

ALL
BRITISH
COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

DATA
SHEET
SIZE
S175

MAXIMUM STATIC TORQUE 1.1 N.m. 10lb.ins.

The data sheet gives dimensional and technical details for both the Clutch and the Brake. The Clutch may be used with the input at either end. The Brake shaft may enter from either end or pass right through.



H.P. rating

R.P.M. at Clutch/ Brake shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating/decelerating period
	H.P.	H.P.
100	0.0064	0.0057
200	0.0128	0.0112
300	0.0192	0.0156
400	0.0256	0.0191
500	0.0320	0.0226
600	0.0384	0.0264
700	0.0448	0.0293
800	0.0512	0.0311
900	0.0576	0.0343
1000	0.064	0.0382
1250	0.080	0.0474
1440	0.092	0.055
2000	0.128	0.0762
2500	0.160	0.0952

General Specification

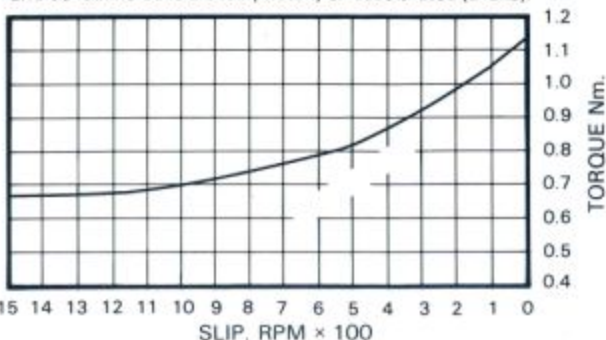
Maximum Static Torque	: 1.1 N.m. (10lb.ins.)
Standard Voltage	: 24 Volts D.C.
Rated Continuous Current	: 0.25 amp.
Resistance (20°C)	: 97 Ohms
Other Voltages Available	: 6, 12, 50, 90 Volts D.C.
Maximum Speed	: 15,700 R.P.M.
Maximum Heat Dissipation (Slipping)	

At various R.P.M.	0-500 r.p.m.:	870 Nm/min (640 ft.lb./min)
	1000 r.p.m.:	1333 Nm/min (980 ft.lb./min)
	1500 r.p.m.:	1500 Nm/min (1100 ft.lb./min)
	3000 r.p.m.:	1800 Nm/min (1325 ft.lb./min)

Weight : Clutch	: 0.23kg (8 oz)
Brake	: 0.23kg (8 oz)

Torque: Slip characteristic

i.e. Gives torque at moment of engagement and as load is accelerated (Clutch) or decelerated (Brake).

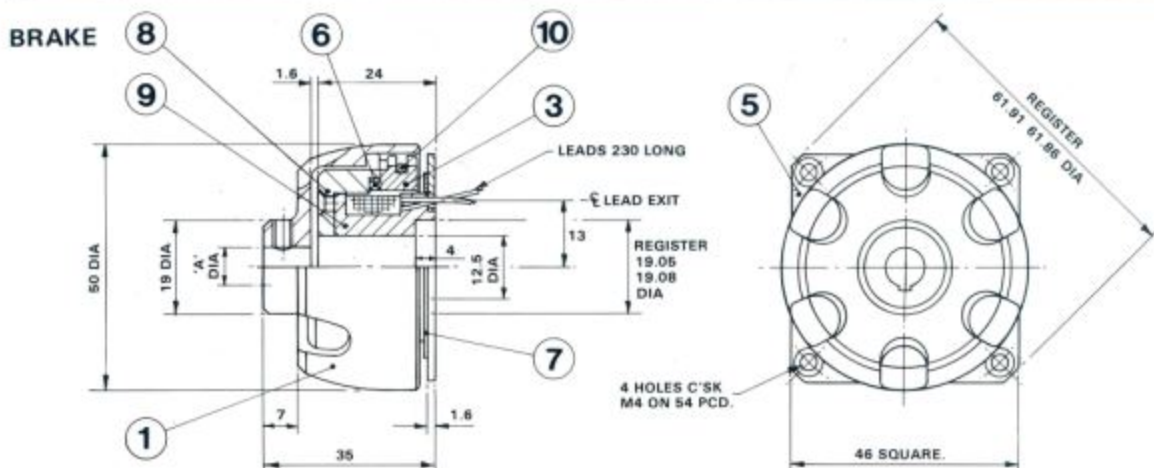
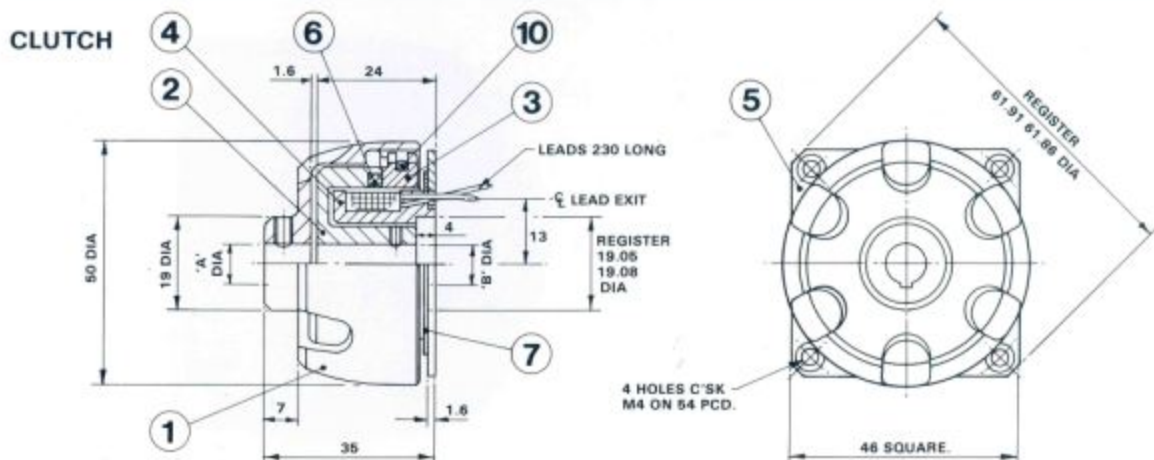


DATA SHEET
SIZE S175

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

ALL BRITISH COMPANY

To design a satisfactory arrangement reference should be made to the setting up procedure on the Installation & Maintenance sheet at the front of the catalogue.



STANDARD BORES

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	540	OUTER MEMBER	1
2	541	INNER ROTOR	1
3	543	DRIVE RING	1
4	544	CLUTCH FIELD SPOOL ASSY	1
5	545	MOUNTING PLATE	1
6	552	FRICTION LINING	1
7	4854	MAGNETIC INSULATOR	1
8	5227	BRAKE FIXED POLE	1
9	609	BRAKE FIELD SPOOL ASSY	1
10	735	CUSHION RING	1

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
1.685 / 1.875	1.885 / 1.875	-
2.51 / 2.50	2.51 / 2.50	1/16
3.135 / 3.125	3.135 / 3.125	1/8
3.76 / 3.75	3.76 / 3.75	1/4
4.385 / 4.375	-	3/8
-0	-0	mm
mm +.03	mm +.03	mm
6	6	-
8	8	2
9	9	3
10	-	3

CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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ALL
BRITISH
COMPANY

EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

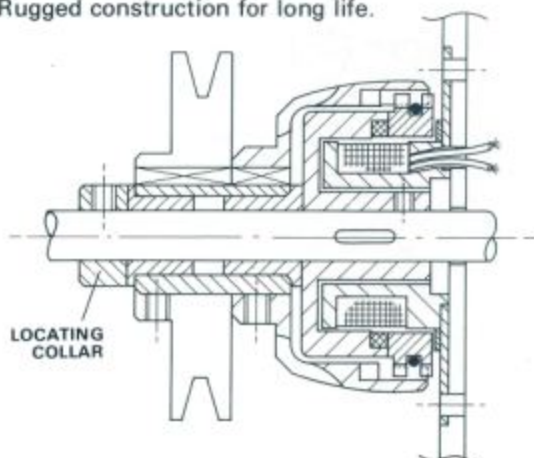
DATA
SHEET
SIZE
S175EH

MAXIMUM STATIC TORQUE 1.1 Nm. 10 lb. ins.

EXTENDED HUB CLUTCHES

Advantages

- Ideal for use where an input or output drive is required to a shaft emerging from a machine side frame or casting.
- Rugged construction for long life.
- Through shaft mounting avoids need to align shafts.
- Offers a facility for use with a pulley or a flexible coupling for in-line drive.
- Input drive may be to shaft or hub.



SELECTION TABLE

Allowing for 250% torque overloads after Clutch has brought load to full speed.

Motor kW	SHAFT SPEED AT CLUTCH IN R.P.M.																		
	100	200	300	400	500	600	700	800	900	1000	1250	1440	1750	2000	2500	2800	3000	4000	
0.015	250	250	250	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
0.037	365	250	250	250	250	250	250	175	175	175	175	175	175	175	175	175	175	175	175
0.06	400	365	250	250	250	250	250	250	250	250	250	250	175	175	175	175	175	175	175
0.09	400	400	365	250	250	250	250	250	250	250	250	250	250	175	175	175	175	175	175
0.12	600	400	365	365	365	250	250	250	250	250	250	250	250	250	175	175	175	175	175
0.18	600	400	400	400	365	365	365	250	250	250	250	250	250	250	250	250	250	250	175
0.25	600	600	400	400	400	365	365	365	365	365	250	250	250	250	250	250	250	250	250
0.37	800	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250	250	250	250
0.55	800	800	600	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250	250
0.75		800	600	600	600	600	600	400	400	400	400	400	365	365	365	365	365	365	250
1.1		800	800	600	600	600	600	600	600	600	400	400	400	400	365	365	365	365	365
1.5			800	800	800	600	600	600	600	600	600	600	400	400	400	400	400	400	365
2.2				800	800	800	800	600	600	600	600	600	600	600	400	400	400	400	400
3.0							800	800	800	800	800	600	600	600	600	600	600	600	400
5.5											800	800	800	800	600	600	600	600	600
7.5												800	800	800	800	600	600	600	600
9.3													800	800	800	800	800	800	600
11.0														800	800	800	800	800	800

See S175 Clutch Data Sheet for full specification.

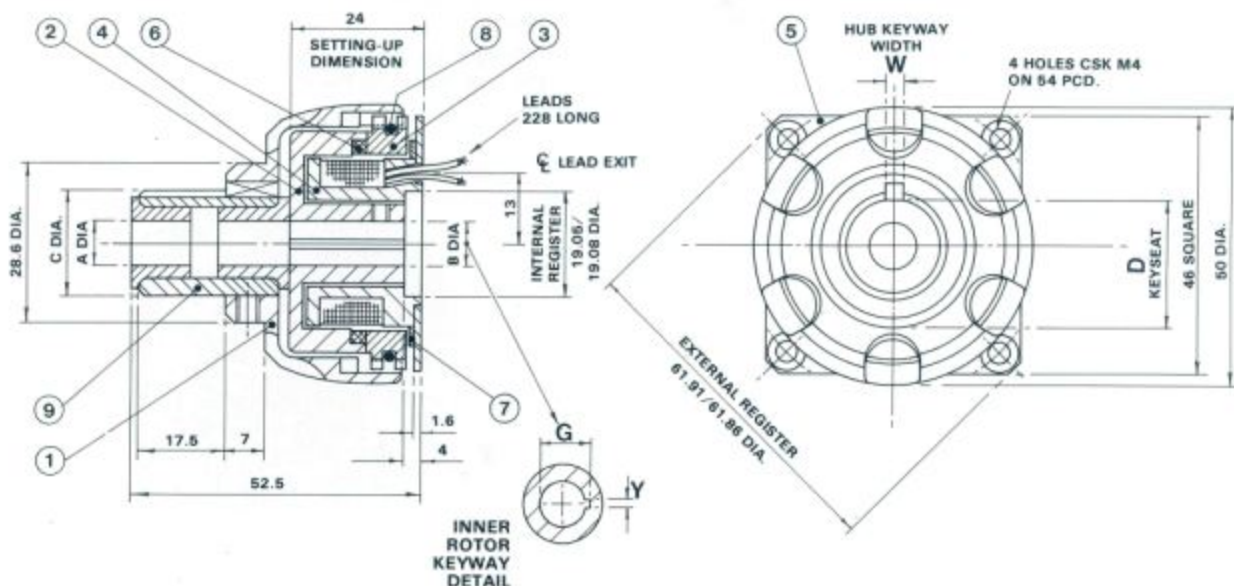
DATA SHEET
SIZE
S175EH

**EXTENDED-HUB
ELECTROMAGNETIC
CLUTCHES**

**FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING**

ALL
BRITISH
COMPANY

Type S175EH (Consult S175 Clutch Data Sheet for details of field spool mounting).



STANDARD BORES, HUB DIAMETERS & KEYWAYS

PARTS LIST

BEARING BORE A DIA.	B DIA	INNER ROTOR KEYWAY		HUB DIA. C	HUB KEYWAY	
		Y	G		W	D
1/4"	.250"/.251"			.7500"/.7495"	.124"/.125"	.677"/.671"
5/16"	.3125"/.3135"	.125"	.372"/.378"			
3/8"	.375"/.376"		.409"/.415"			

ITEM	PART No.	TITLE
1	3477	EH OUTER MEMBER
2	541	INNER ROTOR
3	5254	DRIVE RING
4	544	FIELD SPOOL ASSY.
5	545	MOUNTING PLATE
6	5265	FRICTION LINING
7	4854	MAGNETIC INSULATOR
8	735	CUSHION RING
9	4127	EH SLEEVE AND BEARING SUB ASSY.

METRIC SIZES (mm)

BEARING BORE A DIA.	B DIA	INNER ROTOR KEYWAY		HUB DIA C	HUB KEYWAY	
		Y	G		W	D
6	6.00/6.03			20.00/19.99	4.00/3.97	17.5/17.4
8	8.00/8.03	2.00/1.99	9.03/9.13			
9	9.00/9.03	3.00/3.02	10.43/10.53			

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SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

DATA
SHEET
SIZE
S250

MAXIMUM STATIC TORQUE 5.7 Nm. 50lb. ins.

The data sheet gives dimensional and technical details for both the Clutch and the Brake. The overall and fixing dimensions are the same for both. The Brake has no inner rotor, this being replaced by a "fixed pole" internally (see drawings overleaf).



Clutch H.P. rating

R.P.M. at Clutch shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating period
	H.P.	H.P.
100	0.032	0.028
200	0.064	0.053
300	0.096	0.076
400	0.128	0.099
500	0.16	0.121
600	0.192	0.14
700	0.224	0.16
800	0.256	0.178
900	0.288	0.197
1000	0.320	0.216
1250	0.4	0.254
1440	0.46	0.292
2000	0.64	0.406
2500	0.8	0.508

General Specification

Maximum Static Torque : 5.7 N.m. (50lb.ins.)
 Standard Voltage : 24 Volts D.C.
 Rated Continuous Current : 0.5 amp.
 Resistance (20°C) : 48 Ohms
 Other Voltages Available : 6, 12, 50, 90 Volts D.C.
 Maximum Speed : 10,800 R.P.M.
 Maximum Heat
 Dissipation (Slipping)

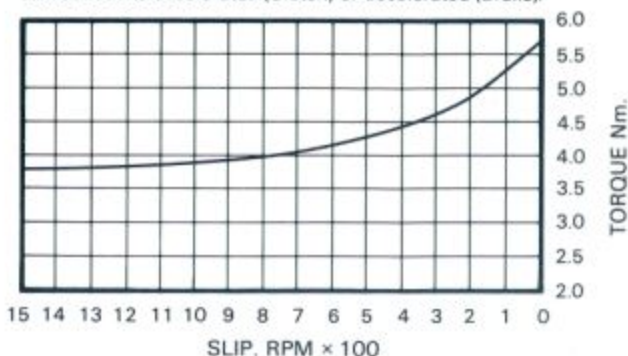
At various R.P.M.

0-500 r.p.m.: 1320 Nm/min (970 ft.lb./min)
 1000 r.p.m.: 2000 Nm/min (1475 ft.lb./min)
 1500 r.p.m.: 2450 Nm/min (1805 ft.lb./min)
 3000 r.p.m.: 3070 Nm/min (2260 ft.lb./min)

Weight : Clutch : 0.62kg (1 lb. 6oz)
 Brake : 0.62kg (1 lb. 6oz)

Torque: Slip characteristic

i.e. Gives torque at moment of engagement
 and as load is accelerated (Clutch) or decelerated (Brake).



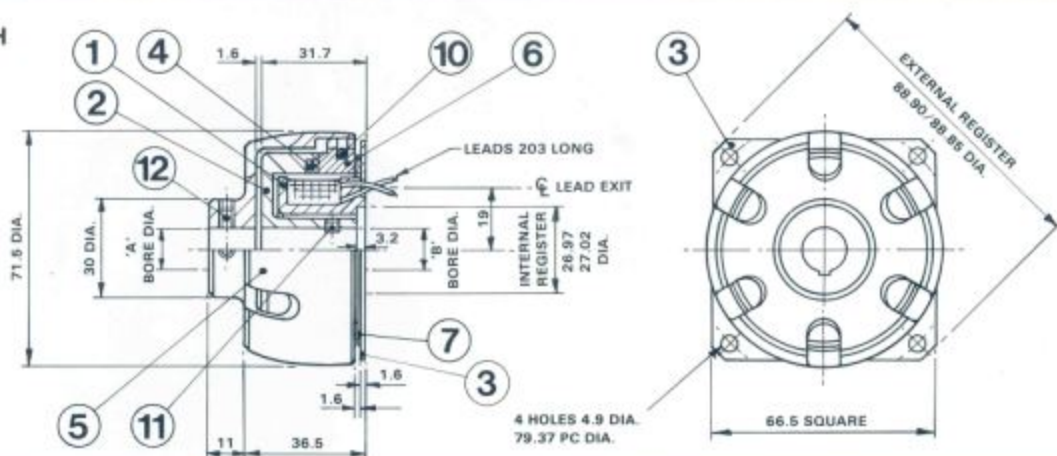
DATA
SHEET
SIZE
S250

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

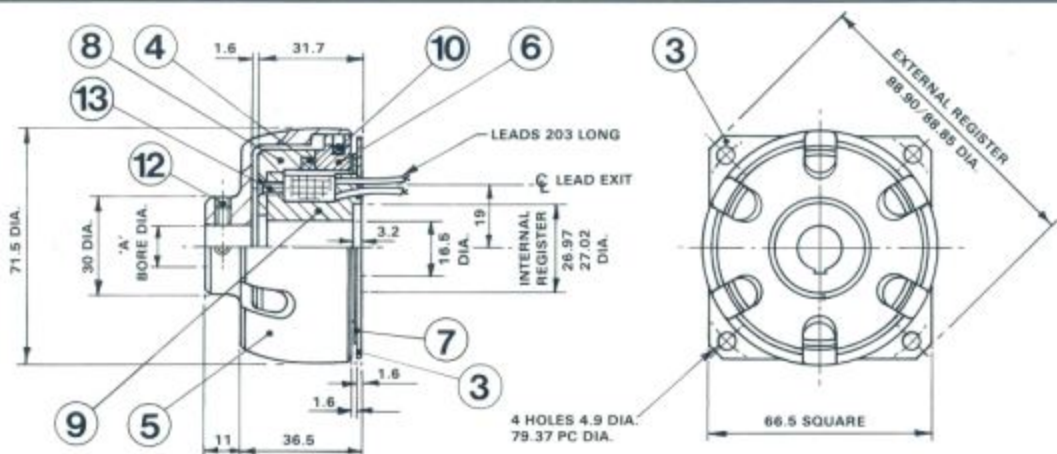
ALL
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To design a satisfactory arrangement, reference should be made to the setting up procedure on the Installation & Maintenance sheet at the front of the catalogue.

CLUTCH



BRAKE



PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	478	CLUTCH FIELD SPOOL ASSY	1
2	479	INNER ROTOR	1
3	483	MOUNTING PLATE	1
4	5188	FRICTION RING	1
5	490	OUTER MEMBER	1
6	4682	DRIVE RING	1
7	566	MAGNETIC INSULATOR	1
8	5171	BRAKE FIXED POLE	1
9	631	BRAKE FIELD SPOOL ASSY	1
10	734	CUSHION RING	1
11		M3 SOCKET SET SCREW	2
12		M4 SOCKET SET SCREW	2
13		M4 CSK. SOCKET SCREW	3

STANDARD BORES

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
3125/3135	3125/3135	1/8
375/376	375/376	1/8
4375/4385	4375/4385	3/8
500/501	500/501	1/2
625/626	-	5/8
750/751	-	3/4
-0	-0	
mm +03	mm +03	mm
8	8	2
9	9	3
10	10	3
11	11	4
12	12	4
14	14	5

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EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET

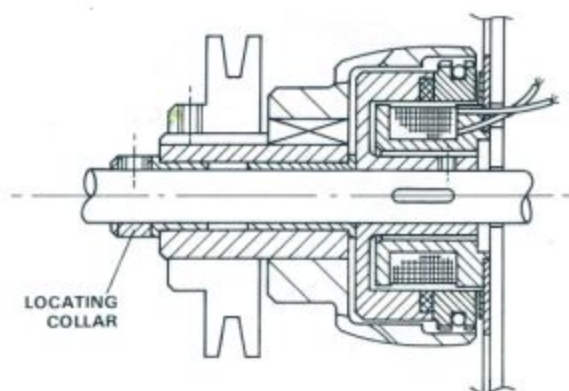
SIZE
S250EH

MAXIMUM STATIC TORQUE 5.6 Nm. 50 lb. ins.

EXTENDED HUB CLUTCHES

Advantages

- Ideal for use where an input or output drive is required to a shaft emerging from a machine side frame or casting.
- Rugged construction for long life.
- Through shaft mounting avoids need to align shafts.
- Offers a facility for use with a pulley or with a flexible coupling for in-line drive.
- Input drive may be to shaft or hub.



SELECTION TABLE

Allowing for 250% torque overloads after Clutch has brought load to full speed.

Motor kW	SHAFT SPEED AT CLUTCH IN R.P.M.																	
	100	200	300	400	500	600	700	800	900	1000	1250	1440	1750	2000	2500	2800	3000	4000
0.015	250	250	250	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
0.037	365	250	250	250	250	250	250	175	175	175	175	175	175	175	175	175	175	175
0.06	400	365	250	250	250	250	250	250	250	250	250	175	175	175	175	175	175	175
0.09	400	400	365	250	250	250	250	250	250	250	250	250	175	175	175	175	175	175
0.12	600	400	365	365	365	250	250	250	250	250	250	250	250	250	250	175	175	175
0.18	600	400	400	400	365	365	365	250	250	250	250	250	250	250	250	250	250	175
0.25	600	600	400	400	400	365	365	365	365	365	250	250	250	250	250	250	250	250
0.37	800	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250	250	250
0.55	800	800	600	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250
0.75		800	600	600	600	600	600	400	400	400	400	400	365	365	365	365	365	250
1.1		800	800	600	600	600	600	600	600	600	400	400	400	400	365	365	365	365
1.5			800	800	800	600	600	600	600	600	600	600	400	400	400	400	400	365
2.2				800	800	800	800	600	600	600	600	600	600	600	400	400	400	400
3.0							800	800	800	800	800	600	600	600	600	600	600	400
5.5											800	800	800	800	600	600	600	600
7.5												800	800	800	800	600	600	600
9.3													800	800	800	800	800	600
11.0														800	800	800	800	800

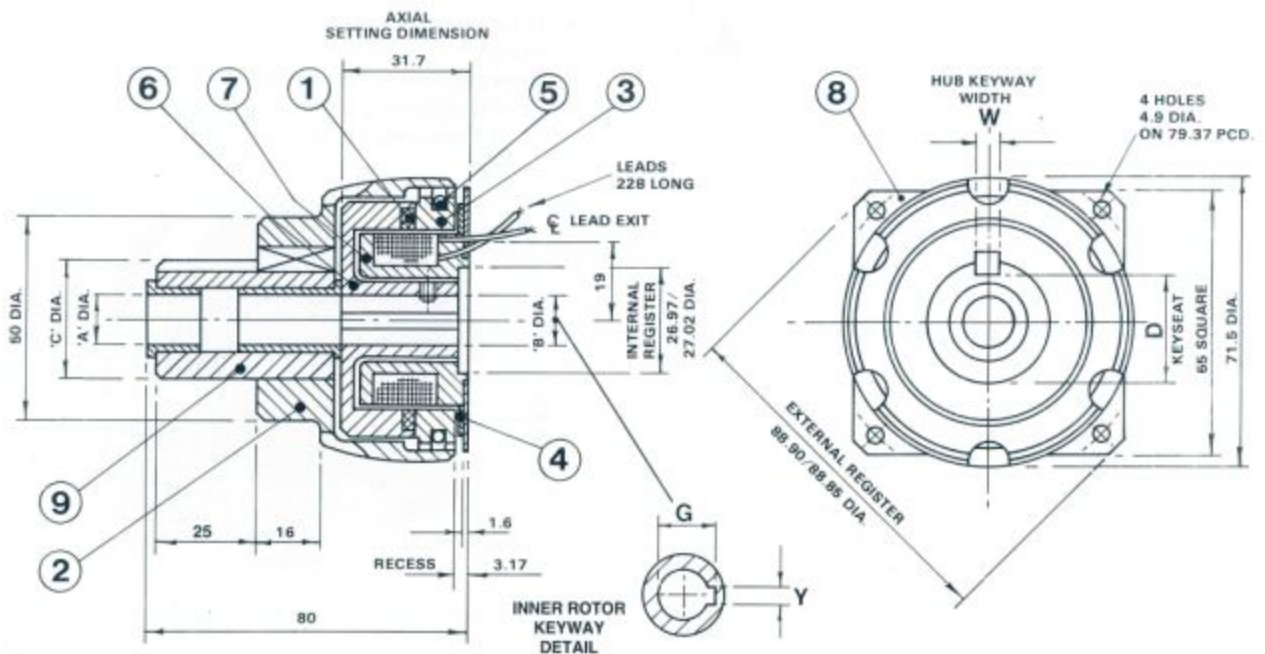
See S250 Clutch Data Sheet for full specification.

DATA SHEET
SIZE S250EH

EXTENDED-HUB ELECTROMAGNETIC CLUTCHES
FOR PULLEY, CHAINWHEEL, SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Type S250EH (Consult S250 Clutch Data Sheet for details of field spool mounting).



STANDARD BORES, HUB DIAMETERS & KEYWAYS

BEARING BORE A DIA.	B DIA.	INNER ROTOR KEYWAY		HUB DIA. C	HUB KEYWAY	
		Y	G		W	D
3/8"	375"/.376"	.125"/.126"	.435"/.441"	1.0005"/1.0002"	249"/250"	858"/.852"
1/2"	500"/.501"	.125"/.126"	561"/.567"	1.1255"/1.1252"		.983"/.977"

METRIC SIZES (mm)

BEARING BORE A DIA.	B DIA.	INNER ROTOR KEYWAY		HUB DIA. C	HUB KEYWAY	
		Y	G		W	D
8	8.00/8.03	1.99/2.00	9.03/9.13	25.00/24.99	4.00/3.97	22.50/22.40
9	9.00/9.03	3.00/3.02	10.43/10.53			
10	10.00/10.03	3.00/3.02	11.43/11.53			
12	12.00/12.03	4.00/4.02	13.83/13.93	28.00/27.99		25.50/25.40
14	14.00/14.03	5.00/5.02	14.09/15.00			

PARTS LIST

ITEM	PART No.	TITLE
1	484	FRICITION LINING
2	3245	EH OUTER MEMBER
3	491	DRIVE RING
4	566	MAGNETIC INSULATOR
5	734	CUSHION RING
6	479	INNER ROTOR
7	478	FIELD SPOOL
8	483	MOUNTING PLATE
9	3246	EH SLEEVE & BEARING SUB-ASSY.

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SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

DATA
SHEET
SIZE
S400

MAXIMUM STATIC TORQUE 23 N.m. 200lb.ins.

The data sheet gives dimensional and technical details for both the Clutch and the Brake. Overall and fixing dimensions are the same for both. The Brake has no inner rotor, this being replaced by a "fixed pole" internally (see drawings overleaf).



Clutch H.P. rating

R.P.M. at Clutch shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating period
	H.P.	H.P.
100	0.128	0.12
200	0.256	0.228
300	0.384	0.33
400	0.512	0.424
500	0.640	0.515
600	0.768	0.6
700	0.896	0.686
800	1.024	0.768
900	1.152	0.854
1000	1.28	0.93
1250	1.6	1.125
1440	1.84	1.25
2000	2.56	1.78
2500	3.18	2.21

General Specification

Maximum Static Torque	: 23 N.m. (200lb.ins.)
Standard Voltage	: 24 Volts D.C.
Rated Continuous Current	: 0.70 amp.
Resistance (20°C)	: 34 Ohms
Other Voltages Available	: 6, 12, 50, 90 Volts D.C.
Maximum Speed	: 6250 R.P.M.
Maximum Heat Dissipation (Slipping)	

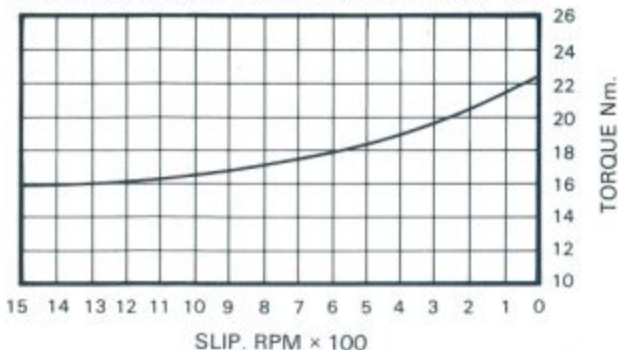
At various R.P.M.

0-500 r.p.m.:	2788 Nm/min (2050 ft.lb/min)
1000 r.p.m.:	4250 Nm/min (3125 ft.lb/min)
1500 r.p.m.:	5508 Nm/min (4050 ft.lb/min)
3000 r.p.m.:	7923 Nm/min (5826 ft.lb/min)

Weight : Clutch	: 2.01kg (4lb 7oz)
Brake	: 1.75kg (3lb 14oz)

Torque: Slip characteristic

i.e. Gives torque at moment of engagement and as load is accelerated (Clutch) or decelerated (Brake).



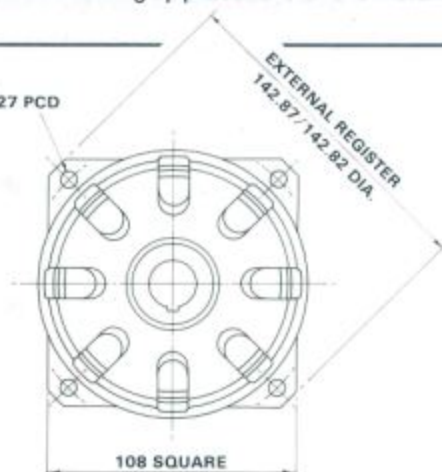
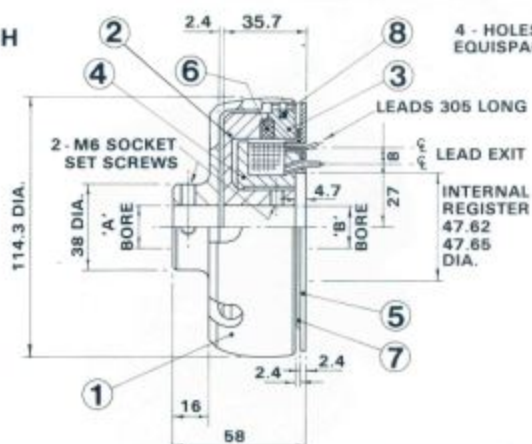
DATA SHEET
SIZE S400

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES & BRAKES

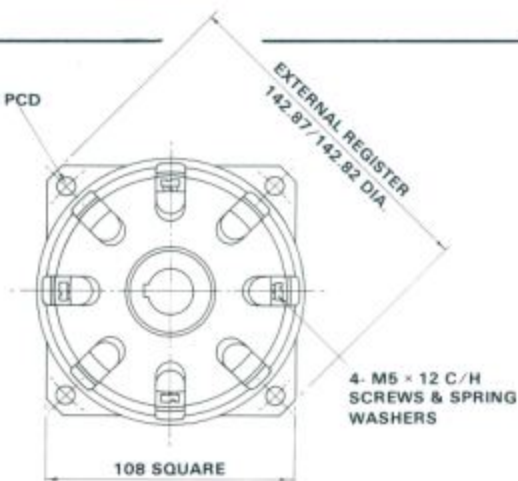
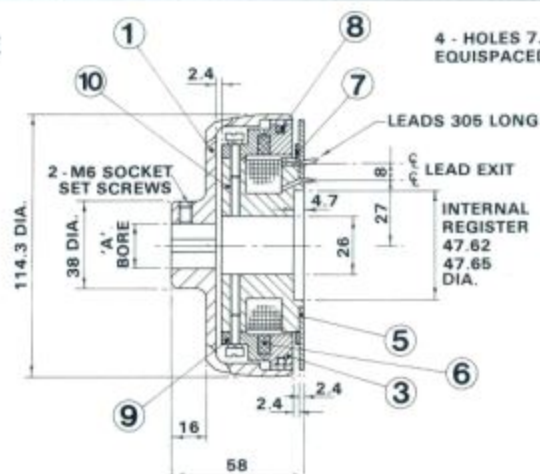
ALL
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COMPANY

To design a satisfactory arrangement, reference should be made to the setting up procedure on the Installation & Maintenance sheet at the front of the catalogue.

CLUTCH



BRAKE



STANDARD BORES

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	526	OUTER MEMBER	1
2	527	INNER ROTOR	1
3	4073	DRIVE RING	1
4	530	CLUTCH FIELD SPOOL ASSY	1
5	531	MOUNTING PLATE	1
6	4086	FRICTION RING	1
7	565	MAGNETIC INSULATOR	1
8	733	CUSHION RING	1
9	612	BRAKE FIXED POLE	1
10	613	BRAKE FIELD SPOOL ASSY	1

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
501/500	501/500	1/8
626/625	626/625	3/16
751/750	751/750	1/4
876/875	-	5/16
1001/1000	-	3/8
-0 mm +03	-0 mm +03	mm
11	11	4
12	12	4
14	14	5
15	15	5
16	16	5
17	17	5
19	19	6
20	20	6

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EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
S400EH

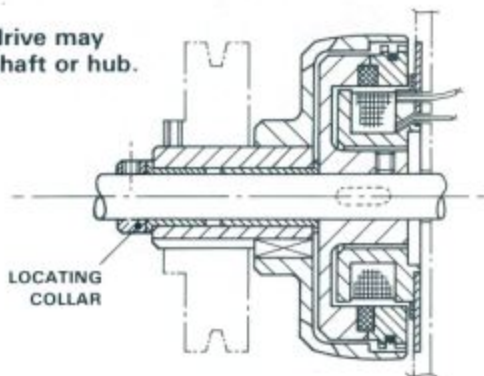
MAXIMUM STATIC TORQUE 23 Nm. 16 lb. ft.

EXTENDED HUB CLUTCHES

Advantages

- Ideal for use where an input or output drive is required to a shaft emerging from a machine side frame or casting.
- Rugged construction for long life.
- Simple to fit - fitted with self-positioning flange bearings.
- Offers a facility for use with a pulley or with a flexible coupling for in-line drive.

Input drive may
be to shaft or hub.



SELECTION TABLE

Allowing for 250% torque overloads after Clutch has brought load to full speed.

Motor kW	SHAFT SPEED AT CLUTCH IN R.P.M.																	
	100	200	300	400	500	600	700	800	900	1000	1250	1440	1750	2000	2500	2800	3000	4000
0.015	250	250	250	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
0.037	365	250	250	250	250	250	250	175	175	175	175	175	175	175	175	175	175	175
0.06	400	365	250	250	250	250	250	250	250	250	250	175	175	175	175	175	175	175
0.09	400	400	365	250	250	250	250	250	250	250	250	250	250	175	175	175	175	175
0.12	600	400	365	365	365	250	250	250	250	250	250	250	250	250	250	175	175	175
0.18	600	400	400	400	365	365	365	250	250	250	250	250	250	250	250	250	250	175
0.25	600	600	400	400	400	365	365	365	365	365	250	250	250	250	250	250	250	250
0.37	800	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250	250	250
0.55	800	800	600	600	600	400	400	400	400	400	365	365	365	365	250	250	250	250
0.75		800	600	600	600	600	600	400	400	400	400	400	365	365	365	365	365	250
1.1		800	800	600	600	600	600	600	600	600	400	400	400	400	365	365	365	365
1.5			800	800	800	600	600	600	600	600	600	600	400	400	400	400	400	365
2.2				800	800	800	800	600	600	600	600	600	600	600	400	400	400	400
3.0							800	800	800	800	800	600	600	600	600	600	600	400
5.5											800	800	800	800	600	600	600	600
7.5												800	800	800	800	600	600	600
9.3													800	800	800	800	800	600
11.0														800	800	800	800	800

See S400 Clutch Data Sheet for full specification. Consult S400 installation Data Sheet for details of Field Spool Mounting.

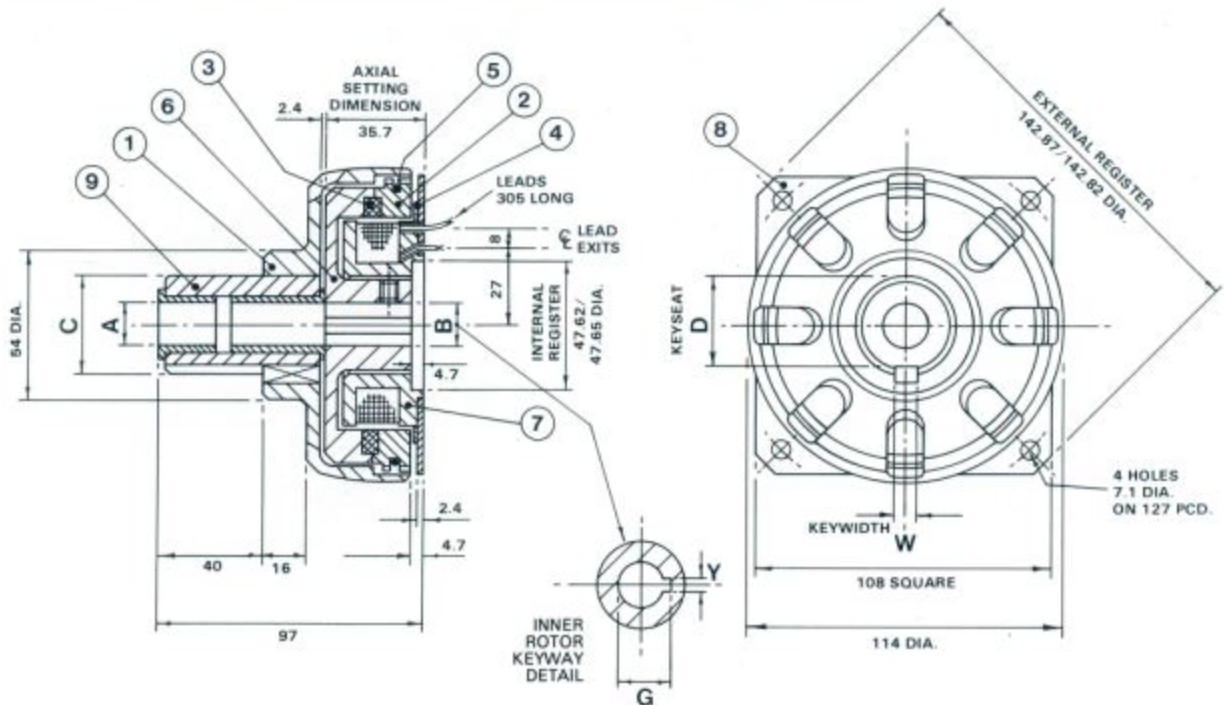
DATA SHEET
SIZE
S400EH

**EXTENDED-HUB
ELECTROMAGNETIC
CLUTCHES**
FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Type S400EH

(Used where the Field Spool assembly can be attached to an existing support)



STANDARD BORES, HUB DIAMETERS & KEYWAYS

BEARING BORE A DIA.	B DIA.	INNER ROTOR KEYWAY		HUB DIA. C	HUB KEYWAY	
		Y	G		W	D
1/2"	.500"/.501"	.125"/.126"	.561"/.567"	1.3750"/1.3747"	.374"/.375"	1.223"/1.218"
3/8"	.625"/.626"	.188"/.189"	.714"/.720"			
3/4"	.750"/.751"	.188"/.189"	.838"/.844"			

METRIC SIZES (mm)

BEARING BORE A DIA.	B DIA.	INNER ROTOR KEYWAY		HUB DIA. C	HUB KEYWAY	
		Y	G		W	D
12	12.00/12.03	4.00/4.02	13.83/13.93	35.000/ 34.992	10.000/ 9.964	31.50/ 31.40
14	14.00/14.03	5.00/5.02	16.33/16.43			
15	15.00/15.03		17.33/17.43			
16	16.00/16.03	18.33/18.43				
19	19.00/19.03	6.00/6.02	21.83/21.93			
20	20.00/20.03		22.83/22.93			

PARTS LIST

ITEM	PART No.	TITLE
1	3163	EH OUTER MEMBER
2	4073	DRIVE RING
3	4086	FRICTION LINING
4	565	MAGNETIC INSULATOR
5	733	CUSHION RING
6	527	INNER ROTOR
7	530	FIELD SPOOL
8	531	MOUNTING PLATE
9	4135	EH SLEEVE & BEARING SUB-ASSY.

CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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ALL
BRITISH
COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES

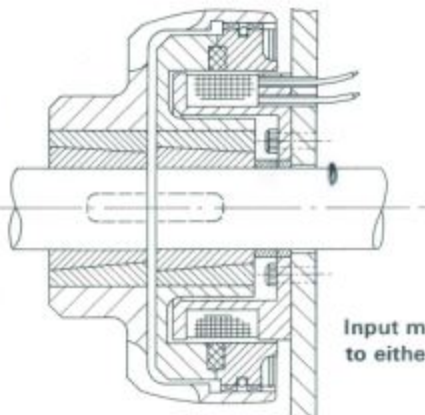
DATA
SHEET
SIZE
S600

MAXIMUM STATIC TORQUE 61 Nm. 45lb. ft.



FULLY SELF-ADJUSTING FOR WEAR

An important feature of
this design makes regular
maintenance unnecessary.



Input may be
to either end

Clutch H.P. rating

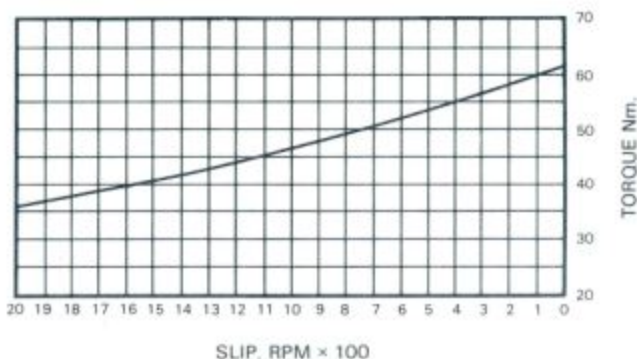
R.P.M. at Clutch shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating period
H.P.	H.P.	H.P.
100	0.343	0.332
200	0.686	0.648
300	1.029	0.950
400	1.372	1.225
500	1.715	1.490
600	2.058	1.750
700	2.401	1.980
800	2.744	2.195
900	3.087	2.400
1000	3.430	2.620
1250	4.290	3.050
1440	4.940	3.350
2000	6.860	4.040
2500	8.575	4.380

General Specification

- Maximum Static Torque : 61 Nm (45lb.ft.)
- Standard Voltage : 24 Volts D.C.
- Rated Continuous Current : 1 amp at 24 V
- Resistance (20°C) : 24 Ohms
- Other Voltages Available : 6, 12, 50, 90 & 180 Volts D.C.
- Maximum Speed : 4750 R.P.M.
- Maximum Heat Dissipation (Slipping)
At various R.P.M.
 - 500 r.p.m.: 14,820 Nm/min (10,900 ft.lb./min)
 - 1000 r.p.m.: 22,440 Nm/min (16,500 ft.lb./min)
 - 1500 r.p.m.: 28,560 Nm/min (21,000 ft.lb./min)
 - 3000 r.p.m.: 49,640 Nm/min (36,500 ft.lb./min)
- Weight : 6 kg (13lbs)

Torque: Slip characteristic

i.e. Gives torque at moment of engagement
and as load is accelerated.

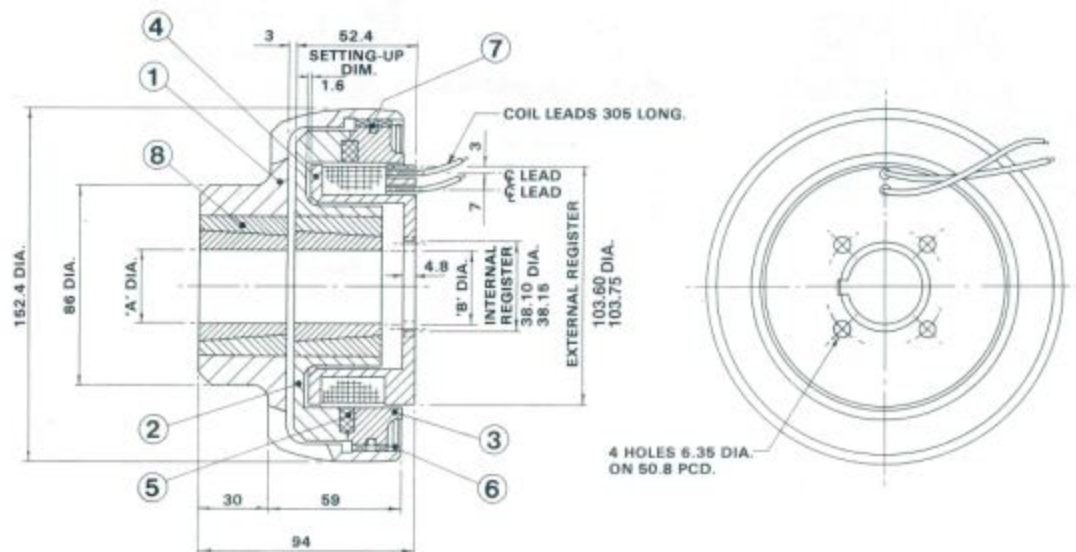


**DATA
SHEET
SIZE
S600**

**SELF-ADJUSTING
ELECTROMAGNETIC
CLUTCHES**

**ALL
BRITISH
COMPANY**

To design a satisfactory arrangement, reference should be made to the setting up procedure on the Installation & Maintenance sheet at the front of the catalogue.



STANDARD BORES

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{16} \times \frac{3}{32}$
$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{4} \times \frac{1}{8}$
1	1	$\frac{1}{4} \times \frac{1}{8}$
$1\frac{1}{8}$	$1\frac{1}{8}$	$\frac{5}{16} \times \frac{7}{64}$
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{5}{16} \times \frac{7}{64}$

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	672	OUTER MEMBER	1
2	4860	INNER ROTOR	1
3	4139	DRIVE RING	1
4	675/1	FIELD SPOOL	1
5	4331	FRICTION RING	1
6	731	SPRING CLIP	1
7	732	CUSHION RING	1
8	B677	TAPER BUSH ASSY.	2

METRIC SIZES (mm)				
12		12		4 x 1.8
14	16	14	16	5 x 2.3
18		18		6 x 2.8
20	22	20	22	
24		24		8 x 3.3
28	30	28	30	
32		32		10 x 1.3

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ALL
BRITISH
COMPANY

**EXTENDED-HUB
ELECTROMAGNETIC
CLUTCHES**
FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
S600EH

MAXIMUM STATIC TORQUE 61 Nm. 45 lb. ft.

EXTENDED HUB CLUTCHES

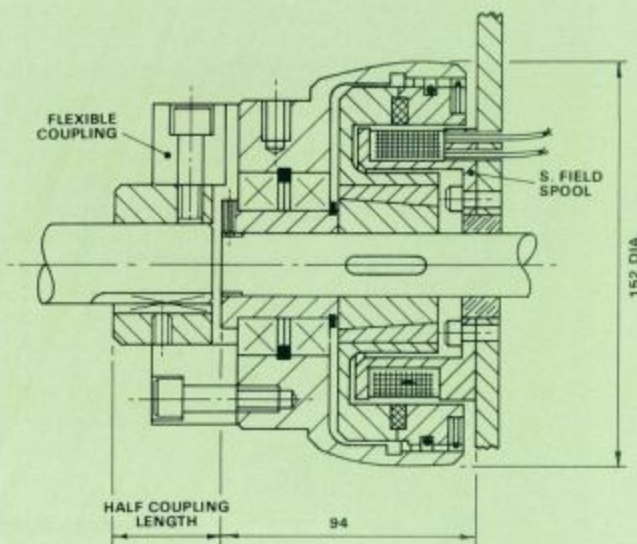
Advantages

- Clark Clutches are self-adjusting throughout their life - no maintenance.
- Clutch uses existing machine frame for support - reduced cost.

These clutches are supplied with specified Pulley or Chainwheel etc., already fitted.

The design can accommodate Vee Pulleys, Timing Belt Pulleys, Chainwheels or Spur gears, or flexible couplings for in-line drives.

They provide an alternative method of automatic transmission where it is required to drive into or from a shaft. The input drive may be to pulley or shaft.



In common with the S600 clutch-coupling, the Pulley Clutch is recommended for use where a support for the Clutch field spool already exists i.e. where a shaft emerges from the side frame of a machine or casting.

S600EH CLUTCH WITH FLEXIBLE COUPLING FOR IN-LINE DRIVE

DATA
SHEET
SIZE
S600EH

EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Field Spool Location

For best results it is necessary to accurately locate the field spool either by providing a register to suit the OD of the spool as in Drg. A, or by use of a bearing worthy bush to suit the internal register and the shaft as in Drg. B.

It is also important to correctly locate the inner rotor in its axial position, see Drg. A, for setting up dimension. This is simplified by use of a spacer on the shaft fitted between the end of the inner rotor and passing through the field spool up to the shaft support bearing.

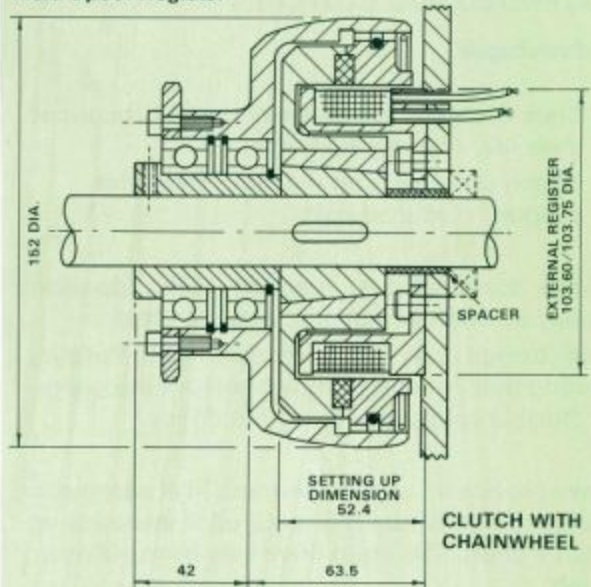
See S600 Clutch data sheet for full technical specification of clutch and dimensions of fixing holes and field spool registers and available bore sizes.

Order Specification

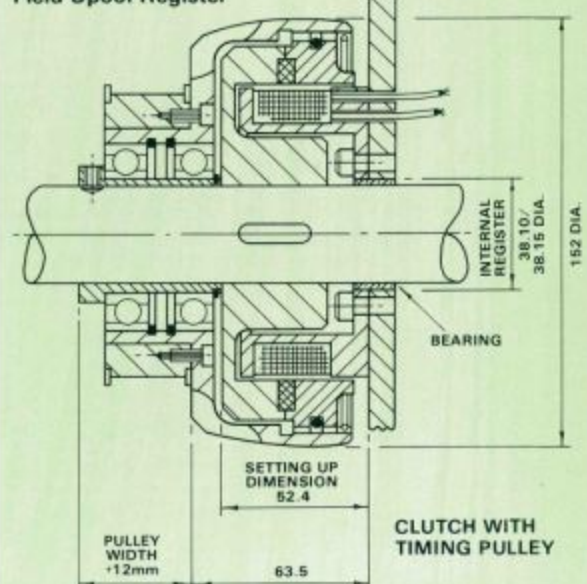
- State ● Through shaft diameter.
- State ● Pulley PCD No. of grooves and belt section.
- or
- Chainwheel PCD and pitch for simple duplex or triplex chain.
- or
- Gearwheel details.

For pulleys under 4" - (100 mm) PCD, apply for details of maximum bore which can be accommodated.

Drg. A. using external
Field Spool Register



Drg. B. using internal
Field Spool Register



CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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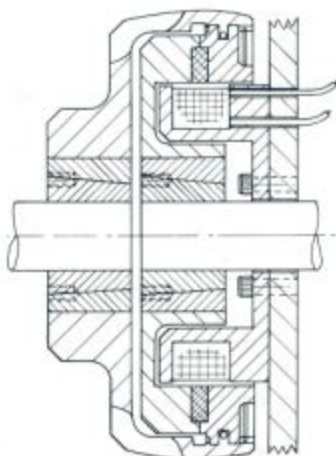
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ALL
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COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES

DATA
SHEET
SIZE
S800

TORQUE 122 Nm. INPUT MAY BE TO EITHER END



Clutch H.P. rating

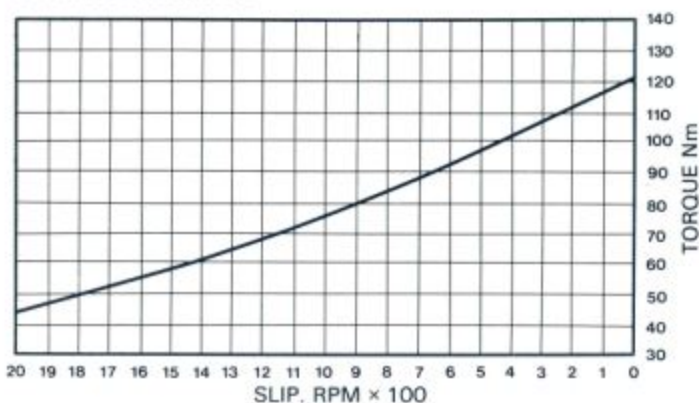
R.P.M. at Clutch shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating period
	H.P.	H.P.
100	0.686	0.658
200	1.372	1.250
300	2.058	1.810
400	2.744	2.280
500	3.430	2.750
600	4.116	3.160
700	4.802	3.470
800	5.488	3.800
900	6.174	4.060
1000	6.860	4.280
1250	8.575	4.680
1440	9.880	4.840
2000	13.720	5.040
2500	17.150	5.050

General Specification

Maximum Static Torque	: 122 Nm (90lb.ft.)
Standard Voltage	: 24 Volts D.C.
Rated Continuous Current	: 1.34 amps.
Resistance (20°C)	: 17.85 Ohms
Other Voltages Available	: 6, 12, 50, 90 & 180 Volts.
Maximum Speed	: 3600 R.P.M.
Maximum Heat Dissipation (Slipping)	
Input Speed	500 r.p.m.: 20.000 Nm/min (14.700 ft.lb./min)
	1000 r.p.m.: 30.600 Nm/min (22.500 ft.lb./min)
	1500 r.p.m.: 41.100 Nm/min (30.200 ft.lb./min)
	3000 r.p.m.: 71.700 Nm/min (52.700 ft.lb./min)
Weight	: 10.6kg (23.5lbs)

Torque: Slip characteristic

i.e. Gives torque at moment of engagement
and as load is accelerated.



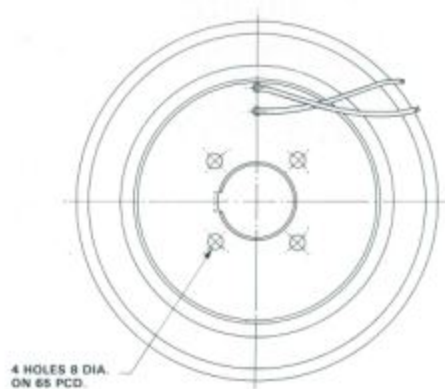
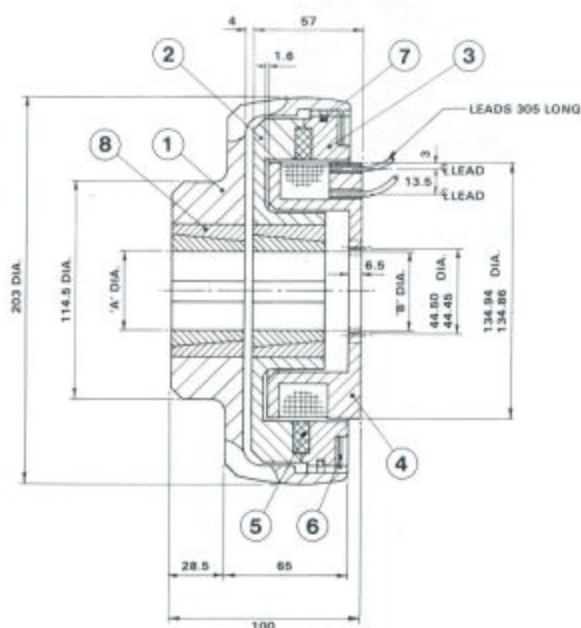
DATA
SHEET

SIZE
S800

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES

ALL
BRITISH
COMPANY

Consult the Installation sheet at the front of the catalogue for correct method of mounting.



STANDARD BORES

'A'DIA. "	'B'DIA. "	KEYWAY "
3/4	3/4	3/16 x 3/32
7/8	7/8	1/4 x 1/8
1	1	1/4 x 1/8
1 1/8	1 1/8	5/16 x 7/64
1 1/4	1 1/4	5/16 x 7/64
1 3/8	1 3/8	3/8 x 1/8
1 1/2	1 1/2	3/8 x 1/8
1 5/8	1 5/8	7/16 x 1/8

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	581	OUTER MEMBER	1
2	4828	INNER ROTOR	1
3	4328	DRIVE RING	1
4	584	FIELD SPOOL	1
5	4330	FRICTION RING	1
6	729	SPRING CLIP	1
7	730	CUSHION RING	1
8	B586	TAPER BUSH ASSY.	2

METRIC SIZES (mm)

16	16	5 x 2.3
18 20	19 22	6 x 2.8
24 28	25 30	8 x 3.3
32 38	32 38	10 x 3.3
40	42	12 x 1.3

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ALL
BRITISH
COMPANY

EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
S800EH

MAXIMUM STATIC TORQUE 122 Nm. 90 lb. ft.

EXTENDED HUB CLUTCHES

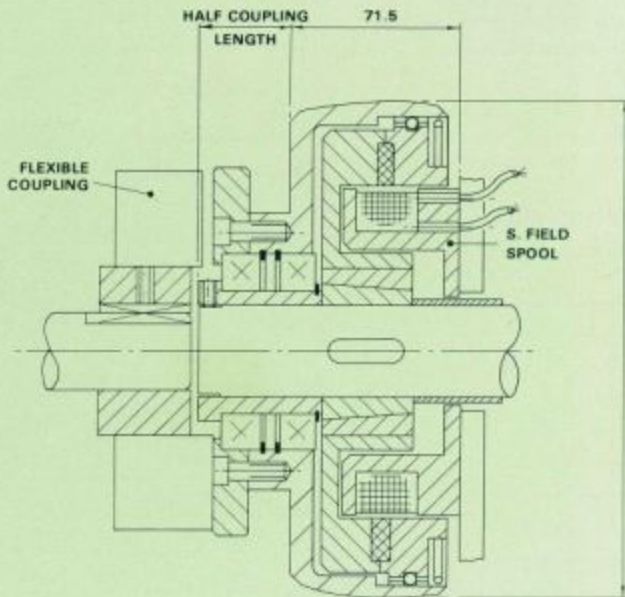
Advantages

- Clark Clutches are self-adjusting throughout their life - no maintenance.
- Clutch uses existing machine frame for support - reduced cost.

These clutches are supplied with specified Pulley or Chainwheel etc., already fitted.

The design can accommodate Vee Pulleys, Timing Belt Pulleys, Chainwheels or Spur gears, or flexible couplings for in-line drives.

They provide an alternative method of automatic transmission where it is required to drive into or from a shaft. The input drive may be to pulley or shaft.



S800EH CLUTCH WITH FLEXIBLE COUPLING FOR IN-LINE DRIVE

In common with the S800 clutch-coupling, the Pulley Clutch is recommended for use where a support for the Clutch field spool already exists i.e. where a shaft emerges from the side frame of a machine or casting.

DATA
SHEET
SIZE
S800EH

**EXTENDED-HUB
ELECTROMAGNETIC
CLUTCHES**
FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Field Spool Location

For best results it is necessary to accurately locate the field spool either by providing a register to suit the OD of the spool as in Drg. A, or by use of a bearing worthy bush to suit the internal register and the shaft as in Drg. B.

It is also important to correctly locate the inner rotor in its axial position, see Drg. A, for setting up dimension. This is simplified by use of a spacer on the shaft fitted between the end of the inner rotor and passing through the field spool up to the shaft support bearing.

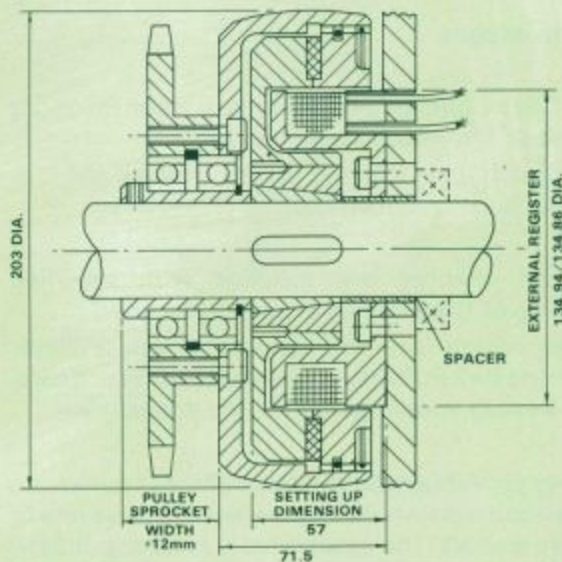
See S800 Clutch data sheet for full technical specification of clutch and dimensions of fixing holes and field spool registers and available bore sizes.

Order Specification

- State ● Through shaft diameter.
- State ● Pulley PCD No. of grooves and belt section.
or
Chainwheel PCD and pitch for simple duplex or triplex chain.
or
Gearwheel details.

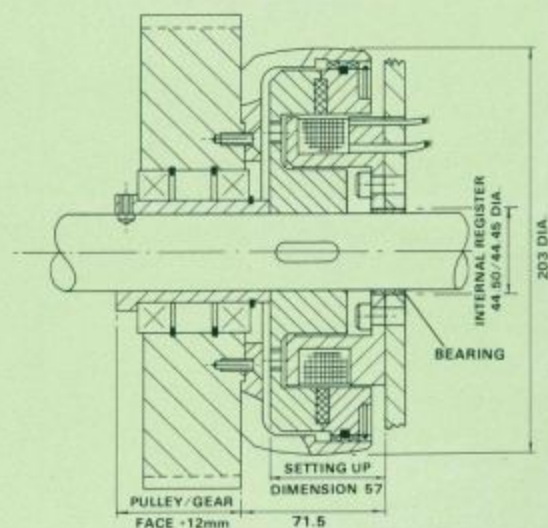
For pulleys under $4\frac{3}{4}$ " - (120 mm) PCD, apply for details of maximum bore which can be accommodated.

Drg. A. using external Field Spool Register



CLUTCH WITH CHAINWHEEL

Drg. B. using internal Field Spool Register



CLUTCH WITH TIMING PULLEY

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