



Zero Backlash Jaw Clutches and Brakes (JEM)

ADVANTAGES

- Continuous rotor connection provides zero backlash*
- Highest torque in smallest space
- Exclusive "Power Pack" control provides fast engagement & release
- Prolonged engagement and momentary disengagement
- Hardened jaws and high-carbon alloy steel teeth for positive tooth drive

OPERATION

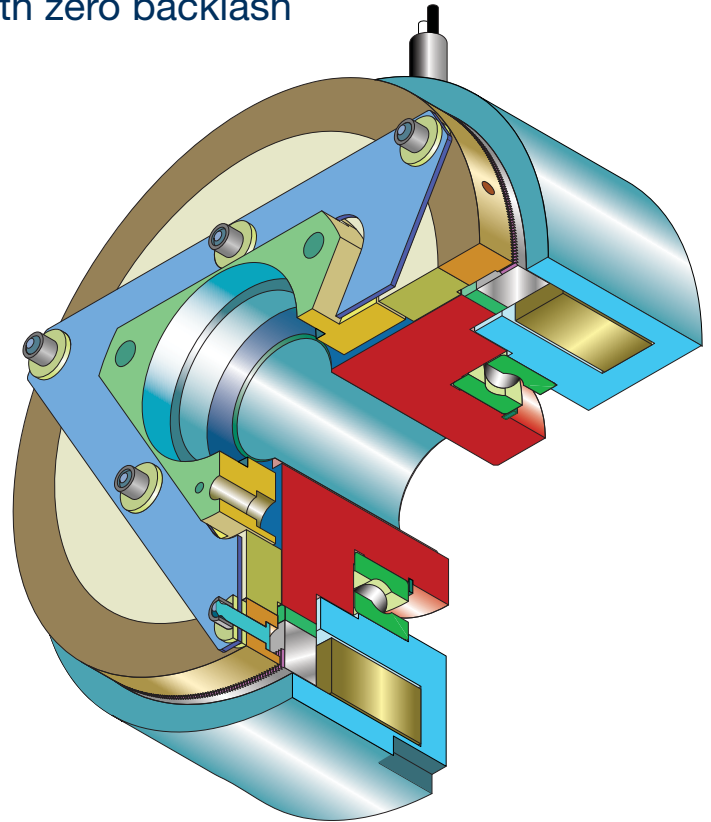
- Torque range 50 lb. ft. – 5,000 lb. ft.
- Bi-directional operation
- Positional accuracy .001° for loads up to 10% rated torque
- Drag-free neutral, no torque transmitted in the disengaged mode
- Engaged fully by induced magnetic flux
- Operates in wet or dry applications

CUSTOMIZATION

- Full range of tooth configurations
- Available with single or multiple position registration for timed applications
- Available as spring set/electrically released for positioning and holding
- Available with spring or electric actuation
- Custom designs and alterations available

**Since there is some compliance in all mechanical systems, no clutch or brake can deliver absolute zero backlash.*

Quick-acting engagement and release
with zero backlash



MAXITORQ® model JEM jaw clutches and brakes are designed to optimize size and space. With "zero" backlash they are ideally suited for positioning, holding, indexing and for situations that require the unit to maintain a positive registration between an input and an output shaft.

JEM jaw clutches and brakes are bi-directional, and operation is not dependent on rotation. Pins are available to permit single position engagement making these units ideal for printing, labeling and other special applications that require exact positioning.

Our experienced engineers can modify our standard JEM model clutches and brakes to meet your specifications and requirements.

MAXITORQ®

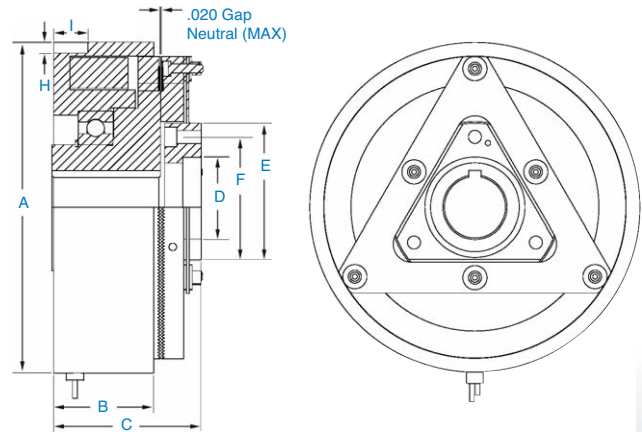
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Specifications of JEM Zero Backlash Jaw Clutches and Brakes

MAXITORQ® JEM clutch and brake models offer an array of operational features, making them an ideal solution for complex operations. When disengaged, JEM units do not transmit torque, which allows for a drag-free neutral position. In addition, their precision positional accuracy is extremely exact – .001 degrees for loads up to 10% rated torque. With bi-directional operation in both wet and dry applications, and a wide range of available torque options, JEM jaw clutches and brakes are well-suited to a variety of applications.



Model	Torque (lb. ft.)	Engagement (Max RPM)	Running (Max RPM)	Number of Teeth	Standard Bore	Keyway	Voltage DC ± 10%	Watts
JEM0375	50	100	5,000	360 or 560	3/4 or 7/8	3/16 x 3/32	24 or 100	40
JEM0425	100	100	5,000	360 or 560	1 or 1 1/8	3/16 x 3/32	24 or 100	40
JEM0475	200	100	5,000	360 or 560	1 1/4 or 1 3/8	1/4 x 1/8	24 or 100	50
JEM0625	400	100	4,200	360 or 560	1 3/4 or 1 7/8	3/8 x 3/16	24 or 100	60
JEM0800	800	100	3,600	360 or 560	2 or 2 1/4	7/16 x 7/32	24 or 100	80

Other voltages are available. Carlyle Johnson can provide coils with voltages ranging from 6 to 240 volts DC. Since there is some compliance in all mechanical systems, no clutch or brake can deliver absolute zero backlash. Carlyle Johnson offers a standard clutch with backlash of less than .001° at 10% of rated torque.

Model	A	B	C	ID Pilot D	OD Pilot E	Bolt Circle F	Bolt Size (QTY 3)	G	H	I
JEM0375	4.046	1.350	1.827	1.031/1.032	2.061/2.062	1.547	#10	0.120	0.100	0.375
JEM0425	4.625	1.566	2.562	1.281/1.282	2.354/2.355	1.812	#10	0.160	0.140	0.425
JEM0475	5.187	1.822	2.812	1.531/1.532	2.650/2.651	2.092	1/4	0.200	0.180	0.500
JEM0625	6.750	2.082	3.375	2.031/2.032	3.436/2.437	2.625	1/4	0.250	0.220	0.690
JEM0800	8.500	2.411	3.750	2.401/2.402	4.325/4.326	3.625	3/8	0.250	0.250	0.750

JEM clutches and brakes are available with either 24 or 100 volt DC coils as standard equipment, though other voltages are available to meet your order specifications. Coils with voltages ranging from 6 to 240 volts DC are available upon request.

Carlyle Johnson can also custom design a new product to meet your specific requirements, as seen to the right in this zero backlash positioning brake used in medical imaging. Our engineering department can work with you to develop a clutch or brake that will meet your specific requirements.

