

EMCO-Simplatroll™

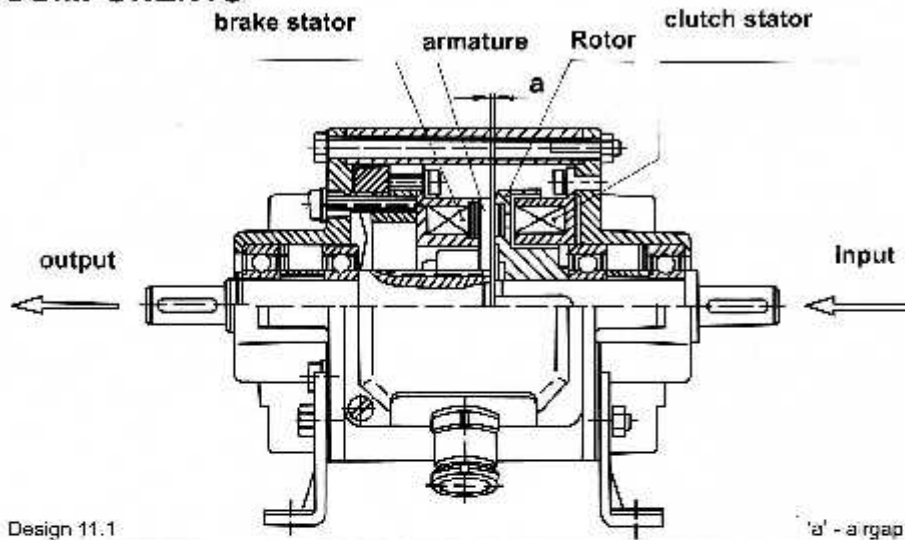
INDUSTRIAL ELECTROMAGNETIC BRAKES & CLUTCHES



**ELECTROMAGNETIC CLUTCH BRAKE UNITS
(Normally Off & Encased)
TYPE 14.800**

www.emco-dynatorq.in

COMPONENTS



Design 11.1

'a' - a rgap

WORKING

When D.C. Power is supplied to Clutch Coil, Rotor attracts Armature Assembly, thus transmitting torque from drive connected to input shaft via Clutch to Load connected through output shaft. On withdrawal of current from clutch, relay contactor or some Suitable circuit when used automatically diverts the current to brake coil, thus instantaneously disengaging drive and simultaneously stopping output shaft connected to Load via Brake.

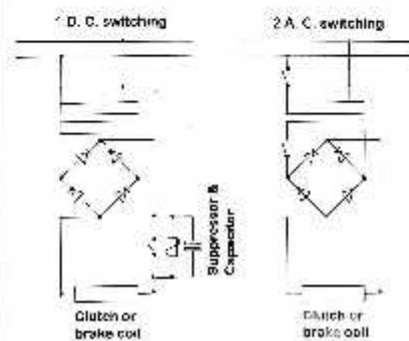
ORDERING INFORMATION

- 1.Type
- 2.Size
- 3.Coil Operating Voltage
- 4.Design
- 5.Shaft diameter
- 6.Flange diameter
- 7.Height at feet

AREAS OF OPERATIONS

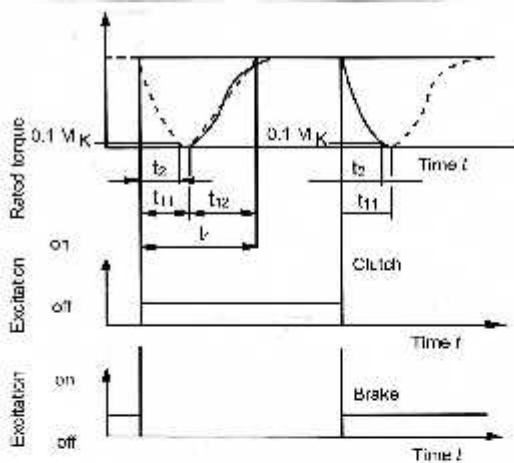
- Packaging Machines.
- Conveyors.
- Machine Tools.
- Special Purpose Machines.
- Welding Machines.

SWITCHING



SWITCHING

Our Clutch-Brake Combination Unit require D.C. supply voltage which is obtained through A.C./D.C. rectification. Normally switching is carried out on the A.C. side. However, for much faster engagement / disengagement time, switching is carried out on the D.C. side for which a suitable arc suppressor and a capacitor is a must to protect the coil and switches from high induction voltages. Engagement/disengagement time is a function of nominal release distance.



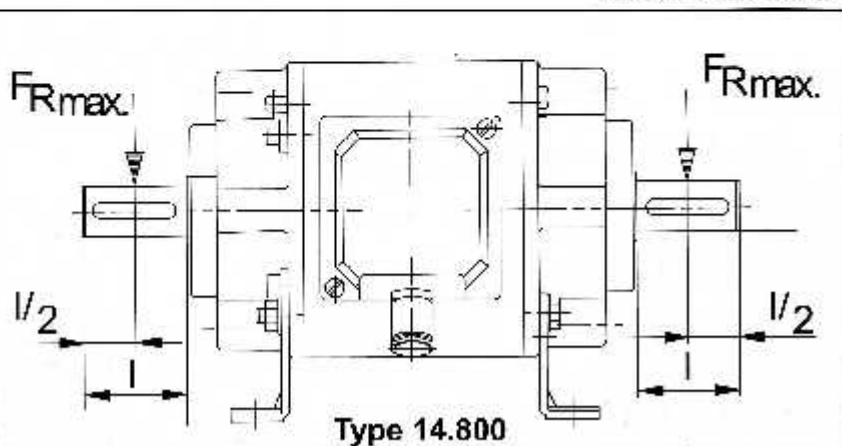
Description of times when engaging and disengaging

- t11 - Delay time when engaging
- t12 - Torque rise time
- t2 - Engagement time
- t - Flows experimental time
- t1 - Brake -> Clutch
- t2 - Clutch -> Brake

Operating times in ms

Size	Type 14.800				
	$t_{11} \approx t_2$	Clutch	Brake	t_{12}	t_1
06	24	42	66	30	54
08	30	84	114	36	66
10	42	102	144	60	102
12	60	144	204	90	150
16	78	174	252	102	180

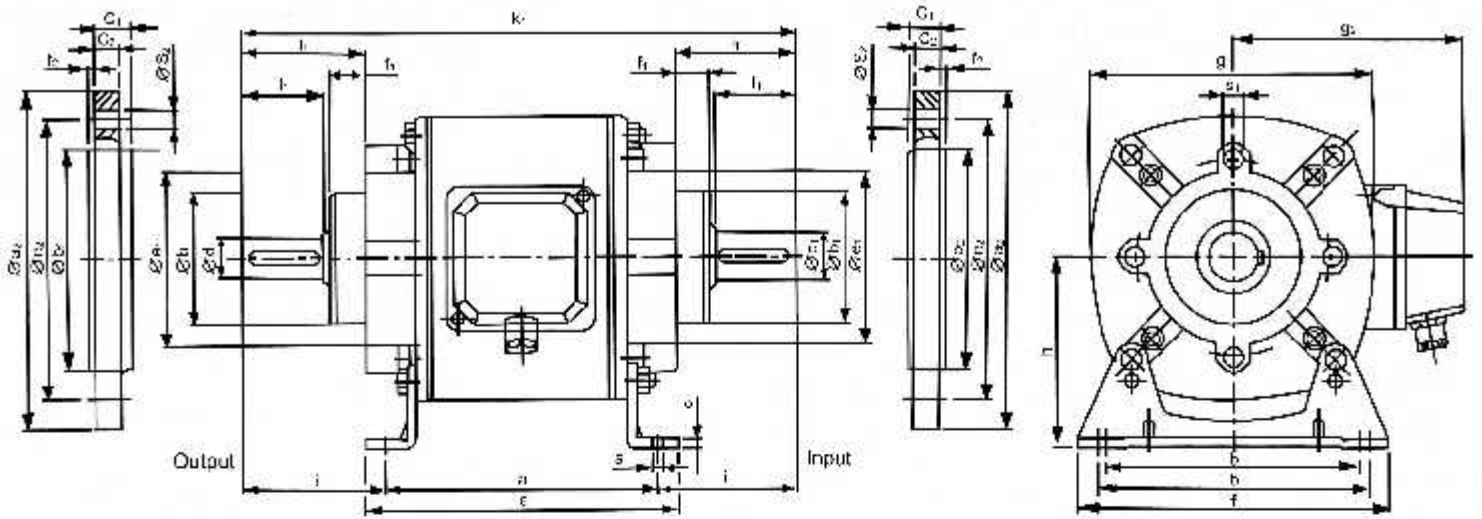
SHAFT LOADS



Type 14.800

Size	Force F_{Rmax} [N]	Force F_N [N]
06	600	325
08	900	425
10	1300	590
12	1900	870
16	2300	1350

DIMENSIONS



Keyways to IS : 2648

All dimensions are in 'mm' only.

PARAMETERS

Size	Mk M ₁₁	Output		Shaft		D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	
		W ₁	W ₂	b ₁ 16	e ₁ 67													
06	7.5	15	11.5	52	67	11	10	90	89	53	35	183	23	M6				
						14				71	42	197	30					
08	15	20	16	65	80	14	10	114	85	71	42	230	30	M8				
						18				80	52	250	40					
10	30	28	21	78	115	18	10	140	110	80	52	280	40	M10				
						24				90	72	300	50					
12	60	35	28	78	115	21	20	167	136	100	72	324	50	M10				
						28				112	82	317	60					
16	120	50	38	98	145	28	20	210	158	112	82	350	60	M12				
						38				132	102	420	80					

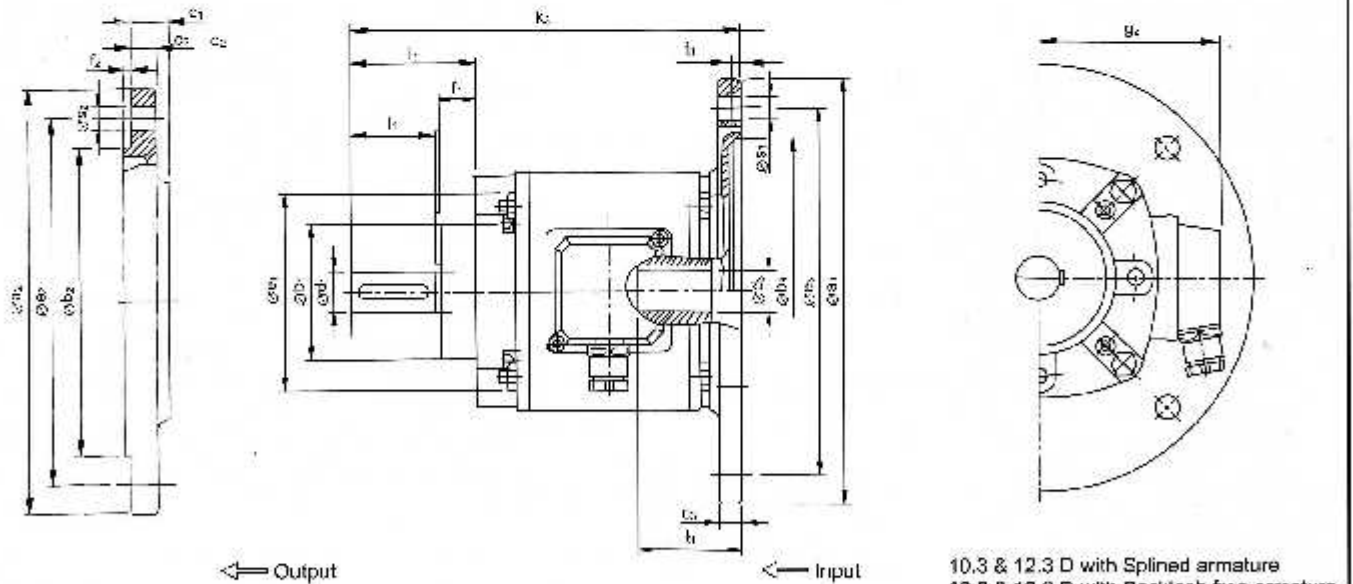
Feet

Size	a	b	a ₁	c	g	f	l	s
06	100	80	35	3	115	100	41.5	7
							49.5	
08	120	102	110	3	140	130	50	9
							85	
10	140	150	140	4	165	160	70	9
							80	
12	160	150	160	5	184	180	82	11
							92	
16	195	185	190	6	215	229	97.5	13
							117.5	

Flange

Size	a ₁	b ₁ j7	C ₁	C ₂	e ₁	f	g
06	140	85	12	10	115	3	9
	160	110			130	3.5	
08	160	110	12	9	130	3.5	9
	200	130			165	4	11.5
10	200	130	22	15	165	3.5	11
	250	180			215	4	13.5
12	200	130	22	15	165	3.5	11
	250	180			215	4	13.5
16	250	190	22	15	215	4	13.5
	300	230			265		

DIMENSIONS FOR DESIGN 10.3(8) & 12.3(8)



10.3 & 12.3 D with Splined armature
10.8 & 12.8 D with Backlash free armature

PARAMETERS

Size	Mk M ₁₁	Output		Shaft		D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	
		W ₁	W ₂	b ₁ 16	e ₁ 67													
06	7.5	15	11.5	52	67	11	10	90	89	53	35	183	23	M6				
						14				71	42	197	30					
08	15	20	16	65	80	14	10	114	85	71	42	230	30	M8				
						18				80	52	250	40					
10	30	28	21	78	115	18	10	140	110	80	52	280	40	M10				
						24				90	72	300	50					
12	60	35	28	78	115	21	20	167	136	100	72	324	50	M10				
						28				112	82	317	60					
16	120	50	38	98	145	28	20	210	158	112	82	350	60	M12				
						38				132	102	420	80					

Output Flange

Size	a ₁	b ₁ j7	C ₁	C ₂	e ₁	f	g
06	140	85	12	10	115	3	9
	160	110			130	3.5	
08	160	110	12	9	130	3.5	9
	200	130			165	4	11.5
10	200	130	22	15	165	3.5	11
	250	180			215	4	13.5
12	200	130	22	15	165	3.5	11
	250	180			215	4	13.5
16	250	190	22	15	215	4	13.5
	300	230			265		

