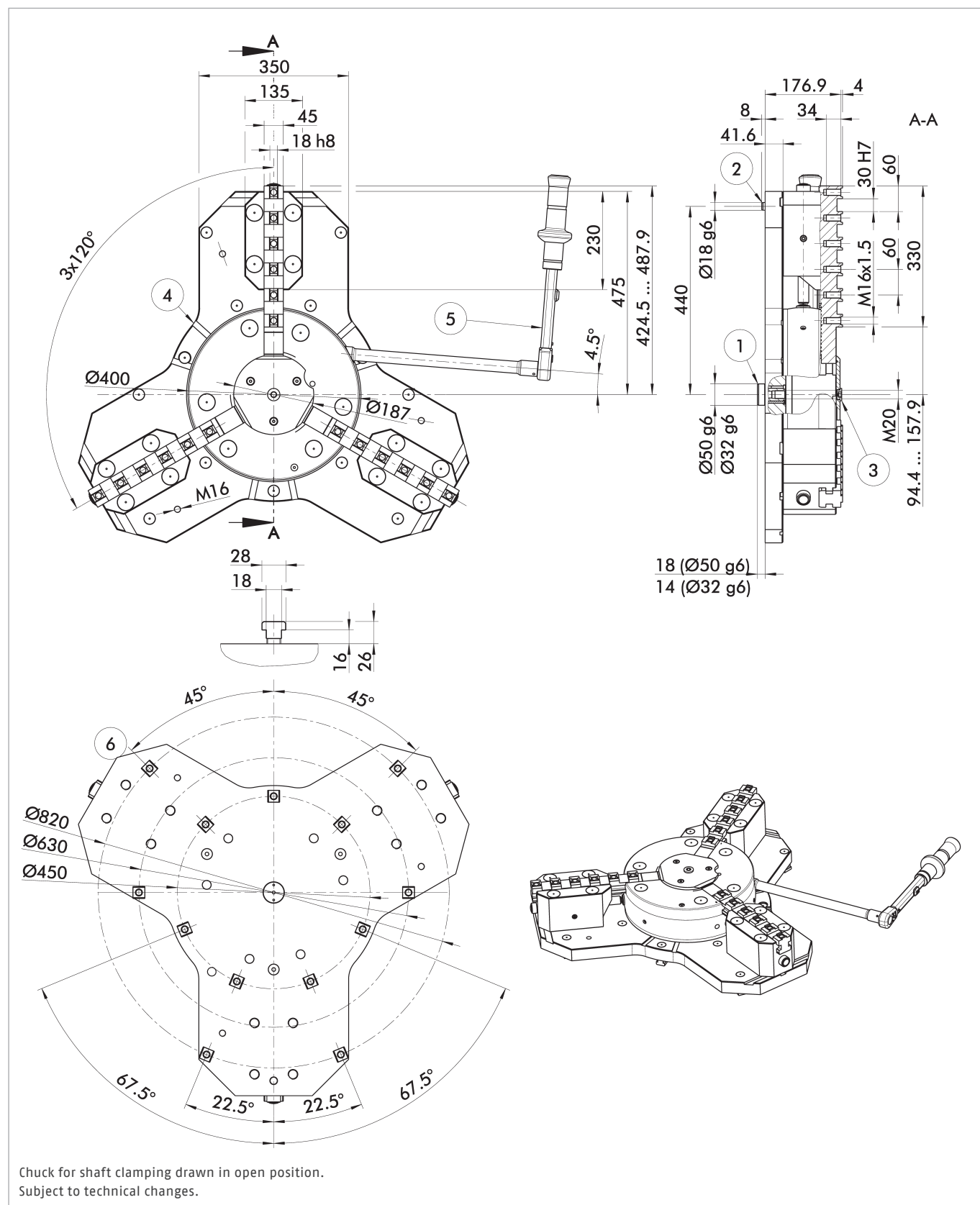
- ❶ **Minimum clamping range**
With hard stepped jaws
- ❷ **Maximum clamping range**
With hard stepped jaws



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.



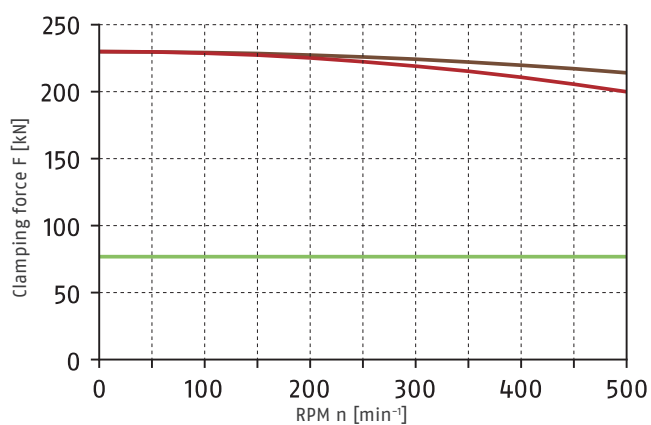
Technical data

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]
0814830	ROTA-S plus 400	500	230	280	12	4000	360

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

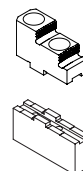
Clamping force-RPM-diagram



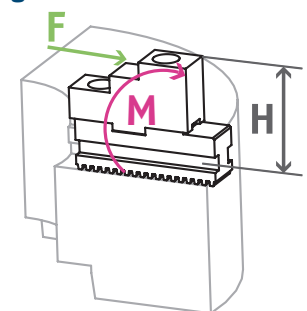
Required minimum clamping force F_{spmin} 33%

SHF 400
6.8 kg

SFA 400
13.7 kg



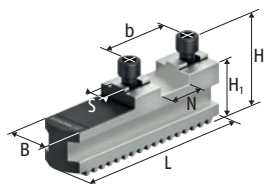
Load of base jaw guidance



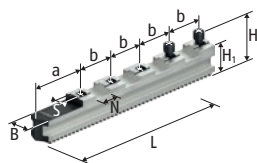
M_{max} = 7437 Nm

Base jaws

with angled serration



SFGF-K
Base jaws



SFGF-L
Base jaws

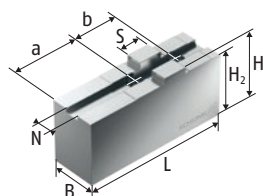
Technical data

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 1000	SFGF-K 1000	0814836	30	18	45	55	51	160	60	M16x1.5	6.4
ROTA-S flex 1000	SFGF-L 1000	0814835	30	18	45	55	51	415	60	M16x1.5	16.0

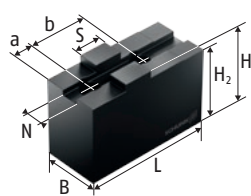
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Soft top jaws

with tongue and groove



SFA-AL
Soft top jaws



SFA
Soft top jaws

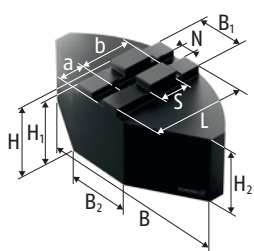
Technical data

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 1000	SFA 400	0153104	18	30	50	80	73	180	85	60	M16	13.7
ROTA-S flex 1000	SFA-AL 400	0172105	18	30	50	80	73	180	85	60	M16	6.3
ROTA-S flex 1000	SFA 400-C1	0154116	18	30	60	80	73	130	50	60	M16	11.8
ROTA-S flex 1000	SFA 400-C3	0154118	18	30	60	100	93	155	75	60	M16	18.2
ROTA-S flex 1000	SFA 400-C4	0154119	18	30	60	120	113	155	75	60	M16	22.1
ROTA-S flex 1000	SFA 400-C5	0154120	18	30	80	80	73	130	50	60	M16	16.0
ROTA-S flex 1000	SFA 400-C6	0154125	18	30	58	180	173	160	80	60	M16	33.6
ROTA-S flex 1000	SFA 400-C7	0154135	18	30	96	115	108	115	35	60	M16	25.2

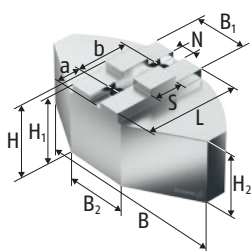
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Hard stepped top jaws, Full grip jaws

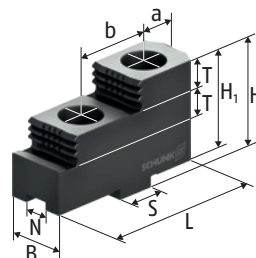
with tongue and groove



SFA-SM
Full grip jaws



SFA-SA
Full grip jaws



SHF
Hard stepped top jaws

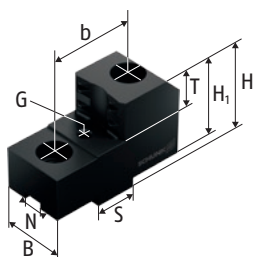
Technical data

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 1000	SFA-SA 400	0174104	18	30	330	60	90	83	60	160		81	60	M16	16.3
ROTA-S flex 1000	SFA-SM 400	0173104	18	30	330	45	85	78	55	160		81	60	M16	55.2
ROTA-S flex 1000	SHF 400	0155104	18	30	45		82	75		130	20	27.05	60	M16	6.8

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Claw jaws

with tongue and groove



SZKA
Claw jaws

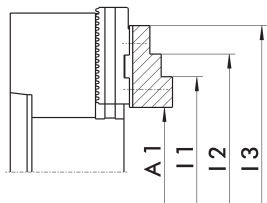
Technical data

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 1000	264 - 765	990	SZKA 409	0139170	18	30	50	78	71	126	33	M8	60	M16	6.0
ROTA-S flex 1000	366 - 867	990	SZKA 412	0139173	18	30	50	78	71	103	33	M8	60	M16	5.1

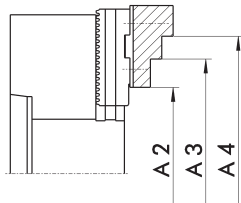
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Hard stepped top jaws

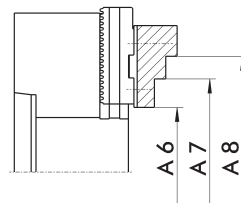
with tongue and groove



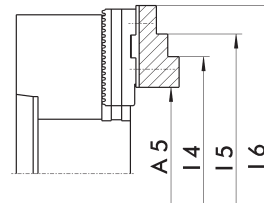
Position of base jaws II



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 1000	SHF 400	0155104	170 - 772	164 - 766	285 - 888

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]
ROTA-S flex 1000	SHF 400	0155104	282 - 885	403 - 1007

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 1000	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 1000	IFT adapter set	1498512

Torque wrench

Torque wrench for actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 1000	SSH-D-3/4" 80-400	1301023

Ratchets

Ratchet for fast actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 1000	SSH-K 3/4"-510	9987240

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

Square 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 1000	SAV-I 3/4"-SW19	8705470

Centering pins

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



Suitable for	Description	ID
ROTA-S flex 1000	ZTB Ø32	0814847
ROTA-S flex 1000	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 1000	VSD M16	40009903

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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