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Embragues Electromagnéticos Directos Monodisco



	ELECTROMAGNETIC SINGLE-DISK CLUTCHES	EMS	08
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GENERAL FEATURES

Because of their simple design, ease of application and functional safety and precision, these clutches have met with great favor among manufacturers and engineers in the mechanical field. Designed for dry run condition only, they provide the considerable advantage of being free from any dragging in the neutral position, since the friction surfaces are completely separated.

Each unit consists of an electromagnet, an armature and a central hub, which supports the cup-holder radial bearings and has the rotor connected to it. The friction surface is attached to the front face of the rotor.

The armature has a toothed center hub, which grants the unit the possibility to be subjected to a high number of interventions.

A system for automatically compensating for friction-surface wear is also provided. As a result, the gap is kept constant without the need for any required intervention and permits the maintaining of constant coupling times.

ELECTROMAGNETIC CONTROL

*These clutches are in accordance with **VDE 0580 NORMS**.*

POWER SUPPLY

*Standard clutches operate on **24 V DC -0 +15%**.*

On request, different voltages are available.

MOUNTING AND MAINTENANCE

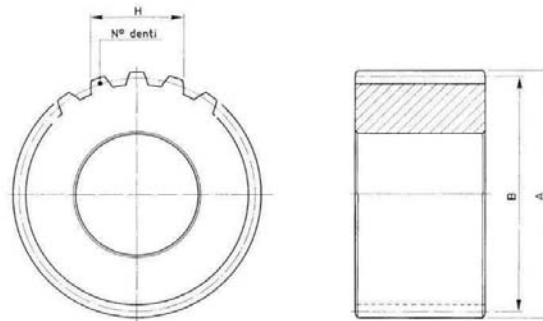
For mounting, please follow the instructions and examples given.

The electromagnet require to be anchored against rotation, using the special bracket located on the outside diameter of the cup, and being particularly careful to see that the coupling is not rigid or forced, otherwise the service life of the radial bearings will be significantly reduced.

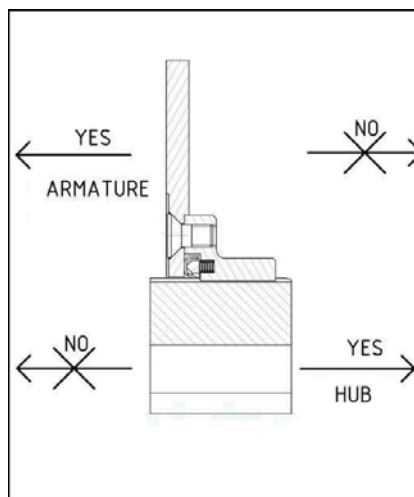
Avoid oil or grease come in contact with the friction surfaces. If this should happen, remove the oil or grease with a cloth lightly moistened with cleaning fluid or gasoline.

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SIZE OF ARMATURE HUBS FOR SINGLE PLATE CLUTCHES EMS (Customer's care)



□□□	A	B	m module	z n. teeth	H		α	
					Max.	Min.		
060	32,2	30	1,5	20	11,39	11,34	3	20°
070	43,5	40,5	1,5	27	16,38	16,34	4	20°
080/090	50,5	47,25	1,75	27	19,12	19,08	4	20°
100	62	60	2/1	30	21,51	21,50	4	20°
130/145/170	64	62	2/1	31	21,467	21,422	4	20°
210	84	80,5	3,5/1,75	23	26,893	26,848	3	20°
255	108	105	3,5/1,75	30	37,568	37,523	4	20°
310	119	115,5	3,5/1,75	33	37,715	37,670	4	20°
390	143,5	140	3,5/1,75	40	48,391	48,346	5	20°



MOUNTING AND DISMOUNTING OF THE TOOTHED HUB

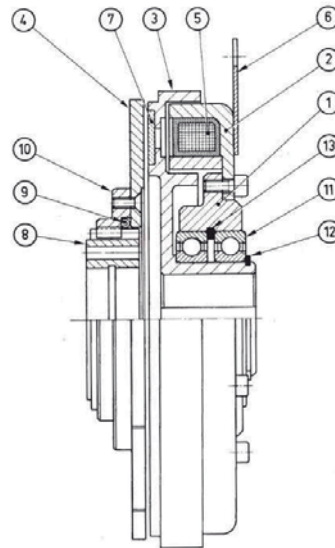
When mounting or dismounting the toothed hub supplied with clutches from series EMS, push it in the direction indicated by arrow only. If in the end, the hub positioning with respect to the clutch will result incorrect, push it completely out the armature and repeat the procedure.

ELECTROMAGNETIC SINGLE-DISK CLUTCHES

EMS

08

EMS

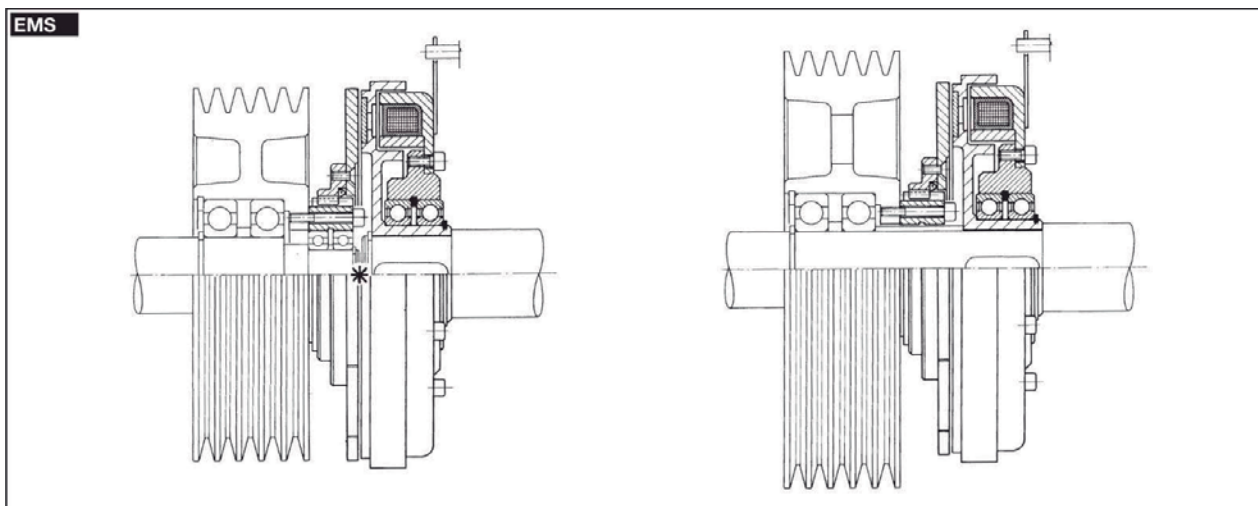


PARTS LIST

1. **MAGNET SUPPORT**
2. **MAGNET CUP**
3. **ROTOR**
4. **ARMATURE TRANSMISSION SLEEVE**
5. **COIL**
6. **BRACKET**
7. **FRICTION LINING**
8. **TOOTHED HUB**
9. **SPRING AND SELF-ADJUSTMENT RING**
10. **TOOTHED FLANGE**
11. **BEARINGS**
12. **OUTER SAFETY RING**
13. **INNER SAFETY RING**

** There must never be any misalignment between the two parts*

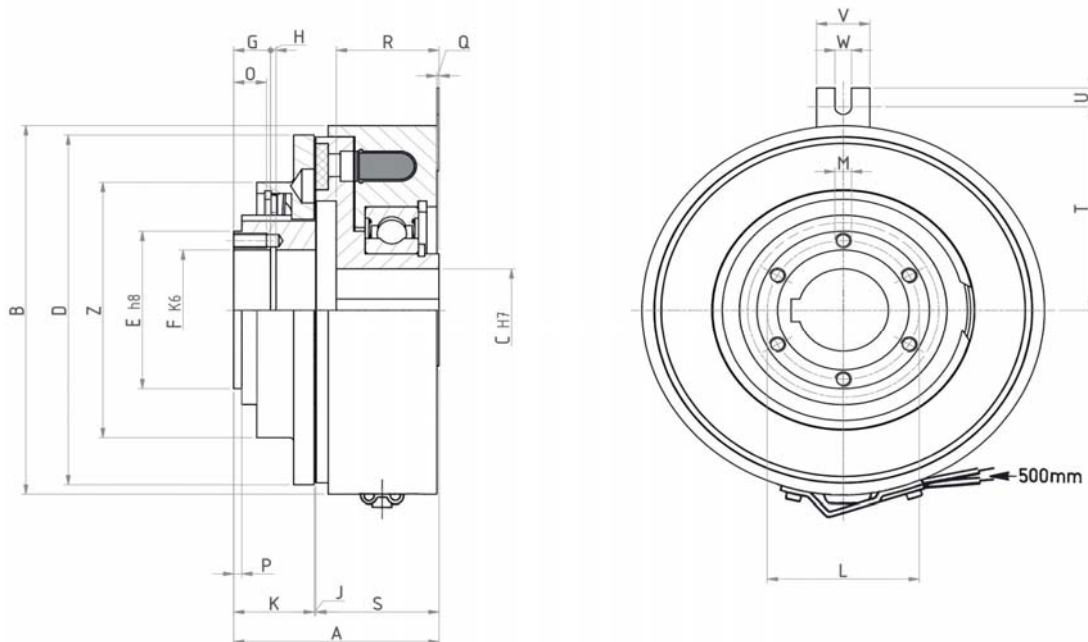
EXAMPLES OF MOUNTING



	ELECTROMAGNETIC SINGLE-DISK CLUTCHES	EMS	08
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MODEL
CODE

EMS □□□
08.03.□□□.01



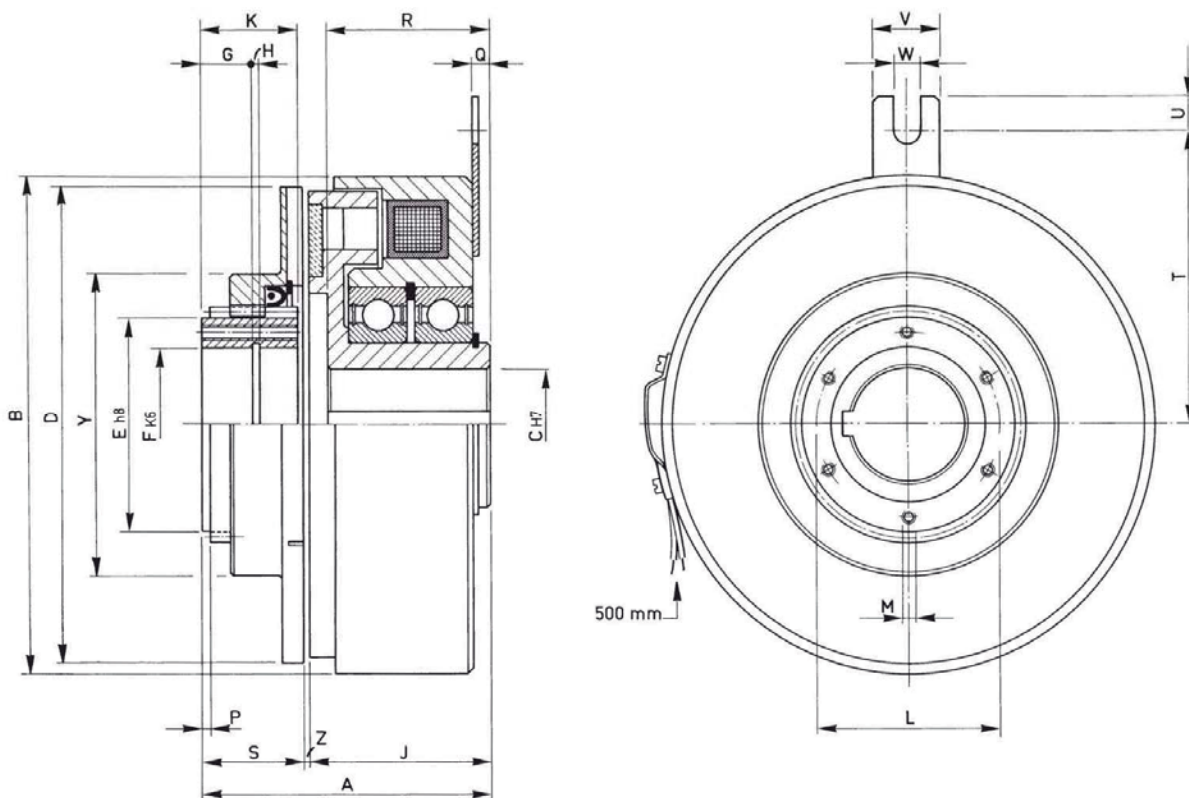
□□□	Torques		R.P.M. limit Max.	Build up time ms	Decay time ms	Watt		Weight kg
	Mi (Nm)	Ms (Nm)				20°	120°	
060	5	6	8000	55	25	10	7,2	1,0
070	7,5	9	7000	65	30	12	8,6	1,3
080	10	12	6000	80	30	14	10	1,5
090	14	20	5500	100	35	16	11,5	1,7

□□□	A	B	C		D	E	F	G	H	J Max.	K	L	M N°xØ	O	P	Q	R	S	T	U	V	W	Z
			Min.	Max.																			
060	40	66	6	12	63	28	19	7	1,1	0,3	16	--	--	--	1,5	-1,5	21	25,5	38	5	13	4	46
070	44	76	8	15	73	38	28	8	1,3	0,3	18	33	6xM3	18	1,5	+0,5	22	26	43	5	13	4	61
080	48	87	10	18	83	42	32	9	1,3	0,3	20	37	6xM4	8	2	+0,5	24	28	49	5	13	4	68
090	50	98	12	22	93	42	32	9	1,3	0,4	20	37	6xM4	8	2	+0,5	25	30	54	5	13	4	68

<i>ELECTROMAGNETIC SINGLE-DISK SELF-ADJUSTING CLUTCHES</i>	EMS	08
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<i>MODEL</i>
<i>CODE</i>

EMS □□□
08.03.□□□.01



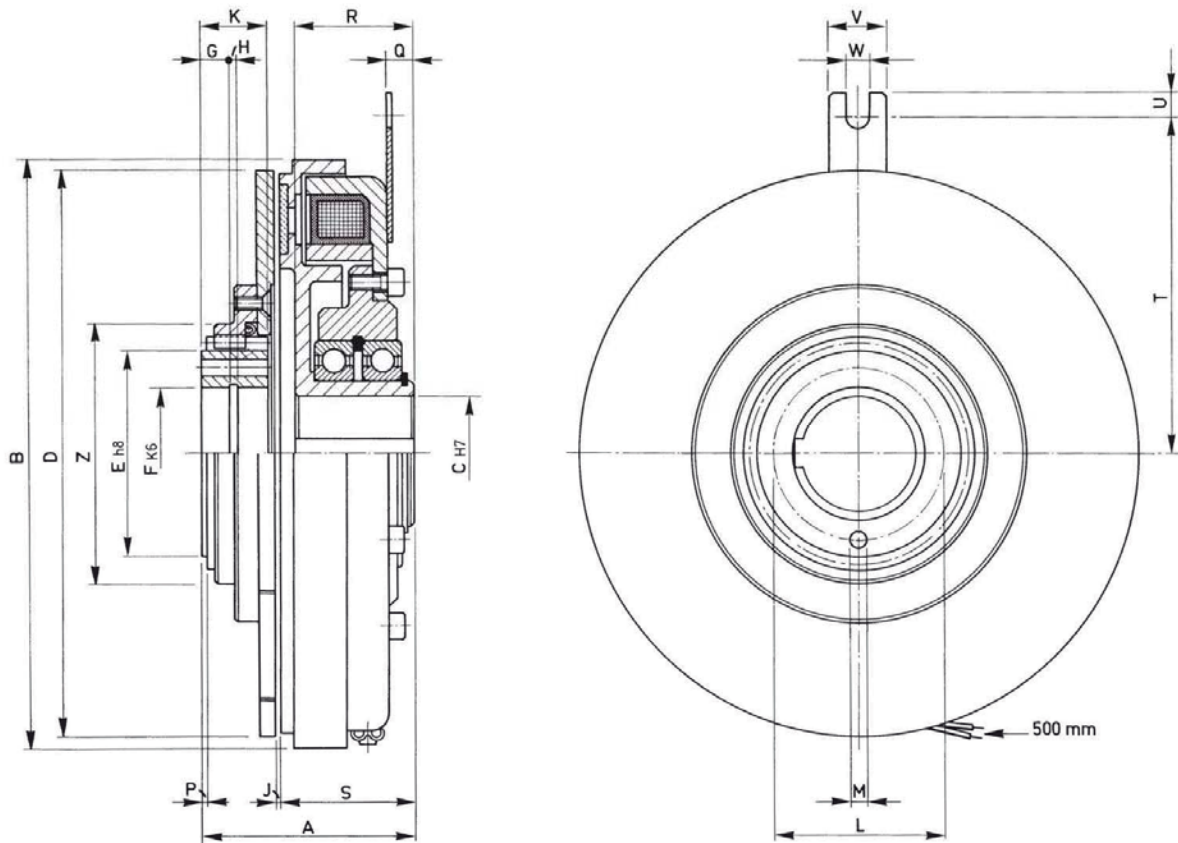
□□□	Torques		R.P.M. limit Max.	Build up time ms	Decay time ms	Watt		Weight kg
	Mi (Nm)	Ms (Nm)				20°	120°	
100	18	30	5000	120	45	18	13	2,0
130	50	80	4200	155	55	38	27,4	4,3
145	60	100	4000	165	65	38	27,4	5,3
170	70	120	4000	195	70	38	27,4	6

□□□	A	B	C		D	E	F	G	H	J	K	L	M N°xφ	P	Q	R	S	T	U	V	W	Y	Z
	Min.	Max.	Min.	Max.																			Max.
100	58	107,5	12	25	103	46 58,5	32 42	10,6 10,05	1,3 1,85	35,5	22,5	40 51,5	6xM5	2	-2	28,5	22,1	59	5	13	4	82	0,4
130	75	135	15	32	129	58,5	42	14	1,85	50	28	51,5	6xM5	2	5	45	25	73	7	19	5,5	82	0,4
145	78	156	18	32	147,5	58,5	42	14	1,85	50	28	51,5	6xM5	2	5	45	28	80	10	25	10	82	0,5
170	78	178	20	38	168	58,5	42	14	1,85	50	28	51,5	6xM5	2	5	45	28	92	10	25	10	85	0,5

F ELECTROMAGNETIC SINGLE-DISK SELF-ADJUSTING CLUTCHES	EMS	08
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MODEL
CODE

EMS □□□
08.03.□□□.01



□□□	Torques		R.P.M. limit	Build up time	Decay time	20°	Watt	120°	Weight
	Mi (Nm)	Ms (Nm)	Max.	ms	ms				kg
210	18	30	5000	120	45	18	13		2,0
255	50	80	4200	155	55	38	27,4		4,3
310	60	100	4000	165	65	38	27,4		5,3
390	70	120	4000	195	70	38	27,4		6

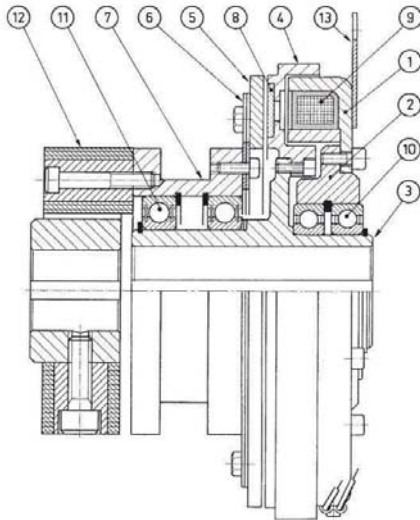
□□□	A	B	C		D	E	F	G	H	J	K	L	M	P	Q	R	S	T	U	V	W	Z
			Min.	Max.						Max.			N°xφ									
210	90	222	25	38	209	72	47	16	1,85	0,6	33	60	8x 8,5	2	8	49	54	125	10	25	10	96
255	95	265	30	52	254	98	62	16	2,15	0,8	32	83	8x10,5	3	8,5	52	58	147	10	25	10	120
310	125	325	35	60	310	110	72	22	2,65	1	54	92	8x10,5	3	10,5	61	68	190	10	30	10	136
390	150	404	40	78	390	127	85	24	3,15	1,2	62	110	10x10,5	4	25,5	78	86	230	10	30	10	164

ELECTROMAGNETIC SINGLE-DISK CLUTCHES

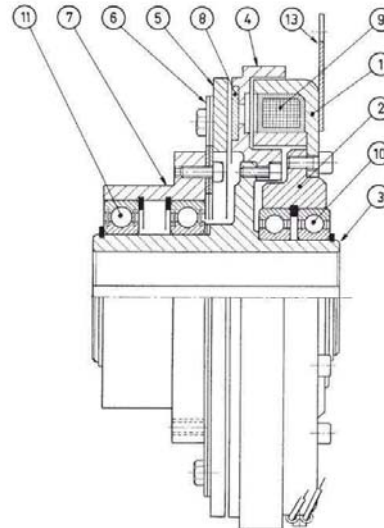
EMSG
EMSR

08

EMSG



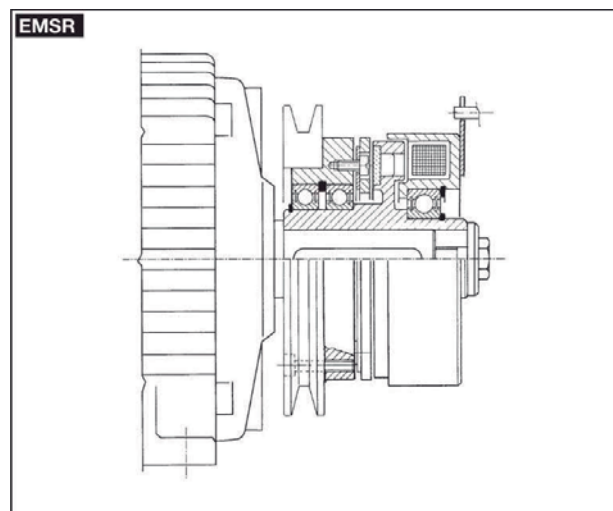
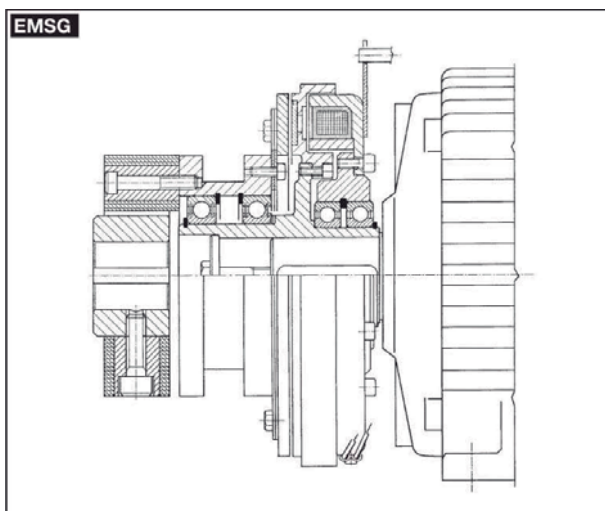
EMSR



PARTS LIST

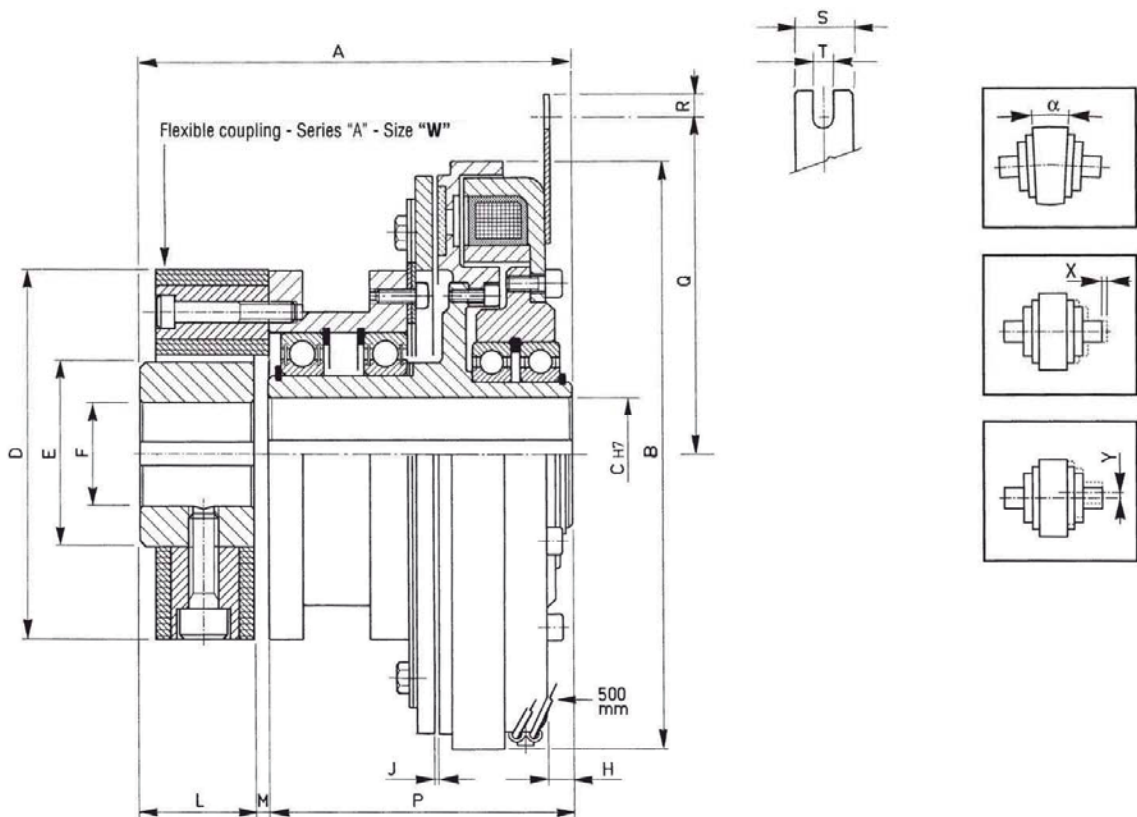
1. *MAGNET CUP*
2. *CUP SUPPORT*
3. *CENTRAL HUB*
4. *ROTOR*
5. *ARMATURE*
6. *FLAT SPRINGS*
7. *SLEEVE*
8. *FRICTION LINING*
9. *COIL*
10. *CLUTCH BEARING*
11. *SLEEVE BEARING*
12. *FLEXIBLE COUPLING*
13. *BRACKET*

EXAMPLES OF MOUNTING



ELECTROMAGNETIC SINGLE-DISK CLUTCHES WITH FLEXIBLE COUPLING	EMSG	08
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MODEL	EMSG □□□
CODE	08.50.□□□.02



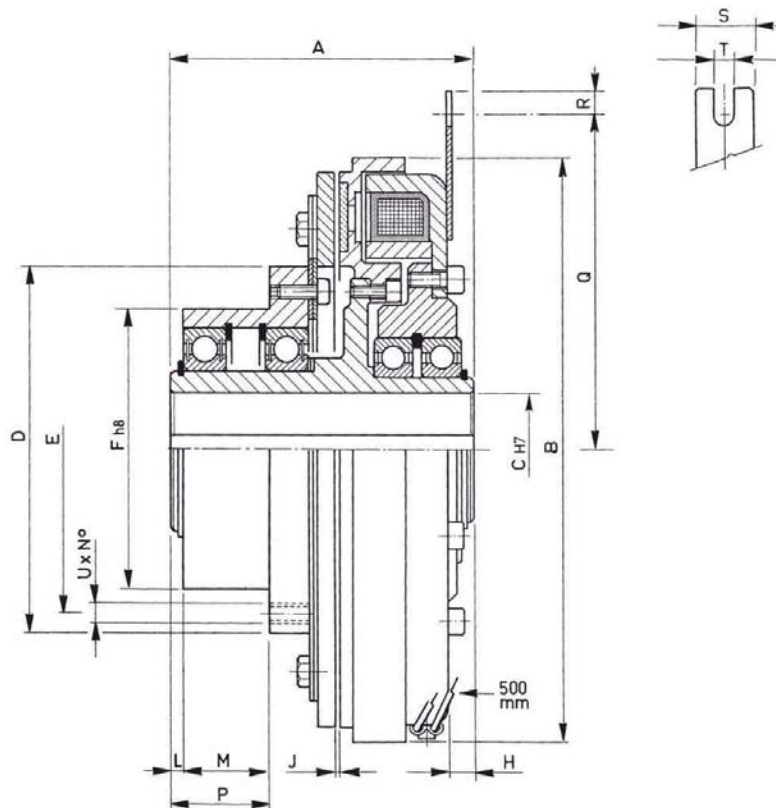
□□□	Torques		R.P.M. limit Max.	Build up time ms	Decay time ms	Torques Coupling Nm max	4-Poles Motor kW max	Watt		Coupling size W	Weight Kg
	Mi (Nm)	Ms (Nm)						20°	120°		
080	10	12	6000	80	30	25	0,37	14	10,1	1	1,5
100	18	30	5000	120	45	60	1,5	12	8,6	2	2,6
130	50	80	4200	155	55	125	4	38	27,4	4	5,5
170	70	120	4000	195	70	280	7,5	38	27,4	8	10

□□□	A	B	C		D	E	F Max.	H	J Max.	L	M	P	Q	R	S	T	X	Y	α
			Min.	Max.															
080	96	87	10	18	56	30	19	0,5	0,2	24	2	70	49	5	13	4	2	1	1°
100	112	107,5	12	25	85	40	26	1	0,2	28	4	80	59	5	13	4	2	1	1°
130	131	135	15	32	100	45	30	5	0,3	30	4	97	73	7	19	5,5	2	1	1°
170	166	178	20	38	120	60	38	5,5	0,3	42	4	120	92	10	25	10	2	1	1°

PLEASE NOTE: Products not listed in the above table (.01 series from catalogue 2011.1) will be available on demand for a period of five years max.

<i>ELECTROMAGNETIC SINGLE-DISK CLUTCHES WITH TRANSMISSION SLEEVE</i>	EMSR	08
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<i>MODEL</i>	EMSR □□□
<i>CODE</i>	08.60.□□□.02



□□□	Torques		R.P.M. limit Max.	Build up time ms	Decay time ms	4-Poles Motor kW max	Watt		Weight Kg
	Mi (Nm)	Ms (Nm)					20°	120°	
080	10	12	6000	80	30	0,37	14	10,1	1,6
100	18	30	5000	120	45	1,5	12	8,6	2,5
130	50	80	4200	155	55	4	38	27,4	5,5
170	70	120	4000	195	70	7,5	38	27,4	9,1

□□□	A	B	C		D	E	F	H	J Max.	L	M	P	Q	R	S	T	U N°xφ
			Min.	Max.													
080	65	87	10	18	78	67	55	0,5	0,2	3,5	20	23,5	49	5	13	4	3xM6
100	80	107,5	12	25	88	76	55	1	0,2	5	22	27	59	5	13	4	3xM6
130	97	135	15	32	109	90	78	5	0,3	5	25	30	73	7	19	5,5	3xM6
170	120	178	20	38	134	110	92	5,5	0,3	9	41	50	92	10	25	10	3xM8

PLEASE NOTE: Products not listed in the above table (.01 series from catalogue 2011.1) will be available on demand for a period of five years max.