

# ERD VAR 00 / VAR 02 005-300

## Electro-Magnetic Electro Release Brake

### Characteristics

- Electrically operated 24, 103,5 or 207 VDC
- Single disc
- Activated by spring pressure

### Utilisation

- Braking a shaft
- Holding a load

### Particularities

- For dry use
- No residual torque in disengaged position

### Adjustments

- Factory set, no adjustment required
- With wear adjustment for dynamic use

### Maintenance Manual

- SM 321A for sizes 005 to 035
- SM 321 for sizes 060 to 300

### Mounting Precautions

- For horizontal or vertical use for standard versions
- Horizontal use for high torque versions
- Release shipping screws after mounting

### Power Supply

- CBC 140-5 + CBC 140-T (24V)
- CBC 140-5 (103,5V - 207V)

### Response Times

Response times are average values for switching on the DC side. Pull-in = release time for 10 % torque left. Drop-out = time to obtain 90 % torque. DC side operated, AC side operated t x 6 (typ)

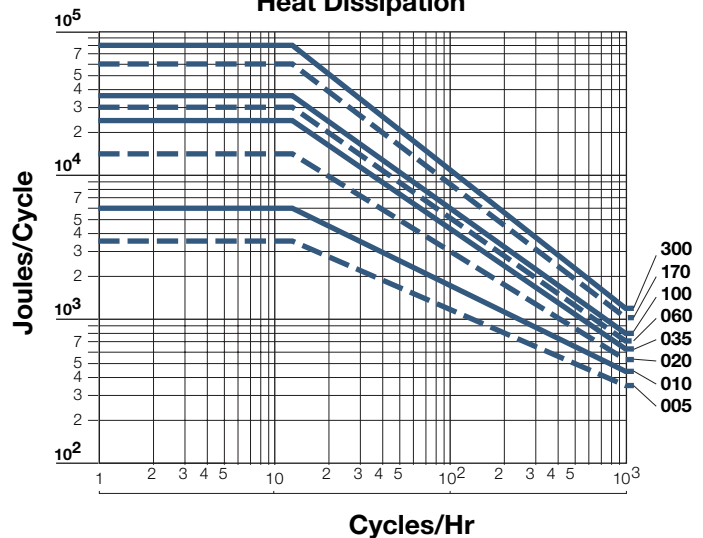
Switch time on the DC side

Sizes		005	010	020	035	060	100	170	300
Pull-in	[ms]	36	54	45	104	188	195	297	354
Drop-out	[ms]	18	26	29	45	47	74	99	160

### Mounting Example



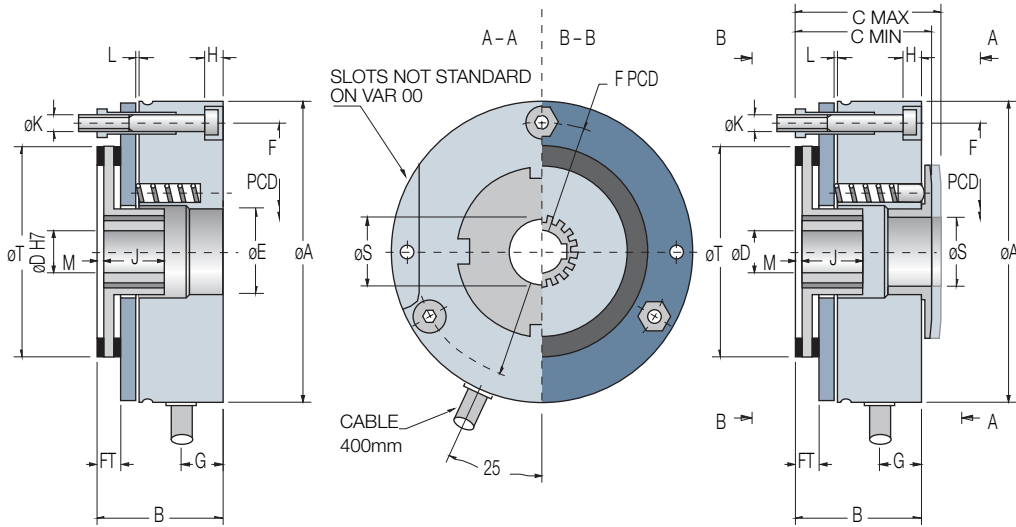
### Heat Dissipation



## Electro-Magnetic Electro Release Brake

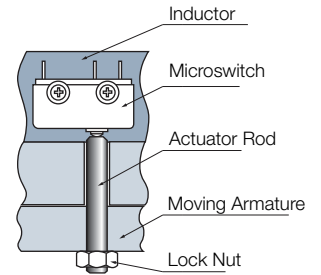
### VAR 00

### VAR 02



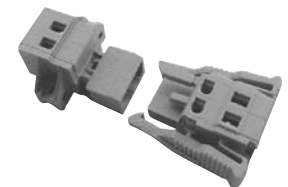
### Microswitch Option

- Kit for sizes 060 to 300 only.



Sizes		005	010	020	035	060	100	170	300	
<b>STANDARD</b>										
Nom. Torque	[Nm]	5	10	20	35	60	100	170	300	
Max. Speed	[min. <sup>-1</sup> ]	3600	3600	3600	3600	3600	3600	3600	3600	
<b>HI-TORK</b>										
Nom. Torque	[Nm]	–	–	–	–	80	130	220	400	
Max. Speed	[min. <sup>-1</sup> ]	–	–	–	–	2600	2300	1900	1600	
Power	P24 VCD	20	25	30	39	47	57	66	99	
	P20 103,5 VCD	23	27	33	43	55	66	76	128	
	207 VCD	23	27	33	43	62	86	84	135	
	A	84	102	127	147	162	188	215	252	
	B	35	41	47,5	54,5	64	71	83	97	
	C min	38,5	44,5	52	61	70	77	89	107	
	C max	40	46,5	55,5	65	74,5	81,5	96	115	
	D pre-bore	8	10	10	14	14	15	20	25	
	D standard H7	10/11	10/14/15*	15/20/22/24*	20/24/25	25/30	25/30/35	35/40/45	35/40/45	
	D max*	12*	15*	24*	28*	32*	40*	50*	54*	
	E	23,5	28,5	40,5	48,5	58,5	63,5	73,5	88,5	
	F	72	90	112	132	145	170	196	230	
	FT	6,5	8,2	9,8	11	12	12	14,7	15,7	
	G	11,7	14,6	15,5	19,7	19	22	27	34	
	H	5,1	6,4	5,8	7,3	8,7	11	13	18	
	J	0/+0,2	18	20	20	25	30	35	40	
	K	3xM4	3xM5	3xM6	3xM6	3xM8	3xM8	6xM8	6xM10	
	L nom	0,2	0,2	0,2	0,3	0,3	0,3	0,3	0,3	
	M synth	1,5	2,5	–	–	–	–	–	–	
	M metal	2	3	4	3	3	3	4,5	5	
	S	19	24	35	40	48	52	60	73	
	T	60	77	96	116	125	150	174	204	
Inertia	Synthetic	[kgcm <sup>2</sup> ]	0,12	0,5	–	–	–	–	–	
	STD Metal	[kgcm <sup>2</sup> ]	0,271	0,70	2,30	7,465	6,3	14,4	29	61
Inertia	HT	[kgcm <sup>2</sup> ]	–	–	–	–	8,5	20,5	47	92
Weight	[kg]	0,9	1,7	3	4,6	6,4	9,9	15,6	25,9	
Connection		<b>Cable</b>								

The HT torque outlined is a static torque: for dynamic applications, please contact our technical department.



### Connector Options

(Delivered without cable)  
2 poles, capacity :  
0,5/2,5mm<sup>2</sup>

Keyways according to  
ISO/R 773 / BS 4235 / DIN 6885-1 / NF E 22-175, tolerance P9  
\*Keyways according to DIN 6885-1/3

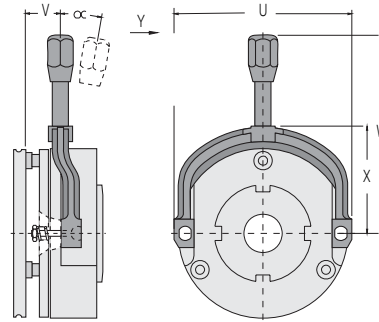
# ERD VAR 00 / VAR 02 005-300

## Electro-Magnetic Single Disc Electro Release Brake

### Hand Release

Designed to be retrofitted, except VAR 00.

Automatically returns to “neutral position” when released, thereby restoring holding torque to the brake.

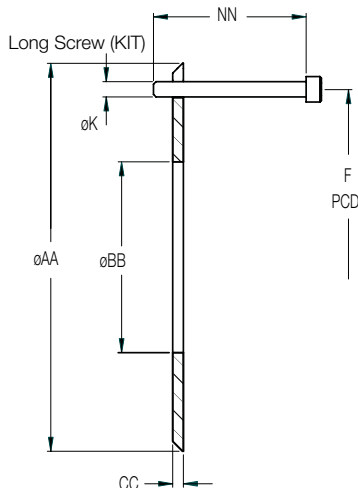


Sizes	005	010	020	035	060	100	170	300
U	88	106	132	152	166	187	223	262,5
V	17	18	25	22	40	44	53	61
W	98	107	129	139	189	205	240	313
X	53	62	76	86	104	120	140	162
Y [N]	30	53	62	107	150	200	250	450
α [°]	10	9	8	8	15	15	15	20

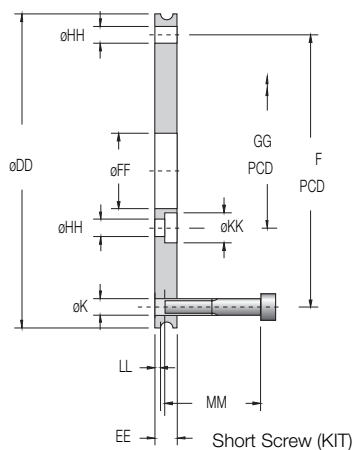
### Friction Flanges for Brake Mounting

Sizes	ERD005	ERD010	ERD020	ERD035	ERD060	ERD100	ERD170	ERD300
AA	87	107	132,5	152,5	–	–	–	–
BB	42	54	60	70	–	–	–	–
CC (min)	3,2	3,2	3,6	4,6	–	–	–	–
DD	83	100	125	145	160	185	212	250
EE	6	7	9	9	11	11	11	11
F	K 3 x M4 HH 3 x 4,5	3 x M5 3 x 5,5	3 x M6 3 x 6,5	3 x M6 3 x 6,5	3 x M8 3 x 8,3	3 x M8 3 x 8,3	6 x M8 6 x 8,3	6 x M10 6 x 10,3
FF	20	30	40	45	55	65	75	90
GG	30	45	56	62	74	84	100	120
KK	8	10	11	11	14	14	14	17
LL	2	2	3	3	3	3	3	3
MM	35	40	50	55	63	68	77	87,5
NN	40	45	55	60	–	–	–	–

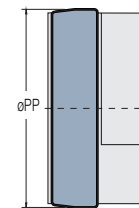
### Intermediate Flange



### Thick Flange



### Dust Cover Option



Sizes	005	010	020	035
PP [mm]	88	106	132	152




Sizes	060	100	170	300
PP [mm]	166	192	219	256

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## Electro-Magnetic Single Disc Electro Release Brake

### Classification Key

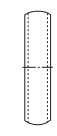
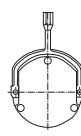
\* Microswitch Only for VAR02

Nominal Torque $M_d$ [Nm]	300	 <b>M</b>	 <b>S</b>	 <b>HT</b>	**Special 207 VDC 103,5 VDC VDC	See page 73 00 Pre-bored [mm]	None <b>0</b> With <b>1</b>
	170						
	100						
	060						
	035						
	020						
	010						
	<b>005</b>						


  

Model	Size	Design	OPTION	Voltage VDC	Bore H7	
<b>E R D</b>	<b>0 0 5</b>	<b>2 0</b>	<b>M 1 2</b>	<b>0 2 4</b>	<b>1 1</b>	<b>0</b>

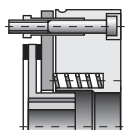
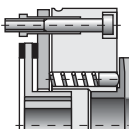
  

0	None	
<b>1</b>	Dust Cover	
2	Hand Release	
3	1 + 2	

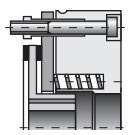
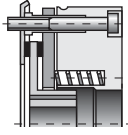
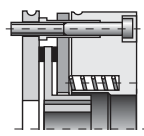
  

Cable <b>0</b>	
Cable + Connector 1 (Unmounted)	

VAR 00		$M_d$ No Adjustment
VAR <b>02</b>		$M_d$ Central Adjustment

No Friction Flange		<b>0</b>
Intermediate Friction Flange (size 005-035 only)		<b>3</b>
Thick Friction Flange		<b>2</b>

\* Only for sizes 060 to 300

\*\* Min. 50 pieces