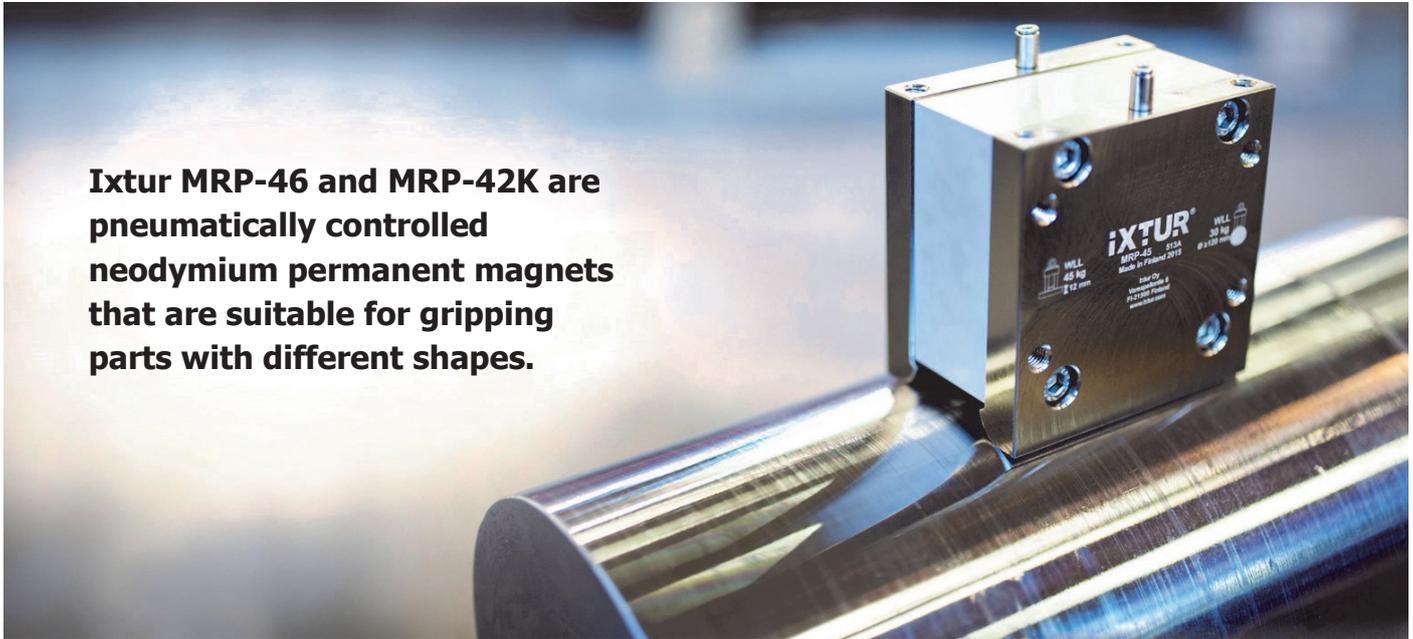


MRP-46, MRP-42K

Pneumatic magnets

10/2017

Ixtur MRP-46 and MRP-42K are pneumatically controlled neodymium permanent magnets that are suitable for gripping parts with different shapes.



TECHNICAL SPECIFICATIONS

	Lifting capacity WLL [kg]	Gripping capacity [kg] [N]	Residual capacity, max. [kg]	Dimensions L x W x H [mm]	Weight [kg]	Operating temperature [°C]	Air pressure: functional range [bar]	Pneumatic hose outer diameter [mm]	Minimum cycle time [s]
MRP-46	Flat: 46* Round: 30**	138* 1350* 90** 883**	1.2 *** ***	80 x 55 x 82.5	1.90	0 ... 50	5 ... 8	2 x 4.0	< 1
MRP-42K	Flat: 42* Round: 27**	126* 1240* 81** 794**	0.3 *** ***						

* plate thickness ≥ 12 mm

** cylinder diameter ≥ 100 mm

*** see 'Residual gripping capacity' on the next page

The lifting capacities (WLL) are determined with a safety factor of 3.

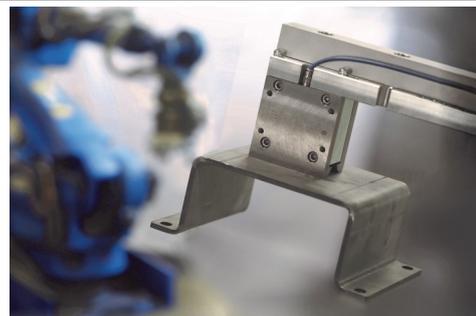
Requirements for compressed air: Water separation, particle filter $\leq 5 \mu\text{m}$

The minimum load diameter for the magnets is 20 mm.

MRP-42K has considerably lower residual gripping capacity than MRP-46.

The magnets do not change their magnetic state in case of loss of compressed air.

The compact size combined with the strong gripping force provides high versatility. Ixtur MRP magnets are maintenance-free and have a short cycle time, allowing high production speed and efficient automation.



MRP magnets are suitable for flat and round parts, and for steel and cast iron. Ixtur magnets can handle solid and perforated material and they can be used in any orientation needed, so it's possible to handle objects with various shapes and angles.

Magnets can be used in various applications: lifters, robot grippers, fixtures, production automation, etc.

More information: www.ixtur.com

Company • Ixtur Ltd. is a Finnish magnet technology company established in 2010. Ixtur develops and manufactures permanent magnet based lifters, grippers and customer applications for machinery, welding, automation, robotics and material handling. Ixtur is focused on energy-efficient magnet components and applications.

IXTUR®

MRP-46, MRP-42K

Pneumatic magnets

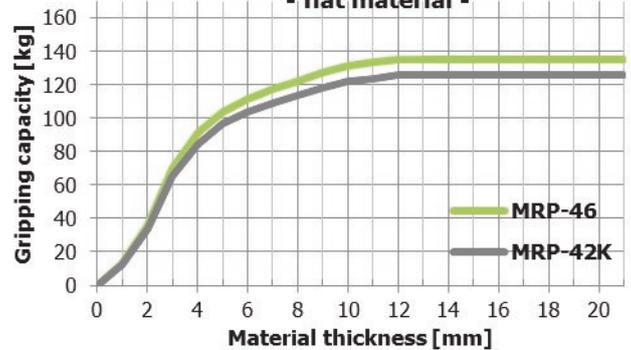
Gripping capacity vs. material thickness and airgap

The nominal gripping capacities can be obtained with the material thicknesses stated in the technical specifications table. The magnets can be used also with thinner materials, but the gripping capacity will be lower, as shown in the graphs on this page. The given gripping capacities are valid for mild steel (S355).

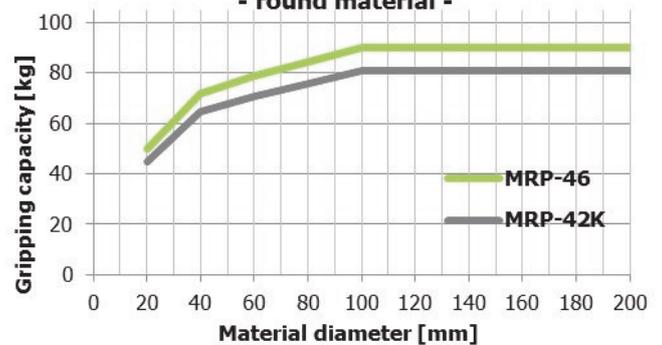
Residual gripping capacity

The residual gripping capacity with MRP magnets, i.e. the gripping capacity when the magnet is OFF, varies based on the material and structure of the gripped part. In extreme cases, parts up to 4 kg may stay attached with MRP-46 and 1 kg with MRP-42K. The residual gripping capacity is greatest as long as the part continuously stays in contact with the magnet after the magnet has been turned from ON to OFF. If the amount of residual capacity is critical to the application, pretesting with the actual part is recommended.

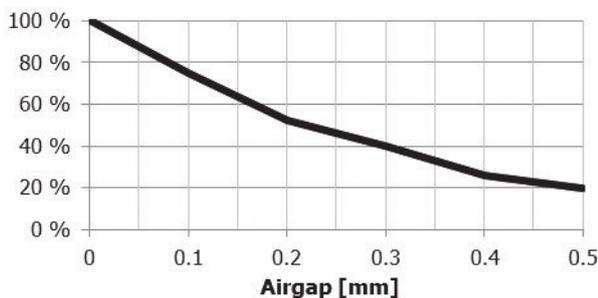
Gripping capacity vs. material thickness - flat material -



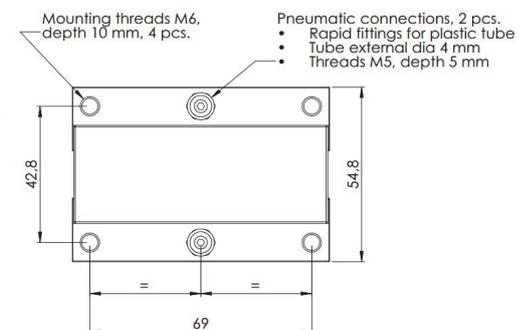
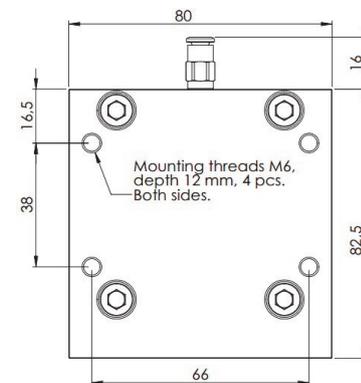
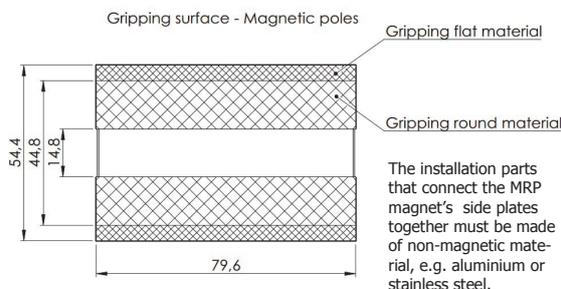
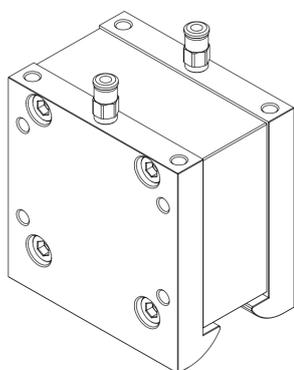
Gripping capacity vs. material diameter - round material -



Gripping capacity vs. airgap - flat material -



MRP-46 & MRP-42K technical drawings (all dimensions are in millimetres)



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