Product name : D12 x 10 / F30 - ferrite magnet

PERFORMANCE PARAMETERS

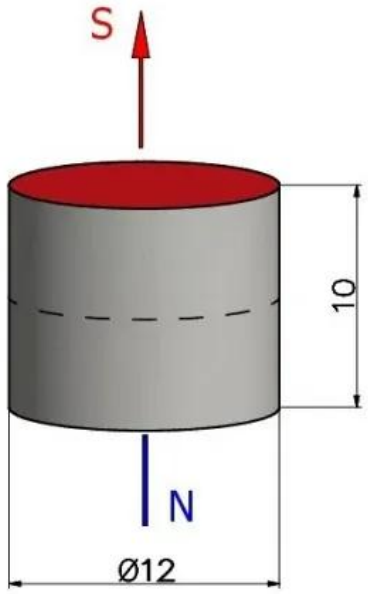
External diameter	12 [mm] +2,5%/-2,5%
Height	10 [mm] +0,1/-0,1
magnetizing direction along dimension	10 [mm]
Direction of magnetization along the height means that one circular surface of a magnet makes the N-pole, while the other – opposite – circular surface refers to the S-pole.	
Grade	F30
Magnet type	Ferrite
Maximal hoisting capacity	0,55 [kg]
The pull force was measured by using metal sheet 10 [mm] thick, acting with perpendicular detaching force. With the force acting on the sliding off, the lifting capacity of the magnet will be 5 times smaller. The air gap comprised between the metal sheet and a magnet causes reduction in the pull force.	
Maximum working temperature	250 °[C]
For flat magnets and magnets mounted in the open magnetic circuit working temperature may be insignificantly lower. For high magnets and magnets mounted in the closed magnetic circuit working temperature equals max. working temperature for a given material. Curie's temperature is ~ 450°[C]. Temperature coefficient of remanence TK(Br): approx. -0,19 %/°[C]. Temperature coefficient of coercivity TK(HcJ): approx. 0,40 %/°[C].	
water-resistant	yes
Ferrite magnets do not require anticorrosive protection. They my be used in water. As ceramic magnets, ferrite magnets are brittle.	
Weight	5,09 [g]
All the numbers quoted were obtained as a result of tests with one specific item in a room temperature and are intended to serve for comparison of practical magnetic properties of magnets offered by the shop.	

MAGNETIC PROPERTIES OF MATERIAL GRADE F30

remanence B_r	min. 0,37 [T]
coercivity H_cB	min. 175 [kA/m]
coercivity H_cJ	min. 180 [kA/m]
energy product $(BH)_{max}$	min. 26 [kJ/m^3]
Magnetic properties of a particular material, together with its shape, volume, max. working temperature and direction of magnetization have influence on practical magnetic properties of a magnet.	
As an example, you will find attached a graph of a course of the II quadrant of magnetic hysteresis loop for a material grade F30.	

PHYSICAL PROPRIETIES

density	~4,5 [g/cm3]

resistivity	10^4 - 10^8 [uOhm x cm]

TECHNICAL DRAWING