

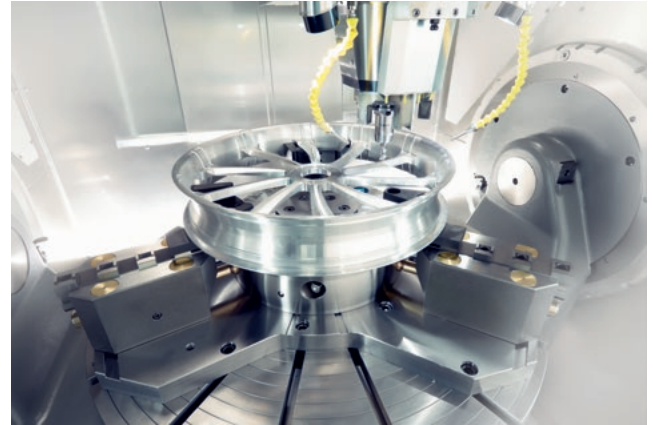
## ROTA-S *flex*

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

## Field of application

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

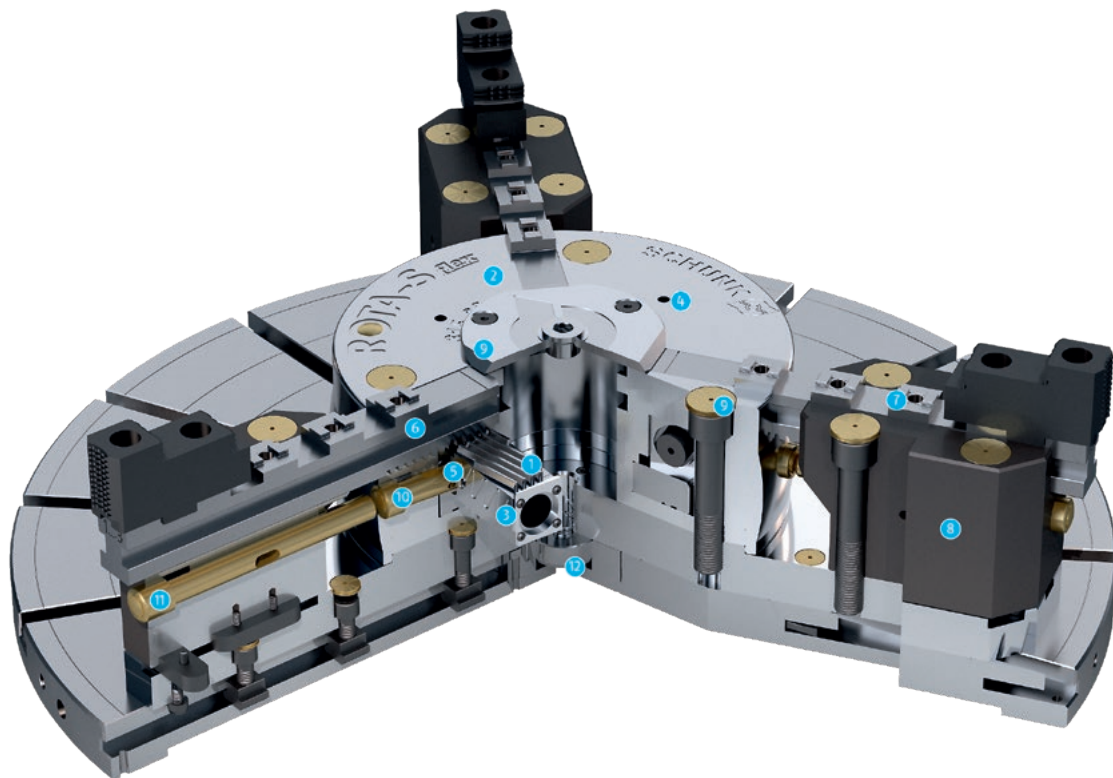
- + Convenient jaw quick-change system**  
Minimizing set-up times and costs
- + High efficiency of the wedge bar system**  
Process-reliable clamping due to high clamping forces
- + High jaw quick-change repeatability**  
No reboring of already machined jaws necessary
- + Low chuck weight**  
Higher 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**  
Interchangeable with ROTA-S plus and with system "F" (Forkardt)
- + All functional parts are ground and hardened**  
High run-out and jaw change repeat accuracy

## Technical data

Description	Number of chuck jaws	Max. RPM [min <sup>-1</sup> ]	Max. clamping force [kN]	Max. torque [Nm]	Stroke/jaw [mm]
ROTA-S flex 550	3	1000	100	120	7
ROTA-S flex 700	3	800	180	220	9.7
ROTA-S flex 1000	3	500	230	280	12
ROTA-S flex 1200	3	500	270	320	12
ROTA-S flex 1400	3	400	270	350	15

## Function ROTA-S flex

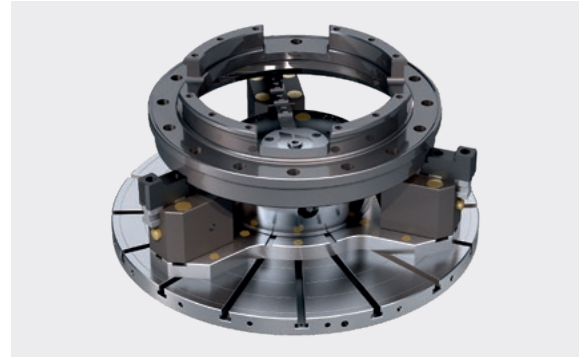
The tangentially movable wedge bars in the chuck are driven by turning the thread spindle. The wedge bars transmit the force to the base jaws, generating a jaw movement that is synchronous and radial to the rotational axis.



- 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 life span at highest precision. Even with maximum clamping force
- 3 Optimized lubrication system**  
For maximum efficiency
- 4 Mounting threads**  
For workpiece stops or cover plates
- 5 Jaw quick-change system**  
The individual jaw unlocking mechanism shortens set-up times
- 6 Base jaws with angled serration (SFG)**  
Interchangeable with ROTA-S plus and with system "F" (Forkardt)
- 7 Standard jaw interface**  
For using of standard clamping jaws from SCHUNK
- 8 Exchangeable guideway extension**  
For increasing the clamping range
- 9 Improved design which is insensitive to dirt**  
By specific sealing
- 10 Push button for jaw change**  
For shortest set-up times
- 11 Push button extension**  
For the jaw quick-change when using the guideway extension
- 12 Centering pin**  
For exact positioning on the machine table

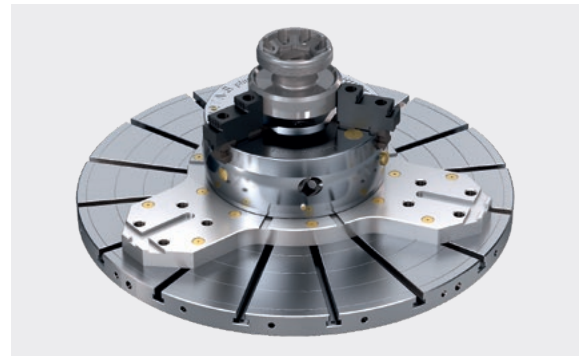
### ROTA-S flex with extended guideways

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

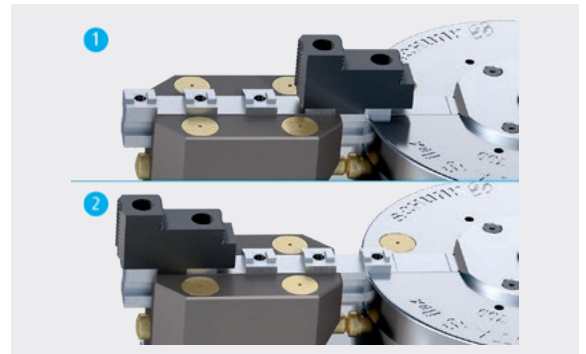
Even small workpieces can be clamped with optimal accessibility by removing the guideway extensions and using an SGF standard base jaw.



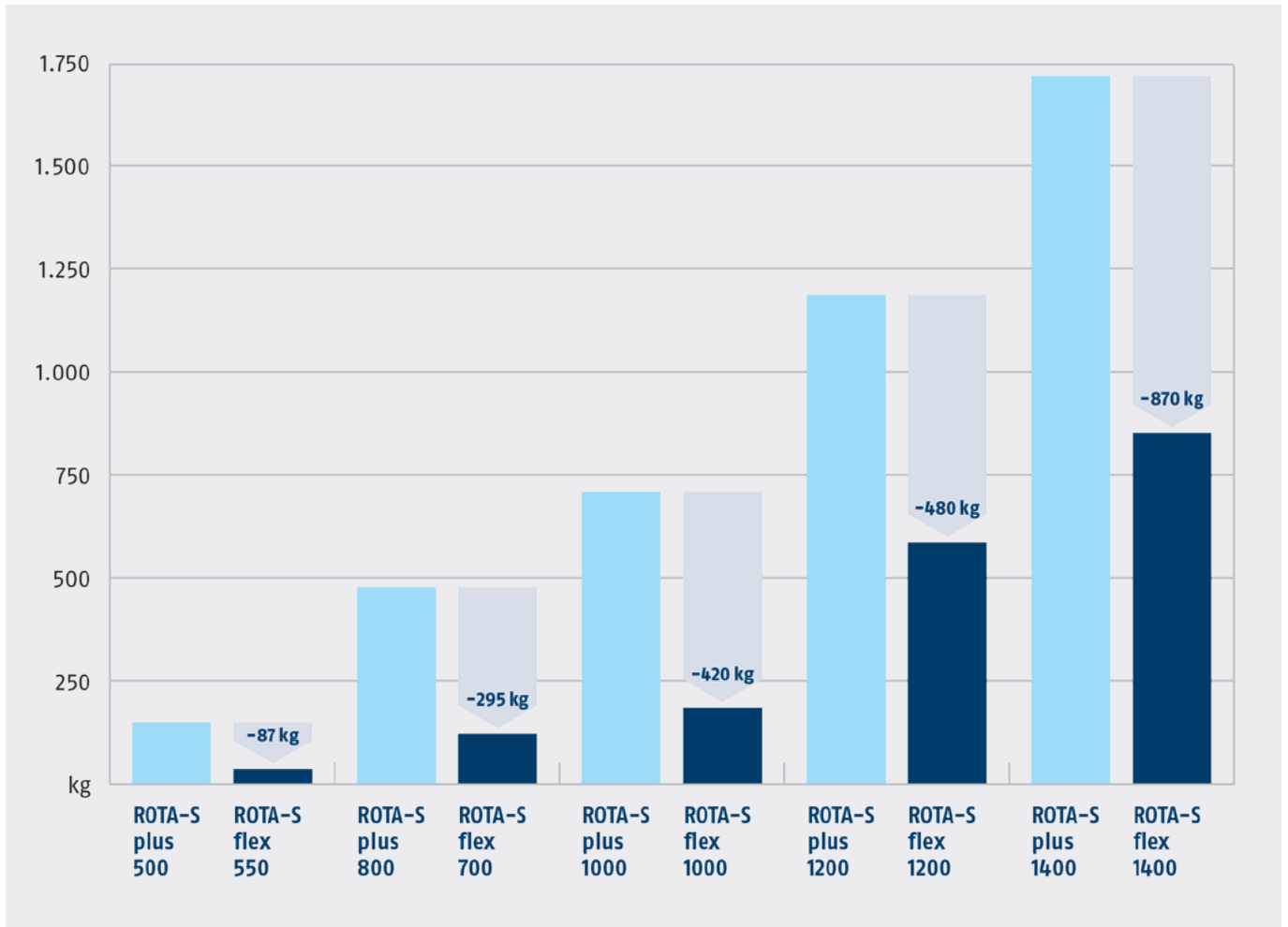
### Clamping range of the ROTA-S flex

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.

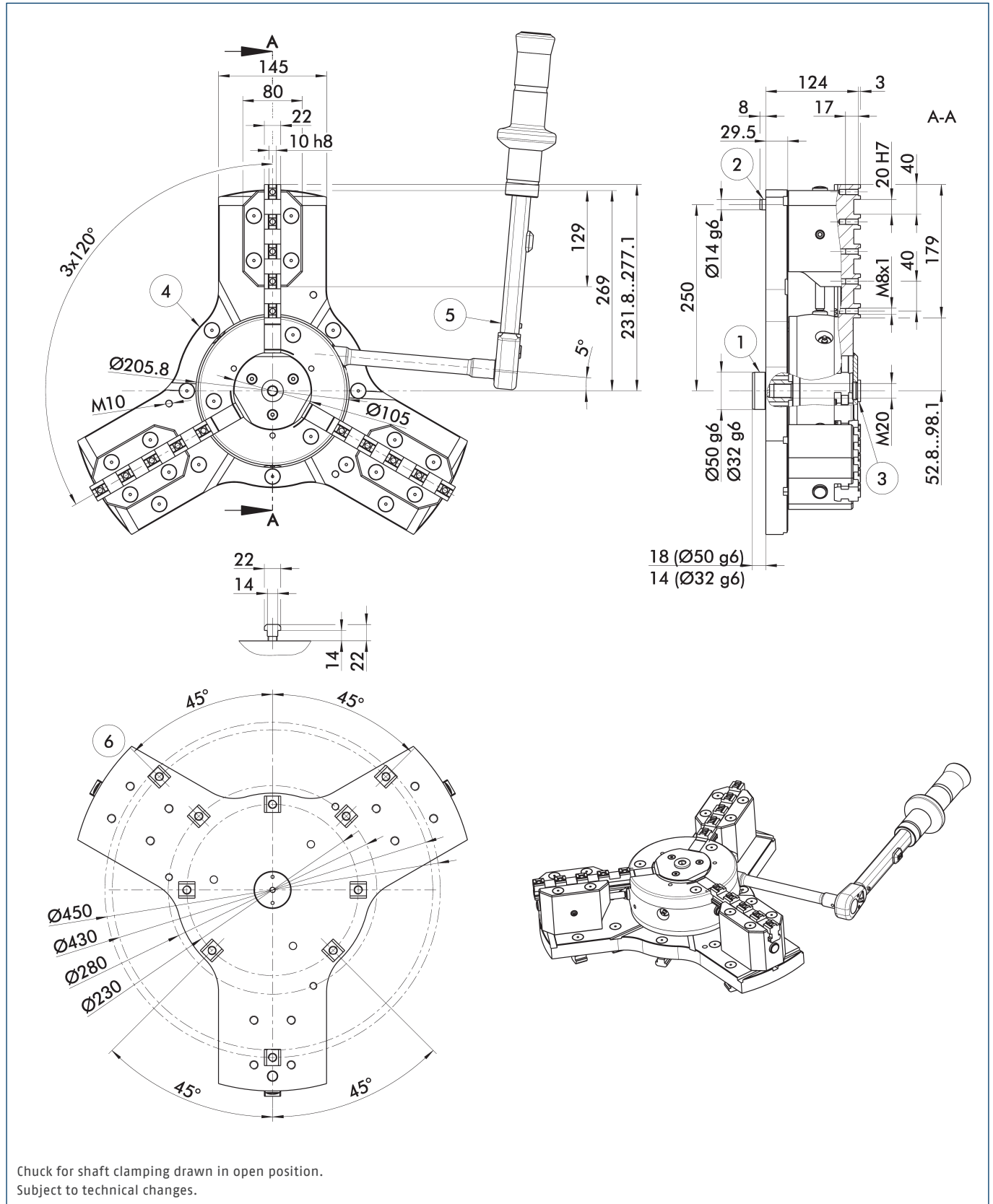
- 1 **Minimum clamping range**  
With hard stepped jaws
- 2 **Maximum clamping range**  
With hard stepped jaws



## 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.



- |   |  |
|---|--|
| ① Centering bolt for centering the clamping pallet              | ④ Water drainage grooves                             |
| ② Mounting bolt for position orientation of the clamping pallet | ⑤ Ratchet wrench                                     |
| ③ Closing screw   | ⑥ Lathe chuck suitable for a 22.5° star groove table |

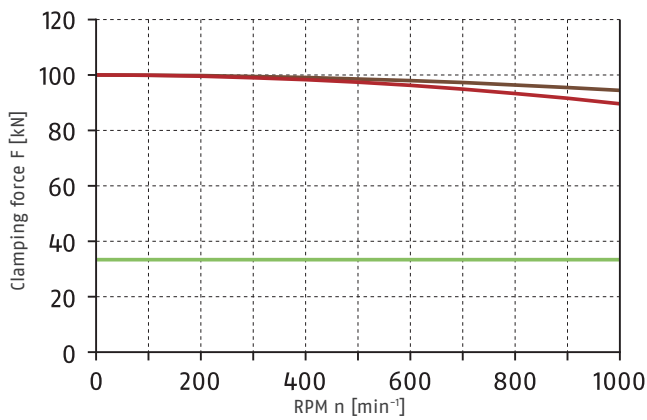
Technical data

ID	Used chuck	Max. RPM [min <sup>-1</sup> ]	Max. clamping force [kN]	Max. torque [Nm]	Stroke/jaw [mm]	Max. rotary table torque [Nm]	Weight [kg]
0814810	ROTA-S plus 2.0 200	1000	100	120	7	2000	65

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

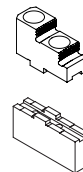
Clamping force-RPM-diagram



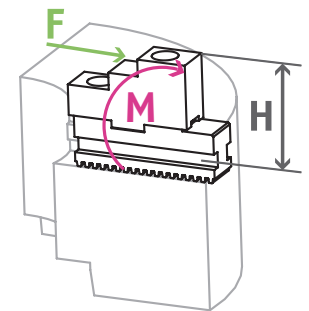
Required minimum clamping force F<sub>spmin</sub> 33%

SHF 200  
0.82 kg

SFA 200  
2 kg



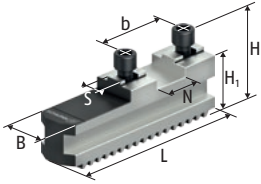
Load of base jaw guidance



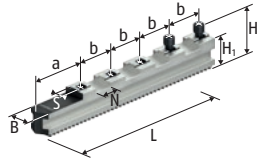
M<sub>max</sub> = 1700 Nm

## Base jaws

with angled serration



SFGF-K  
Base jaws



SFGF-L  
Base jaws

### Technical data

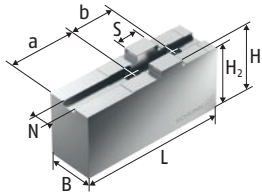
Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H1 [mm]	L [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S flex 550	SFGF-K 550	8705502	20	10	22	35	32	90	40	M8x1	0.15
ROTA-S flex 550	SFGF-L 550	8705531	20	10	22	35	32	230	40	M8x1	2.79

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

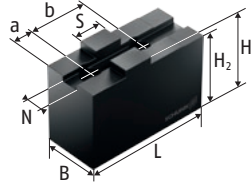


## Soft top jaws

with tongue and groove



SFA-AL  
Soft top jaws



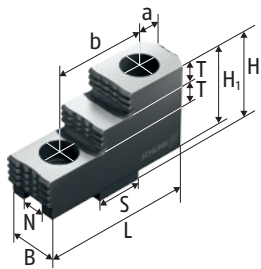
SFA  
Soft top jaws

### Technical data

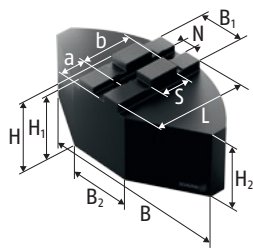
Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H2 [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S flex 550	SFA 200	0153101	10	20	22	47	43	105	25	40	M8	2
ROTA-S flex 550	SFA-AL 200	0172102	10	20	25	50	46	105	40	40	M8	0.9
ROTA-S flex 550	SFA 200-C1	0154100	10	20	30	55.5	51.5	100	13	40	M8	3.2
ROTA-S flex 550	SFA 200-C2	0154124	10	20	22	55.5	51.5	100	13	40	M8	2.2
ROTA-S flex 550	SFA 200-C3	0154128	10	20	40	40	36	70	13	40	M8	2.1
ROTA-S flex 550	SFA 200-C4	0154130	10	20	40	60	56	85	13	40	M8	4
ROTA-S flex 550	SFA 200-C5	0154132	10	20	40	80	76	95	13	40	M8	6.1

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

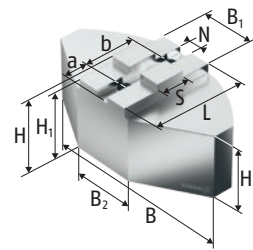
## Hard stepped top jaws, Full grip jaws with tongue and groove



SHF  
Hard stepped top jaws



SFA-SM  
Full grip jaws



SFA-SA  
Full grip jaws

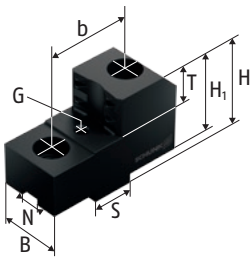
### Technical data

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 550	SFA-SA 200	0174101	10	20	140	35	58	54	48	72.5		21.75	40	M8	2.41
ROTA-S flex 550	SFA-SA 201	0174105	10	20	140	35	80	76	70	72.5		21.75	40	M8	3.47
ROTA-S flex 550	SFA-SM 200	0173101	10	20	140	35	60	56	50	70		18	40	M8	9
ROTA-S flex 550	SFA-SM 201	0173105	10	20	140	35	80	76	70	70		18	40	M8	12.5
ROTA-S flex 550	SHF 200	0155101	10	20	22		42	38		71.7	10	16	40	M8	0.82

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

## Claw jaws

with tongue and groove



SZKA  
Claw jaws

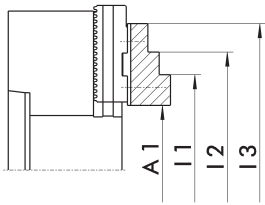
### Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	S	B	H	H1	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg]
ROTA-S flex 550	65 - 387	570	SZKA 212	0139153	10	20	26	49	45	25	M6	40	M8	1.4
ROTA-S flex 550	140 - 462	570	SZKA 213	0139154	10	20	30	49	45	25	M6	40	M8	1.3
ROTA-S flex 550	175 - 497	570	SZKA 216	0139159	10	20	30	49	45	25	M6	40	M8	1.2

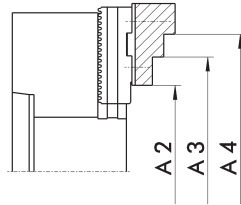
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Hard stepped top jaws

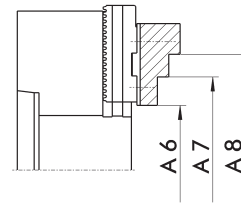
with tongue and groove



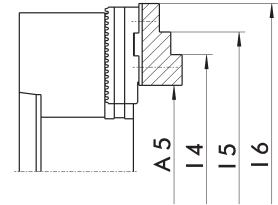
Position of base jaws II



Position of base jaws I



Position of base jaws II



Position of base jaws I

### O.D. clamping

Chuck type	Description	ID	A1 [mm]	A2 [mm]	A3 [mm]	A4 [mm]
ROTA-S flex 550	SHF 200	0155101	93 - 415	93 - 415	146 - 467	174 - 495

### I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA-S flex 550	SHF 200	0155101	158 - 479	185 - 506	237 - 559

## 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

### 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

## 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 550	IFT Set	1404235

### Measuring head adapter for large chuck

For use as an extension of the IFT measuring head for measuring the jaw clamping force of large chucks.



Suitable for	Description	ID
ROTA-S flex 550	IFT adapter set	1498512

### Torque wrench

Torque wrench for actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 550	SSH-D-1/2" 40-200	9938065

### Ratchets

Ratchet for fast actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S flex 550	SSH-K 1/2"-350	1151118

### 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 550	SAS-1 1/2"-SW12	8705487

### Centering pin

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



Suitable for	Description	ID
ROTA-S flex 550	ZTB Ø32	0814847
ROTA-S flex 550	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 550	VSD M12	40009901



**H.-D. SCHUNK GmbH & Co.  
Spanntechnik KG**

Lothringer Str. 23  
D-88512 Mengen  
Tel. +49-7572-7614-1300  
Fax +49-7572-7614-1039  
CMM@de.schunk.com  
schunk.com