



ROTA NCA

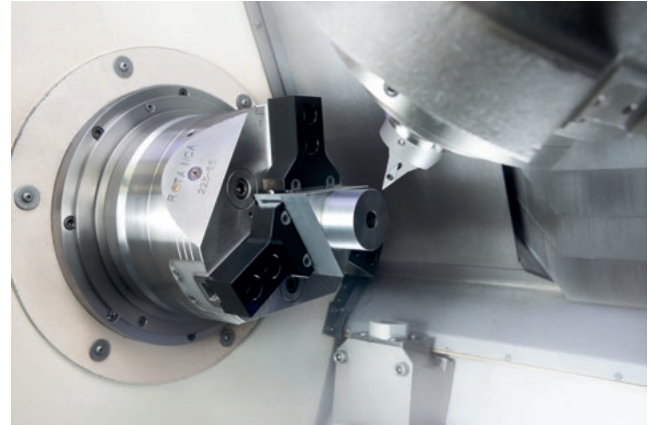
Sealed power lathe chuck for
modern turn/mill centers

Hand in hand for tomorrow

Power lathe chuck with sophisticated sealing system for permanent lubrication and constant clamping forces

Field of application

Constant clamping forces, minimum maintenance effort, as well as a high energy efficiency and productivity are ensured with the versatile ROTA NCA power lathe chuck. The geometry of the chuck body makes ensures a good accessibility of the tools, meaning that the ROTA NCA can be also used on modern turn/mill centers.



Advantages – Your benefits

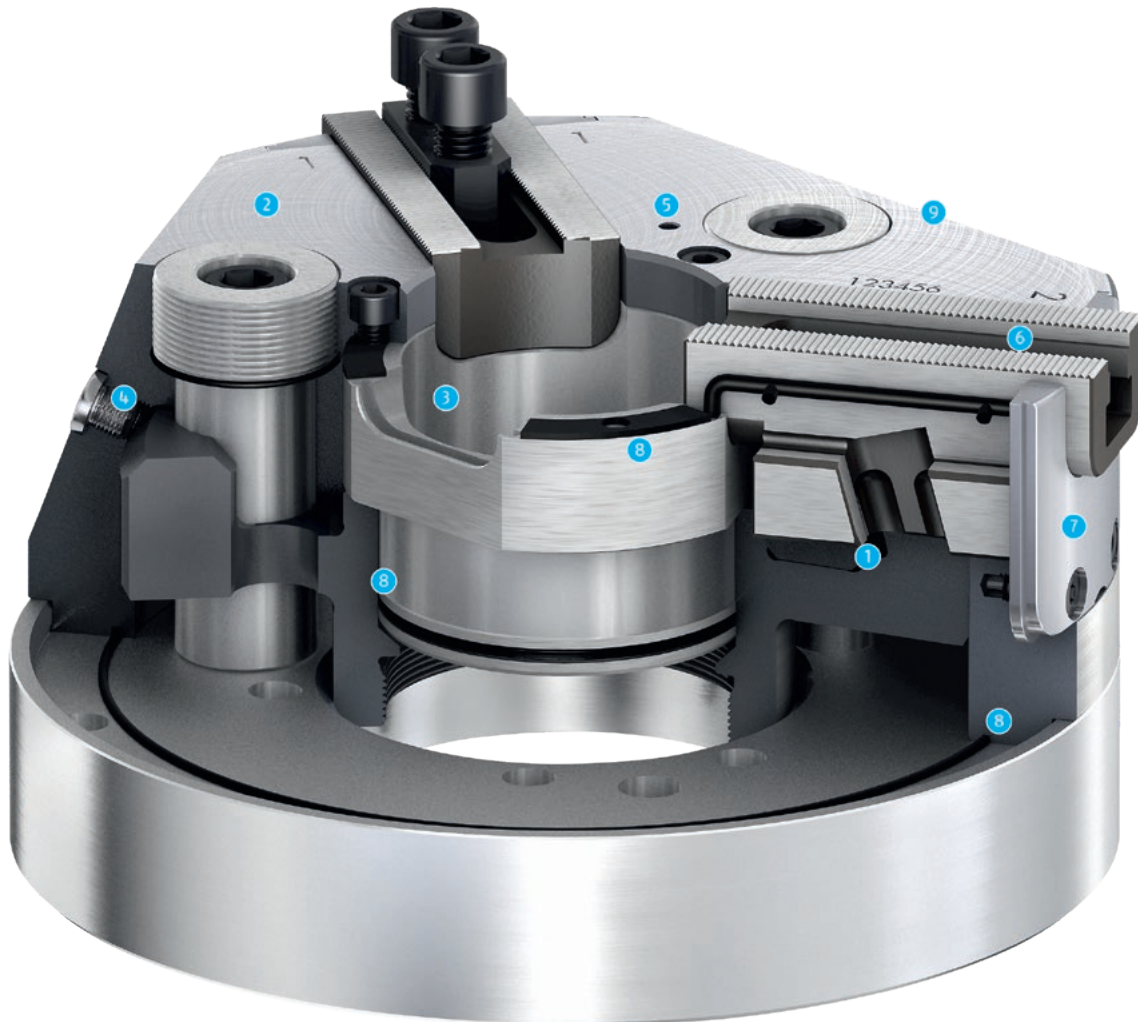
- + Sealed power lathe chuck**
For significantly longer maintenance intervals
- + Permanent grease lubrication**
For consistently high clamping forces
- + Precision wedge-hook power lathe chuck for highest quality requirements**
Allows excellent machining processes
- + High efficiency of the wedge hook system**
Process-reliable clamping due to high clamping forces
- + Low chuck weight**
Fast acceleration and deceleration operations shorten the cycle times
- + Base jaws with fine serration 1.5 mm x 60° and 1/16" x 90° as standard**
High flexibility in the range of top jaws
- + All functional parts are ground and hardened**
Ensures a long life span

Technical data

Description	Max. RPM [min ⁻¹]	Max. clamping force [kN]	Max. actuating force [kN]	Stroke/jaw [mm]	Piston stroke [mm]	Through-hole [mm]
ROTA NCA 160-32	5500	45	20	4	15	32
ROTA NCA 200-52	5000	72	32	5.3	20	52
ROTA NCA 225-66	5000	100	45	5.3	20	66
ROTA NCA 280-86	4000	140	63	5.3	20	86
ROTA NCA 330-104	3500	160	72	5.3	20	104

Function of ROTA NCA

The axially movable piston transfers the force to the base jaw and generates a radial jaw movement synchronized with the rotational axis. The innovative sealing system located on the base jaws, prevents grease from being rinsed out, and the clamping force from being lost gradually.



- ❶ **Wedge hook drive in ring piston design**
Offers constantly high clamping forces in operation
- ❷ **Hardened and extremely rigid base body**
Therefore a longer life span at highest precision. Even with maximum clamping force
- ❸ **Large through-hole**
For machining of all commercially available raw pipe material diameters
- ❹ **Ventilation hole**
To drain off excess grease
- ❺ **Mounting threads**
For workpiece stops
- ❻ **Base jaw serration**
Available in inch or metric sizes
- ❼ **Cover**
Serves to seal the lathe chuck and additionally as base jaw safety feature
- ❽ **Sealing of the lathe chuck**
For significantly longer maintenance intervals
- ❾ **Weight-optimized design**
For great economy in daily use

Innovative sealing system

An innovative sealing system – consisting of a specially designed gasket – prevents grease from being rinsed out during machining. This in turn prevents a gradual loss of clamping force. Advantage: The chuck is additionally protected against the penetration of dirt and chips.

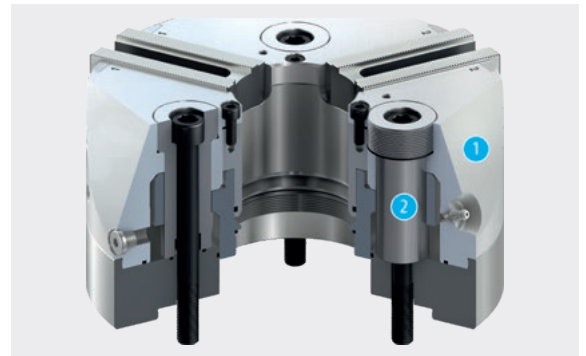
- 1 Gasket



Inlays at the mounting holes

In order to further increase the tightness and stiffness of the chuck, special inlays are installed in the area of the fastening screws.

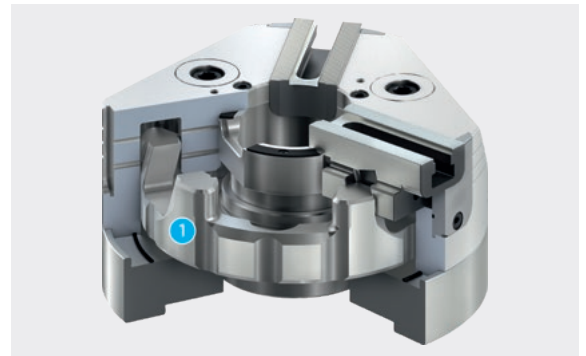
- 1 Chuck body
- 2 Inlay



Long and precise piston guidance

For high clamping repeatability and long service life. All functional components used for force transmission are hardened and ground.

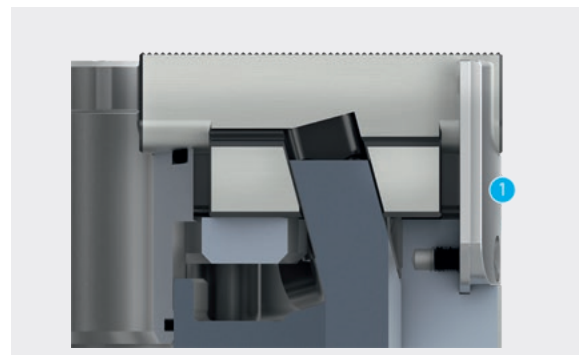
- 1 Ring piston



Base jaw safety feature

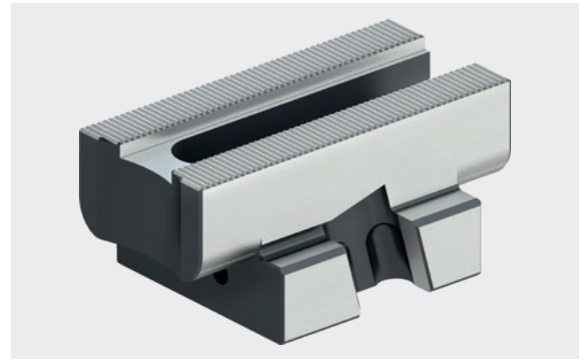
The cover elements form the end piece of the base jaw guidance. Even in the event of a crash it is avoided e.g. in the case of a component failure that the base jaws will be ejected out of the chuck.

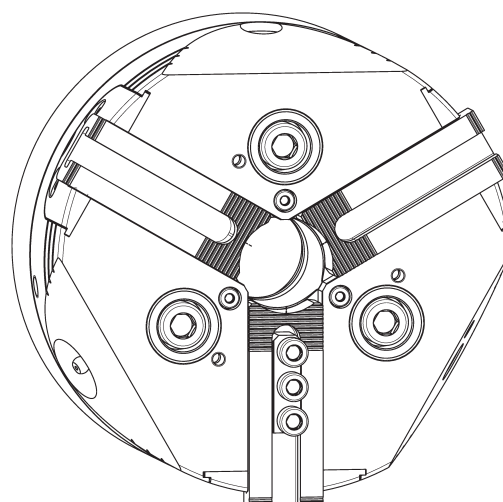
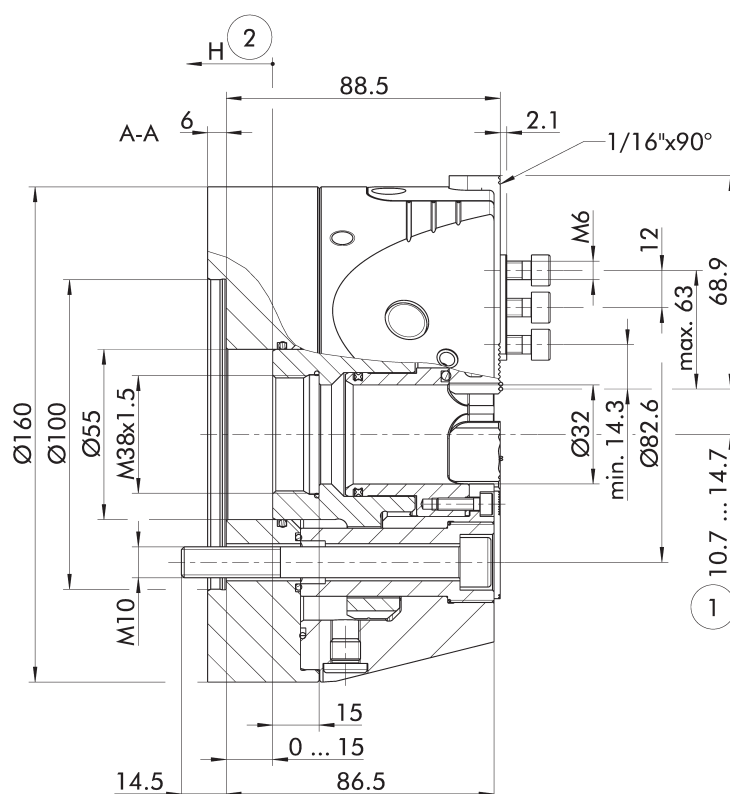
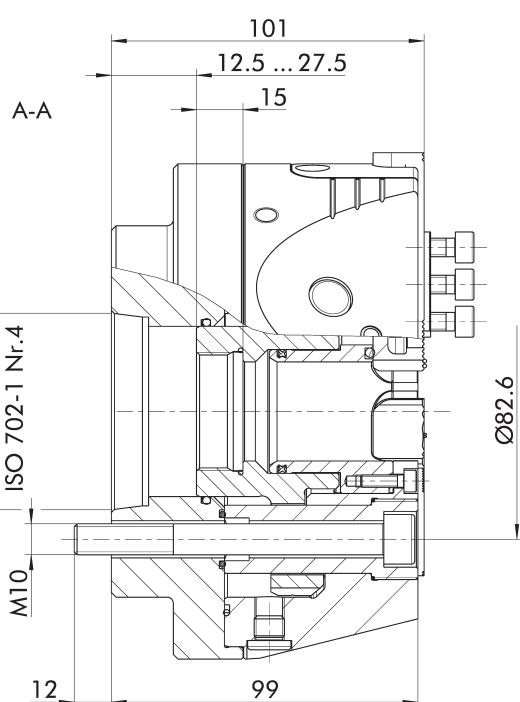
- 1 Cover



Absolute flexibility of the base jaw

Select between two standard jaw interfaces 1/16" x 90° or 1.5 mm x 60° with the benefit of being able to continue using your existing top jaws on the new SCHUNK lathe chuck.





② Piston stroke direction

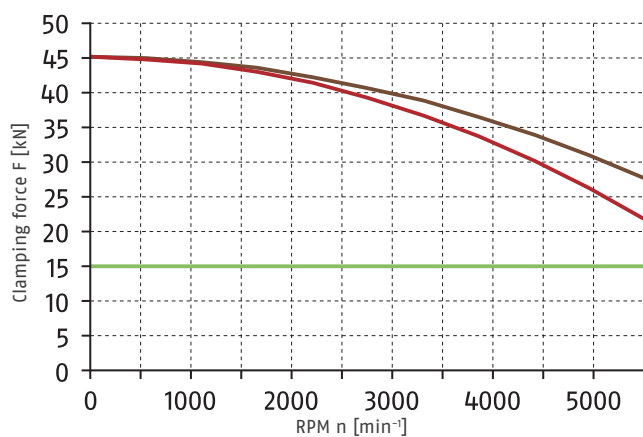
Technical data

Spindle type	Spindle size	ID	Serration	Max. RPM [min ⁻¹]	Max. clamping force [kN]	Max. actuating force [kN]	Stroke/jaw [mm]	Piston stroke (H) [mm]	Moment of inertia [kgm ²]	Weight [kg]
ISO 702-4	Nr. 4 (Z100)	1342599	1/16" x 90°	5500	45	20	4	15	0.04	11.5
ISO 702-1	Nr. 4	1342600	1/16" x 90°	5500	45	20	4	15	0.04	11

Scope of delivery

Chuck, T-nuts with screws, chuck mounting screws, and operating manual

Clamping force-RPM-diagram



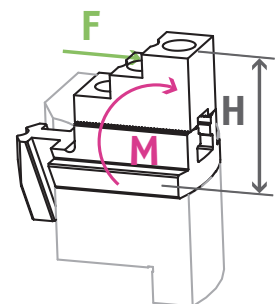
Required minimum clamping force F_{spmin} 33%

SHB-FR 130
0.62 kg

SWB-FR 132
1 kg



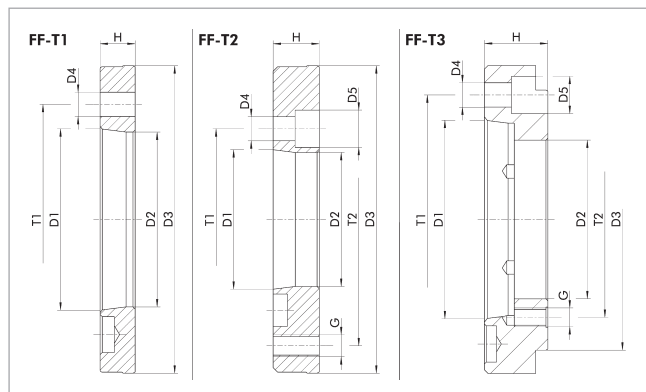
Load of base jaw guidance



$$M_{\max} = 323 \text{ Nm}$$

Adapter plates

Z-mount on short taper ISO 702-1



Technical data

Description	Adapter plate type	ID	Suitable for	D1	D2	D3	D4	D5	G	H	T1	T2
					[mm]		[mm]	[mm]		[mm]	[mm]	[mm]
FF-T1 Z100-A4	FF-T1	0803010	ROTA NCA 160-32	Nr. 4	61	Z100	11 (6 x 60°)			12	82.6	
FF-T3 Z100-A5	FF-T3	0801008	ROTA NCA 160-32	Nr. 5	66	Z100	11 (6 x 60°)	17	M10 (6 x 60°)	30	104.8	82.6

Direct adapter plates FF-T1

Direct adapter plates are used if the spindle mounting bolt circle has the same size as the lathe chuck mounting bolt circle. The adapter plate has to be mounted on to the spindle together with the lathe chuck. The adapter plate is preassembled on the lathe chuck.

Reduction adapter plates FF-T2

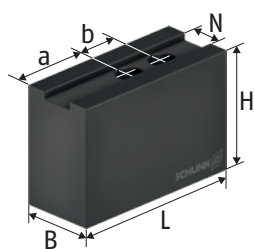
Reduction adapter plates are used if the mounting bolt circle of the spindle is smaller than the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Expansion adapter plates FF-T3

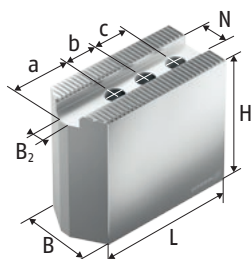
Expansion adapter plates are used if the mounting bolt circle of the spindle is larger than the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Soft top jaws

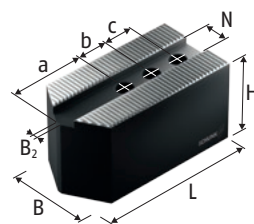
with fine serration 90°



SWB-FR
Soft top jaws



FR-AL
Soft top jaws



SWB-FR
Soft top jaws

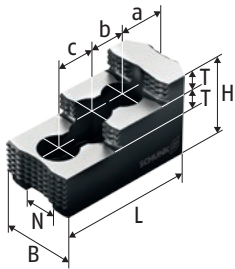
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	c [mm]	Screws	m/SET [kg]
ROTA NCA 160-32	FR-AL 130	0120600	10	25	45	53	20	12	12	M6	0.4
ROTA NCA 160-32	SWB-FR 132	0132141	10	22	47	53	20	12	12	M6	1.0
ROTA NCA 160-32	SWB-FR 130	0120400	10	25	30	55.5	20.5	12	12	M6	0.8
ROTA NCA 160-32	SWB-FR 133	0120410	10	32	32	62	29	12	12	M6	1.2

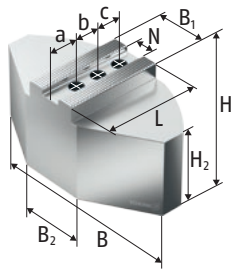
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

Hard stepped top jaws, Full grip jaws

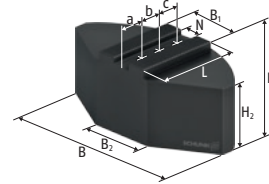
with fine serration 90°



SHB-FR
Hard stepped top jaws



FR-SA
Full grip jaws



FR-SM
Full grip jaws

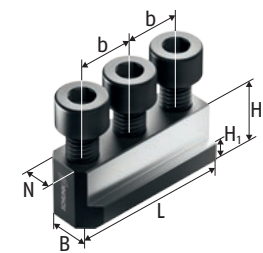
Technical data

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 NCA 160-32	FR-SA 130	0120650	10	100	30	48	43	47.4		15	12	12	M6	1.3
ROTA NCA 160-32	FR-SM 130	0120700	10	100	30	40	35	50		14	12	12	M6	3.0
ROTA NCA 160-32	SHB-FR 130	0121109	10	26		37.5		58	10	11.6	12	12	M6	0.6

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T-nut

with fine serration 90°



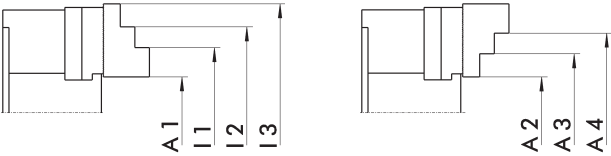
NK
T-nut

Chuck type	Description	ID	H	H1	b	G	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]			[Nm]
ROTA NCA 160-32	NK 60	0147104	13.7	5.5	12	M6	M6 x 18	16

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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 NCA 160-32	SHB-FR 130	0121109	9 - 60	7 - 60	57 - 94	91 - 146

I.D. clamping

Chuck type	Description	ID	I1 [mm]
ROTA NCA 160-32	SHB-FR 130	0121109	42 - 79

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 NCA 160-32	IFT Set	1404235



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