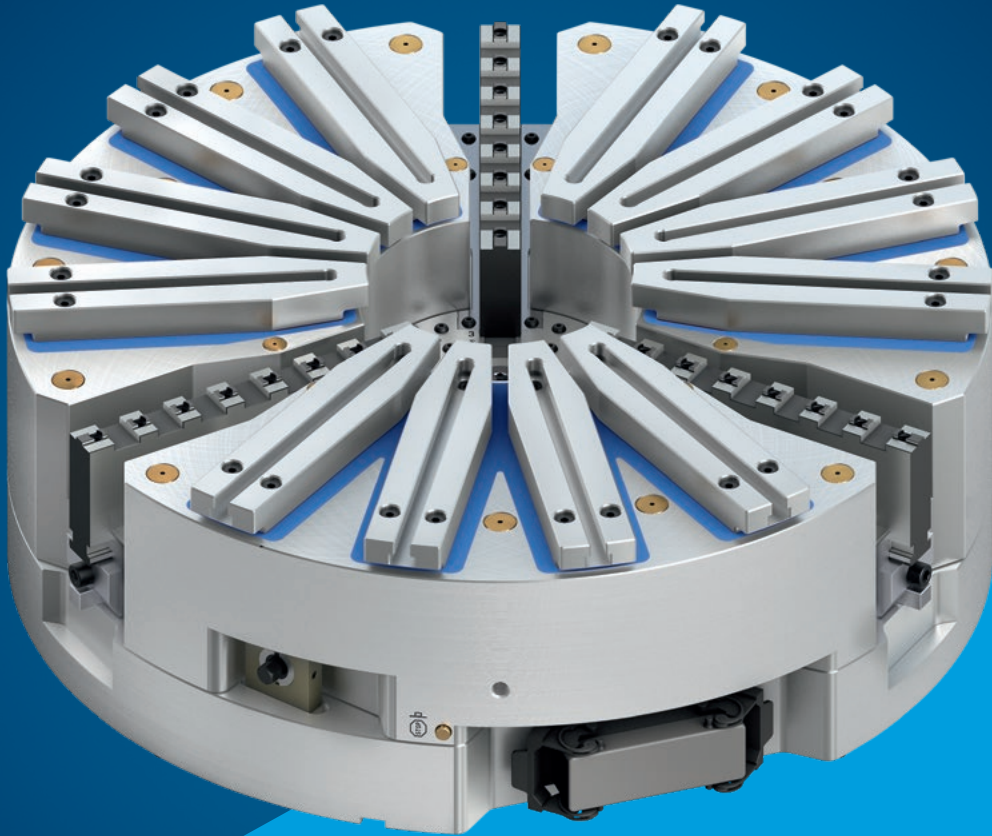




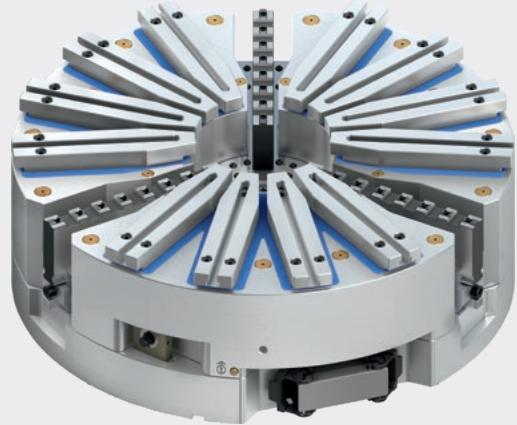
ROTA NCML

**Synergy from centering and
magnetic chucks**

Hand in hand for tomorrow

Hybrid chuck with manual pre-centering of workpieces followed by low-deformation clamping of rings and washers

ROTA NCML hybrid chucks are a combination of manual lathe chuck and magnetic clamping chuck. The manual lathe chuck serves to center the workpiece on the chuck and then clamps it via the magnetic clamping chuck without deformation and vibration. This makes these chucks particularly suitable for high-precision machining when grinding or hard turning thin-walled rings or fitting disks.



Advantages – Your benefits

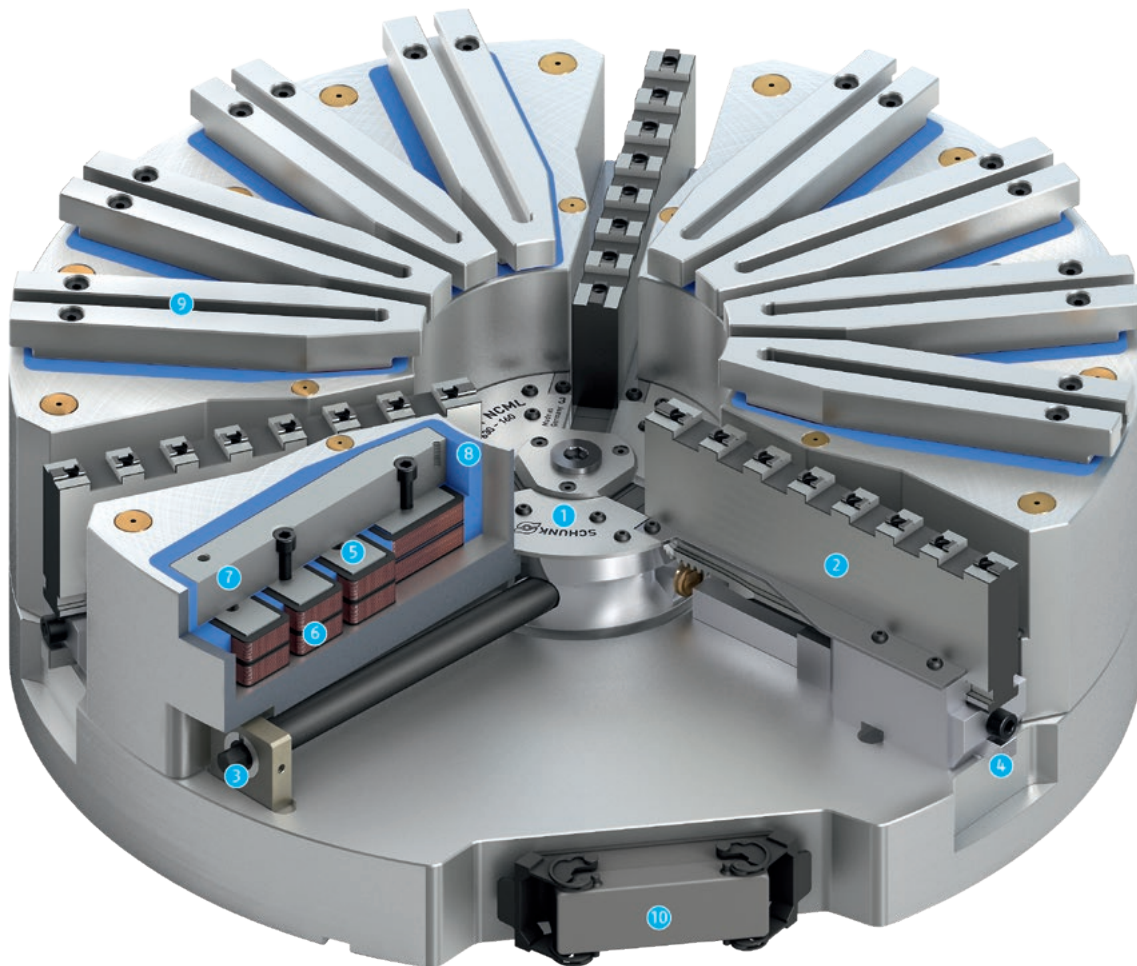
- + Workpiece centering via manual 3-jaw wedge bar chuck**
No manual alignment of the workpiece is necessary
- + Deformation-free magnetic workpiece clamping**
For maximum radial and axial run-out tolerances
- + High magnetic holding forces**
Depending on the workpiece geometry and material, a high cutting performance is possible
- + For internal and external centering**
For universal and flexible use
- + Optimal dirt sealing, encapsulated centering chuck**
Low maintenance and ensured high clamping accuracy
- + Standard interface for centering jaws**
Centering jaws can be manufactured from SCHUNK standard jaws
- + High clamping force due to jaw support**
Improved cutting performance, particularly during hard turning
- + For grinding and hard turning**
Ideal for high-precision workpiece machining
- + For horizontal and vertical machines**
Suitable for use with almost every machine tool (turning – milling – grinding)
- + 3-sided machining possible due to retractable jaws**
Reduced set-up costs, shorter processing times

Technical data

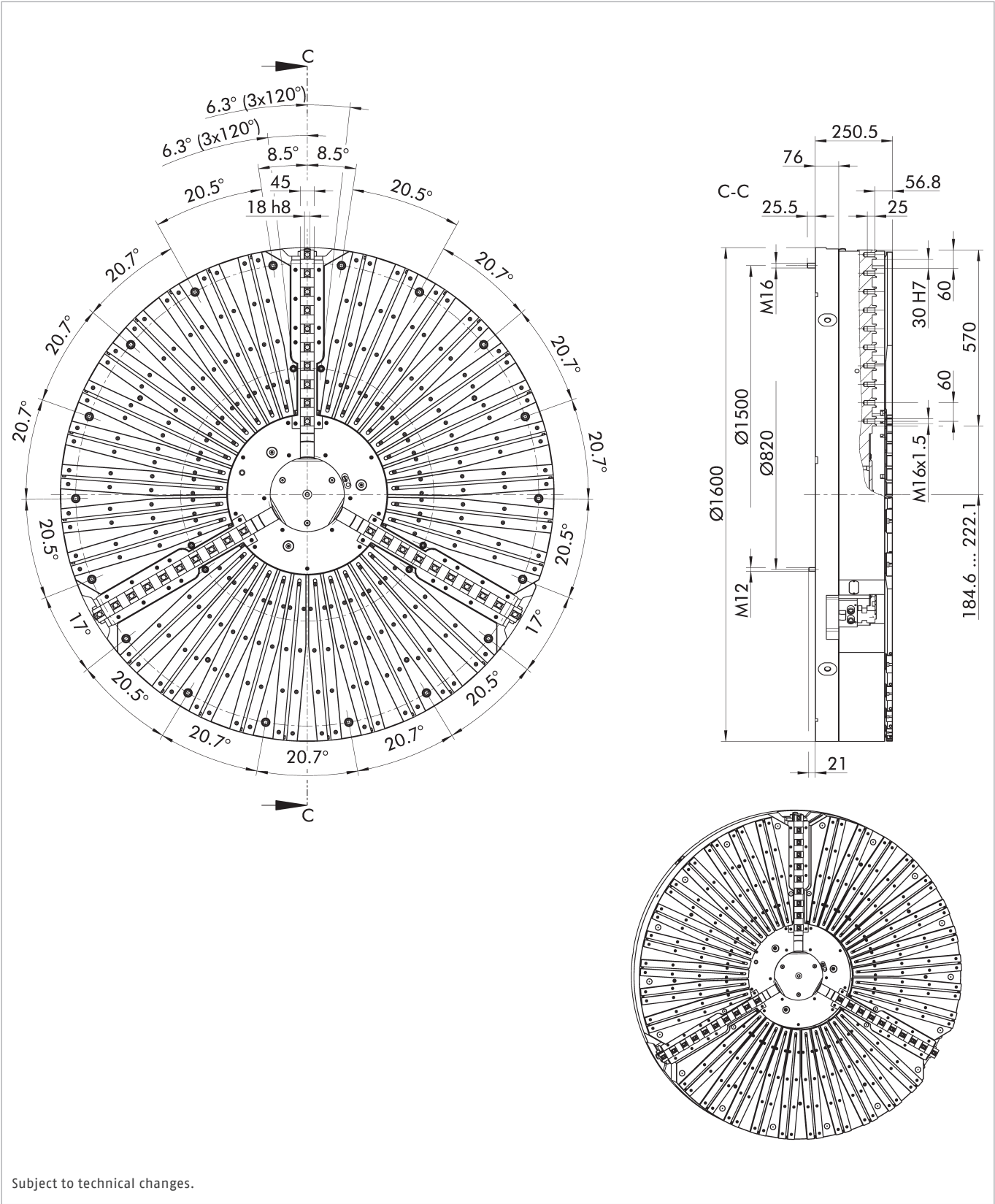
Description	Max. rotational speed	Max. centering force	Max. magnetic holding force	Max. torque	Stroke/jaw
	[min ⁻¹]	[kN]	[N/cm ²]	[Nm]	[mm]
ROTA NCML 630	600	65	160	80	6.5
ROTA NCML 800	500	65	160	80	6.5
ROTA NCML 1000	320	100	160	120	7
ROTA NCML 1250	300	180	160	220	9.9
ROTA NCML 1400	280	180	160	220	9.9
ROTA NCML 1600	230	270	160	320	12

Function of ROTA NCML

Workpieces are pre-centered on the hybrid chuck using the manual lathe chuck. The actual clamping procedure then takes place via the magnetic chuck. A brief electric pulse is required for this, which reverses the polarity of the AlNiCo magnets in the magnet segments. The magnetic field is conducted to the workpiece via steel poles and, if needed, pole extensions. The vacuum-hardened synthetic resin prevents coolant and chips infiltrating the magnetic chuck.



- 1 Manual centering chuck ROTA-S plus 2.0 or ROTA-S plus**
For fast and easy workpiece centering
- 2 Long base jaws with multiple tongue and groove**
For the use of standard top jaws from SCHUNK
- 3 Actuation via hexagon connection**
This ensures easy operation
- 4 Push button for jaw release**
Simple removal of base jaw
- 5 Invertible AlNiCo-magnets**
Double version, embedded in the coil – for activating or deactivating the magnetic chuck
- 6 Coil body, insulated version**
For transmitting impulses for activation or deactivation of the magnetic clamping chuck
- 7 Steel pole**
For relaying the magnetic field to the workpiece
- 8 Synthetic resin casting**
For sealing the magnetic clamping chuck and sealing cavities
- 9 Pole shoe**
For mounting SCHUNK pole extensions
- 10 Connection housing**
For connecting the magnetic clamping chuck with the control unit



Technical data

ID	Max. rotational speed [min ⁻¹]	Max. magnetic holding force [N/cm ²]	Magnet clamping range [mm]	Number of poles	Connection	Number of channels	Mains voltage	Weight [kg]
0809003	230	160	540 - 1600	30	13-PIN	6	400 V / 50 Hz	2920

Scope of delivery

Hybrid chuck, soft top jaws, actuation key, assembly key, operating manual and CE declaration of conformity

Notes

Field of application

For machining workpieces for grinding and hard turning.

Magnetic chucks of the same height

The magnetic chucks are height-adjustable ± 0.5 mm by default.

Equal-height magnetic chucks are available on request.

Demagnetizing cycle

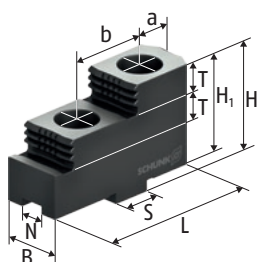
Following machining, a demagnetization cycle can be used to reduce the residual magnetism for subsequent machining operations.

Technical data centering chuck

Centering chuck	Max. centering force [kN]	Max. torque [Nm]	Stroke/jaw [mm]	Tooth pitch [mm]
ROTA-S plus 500	270	320	12	8.5

Hard stepped top jaws

with tongue and groove



SHF
Hard stepped top jaws

Technical data

Chuck type	Description	ID	N [mm]	S [mm]	B [mm]	H [mm]	H1 [mm]	L [mm]	T [mm]	a [mm]	b [mm]	Screws	m/SET [kg]
ROTA NCML 1600	SHF 400	0155104	18	30	45	82	75	130	20	27.05	60	M16	6.8

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.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 NCML 1600	IFT Set	1404235

Measuring head adapter for 4-jaw clamping

For use as an extension of the IFT measuring head for measuring the jaw clamping force of 4-jaw chucks.



Suitable for	Description	ID
IFT Set	IFT MA4	1452686

Extension set for large chucks

For use as an extension of the IFT measuring head for measuring the jaw clamping force of large chucks of Ø 400 mm and more.



Suitable for	Description	ID
IFT Set	IFT adapter set	1498512

Manual gaussmeter

For determining the residual magnetism in the workpiece after machining.



Suitable for	Description	ID
ROTA NCML 1600	MG10	0422950

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.

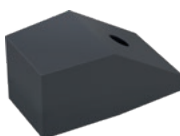


Bundle	Description	ID
Cartridge	Grease gun	9900543

Pole extensions

Fixed pole extension

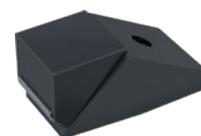
With through-hole, fixing screw M6 and T-nut for guide 10 mm.



Suitable for	Description	Length mm	Width mm	Height mm	ID
ROTA NCML 1600	RVF 30-54	90	30	54	0422620
ROTA NCML 1600	RVF 50-54	110	50	54	0422621
ROTA NCML 1600	RVF 70-54	150	70	54	0422622

Flexible pole extensions

With through-hole, fixing screw M6 and T-nut for guide 10 mm. Compensation stroke 7 mm.



Suitable for	Description	Length mm	Width mm	Height mm	ID
ROTA NCML 1600	RVB 30-54	90	30	54	0422623
ROTA NCML 1600	RVB 50-54	110	50	54	0422624
ROTA NCML 1600	RVB 70-54	150	70	54	0422625

Hand remote control

Hand remote control for max. one magnetic chuck
With holding force regulation (HKR).



Suitable for	Description	Length m	HKR	ID
KEH-MGT plus	HABE KEH plus 01-HKR	5	●	0420665

Connection cable

Connection cable 1xILME / 1x13-PIN for max. one magnetic chuck

Connections:

Control unit = 1 x ILME.

Magnetic chuck = 1 x 13-PIN/6CH.



Suitable for	Description	Length m
KEH-MGT plus 06 400V/50Hz		
KEH-MGT plus 06 460V/60Hz	VBK2-5 1xIL-1x13P 6CH	5
KEH-MGT plus 06 400V/50Hz		
KEH-MGT plus 06 460V/60Hz	VBK2-10 1xIL-1x13P 6CH	10

Control units

Control unit 400 V/50 Hz

For magnetizing or demagnetizing
MGT magnetic chucks.



Suitable for	Description	Channels	ID
ROTA NCML 1600	KEH-MGT plus 06 400V/50Hz	6	1472407

Control unit 460 V/60 Hz

For magnetizing or demagnetizing
MGT magnetic chucks.



Suitable for	Description	Channels	ID
ROTA NCML 1600	KEH-MGT plus 06 460V/60Hz	6	1472410

Automation components

PLC box 78-PIN for automation

For installation between KEH plus control
unit and PLC machine.



Suitable for	Description	ID
KEH-MGT plus 06 400V/50Hz		
KEH-MGT plus 06 460V/60Hz	PLC-B 78PIN	0420704

PLC cable

For connection between control unit
KEH plus and PLC box via a 78-PIN
connector.



Suitable for	Description	Length m	ID
KEH-MGT plus 06 400V/50Hz			
KEH-MGT plus 06 460V/60Hz	PLC-K-5 1x78P	5	0420707



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