

## EC / EB Series Electro Clutches and Brakes

### Shaft Mounted Clutches and Brakes

#### Shaft Mounted Clutches

##### EC Series

All the features of an electric clutch in a convenient, preassembled package. Mounts on any through shaft or double shafted motor. Easy-to-assemble with standard sheaves, pulleys, gears and sprockets.

Available in a wide range of bore sizes. Shaft extension makes pulley or sprocket installation easy.

#### Shaft Mounted Brakes

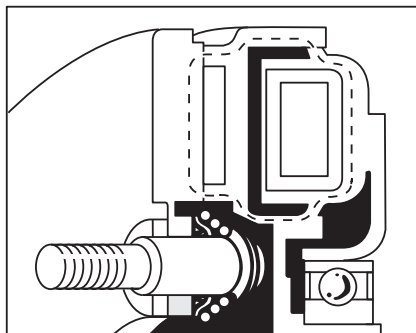
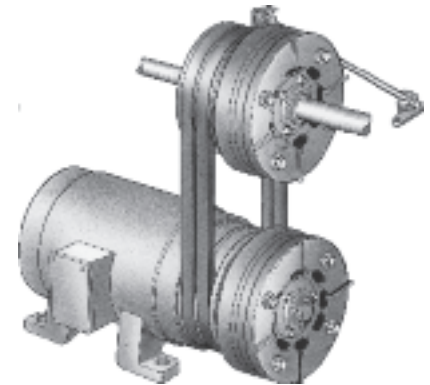
##### EB Series

Electro Brakes mount directly on a motor or through shaft for basic braking functions.

Torque arm feature makes Electro Brakes easy to install on any through shaft or double shaft motor.

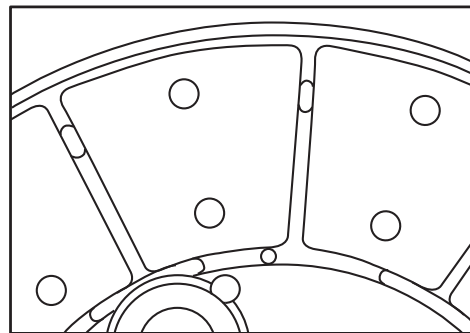
Segmented and fluted armature disc provides maximum cooling of friction surfaces.

- Six sizes of clutches and brakes
- 16 lb. ft. to 465 lb. ft. torque range
- Preassembled. Factory aligned.
- Mounting flexibility
- Simple to install



#### Brushless Design

Warner Electric designed electromagnetic circuit eliminates brushes.



#### Heat Dissipation

Specially designed segmented armature disc is segmented and fluted to provide maximum cooling of friction surfaces. Automatically adjusts for wear.

Motor mounted Electro Clutch used in combination with an Electro Brake on a through shaft installation.

## EC Series Electro Clutch

### Shaft Mounted Clutches

#### Mounting flexibility

Standard Electro Clutches are offered in a wide variety of bore sizes.

#### No brushes to wear out

Warner Electric designed electro-magnetic circuit eliminates brushes.

#### UL listed

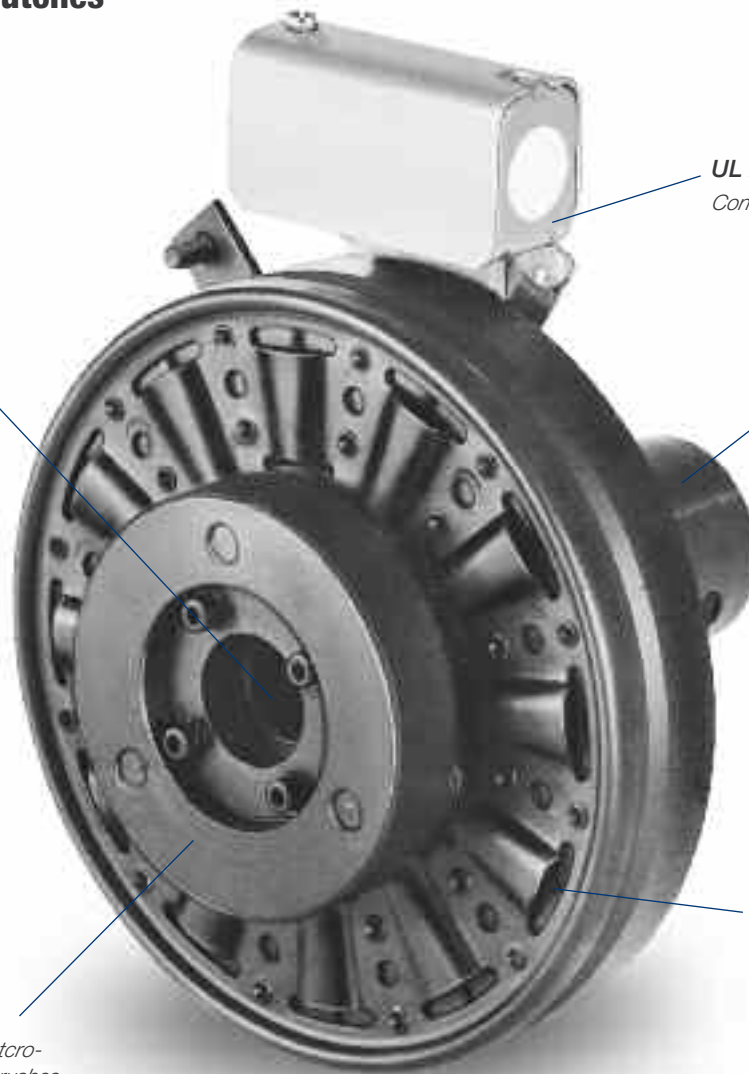
Conduit box meets industry standards.

#### Simple installation

Easy-to-install a pulley, sprocket, sheave or gear on the Electro Clutch shaft extension.

#### Long life – no maintenance

Specially designed armature disc is segmented and fluted to provide maximum cooling of friction surfaces. Automatically adjusts to wear.



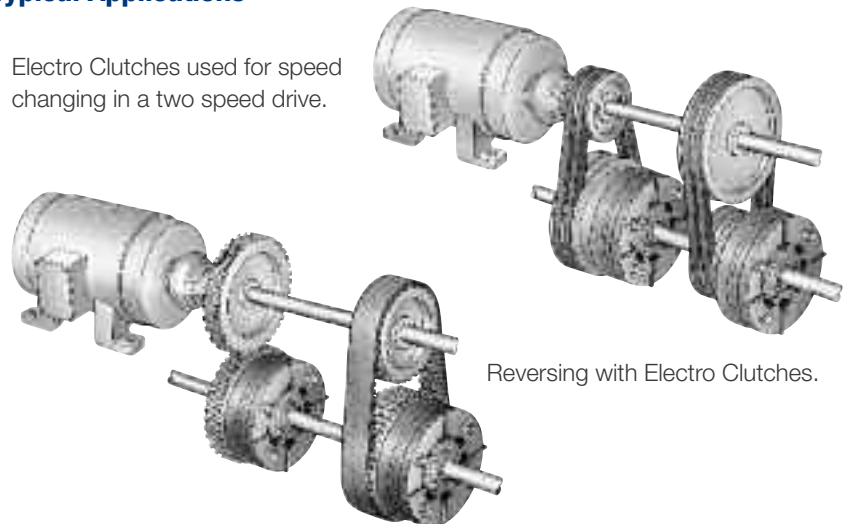
### Packaged Performance

The engineering is built-in. Warner Electric Packaged Performance products are factory aligned and pre-assembled. They have been designed to mate easily with industry standard motors, reducers and other power transmission components. "Bolt-it-down and wire-it-up". . . they're ready to go.

- Hubs mate to standard sheaves, sprockets, gears and pulleys
- Wide torque range from 16 to 465 lb. ft.
- Handle 1 to 20 HP at 1800 RPM

### Typical Applications

Electro Clutches used for speed changing in a two speed drive.



Reversing with Electro Clutches.

# EC Series Electro Clutch

## Selection/Ordering Information

### Selection Procedure

1. Determine the motor horsepower and r.p.m. at the clutch location.
2. Use the Horsepower vs. Shaft Speed chart to determine the right size Electro Clutch.
3. When ordering, specify bore size and voltage.
4. To get maximum performance from your Electro Clutch, use a Warner Electric Control. See the Controls Section.

**Note:**  
Electro Clutches require extended length motor shafts for motor mounting.

### Part Numbers

Model Size	Bore Size	Voltage DC	Part No.
EC-375	1/2"	6	5180-271-006
		24	5180-271-004
		90	5180-271-009
EC-475	5/8"	6	5180-271-002
		24	5180-271-008
		90	5180-271-005
EC-475	3/4"	6	5181-271-033
		24	5181-271-037
		90	5181-271-036
EC-475	7/8"	6	5181-271-032
		24	5181-271-038
		90	5181-271-034
EC-650	1"	6	5181-271-031
		24	5181-271-039
		90	5181-271-035
EC-650	1-1/8"	6	5281-271-004
		24	5281-271-018
		90	5281-271-007
EC-650	1-1/4"	6	5281-271-002
		24	5281-271-019
		90	5281-271-005
EC-650	1-3/8"	6	5281-271-009
		24	5281-271-020
		90	5281-271-008
EC-825	1-3/8"	6	5281-271-003
		24	5281-271-016
		90	5281-271-006
EC-825	1-1/8"	6	5282-271-002
		24	5282-271-008
		90	5282-271-011
EC-825	1-1/4"	6	5282-271-003
		24	5282-271-009
		90	5282-271-012
EC-825	1-3/8"	6	5282-271-004
		24	5282-271-010
		90	5282-271-013
EC-1000	1-3/8"	6	5283-271-002
		24	5283-271-010
		90	5283-271-003
EC-1000	1-1/2"	24	5283-271-012
		90	5283-271-013
		6	5283-271-004
EC-1000	1-5/8"	24	5283-271-011
		90	5283-271-005
		6	5284-271-008
EC-1225	1-5/8"	24	5284-271-013
		90	5284-271-010
		6	5284-271-002
EC-1225	1-7/8"	24	5284-271-014
		90	5284-271-003
		6	5284-271-004
EC-1225	2-1/8"	24	5284-271-015
		90	5284-271-005

Note: Metric bores available in some sizes, consult factory.

### Horsepower vs. Shaft Speed

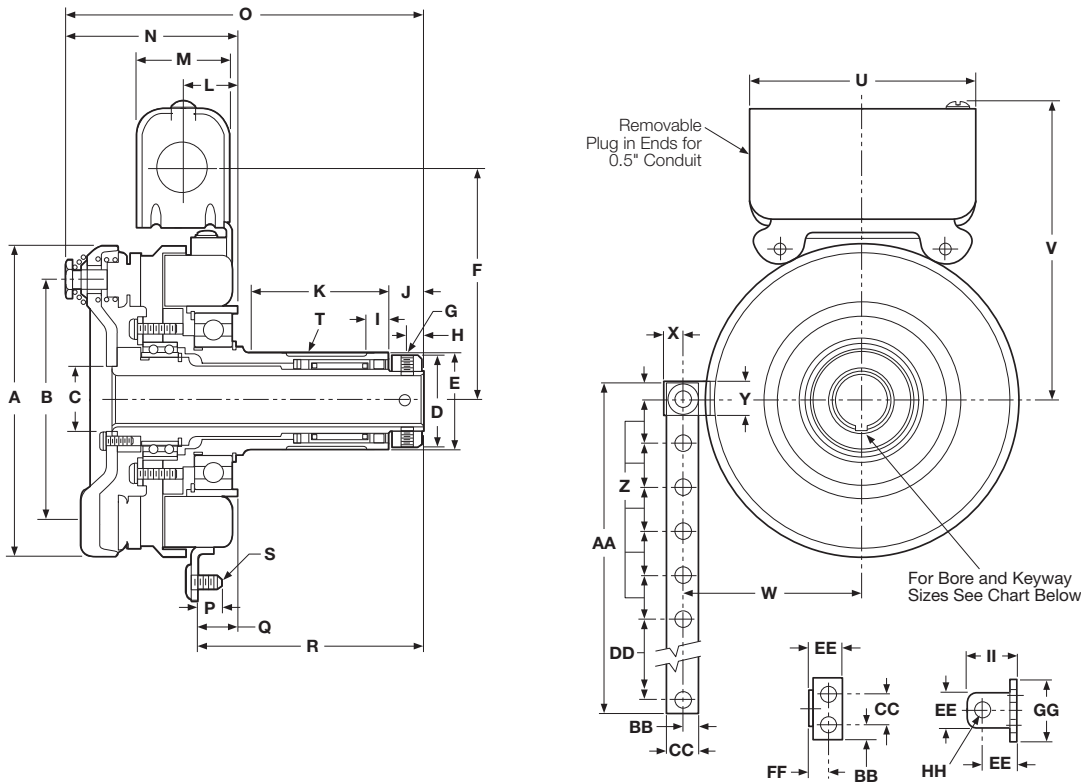
HP	SHAFT SPEED AT CLUTCH (IN RPM)																					
	100	200	300	400	500	600	700	800	900	1000	1100	1200	1500	1800	2000	2400	3000	3600	4000	4500	5000	
1/50																						
1/20																						
1/12																						
1/8																						
1/6																						
1/4																						
1/2																						
3/4																						
1																						
1-1/2																						
2																						
3																						
5																						
7-1/2																						
10																						
15																						
20																						

### Specifications

Electro Clutch Size	Static Torque lb. ft.	Max. RPM	Voltage DC	Total Wt. lbs.
EC-375	16	5000	6, 24 or 90	4
EC-475	30	4500	6, 24 or 90	8
EC-650	95	3600	6, 24 or 90	18
EC-825	125	3600	6, 24 or 90	28
EC-1000	240	2000	6, 24 or 90	41
EC-1225	465	2000	6, 24 or 90	85

# EC Series Electro Clutch

## EC-375, EC-475, EC-650



### Dimensions

All dimensions are nominal, unless otherwise noted.

Size	A Max.	B Dia.	C Min.	D Dia.	E Dia.	F	G	H	I	J	K Max.	L	M
375	4.078	3.125	.7505	1.313	1.375	3.344	10-24 UNC	.188	.375	.344	2.047	.781	1.547
					1.374		-3A x 5/15						
475	5.172	4.000	1.0625	1.563	1.625	3.922	1/4-20 UNC	.281	.375	.578	2.359	.875	1.547
					1.624		-3A x 7/16						
650	6.578	5.125	1.625	2.375	2.5000	4.625	1/4-20 UNC	.281	.188	.563	3.047	.953	1.547
					2.4985		-3A x 1/2						

### Bore Sizes and Keyways

Size	Bore Dia.	Keyway
375	.625	*3/16 x 1/16
	.500	1/8 x 1/16
475	.750	3/16 x 3/32
	.875	*3/16 x 1/16
	.625	3/16 x 3/32
650	1.125	*1/4 x 1/8
	1.375	*5/16 x 3/32
	1.000	1/4 x 1/8
	1.250	1/4 x 1/8

\*Key Furnished

Size	N Max.	O Max.	P	Q Max.	R Min.	S	T	U	V Max.	W	X
375	2.484	4.984	.438	.609	3.000	1/4-20 UNC-2A	5/16 x 3/32	3.750	4.438	2.438	.313
475	3.219	6.266	.422	.658	3.641	1/4-20 UNC-2A	3/8 x 3/32	3.750	4.984	2.984	.313
650	3.547	7.141	.422	.722	4.359	1/4-20 UNC-2A	5/8 x 3/32	3.750	5.750	3.750	.313

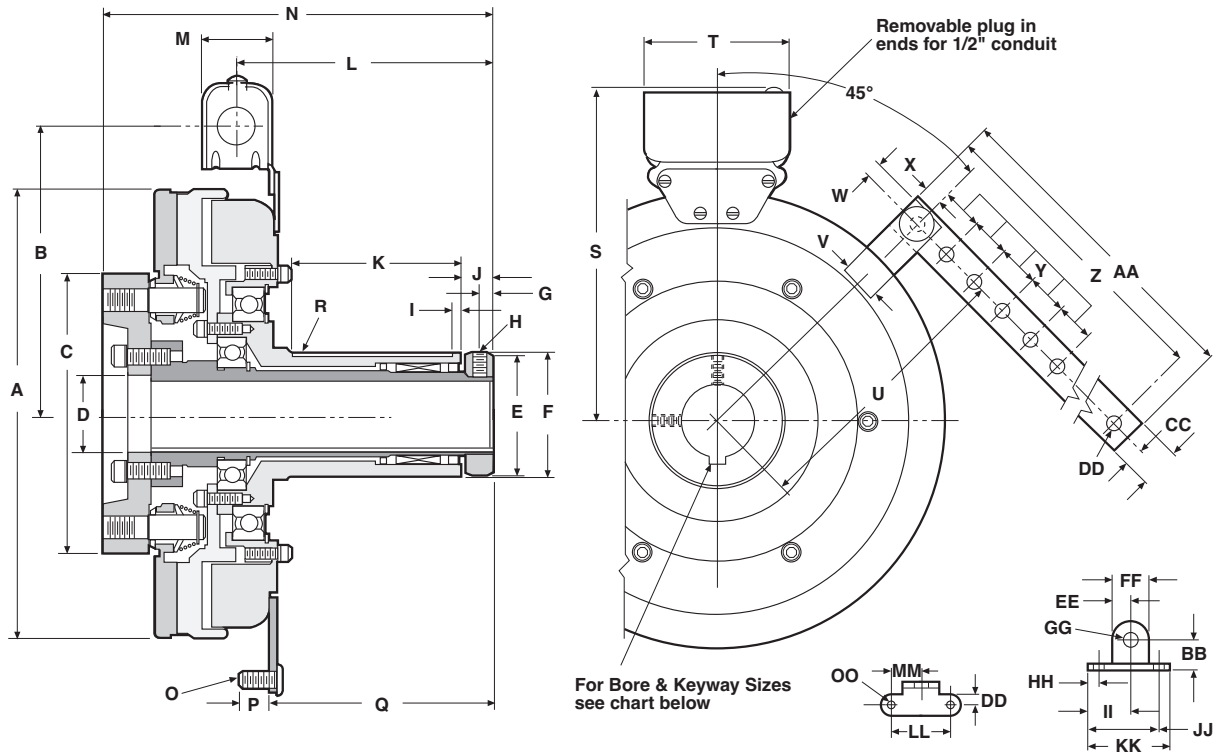
Size	Y	Z	AA	BB	CC	DD	EE Dia.	FF	GG	HH Dia.	II
375	.563	.750	5.000	.250	.500	.750	.563	.313	1.000	.270 .260	.828
475	.578	.750	5.000	.250	.500	.750	.563	.313	1.000	.270 .260	.828
650	.563	.750	10.000	.250	.500	5.750	.563	.313	1.000	.270 .260	.828

### Specifications

Size	Average Wt.-lbs.				Inertia-WR <sup>2</sup> (lb.ft. <sup>2</sup> )			
	Arm. & Carrier	Rotor	Outer Sleeve	Inner Sleeve	Arm. & Carrier	Rotor	Outer Sleeve	Inner Sleeve
EC-375	.60	.55	.49	.60	.010	.018	.001	.001
EC-475	1.13	1.12	.78	1.22	.072	.033	.006	.002
EC-650	2.3	2.5	1.6	2.37	.106	.202	.010	.013

# EC Series Electro Clutch

## EC-825



### Dimensions

All dimensions are nominal, unless otherwise noted.

Size	A Max.	B Dia.	C	D Min.	E Dia.	F Dia.	G	H	I	J
825	8.656	5.656	4.625	1.437	2.375	2.5000 2.4985	.281	1/4-20 UNC -3A x 3/8	.188	.563

Size	K Max.	L	M	N Max.	O	P	Q Max.	R*	S	T
825	3.047	5.219	1.547	8.000	5/16-18 UNC-2A	1.547	4.468	5/8 x 3/32	6.813	3.750

Size	U	V	W	X	Y	Z	AA	BB	CC	DD Dia.
825	5.063	.875	—	.375	.750	16.625	17	.750	.375	.330 .321

Size	EE	FF	GG Dia.	HH	II	JJ	KK	LL	MM	NN	OO
825	.438	.875	.313	.250	1.000	1.750	2.000	1.500	.750	.250	.270 .260

\* Key supplied

### Specifications

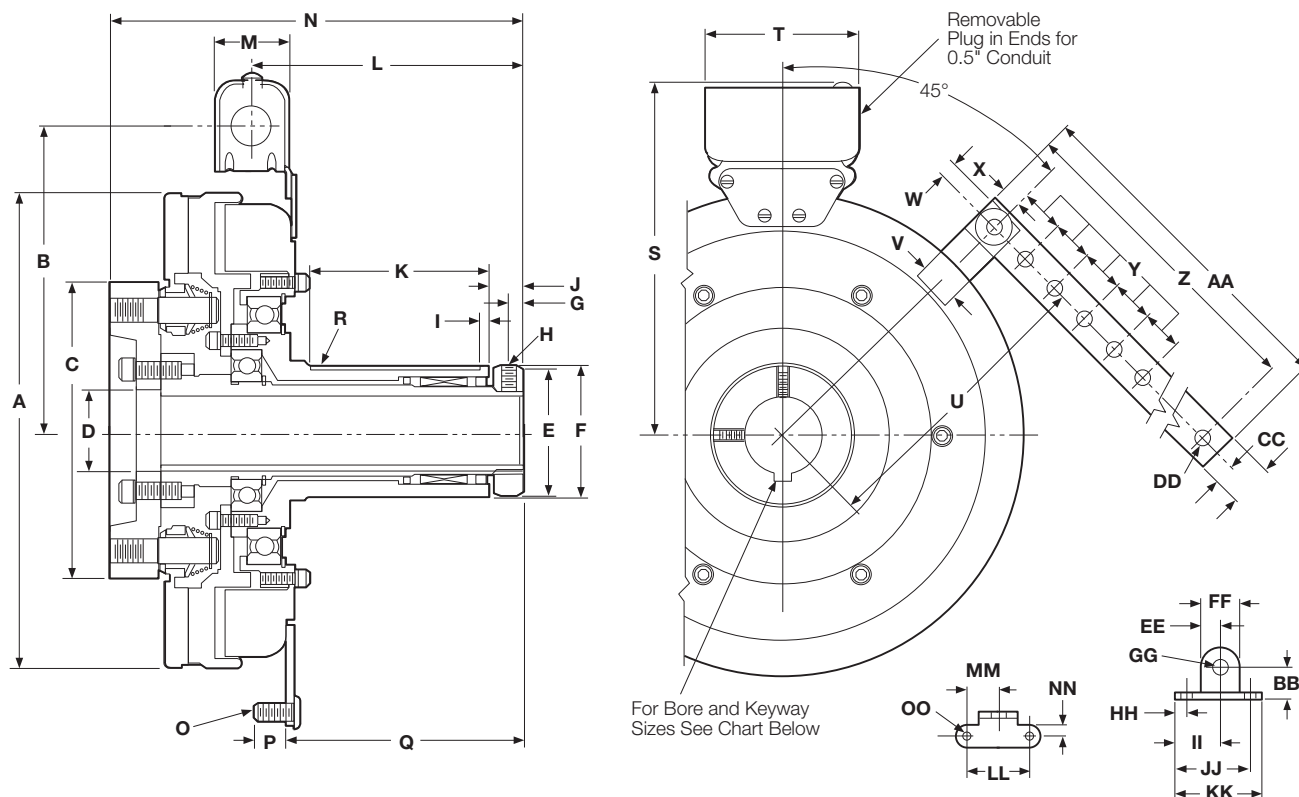
Model Size	Voltage DC	Inertia-WR <sup>2</sup> (lb. ft <sup>2</sup> )		Total Weight lbs.	Average Weight-lbs.	
		Armature, Hub & Inner Sleeve	Rotor & Outer Sleeve		Armature, Hub & Inner Sleeve	Rotor & Outer Sleeve
EC-825	6	.35	.87	28	6.0	18.5
	24	.35	.87	28	6.0	18.5
	90	.35	.87	28	6.0	18.5

### Bore Sizes and Keyways

Size	Bore Dia.	Keyway
825	1.125	1/4 x 1/8
	1.250	1/4 x 1/8
	1.375	5/16 x 3/32

# EC Series Electro Clutch

## EC-1000, EC-1225



### Specifications

Model Size	Voltage DC	Static Torque (lb. ft.)	Max. Speed RPM	Inertia-WR <sup>2</sup> (lb. ft <sup>2</sup> )			Inner Sleeve	Total Weight lbs.
				Arm. & Hub	Rotor	Outer Sleeve		
EC-1000	6	240 lb. ft.	2000	.720	.894	.129	.036	41
	24	240 lb. ft.	2000	.720	.894	.129	.036	41
	90	240 lb. ft.	2000	.720	.894	.129	.036	41
EC-1225	6	465 lb. ft.	2000	1.8	2.4	.129	.061	85
	24	465 lb. ft.	2000	1.8	2.4	.129	.061	85
	90	465 lb. ft.	2000	1.8	2.4	.129	.061	85

# EC Series Electro Clutch

## EC-1000, EC-1225

### Dimensions

All dimensions are nominal, unless otherwise noted.

Size	A Max.	B Dia.	C	D Min.	E Dia.	F Dia.	G	H	I	J	K Max.	L	M
1000	10.328	6.531	6.344	1.750	2.875	2.9375 2.9365	.344	5/16-18 UNC -3A x 3/8	.188	.750	3.969	6.000	1.547
1225	12.672	7.531	6.969	2.234	3.625	3.750 3.749	.406	5/81-16 UNC -3A x 3/4	.375	.859	5.219	7.781	1.547

Size	N Max.	O	P	Q Max.	R*	S	T	U	V	W	X	Y
1000	9.031	5/16-18 UNC-2A	1.547	5.281	3/4 x 1/8	7.688	3.750	6.125	.875	.344	.375	.750
1225	11.016	5/16-18 UNC-2A	1.547	7.047	7/8 x 1/8	8.688	3.750	7.000	.875	.344	.375	.750

Size	Z	AA	BB	CC	DD Dia.	EE	FF	GG Dia.	HH	II	JJ	KK	LL	MM	NN	OO
1000	16.625	17	.750	.375	.330 .321	.438	.875	.313	.250	1.000	1.750	2.000	1.500	.750	.250	.270 .260
1225	16.625	17	.750	.375	.330 .321	.438	.875	.313	.250	1.000	1.750	2.000	1.500	.750	.250	.270 .260

\* Key supplied

### Bore Sizes and Keyway

Size	Bore Dia.	Keyway
1000	1.375	*5/15 x 5/32
	1.500	*3/8 x 11/64
	1.625	*3/8 x 1/8
1225	1.625	*3/8 x 5/32
	1.875	*1/2 x 1/4
	2.125	*1/2 x 3/16

\*Key Furnished