

EMCO® & EMCO-Simplatroll®

making machines friendly

The brands **Emco** & **Emco-Simplatroll** stand for uncompromised quality in products as well the services. Products that are safe & reliable and service that makes our products and your machines perform efficiently.



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Emco Dynatorq Pvt. Ltd.

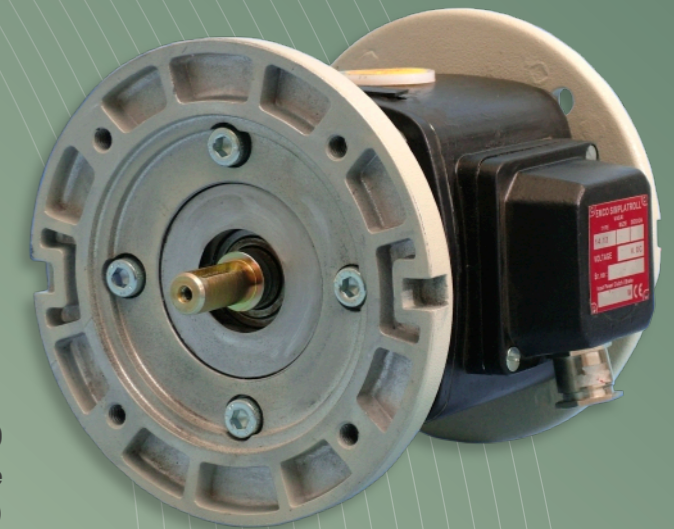
(Formerly **Emco Lenze Pvt. Ltd.**)

CIN NO. : U74999MH1991PTC061109

ISO 9001:2008 Company

EMCO-Simplatroll®

DC
Electromagnetic
Clutch-Brake
Combinations



Type **14.800**
Foot / Flange Mounted **Clutch-Brake**
(Normally OFF)



Type **14.125**
Foot / Flange Mounted **Clutch-Brake**
(Normally OFF)



Emco Dynatorq Pvt. Ltd.

(Formerly **Emco Lenze Pvt. Ltd.**)

ISO 9001:2008 Company

14.800 & 14.125 / Ver. 1 / DEC 2014

Electromagnetic clutch-brake units are frequently used in switched mode systems with synchronous drive speeds. **14.800** clutch-brake turns a continuous motion at the input to intermittent motion at the output shaft in a torque range 7.5-120 Nm. Rapid acceleration & deceleration at constant motor speed is its unique feature. Available with patented wear compensation system makes it easy to maintain. The unit comes with foot or no foot configuration, B5/B14 flange adapters at input side and output side with B5 flange. Units are also available with hollow or solid input & output shafts, using specially designed over excitation switching device, extremely high switching frequencies can be obtained. Zero backlash armatures are available upon request.

The **14.125** clutch-brake can be used for continuous start stop function in any drive transmission arrangement of any machine or mechanism. The standard unit comes with an input and output shaft which can be coupled with any other input and output shaft or other items. Flange mounted option for either input or output or both is also available and hollow shaft instead of solid shaft in input or output or both is also available which facilitates an outside driving or driven shaft to be inserted inside the unit.

Salient Features of Type 14.800

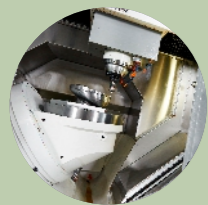
- ▶ Torque in 7.5 to 120 Nm.
- ▶ Five sizes from 7.5 to 120 Nm.
- ▶ Non asbestos friction linings.
- ▶ Patented air-gap adjustment from outside without dismantling the unit.
- ▶ Two axis heights available for each size.
- ▶ Rivet less low inertia armature.
- ▶ Coil with Class 'F' insulation.
- ▶ Dimensioning for 100% duty time.
- ▶ Totally enclosed design.
- ▶ Strong bearing design.
- ▶ Simple to fit.
- ▶ High operating reliability.
- ▶ Ready in assembled form.
- ▶ Fast switching times.
- ▶ Enclosure IP 44.
- ▶ Compact flange mounted designs available.

Salient Features of Type 14.125

- ▶ Torque in 7.5 to 2500 Nm.
- ▶ Simple to fit.
- ▶ Ready in assembled form.
- ▶ Strong bearing design.
- ▶ Totally encased unit.
- ▶ Air-gap adjustable without dismantling the unit.
- ▶ Good heat dissipation.
- ▶ Backlash free torque transmission.
- ▶ High operating frequency.
- ▶ Long life.
- ▶ Single plate dry type. Slotted armature for torque stability.
- ▶ Fast switching times. Coil with Class 'F' insulation.
- ▶ High operating reliability. Special friction disc.
- ▶ Stationery field (No Slip Rings). Low inertia of rotating parts.
- ▶ Consistent operating characteristics.
- ▶ Simple wear compensation adjustment.

Higher coil insulation available on request. * Standard Indian liner. German liner available on request.

Applications



Machine Tools



Welding Machines



Conveyors

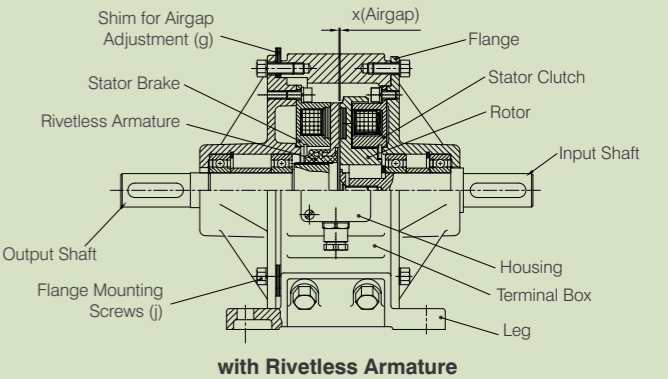
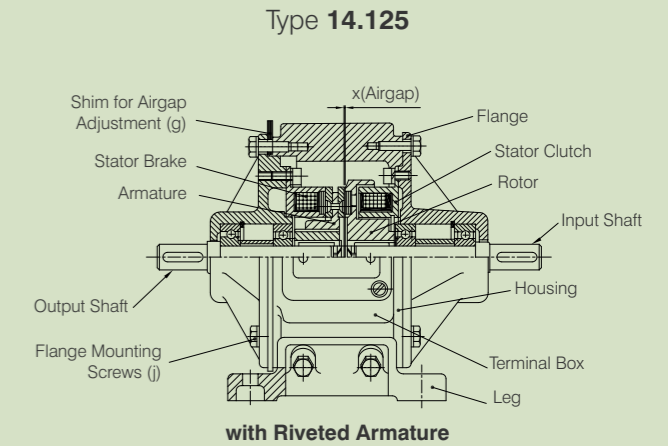
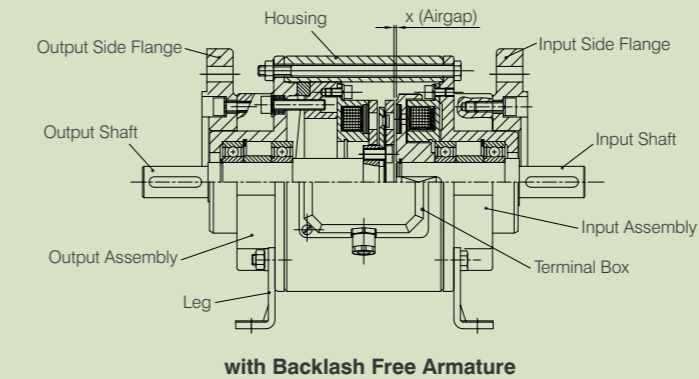
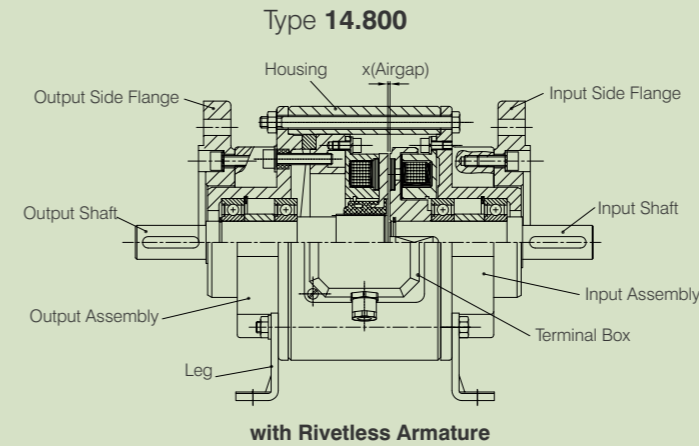


Packaging Machines

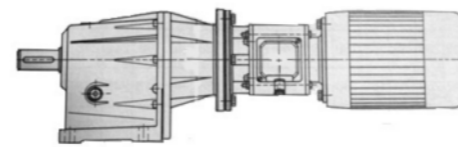


Spl. Purpose Machines

Components

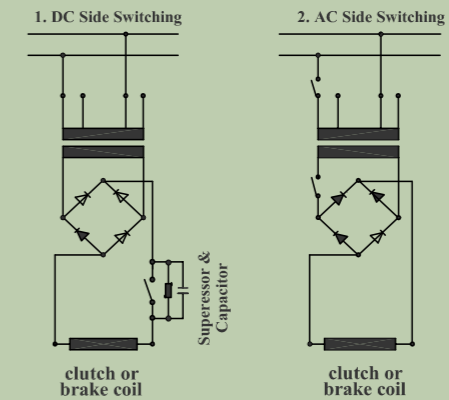


Mounting



Type **14.800**

Switching



Our Clutch-Brake combinations 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, switches etc. from high induction voltages produced during switching off power supply.

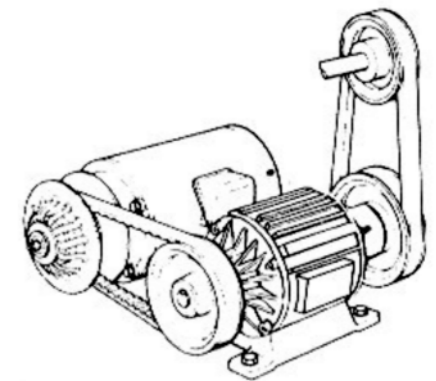
Engagement /disengagement time is a function of nominal release distance (airgap) and type of switching.

Working

Type **14.800**

When supplied with DC voltage the armature is attracted towards the friction material of the rotor and transmits the torque free of backlash. When the supply is interrupted, the pre-stressed spring pulls the armature back into its original position free of residual torque even when mounted vertically.

Mounting



Type **14.125**

Working

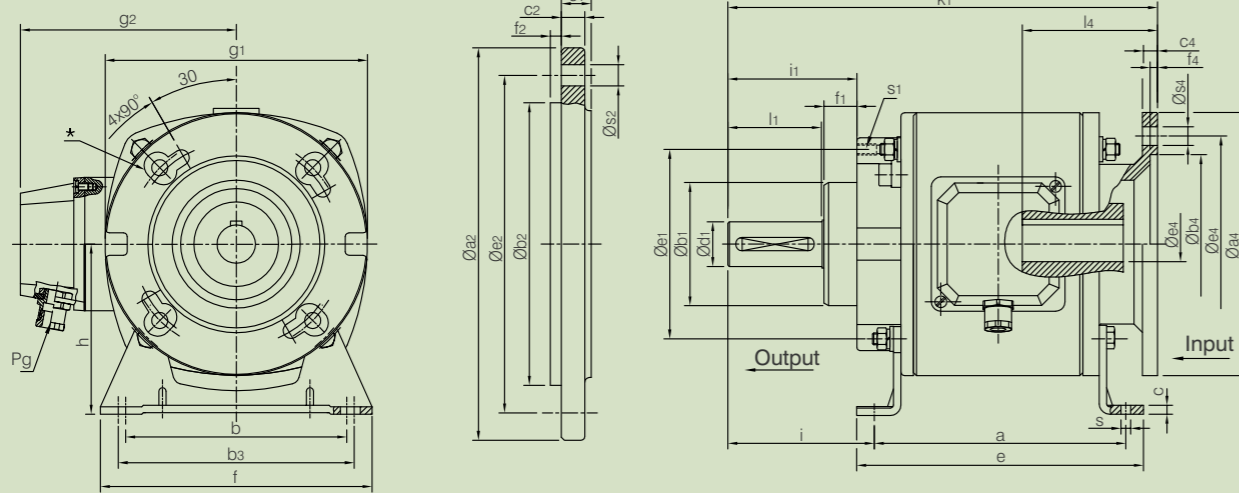
Type **14.125**

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 the load connected through output shaft. On withdrawal of current from clutch, relay contractor 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.

Type **14.800** (Normally OFF)

Dimensions

*Slot - Only for size 06,08,10



Basic Design 14.800. .10.4[9]

Parameters

All dimensions are in mm

Size	M k Nm	Clutch P at 20°C		a ₄	b ₁ h8	b ₄ H9	c ₄	d ₁ k6	d ₃ G7	e ₁	e ₄	f ₁	f ₄	g ₁	g ₂	h	i ₁	k ₁	l ₁	l ₄	s ₁	s ₄	g
		W	W																				
06	7.5	15	11.5	108	52	70.2	5.5	11 14	11 14	67	85	10	3	90	89	63 71	35 42	152 159	23 30	50	M6	7	9
08	15	20	16	135	65	80.2	7	14 19	14 19	90	100	10	4	112	95	71 80	42 52	186 196	30 40	58	M8	7	9
10	30	28	21	140	78	95.2	8	19 24	19 24	115	115	19	4	140	110	80 90	62 72	225 235	40 50	70	M10	9	9
12	60	35	28	160	78	110.2	8	24 28	24 28	115	130	20	4	167	136	100 112	72 82	261 271	50 60	80	M10	9	11
16	120	50	38	200	98	130.2	10	28 38	28 38	145	165	20	5	210	158	112 132	82 102	309 209	60 80	97	M12	12	11

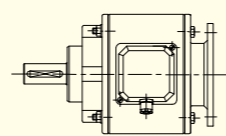
Feet

Size	a	b	b ₃	c	e	f	i	s
06	100	80	85	3	115	100	41.5 48.5	7
08	120	105	110	3	140	130	55 65	9
10	140	130	140	4	165	160	70 80	9
12	160	150	160	5	184	180	82 92	11
16	185	185	195	6	215	223	97.5 117.5	13

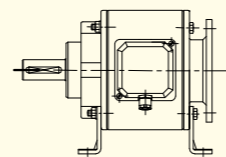
Output Flange

Size	a ₂	b ₂ j7	c ₁	c ₂	e ₂	f ₂	s ₂
06	140	95	12	10	115	3	9
08	160	110	12	9	130	3.5	9
10	200	130	22	15	165	3.5	11
12	200	130	22	15	165	3.5	11
16	250	180	22	15	215	4	13.5

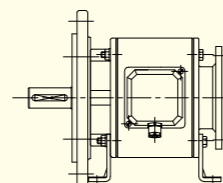
DESIGNS AVAILABLE



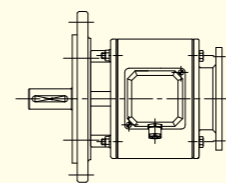
Type 14.800. .10.4 [9]



Type 14.800. .11.4 [9]



Type 14.800. .13.4 [9]



Type 14.800. .12.4 [9]

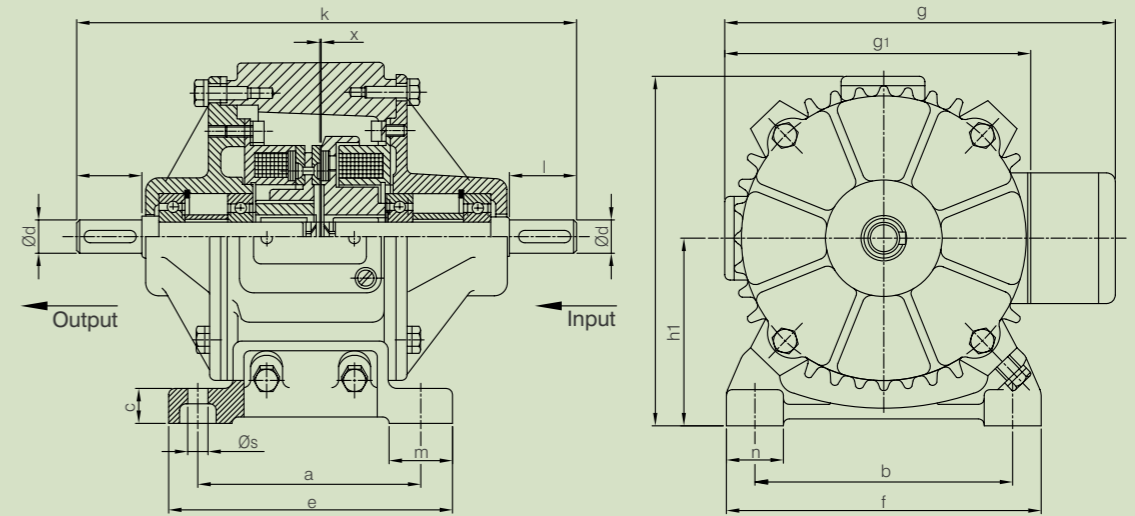
IMPORTANT 1. 1Nm = 0.102 kgm = 0.737 lb.ft
MK. rated Torque at 100 rpm
2. Standard Voltage : 24 V.D.C. (other Voltages on request)
3. @ keyways to DIN 6885 / IS:2048

ORDERING DATA General - 1. Type 2. Size 3. Design 4. Coil Voltage
Variants - Input hollow Shaft Diameter (Rotor Bore)
Input Flange Diameter
Output Shaft Diameter
Output Flange Diameter

Specifications are subject to change without notice.

Type **14.125** (Normally OFF)

Dimensions

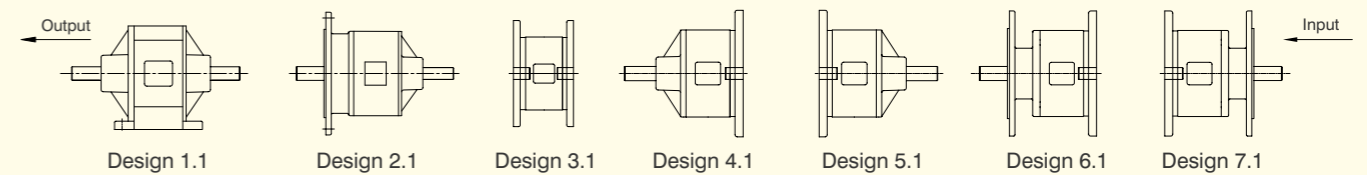


Parameters

All dimensions are in mm

Size	M k Nm	Clutch P at 20°C		±1.0 a	±1.0 b	±1.0 c	ØdK6	±2.0 e	±2.0 f	±4.0 g	±4.0 g ₁	±4.0 h	±0.5 h ₁	±2.0 k	±1.0 l	±2.0 m	±2.0 n	±1.0 Øs	±0.05 x
		W	W																
06	7.5	15	11.5	80	90	12.5	11	100	110	151	107	120	63	175	23	25	20	6.5	0.2
08	15	20	16	95	105	13	14	115	130	172	128	137	71	210	30	26	25	7.0	0.2
10	30	28	21	100	140	15	24	130	170	202	158	171	90	272	50	35	30	10	0.2
12	60	35	28	130	150	16	28	157	181	228	184	194	100	320	60	36	32	12	0.3
16	120	50	38	160	175	16	38	188	218	275	228	248	132	383	80	57	45	14	0.3
20	240	68	45	165	230	20	42	200	280	331	284	306	160	410	80	60	50	18	0.5
25	450	85	70	185	270	25	42	225	325	385	338	371	200	428	80	63	55	18	0.5
31	630	80	80	227	300	18	55	275	355	410	458	457	250	573	120	66	88	18	1
40	1250	100	100	250	400	18	60	305	455	514	559	540	280	632	130	70	93	18	1
50	2500	120	120	400	460	20	75	490	550	620	665	665	355	860	140	100	100	18	1

Flange Mounted Configurations available in 14.125.06 to 25 only



IMPORTANT 1. 1Nm = 0.102 kgm = 0.737 lb.ft
2. Standard Voltages : 24 V.D.C., 96 V.D.C., 190 V.D.C. (other Voltages on request)
3. @ keyways to DIN 6885 / IS:2048
1 at 20°C

Specifications are subject to change without notice.