

These Holding Magnets are D.C. operated units which, when energised, generate an electro-magnetic field that can be employed for the purpose of holding, or manipulating, ferrous materials.

When applying, observe the appropriate Health and Safety Regulations re: operating, electrical interlocking and control system procedure.

Standard Voltage: 24 Volts D.C.
Other voltages up to a max. of 220 Volts D.C. are available at extra cost.

These Magnets are continuously rated.

Protection in accordance with DIN 40 050

Insulation Class: E

Ref: Units to Protection Class. 1. Earth connections must be in accordance with VDE 0100 Para. 6. This responsibility rests with the user.

Units are manufactured and tested to VDE 0580 and conform to CENELEC Memorandum No. 3. Part. 3. Para. 2.3 E. E. C. Equipment Safety Regulations.

For application information, refer to Application and Operating Instructions 01/10/17.

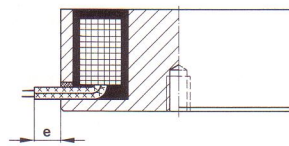
Please take note of ordering data!



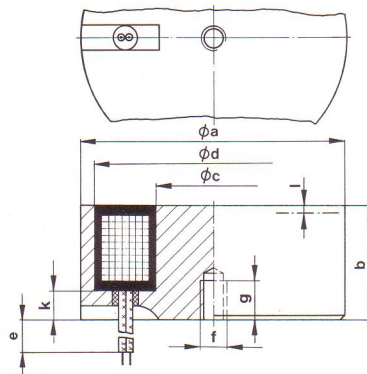
Type 10 320 02 to 25 B/C
with Flying Leads
Protection: Magnet IP 65



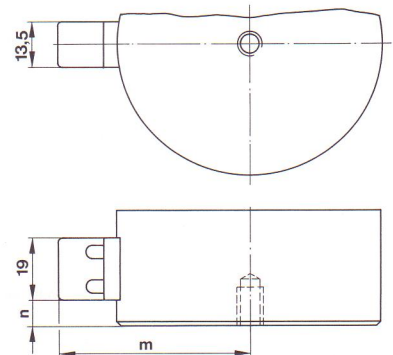
Type 10 321 02 to 08 B/C
with Terminal Block
Protection: Magnet IP 65
Terminals IP 20



Type 10 320 02 B/C
with Flying Leads



Type 10 320 03 to 25 B/C
with Flying Leads



Type 10 321 02 to 08 B/C
with Terminal Block

Technical Data

The Max. Hold Forces F_H listed relate to magnets operating at 90 % of nominal working voltage and normal working temperature, (ca. 70 K above ambient without Heat Sink) holding a workpiece of optimum thickness, having a good surface finish, (manufactured in St 37 (En2) matl.) which fully covers the magnet holding face, without air gaps. ($\delta_L = 0$).

In cases where workpiece materials, surface finish and/or profiles differ, magnet hold force capability will be reduced (see Application Data 01/10/17).

In all applications however, adequate safety margins must be introduced.

The Input Powers listed relate to a magnet coil temp. of 20 °C (VDE 0580/10.70 Para. 9.1) and represent the max. requirements on which to base supply equipment.

In operation the power demand will reduce in relationship to the percentage of magnet "ON" time.

Dimensions (mm)

Subject to alternation

Dimension "l" is the maximum reserve pole thickness which can be utilised for re-grinding or magnet profiling. A centrally positioned tapped hole is provided for fixing the magnets. If a larger central fixing hole is required, it must be noted that the size of hole must not exceed 70 % of "c" dia., the depth of hole is optional.

If more than one fixing hole is required, (e.g. on a P.C.D.) it must be stringently observed that the depths of holes be less than dim. "k". Whichever method of fixing is adopted, ensure that the size of fixing screw utilised has enough length to take up the full depth of the fixing hole, otherwise the magnet characteristics will be impaired.

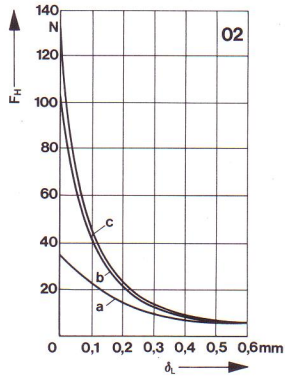
Sz.	Magn. Holding Face	Max. Hold Force at $\delta_L = 0$	Input Power	Weight	a	b	c	d	e	f	g	k	l	m	n
	\varnothing mm	F_H N	P_{20} W	m kg											
02 C	25	140	3,2	0,06	25	20	11,1	22,3	200	M 4	6	3,5	1	28,5	0,5
03 C	32	265	3,5	0,11	32	22	14,3	28,6	200	M 4	6	5	3	32,5	0,5
04 C	40	405	5,2	0,2	40	25,5	17,9	35,8	200	M 5	8	5	3	37	0,5
05 C	50	720	6,5	0,3	50	27	22,4	44,7	200	M 5	8	5,5	3	42	4,5
06 C	63	1140	9	0,55	63	30	28,2	56,3	200	M 8	12	6	3	49	6,5
08 B	80	2400	15	1,2	80	38	34	72,8	200	M 8	12	8,5	3	57,5	7,5
10 B	100	3400	20,5	2,1	100	43	42,8	91,3	300	M 10	15	10	3	-	-
15 B	150	9300	37	6,4	150	56	67,9	134	300	M 16	24	16,5	3	-	-
18 B	180	15000	50	10,5	180	63	84,8	161	300	M 24	36	20,5	3	-	-
25 B	250	30000	90	25,9	250	80	117,5	223	300	M 24	36	28,5	3	-	-

Hold Force Characteristics

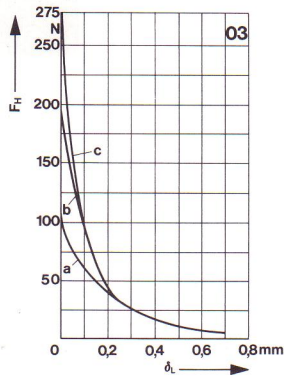
Hold Force capability F_H is dependant upon the size of operating Air Gap δ_L between the magnet holding face and the

workpiece, coupled with the effective material thickness. The forces outlined relate to workpiece manufactured in St 37 (En2) material, which fully cover the magnet holding

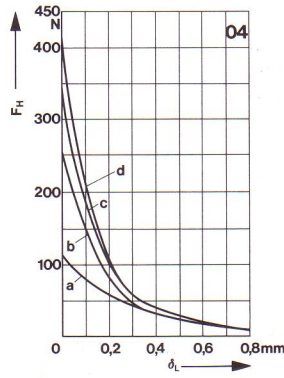
face, with the magnets operating at 90 % of their nominal working voltage and at normal working temperature. (70 K above ambient without Heat Sink).



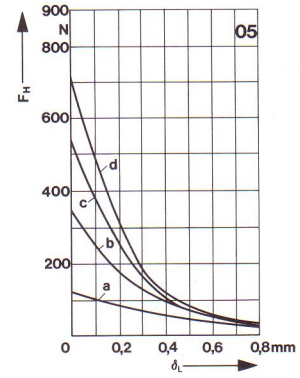
Eff. Material Thickness
a = 1 mm c = 3 mm
b = 2 mm



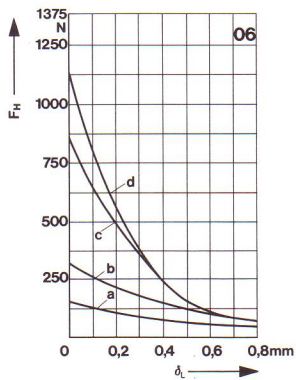
Eff. Material Thickness
a = 1 mm c = 3,5 mm
b = 2 mm



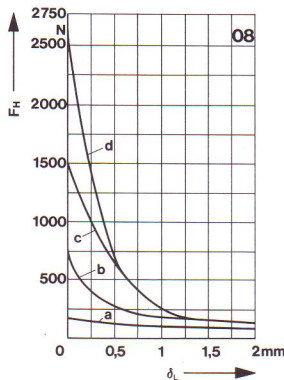
Eff. Material Thickness
a = 1 mm c = 3 mm
b = 2 mm d = 4 mm



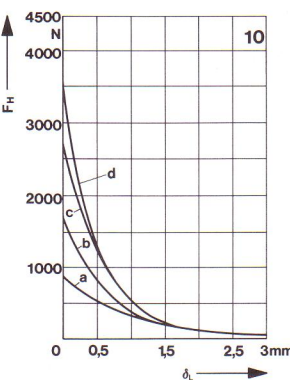
Eff. Material Thickness
a = 1 mm c = 3 mm
b = 2 mm d = 5 mm



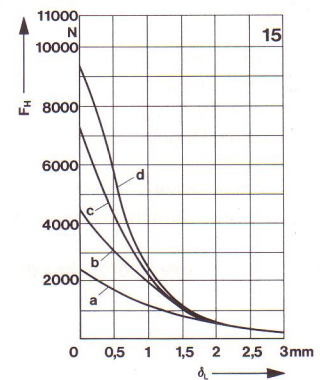
Eff. Material Thickness
a = 1 mm c = 4 mm
b = 2 mm d = 6,5 mm



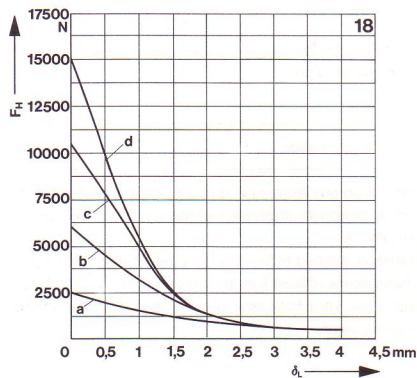
Eff. Material Thickness
a = 1 mm c = 5 mm
b = 3 mm d = 9 mm



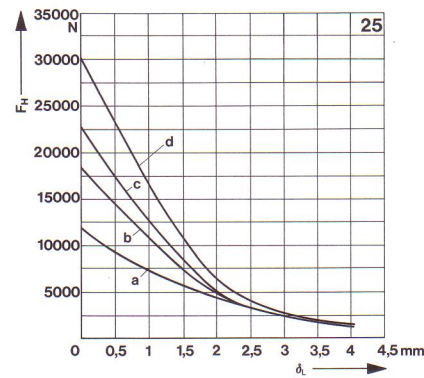
Eff. Material Thickness
a = 3,5 mm c = 7,5 mm
b = 5,5 mm d = 10,5 mm



Eff. Material Thickness
a = 5 mm c = 12 mm
b = 8 mm d = 17 mm



Eff. Material Thickness
a = 5 mm c = 13 mm
b = 9 mm d = 21 mm



Eff. Material Thickness
a = 13 mm c = 21 mm
b = 18 mm d = 29 mm

Ordering Data

Electro Holding Magnet
Type: 10 32 . Size: . . . B/C
Nom. Voltage: . . . Volts D.C.
Input Power: . . . W
Accessories
Single Phase Transformer Rectifier Unit
Types: 32 213/32 224 F

Order Example

Electro Holding Magnet
10 320 08 B
24 Volts D.C.
15 W