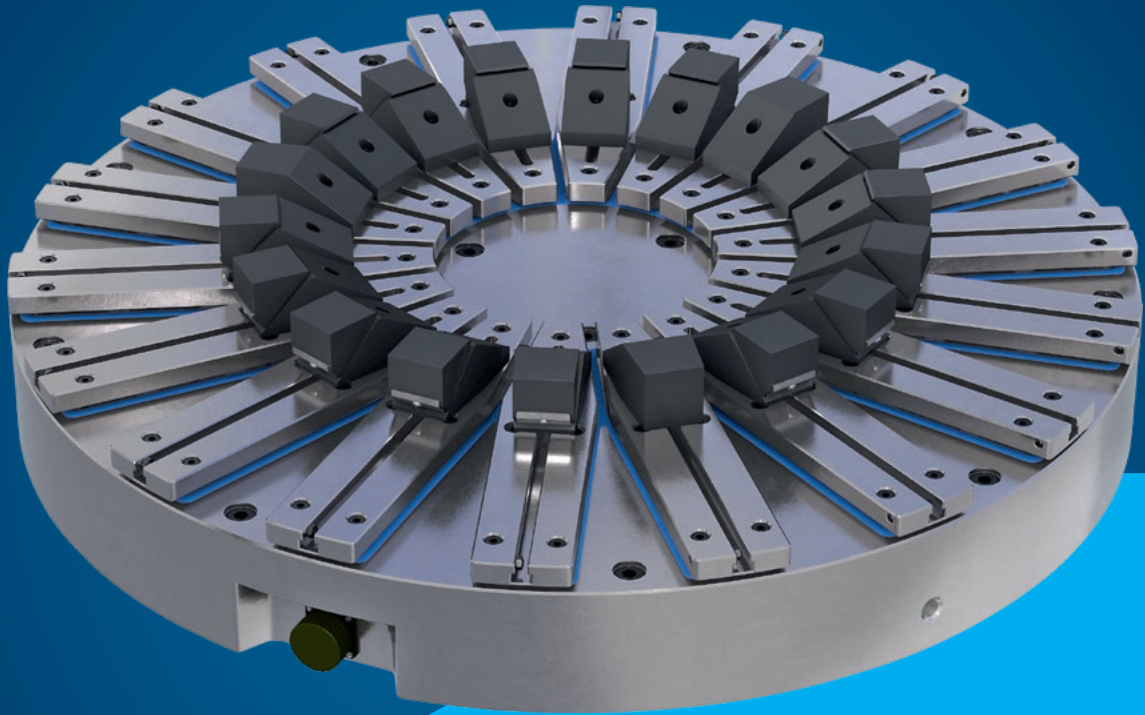




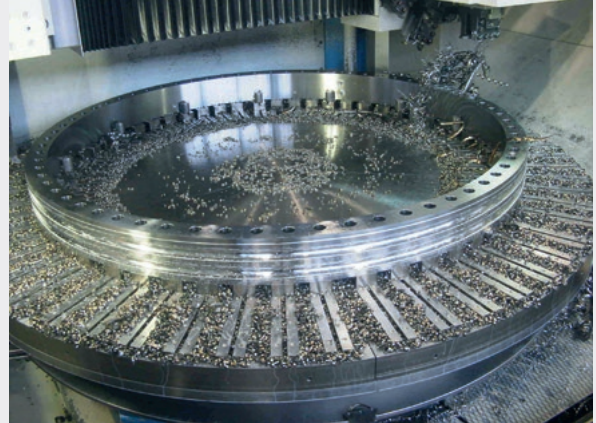
MAGNOS MGT

Magnetic clamping technology for turning and grinding machines

Hand in hand for tomorrow

Electropermanent magnetic clamping chucks for clamping rings and disks with low deformation on lathes and grinding machines

MAGNOS electropermanent magnetic chucks with radial pole pitch are designed for the turning and grinding of rings and disks on lathes and grinding machines. The workpieces are clamped so they are low in deformation and vibration due to the equally permanent magnetic clamping force, resulting in improved surfaces and significantly increased precision. Due to the use of pole extensions machining from three sides is possible. Therefore, the magnetic chuck can be individually adapted to the workpiece. In addition, when using MGT magnetic chucks, the residual magnetism can be reduced by a demagnetizing cycle at the end of machining.

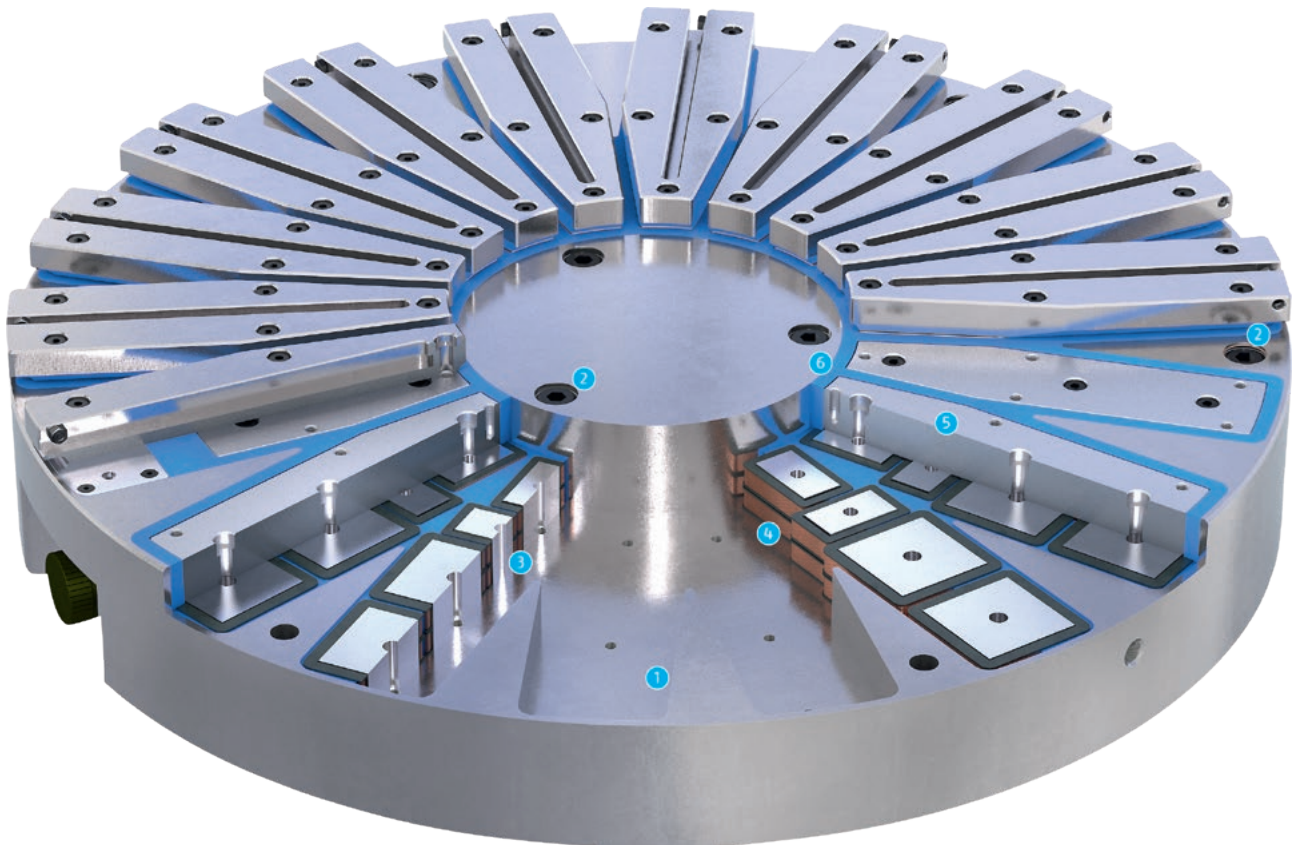


Advantages – Your benefits

- + 3-sided workpiece machining in one set-up**
Higher accuracy by setting up once and at best accessibility of the machine spindle
- + Even permanent magnetic clamping force across the entire workpiece**
Low deformation and vibration clamping of the workpieces
- + Low vibration clamping**
Improved surfaces and significantly increased precision
- + Deformation-free clamping**
No deformation and internal forces in the workpiece due to the clamping force
- + Control unit compatible with machine control system**
Can also be used in automated applications
- + Mono-block design**
Compact and robust design with high rigidity
- + Clamping within a few seconds**
Shortest possible setup times and a resulting increase in productivity
- + State-of-the-art electropermanent technology for one-time energy supply for MAG/DEMAG process**
Energy-efficient and reliable clamping of the workpieces

Function MGT

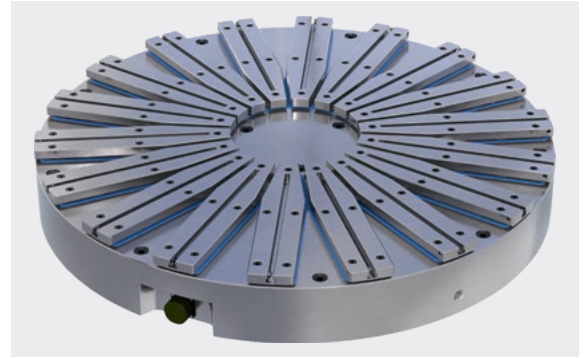
MAGNOS MGT magnetic chucks are designed for finishing, precision turning and grinding processes. MGT magnetic chucks are actuated by double AlNiCo magnets, which either short-circuit the magnetic field in the chuck or conduct it to the outside of the workpiece. With these magnetic chucks, a demagnetization cycle for reducing the residual magnetism can be carried out after machining. The advantage here is that there is less residual magnetism in the workpiece for the following machining operations.



- 1 Stable base body**
For optimum clamping results with an additional coating against corrosion
- 2 Mounting hole**
For direct mounting of the magnetic chuck on the machine table
- 3 Invertible AlNiCo-magnets**
Double version, embedded in the coil – for activating or deactivating the magnetic chuck
- 4 Coil body, insulated version**
For transmitting impulses for activation or deactivation of the magnetic clamping chuck
- 5 Steel pole**
For transferring the magnetic field to the workpiece and for mounting the pole extensions
- 6 Synthetic resin casting**
For sealing the magnetic clamping chuck and sealing cavities

Function and mode of operation

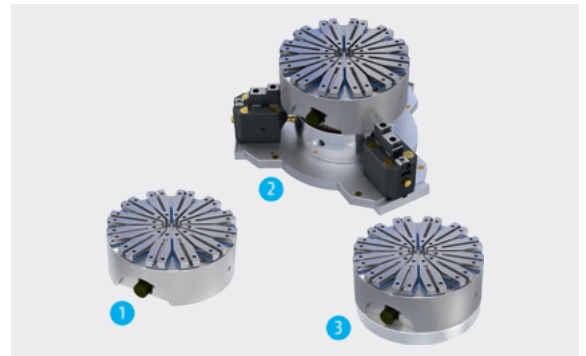
MAGNOS electropermanent magnetic clamping chucks with radial pole pitch are designed for turning and grinding operations of thin-walled rings on circular tables and circular grinding machines. T-slots and bore holes are machined into the pole shoes for mounting pole extensions. Due to the use of pole extensions, virtually deformation-free clamping is possible.



Mounting options

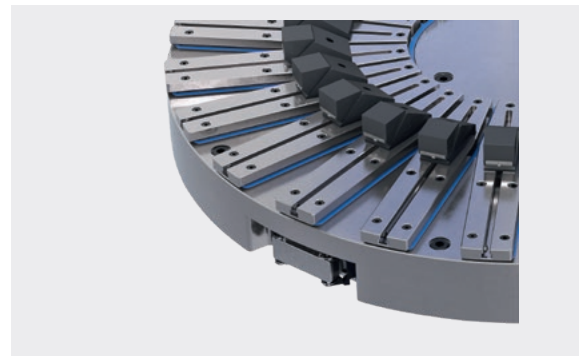
All magnetic clamping chucks are equipped with mounting holes by default. They enable the chucks to be mounted directly on the machine table. Alternatively, the magnetic clamping chucks can be mounted on the machine table using 3-jaw chuck or an adapter flange. The adapter flange can be adjusted to the respective machine table as per the customer's specifications.

- ❶ Direct mounting using mounting bores
- ❷ Mounting to the 3-jaw chuck
- ❸ Mounting using an adapter flange



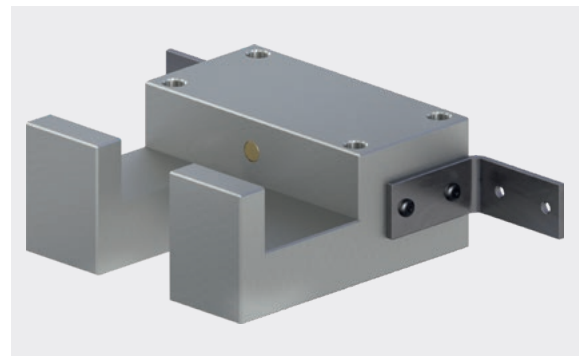
Pole extensions

Pole extensions facilitate the clamping of bushings, cylinders or rings for internal and external machining. The extensions may be individually adjusted. Decisive for the quality of the solution is the use of optimal magnetic products, its polarity, and magnetic output.



Docking station

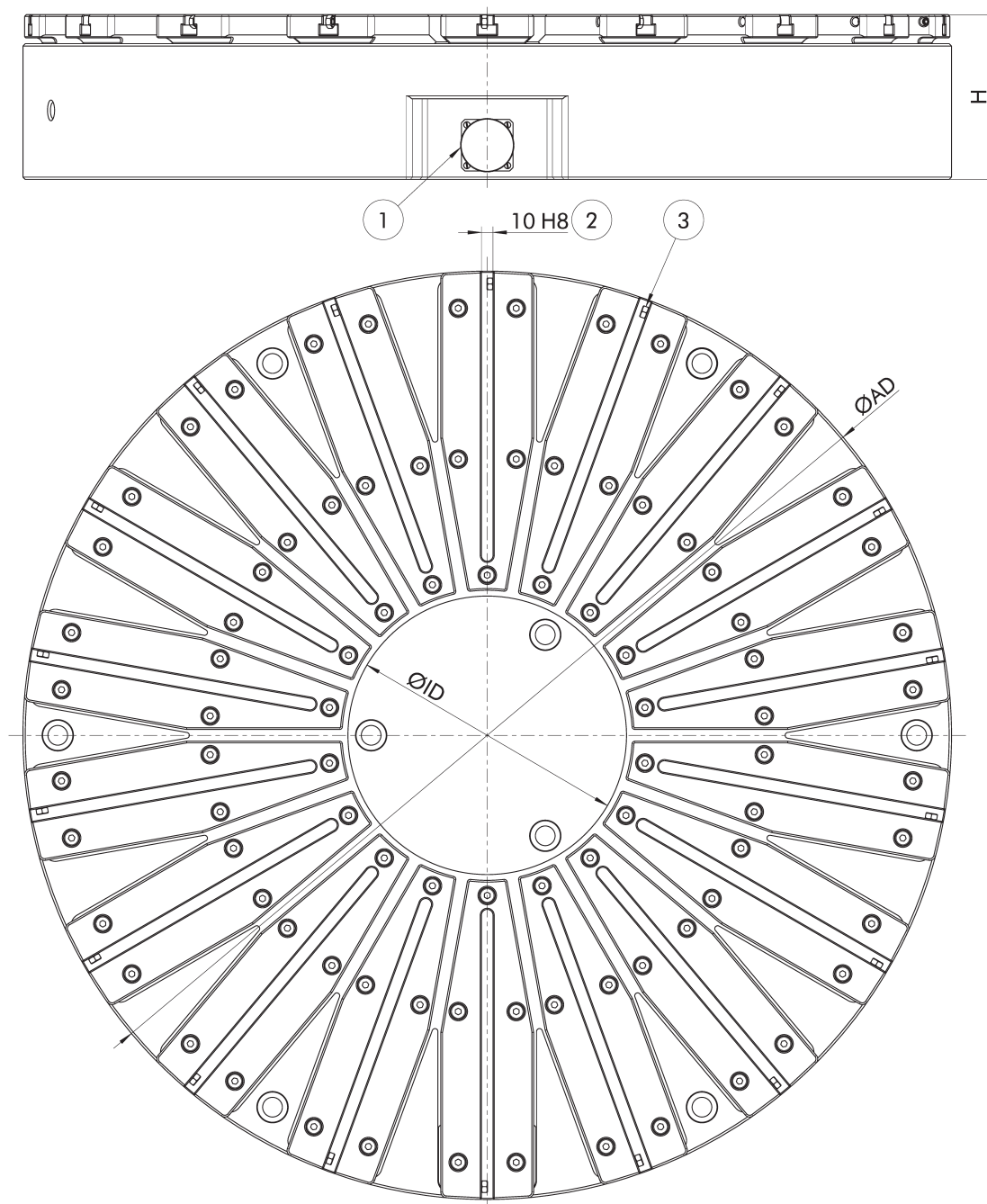
In order to prevent the connection cable from being connected with the magnetic clamping chuck at the start of the machining, there is an additional safety function when turning. By means of a proximity switch, it is queried in a docking station whether the connector is decoupled from the magnetic clamping chuck. The signal can be transmitted to the machine control system and the machining procedure can only be initiated after approval.



Shortest possible setup times and a resulting increase in productivity

With MAGNOS, the workpiece can be clamped within seconds. It is no longer necessary to spend time on the fine adjustment of the clamping elements or on changing the set-up of the workpiece while it is being processed – nor are time-intensive set-up periods and machine downtimes required.





Subject to technical changes.

- ① Fast connection for connection cable
- ② Slot for fastening pole extensions
- ③ Safety device to prevent the pole extensions being ejected

Technical data

Description	ID	ØAD	ØID	Height H	Max. clamping force	Number of poles	Connection	Number of channels	Max. rotational speed	Weight
		[mm]	[mm]	[mm]	[N/cm ²]				[min ⁻¹]	[kg]
MGT-IC Ø600	1311855	600	140	158	160	12	7-PIN	1	650	290
MGT-IC Ø800	1311856	800	250	142	160	18	7-PIN	3	500	460
MGT-IC Ø1000	1311857	1000	250	142	160	18	7-PIN	3	400	720
MGT-IC Ø1250	1311858	1250	400	142	160	24	13-PIN	6	300	1120
MGT-IC Ø1500	1311859	1500	600	142	160	32	13-PIN	6	240	1700

Scope of delivery

Magnetic chuck, operating manual, CE declaration of conformity; without control unit, without pole extensions

Notes

Field of application

For machining workpieces for grinding and finishing during 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.

Special sizes

Magnetic chucks are available on request up to Ø 4,000 mm.
This facilitates for instance the machining of bearing rings Ø 600 – 4,000 mm.

Rotary feed-through

Magnetic clamping chuck with rotary feed-through at the back available on request

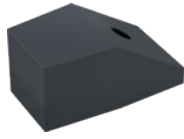
Further technical data

Mains voltage	IP protection class with closed cover plate	Max. working temperature
[V]		[°C]
400/460	67	80

Pole extensions

Fixed pole extension

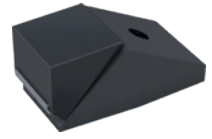
With through-hole, fixing screw M6 and T-nut for guide 10 mm.



Suitable for	Description	Length mm	Width mm	Height mm	ID
MGT-IC	RVF 30-54	90	30	54	0422620
MGT-IC	RVF 50-54	110	50	54	0422621
MGT-IC	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
MGT-IC	RVB 30-54	90	30	54	0422623
MGT-IC	RVB 50-54	110	50	54	0422624
MGT-IC	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 1x 7-PIN for max. one magnetic chuck

Connections:

Control unit = 1 x ILME.

Magnetic chuck = 1 x 7-PIN/4CH.



Suitable for	Description	Length m	ID
KEH-MGT plus 01 400V/50Hz			
KEH-MGT plus 01 460V/60Hz			
KEH-MGT plus 03 400V/50Hz			
KEH-MGT plus 03 460V/60Hz	VBK2-5 1xIL-1x7P 4CH	5	1611051
KEH-MGT plus 01 400V/50Hz			
KEH-MGT plus 01 460V/60Hz			
KEH-MGT plus 03 400V/50Hz			
KEH-MGT plus 03 460V/60Hz	VBK2-10 1xIL-1x7P 4CH	10	1611052
KEH-MGT plus 01 400V/50Hz			
KEH-MGT plus 01 460V/60Hz			
KEH-MGT plus 03 400V/50Hz			
KEH-MGT plus 03 460V/60Hz	VBK2-5 1xIL-1x7P 3CH	5	1611045
KEH-MGT plus 01 400V/50Hz			
KEH-MGT plus 01 460V/60Hz			
KEH-MGT plus 03 400V/50Hz			
KEH-MGT plus 03 460V/60Hz	VBK2-10 1xIL-1x7P 3CH	10	1611046

Connection cable 1x 13-PIN for a max. of 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
MGT-IC	KEH-MGT plus 01 400V/50Hz	1	1472405
MGT-IC	KEH-MGT plus 03 400V/50Hz	3	1472406
MGT-IC	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
MGT-IC	KEH-MGT plus 01 460V/60Hz	1	1472408
MGT-IC	KEH-MGT plus 03 460V/60Hz	3	1472409
MGT-IC	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 01 400V/50Hz	PLC-B 78PIN	0420704
KEH-MGT plus 01 460V/60Hz		
KEH-MGT plus 03 400V/50Hz		
KEH-MGT plus 03 460V/60Hz		
KEH-MGT plus 06 400V/50Hz		
KEH-MGT plus 06 460V/60Hz		

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 01 400V/50Hz	PLC-K-5 1x78P	5	0420707
KEH-MGT plus 01 460V/60Hz			
KEH-MGT plus 03 400V/50Hz			
KEH-MGT plus 03 460V/60Hz			
KEH-MGT plus 06 400V/50Hz			
KEH-MGT plus 06 460V/60Hz			

Docking stations

Docking station

Bracket for connection cable with a check whether the cable has been removed from the magnetic chuck.



Suitable for	Description	ID
MGT-IC	DKS2.C1 CIR24 7-PIN	1654709
MGT-IC	DKS2.C5 CIR32 13-PIN	1654826



**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