TECHNICAL SHEET Nº 2112

PERMANENT MAGNET BRAKE

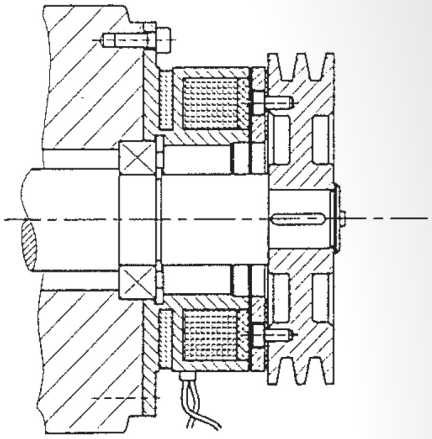
Type FIP

ASSEMBLY EXAMPLES

Construction 1.1

With external fastening
Pulley adjustment

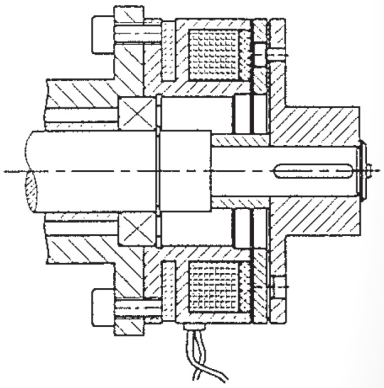
Figure 1



Construction 1.3

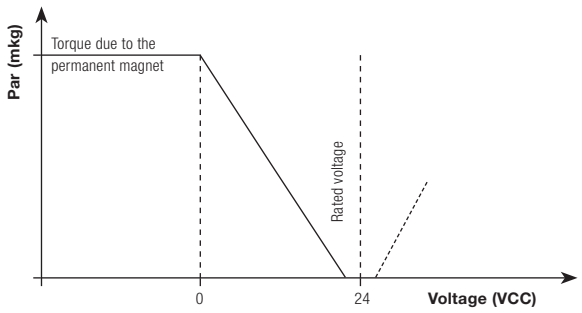
With posterior fastening
Adjustment shaft

Figure 2



CURVE FEATURE

Torque versus voltage.



Description

The EIDE FIP electromagnetic brake with permanent magnet consists basically of an inductor core, being made up of permanent magnet, coil, friction material and armature assembly. This assembly consists of the own disk induced by a spring membrane to be mounted directly on pulley, chain sprocket, etc. (see construction 1.1) or an induced bracket bushing to be mounted on the shaft on which the braking action will be exercised (see construcion 1.2 and 1.3).

The permanent magnet attracts the armature assembly, deforming the membrane spring and producing the braking between the armature disk and the friction material.

By applying a voltage (normalized to 24 VCC –1/+2) to the coil (ED100%), it creates a magnetic field. This magnetic field cancels the permanent magnet. The armature is moved by membrane spring and braking stops without residual torque.

The two friction surfaces must be free of grease or oil, as their presence decreases the braking torque. Also, for the correct operation of the assembly, the supply voltage should be as close as possible to the nominal. **Attention to the polarity: Red Cable +.**

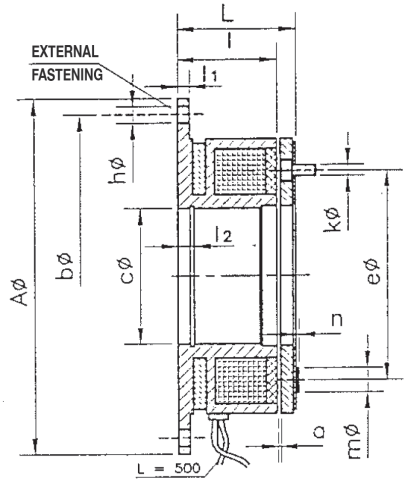
Bores must be made on the pulley to which it is coupled to retract the heads of the rivets. In construction 1.1, the assembly has to be centered only by screws, not being able to make any abrupt change of section in an area of the shaft.

Ordering example for a permanent magnet brake size 1.5 with rear fastening and construction 1.3:

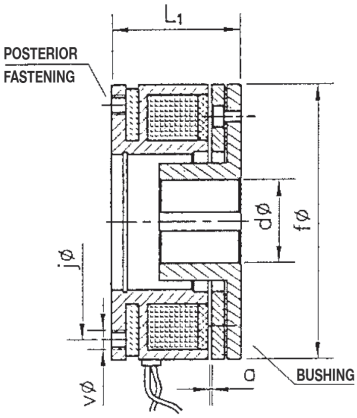
FIP 1,5 / 1.3 / FP

PERMANENT MAGNET BRAKE
Type FIP

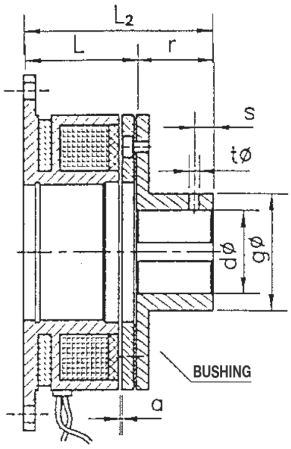
Characteristics and dimensions



Construction 1.1



Construction 1.2



Construction 1.3

SIZE			0,15	0,25	0,75	1,5	3	6	12	20
Maximum torque		Nm.	0,75	1,25	3,75	7,5	15	30	60	100
Maximum consumption		Watts	8	10	12	15	22	28	38	48
Rpm max.		N	10.000	8.750	7.000	5.500	4.400	3.500	2.750	2.200
J	Const. 1.1	kg cm²	0,043	0,091	0,37	1,10	3,75	11,70	40,80	118
	Const. 1.2 - 1.3		0,061	0,137	0,58	1,63	5,67	16,70	56	171
Mass	Const. 1.1	kg	0,175	0,290	0,435	0,725	1,45	2,45	4,65	9,15
	Const. 1.2 - 1.3		0,195	0,320	0,535	0,925	1,75	3,15	6,15	12,15
Level “a” with current		mm	0,15	0,2	0,2	0,2	0,3	0,3	0,3	0,5
		A	54	65	80	100	125	150	190	230
		L	28,8	32,2	30	32,7	36	41	47	53,5
		L1	31,4	35,2	33,5	36,7	41	47	54	62,5
		L2	40,8	44,2	45	52,7	61	71	85	101,5
		b	47	58	72	90	112	137	175	215
		c	19	26	35	42	52	62	80	100
		d	–	–	–	10	10	14	19	24
		d max.	10	15	15	25	30	40	50	70
		e	30	38	46	60	76	95	120	158
		f	40	50	63	80	100	125	160	200
		g	17	24	27	37	42	52	65	83
		h	4x3,4	4x3,4	4x4,5	4x5,5	4x6,5	4x6,5	4x9	4x9
		k	3xM3	3xM3	3xM3	3xM4	3xM5	3xM6	3xM8	3xM10
		l	26	29	26	28	30	34	38	42
		l1	2	2	2,5	2,5	3	4	5	5
		l2	3	3,2	3,5	4,3	5	5,5	6	7
		j	32	42	55	70	90	115	145	185
		m	3x5	3x5	3x6	3x7	3x9	3x10	3x13	3x16
		n	1,5	1,5	1,5	1,7	2,1	2,5	3	6,5
		r	12	12	15	20	25	30	38	48
		s	5	5	5	6	6	10	10	15
		t	M4	M4	M4	M5	M5	M6	M8	M8
Dimensions in mm		v	4xM4	4xM4	4xM4	4xM5	4xM5	4xM6	4xM8	4xM8

NOTE: in all constructions, the fastening may be external or in back.

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