



ROTA-S *plus* 2.0

**Jaw quick-change chuck with
angled serrated base jaw
interface**

Versatile useable manual lathe chuck with jaw quick-change system for jaw change in 60 seconds.

The ROTA-S plus 2.0 manual lathe chuck is specifically designed for storage solutions and conventional lathes without hydraulic or pneumatic cylinders. The jaw quick-change system makes the chucks suitable for flexible production starting from batch size 1. There is no need to rebores the jaws on the chuck. The angled jaw interface makes the manual lathe chucks compatible with the predecessor ROTA-S ROTA-S plus as well as the "F" system (Forkardt).



Advantages – Your benefits

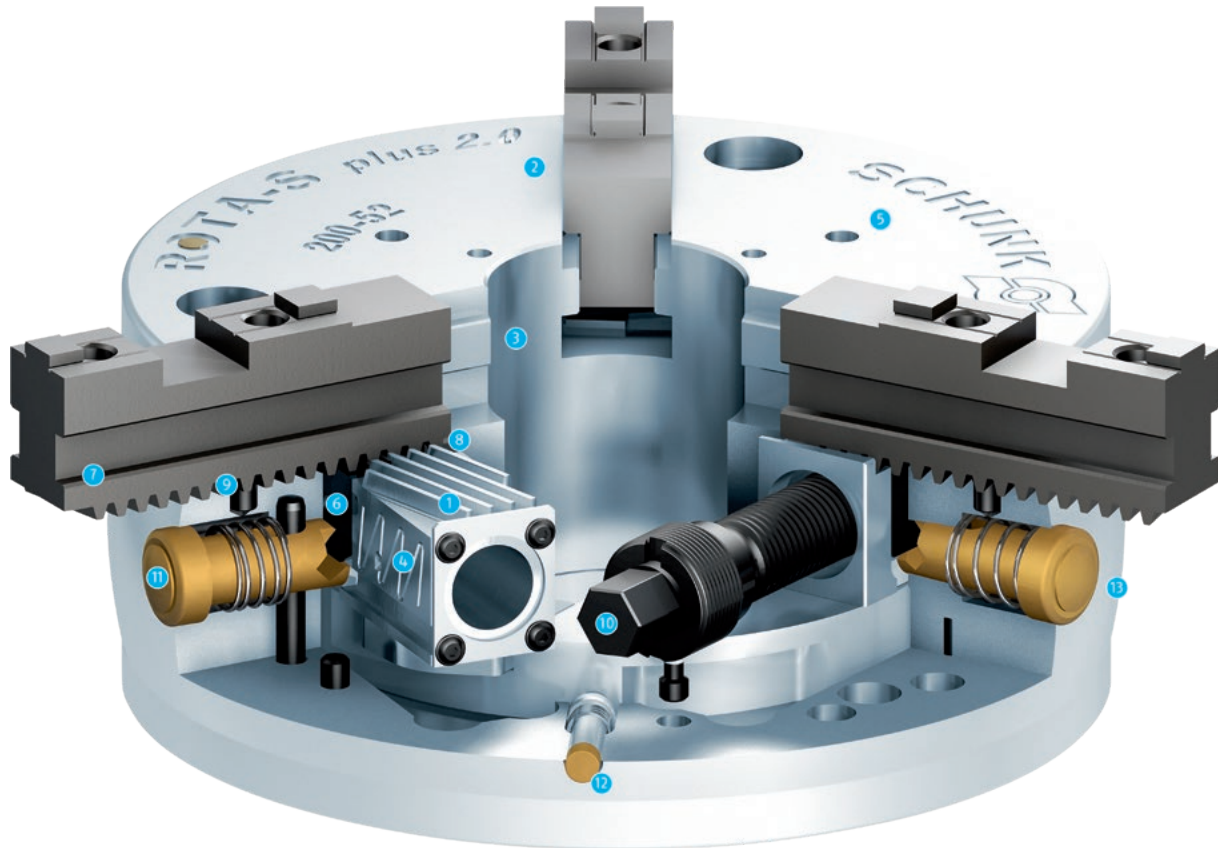
- + Convenient jaw quick-change system**
Minimizing set-up times and costs
- + Large through-hole**
Machining all standard pipe diameters
- + High efficiency of the wedge bar system**
Process-reliable clamping due to high clamping forces
- + High jaw quick-change repeat accuracy**
No reboring of already machined jaws necessary
- + Visual safety devices**
Maximum operating safety
- + Optimized lubrication system**
Consistently high clamping forces ensured
- + Modular center sleeve system**
Optimal adjustment to new clamping tasks thanks to the exchangeable center sleeves
- + Excellent clamping force/torque ratio**
Perfect use of the machine performance
- + Angled serrated base jaws SFG**
Compatible with the ROTA-S plus and "F" system (Forkardt)
- + Ergonomic, light safety spanner wrench**
Ensures easy operation
- + 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]	Through-hole [mm]
ROTA-S plus 2.0 160-42	5400	65	80	6.5	42
ROTA-S plus 2.0 200-52	4800	100	120	7	52
ROTA-S plus 2.0 250-62	4200	160	210	7.7	62
ROTA-S plus 2.0 315-92	3400	180	220	9.8	92
ROTA-S plus 400-102	2200	230	280	12	102
ROTA-S plus 500-162	1500	270	320	12	162
ROTA-S plus 630-252	1000	270	350	15	252
ROTA-S plus 800-252	1000	270	350	15	252
ROTA-S plus 1000-402	900	270	350	15	402

Function ROTA-S plus 2.0

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 Large through-hole
For machining all conventional bar diameters (optionally: with enlarged through-hole)</p> <p>4 Optimized lubrication system
For a high level of efficiency</p> <p>5 Mounting thread
For workpiece stops or cover plates</p> <p>6 Jaw quick-change system
Shortest set-up times due to individual unlocking of jaws</p> <p>7 Base jaws with diagonal serration (SFG)
Compatible with the ROTA-S plus and "F" system (Forkardt)</p> | <p>8 Locking mechanism
Ensures secure intermeshing of the base jaw serration with the wedge bar serration</p> <p>9 Plunger pin
For pre-positioning the base jaw</p> <p>10 Actuation via hexagon connection
This ensures easy operation</p> <p>11 Push button for jaw change
For shortest set-up times</p> <p>12 Indicator pin
For visual stroke monitoring of the manual lathe chuck</p> <p>13 Special shaping with "edge profile for coolant run-off"
Therefore less coolant is in the spindle bearing or machine spindle</p> |
|---|--|

Spindel with hexagon connection

The vise can be easily actuated via a standard hexagon connection using either conventional socket wrenches, extensions or torque wrenches.



Wedge bar system with wiper

Wipers at the end of the wedge bars prevent dirt and fine chips from penetrating into the lathe chuck and the chuck mechanism.



Central lubrication system

Two lubrication nipples positioned on the chuck body facilitate lubrication of all functional surfaces. The special shape of the grease grooves ensures constant lubrication of the friction surfaces. This improves the clamping behavior during operation.



Maximum operating safety

To ensure safe working, an indicator pin shows when the chuck mechanism is close to the stroke end position. As soon as the indicator pin moves outwards, the workpiece is no longer clamped correctly and machining must not be started.

1 Indicator pin



Correct jaw change

When the base jaw is fully inserted into the guideway, the slide positions the base jaw serration for the wedge bar. The base jaw holds the locking slide in the release position. The chuck can now be actuated.

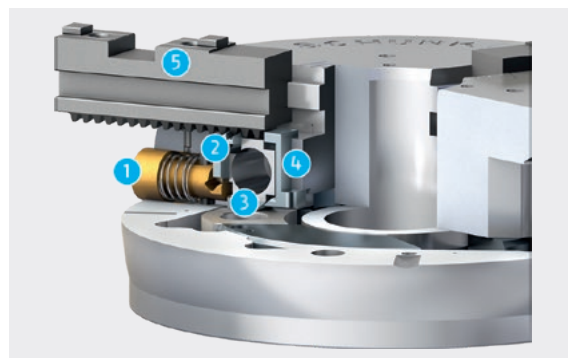
- ① Push button
- ② Slide
- ③ Traverse slide
- ④ Locking slide
- ⑤ Base jaw



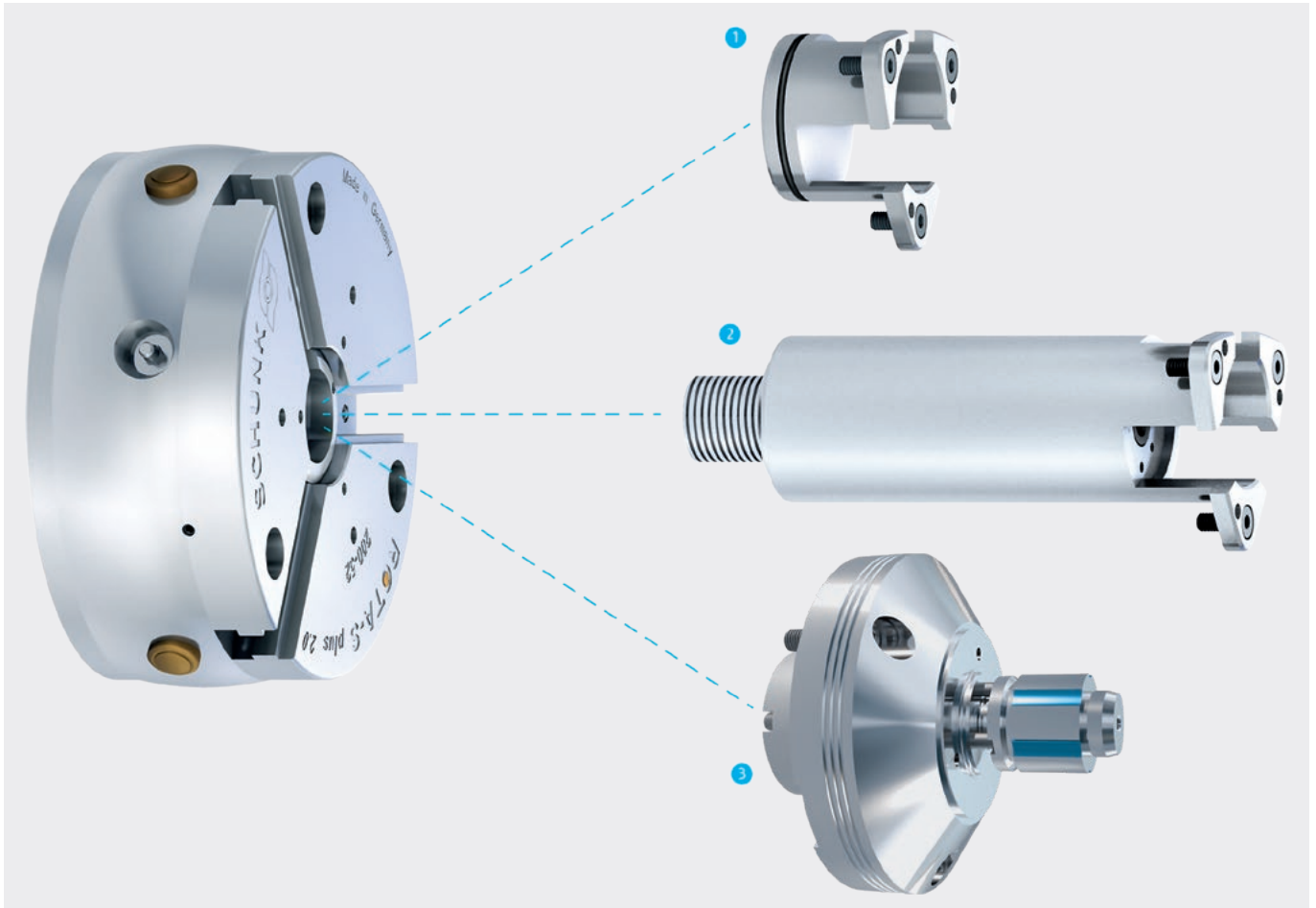
Incorrect jaw change

If the base jaw is not fully inserted into the guideway, the locking slide prevents the chuck being clamped.

- ① Push button
- ② Slide
- ③ Traverse slide
- ④ Locking slide
- ⑤ Base jaw



Modular center sleeve system



The modular center sleeve system increases flexibility for the most various applications in everyday life.

1 Closed center sleeve

The closed center sleeve prevents penetration of chips and coolant into the through-hole.

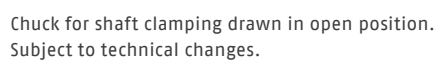
2 Adjustable stop in the center sleeve

The adjustable stop ensures that all workpieces are stopped with high repeat accuracy in the same selectable position. This makes handling quick and easy.

3 Expansion arbor

To clamp small inner clamping diameters, the ROTA-S plus 2.0 in sizes $\varnothing 200$ mm and $\varnothing 250$ mm can be retrofitted with an expansion arbor. However, a taper must be ground into the chuck body in order to do this.

① Modular center sleeve system up to size 315 possible.



Technical data

Spindle type	Spindle size	ID	Max. rotational speed [min ⁻¹]	Max. clamping force [kN]	Max. torque [Nm]	Weight [kg]
-	Z145	0819100	5400	40	55	8.5

Scope of delivery

Chuck, 1 set of base jaws with screws, chuck mounting screws, actuation key and operating manual

Note

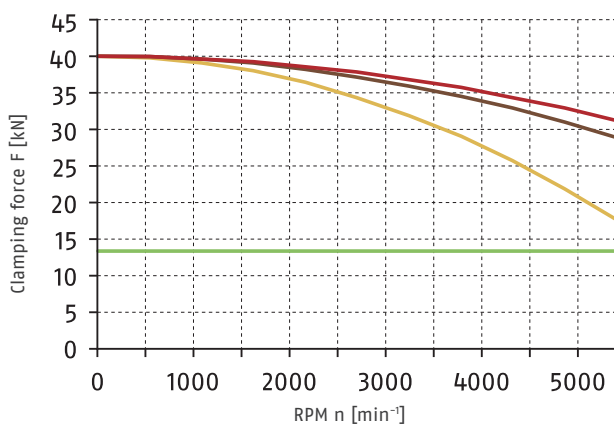
Enlargement of the through-hole

Enlargement of the through-hole to a maximum $\varnothing$ 45 mm available upon request.

Further technical data

Chuck type	Through-hole [mm]	Stroke/jaw [mm]	Tooth pitch [mm]	Center jaw height [mm]
ROTA-S plus 2.0 160-42/2	42	6.5	4.8	42.5

Clamping force-RPM-diagram



Required minimum clamping force F_{spmin} 33%

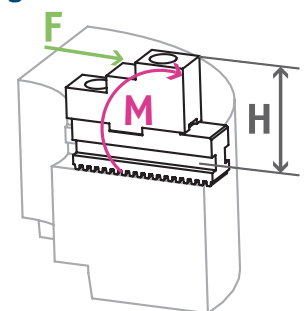
SHF 160
0.6 kg

STF 160
1.1 kg

SFA 160
1.2 kg

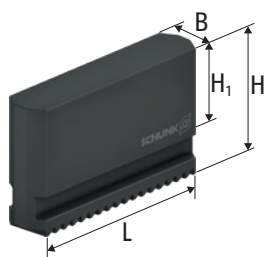


Load of base jaw guidance

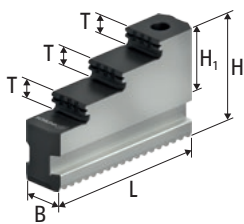


$$M_{max} = 567 \text{ Nm}$$

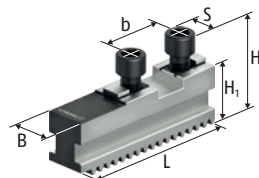
Base jaws, Hard stepped block jaws, Soft monoblock jaws with angled serration



SMB
Soft monoblock jaws



STF
Hard stepped block jaws



SFG
Base jaws

Technical data

Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H1 [mm]	L [mm]	T [mm]	b [mm]	Screws	m/SET [kg]
ROTA-S plus 2.0 160-42/2	SMB 160	0163100			20	45	24	79				1.5
ROTA-S plus 2.0 160-42/2	SMB-H 160	0163200			20	60	39	79				2.0
ROTA-S plus 2.0 160-42/2	SFG 160	0157100	18	8	20	29.5	27	74		32	M8x1	0.8
ROTA-S plus 2.0 160-42/2	SFGK 160	0157500	18	8	20	29.5	27	64		32	M8x1	0.7
ROTA-S plus 2.0 160-42/2	STF 160	0161100			20	45	24	79.1	7.5			1.1

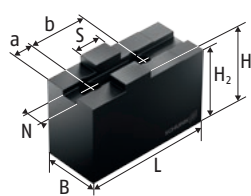
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Soft top jaws

with tongue and groove



SFA-AL
Soft top jaws



SFA
Soft top jaws

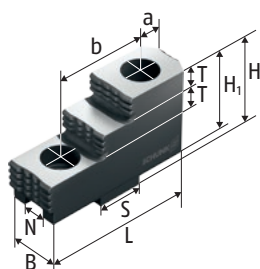
Technical data

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 plus 2.0 160-42/2	SFA 160	0153100	8	18	20	40	36	85	35	32	M8	1.2
ROTA-S plus 2.0 160-42/2	SFA-AL 160	0172100	8	18	25	50	46	85	35	32	M8	0.7
ROTA-S plus 2.0 160-42/2	SFA 160-C1	0154121	8	18	30	55.5	51.5	85	41	32	M8	2.7
ROTA-S plus 2.0 160-42/2	SFA 160-C2	0154127	8	18	35	40	36	63	19	32	M8	1.6
ROTA-S plus 2.0 160-42/2	SFA 160-C3	0154131	8	18	40	60	56	70	26	32	M8	3.3
ROTA-S plus 2.0 160-42/2	SFA 160-C4	0154133	8	18	40	80	76	85	41	32	M8	5.6

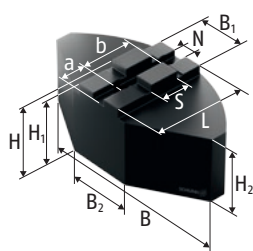
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

Hard stepped top jaws, Full grip jaws

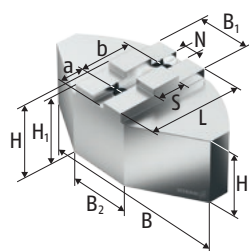
with tongue and groove



SHF
Hard stepped top jaws



SFA-SM
Full grip jaws



SFA-SA
Full grip jaws

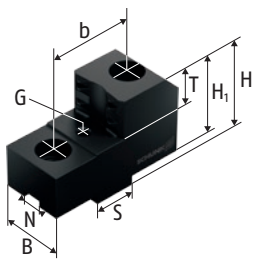
Technical data

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 plus 2.0 160-42/2	SFA-SA 160	0174100	8	18	120	35	50	46	40	59.5		15.75	32	M8	1.4
ROTA-S plus 2.0 160-42/2	SFA-SM 160	0173100	8	18	120	30	50	46	40	60		16.5	32	M8	4.8
ROTA-S plus 2.0 160-42/2	SHF 160	0155100	8	18	20		36.5	32.5		63	7.5	16.8	32	M8	0.6

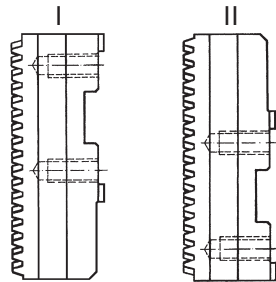
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on schunk.com

Claw jaws

with tongue and groove



SZKA
Claw jaws



Position of base jaws

Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Position of base jaws	Description	ID	N	S	B	H	H1	L	T	G	b	Screws	m/SET
	[mm]	[mm]				[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg]
ROTA-S plus 2.0 160-42/2	89 - 135	220	I	SZKA 163	0165146	8	18	40	44	40	60	20	M6	32	M8	1.5
ROTA-S plus 2.0 160-42/2	140 - 186	250	I	SZKA 167	0165150	8	18	30	44	40	76	20	M6	32	M8	1.3
ROTA-S plus 2.0 160-42/2	42 - 87	210	I	SZKA 169	0165174	8	18	26	44	40	71	20	M6	32	M8	1.0
ROTA-S plus 2.0 160-42/2	54 - 99	209	II	SZKA 163	0165146	8	18	40	44	40	60	20	M6	32	M8	1.5
ROTA-S plus 2.0 160-42/2	104 - 150	215	II	SZKA 167	0165150	8	18	30	44	40	76	20	M6	32	M8	1.3
ROTA-S plus 2.0 160-42/2	26 - 52	209	II	SZKA 169	0165174	8	18	26	44	40	71	20	M6	32	M8	1.0

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

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 plus 2.0 160-42/2	IFT Set	1404235

Maintenance kit

Consisting of a grease gun, LINOMAX plus grease cartridge, chip protection, and sealing plug.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	WTS-S 160	0899014

Torque wrench

Torque wrench for actuation of SCHUNK manual lathe chucks.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	SSH-D-1/2" 40-200	9938065

Hexagon actuation wrench

Spanner wrench for manual actuation of the SCHUNK manual lathe chucks with hexagonal connections.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	SSH-SK SW12-160	1330869
ROTA-S plus 2.0 160-42/2	SSH-SL SW12-260	8704921

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

Consol plate

Standard version for conversion of all ROTA-S plus 2.0 manual lathe chucks for stationary applications. The sizes 400 to 630 are available on request.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	KSL 160	0814270

Sealing plug

For closing the through-hole on manual lathe chucks ROTA-S plus 2.0, ROTA-S plus and ROTA-G.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	VST Ø42	8702833

Chip protection

For better protection against the penetration of chips for the manual lathe chucks ROTA-S plus 2.0, ROTA-S plus and ROTA-G.



Suitable for	Description	ID
ROTA-S plus 2.0 160-42/2	SPS 160/200	9966639

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



**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