

ALL
BRITISH
COMPANY

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

DATA
SHEET

SIZE
BM175EH

MAXIMUM STATIC TORQUE 1.1 Nm. (10 lb. ins.)

EXTENDED HUB CLUTCHES

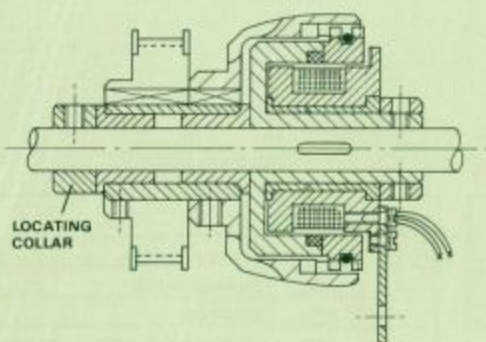
Advantages

- Simple to fit - slide clutch onto shaft, fit key and lock collars.
- Through shaft mounting avoids need to align shafts.
- Clark Clutches are self-adjusting throughout their life.
- Will operate small mechanism several times a second when used with boost supply.
- Low power device 0.25 amp at 24 volt.

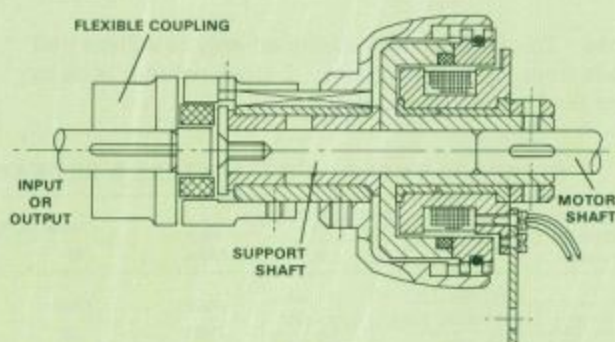
Extended Hub Clutches are designed for use where a remotely controlled drive is required to or from a shaft via a clutch and pulley etc. The Clutches are fitted with oil reservoir sleeve bearings contained within the steel keywayed hub to which the pulley etc. may be secured. When the Clutch is switched off, the hub idles on the shaft. When the Clutch is switched on, the hub is locked to the shaft.



Typical use of BM175EH Clutch :



(a) clutch mounted on through shaft with pulley fitted to hub.



(b) with a flexible coupling fitted for an in-line coupling between two shafts where precise shaft alignment cannot be guaranteed.

See BM175 Clutch Data Sheet for full specification.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

DATA
SHEET

SIZE
BM175EH

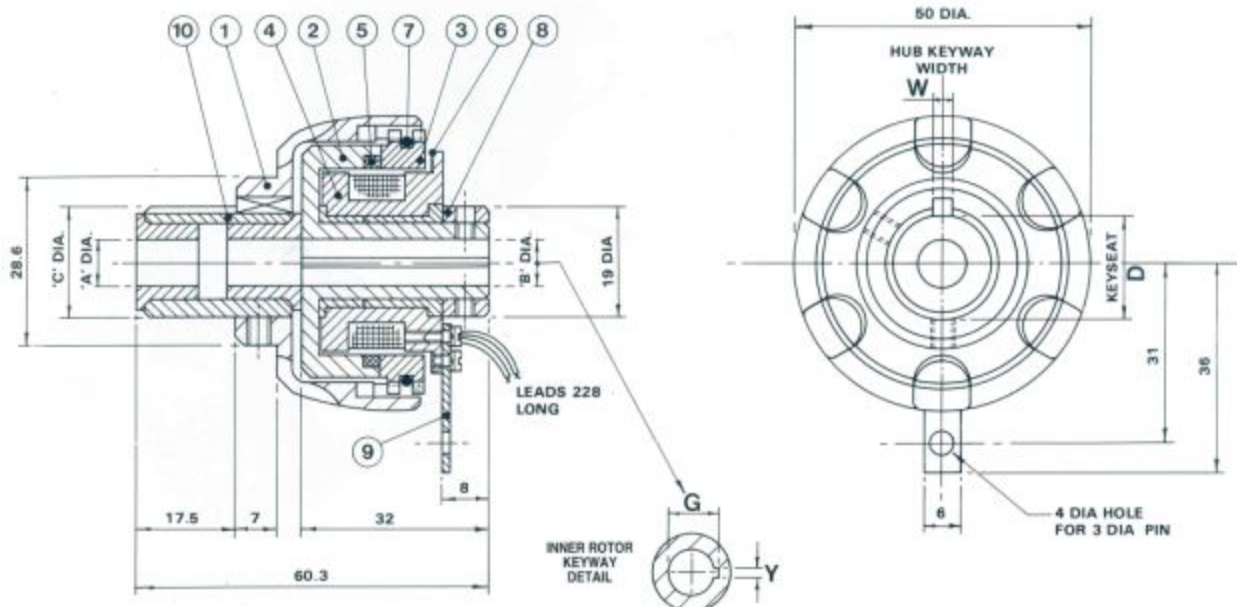
EXTENDED-HUB ELECTROMAGNETIC

CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Type BM175EH



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

STANDARD BORES, HUB DIAMETERS & KEYWAYS

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

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			

PARTS LIST

ITEM	PART No.	TITLE	
1	3477	EH OUTER MEMBER	
2	2065	BM INNER ROTOR	
3	5254	DRIVE RING	
4	3734	BM FIELD SPOOL ASSY.	
5	5265	FRICTION LINING	
6	4854	MAGNETIC INSULATOR	
7	735	CUSHION RING	
8	2066	COLLAR	
9	2067	TORQUE ARM	
10	4127	EH SLEEVE AND BEARING SUB ASSY.	

CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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

DATA
SHEET

SIZE
BM175EH

MAXIMUM STATIC TORQUE 1.1 Nm. (10 lb. ins.)

EXTENDED HUB CLUTCHES

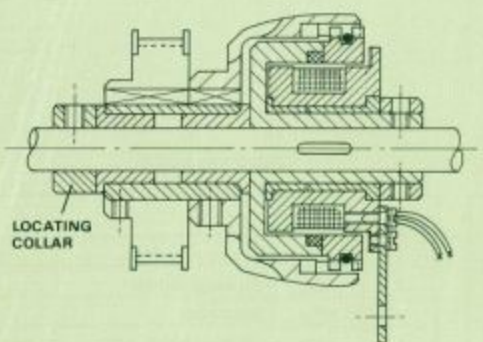
Advantages

- Simple to fit - slide clutch onto shaft, fit key and lock collars.
- Through shaft mounting avoids need to align shafts.
- Clark Clutches are self-adjusting throughout their life.
- Will operate small mechanism several times a second when used with boost supply.
- Low power device 0.25 amp at 24 volt.

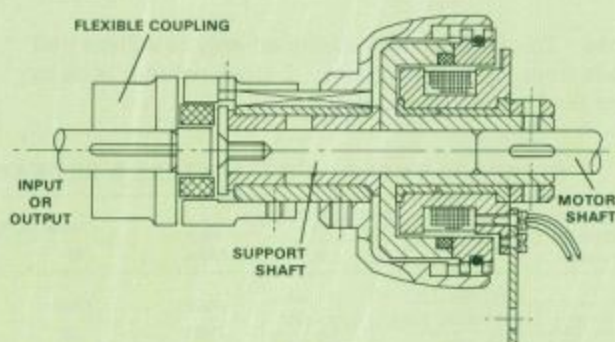
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Typical use of BM175EH Clutch :



(a) clutch mounted on through shaft with pulley fitted to hub.



(b) with a flexible coupling fitted for an in-line coupling between two shafts where precise shaft alignment cannot be guaranteed.

See BM175 Clutch Data Sheet for full specification.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

DATA
SHEET

SIZE
BM175EH

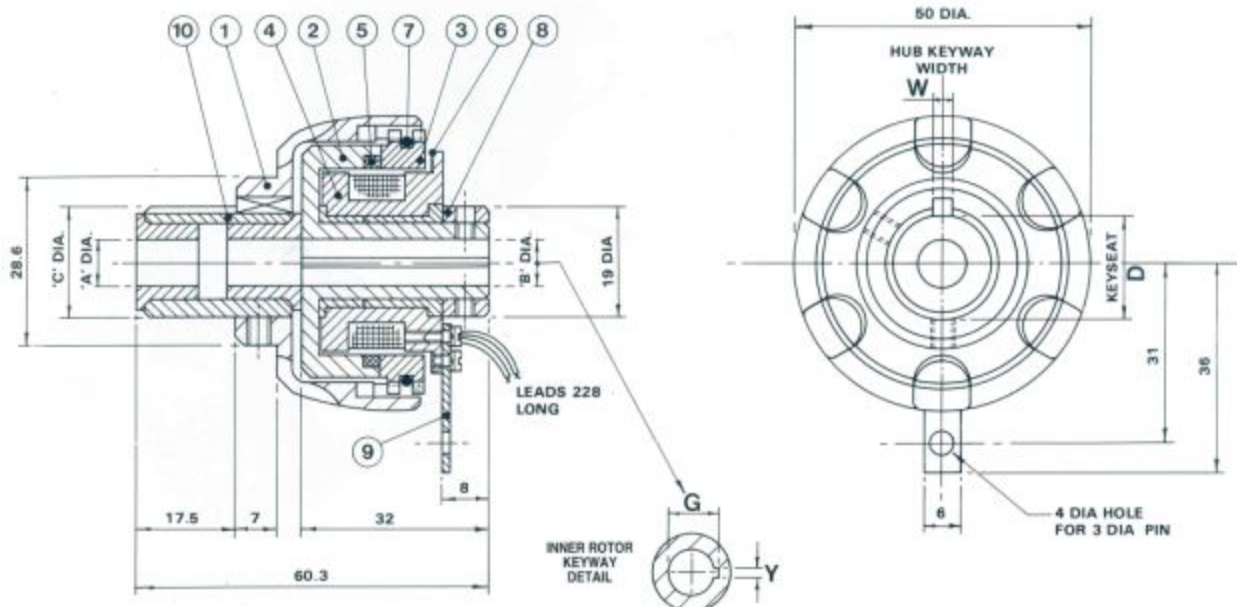
EXTENDED-HUB ELECTROMAGNETIC

CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

ALL
BRITISH
COMPANY

Type BM175EH



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

STANDARD BORES, HUB DIAMETERS & KEYWAYS

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

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			

PARTS LIST

ITEM	PART No.	TITLE	
1	3477	EH OUTER MEMBER	
2	2065	BM INNER ROTOR	
3	5254	DRIVE RING	
4	3734	BM FIELD SPOOL ASSY.	
5	5265	FRICTION LINING	
6	4854	MAGNETIC INSULATOR	
7	735	CUSHION RING	
8	2066	COLLAR	
9	2067	TORQUE ARM	
10	4127	EH SLEEVE AND BEARING SUB ASSY.	

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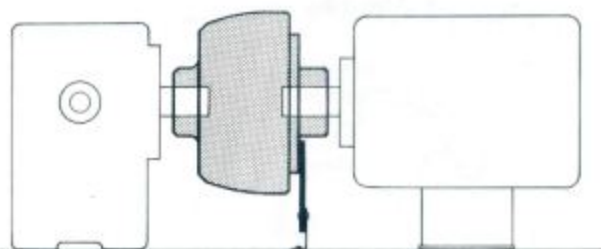
ALL
BRITISH
COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES TYPE BM

DATA
SHEET
SIZE
BM250

WITH BEARING MOUNTED STATIONARY FIELD

MAXIMUM STATIC TORQUE 5.6 Nm 50lb.ins.



Two part assembly : Input may be from 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
100	0.032	0.028
200	0.064	0.053
300	0.096	0.076
400	0.128	0.099
500	0.160	0.121
600	0.192	0.140
700	0.224	0.160
800	0.256	0.178
900	0.288	0.197
1000	0.320	0.216
1250	0.40	0.254
1440	0.46	0.292
2000	0.64	0.406
2500	0.80	0.508

General Specification

Maximum Static Torque	: 5.6 Nm. (50lb. ins.)
Standard Voltage	: 24 Volts D.C.
Rated Continuous Current	: 0.38 amp.
Resistance (20°C)	: 64 Ohms
Other Voltages Available	: 6, 12, 50, 90 Volts D.C.
Maximum Speed	: 5,000 R.P.M.
Maximum Heat Dissipation (Slipping)	

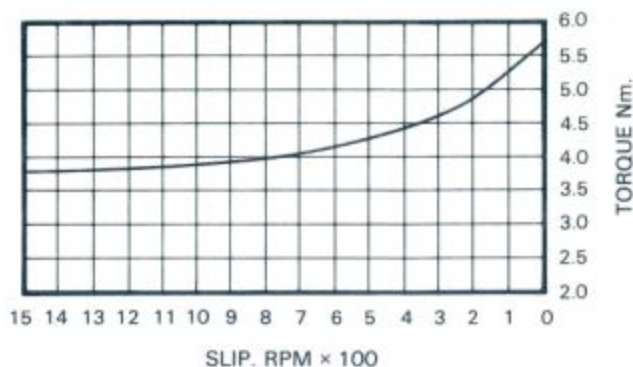
At various R.P.M.

0-500 r.p.m.	: 1320 Nm/min (970 ft.lb/min)
1000 r.p.m.	: 2006 Nm/min (1475 ft.lb/min)
1500 r.p.m.	: 2455 Nm/min (1805 ft.lb/min)
3000 r.p.m.	: 3074 Nm/min (2260 ft.lb/min)

Weight : 0.62kg (1lb 6oz)

Torque: Slip characteristic

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



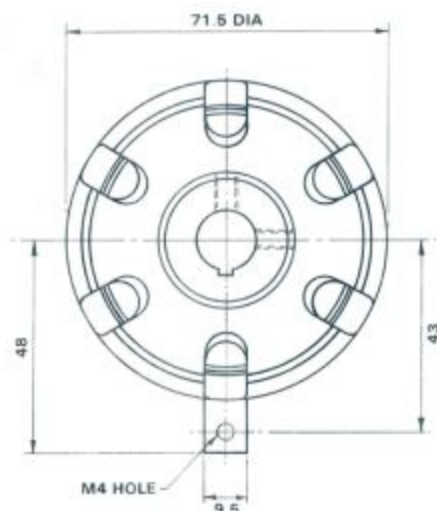
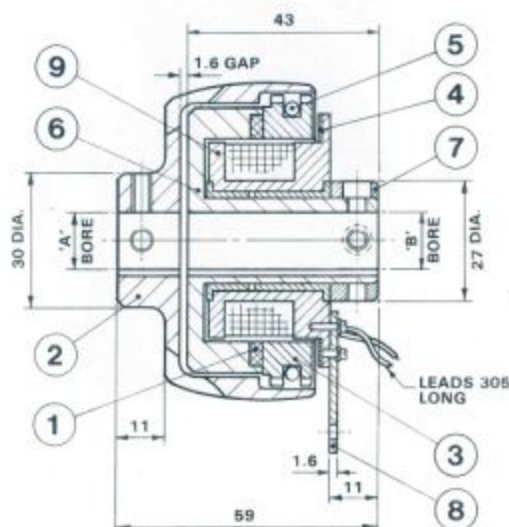
**DATA
SHEET
SIZE
BM250**

**SELF-ADJUSTING
ELECTROMAGNETIC
CLUTCHES
TYPE BM**

ALL
BRITISH
COMPANY

WITH BEARING MOUNTED STATIONARY FIELD

Observe shaft parallel alignment requirements as given on Assembly and Maintenance data sheet at front of catalogue.



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	5188	FRICTION RING	1
2	490	OUTER MEMBER	1
3	4682	DRIVE RING	1
4	566	MAGNETIC INSULATOR	1
5	734	CUSHION RING	1
6	2055	BM. INNER ROTOR	1
7	2056	BM. COLLAR	1
8	2057	BM. TORQUE ARM	1
9	2075	BM. FIELD SPOOL	1

STANDARD BORES

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
.3125/.3135	.3125/.3125	1/8
.375/.376	.375/.376	1/8
.4375/.4385	.4375/.4385	1/8
.500/.501	.500/.501	1/8
.625/.626	-	3/16
.750/.751	-	3/16
mm - 0 +0.3	mm - 0 +0.3	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
BM250EH

MAXIMUM STATIC TORQUE 5.6 Nm. (50 lb. ins.)

Will transmit available torque of .25 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

EXTENDED HUB CLUTCHES

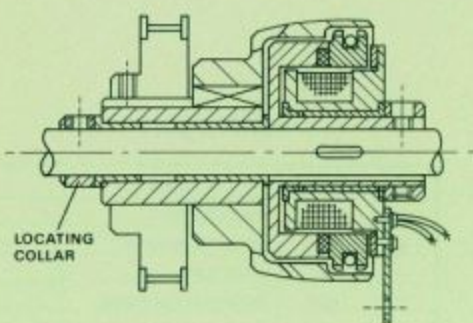
Advantages

- Simple to fit-slide onto shaft, fit key and lock collars.
- Through shaft mounting avoids need to align shafts.
- Clark Clutches are self-adjusting throughout their life.
- Will operate up to 60 times a minute where load inertia permits.
- Softstart facility available where used with Clark Silkstart Acceleration Controller.
- Lower power device .38 amp at 24 volt.

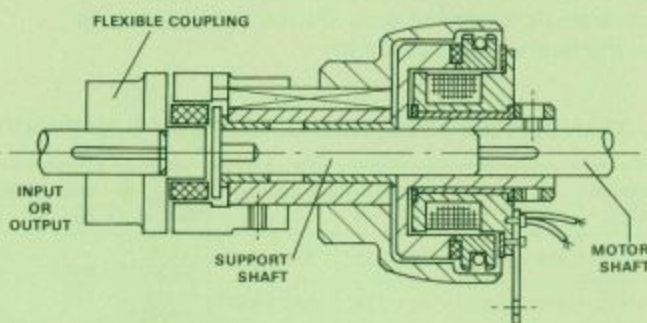
Extended Hub Clutches are designed for use where a remotely controlled drive is required to or from a shaft via a clutch and pulley etc. The Clutches are fitted with oil reservoir sleeve bearings contained within the steel keywayed hub to which the pulley etc. may be secured. When the Clutch is switched off, the hub idles on the shaft. When the Clutch is switched on, the hub is locked to the shaft.



Typical use of BM250EH Clutch :



(a) clutch mounted on through shaft with pulley fitted to hub.



(b) with a flexible coupling fitted for an in-line coupling between two shafts where precise shaft alignment cannot be guaranteed.

See BM250 Clutch Data Sheet for full specification.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

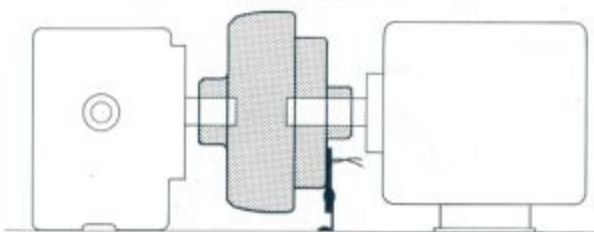
ALL
BRITISH
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SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES TYPE BM

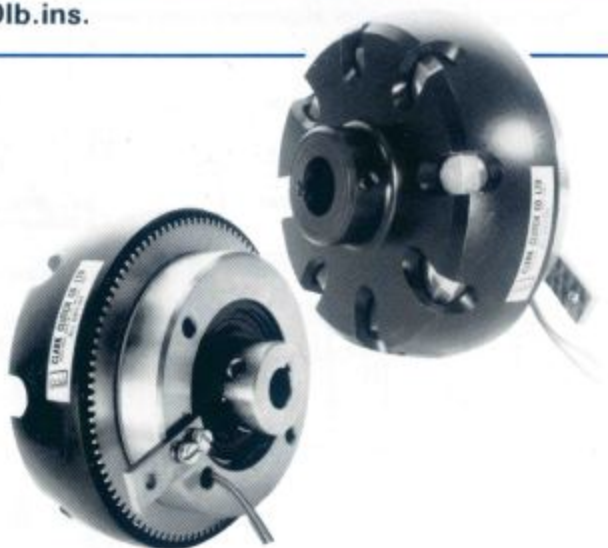
WITH BEARING MOUNTED STATIONARY FIELD

DATA
SHEET
SIZE
BM400

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



Two part assembly : Input may be from 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	0.128	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

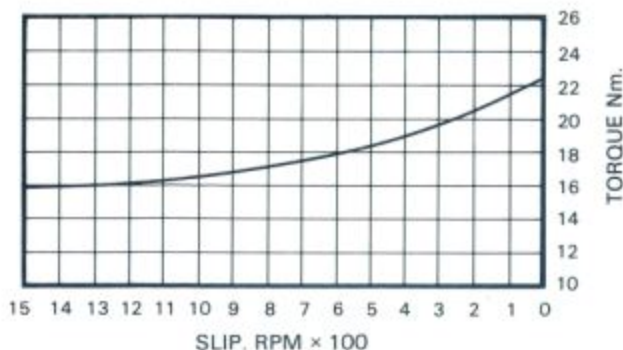
Maximum Static Torque : 23 N.m. (200lb. ins.)
 Standard Voltage : 24 Volts D.C.
 Rated Continuous Current : 0.70 amp.
 Resistance (20°C) : 34 Ohms
 Other Voltages Available : 6, 12, 50, 90 Volts D.C.
 Maximum Speed : 6,250 R.P.M.
 Maximum Heat
 Dissipation (Slipping)

At various R.P.M. 500 r.p.m.: 2790 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 : 2.5kg (5 1/2 lb)

Torque: Slip characteristic

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



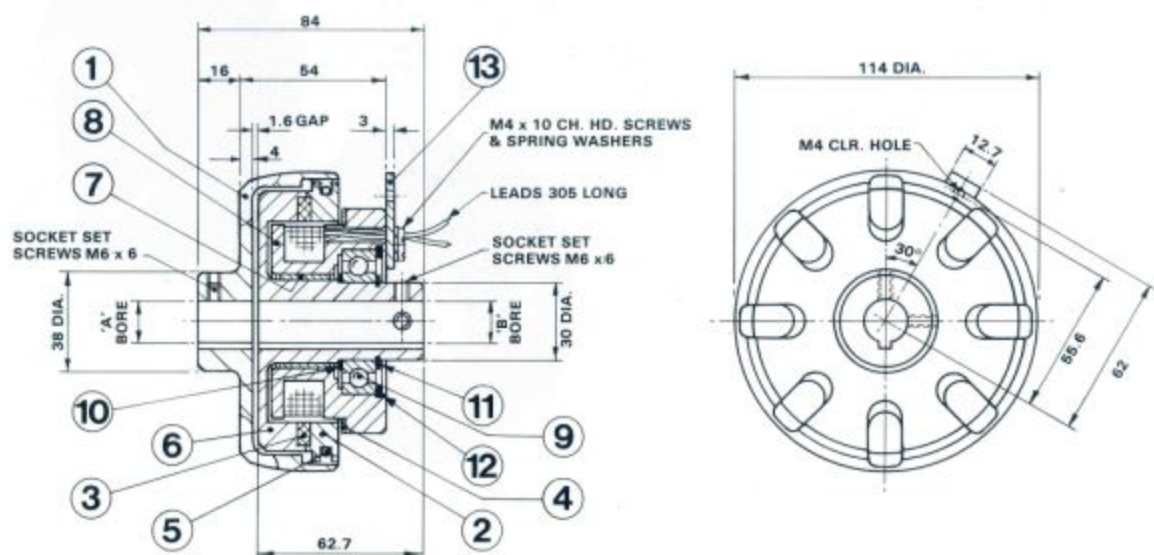
**DATA
SHEET
SIZE
BM400**

**SELF-ADJUSTING
ELECTROMAGNETIC
CLUTCHES
TYPE BM**

ALL
BRITISH
COMPANY

WITH BEARING MOUNTED STATIONARY FIELD

Observe shaft parallel alignment requirements as given on installation data sheet at front of catalogue.



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

STANDARD BORES

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	526	OUTER MEMBER/BORE	
2	4073	DRIVE RING	
3	4086	FRICTION RING	
4	565	MAGNETIC INSULATOR	
5	733	CUSHION RING	
6	4786	BM. INNER ROTOR/BORE	
7	2081	SLEEVE BEARING	
8	4592	BM. FIELD SPOOL ASSY.	
9		BALL BEARING 6006 2 RS	
10		ABUTMENT CIRCLIP (External) 30 mm.	
11		CIRCLIP (External) 30 mm.	
12		CIRCLIP (Internal) 55 mm.	
13	3157	TORQUE ARM	

'A' INCHES	'B' INCHES	KEYWAY WIDTH INCHES
.501/.500	.501/.500	1/8
.626/.625	.626/.625	3/16
.751/.750	.751/.750	3/8
.876/.876	-	1/4
1.001/1.000	-	1/2
mm ⁰ / _{+.018}	mm ⁰ / _{+.018}	mm
11	11	4
12	12	4
14	14	5
15	15	5
16	16	5
17	17	5
mm ⁰ / _{+.021}	mm ⁰ / _{+.021}	mm
19	19	6
20	20	6

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ALL
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EXTENDED-HUB ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET

SIZE
BM400EH

MAXIMUM STATIC TORQUE 23 Nm. (16 lbs. ft.)

Will transmit available torque of 1.1 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

EXTENDED HUB CLUTCHES

Advantages

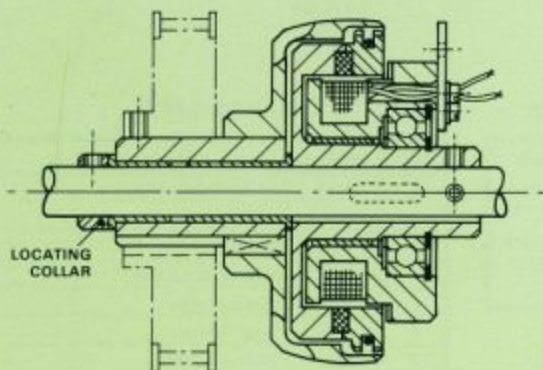
- Through shaft mounting for simple assembly.
- Clark Clutches are self-adjusting throughout their life.
- Will operate up to 60 times a minute where load inertia permits.
- Softstart facility available where used with Clark Silkstart Acceleration Controller.
- Lower power device 0.7 amp at 24 volt.

Extended Hub Clutches are designed for use where a remotely controlled drive is required to or from a shaft via a clutch and pulley etc. The Clutches are fitted with oil reservoir sleeve bearings contained within the steel keywayed hub to which the pulley etc. may be secured. When the Clutch is switched off, the hub idles on the shaft. When the Clutch is switched on, the hub is locked to the shaft.

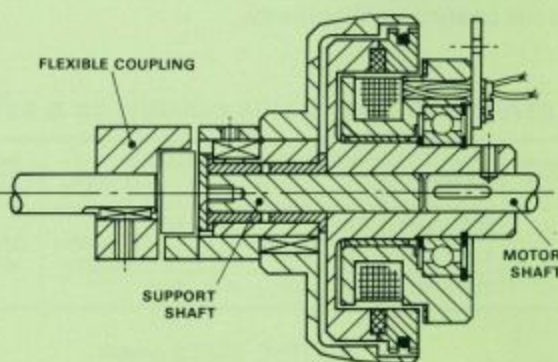


Typical use of BM400EH Clutch :

Input drive may be to shaft or hub.



(a) with a pulley fitted.



(b) with a flexible coupling fitted for an in-line coupling between two shafts where precise shaft alignment cannot be guaranteed.

See BM400 Clutch Data Sheet for full specification.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

**DATA
SHEET**

SIZE

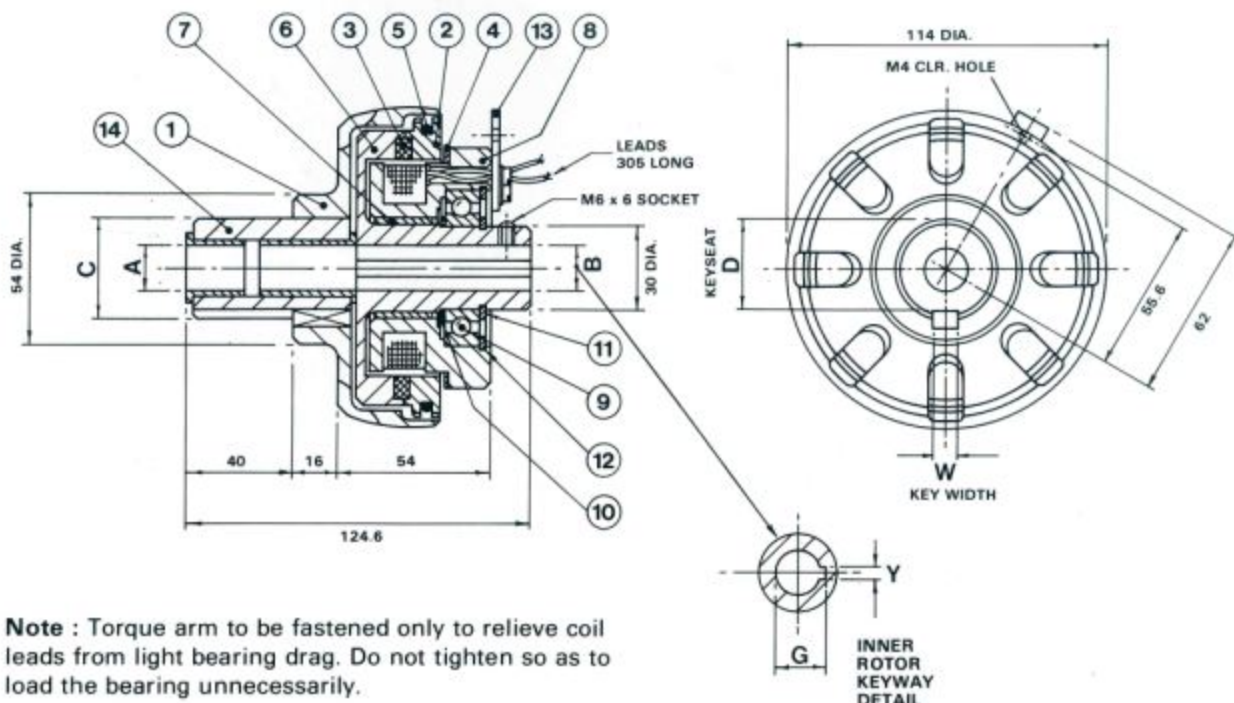
BM400EH

**EXTENDED-HUB
ELECTROMAGNETIC
CLUTCHES**

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

**ALL
BRITISH
COMPANY**

Type BM400EH (incorporating bearing mounted Field Spool)



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

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"
5/8"	.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		16.33/16.43			
15	15.00/15.03	5.00/5.02	17.33/17.43			
16	16.00/16.03		18.33/18.43			
19	19.00/19.03		21.83/21.93			
20	20.00/20.03	6.00/6.02	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	4786	INNER ROTOR	
7	2081	SLEEVE BEARING	
8	4592	BM FIELD SPOOL ASSY	
9		BALL BEARING 6006 2RS	
10		ABUTMENT CIRCLIP (External) 30mm	
11		CIRCLIP (External) 30mm	
12		CIRCLIP (Internal) 55mm	
13	3157	TORQUE ARM	
14	4135	EH SLEEVE & BEARING SUB-ASSY.	

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ALL
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MOTOR MOUNTED ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
BM400EH

MAXIMUM STATIC TORQUE 23 Nm. (16 lb. ft.)

Will transmit available torque of 1.1 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

MOTOR MOUNTED PULLEY CLUTCHES

Advantages

- One piece assembly direct to motor shaft.

These clutches are custom built to provide a remotely controlled automatic drive from the shaft of a motor or gearbox.

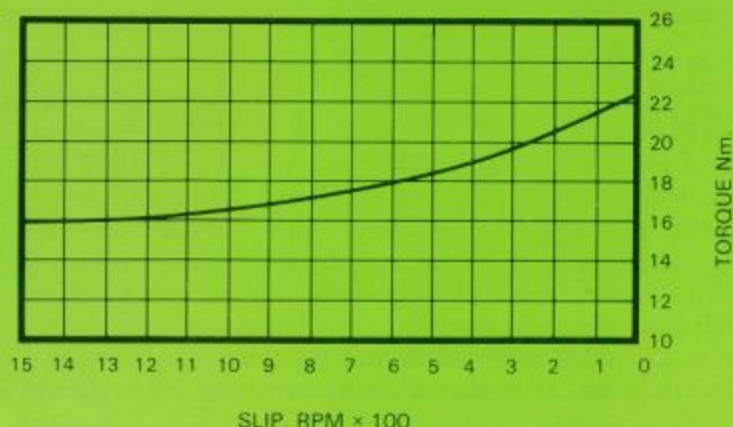
The assembly comprises a specified pulley or chainwheel etc, fitted to the clutch, bored and keywayed as required.

The assembly is fitted as a single unit and secured to the shaft with a set screw tapped into the end of the motor shaft. A restraint is also required for the torque arm.

The unit may be removed from the shaft by a jacking screw, the assembly being provided with a suitably threaded portion.

The arrangement has several advantages :

- It avoids the need to erect and support a motor shaft extension to accommodate the Clutch.
- The pulley etc. is positioned to be over the motor bearings so that the motor shaft and bearings are not overloaded.
- All Clark Clutches are self-adjusting for wear throughout their life.
- Softstart facility available where used with Clark Silkstart Acceleration Controller.



Torque: Slip characteristic

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

**DATA
SHEET
SIZE
BM400EH**

**MOTOR MOUNTED
ELECTROMAGNETIC
CLUTCHES**

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

**ALL
BRITISH
COMPANY**

MAXIMUM STATIC TORQUE 23 Nm. (16 lb. ft.)

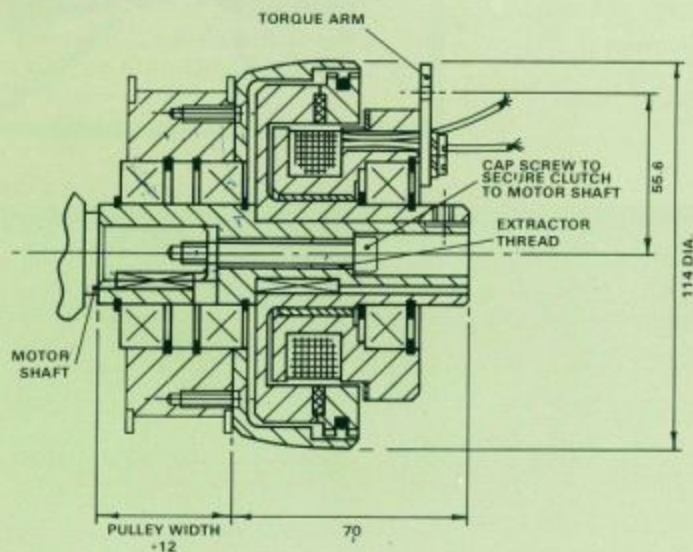
Will transmit available torque of 1.1 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

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 : 6,250 R.P.M.
Maximum Heat
Dissipation (Slipping)

At various R.P.M.

500 r.p.m.: 2790 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)



**TYPICAL BM400 MOTOR
MOUNTING CLUTCH
WITH TIMING PULLEY**

Electrical Note

If not using a Clark Power Unit, always connect a 0.22 mfd 1000v. capacitor permanently across the clutch or brake coil to protect the control switch contacts.

CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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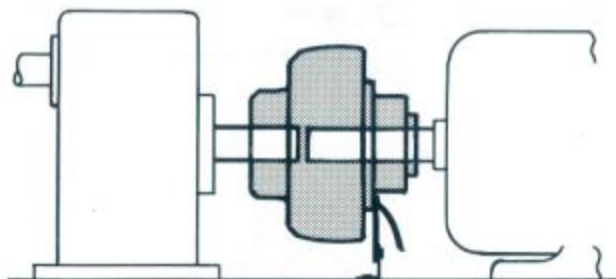
ALL
BRITISH
COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES TYPE BM

WITH BEARING MOUNTED STATIONARY FIELD

DATA
SHEET
SIZE
BM600

MAXIMUM STATIC TORQUE 61 Nm. 45lb.ft.



Two part assembly : Input may be from 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 24V.
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)	

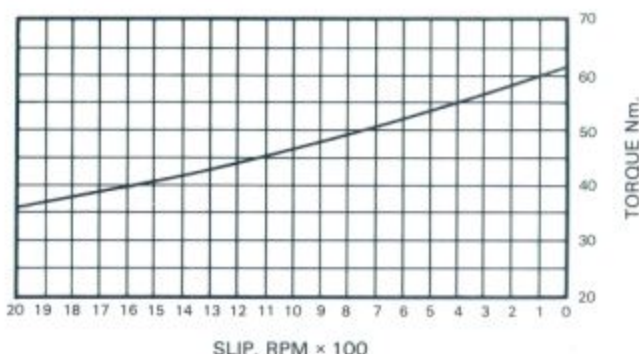
At various R.P.M.

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 : 7kg (15lb)

Torque: Slip characteristic

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



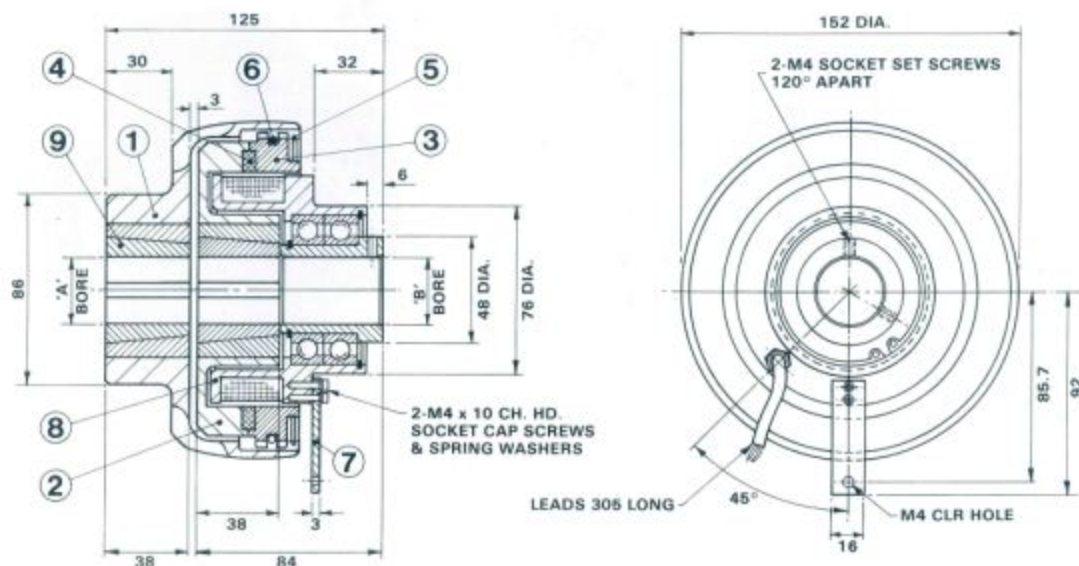
**DATA
SHEET
SIZE
BM600**

**SELF-ADJUSTING
ELECTROMAGNETIC
CLUTCHES
TYPE BM**

ALL
BRITISH
COMPANY

WITH BEARING MOUNTED STATIONARY FIELD

Observe shaft parallel alignment requirements as given on Assembly and Maintenance data sheet at front of catalogue.



Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	672	OUTER MEMBER	1
2	4860	INNER ROTOR	1
3	4139	DRIVE RING	1
4	4331	FRICTION RING	1
5	731	SPRING CLIP	1
6	732	CUSHION RING	1
7	3062	TORQUE ARM	1
8	4269	FIELD SPOOL ASSY	1
9	1615	TAPER BUSH ASSY	2

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	$\frac{1}{4} \times \frac{1}{8}$
$1\frac{1}{8}$	$1\frac{1}{8}$	$\frac{5}{16} \times \frac{7}{64}$
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{5}{16} \times \frac{7}{64}$
Metric Sizes (mm)		
12	12	4 × 1.8
14 16	14 16	5 × 2.3
18 19	18 19	6 × 2.8
20 22	20 22	
24 25	24 25	8 × 3.3
28 30	28 30	
32	32	10 × 1.3

CLARK ELECTRIC CLUTCH AND CONTROLS Ltd

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ALL
BRITISH
COMPANY

EXTENDED-HUB & MOTOR MOUNTED ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
BM600EH

MAXIMUM STATIC TORQUE 61 Nm. (45 lb. ft.)

Will transmit available torque of 3.7 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

EXTENDED HUB CLUTCHES

Advantages

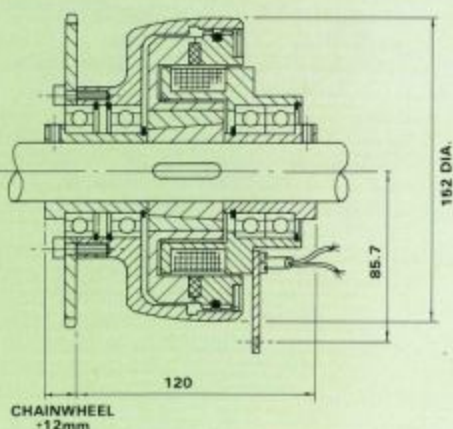
- Through shaft mounting - no shaft aligning required.
- Clark Clutches are self-adjusting throughout their life.
- No machining and fitting - the clutch is supplied complete with pulley etc.
- Will operate up to 60 times a minute where load inertia permits.
- Soft start facility available where used with Clark Silkstart Acceleration Controller.
- Low power device 1 amp at 24 volt.

These clutches are supplied with specified pulley or chainwheel etc., already fitted with the assembly, bored and keywayed as required.

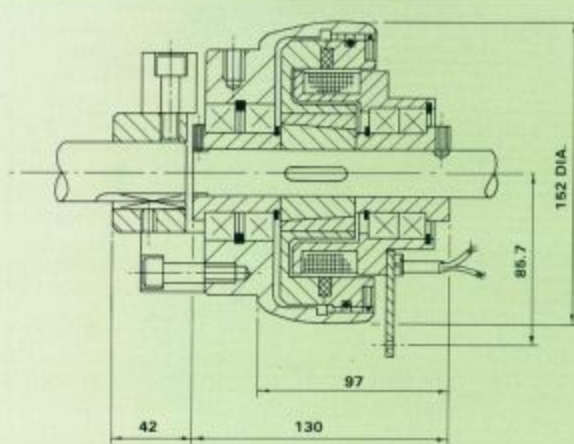
Extended Hub Clutches are designed to provide an alternative method of automatic transmission where it is required to drive to or from a shaft via a clutch and pulley etc.

Since the assembly is carried on a through shaft, no other form of fixing is required other than a restraint for the torque arm.

The assembly consists of 3 sections each provided with internal spacers, the 3 sections are butted together on the shaft and the screws tightened in the collars.



BM 600 EH Clutch with Chainwheel



BM 600 EH Clutch with Flexible Coupling for in-line drive

See BM600 Data Sheet for full technical details.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

DATA
SHEET

SIZE
BM600EH

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

ALL
BRITISH
COMPANY

MAXIMUM STATIC TORQUE 61 Nm. (45 lb. ft.)

Will transmit available torque of 3.7 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

MOTOR MOUNTED PULLEY CLUTCHES

Advantages

- One piece assembly direct to motor shaft.

These clutches are custom built to provide a remotely controlled automatic drive from the shaft of a motor or gearbox.

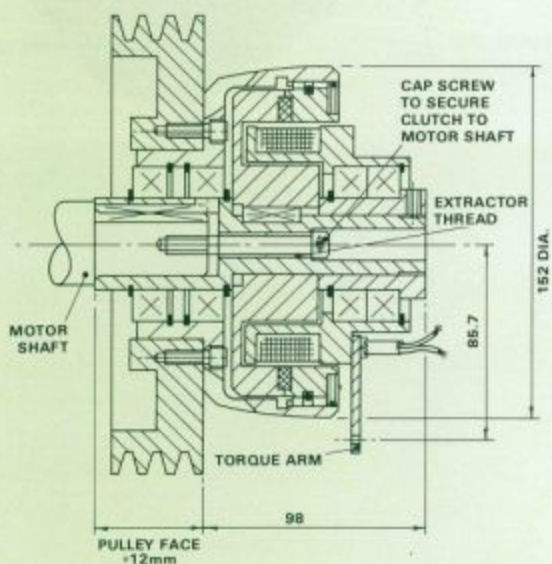
The assembly comprises a specified pulley or chainwheel etc, fitted to the clutch, bored and keywayed as required.

The assembly is fitted as a single unit and secured to the shaft with a set screw tapped into the end of the motor shaft. A restraint is also required for the torque arm.

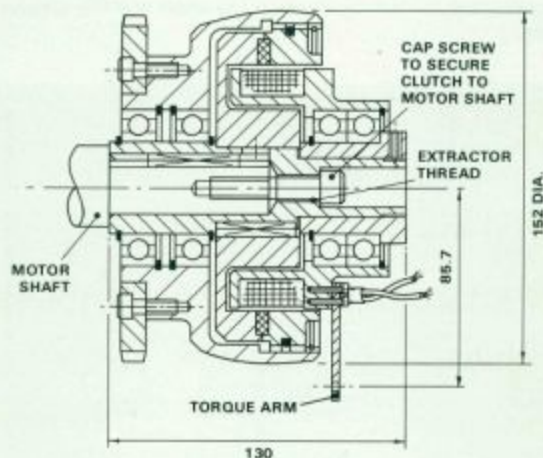
The unit may be removed from the shaft by a jacking screw, the assembly being provided with a suitably threaded portion.

The arrangement has several advantages :

- It avoids the need to erect and support a motor shaft extension to accommodate the Clutch.
- The pulley etc. is positioned to be over the motor bearings so the motor shaft and bearings are not overloaded.
- All Clark Clutches are self-adjusting for wear throughout their life.
- Soft start facility available where used with Clark Silkstart Acceleration Controller.



BM 600 Motor Mounting Pulley Clutch



BM 600 Motor Mounting Clutch with Sprocket

Electrical Note

If not using a Clark Power Unit, always connect a 0.22 mfd 1000v. capacitor permanently across the clutch or brake coil to protect the control switch contacts.

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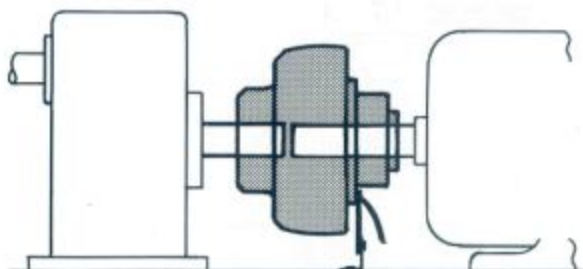
ALL
BRITISH
COMPANY

SELF-ADJUSTING ELECTROMAGNETIC CLUTCHES TYPE BM

DATA
SHEET
SIZE
BM800

WITH BEARING MOUNTED STATIONARY FIELD

MAXIMUM STATIC TORQUE 122 Nm. 90lb.ft.



Two part assembly : Input may be from either end.



Clutch H.P. rating

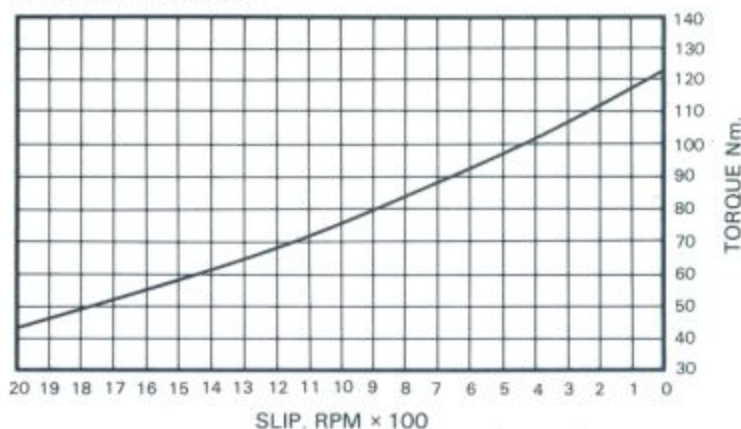
R.P.M. at Clutch Shaft	Allowing for shock torque loads up to 250% of steady load occurring.	
	When load is up to speed	During the accelerating period
H.P.	H.P.	H.P.
100	0.686	0.658
200	1.372	1.250
300	2.058	1.810
400	2.744	2.280
500	3.430	2.750
600	4.116	3.160
700	4.802	3.470
800	5.488	3.800
900	6.174	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	: 1.3 amp.
Resistance (20°C)	: 17.8 Ohms
Other Voltages Available	: 6, 12, 50, 90 & 180 Volts D.C.
Maximum Speed	: 3600 r.p.m.
Maximum Heat Dissipation (Slipping)	
At various r.p.m.	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	: 14.5Kg (32lb)

Torque: Slip characteristic

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



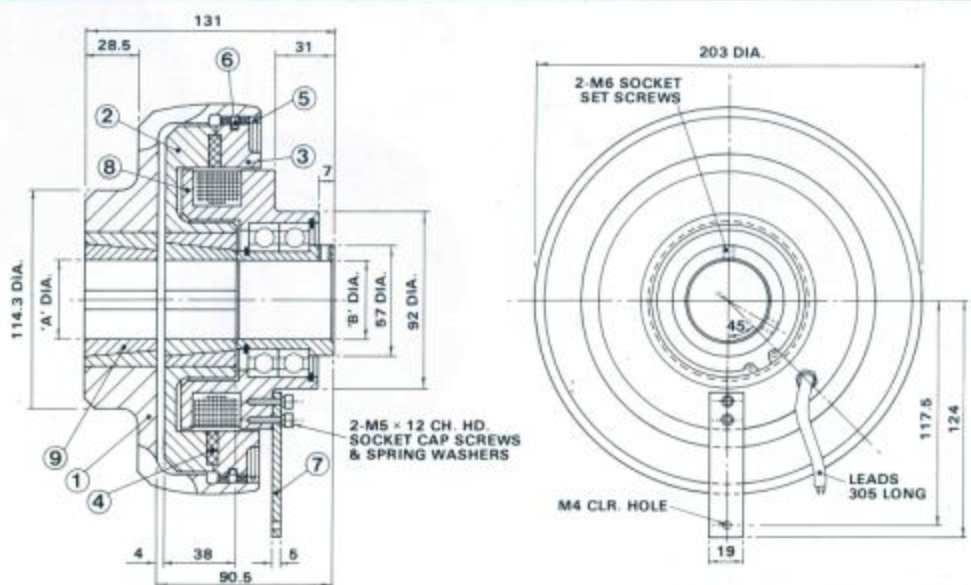
**DATA
SHEET
SIZE
BM800**

**SELF-ADJUSTING
ELECTROMAGNETIC
CLUTCHES
TYPE BM**

ALL
BRITISH
COMPANY

WITH BEARING MOUNTED STATIONARY FIELD

Observe shaft parallel alignment requirements as given on Assembly and Maintenance data sheet at front of catalogue.



STANDARD BORES

Note : Torque arm to be fastened only to relieve coil leads from light bearing drag. Do not tighten so as to load the bearing unnecessarily.

PARTS LIST

ITEM	PART No.	TITLE	No. OFF
1	581	OUTER MEMBER	1
2	4828	INNER ROTOR	1
3	4328	DRIVE RING	1
4	4330	FRICTION RING	1
5	729	SPRING CLIP	1
6	730	CUSHION RING	1
7	3051	TORQUE ARM	1
8	3053	FIELD SPOOL ASSY.	1
9		TAPER ADAPTOR & BUSH	2

'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	$\frac{1}{4} \times \frac{1}{8}$
$1\frac{1}{8}$	$1\frac{1}{8}$	$\frac{5}{16} \times \frac{7}{64}$
$1\frac{1}{4}$	$1\frac{1}{4}$	$\frac{5}{16} \times \frac{7}{64}$
$1\frac{3}{8}$	$1\frac{3}{8}$	$\frac{3}{8} \times \frac{1}{8}$
$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{8} \times \frac{1}{8}$
$1\frac{5}{8}$	$1\frac{5}{8}$	$\frac{7}{16} \times \frac{1}{8}$
Metric Sizes (mm)		
16	16	5 x 2.3
18 19	18 19	6 x 2.8
20 22	20 22	8 x 3.3
24 25	24 25	10 x 3.3
28 30	28 30	
32 35	32 35	
38	38	
40 42	40 42	12 x 1.3

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EXTENDED-HUB & MOTOR MOUNTED ELECTROMAGNETIC CLUTCHES

FOR PULLEY, CHAINWHEEL,
SPUR GEAR OR FLEXIBLE COUPLING

DATA
SHEET
SIZE
BM800EH

MAXIMUM STATIC TORQUE 122 Nm. (90 lb. ft.)

Will transmit available torque of 7.5 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

EXTENDED HUB CLUTCHES

Advantages

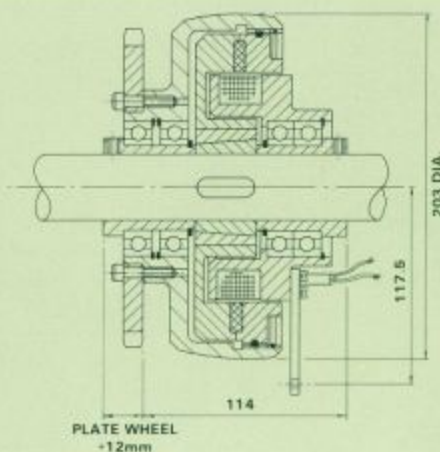
- Through shaft mounting - no shaft aligning required.
- Clark Clutches are self-adjusting throughout their life.
- No machining and fitting - the clutch is supplied complete with pulley etc.
- Will operate up to 60 times a minute where load inertia permits.
- Soft start facility available where used with Clark Silkstart Acceleration Controller.
- Low power device 1.5 amp at 24 volt.

These clutches are supplied with specified pulley or chainwheel etc., already fitted with the assembly, bored and keywayed as required.

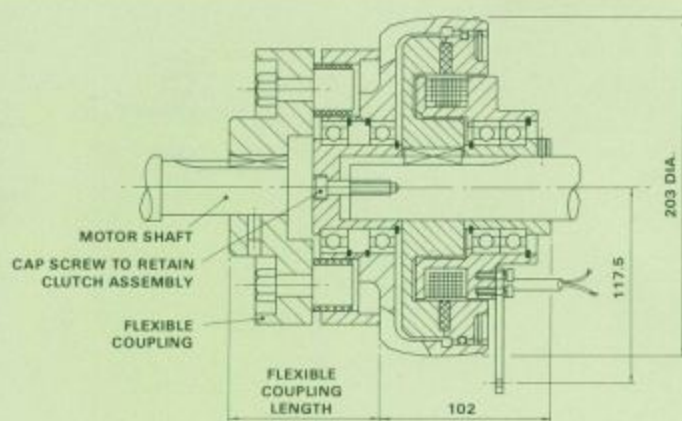
Extended Hub Clutches are designed to provide an alternative method of automatic transmission where it is required to drive to or from a shaft via a clutch and pulley etc.

Since the assembly is carried on a through shaft, no other form of fixing is required other than a restraint for the torque arm.

The assembly consists of 3 sections each provided with internal spacers, the 3 sections are butted together on the shaft and the screws tightened in the collars.



BM 800 EH Clutch with Chainwheel.



BM 800 EH Clutch with Flexible Coupling.

See BM800 Data Sheet for full technical details.

Bedding In

Where it is known that the Clutch and Brake are to be used on low speed applications, the unit may be supplied bedded-in in order that full torque will be available after a few operations.

On fast speed applications, the units will develop full torque after a few operations.

DATA
SHEET

SIZE
BM800EH

EXTENDED-HUB & MOTOR MOUNTED ELECTROMAGNETIC CLUTCHES

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

MAXIMUM STATIC TORQUE 122 Nm. (90 lb. ft.)

Will transmit available torque of 7.5 Kw motor at 1440 r.p.m. with 2.5 times overload factor.

MOTOR MOUNTED PULLEY CLUTCHES

Advantages

- One piece assembly direct to motor shaft.

These clutches are custom built to provide a remotely controlled automatic drive from the shaft of a motor or gearbox.

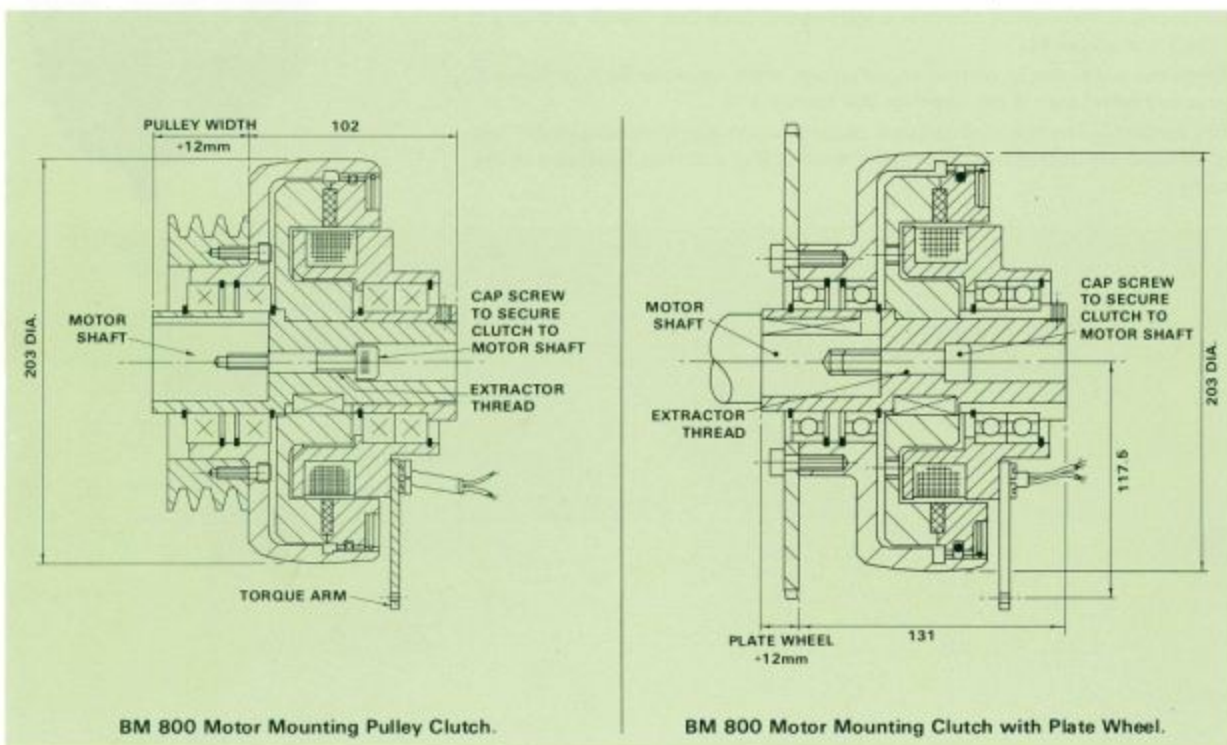
The assembly comprises a specified pulley or chainwheel etc, fitted to the clutch, bored and keywayed as required.

The assembly is fitted as a single unit and secured to the shaft with a set screw tapped into the end of the motor shaft. A restraint is also required for the torque arm.

The unit may be removed from the shaft by a jacking screw, the assembly being provided with a suitably threaded portion.

The arrangement has several advantages :

- It avoids the need to erect and support a motor shaft extension to accommodate the Clutch.
- The pulley etc. is positioned to be over the motor bearings so the motor shaft and bearings are not overloaded.
- All Clark Clutches are self-adjusting for wear throughout their life.
- Soft start facility available where used with Clark Silkstart Acceleration Controller.



Electrical Note

If not using a Clark Power Unit, always connect a 0.22 mfd 1000v. capacitor permanently across the clutch or brake coil to protect the control switch contacts.

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