



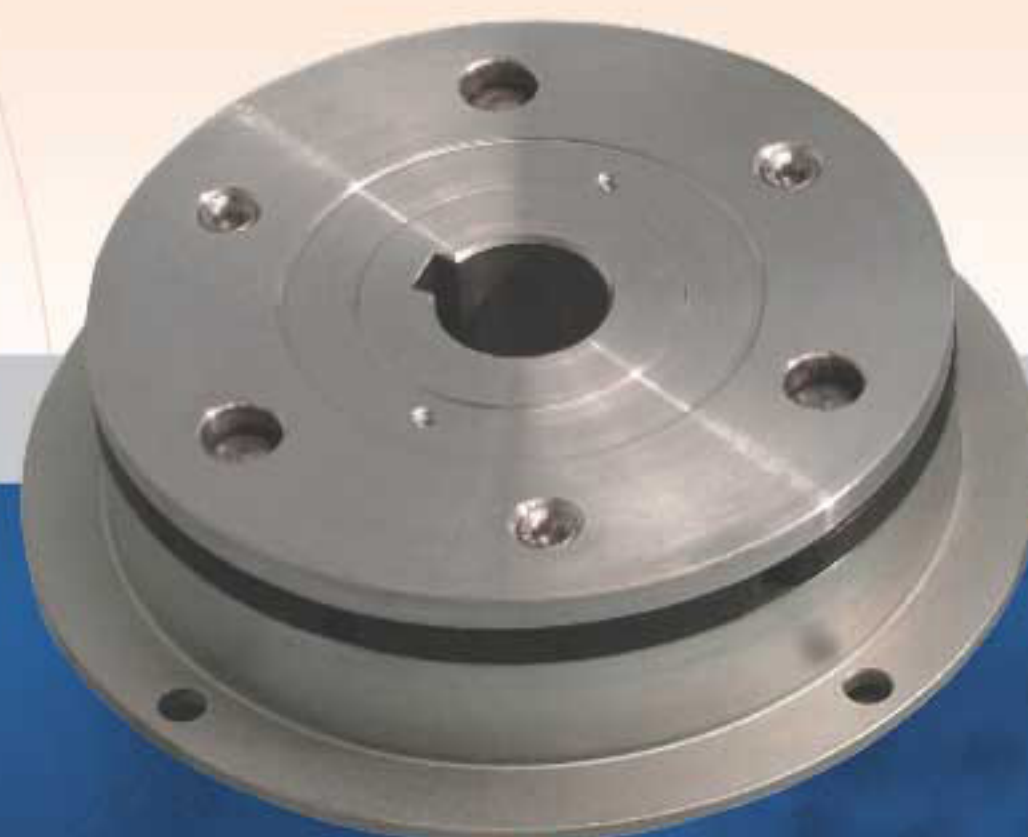
PRECISION • PERFORMANCE • SOLUTIONS

Industrial Electromagnetic Clutches, Brakes and Clutch-Brake Combinations

Precision manufactured with field-proven performance



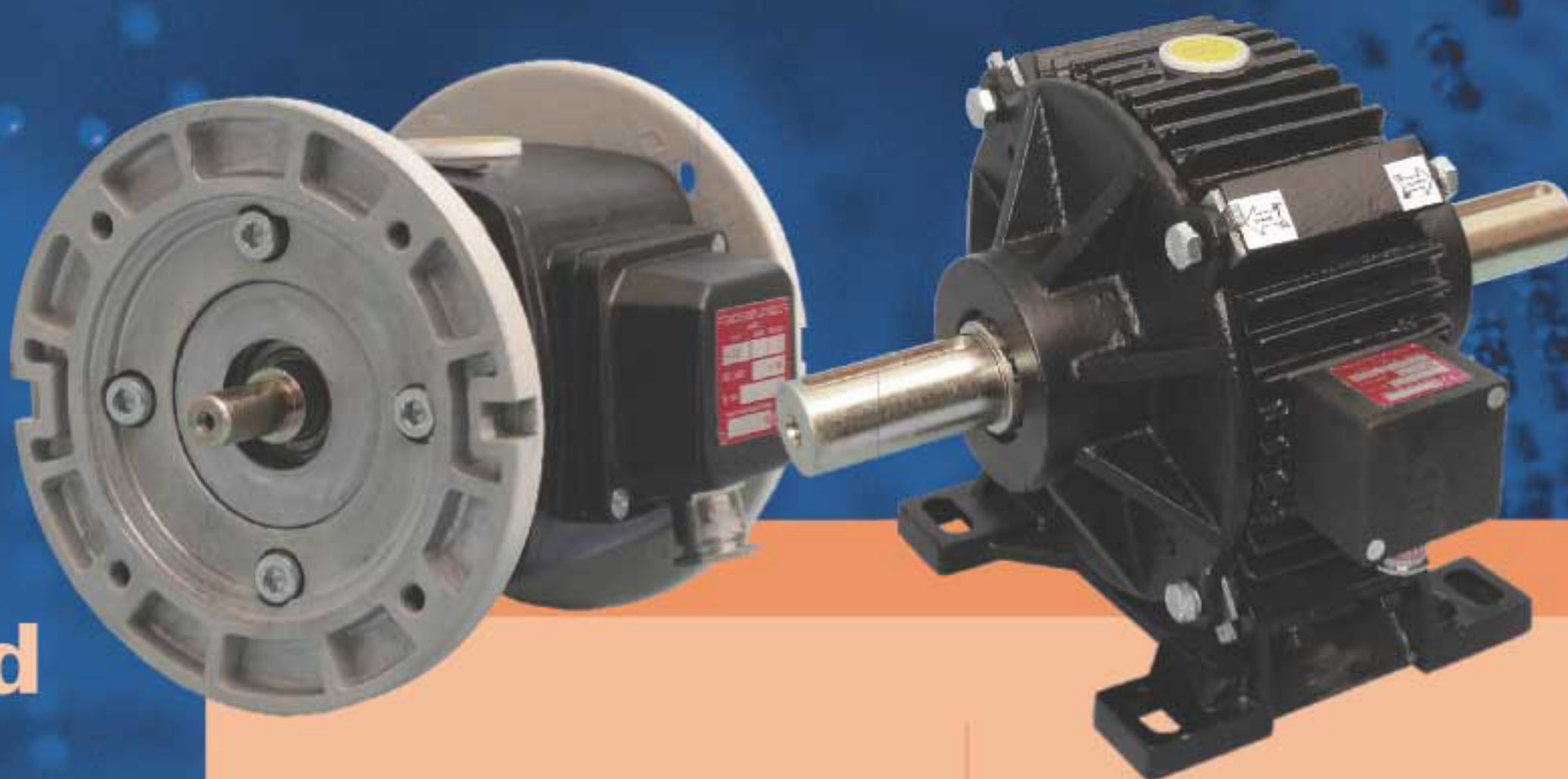
Shaft Mounted Clutches



Flange Mounted Brakes

**For Fast,
Precise
Starting and
Stopping**

www.emtorq.com



Flange Mounted and Foot Mounted
Clutch-Brake Combinations

Industrial Electromagnetic Clutches, Brakes and Clutch-Brake Solutions

Shaft Mounted Clutches for Fast, Precise Starting Flange Mounted Brakes for Fast, Precise Stopping Clutches and Brakes Feature

- Single Armature plate dry design
- Stationary field
- Fast reaction time
- Low inertia of rotating parts
- Zero backlash
- Special contoured spring
- Coil with class "F" insulation
- Long service life



Clutches

Flange Mounted and Foot Mounted Clutch-Brake Combinations provide Fast, Precise Starting & Stopping and feature

- IP 44 enclosed housing
- No overlap
- Fast reaction time
- Low inertia of rotating parts
- Zero backlash
- Special contoured spring
- Single Armature plate dry design
- Long service life



Brakes

These products must run dry. Oil, grease, foreign materials and similar such contaminants will affect the life and the characteristics of friction materials.



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A DIVISION OF TORQUE TECHNOLOGIES
Spring Set Brakes • Industrial Electromagnetic Clutches
Brakes • Clutch-Brake Combinations

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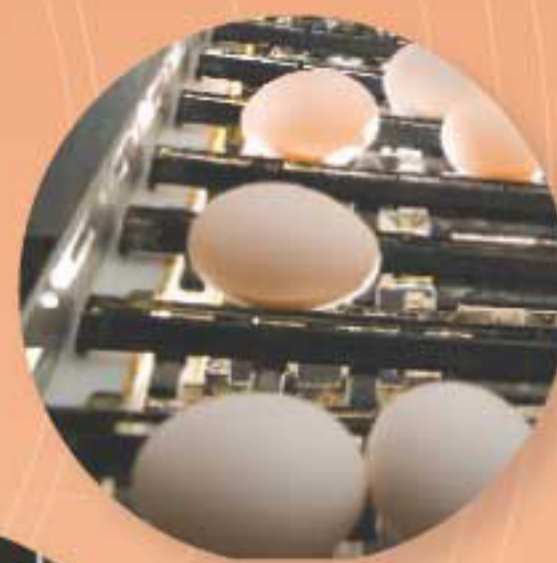
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Industrial Electromagnetic Clutches, Brakes and Clutch-Brake Solutions are designed to meet a variety of demanding applications, including:

Conveyors
Packaging Systems
Machine Tools
Material Handling
Food Processing

Automation
Converting Machinery
Printing Machinery



SIZE SELECTION: Clutches and Clutch-Brake Combinations

Compute the torque requirement and choose the related size for applications involving low inertia and low cycling frequency by using the following formula, applying the appropriate safety factor:

$$\text{Torque (Nm)} = 9550 \times (\text{Motor kW/RPM})$$

SIZE SELECTION: Brakes

Compute the torque requirement and choose the related size for applications involving low inertia and low cycling frequency by using the following formula, applying the appropriate safety factor:

$$\text{Torque (Nm)} = \frac{WK^2 \text{ (kgm}^2\text{)} \times \Delta\text{RPM}}{9.550 \times T \text{ (stop in seconds)}}$$

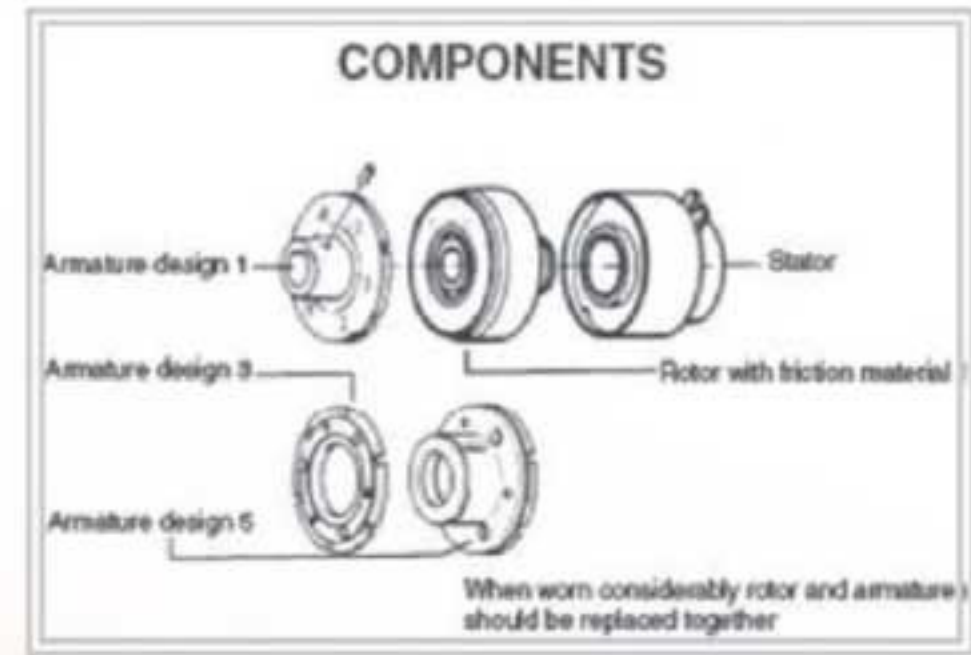
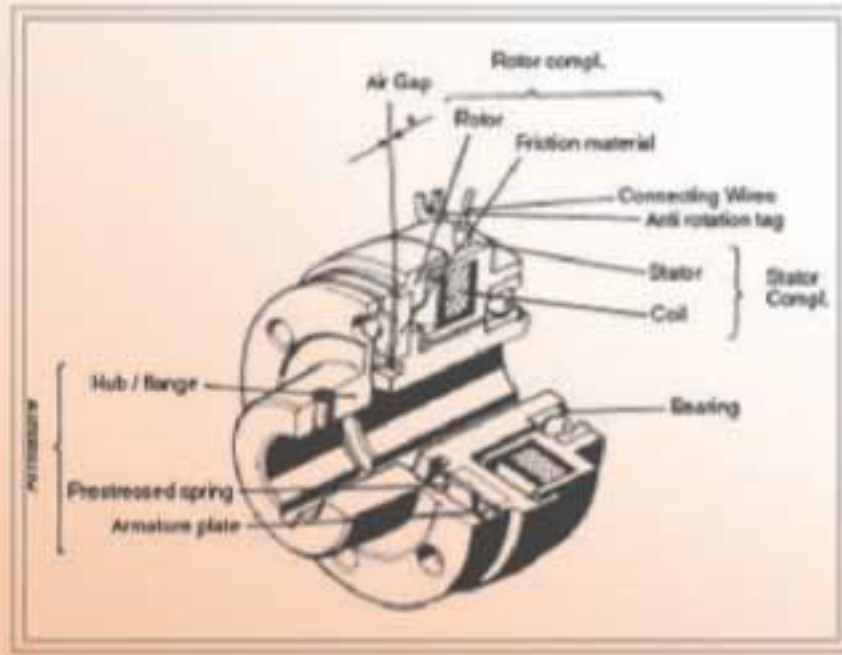
CALCULATING SAFETY FACTOR (K)

Multiply the calculated torque requirements by the appropriate safety factor (K). The value of the safety factor depends upon the calculation for your specific application:

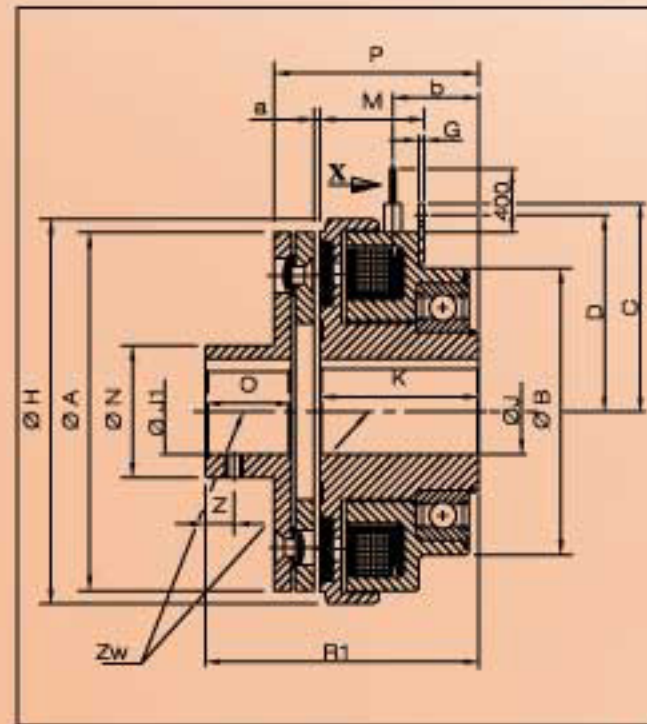
Load Condition	Safety Factor (K)
Low masses, equal loading & non-intermittent operation	2.0
Low masses, light shock load & intermittent operation	2.5
Non-overhauling loads	2-3
Overhauling loads	3-4
Medium masses, Light shock load & intermittent operation	3.0
Large masses, light shock load & intermittent operation	3.0
Diesel engine drive	4-5
Compressor drive	5-6

CLUTCHES

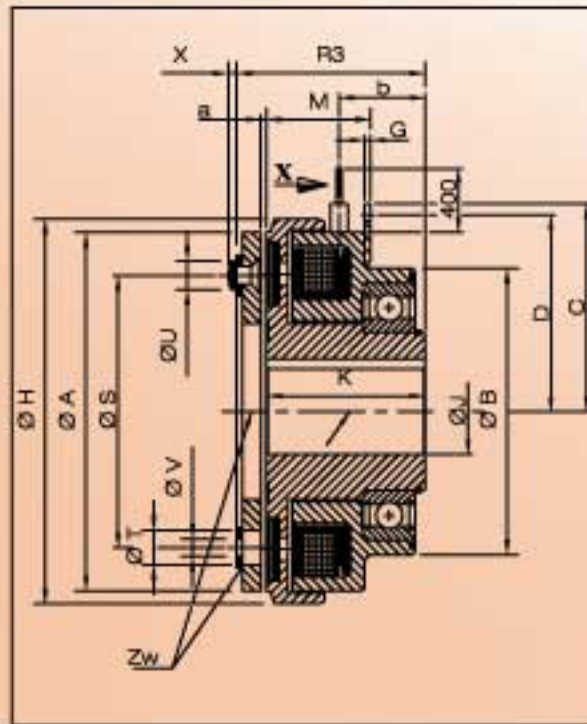
Shaft Mounted



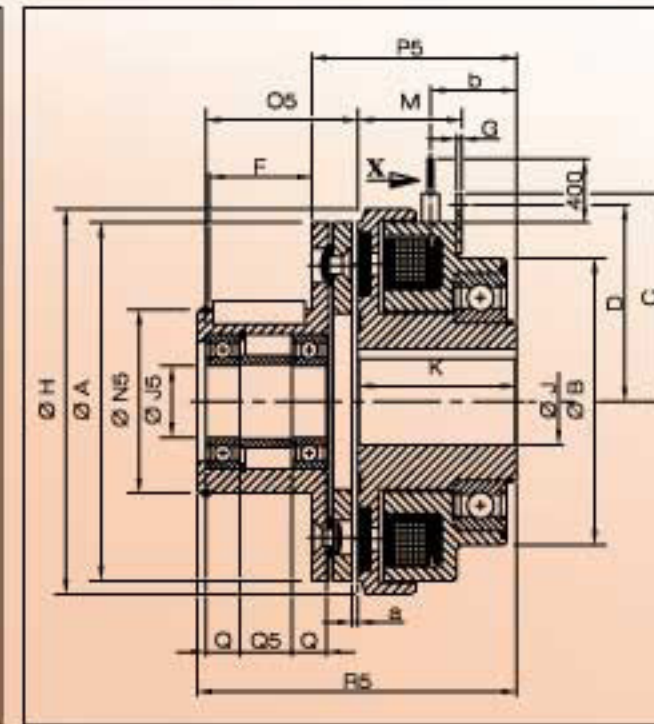
Design 3.1



Design 3.3



Design 3.5



Tapped holes shown on dimension 'Z' on request.

Clutch Selection Parameters

Abbreviated Clutch Selection Parameters

Size		06	08	10	12	16	20	25
Torque	Ms (Nm)	7.5	15	30	60	120	240	480
Max. Speed	RPM (min ⁻¹)	8000	6000	5000	4000	3000	3000	2000
Input Power	P20 [w]*	15	20	28	35	50	68	85
Rotor		1.19	2.66	7.8	22.6	63	205	547
Inertia (kg cm ²)	Armature 1	0.6	1.71	6.64	18	63.3	190	480
	Armature 3	0.42	1.18	4.72	13	48	137	358
	Armature 5	0.92	2.82	9.2	25.8	86.8	258	720

*Input power at 20°C

Additional sizes are available.

Clutches: Part Numbering/ Ordering Information

Size	Torque (Nm)
31	630
40	1250
50	2500

**Customer specific
designs available**

Part Number 41.105. __. __.

1. Type of Clutch (41.105)
2. Clutch Size (06-50)
3. Output (Armature) Design (3.1, 3.3, 3.5)
4. Bore of Armature Hub and Voltage

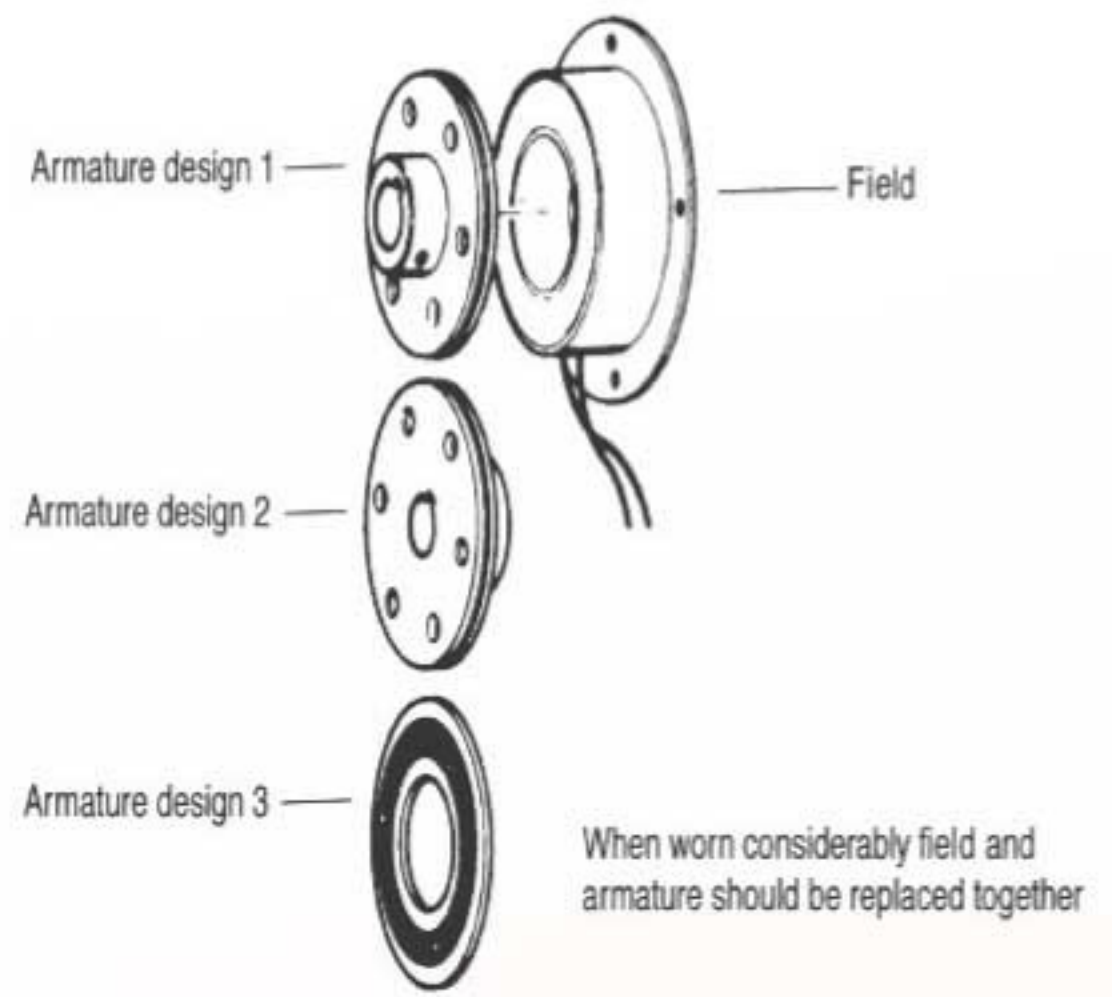
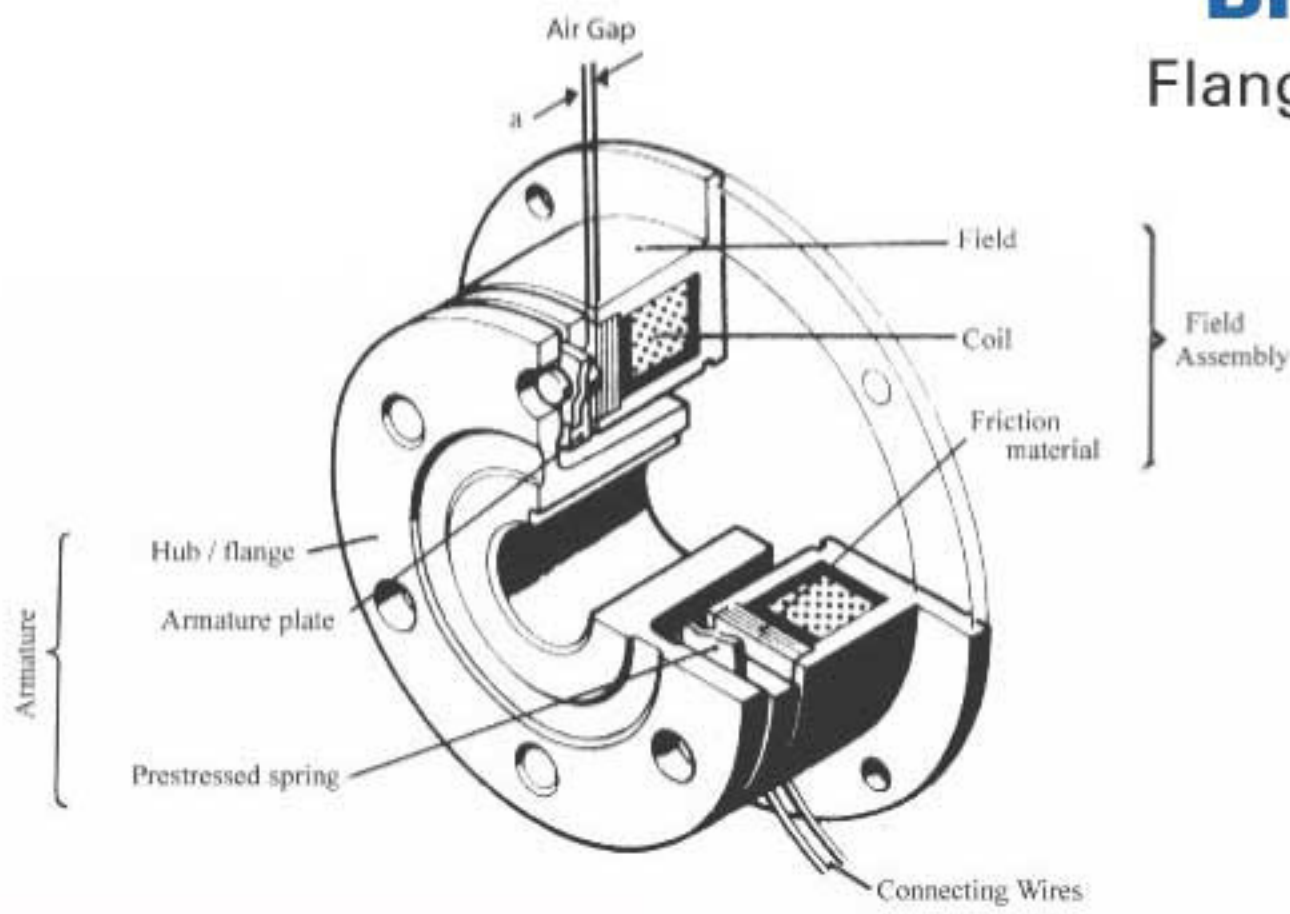
Example 41.105.08.3.1, 0.75 in-bore, 96 VDC

EMTorq electric clutches, brakes, clutch brake combinations and spring set brakes perform stop and start motion control of industrial machinery worldwide.

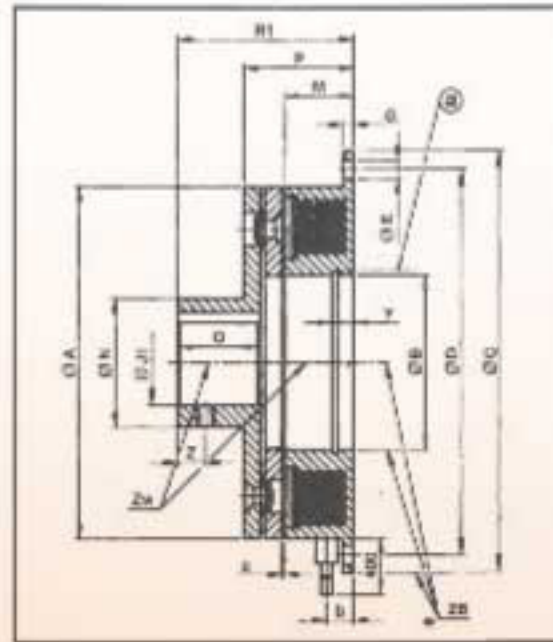
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BRAKES

Flange Mounted

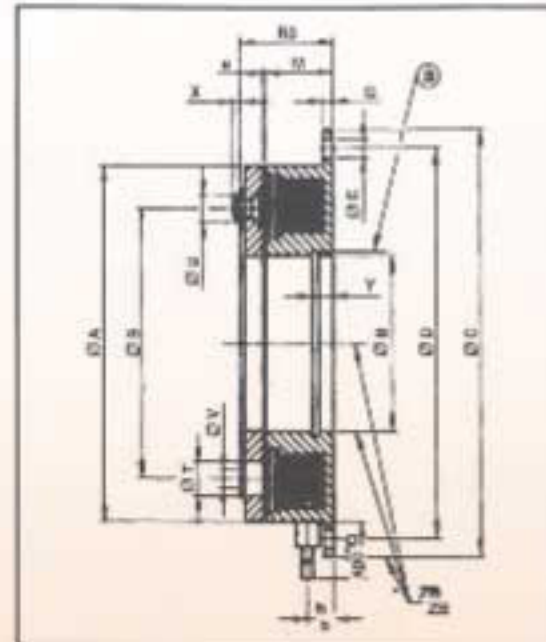


Design 1.1

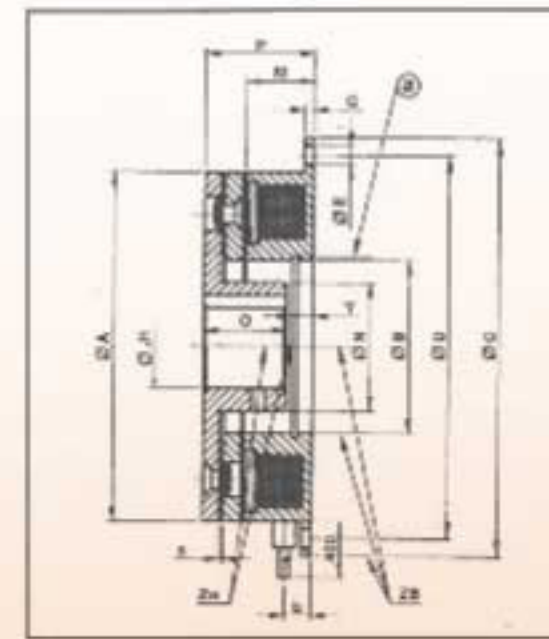


Tapped holes on dimension 'Z' on request.

Design 1.3



Design 1.2



Brake Selection Parameters

Abbreviated Brake Selection Parameters

Size		06	08	10	12	16	20	25
Torque	Ms (Nm)	7.5	15	30	60	120	240	480
Max. Speed	RPM (min ⁻¹)	8000	6000	5000	4000	3000	3000	2000
Input Power	P20 [w]*	11.5	16	21	28	38	45	70
Inertia (kg cm ²)	Armature 1	0.6	1.71	6.64	18	63.3	190	480
	Armature 2	0.6	1.71	6.64	18	63.3	190	480
	Armature 3	0.42	1.18	4.72	13	48	137	358

*Input power at 20°C

Additional sizes are available.

Brakes: Part Numbering/ Ordering Information

Size Torque (Nm)

31	630
40	1250
50	2500

Customer specific designs available

Part Number 41.115. __. __.

1. Type of Brake (41.115)
2. Brake Size (06-50)
3. Output (Armature) Design (1.1, 1.2, 1.3)
4. Bore of Armature Hub and Voltage

Example 41.115.08.1.1, 0.75 in-bore, 96 VDC

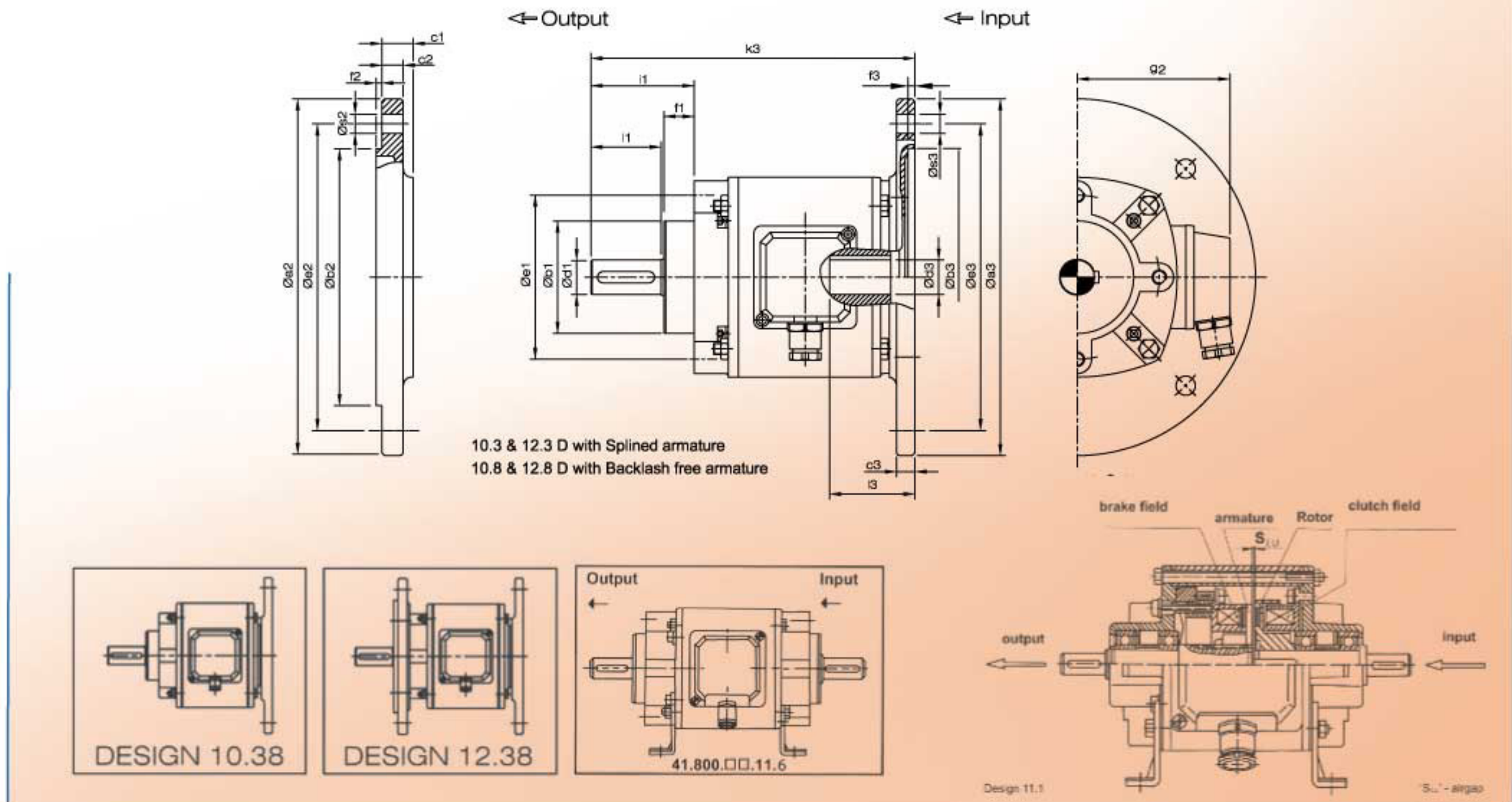
EMTorq applications include wind turbines, marine winches, mail handling, robotics, machine tool axes, automation indexing, packaging, conveyors, cranes, lifts, food processing and more.

Use EMTorq in any application where reliable start or stop solutions are needed.

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CLUTCH-BRAKE COMBINATIONS

Flange Mounted or Foot Mounted Configurations



Clutch-Brake Basic Design Selection Parameters

EMTorq's unique clutch-brake design provides up to 3X the service life vs. the competition:

Single armature design - NO overlap

IP 44 enclosed housing - reduces contaminating dirt, dust and grease

Adjustable - simple control provides longer cycle life

Clutch-Brakes Basic Design Ordering Parameters

Size	Mk Nm	Clutch	Brake
		P20	
		[w]*	[w]*
6	7.5	15	11.5
8	15	20	16
10	30	28	21
12	60	35	28
16	120	50	38

Need More Torque?
Model 41.125 clutch-brake provides up to 480 Nm.

*Input power at 20°C

NEMA Inch Bores/Shafts/Flanges Available.

Clutch-Brake Combinations: Part Numbering/Ordering Information

Part Number 41.800. _ _ . _ _

1. Type of Clutch (41.800)
2. Clutch Size (06-16)
3. Output Design (10, 11, 12)
4. Input Design (6, 8, 9)
5. Variants: coil voltage, shaft diameter, flange diameter, height of feet

Example 41.800.08.11.6, 96 VDC, 19mm, 80mm



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