



ROTA NCF *plus* 2

**Power lathe chuck with
centrifugal force com-
pensation and large
through-hole**

Weight-optimized power lathe chuck with integrated centrifugal force compensation for reducing the loss of clamping force under speed of rotation

High speeds mean high centrifugal forces of the jaws and thus high clamping force losses in turning applications. The ROTA NCF plus 2 with integrated centrifugal force compensation effectively counteracts this loss of clamping force. As a result, significantly higher speeds can be run than with conventional lathe chucks. The modular sealed center sleeve system also increases flexibility.



Advantages – Your benefits

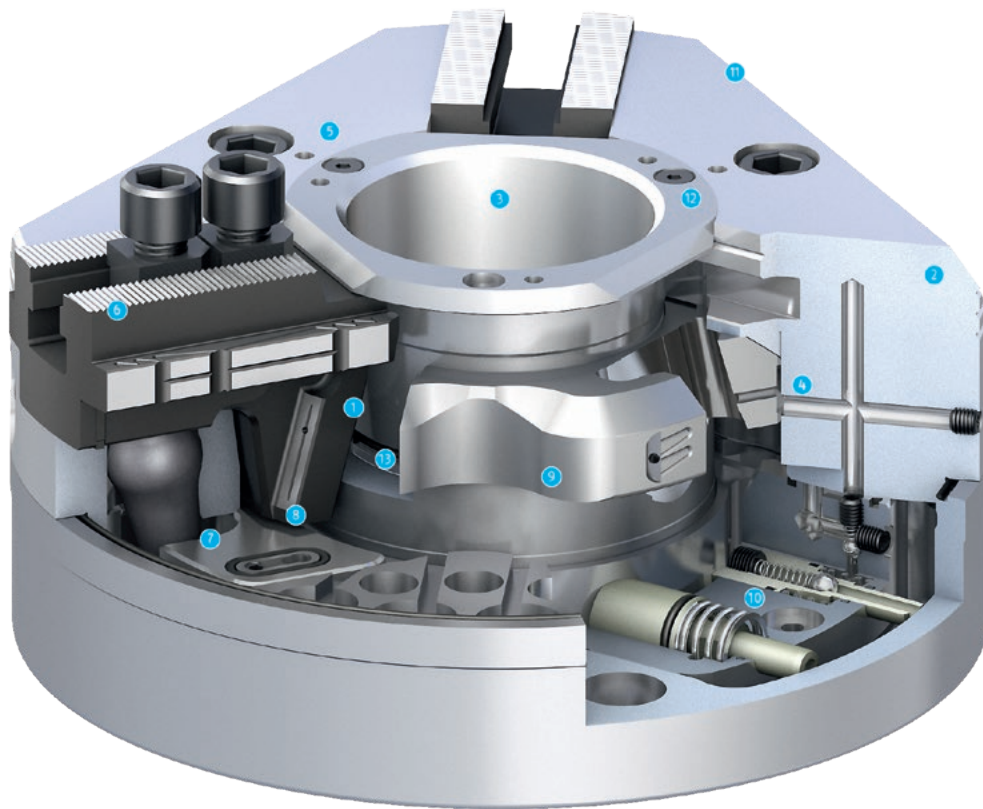
- + Precision wedge-hook power lathe chuck for highest quality requirements**
Allows excellent machining results
- + Very high RPM without essential clamping force reduction**
Optimum utilization of the lathe chuck performance due to high economic efficiency
- + With integrated centrifugal force compensation**
Thereby high machining speeds are possible
- + Large through-hole**
Machining all standard pipe diameters
- + High efficiency of the wedge hook system**
Process-reliable clamping due to high clamping forces
- + Optimized lubrication system**
Consistently high clamping forces ensured
- + Modular center sleeve system**
Optimal adjustment to new clamping tasks thanks to the exchangeable center sleeves
- + Double-guided chuck piston**
For highest run-out and repeat accuracy
- + Low chuck weight**
Fast acceleration and deceleration operations shorten the cycle times
- + All sides of the functional parts are hardened and ground**
Ensures a long service life

Technical data

Description	Max. rotational speed [min ⁻¹]	Max. clamping force [kN]	Max. actuating force [kN]	Stroke/jaw [mm]	Piston stroke [mm]	Through-hole [mm]
ROTA NCF plus 2 185-52	6000	72	30	5.3	20	52
ROTA NCF plus 2 215-66	6000	100	42	5.3	20	66
ROTA NCF plus 2 260-86	4500	140	60	5.3	20	86
ROTA NCF plus 2 315-104	4000	160	70	5.3	20	104
ROTA NCF 400-120	3300	187.5	77	8	30	120
ROTA NCF 500-160	2200	200	75	8	30	160
ROTA NCF 630-180	1800	300	122	11.2	42	180

Function of ROTA NCF plus 2

The axially movable piston transfers the force to the base jaw and generates a radial jaw movement synchronized with the rotational axis. The jaws are coupled to a compensating weight via a lever, which leads to a constant clamping force when the lathe chuck rotates.

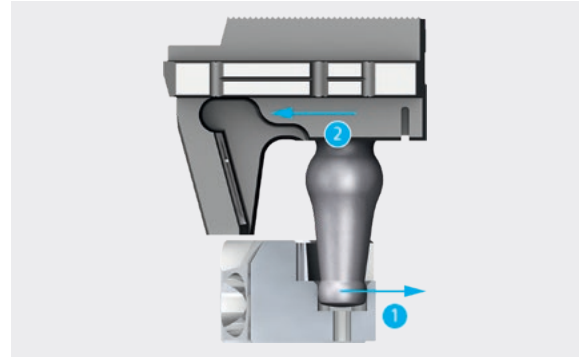


- 1 Wedge hook drive**
Offers constantly high clamping forces in operation
- 2 Hardened and extremely rigid base body**
Therefore a longer service life at highest precision. Even with maximum clamping force
- 3 Large through-hole**
For machining of all standard raw material diameters
- 4 Optimized lubrication system**
For a high level of efficiency
- 5 Mounting thread**
For workpiece stops or cover plates
- 6 Base jaw serration**
Available in inch or metric sizes
- 7 Integrated centrifugal force compensation**
For constant clamping force even at top speeds
- 8 Robust and advanced wedge-hook**
For excellent power transmission
- 9 Innovative piston guidance**
Optimizes the force flow and provides optimal rigidity
- 10 Integrated, patented grease pump system**
For permanent grease circulation during every clamping stroke. Extended maintenance intervals can be realized as a result
- 11 Weight-optimized design**
For great economy in daily use
- 12 Modular center sleeve system**
Therefore optimal adjustment to new clamping tasks
- 13 Additional seals**
For sealing against coolants and chips

Integrated centrifugal force compensation

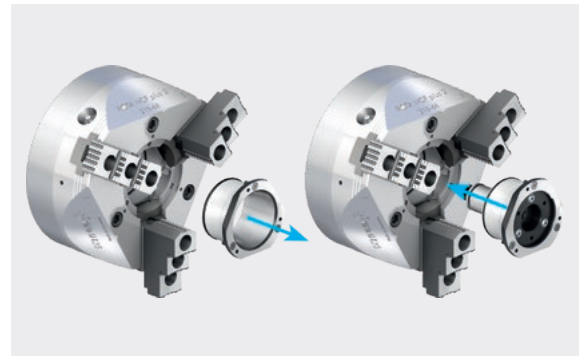
Compared to conventional lathe chucks, the loss of clamping force is compensated by the integrated centrifugal force compensation. Due to the speed, the centrifugal force balancing weight is pressed to the outside. The lever directly transmits the force onto the base jaw.

- ❶ Centrifugal force via compensation weight
- ❷ Clamping force support for O.D. clamping



Changing the center sleeve

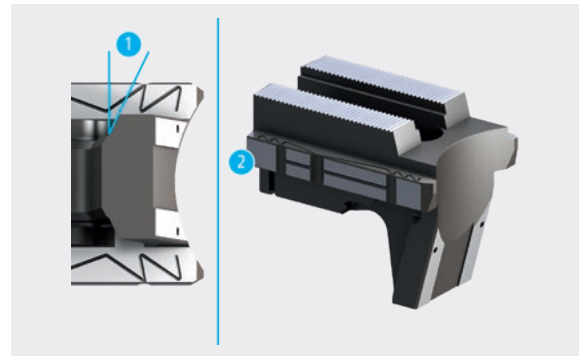
The modular center sleeves can be changed quickly and easily while the chuck remains mounted. When the three screws are undone, all the protection sleeves can be pulled off from the front and replaced.



Optimized wedge hook and precision jaw guidance

For longer life time and high repeat accuracy, fine serration 1/16" x 90° or 1.5 mm x 60°.

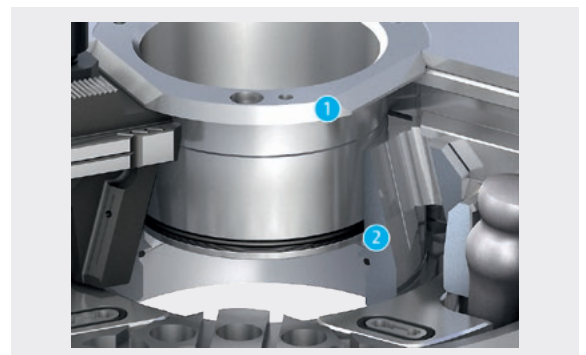
- ❶ Trapezoidal angle
Between the base jaw and piston
- ❷ Precision flat guidance



Additional sealing inside of the center sleeve and optimized greasing system

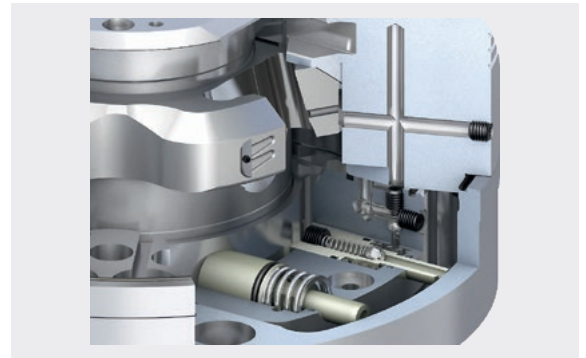
Therefore the maintenance intervals are longer and permanent supply to all function and friction surfaces is ensured.

- ❶ Modular center sleeve
Also exchangeable in built-in condition from the front chuck face
- ❷ Long piston guidance
For more accuracy



Integrated, patented grease-pump system in the centrifugal force compensation

For permanent grease circulation during every clamping stroke. Extended maintenance intervals can be realized as a result



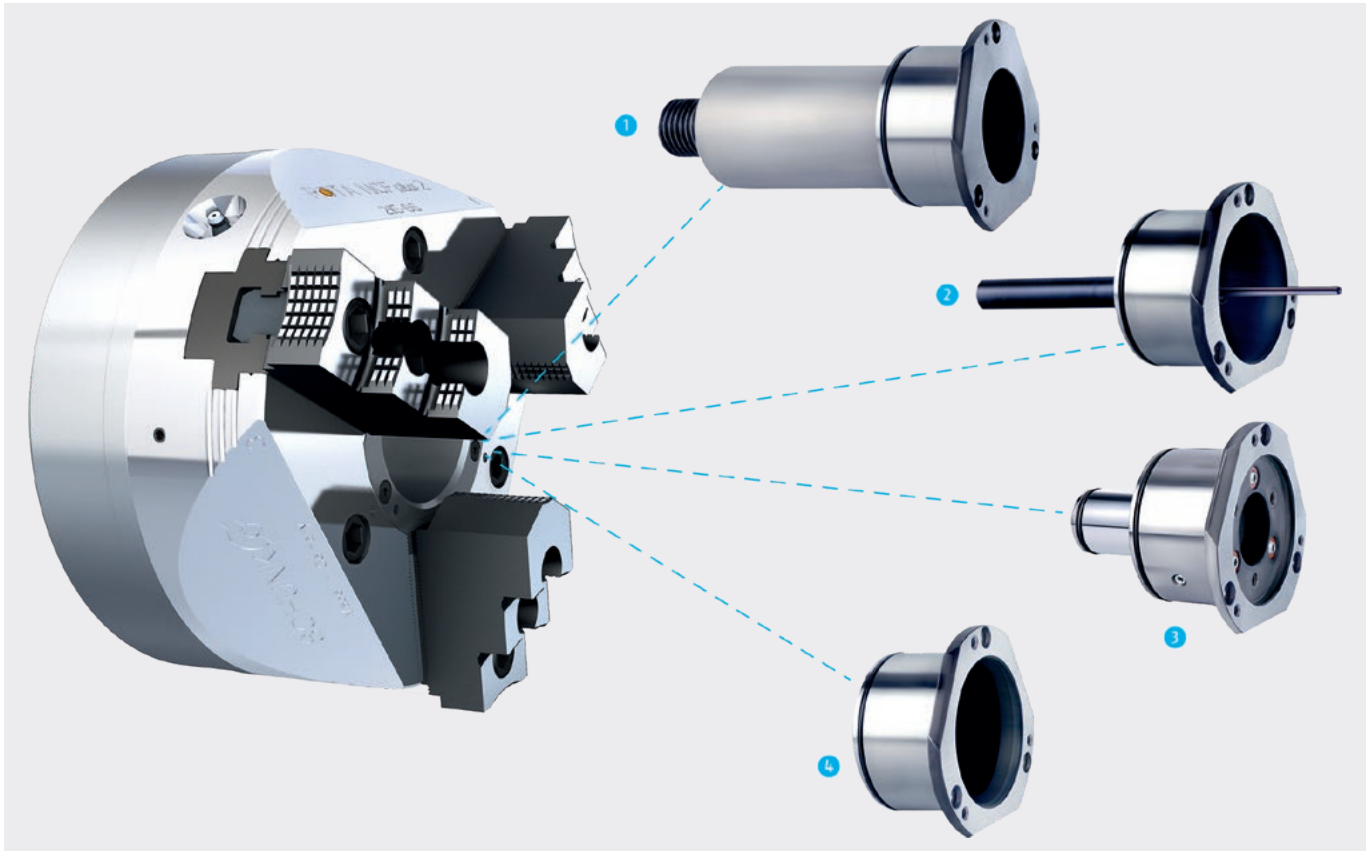
Very rigid and hardened chuck body

With direct short taper mounting without intermediate flange.

- ① Chuck body
- ② Piston



Modular center sleeve system



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

1 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.

2 Part ejector in the center sleeve

An optimum addition for automatic loading. The part ejector disposes of a gas spring, which will eject your workpiece safely out of the chuck.

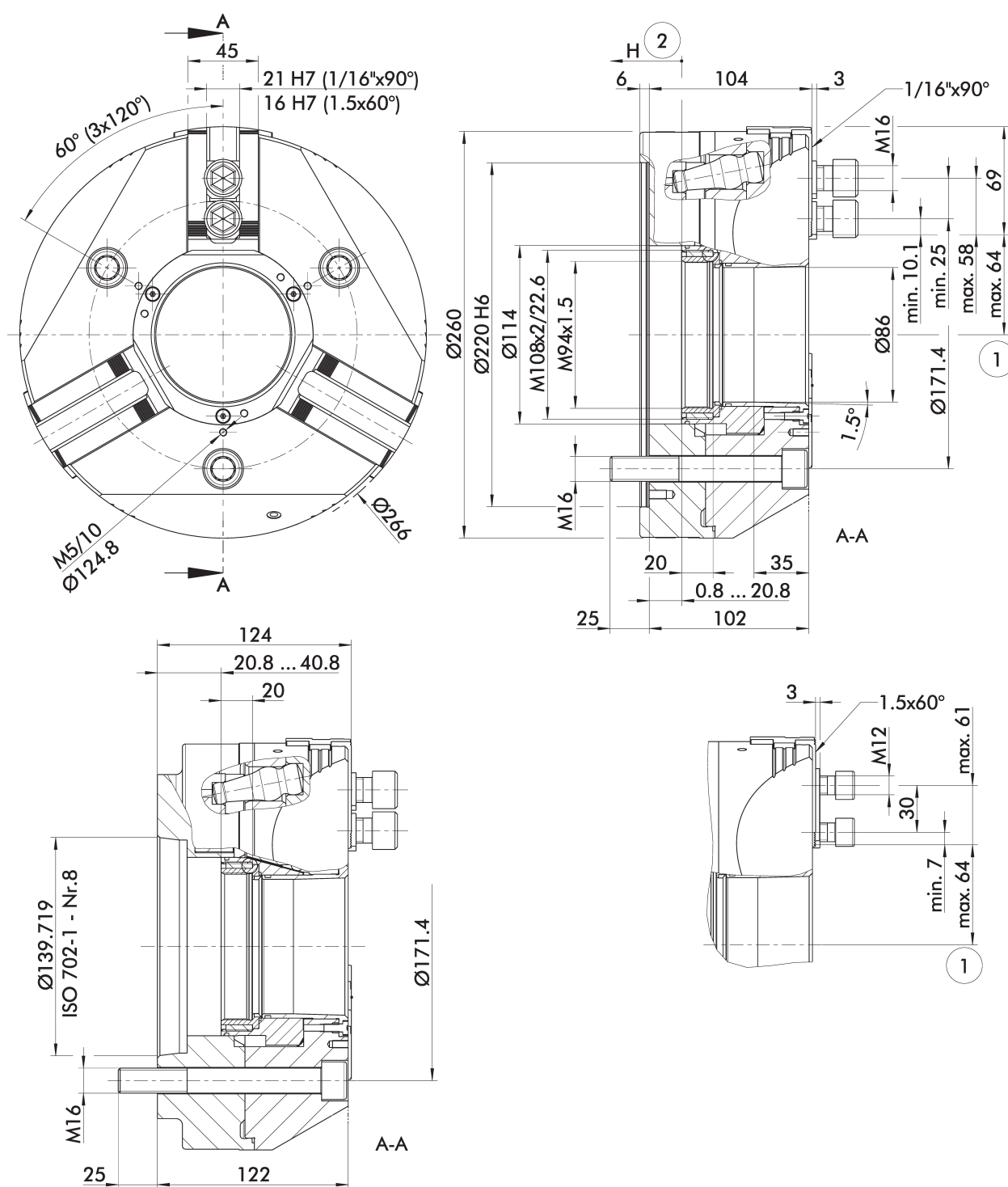
3 Coolant nozzles in the center sleeve

Ideal as an additional component if your machine is equipped with a central coolant supply. For I.D. machining, coolant will be fed directly to the tool.

4 Closed center sleeve

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

① Modular center sleeve system up to size 315 possible.



Subject to technical changes.

- ① Distance to center of first tooth ② Piston stroke direction

Technical data

Spindle type	Spindle size	ID	Serration	Max. rotational speed [min ⁻¹]	Max. clamping force [kN]	Max. actuating force [kN]	Moment of inertia [kgm ²]	Weight [kg]
ISO 702-4	Nr. 8 (Z220)	0854126	1/16" x 90°	4500	140	60	0.27	30
ISO 702-1	Nr. 8	0854127	1/16" x 90°	4500	140	60	0.3	33
ISO 702-4	Nr. 8 (Z220)	0854128	1.5 mm x 60°	4500	140	60	0.27	30
ISO 702-1	Nr. 8	0854129	1.5 mm x 60°	4500	140	60	0.3	33

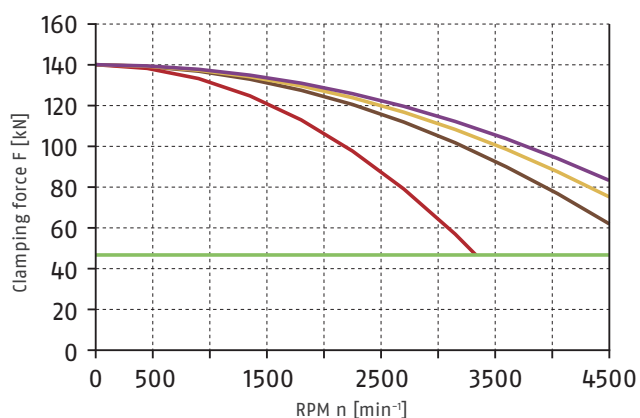
Scope of delivery

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

Further technical data

Chuck type	Through-hole [mm]	Stroke/jaw [mm]	Piston stroke (H) [mm]	Center jaw height [mm]
ROTA NCF plus 2 260-86	86	5.3	20	58

Clamping force-RPM-diagram



Required minimum clamping force F_{spmin} 33%

SHB 250
3.5 kg



SWB 250
9.2 kg



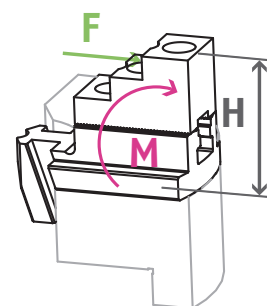
SHB-J 100
2.8 kg



KM-WB 110
3.8 kg



Load of base jaw guidance



$$M_{\max} = 3407 \text{ Nm}$$

Center sleeves

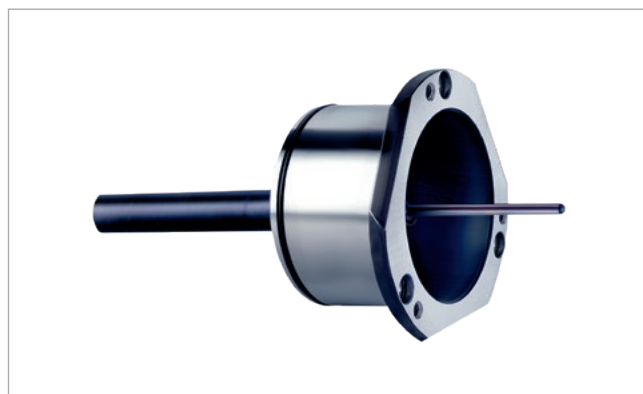
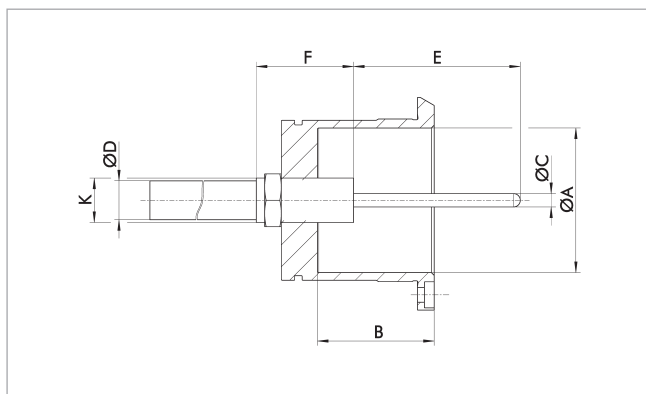
Center sleeve closed



Technical data

Description	ID	Suitable for	ØA [mm]	B [mm]	K	Weight [kg]
SBS-G-C2 260	8705191	ROTA NCF plus 2 260-86	86	38	M16x1.5	0.8

Protection sleeve with ejector

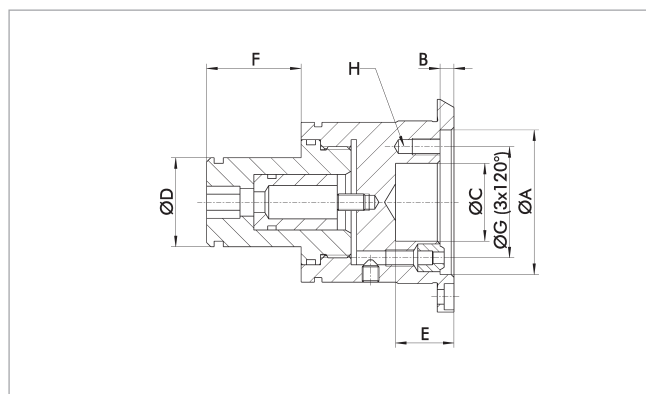


Technical data

Description	Suitable for	ØA [mm]	B [mm]	ØC [mm]	ØD [mm]	E [mm]	F [mm]	K
SBS-A-C2 260	ROTA NCF plus 2 260-86	86	38	4.8	14	10 - 100	35	M16x1.5

- Center sleeves with ejector are available on request
- The ejector stroke is selectable in increments of 10 from 10 - 100 mm
- The ejection force is selectable with 40, 100, 150, 200, 250, or 300 N

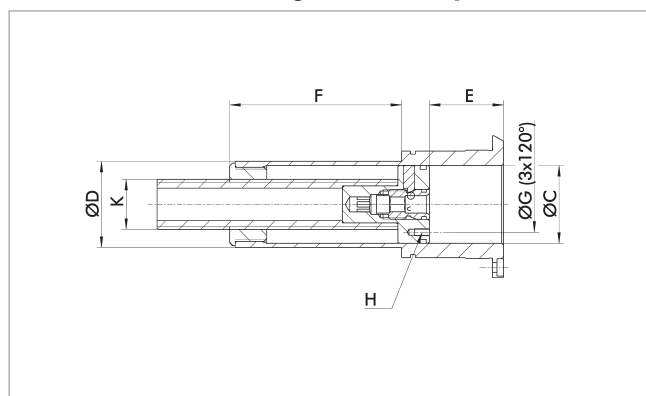
Protection sleeve with spray nozzles



Technical data

Description	ID	Suitable for	ØA [mm]	B [mm]	ØC [mm]	ØD [mm]	F [mm]	ØG [mm]	H	Weight [kg]
SBS-S-C2 260	8705189	ROTA NCF plus 2 260-86	86	5	48	32	47	67	M6x10	2.7

Center sleeve with adjustable stop



Technical data

Description	ID	Suitable for	ØC [mm]	ØD [mm]	E [mm]	F [mm]	ØG [mm]	H	K	Weight [kg]
SBS-T-C2 260	8705185	ROTA NCF plus 2 260-86	61	65.5	0 - 110.8	96.8	40	M5x10	M27	3.2

- Important: Check the spindle/draw tube through-hole
- The spindle through-hole must be at least $\varnothing D + 0.5 \text{ mm}$

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 NCF plus 2 260-86	Nr. 5	79.6	Z220	11 (6x60°)	17	M16 (6x60°) M16 (2x180°)	28	104.8	171.4
FF-T2 Z220-A6	FF-T2	0805003	ROTA NCF plus 2 260-86	Nr. 6	103.2	Z220	13 (6 x 60°)	20	M16 (6x60°) M16 (2x180°)	28	133.4	171.4
FF-T1 Z220-A8	FF-T1	0803002	ROTA NCF plus 2 260-86	Nr. 8	136.2	Z220	17 (6x60°) 17 (2x180°)			19	171.4	
FF-T3 Z220-A11	FF-T3	0803003	ROTA NCF plus 2 260-86	Nr. 11	130	Z220	21 (6x60°)	32	M16 (12 x 30°)	50	235	171.4
FF-T3 Z220-A15-1	FF-T3	0803020	ROTA NCF plus 2 260-86	Nr. 15	145	Z220	26 (6x60°)	38	M16 (6x60°)	55	330.2	171.4
FF-T3 Z220-A15-2	FF-T3	0803021	ROTA NCF plus 2 260-86	Nr. 15	145	Z220	23 (6x60°)	35	M16 (6x60°)	55	330.2	171.4

Direct adapter plates

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

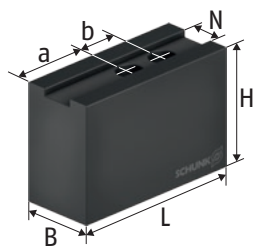
Reduction adapter plates are used if the mounting bolt circle of the spindle is smaller than the one of the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Expansion adapter plates FF-T3

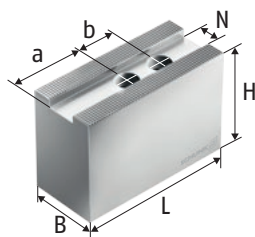
Expansion adapter plates are used if the mounting bolt circle of the spindle is larger than the one of the lathe chuck mounting bolt circle. The adapter plate is first mounted on the spindle and then the lathe chuck is mounted on the adapter plate.

Soft top jaws

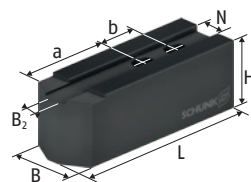
with fine serration 60°



KM-WB
Soft top jaws



KM-WBAL
Soft top jaws



KM-WBL
Soft top jaws

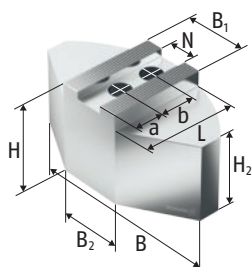
Technical data

Chuck type	Description	ID	N [mm]	B [mm]	H [mm]	L [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA NCF plus 2 260-86	KM-WBL 100	0132602	16	40	42	125	65	30	M12	4.1
ROTA NCF plus 2 260-86	KM-WBL 101	0132608	16	40	100	125	65	30	M12	9.8
ROTA NCF plus 2 260-86	KM-WBL 103	0132609	16	40	60	125	65	30	M12	5.7
ROTA NCF plus 2 260-86	KM-WB 102	0132104	16	40	60	90	45	30	M12	4.3
ROTA NCF plus 2 260-86	KM-WB 103	0132105	16	40	60	110	50	30	M12	5.2
ROTA NCF plus 2 260-86	KM-WB 104	0132106	16	50	80	90	45	30	M12	7.3
ROTA NCF plus 2 260-86	KM-WB 105	0132129	16	40	80	110	50	30	M12	7.2
ROTA NCF plus 2 260-86	KM-WB 106	0132152	16	40	100	120	60	30	M12	9.7
ROTA NCF plus 2 260-86	KM-WB 110	0132140	16	40	42	110	50	30	M12	3.8
ROTA NCF plus 2 260-86	KM-WB 111	0132147	16	50	50	120	60	30	M12	6.2
ROTA NCF plus 2 260-86	KM-WBAL 100	0132523	16	40	60	110	55	30	M12	1.9

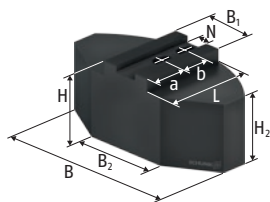
Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

Hard stepped top jaws, Full grip jaws

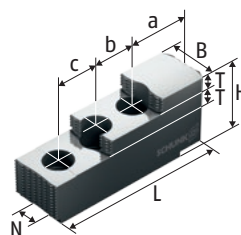
with fine serration 60°



KMWB-SA
Full grip jaws



KMWB-SM
Full grip jaws



SHB-J
Hard stepped top jaws

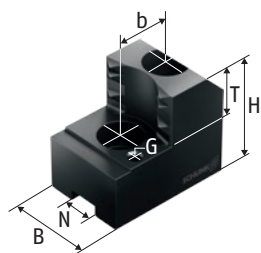
Technical data

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 NCF plus 2 260-86	KMWB-SA 250	0132802	16	180	40	58	43	87.5		40	30		M12	4.5
ROTA NCF plus 2 260-86	KMWB-SA 251	0132806	16	180	40	80	65	87.5		40	30		M12	6.6
ROTA NCF plus 2 260-86	KMWB-SM 250	0132702	16	180	40	60	45	80		29	30		M12	12.0
ROTA NCF plus 2 260-86	KMWB-SM 251	0132706	16	180	40	80	70	80		29	30		M12	18.0
ROTA NCF plus 2 260-86	SHB-J 100	0133111	16	40		54		101.5	13	25.5	30	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)

Claw jaws

with fine serration 60°



SZAJ
Claw jaws

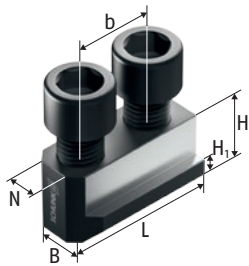
Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	B	H	L	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[kg]
ROTA NCF plus 2 260-86	50 - 102	281	SZAJ 25-1	0138117	16	40	58	99.5	25	M6	30	M12	2.9
ROTA NCF plus 2 260-86	92 - 144	283	SZAJ 25-2	0138119	16	40	58	81	25	M6	30	M12	2.3
ROTA NCF plus 2 260-86	136 - 189	287	SZAJ 25-3	0138121	16	40	58	70.5	25	M6	30	M12	2.1
ROTA NCF plus 2 260-86	181 - 234	301	SZAJ 25-4	0138123	16	40	58	75	25	M6	30	M12	2.3
ROTA NCF plus 2 260-86	216 - 269	333	SZAJ 25-15	0138118	16	40	58	94.5	25	M6	30	M12	2.8

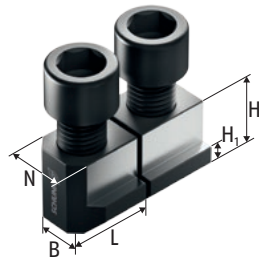
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T-nut

with fine serration 60°



NJ
T-nut



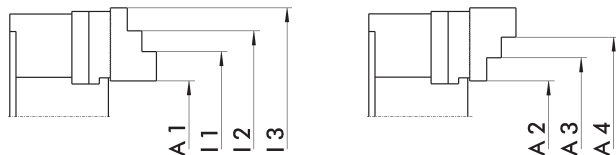
NJ sawn
T-nut

Chuck type	Description	ID	N	B	H	H1	L	b	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[Nm]
ROTA NCF plus 2 260-86	NJ 103 gesägt/sawn	0146002	16	22.4	21.5	8.5	22.7		M12 x 30	70
ROTA NCF plus 2 260-86	NJ 103	0146132	16	22.4	21.5	8.5	50.7	30	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

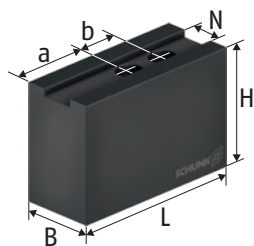
Chuck type	Description	ID	A1 [mm]	A2 [mm]	A3 [mm]	A4 [mm]
ROTA NCF plus 2 260-86	SHB-J 100	0133111	21 - 134	39 - 130	125 - 164	159 - 247

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA NCF plus 2 260-86	SHB-J 100	0133111	107 - 146	141 - 230	225 - 330

Soft top jaws

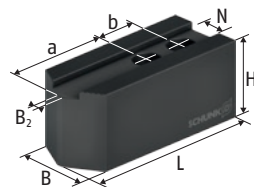
with fine serration 90°



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 NCF plus 2 260-86	SWBL 250-21	0120155	21	50	50	120	72	28	M16	5.4
ROTA NCF plus 2 260-86	CWB 251	0100012	21	50	60	95	52	28	M16	5.2
ROTA NCF plus 2 260-86	SWB 250	0120105	21	50	80	120	62	28	M16	9.2
ROTA NCF plus 2 260-86	SWB-AL 250	0168102	21	50	80	120	62	28	M16	3.3

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Hard stepped top jaws, Full grip jaws

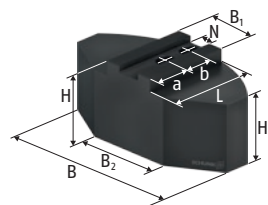
with fine serration 90°



SHB
Hard stepped top jaws



SWB-SA
Full grip jaws



SWB-SM
Full grip jaws

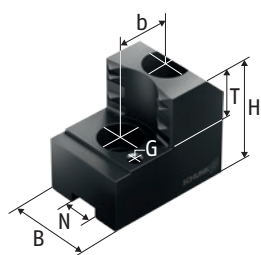
Technical data

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 NCF plus 2 260-86	SWB-SA 250-21	0170103	21	180	50	78	63	87.5		40	28		M16	6.3
ROTA NCF plus 2 260-86	SWB-SA 251	0170107	21	180	50	100	85	87.5		40	28		M16	8.3
ROTA NCF plus 2 260-86	SWB-SM 250-21	0169103	21	180	50	70	55	80		29	28		M16	14.5
ROTA NCF plus 2 260-86	SWB-SM 251	0169107	21	180	50	100	85	80		30	28		M16	22.0
ROTA NCF plus 2 260-86	SHB 250	0121105	21	50		58		103.5	14	34	25	25	M16	3.5

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Claw jaws

with fine serration 90°



SZA
Claw jaws

Technical data

Chuck type	Clamping range ØD	Swing diameter SDmax	Description	ID	N	B	H	L	T	G	b	Screws	m/SET
	[mm]	[mm]			[mm]	[mm]	[mm]	[mm]	[mm]		[mm]		[kg]
ROTA NCF plus 2 260-86	61 – 105	278	SZA 25-37	0138180	21	50	58	95.9	25	M8	28	M16	3.3
ROTA NCF plus 2 260-86	101 – 145	278	SZA 25-38	0138181	21	50	58	81	25	M8	28	M16	2.9
ROTA NCF plus 2 260-86	150 – 195	281	SZA 25-39	0138182	21	50	58	76.2	25	M8	28	M16	2.7
ROTA NCF plus 2 260-86	197 – 242	317	SZA 25-40	0138183	21	50	58	90.5	25	M8	28	M16	3.2

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 90°



NKA
T-nut



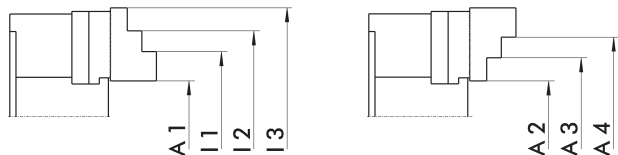
NKS
T-nut

Chuck type	Description	ID	N	B	H	H1	L	b	Cyl.-screw	Max. adm. tightening torque
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[Nm]
ROTA NCF plus 2 260-86	NKA 3	0145105	21	25	26.5	10	54	28	M16 x 35	150
ROTA NCF plus 2 260-86	NKS 3	0143107	21	25	26.5	10	25		M16 x 35	150

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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 NCF plus 2 260-86	SHB 250	0121105	23 - 128	48 - 135	130 - 208	203 - 260

I.D. clamping

Chuck type	Description	ID	I1 [mm]	I2 [mm]	I3 [mm]
ROTA NCF plus 2 260-86	SHB 250	0121105	76 - 153	148 - 233	228 - 330

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 NCF plus 2 260-86	IFT Set	1404235

Mounting wrench

For power lathe chucks with a turnable threaded ring in pipe design with two actuation tabs.



Suitable for	Description	ID
ROTA NCF plus 2 260-86	SSH-MR Ø86-150	8703837

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



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