



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

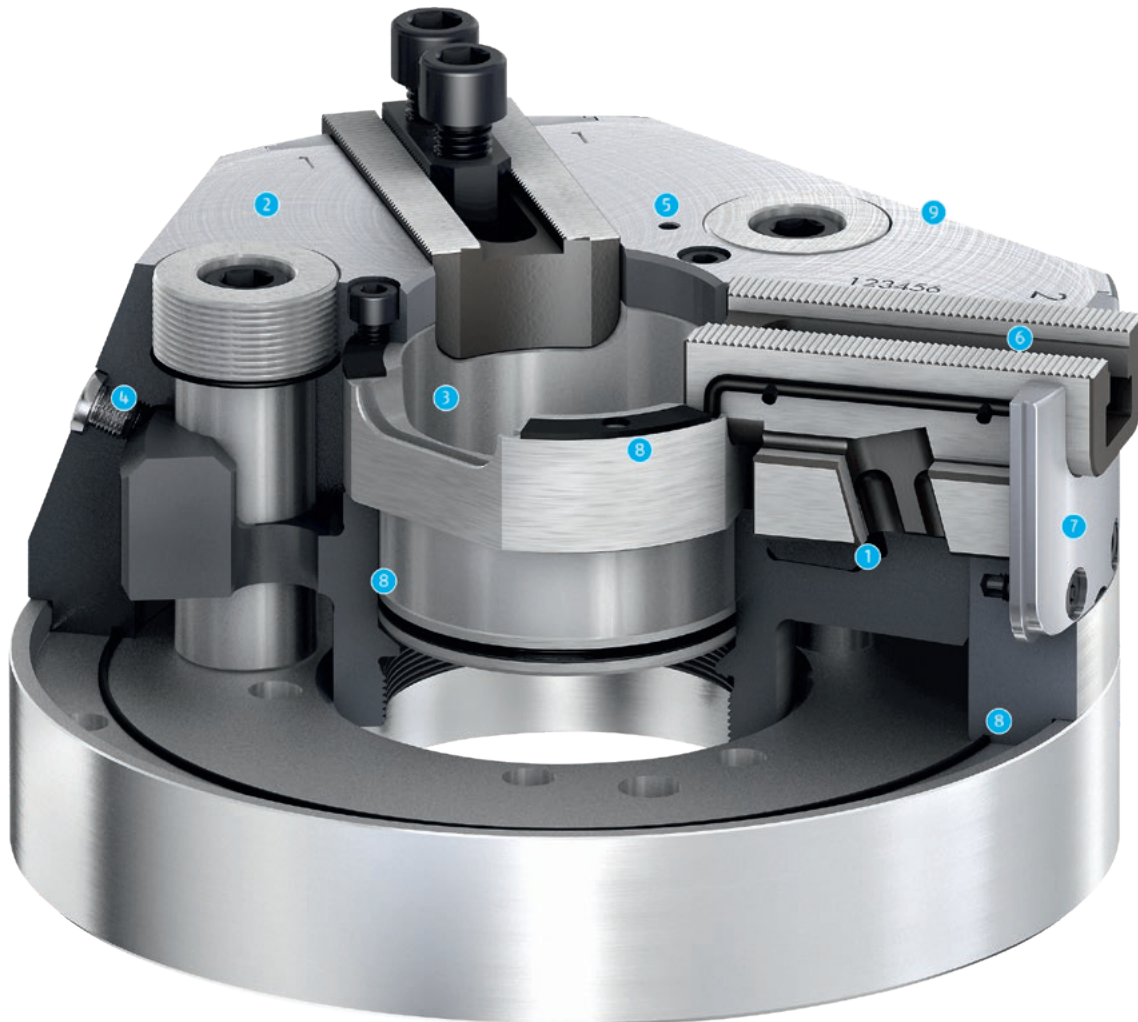
- + Sealed power lathe chuck**
For significantly longer maintenance intervals
- + Permanent grease lubrication**
For consistently high clamping forces
- + Precision wedge-hook power lathe chuck for highest quality requirements**
Allows excellent machining processes
- + High efficiency of the wedge hook 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.



- 1 Wedge hook drive in ring piston design**
Offers constantly high clamping forces in operation
- 2 Hardened and extremely rigid base body**
Therefore a longer life span at highest precision. Even with maximum clamping force
- 3 Large through-hole**
For machining of all commercially available raw pipe material diameters
- 4 Ventilation hole**
To drain off excess grease
- 5 Mounting threads**
For workpiece stops
- 6 Base jaw serration**
Available in inch or metric sizes
- 7 Cover**
Serves to seal the lathe chuck and additionally as base jaw safety feature
- 8 Sealing of the lathe chuck**
For significantly longer maintenance intervals
- 9 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

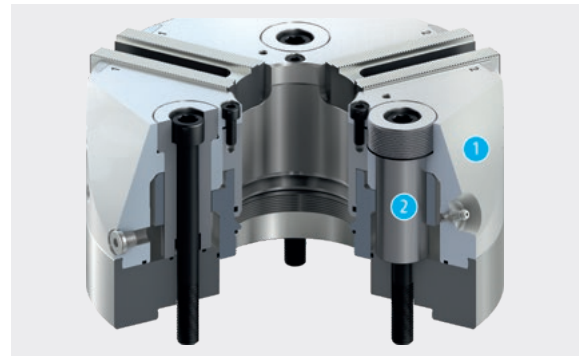


Inlays at the mounting holes

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

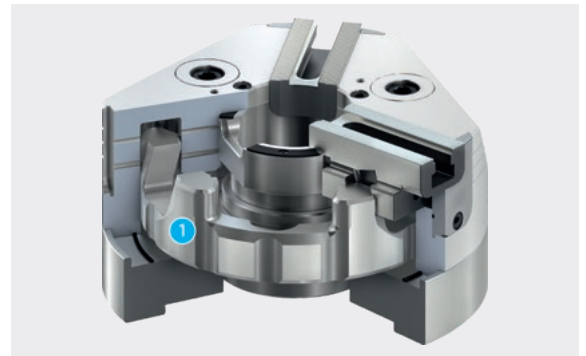
② Inlay



Long and precise piston guidance

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

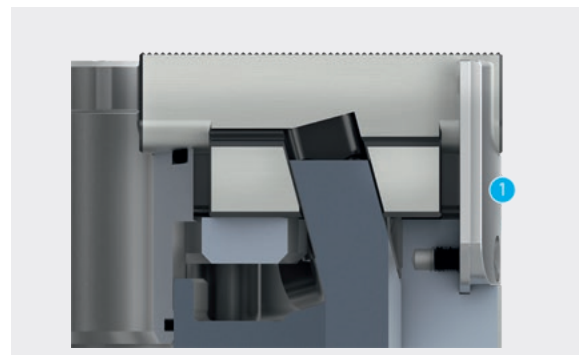
① Ring piston



Base jaw safety feature

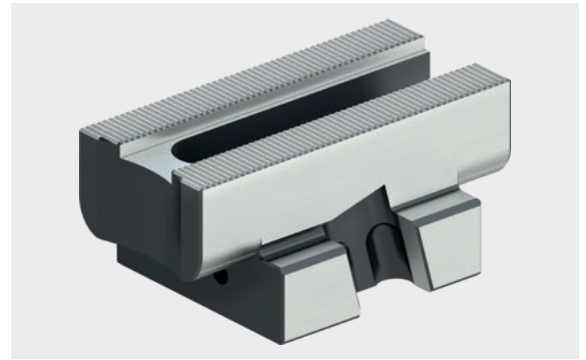
The cover elements form the end piece of the base jaw guidance. Even in the event of a crash it is avoided e.g. in the case of a component failure that the base jaws will be ejected out of the chuck.

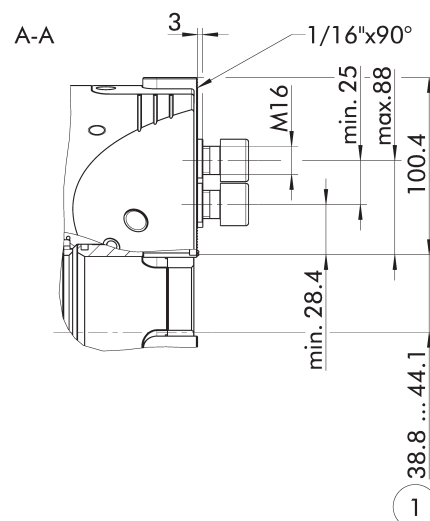
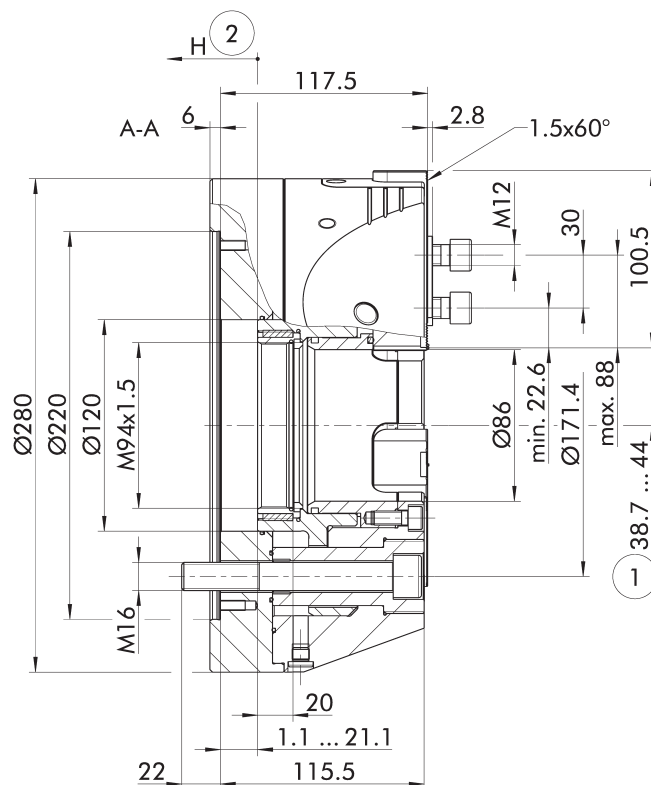
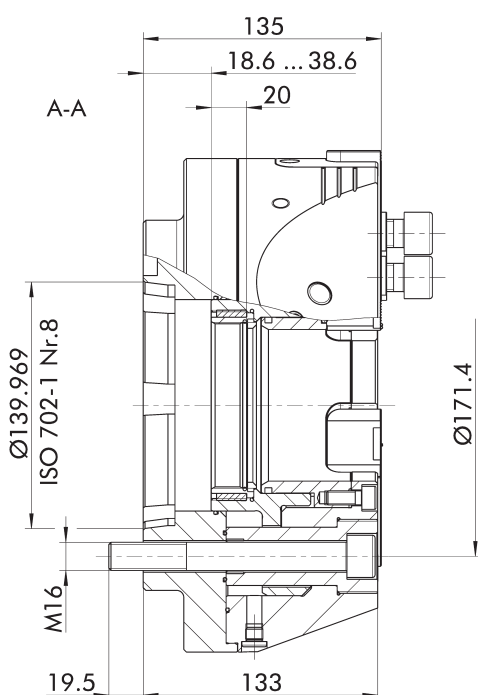
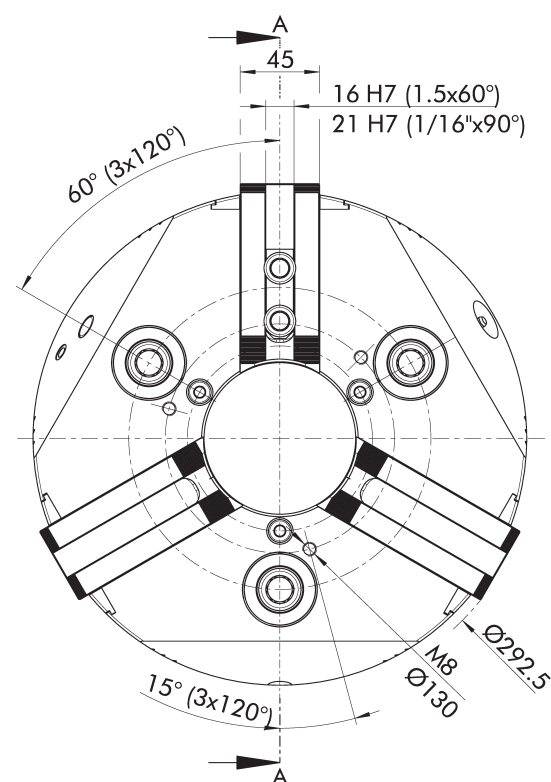
① Cover



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.





Chuck for shaft clamping drawn in open position.
Subject to technical changes.

① Distance to center of first tooth

② Piston stroke direction

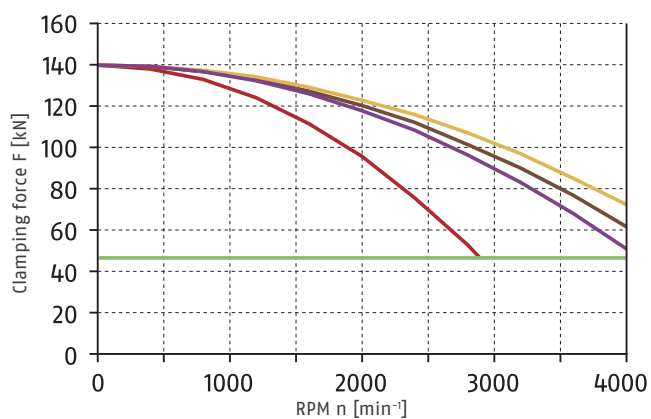
Technical data

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. 8 (Z220)	1307917	1/16" x 90°	4000	140	63	5.3	20	0.47	41.9
ISO 702-1	Nr. 8	1320182	1/16" x 90°	4000	140	63	5.3	20	0.46	43
ISO 702-4	Nr. 8 (Z220)	1320183	1.5 mm x 60°	4000	140	63	5.3	20	0.47	42.7
ISO 702-1	Nr. 8	1320184	1.5 mm x 60°	4000	140	63	5.3	20	0.46	43

Scope of delivery

Chuck, T-nuts with screws, chuck mounting screws, mounting wrench for turnable threaded ring, eye bolt, and operating manual

Clamping force-RPM-diagram



Required minimum clamping force F_{spmin} 33%

SHB 250
3.5 kg



SWB 250
9.2 kg



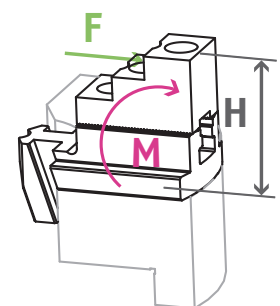
SHB-J 100
2.8 kg



KM-WB 110
3.8 kg



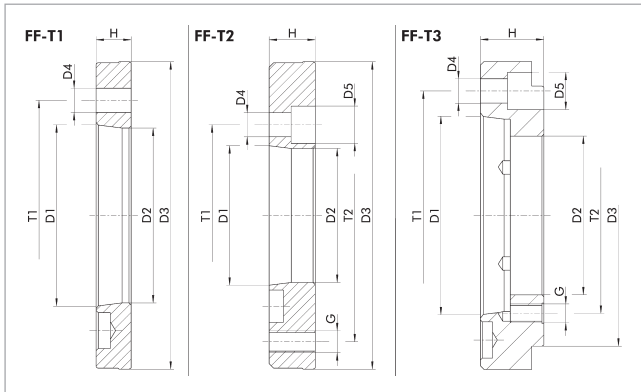
Load of base jaw guidance



$$M_{max} = 2380 \text{ Nm}$$

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-T2 Z220-A5	FF-T2	0805002	ROTA NCA 280-86	Nr. 5	79.6	Z220	11 (6 x 60°)	17	M16 (6 x 60°) M16 (2 x 180°)	28	104.8	171.4
FF-T2 Z220-A6	FF-T2	0805003	ROTA NCA 280-86	Nr. 6	103.2	Z220	13 (6 x 60°)	20	M16 (6 x 60°) M16 (2 x 180°)	28	133.4	171.4
FF-T1 Z220-A8	FF-T1	0803002	ROTA NCA 280-86	Nr. 8	136.2	Z220	17 (6 x 60°) 17 (2 x 180°)			19	171.4	
FF-T3 Z220-A11	FF-T3	0803003	ROTA NCA 280-86	Nr. 11	130	Z220	21 (6 x 60°)	32	M16 (12 x 30°)	50	235	171.4

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

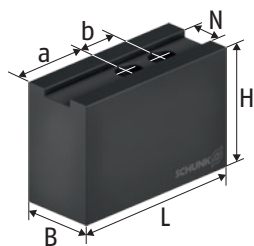
Reduction adapter plates are used if the mounting bolt circle of the spindle is smaller than the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Expansion adapter plates FF-T3

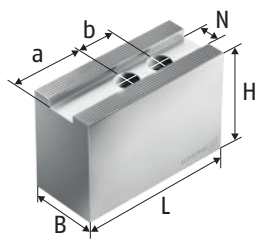
Expansion adapter plates are used if the mounting bolt circle of the spindle is larger than the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Soft top jaws

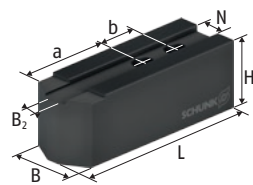
with fine serration 60°



KM-WB
Soft top jaws



KM-WBAL
Soft top jaws



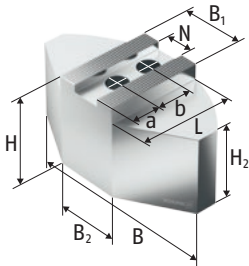
KM-WBL
Soft top jaws

Technical data

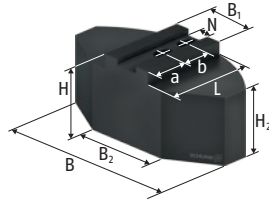
Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA NCA 280-86	KM-WBL 100	0132602	16	40	42	125	65	30	M12	4.1
ROTA NCA 280-86	KM-WBL 101	0132608	16	40	100	125	65	30	M12	9.8
ROTA NCA 280-86	KM-WBL 103	0132609	16	40	60	125	65	30	M12	5.7
ROTA NCA 280-86	KM-WB 102	0132104	16	40	60	90	45	30	M12	4.3
ROTA NCA 280-86	KM-WB 103	0132105	16	40	60	110	50	30	M12	5.2
ROTA NCA 280-86	KM-WB 104	0132106	16	50	80	90	45	30	M12	7.3
ROTA NCA 280-86	KM-WB 105	0132129	16	40	80	110	50	30	M12	7.2
ROTA NCA 280-86	KM-WB 106	0132152	16	40	100	120	60	30	M12	9.7
ROTA NCA 280-86	KM-WB 110	0132140	16	40	42	110	50	30	M12	3.8
ROTA NCA 280-86	KM-WB 111	0132147	16	50	50	120	60	30	M12	6.2
ROTA NCA 280-86	KM-WBAL 100	0132523	16	40	60	110	55	30	M12	1.9

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

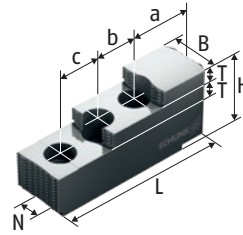
Hard stepped top jaws, Full grip jaws with fine serration 60°



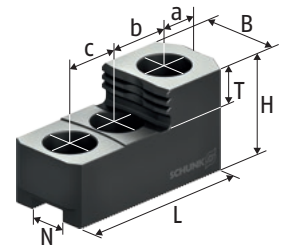
KMWB-SA
Full grip jaws



KMWB-SM
Full grip jaws



SHB-J
Hard stepped top jaws



SHB-J
Hard stepped top jaws

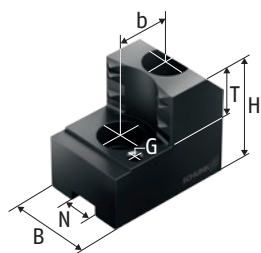
Technical data

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 280-86	KMWB-SA 250	0132802	16	180	40	58	43	87.5		40	30		M12	4.5
ROTA NCA 280-86	KMWB-SA 251	0132806	16	180	40	80	65	87.5		40	30		M12	6.6
ROTA NCA 280-86	KMWB-SM 250	0132702	16	180	40	60	45	80		29	30		M12	12.0
ROTA NCA 280-86	KMWB-SM 251	0132706	16	180	40	80	70	80		29	30		M12	18.0
ROTA NCA 280-86	SHB-J 100	0133111	16	40		54		101.5	13	25.5	30	30	M12	2.8
ROTA NCA 280-86	SHB-J 102	0131109	16	35		42		83	15	19	25	25	M12	1.5

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Claw jaws

with fine serration 60°



SZAJ
Claw jaws

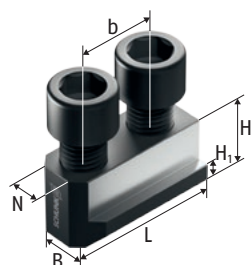
Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	B	H	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]		[mm]		[kg]
ROTA NCA 280-86	40 - 116	296	SZAJ 25-1	0138117	16	40	58	25	M6	30	M12	2.9
ROTA NCA 280-86	83 - 158	298	SZAJ 25-2	0138119	16	40	58	25	M6	30	M12	2.3
ROTA NCA 280-86	125 - 202	302	SZAJ 25-3	0138121	16	40	58	25	M6	30	M12	2.1
ROTA NCA 280-86	170 - 248	316	SZAJ 25-4	0138123	16	40	58	25	M6	30	M12	2.3
ROTA NCA 280-86	207 - 283	348	SZAJ 25-15	0138118	16	40	58	25	M6	30	M12	2.8

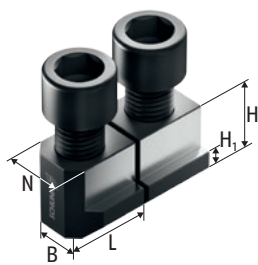
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

T-nut

with fine serration 60°



NJ
T-nut



NJ sawn
T-nut

Chuck type	Description	ID	H	H1	b	G	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]			[Nm]
ROTA NCA 280-86	NJ 103 gesägt/sawn	0146002	21.5	8.5		M12	M12 x 30	70
ROTA NCA 280-86	NJ 103	0146132	21.5	8.5	30	M12	M12 x 30	70

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Hard stepped top jaws

with fine serration 60°



Jaw position I

Jaw position II

O.D. clamping

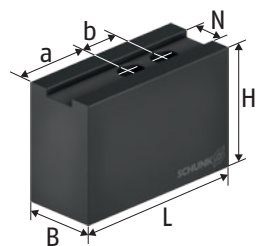
Chuck type	Description	ID	A1 [mm]	A2 [mm]	A3 [mm]	A4 [mm]
ROTA NCA 280-86	SHB-J 100	0133111	15 - 104	35 - 108	121 - 161	155 - 228

I.D. clamping

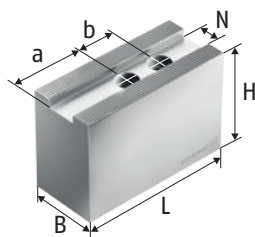
Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA NCA 280-86	SHB-J 100	0133111	98 - 137	132 - 221	216 - 308

Soft top jaws

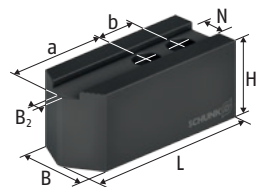
with fine serration 90°



CWB
Soft top jaws



SWB-AL
Soft top jaws



SWBL
Soft top jaws

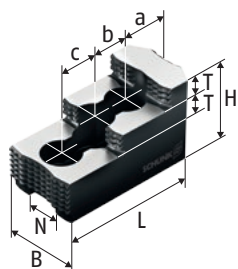
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA NCA 280-86	SWBL 250-21	0120155	21	50	50	120	72	28	M16	5.4
ROTA NCA 280-86	CWB 251	0100012	21	50	60	95	52	28	M16	5.2
ROTA NCA 280-86	SWB 250	0120105	21	50	80	120	62	28	M16	9.2
ROTA NCA 280-86	SWB-AL 250	0168102	21	50	80	120	62	28	M16	3.3

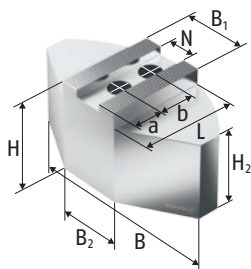
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

Hard stepped top jaws, Full grip jaws

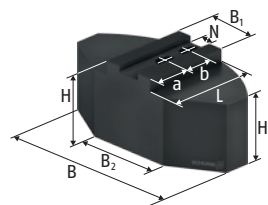
with fine serration 90°



SHB
Hard stepped top jaws



SWB-SA
Full grip jaws



SWB-SM
Full grip jaws

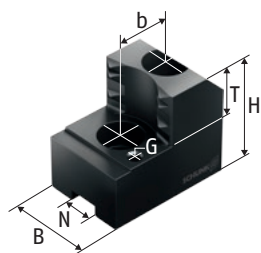
Technical data

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 280-86	SWB-SA 250-21	0170103	21	180	50	78	63	87.5		40	28		M16	6.3
ROTA NCA 280-86	SWB-SA 251	0170107	21	180	50	100	85	87.5		40	28		M16	8.3
ROTA NCA 280-86	SWB-SM 250-21	0169103	21	180	50	70	55	80		29	28		M16	14.5
ROTA NCA 280-86	SWB-SM 251	0169107	21	180	50	100	85	80		30	28		M16	22.0
ROTA NCA 280-86	SHB 250	0121105	21	50		58		103.5	14	34	25	25	M16	3.5

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

Claw jaws

with fine serration 90°



SZA
Claw jaws

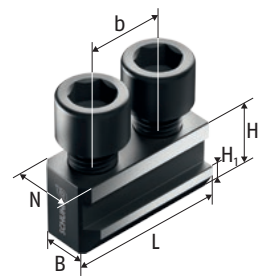
Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	B	H	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]		[mm]		[kg]
ROTA NCA 280-86	39 - 128	302	SZA 25-37	0138180	21	50	58	25	M8	28	M16	3.3
ROTA NCA 280-86	97 - 169	303	SZA 25-38	0138181	21	50	58	25	M8	28	M16	2.9
ROTA NCA 280-86	147 - 219	306	SZA 25-39	0138182	21	50	58	25	M8	28	M16	2.7
ROTA NCA 280-86	194 - 266	341	SZA 25-40	0138183	21	50	58	25	M8	28	M16	3.2

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T-nut

with fine serration 90°



NKA
T-nut



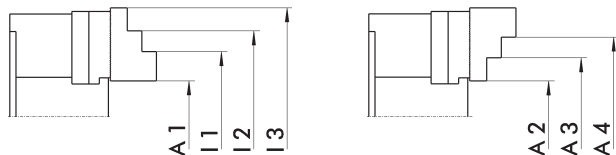
NKS
T-nut

Chuck type	Description	ID	H	H1	b	G	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]			[Nm]
ROTA NCA 280-86	NKA 3	0145105	26.5	10	28	M16	M16 x 35	150
ROTA NCA 280-86	NKS 3	0143107	26.5	10		M16	M16 x 35	150

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

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 280-86	SHB 250	0121105	22 - 102	52 - 107	134 - 189	207 - 262

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA NCA 280-86	SHB 250	0121105	73 - 150	145 - 228	225 - 308

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 280-86	IFT Set	1404235

Mounting wrench

For power lathe chucks with turnable threaded rings as wrench design with driving pins that snap into the threaded ring.



Suitable for	Description	ID
ROTA NCA 280-86	SSH-MN Ø86-228	8700249



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