

Magnetic clutches and brakes

Precision Tork™ units provide constant torque independent of slip speed. They offer excellent overload and jam protection for all drive train components and also provide soft starts with zero slip when a preset torque is reached. Precision Tork permanent magnet clutches and brakes do not require maintenance and provide extremely long life.

Features and Benefits

Fast, precise torque adjustment

- Torque is set with a large knurled adjustment ring
- Infinite adjustability between minimum and maximum settings. This allows units to be fine tuned to your unique requirement.

Torque is constant with respect to speed

- By using the Precision Tork™ unit, you can solve almost any torque control problem
- Torque is extremely consistent and smooth at low, as well as high speeds

No external control or power source

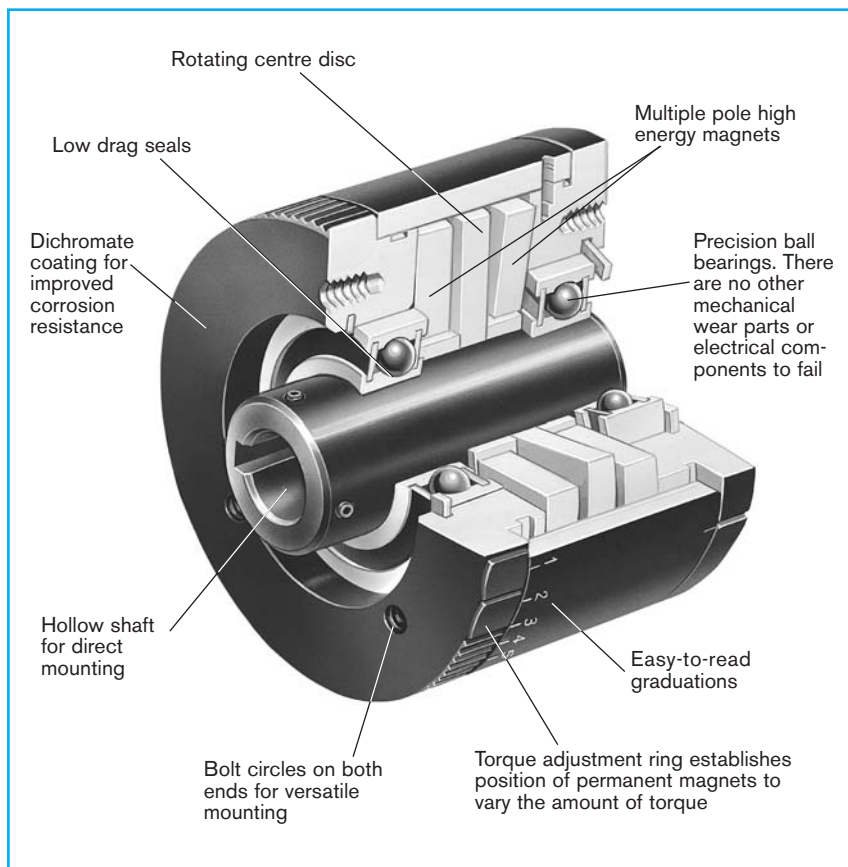
- Simple to install
- Nothing to monitor
- Unaffected by power interruption or power fluctuation
- Safe to use

Dependable performance

- Smallest possible transition from static to dynamic torque
- Virtually eliminates the “stick-slip” phenomenon associated with friction devices
- Long life. The only wearing parts are the ball bearings
- Extremely accurate. Precision Tork™ units out-perform all other devices at low RPM

Versatile mounting: Easy to retrofit

- Clutches are available with hollow bores for mounting on motor shafts or jack shafts
- Bolt circles allow for fixed mounting, adding a pulley, or stub shaft adapters
- Brakes are available with solid shaft outputs



SPECIAL APPLICATIONS

Specials are our business. . .

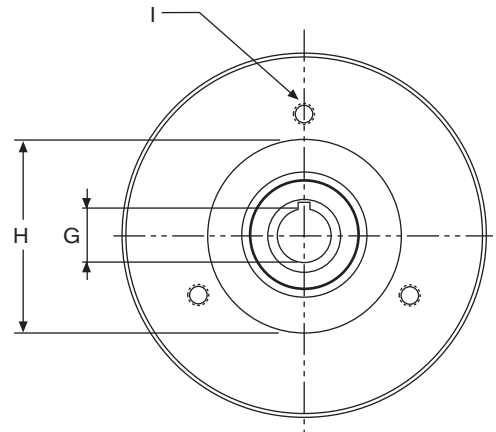
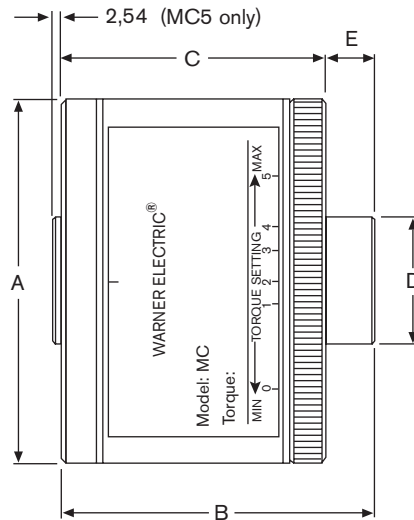
- Special shaft bores and keyways
- Shaft extensions
- System retrofits
- Fixed torque units



Magnetic clutches - MC



Set screw adjustment



Drawing A

Specifications

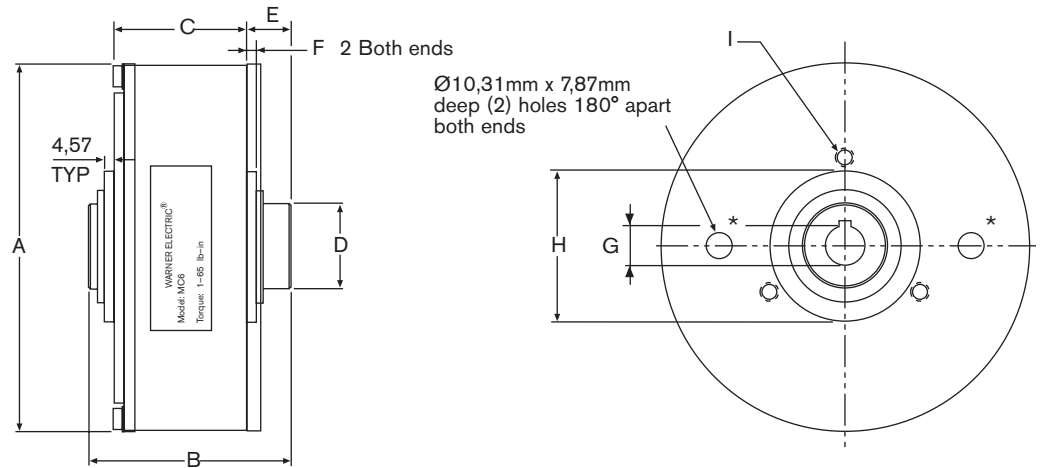
| Standard models | Stainless steel models | Max. torque (Nm) | Max. heat dissipation (W) | Inertia of output shaft (kgcm ²) | Bending moment (Nm) | Max. speed (RPM) | Weight (kg) |
|-----------------|------------------------|------------------|---------------------------|--|---------------------|------------------|-------------|
| MC2M-6 | MC2MS-6 | 0,16 | 10 | 4,9 x 10 ⁻⁶ | 0,56 | 3600 | 0,31 |
| MC3M-8 | MC3MS-8 | 0,68 | 18 | 4,6 x 10 ⁻⁵ | 1,1 | 1800 | 0,9 |
| MC4M-8 | MC4MS-8 | 1,24 | 22 | 9,4 x 10 ⁻⁵ | 1,1 | 1800 | 1,13 |
| MC4M-14 | MC4MS-14 | 1,24 | 22 | 9,4 x 10 ⁻⁵ | 1,1 | 1800 | 1,13 |
| MC4M-15 | MC4MS-15 | 1,24 | 22 | 9,4 x 10 ⁻⁵ | 1,1 | 1800 | 1,13 |
| MC4M-16 | MC4MS-16 | 1,24 | 22 | 9,4 x 10 ⁻⁵ | 1,1 | 1800 | 1,13 |
| MC4M-001 | MC4MS-001 | 2 | 22 | 1,7 x 10 ⁻⁴ | 1,1 | 1800 | 1,58 |
| MC5M-16 | MC5MS-16 | 3,4 | 72 | 5,4 x 10 ⁻⁴ | 2,82 | 1800 | 4,08 |
| MC5M-19 | MC5MS-19 | 3,4 | 72 | 5,4 x 10 ⁻⁴ | 2,82 | 1800 | 4,08 |
| MC5,5M-16 | MC5,5MS-16 | 5,6 | 110 | 8,5 x 10 ⁻⁴ | 2,82 | 1800 | 4,99 |
| MC5,5M-19 | MC5,5MS-19 | 5,6 | 110 | 8,5 x 10 ⁻⁴ | 2,82 | 1800 | 4,99 |
| MC6M-16 | MC6MS-16 | 7,9 | 150 | 1,4 x 10 ⁻³ | 2,82 | 1800 | 5,44 |
| MC6M-19 | MC6MS-19 | 7,9 | 150 | 1,4 x 10 ⁻³ | 2,82 | 1800 | 5,44 |
| MC6DM-19 | - | 15,8 | 300 | 2,5 x 10 ⁻³ | 2,82 | 1800 | 10,84 |
| MC9M-24 | - | 33,9 | 345 | 19 x 10 ⁻³ | 5,65 | 1200 | 20,38 |

Dimensions (mm)

| Models | Drawing | A | B | C | D | E | F | Pilot ø H |
|-----------|---------|--------|-------|-------|-------|-------|------|---------------|
| MC2M-6 | A | 46,99 | 41,1 | 34,29 | 9,4 | 6,8 | - | 22,25 - 22,30 |
| MC3M-8 | A | 69,6 | 56,3 | 50,2 | 14,99 | 6,1 | - | 35,08 - 35,13 |
| MC4M-8 | A | 82,04 | 57,7 | 51,1 | 24,99 | 6,6 | - | 47,04 - 47,09 |
| MC4M-14 | A | 82,04 | 57,7 | 51,1 | 24,99 | 6,6 | - | 47,04 - 47,09 |
| MC4M-15 | A | 82,04 | 57,7 | 51,1 | 24,99 | 6,6 | - | 47,04 - 47,09 |
| MC4M-16 | A | 82,04 | 57,7 | 51,1 | 24,99 | 6,6 | - | 47,04 - 47,09 |
| MC4M-001 | A | 82,04 | 61,95 | 55,32 | 24,99 | 6,6 | - | 47,04 - 47,09 |
| MC5M-16 | A | 118,11 | 80,77 | 67 | 35 | 13,8 | - | 61,98 - 62,00 |
| MC5M-19 | A | 118,11 | 80,77 | 67 | 35 | 13,8 | - | 61,98 - 62,00 |
| MC5,5M-16 | A | 134,1 | 81,7 | 67,1 | 35 | 14,6 | - | 61,98 - 62,00 |
| MC5,5M-19 | A | 134,1 | 81,7 | 67,1 | 35 | 14,6 | - | 61,98 - 62,00 |
| MC6M-16 | B | 153,5 | 80,77 | 51,82 | 34,6 | 19,5 | 4,57 | 61,98 - 62,00 |
| MC6M-19 | B | 153,5 | 80,77 | 51,82 | 35 | 19,5 | 4,57 | 61,98 - 62,00 |
| MC6DM-19 | * | * | * | * | * | * | * | 82,50 - 82,55 |
| MC9M-24 | B | 238,76 | 106,2 | 88,65 | 44,8 | 13,97 | 3,3 | 82,50 - 82,55 |

* Drawing on request

Magnetic clutches - MC

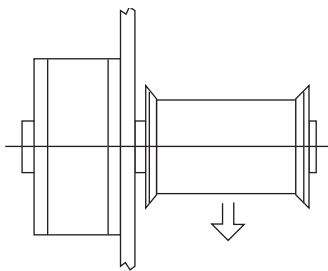


*Spanner wrench adjustment **Drawing B**

Dimensions (mm)

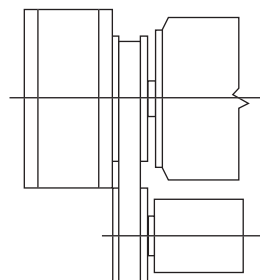
| Models | Bore Ø G (H8) | Keyway (Width) - DIN 6885 | Mounting (I) | Holes depth | Adjust screws |
|------------------|---------------------------|------------------------------|---|----------------|------------------|
| MC2M-6 | 6 | Roll pin Ø 3 mm | 3 x M4 on Ø 32 equidistant | 8 | M3 |
| MC3M-8 | 8 | 2 x M4 90° | 3 x M4 on Ø 48 equidistant | 11 | M4 |
| MC4M-8 | 8 | 7,5 Flat | 3 x M5 on Ø 60,33 equidistant | 11 | M4 |
| MC4M-14 | 14 | 3 | 3 x M5 on Ø 60,33 equidistant | 11 | M4 |
| MC4M-15 | 15 | 5 | 3 x M5 on Ø 60,33 equidistant | 11 | M4 |
| MC4M-16 | 16 | 5 | 3 x M4 on Ø 60 equidistant | 11 | M4 |
| MC4M-001 | 16 | 5 | 3 x M5 on Ø 60 equidistant | 11 | M4 |
| MC5M-16 | 16 | 5 | 3 x M6 on Ø 80 equidistant | 12,7 | M5 |
| MC5M-19 | 19 | 6 | 3 x M6 on Ø 80 equidistant | 12,7 | M5 |
| MC5,5M-16 | 16 | 5 | 3 x M6 on Ø 100 equidistant | 15,5 | M5 |
| | 16 | 5 | 3 x M6 on Ø 73,03 equidistant | 12,7 | M5 |
| MC5,5M-19 | 19 | 6 | 3 x M6 on Ø 100 equidistant | 15,5 | M5 |
| | 19 | 6 | 3 x M6 on Ø 73,03 equidistant | 12,7 | M5 |
| MC6M-16 | 16 | 5 | 3 x M6 on Ø 100 equidistant | 7,9 | M5 |
| | 16 | 5 | 3 x M6 on Ø 73,03 equidistant | 7,9 | M5 |
| MC6M-19 | 19 | 6 | 3 x M6 on Ø 100 equidistant | 7,9 | M5 |
| | 19 | 6 | 3 x M6 on Ø 73,03 equidistant | 7,9 | M5 |
| MC6DM-19 | 19 | 6 | 3 x M8 on Ø 101,6 equidistant | 13 | M6 |
| MC9M-24 | 24 | 8 | 4 x M6 on Ø 149,23 equidistant | 12,7 | M5 |
| | 24 | 8 | 3 x M6 on Ø 107,95 equidistant | 12,7 | M5 |

Typical mounting



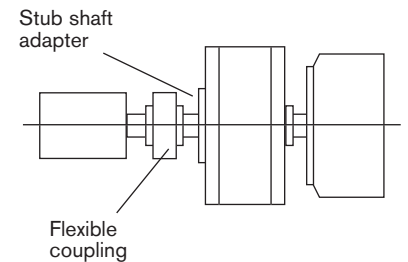
Brake

Typical setup for tensioning wire, film and fibers.



Clutch

Typical setup for material handling, soft starts and torque limiting.




Clutch coupling

Typical setup for torque limiting protection used for labeling, capping and printing applications.

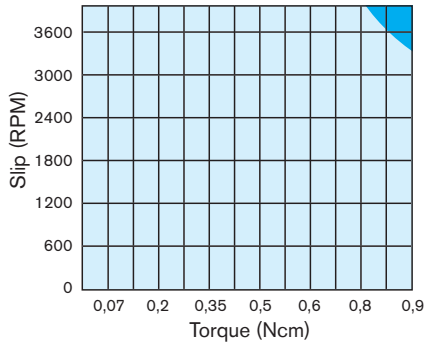
Magnetic clutches and brakes

Heat Dissipation Charts

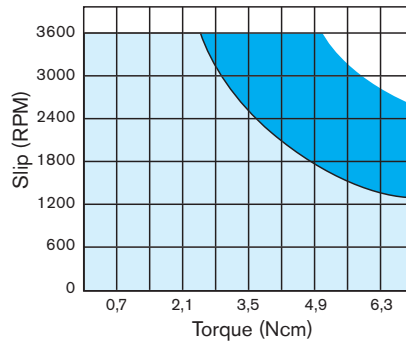
 Intermittent operation (50 % duty cycle)

 Continuous operation

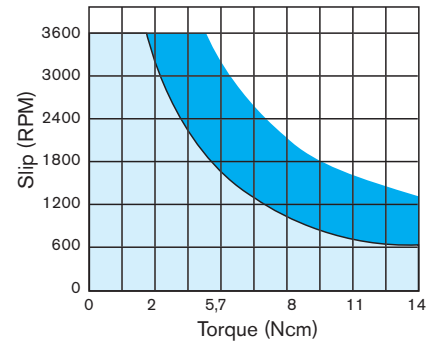
MB1



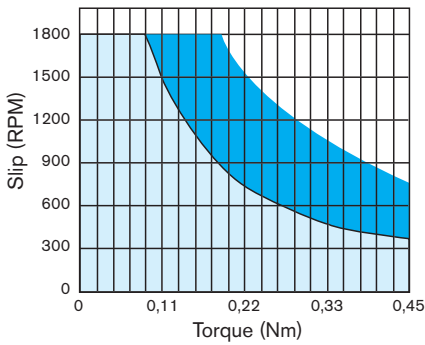
MC1.5/MB1.5



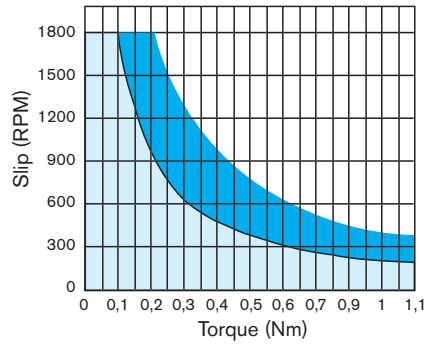
MC2/MB2



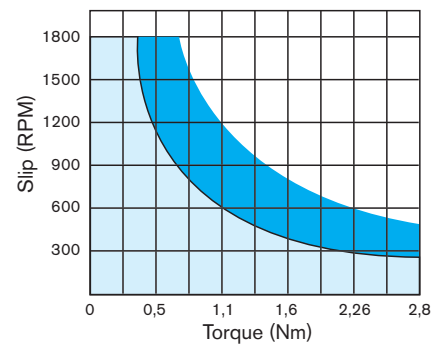
MC3/MB3



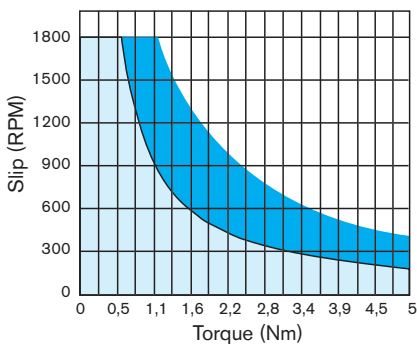
MC4/MB4



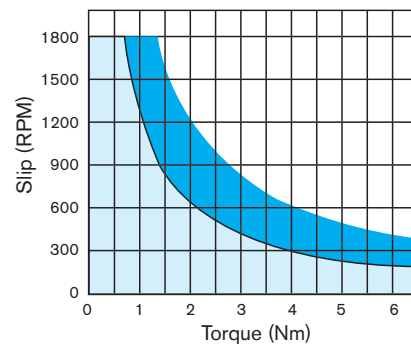
MC5/MB5



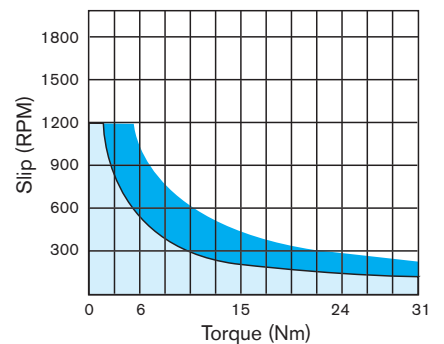
MC5.5/MB5.5



MC6/MB6



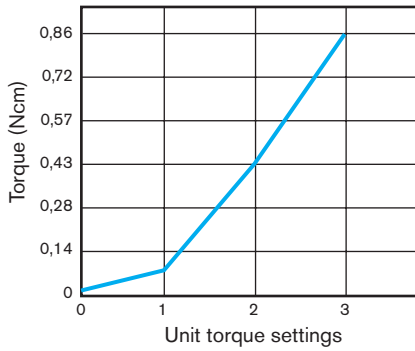
MC9/MB9



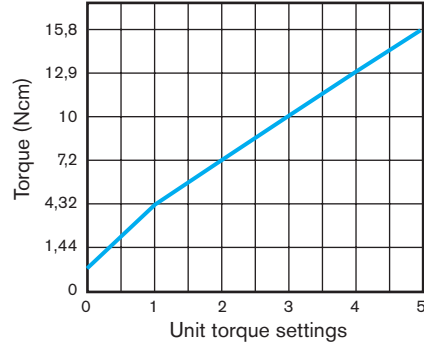
Magnetic clutches and brakes

Torque Setting Charts

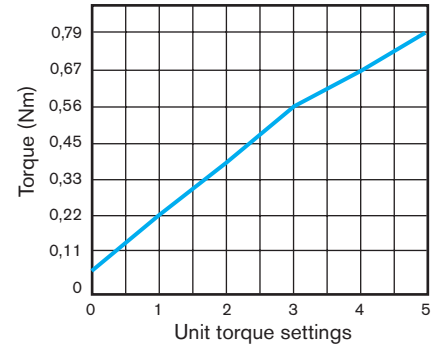
MB1



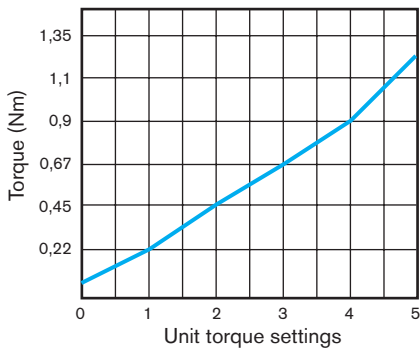
MC2/MB2



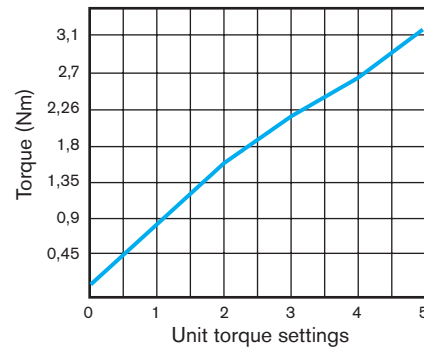
MC3/MB3



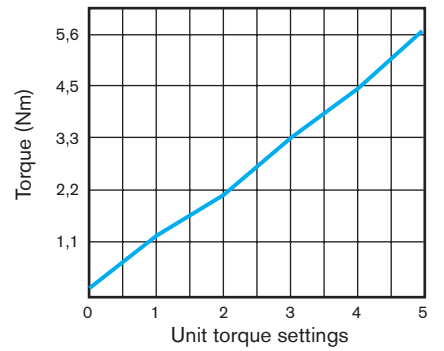
MC4/MB4



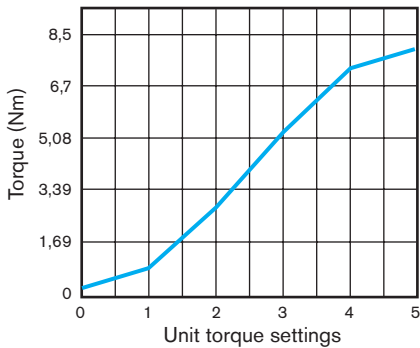
MC5/MB5



MC5.5/MB5.5



MC6/MB6



MC9/MB9

