

Magneta miniature clutches – flange mounted

Type 14.100.□□.11□

0.6 to 3.6 Nm

New design with 50% torque increase

Speed up to 10,000 r/min

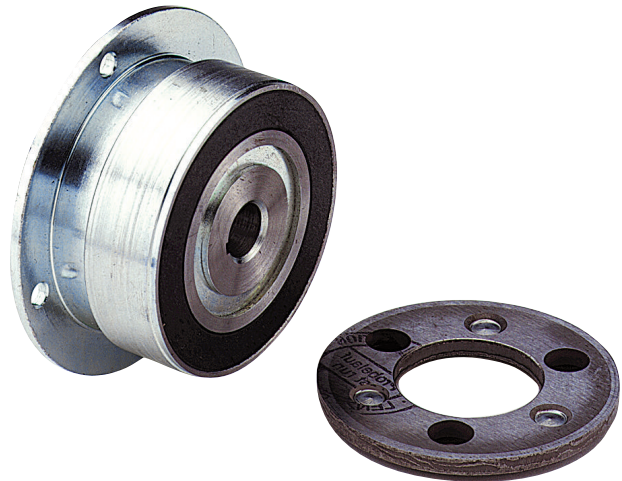
Bores 5 to 15mm

Stationary field and maintenance-free

Without backlash

No running-in required

Very fast operating times



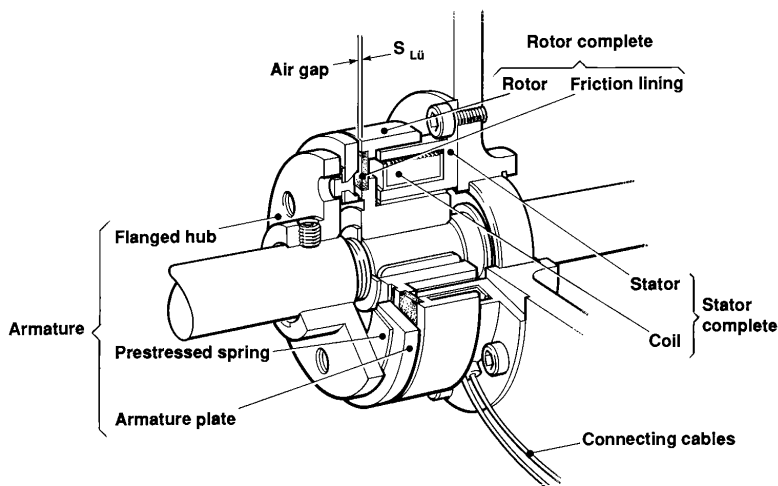
Clutches type 14.100.□□.1.□ comprise three parts, the stator, the rotor and the armature of design 1 or 3. The assembly is axially compact and suits high speed running but see also bearing mounted clutches 14.100.□□.3 which are simpler to install.

Select armature type 1 for in-line shaft to shaft drives but observe the necessary shaft alignment limit t_w .

Armature type 3 is designed to be mounted onto pulleys, gears or sprockets which must in turn be bearing supported from the shaft.

Armature 1 assemblies			Armature 3 assemblies		
Type No.	Bores d, d11 H7, H9	Stockline No.	Type No.	Bore H9	Stockline No.
14.100.02.111	5 6	A7-90 470 A7-91 076	14.100.02.113	5 6	A7-90 533 A7-91 321
14.100.03.111	6	A7-90 68X	14.100.03.113	6	A7-92 668
14.100.04.111	8 10	A7-92 755 A7-90 872	14.100.04.113	8 10	A7-290 012 A7-290 020
14.100.05.111	10 15	A7-93 823 A7-93 953	14.100.05.113	10 15	A7-290 039 A7-290 055

Stockline numbers in black – delivery time on request.



Operation

The coil is supplied with D.C. voltage generating a magnetic field which passes through air gaps to the rotor and then pulls in the armature plate. Armature movement is achieved by the backlash-free spring. If the current supply is interrupted the magnetic field collapses and the spring pulls back the armature plate leaving no residual torque.

Ordering example

(6) off clutches type 14.100.05.113 24V, 10mm bore

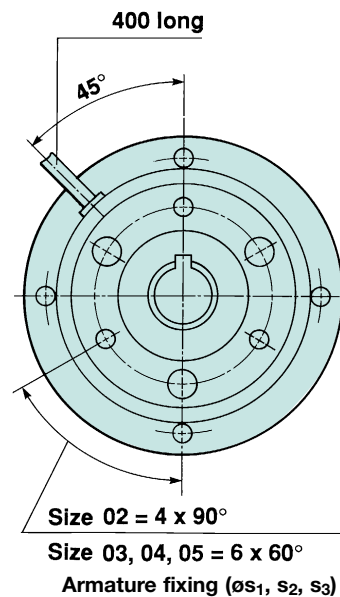
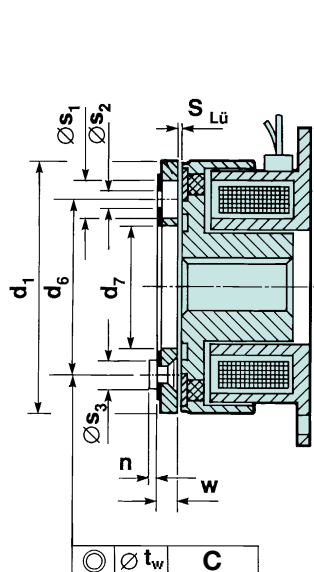
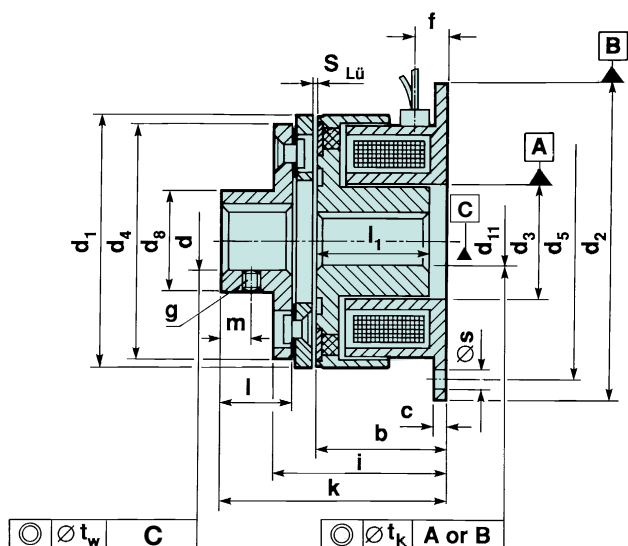
Stockline No. A7-290 039

Magneta miniature clutches – flange mounted

Type 14.100.□□.11□

Type 14.100.□□.111

Type 14.100.□□.113



Keyways to BS4235

Size	Torque		P 20°C W	b	c	d (H7) standard			d ₁	d ₂ h9	d ₃ H9	d ₄	d ₅	d ₆	d ₇	d ₈	d ₁₁ (H9)	f i k standard		
	M Nm																			
02	0.6	6	16	1.5	5	6	8	31	39	11	28	33.5	19.5	12.5	13	5	6	4	20.35	26.35
03	0.9	6	19	2	5	6	8	34	45	13	32	38	23	15	15	5	6	4.5	23.55	31.55
04	1.8	8	22.3	2	6	8	10	43	54	19	40	47	30	21	17	6	8	5.5	28.4	37.4
05	3.6	10	23.5	2	10	12	15	54	65	26	50	58	38	29	24	10	12	5.5	29.7	38.7

Size	l	l ₁	m	n	s	s ₁	s ₂	s ₃	S _{Lü}	t _k	t _w	w	g	Stator m (kg)	Rotor m(kg)	Armature m (kg) 001 003	
02	8	14	3.5	0.8	3.4	2x5	2x2.1	2x3.7	0.1	0.06	0.03	2.25	M3	0.036	0.021	0.015	0.009
03	10	17	4	1.2	3.4	3x6	3x2.6	3x4.5	0.15	0.06	0.03	2.4	M3	0.058	0.034	0.026	0.011
04	12	19.3	5	1.6	3.4	3x6.5	3x3.1	3x5	0.15	0.06	0.03	2.95	M3	0.100	0.070	0.037	0.023
05	12	20.5	5	1.6	3.4	3x6.5	3x3.1	3x5	0.2	0.06	0.03	3.0	M3	0.150	0.110	0.056	0.033

Mounting

1. Provide shafts to h7 with keyways to BS4235.
2. Mount the stator (coil part) square and concentric to the shaft with a maximum runout of tk. Secure using the 4 holes diameter s.
3. Fit the key and set the rotor in the correct axial position using circlips, spacer or other means.
4. Align armature type 1 on the second shaft with a maximum runout tw. Secure it axially and secure it to shaft through a keyway.
5. Armature type 3 should be supported concentric to the shaft to dimension tw. Counterbore to clear rivet heads, dimensions s3 and n. Fix the armature using screws and shakeproof washers provided (top of cone under screw head.) Use screw adhesive.
6. Provision must be made to set the air gap SLü between the armature and rotor, although wear adjustment is usually not necessary on these clutches. Axial runout must not exceed one half of SLü.
7. These clutches are controlled by a 24V d.c. signal and required a power supply such as our Simplavolt units. The coils are not polarity conscious.

For more detailed mounting information view Publication No. 251.