# **KOP-FLEX**®

# **ELASTOMERIC™**

# **Couplings**

**A Proven** and Unique Concept in a Non-Lubricated **Flexible Coupling** 



**Now Standard Hubs** are Available From Stock, in Aluminum, **Steel and Stainless** Steel.





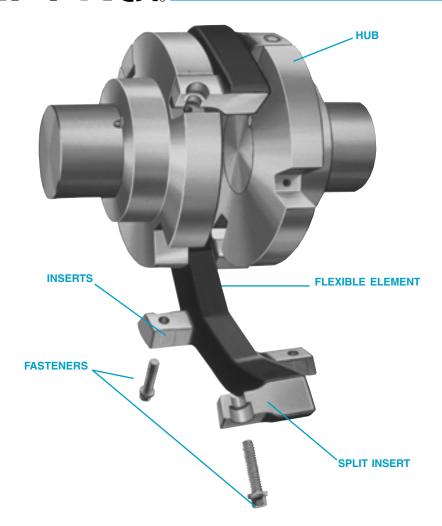
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<sup>\*</sup>TAPER-LOCK is a trademark of Reliance Electric Co.

Q-D is a trademark of Emerson Electric Co.

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LONG LIFE The ELASTOMERIC™ Coupling provides long service life — for the coupling, the bearings and the seals. The design concept contributes to **better** low-cost power transmission with the added benefits of absorbing shock loads and smoothing-out damaging vibrations.

SIMPLE INSTALLATION Just mount the hubs, align the shafts and install the flexible element — in a few short minutes. Assembly is completely visible — with no hidden or hard to reach components. The flexible element can be replaced without disturbing foundation bolts or shaft alignment.

WRAP-AROUND DESIGN The split insert permits easy installation of the flexible element in a simple assembly sequence — with no blind assembly required and shafts may be aligned prior to its installation. With the "split" in the insert and not in the rubber, the joint in the ELASTOMERIC™ Coupling is firmly contained, eliminating distortions and unbalance due to centrifugal force.

RUBBER IN COMPRESSION This is the most efficient way to transfer torque through an elastomeric element; much more efficient than rubber in shear! Rubber in compression, as used in the ELASTOMERIC™ coupling, can be loaded from 5 to 10 times as high as rubber in tension or shear. And the rubber-to-metal bond is permanent — with a compressive load maintained at all times.

PLUS PRECOMPRESSION It is precompression which assures that the unloaded segments of the flexible element remain in compression, protecting both the rubber itself and the rubber-to-metal bond. Application of torque in the ELASTOMERIC™ Coupling increases the compressive stress on the loaded legs while the alternate legs experience a reduction in compressive stress — but not to the point of complete relaxation.

DYNAMICALLY STABLE Distortion of the element due to centrifugal force is contained by the inserts imbedded and bonded in the element and fastened to the hub flanges. Torsional wind-up effects are avoided by driving through compression. These factors greatly reduce axial movement which can lead to damaged bearings, seals, and shaftmounted equipment such as gears or armatures.

cushions shock Loads Resilience in the flexible element cushions the shock of impact loading, providing smooth and quiet power transmission. This protects both the driving and driven equipment, providing longer machine life.

#### **DAMPENS TORSIONAL VIBRATIONS**

The flexible element absorbs the unavoidable torsional vibrations typically found in internal combustion engines and other reciprocating equipment. Our ELASTOMERIC™ Coupling is available for both flywheel mounting and for assembly on stub shafts.

CORROSION RESISTANT The use of corrosion resistant, non-staining aluminum alloys and cadmium plated steel capscrews eliminate the problems normally associated with coupling usage in normal industrial atmospheres — corroded bores and fasteners, contamination from flaking and poor appearance.

**SHAFT MISALIGNMENT** The flexing characteristics of the elastomeric member permit generous shaft misalignments — parallel, angular and axial — under continuous operating conditions.

It is this misalignment capability that compensates for foundation settling, thermal growth, bearing wear, mechanical strains and even human error. Since maximum coupling life will be obtained with minimum shaft misalignment, it is recommended that shafts be carefully and accurately aligned at time of installation.



# A Proven and Unique Concept in a Non-Lubricated Flexible Coupling



Hubs also available in steel and stainless steel from stock.

ALLOYED ALUMINUM High-strength aluminum alloys provide strength and ruggedness while also offering light weight — about one-third the weight of competitive couplings. This means easier handling, longer bearing life, quicker accelerations, and even lower shipping costs. Its high ductility and impact resistance eliminate the brittle fracture characteristics of grey iron and semi-steel. Its resistance to corrosion and its non-sparking characteristics are well known.

## STEEL AND STAINLESS STEEL HUBS

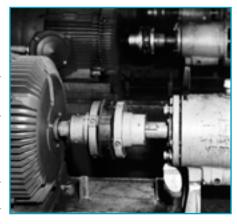
are an available option for the Standard ELASTOMERIC™ Coupling Type EE. Steel hubs provide added strength when the coupling is used in the most rugged applications typical of steel mill service. Type E stainless steel hubs also offer greater resistance to chemical attack from caustics and similar chemicals encountered with the Pulp & Paper processes. Consult KOP-FLEX for price and delivery on Type E Steel Hubs.

NEMA MOTORS The ELASTOMERIC™ Coupling, when mounted with either TAPER-LOCK\* or Q-D® bushings, may be used with any standard T-frame AC motor (including high starting-torque types) on which it can be mounted and will transmit

the rated motor torque continuously on applications involving 1.0 service factors. When straight finish bores are used, the larger maximum bore capacity may permit mounting on bigger, more powerful motors, providing coupling load ratings are not exceeded.

#### WITH THESE BENEFITS:

- Non-Lubricated
- Variable Shaft Separations
- Non-Sparking
- Indoor or Outdoor Operation
- -50°F to +175°F Temperature Range
- Horizontal or Vertical Mounting
  Dirty or Sanitary Environments
- Stocked by Power Transmission Distributors

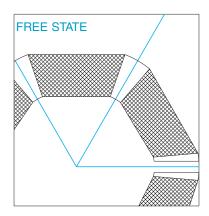


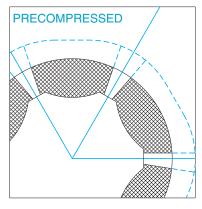
DROP-OUT SPACERS primarily engineered for pump applications where easy and fast pump maintenance is a necessity or for any equipment needing a separation between shaft ends. 117 different shaft separation combinations are available using standard components. The configuration permits fast pump maintenance by easily dropping out the lightweight center coupling section. Shaft mounted hubs and coupling alignment are not disturbed.

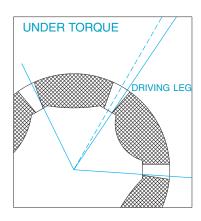
AVS PUMP SPACERS The single-spacer coupling is designed to meet the American Voluntary Standard for chemical pump service, providing 3 1/2" shaft separation. The spacer hub is also designed to drop out through the shaft gap *prior* to dislodging the pump body from the volute, greatly simplifying pump maintenance and providing an easier "swing" as the pump is removed.



## THEORY OF OPERATION







- A. The flexible element in its free state is a polygon.
- B. At assembly, each insert is drawn into its recess in the flange, precompressing each leg, with the element assuming a round shape.
- C. When torque is applied, the driving hub rotates slightly with respect to the driven hub (the torsional load produces a coupling "wind-up"). The driving leg undergoes an increased compression. The trailing leg experiences a reduced compression but not to the point of going into tension. The flexible element is restrained from radial growth under centrifugal force by the inserts which are bonded within the flexible element and are firmly fastened to each hub.

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Q-D is a trademark of Emerson Electric Co.

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## **Service Factors**

Values listed are intended only as a general guide, and are typical of usual service requirements. For systems which frequently utilize the peak torque capability of the power source, verify that the magnitude of this peak torque does not exceed the 1.0 Service Factor Rating of the coupling selected. Applications which involve extreme repetitive shock or high-energy load absorption characteristics should be referred — with full particulars — to KOP-FLEX.

Values contained in the table are to be applied to smooth power sources such as electric motors and steam turbines. For drives involving internal combustion engines of four or five cylinders, add 1.0 to the values listed; for six or more cylinders, add 0.5 to the values listed. For systems utilizing AC or DC Mill Motors as the prime mover, refer to Note (1).

**ACAUTION** All peoplemoving applications must be referred to engineering.

Application	Typical Service Factor
AGITATORS	
Pure Liquids	1.0
Liquids & Solids	1.25
Liquids — Variable Density	1.25
BLOWERS	
Centrifugal	
Lobe	
Vane	
BRIQUETTE MACHINES	
CAR PULLERS — Intermittent Duty	1.5
COMPRESSORS	
Centrifugal	
Centriaxial	
Lobe	
Reciprocating — Multi-Cylinder	2.0
CONVEYORS — LIGHT DUTY UNIFORMLY FED	
	4.05
Apron, Bucket, Chain, Flight, Screw	
Assembly, Belt	
Oven CONVEYORS — HEAVY DUTY	1.5
NOT UNIFORMLY FED	
Apron, Bucket, Chain, Flight, Oven	1.5
Assembly, Belt	1.25
Reciprocating, Shaker	2.5
CRANES AND HOISTS (NOTE 1 and 2)	
Main hoists, Reversing	
Skip Hoists, Trolley & Bridge Drives	2.0
Slope	2.0
CRUSHERS	
Ore, Stone	3.0
DREDGES	
Cable Reels	
Conveyors	
Cutter Head Jig Drives	
Maneuvering Winches	
Pumps	
Screen Drives	
Stackers	
Utility Winches	1.5
ELEVATORS (NOTE 2)	4 75
Bucket	
Centrifugal & Gravity Discharge	
Escalators	
Freight	2.5
Centrifugal	1.0
Cooling Towers	1.0
Forced Draft	
Induced Draft without Damper	1.5
Control	2.0
FEEDERS	2.0
Apron, Belt, Disc, Screw	1 25
Reciprocating	
neciprocaling	2.3

Application	Service Factor
GENERATORS — (Not Welding)	1.0
HAMMER MILLSLAUNDRY WASHERS —	
Reversing  LAUNDRY TUMBLERS	2.0 2.0
LINE SHAFTLUMBER INDUSTRY	
Barkers — Drum Type	
Edger FeedLive Rolls	
Log Haul — Incline Log Haul — Well type	
Off Bearing Rolls Planer Feed Chains	
Planer Floor Chains	
Planer Tilting Hoist	
Slab Conveyor Sorting Table	
Trimmer Feed	
MARINE PROPULSION	0.0
Main Drives	2.0
Bending Roll	
Plate Planer Punch Press — Gear Driven	
Tapping Machines	
Other Machine Tools	
Main Drives	
Auxiliary Drives METAL MILLS	
Draw Bench — Carriage  Draw Bench — Main Drive	2.0
Forming Machines	
Table Conveyors	
Non-Reversing	
Wire Drawing & Flattening Machine	
Wire Winding Machine	
METAL ROLLING MILLS (NOTE 1) Blooming Mills	*
Coilers, hot mill	2.0
Coilers, cold mill	
Cold Mills Cooling Beds	
Door Openers	2.0
Draw Benches Edger Drives	
Feed Rolls, Reversing Mills	
Furnace Pushers	
Hot MillsIngot Cars	
Kick-outs	
Manipulators	
Merchant Mills Piercers	
Pusher Rams	2.5
Reel Drives Reel Drums	
Reelers	3.0
Rod and Bar Mills	
Roughing Mill Delivery TableRunout Tables	3.0
Reversing	3.0
Non-Reversing	
Saws, hot & cold Screwdown Drives	
Skelp Mills	3.0
Slitters	
Soaking Pit Cover Drives	
Straighteners	2.5
Tables, transfer & runout	
Traction Drive	
Tube Conveyor Rolls	2.5
Unscramblers Wire Drawing	
MILLS, ROTARY TYPE	
Ball	
Dryers & Coolers Hammer	

Application	Service
Pebble & Rod	Factor 2.0
Pug Tumbling Barrels	1.75
MIXERS  Concrete Mixers	
Drum Type	
OIL INDUSTRY Chillers	
Paraffin Filter Press	1.75
PAPER MILLS Barker Auxiliaries, Hydraulic	2.0
Barker, Mechanical	
Barking Drum Spur Gear Only	2.25
Beater & PulperBleacher	
Calenders	
Chippers	
Converting Machines,	1.0
except Cutters, Platers	
Couch Roll Cutters, Platers	
Culters, Platers	
Disc Refiners	1.75
DryersFelt Stretcher	
Felt Whipper	
Jordans	
Line Shaft Log Haul	
Pulp Grinder	1.75
Press Roll	
Stock Chests	
Suction Roll	
Washers & Thickeners Winders	
PRINTING PRESSES	1.5
PULLERS — Barge HaulPUMPS	2.0
Centrifugal	1.0
Boiler Feed	
Reciprocating Single Acting	
1 or 2 Cylinders	2.25
3 or more Cylinders	
Double Acting Rotary, Gear, Lobe, Vane	
RUBBER INDUSTRY	
Mixer — Banbury Rubber Calendar	
Rubber Mill (2 or more)	2.25
Sheeter Tire Building Machines	
Tire & Tube Press Openers	
Tubers & Strainers	2.0
SCREENS Air Washing	1.0
Grizzly	2.0
Rotary — Stone or Gravel Traveling Water Intake	
Vibrating	2.5
SEWAGE DISPOSAL EQUIPMENT	
Bar Screens	
Collectors, Circuline or Straightline	1.25
Dewatering Screens	
Scum Breakers	
Slow or Rapid Mixers	
Sludge Collectors Thickeners	
Vacuum Filters	1.25
STEERING GEARSTOKERS	
WINCH	1.5
WINDLASS	1.75
* Refer to KOP-FLEX	
NOTES (1) Maximum Tarque at the coupling must not a	voocd
(1) Maximum Torque at the coupling must not e	veea

Rated Torque of the coupling.
Check local and industrial safety codes.

## Selection Procedure

## 1. Coupling Type:

Select the appropriate ELASTOMERIC™ coupling type for your application.

#### 2. Coupling Size:

**Step 1:** Determine the proper service factor from page 98.

Step 2: Calculate the required HP/100 RPM, using the HP rating of the drive and the coupling speed (RPM) as shown below:

 $\frac{\text{HP x SERVICE FACTOR x 100}}{\text{RPM}} = \text{ HP/100 RPM}$ 

**Now Standard Hubs are Available From Stock,** in Aluminum, Steel and

Stainless Steel.

Step 3: Using Table 1 select the coupling size having a rating sufficient to handle the required HP/100 RPM at the appropriate service factor.

Step 4: Verify that the actual coupling speed (RPM) is equal to or less than the maximum allowable speed rating of the coupling.

Step 5: Verify that the maximum bore of the coupling selected is equal to or <u>larger</u> than either of the equipment shafts.

Clearance fit bores are acceptable for applications using service factors of 2 or less. For service factors higher than 2, interference fits are recommended.

**Step 6:** Check the overall dimensions to ensure coupling will not interfere with the coupling guard, piping, or the equipment housings and that it will fit the required shaft separation.

Note: For reciprocating engines and reciprocating compressor service, refer all application data to KOP-FLEX for selection.

TABLE 1 — SELECTION DATA — ELASTOMERIC™ COUPLINGS

	Coupling	Torque R	ating		Static	Maximum	Maximum
Coupling Size	Rating (1) HP/100 RPM	Continuous Duty (lbin.)	Peak Load (lbin.) (2)	Max. RPM (3)	Torsional Stiffness (lbin./rad.)	Offset Misalignment Capacity (inches)	Axial Misalignment Capacity (inches)
20	.334	217	630	4100	3180	.029	±.013
30	.664	418	1245	4100	7460	.032	±.017
40	1.15	725	2100	4100	11800	.034	±.019
50	2.00	1260	3630	4100	21600	.036	±.023
60	3.05	1920	5700	4100	42800	.038	±.026
70	7.20	4540	13350	3600	97000	.042	±.030
80	13.0	8190	24270	2800	186000	.056	±.036
90	22.6	14200	42300	2000	284000	.079	±.046
100	42.0	26500	78600	1800	557000	.086	±.052

(1) If actual maximum torque loads are known, do not use Service Factors but rather select coupling size under "Torque Rating" in Table I. These figures are those which the coupling is capable of transmitting under continuous operation and normal alignment so as to be consistent with reasonable industrial service life.

- (2) For infrequently applied loads not to exceed once per hour.
- (3) For higher speeds, refer to KOP-FLEX.

**How to Order** 

## PART NUMBER EXPLANATION **Complete Rough Bore Coupling**

Coupling Size (20 to 100) EE=Standard Coupling ES = Single Spacer Coupling SS = Double Spacer Coupling 20 EE DOxx= Drop-Out Spacer Coupling (xx= AA, AB, AC, BB, BC or CC)



## **Coupling Parts**

Description

EHUB = Standard Hub (Aluminum)

EHUBXBORE = Standard Hub Finished Bored

EHUBTLXBUSH = Standard Hub Bored for TAPER-LOCK\*

EHUBQDXBUSH = Standard Hub Bored for Q-D®

SHUB = Spacer Hub LHUB = Long Hub

RHUB = Drop-Out Hub

FS = Fastener Set

ELEMENT = Element with Fasteners

AHUB = Spacer Type A Hub with Fasteners

BHUB = Spacer Type B Hub with Fasteners

CHUB = Spacer Type C Hub with Fasteners

ESTEEL HUB = Steel Hub

ESSTEEL HUB = Stainless Steel Hub

Note: Standard bores are supplied clearance fit with one setscrew over keyway.

ex: 20 EHUBX3/4

<sup>\*</sup>TAPER-LOCK is a trademark of Reliance Electric Co.

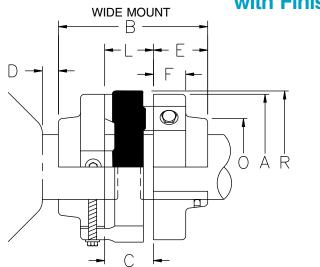
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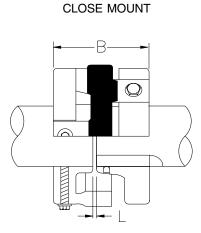
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**Standard Coupling Type EE** with Finished Straight Bores

Standard Couplings are generally used on close-connected equipment and may be mounted for either wide or close shaft separations, at the user's option. This permits ready installation on existing shaft separations and eliminates moving the connected equipment to suit the coupling.





		WIDE MOUNT											CL	OSE MOU	IT	
Coupling Size	Bore Stan Key		Stock Rough	Hub Sep.	Sh Separ C		А	В	D	Е	F	0	R	Coupling Size	Sepa-	В
	Max.	Min.	Bore	L	Min.	Max.								OIZC	ration L	
20	1 1/8	1/2	3/8	1	1/8	1	3 11/16	3 1/8	1/8	1 1/16	5/8	1 7/8	4	20	1/8	2 1/4
30	1 1/2	1/2	3/8	1 1/2	1/8	1 1/2	4 3/8	4 1/8	1/8	1 5/16	5/8	2 7/16	4 5/8	30	1/8	2 3/4
40	1 7/8	1/2	3/8	1 5/8	1/8	1 5/8	5 3/8	5 1/8	1/8	1 3/4	1	2 3/4	5 11/16	40	1/8	3 5/8
*50	2 1/8	3/4	5/8	2 1/8	1/8	2 1/8	6 1/16	6 1/8	1/8	2	1	3 1/8	6 3/4	50	1/8	4 1/8
*60	2 7/8	1 1/8	15/16	2 1/8	1/8	2 1/8	7	6 1/8	1/8	2	1	4 7/32	7 5/8	60	1/8	4 1/8
70	3	1 1/4	1 1/16	2 3/8	1/8	2 3/8	8	6 5/8	1/8	2 1/8	1	4 7/16	8 11/16	70	1/8	4 3/8
*80	3 3/4	1 1/2	1 1/4	3	1/8	3	9 7/16	8 3/8	1/8	2 11/16	1 1/4	5 5/16	10 1/2	80	1/8	5 1/2
90	4 3/4	1 3/4	1 1/2	4 1/8	1/8	4 1/8	12 1/8	11 1/8	1/8	3 1/2	1 1/2	6 5/8	13 1/16	90	1/8	7 1/8
100	5 3/8	2 1/4	2	4 1/8	1/8	4 1/8	13 7/8	12 1/8	1/8	4	2	7 3/8	15 1/8	100	1/8	8 1/8

NOTES: Finished Bored E Hubs can be ordered by specific Bore size.

Complete coupling consists of 2 E Hubs and 1 Replaceable Element.

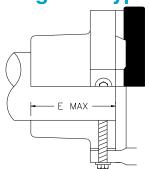
<sup>\* 50, 60</sup> and 80 EE hubs are also stocked in steel. Consult KOP-FLEX.

Coupling	Complete Co No Bor	E Hul No Bo		Element W/ Faster		
Size	Part No.	Wt.	Part No.	Wt.	Part No.	Wt.
20	20 EE	2	20 EHUB	1	20 ELEMENT	1
30	30 EE	3	30 EHUB	1	30 ELEMENT	1
40	40 EE	6	40 EHUB	2	40 ELEMENT	1
50	50 EE	9	50 EHUB	3	50 ELEMENT	2
60	60 EE	12	60 EHUB	3	60 ELEMENT	3
70	70 EE	17	70 EHUB	4	70 ELEMENT	5
80	80 EE	31	80 EHUB	8	80 ELEMENT	9
90	90 EE	59	90 EHUB	15	90 ELEMENT	16
100	100 EE	96	100 EHUB	29	100 ELEMENT	18



Now Standard Hubs are Available From Stock, in Aluminum, Steel and Stainless Steel.

## Long Hub Type L



LONG HUB—TYPE L Available for Wide Mount only

## **ELASTOMERIC L Hub**Rough Bored

Coupling Size Part No.		Емах	Bore Stan Key	Stock Rough Bore	
			Min.	Max.	Bore
60	60 LHUB	3 9/16	1 3/8	3	1 1/4
70	70 LHUB	4	1 3/8	3 1/8	1 1/4
80	80 LHUB	4 11/16	1 3/8	4 1/8	1 1/4
90	90 LHUB	4 15/16	1 9/16	4 3/4	1 7/16
100	100 LHUB	5 7/16	2	5 3/8	1 7/8

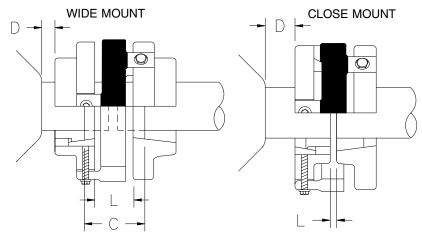


## **Standard Coupling for TAPER-LOCK\* Bushings**

- 1. See table opposite for dimensions not listed.
- 2. Space required to remove bushing using shortened hex key cut to minimum usable length for sizes 30 to 80. Sizes 90 and 100 use open end wrench.
- 3. Maximum bore is the maximum obtained when the bushing is supplied with a shallow keyway. Flat keys are then supplied with the bushing.
- 4. Intermediate hub separations (L) are obtained by reversing one hub only from the Wide Mount arrangement, giving intermediate maximum hub and shaft separations.

## E Hubs Bored for **TAPER-LOCK\* Bushing**

Part No.
30 EHUBTLX1108
40 EHUBTLX1215
50 EHUBTLX1615
60 EHUBTLX2012
70 EHUBTLX2517
80 EHUBTLX3020
90 EHUBTLX3535
100 EHUBTLX3535



		WIDE MOUNT CLOSE MOUNT						UNT		
Coupling Size			TAPER-LOCK* Bushing		Shaft Separation C		D	Coupling Size	Hub and Shaft	D
	Number	Bore Min.	Bore Max.	L	Min.	Max.	(2)		Separation L	(2)
30	1108	1/2	1 1/8	1 1/2	1/8	2 3/8	3/4	30	1/8	1/8
40	1215	1/2	1 1/8	1 5/8	1/8	3 1/8	1 1/16	40	1/8	1/8
50	1615	1/2	1 5/8	2 1/8	1/8	3 1/8	1 1/16	50	1/8	1/8
60	2012	1/2	2	2 1/8	1/8	3 5/8	1 3/8	60	1/8	1/8
70	2517	1/2	2 1/2	2 3/8	1/8	3 1/8	1 5/8	70	1/8	1/8
80	3020	15/16	3	3	1/8	4 3/8	2 1/16	80	1/8	1/8
90	3535	1 3/16	3 1/2	4 1/8	1/8	4 1/8	1 3/4	90	1/8	1/8
100	3535	1 3/16	3 1/2	4 1/8	1/8	4 1/8	2	100	1/8	1/8

## **Standard Coupling for Q-D® Bushings**

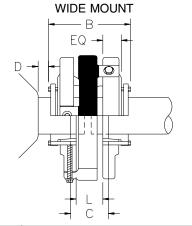
1. Bushing screws may be inserted from direction opposite to that shown, eliminating need for axial clearance D.

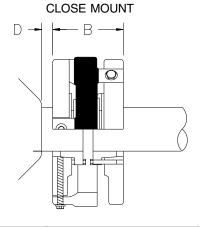
## E Hubs Bored for Q-D® Bushing

Size	Part No.
30	30 EHUBQDXJA
40	40 EHUBQDXJA
50	50 EHUBQDXSH
60	60 EHUBQDXSDS
70	70 EHUBQDXSK
80 90 100	80 EHUBQDXSF 90 EHUBQDXE 100 EHUBQDXF

#### **NET WT. LBS.—STANDARD COUPLINGS**

Coupling Size	With Solid Hubs	With Max. Bore and Standard Keyway	With TAPER-LOCK* Bushing (Max. Bore)	With Q-D <sup>®</sup> Bushing (Max. Bore)	
20	1.7	1.6	-	-	
30	2.8	2.3	2.7	3.0	
40	6.0	5.0 6.2		6.1	
50	8.8	7.3 8.4		9.4	
60	12.2	9.2	11.8	13.0	
70	17.0	13.6	17.1	18.8	
80	30.5	23.1	30.8	32.6	
90	59.4	45.4	62.0	67.3	
100	96.0	76.0	102.0	106	





				WID	E MOU	E MOUNT					CLOSE	MOUN	IT	
Coupling Size	Q-I	D® Bu	shing	В	Hub Sep.	Sh Se		D	EQ	Coupling Size	Hub Sep.	Shaft Sep.	В	D
	Size	Bore Min.	Bore Max.		Ľ	Min.	Max.			Size	Ľ	Ċ		
30	JA	1/2	1 1/4	4 1/4	1 1/2	1/8	1 7/8	1 1/8	3/4	30	1 1/4	3/8	2 3/4	1/8
40	JA	1/2	1 1/4	5 1/8	1 5/8	1/8	2 3/4	1 1/8	1 1/8	40	1 3/8	1/2	3 5/8	1/8
50	SH	1/2	1 5/8	6 3/16	2 1/8	1/8	3 1/8	1 9/16	1 1/4	50	1 5/8	1/2	4 1/8	1/8
60	SDS	1/2	1 15/16	6 1/16	2 1/8	1/8	3	1 9/16	1 3/16	60	1 3/4	5/8	4 1/8	1/8
70	SK	1/2	2 1/2	6 9/16	2 3/8	1/8	2 1/8	2 1/4	1 1/8	70	2 1/8	3/4	4 3/8	1/8
80	SF	1/2	2 15/16	8 1/16	3	1/8	3 1/4	2 3/8	1 7/16	80	2 5/8	1 1/8	5 1/2	1/8
90	E	7/8	3 7/16	10 1/2	4 1/8	1/8	4 1/8	3 1/16	1 3/4	90	3 5/8	1 5/8	7 1/8	1/8
100	F	1	3 15/16	12 3/4	4 1/8	1/8	4 1/4	4 3/16	2 5/8	100	-	-	-	-

<sup>\*</sup>TAPER-LOCK is a trademark of Reliance Electric Co.

Q-D is a trademark of Emerson Electric Co.

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# **KOP-FLEX**

Wherever spacer type couplings are used for motor driven back-pull-out pumps, AVS Pumps, Process Pumps and any application for a Spacer Type coupling. Over 117 shaft separation combinations are available using standard components.

The ELASTOMERIC™ Drop-out coupling provides for easy removal of the pump's back-pull-out section keeping routine pump maintenance and down-time to a minimum.

Upon removal of a few axial fasteners, the flexible coupling center section is easily inserted, or removed to gain pump access.

# Y R A G SHAFT HUB TYPE R Y R A G SHAFT SEPARATION D COUPLING HUBS, TYPE AB, OR C WITH AXIAL FASTENERS FLEXIBLE ELEMENT WITH RADIAL FASTENERS

**Drop-Out Spacer Coupling Type DO** 

Size	I р.,	ifugal mp	Max. RPM	Max. Offset		Dimensions							
	HP/100 RPM (2)	Torque LbIn.			Α	A G H L R Y							
20	.334	217	4100	.029	3 11/16	3 1/8	1 3/8	1	4	4 1/2	5/8		
30	.664	418	4100	.032	4 3/8	3 3/8	1 5/8	1 1/2	4 5/8	5 1/2	5/8		
40	1.15	725	4100	.034	5 3/8	3 11/16	1 3/4	1 5/8	5 11/16	6 5/8	5/8		
50	2.00	1260	4100	.036	6 1/16	4 7/16	2 3/8	2 1/8	6 3/4	7 3/8	5/8		
60	3.05	1920	4100	.038	7	4 15/16	2 5/8	2 1/8	7 5/8	8 3/8	1		
70	7.20	4540	3600	.042	8	5 11/16	3	2 3/8	8 11/16	9 3/4	1		
80	13.0	8190	2800	.056	9 7/16	7	3 7/8	3	10 1/2	11 3/4	1 1/4		
90	22.6	14200	2000	.079	12 1/8	8 1/4	4 1/4	4 1/8	13 1/16	14 3/8	1 1/2		

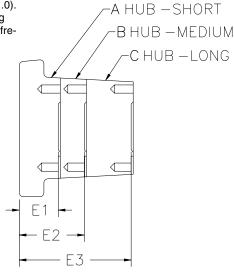
- (1) Ratings are for motor driven centrifugal pump and blower service (service factor of 1.0). For other applications, refer to pages 98 & 99 for appropriate service factors and coupling size selection data. Couplings will transmit peak loads of 3 times these values if infrequently applied (not to exceed once per hour).
- (2) HP/100rpm =  $\underline{HP}$  to be transmitted X 100 Coupling rpm

Coupling		R Hu		Element W/ Fastener			
Size	No B	ore	Finish	Don't No	14/4		
	Part No.	Wt.	Bore① Part No.	Part No.	Wt.		
20	20 RHUB	1	20 RHUB FB	20 ELEMENT	1		
30	30 RHUB	1	30 RHUB FB	30 ELEMENT	1		
40	40 RHUB	1	40 RHUB FB	40 ELEMENT	1		
50	50 RHUB	2	50 RHUB FB	50 ELEMENT	2		
60	60 RHUB	3	60 RHUB FB	60 ELEMENT	3		
	70 011110	_	70 DI II ID ED	70 51 51 451 7	_		
70	70 RHUB	5	70 RHUB FB	70 ELEMENT	5		
80	80 RHUB	9	80 RHUB FB	80 ELEMENT	9		
90	90 RHUB	15	90 RHUB FB	90 ELEMENT	16		

NOTE: ① Finish bores and keyways per AGMA 9002-A86 commercial standard tolerances. Each clearance bore includes one set screw over keyway.



The ELASTOMERIC™ Drop Out Spacer Coupling center section is easily installed as a preassembled unit, or as lightweight component parts. For pump or seal maintenance, the "drop out" center section is easily removed for fast pump access.



## Coupling Hubs Type A, B and C

	Εſ	DIMENSI	ON	AXIAL FASTENERS			
Size	A Hub	B Hub	C Hub	No. Per	Size		
	E1	E2	E3	Hub	Size		
20	_	1 1/4	2 3/4	4	1/4-20		
30	_	1	2 1/2	4	1/4-20		
40	1	1 11/16	3 15/16	4	1/4-20		
50	1	1 7/16	3 11/16	4	1/4-20		
60	1	1 7/16	3 11/16	4	5/16-18		
70	1	1 5/16	3 9/16	4	3/8-16		
80	1 7/32	2 1/8	4 5/8	6	1/2-13		
90	_	1 9/16	4 1/16	6	5/8-11		



# **Type DO Dimensional and Assembly Data**

				Shaft	Hub Type R (1)		Sh	aft Separat	ion		Quantiti	es Per As	sembly	
Coupling	No Bore Part	Weight (lbs.)	Min.	Max. Bore	Std.	Dim.	Min.	Std.	Max.	C	oupling H	ub	Shaft	Flex
0.20	Number	(133.)	Bore	With Std. Kwy	Kwy Size	В	(2)	(3) Dim. C	(4)	Hub A	Hub B	Hub C	Hub	Elem.
20	20 DOBB 20 DOBC 20 DOCC	2.0 2.3 2.5	3/4	1 3/8	5/16 x 5/32	6 1/4 7 3/4 9 1/4	3 7/16 4 15/16 6 7/16	3 1/2 5 6 1/2	3 3/4 5 1/4 6 3/4		2 1	1 2	2 2 2	1 1 1
30	30 DOBB 30 DOBC 30 DOCC	2.8 3.2 3.4	3/4	1 5/8	3/8 x 3/16	6 3/4 8 1/4 9 3/4	3 5/16 4 13/16 6 5/16	3 1/2 5 6 1/2	3 3/4 5 1/4 6 3/4		2 1	1 2	2 2 2	1 1 1
40	40 DOAA 40 DOAB 40 DOBB 40 DOAC 40 DOBC 40 DOCC	5.4 5.6 5.8 6.3 6.5 7.1	3/4	1 3/4	3/8 x 3/16	7 1/8 7 13/16 8 1/2 10 1/16 10 3/4 13	3 1/2 4 3/16 4 7/8 6 7/16 7 1/8 9 3/8	3 5/8 4 5/16 5 6 9/16 7 1/4 9 1/2	3 3/4 4 1/2 5 1/4 6 7/8 7 1/2 10	2 1 1	1 2 1	1 1 2	2 2 2 2 2 2	1 1 1 1 1
50	50 DOAA 50 DOAB 50 DOBB 50 DOAC 50 DOBC 50 DOCC	8.2 8.4 8.6 9.2 9.4 10.2	3/4	2 3/8	5/8 x 5/16	8 7/8 9 5/16 9 3/4 11 9/16 12 14 1/4	3 7/8 4 9/16 4 3/4 6 9/16 7 9 1/4	4 1/8 4 5/16 5 6 13/16 7 1/4 9 1/2	4 3/8 4 13/16 5 1/4 7 1/16 7 1/2 10	2 1 1	1 2 1	1 1 2	2 2 2 2 2 2	1 1 1 1 1
60	60 DOAA 60 DOAB 60 DOBB 60 DOAC 60 DOBC 60 DOCC	10.0 10.2 10.4 11.2 11.4 12.3	1 1/8	2 5/8	5/8 x 5/16	9 3/8 9 13/16 10 1/4 12 1/16 12 1/2 14 3/4	3 7/8 4 5/16 4 3/4 6 9/16 7 9 1/4	4 1/8 4 9/16 5 6 13/16 7 1/4 9 1/2	4 3/8 4 13/16 5 1/4 7 1/16 7 1/2 10	2 1 1	1 2	1 1 2	2 2 2 2 2 2	1 1 1 1 1
70	70 DOAA 70 DOAB 70 DOBB 70 DOAC 70 DOBC 70 DOCC	15.2 15.4 15.6 16.6 16.8 18.0	1 1/8	3	3/4 x 3/8	10 3/8 10 11/16 11 12 15/16 13 1/4 15 1/2	4 5/16 4 5/8 4 15/16 6 7/8 7 3/16 9 7/16	4 3/8 4 11/16 5 6 15/16 7 1/4 9 1/2	4 5/8 415/16 5 1/4 7 3/16 7 1/2 10	2 1 1	1 2 1	1 1 2	2 2 2 2 2 2	1 1 1 1 1
80	80 DOAA 80 DOAB 80 DOBB 80 DOAC 80 DOBC 80 DOCC	26.3 26.9 27.6 28.9 29.6 31.7	1 3/8	3 3/4	7/8 x 7/16	13 3/16 14 3/32 15 16 19/32 17 1/2 20	5 1/4 6 5/32 7 1/16 8 21/32 9 9/16 12 1/16	5 7/16 6 21/32 7 1/4 8 27/32 9 3/4 12 1/4	5 3/4 6 13/16 7 1/2 9 3/32 10 12 1/2	2 1 1	1 2 1	1 1 2	2 2 2 2 2 2	1 1 1 1 1
90	90 DOBB 90 DOBC 90 DOCC	51.0 53.8 56.6	1 5/8	4 1/4	1 x 1/2	16 1/4 18 3/4 21 1/4	6 5/8 9 1/8 11 5/8	7 1/4 9 3/4 12 1/4	7 1/2 10 12 1/2		2 1	1 2	2 2 2	1 1 1

Two shaft hubs (type R) will always be supplied unless ordered "LESS SHAFT HUBS".

- (1) All finish bores will be for clearance fit with set screw over the keyway unless ordered otherwise.
- (2) Minimum shaft separation is obtained by allowing the shafts to protrude slightly beyond the faces of the type R shaft hubs. Hub separation C and dimension L must be maintained as listed.
- (3) Standard shaft separations are obtained when type R shaft hubs are mounted flush with shaft ends. In this case the shaft separation is the same as the hub separation, dimension C.
- (4) Maximum shaft separation is obtained by allowing type R shaft hubs to slightly overhang their shafts. Maximum hub separations tabulated, are based on an overhang of 1/4" or less per hub. Excessive shaft hub overhang increases hub and key stresses.
- (5) Interference fits up to .0005"/in. of shaft diameter are permissible providing maximum bore with interference fit is 1/4" less than maximum clearance fit bore indicated by note (1).
- (6) Weight shown is total coupling weight based on maximum bore.

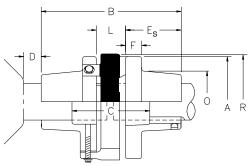


# KOP-FLEX®

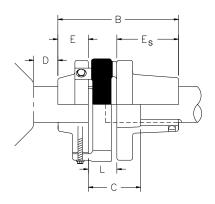
# **Double Spacer Coupling Type SS Single Spacer Coupling Type ES**

Spacer Couplings are commonly used where a larger-than-normal shaft separation is desired. This permits servicing of impellers, packing glands, seals, bearing, etc. without disturbing the connected equipment. The two types of spacer couplings—Double Spacer and Single Spacer—vary only in the number of spacer hubs used and offer the user a wide variety of possible shaft separations.





TYPE ES SINGLE SPACER COUPLING



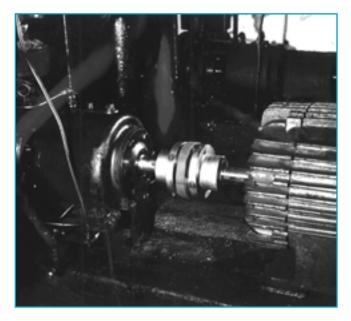
# **DOUBLE SPACER COUPLING**With Finished Straight Bores

0	Coupling Size	Stan	with dard way	Stock Rough Bore	Hub Sep.			В	D	Es	F	0	R	
		Min.	Max.	S Hub	L	Min.	Max.				Ů			
Г	20	3/4	1 1/4	19/32	1	1/8	6	3 11/16	7 7/8	1/8	3 7/16	5/8	2 5/8	4
	30	7/8	1 5/8	3/4	1 1/2	1/8	5 1/2	4 3/8	8 3/8	1/8	3 7/16	5/8	2 13/16	4 5/8
	40	7/8	2	3/4	1 5/8	1/8	5 3/8	5 3/8	8 1/2	1/8	3 7/16	1	3 3/16	5 11/16
	50	7/8	2 1/4	3/4	2 1/8	1/8	5	6 1/16	9	1/8	3 7/16	1	3 3/8	6 3/4
	60	1 1/4	3	1 1/8	2 1/8	1/8	5 1/4	7	9 1/4	1/8	3 9/16	1	4 5/16	7 5/8
П	70	1 5/8	3 1/8	1 1/2	2 3/8	1/8	6 1/8	8	10 3/8	1/8	4	1	4 9/16	8 11/16
	80	1 7/8	4 1/8	1 3/4	3	1/8	7	9 7/16	12 3/8	1/8	4 11/16	1 1/4	5 3/4	10 1/2
	90	2 5/8	4 3/4	2 1/2	4 1/8	1/8	7	12 1/8	14	1/8	4 15/16	1 1/2	6 3/4	13 1/16
	100	2 7/8	5 3/8	2 3/4	4 1/8	1/8	7	13 7/8	15	1/8	5 7/16	2	7 1/2	15 1/8

# SINGLE SPACER COUPLING With Finished Straight Bores

Coupling Size	Hub Sep.		haft aration C	В	E	D
	_	Min.	Max.			
20	1	1/8	3 1/2	5 1/2	1 1/16	1/8
30	1 1/2	1/8	3 1/2	6 1/4	1 5/16	1/8
40	1 5/8	1/8	3 1/2	6 13/16	1 3/4	1/8
50	2 1/8	1/8	3 9/16	7 9/16	2	1/8
60	2 1/8	1/8	3 11/16	7 11/16	2	1/8
70	2 3/8	1/8	4 1/4	8 1/2	2 1/8	1/8
80	3	1/8	5	10 3/8	2 11/16	1/8
90	4 1/8	1/8	5 9/16	12 9/16	3 1/2	1/8
100	4 1/8	1/8	5 9/16	13 9/16	4	1/8

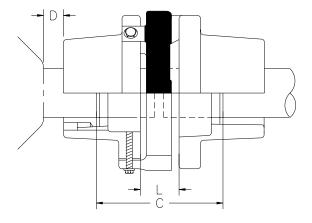
Coupling	S Hub No Bor		E Hul No Bo	-	Element W/ Fastener		
Size	Part No.	Wt.	Part No.	Wt.	Part No.	Wt.	
20	20 SHUB	1	20 EHUB	1	20 ELEMENT	1	
30	30 SHUB	1	30 EHUB	1	30 ELEMENT	1	
40	40 SHUB	2	40 EHUB	2	40 ELEMENT	1	
50	50 SHUB	3	50 EHUB	3	50 ELEMENT	2	
60	60 SHUB	4	60 EHUB	3	60 ELEMENT	3	
70	70 SHUB	6	70 EHUB	4	70 ELEMENT	5	
80	80 SHUB	11	80 EHUB	8	80 ELEMENT	9	
90	90 SHUB	18	90 EHUB	15	90 ELEMENT	16	
100	100 SHUB	34	100 EHUB	29	100 ELEMENT	18	

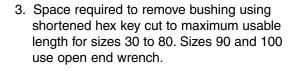




## **Spacer Coupling for TAPER-LOCK\* Bushing**

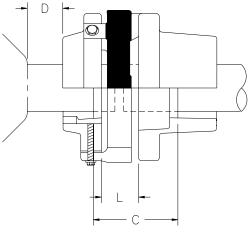
- 1. See table on page 106 for dimensions not listed.
- 2. Maximum bore is the maximum obtained when the bushing is supplied with a shallow keyway. Flat keys are then supplied with the bushing.

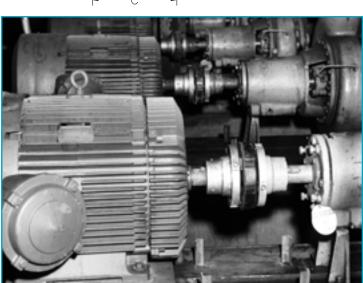






	Coupling Size		ER-LOC ushing	:K*	Hub Sep.	S	naft ep. C	D (3)
	Size	Number	Bore Min.	Bore Max.	L	Min.	Max.	(3)
Ī	30	1108	1/2	1 1/8	1 1/2	1/8	6 5/8	3/4
ı	40	1215	1/2	1 1/4	1 5/8	1/8	6 1/2	1 1/16
ı	50	1615	1/2	1 5/8	2 1/8	1/8	6	1 1/16
ı	60	2012	1/2	2	2 1/8	1/8	6 1/2	1 3/8
ı	70	2517	1/2	2 1/2	2 3/8	1/8	6 7/8	1 5/8
ı								
ı	80	3020	15/16	3	3	1/8	8 3/8	2 1/16
ı	90	3535	1 3/16	3 1/2	4 1/8	1/8	7	1 3/4
Į	100	3535	1 3/16	3 1/2	4 1/8	1/8	7	2





# Single Spacer Coupling for TAPER-LOCK\* Bushings

Coupling Size	S	haft ep. C	D (3)
	Min.	Max.	.,
30	1/8	4 1/2	3/4
40	1/8	4 13/16	1 1/16
50	1/8	4 9/16	1 1/16
60	1/8	5 1/16	1 3/8
70	1/8	5	1 5/8
80	1/8	6 3/8	2 1/16
90	1/8	5 9/16	1 3/4
100	1/8	5 9/16	2

## **Hubs Bored for TAPER-LOCK\* Bushings**

Coupling Size	S Hub Part No.	E Hub Part No.	Element W/ Fastene	rs
			Part No.	Wt.
30	30 SHUBTLX1108	30 EHUBTLX1108	30 ELEMENT	1
40	40 SHUBTLX1215	40 EHUBTLX1215	40 ELEMENT	1
50	50 SHUBTLX1615	50 EHUBTLX1615	50 ELEMENT	2
60	60 SHUBTLX2012	60 EHUBTLX2012	60 ELEMENT	3
70	70 SHUBTLX2517	70 EHUBTLX2517	70 ELEMENT	5
80	80 SHUBTLX3020	80 EHUBTLX3020	80 ELEMENT	9
90	90 SHUBTLX3535	90 EHUBTLX3535	90 ELEMENT	16
100	100 SHUBTLX3535	100 EHUBTLX3535	100 ELEMENT	18

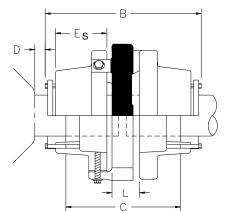


<sup>\*</sup>TAPER-LOCK is a trademark of Reliance Electric Co.
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## **Spacer Coupling For Q-D® Bushing**

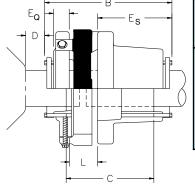
1. See table of Finished Straight Bores on page 104 for dimensions not listed.



## Double Spacer Coupling for Q-D® Bushings

Coupling Size	Q	-D® Bushir	ng	Hub Sep.	Se	aft ep. C	В	D	Es
Size	Number	Bore Min.	Bore Max.	L	Min.	Max.			
30	JA	1/2	1 1/4	1 1/2	1/8	7 1/4	9 5/8	1 1/8	3 7/16
40	JA	1/2	1 1/4	1 5/8	1/8	7 3/8	9 3/4	1 1/8	3 7/16
50	SH	1/2	1 5/8	2 1/8	1/8	7 1/2	10 9/16	1 9/16	3 7/16
60	SDS	1/2	1 15/16	2 1/8	1/8	7 3/4	10 13/16	1 9/16	3 9/16
70	SK	1/2	2 1/2	2 3/8	1/8	7 7/8	12 5/16	2 1/4	4
80	SF	1/2	2 15/16	3	1/8	9 3/4	14 9/16	2 3/8	4 11/16
90	E	7/8	3 7/16	4 1/8	1/8	10 1/2	16 7/8	3 1/16	4 15/16
100	F	1	3 15/16	4 1/8	1/8	9 7/8	18 3/8	4 3/16	5 7/16





Coupling Size		haft ep. C	В	D	EQ		
	Min.	Max.					
30	1/8	4 9/16	6 15/16	1 1/8	3/4		
40	1/8	5 1/16	7 7/16	1 1/8	1 1/8		
50	1/8	5 5/16	8 3/8	1 9/16	1 1/4		
60	1/8	5 3/8	8 7/16	1 9/16	1 3/16		
70	1/8	5	9 7/16	2 1/4	1 1/8		
80	1/8	6 1/2	11 5/16		1 7/16		
90	1/8	7 5/16	13 11/16	3 1/16	1 3/4		
100	1/8	7 1/16	15 9/16	4 3/16	2 5/8		

## **Hubs Bored for Q-D® Bushings**

	Coupling Size	S Hub Part No.	E Hub Part No.	Element W/ Fasteners					
				Part No.	Wt.				
1	30	30 SHUBQDXJA	30 EHUBQDXJA	30 ELEMENT	1				
	40	40 SHUBQDXJA	40 EHUBQDXJA	40 ELEMENT	1				
	50	50 SHUBQDXSH	50 EHUBQDXSH	50 ELEMENT	2				
	60	60 SHUBQDXSDS	60 EHUBQDXSDS	60 ELEMENT	3				
	70	70 SHUBQDXSK	70 EHUBQDXSK	70 ELEMENT	5				
	80	80 SHUBQDXSF	80 EHUBQDXSF	80 ELEMENT	9				
	90	90 SHUBQDXE	90 EHUBQDXE	90 ELEMENT	16				
	100	100 SHUBQDXF	100 EHUBQDXF	100 ELEMENT	18				

## **NET WEIGHT, LBS.—SPACER COUPLINGS**

	Coupling Size	20	30	40	50	60	70	80	90	100
Œ	With Solid Hubs	4.0	4.6	7.4	10.1	13.9	22.5	41.1	73.2	116
SPACER	With Max. Bore and Standard Keyway	3.7	4.1	6.5	8.7	11.1	19.0	34.0	58.8	96
DOUBLE	With TAPER-LOCK* Bushing (Max. Bore)	ı	4.5	7.0	9.8	13.5	22.5	41.4	76.4	113
	With Q-D <sup>®</sup> Bushing (Max. Bore)	1	4.6	7.4	10.3	14.1	23.1	41.3	77.1	122
<u>~</u>	With Solid Hubs	2.8	3.7	6.7	9.5	13.0	19.8	35.8	66.3	106
SPACER	With Max. Bore and Standard Keyway	2.6	3.2	5.7	8.0	10.1	16.3	28.5	52.1	86
SINGLE	With TAPER-LOCK* Bushing (Max. Bore)	ı	3.6	6.2	9.1	12.7	19.8	36.1	69.2	107
<u>σ</u>	With Q-D <sup>®</sup> Bushing (Max. Bore)	-	3.8	6.8	9.9	13.6	21.0	37.0	72.2	114

<sup>\*</sup>TAPER-LOCK is a trademark of Reliance Electric Co. Q-D is a trademark of Emerson Electric Co.

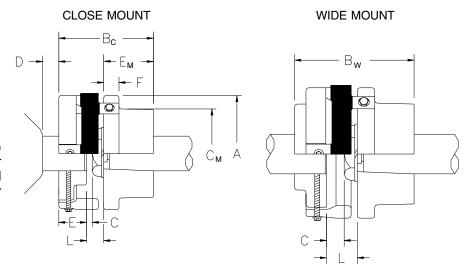
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## Mill Motor Coupling Type EM

Mill motor Couplings are for use on AC or DC Mill-Type Motors.
Couplings sizes are pre-selected in the table below on the basis of MAXIMUM MOTOR TORQUE.
Coupling selections should be made directly from the table. DO NOT USE SERVICE FACTORS.

**NOTE:** Part Numbers for the ELASTOMERIC™ Mill Motor Couplings have not been established due to the wide variety of mill motor frames.



						with	Close	Mount	nt Wide Mount														
Coupling Size	AISE Frame Number				Standard Keyway		Hub Shaft Sep. Sep.		Shaft Sep. C		Α	Вс	Bw	D	E EM	F	Ом	Q	U	V	γ		
5.25	AC Series	400 Series	600 Series	800 Series	Min.	Max.	Sep. L	C C	Sep. L	Min.	Max.												
60	AC1,AC2	2	2	802A	1 3/8	2 7/8	1 1/8	3/16	2 1/8	1/8	1 3/16	7	6 1/8	7 1/8	1/8	2	3	1	4 5/16	15/16	1 3/4	2 3/4	1 3/16
																							1 1
	AC4	402	602	802B,C	1 3/8	3	1 1/4	5/16	2 3/8	1/8	1 7/16	8	6 3/8	7 1/2	1/8	2 1/8	3	1	4 9/16	15/16	1 3/4	2 3/4	1 3/16
70		403	603		1 3/8		1 1/4	1/4	2 3/8	ı	1 3/8	8	6 7/8	8	1/8	2 1/8	3 1/2	1	4 9/16	1	2	3 1/4	1 1/4
	AC8				1 3/8	3	1 1/4	1/8	2 3/8	1/8	1 1/4	8	7 3/8	8 1/2	1/8	2 1/8	4	1	4 9/16	1 1/8	2 1/2	3 3/4	1 3/8
																							1 1
80		404	604	803,804		3 7/8		9/16	3	1/8	2	9 7/16	7 3/4	9 3/16		2 11/16		1 1/4	5 3/4	1	2	3 1/4	1 1/4
00	AC12				1 3/8	3 7/8	1 9/16	7/16	3	1/8	1 7/8	9 7/16	8 1/4	9 3/16	1/8	2 11/16	4	1 1/4	5 3/4	1 1/8	2 1/2	3 3/4	1 3/8
																							1 1
90		406	606	806	1 9/16	4 3/4		1	4 1/8	1/8	3	12 1/8		11 5/8		3 1/2	4	1 1/2	6 3/4	1 1/8	2 1/2	3 3/4	1 3/8
	AC18				1 9/16	4 3/4	2 1/8	3/4	4 1/8	1/8	2 3/4	12 1/8	10 1/8	12 1/8	1/8	3 1/2	4 1/2	1 1/2	6 3/4	1 3/8	3 1/4	4 1/4	1 5/8
																							1 1
		408	608	808	2	5 3/8		7/8	4 1/8		2 7/8	13 7/8	10 5/8	125/8	1/8	4	4 1/2	2	7 1/2	1 1/4	3	4 1/4	1 1/2
100		410	610		2	5 3/8		3/4	4 1/8	ı	2 3/4	13 7/8	10 5/8		ı	4	4 1/2	2	7 1/2		3 1/4	4 1/4	1 5/8
	AC25				2	5 3/8	2 1/8	5/8	4 1/8	1/8	2 5/8	13 7/8	11 1/8	13 1/8	1/8	4	5	2	7 1/2	1 1/2	3 5/8	4 1/4	1 3/4

<sup>\*</sup> DO NOT USE SERVICE FACTORS WHEN SELECTING COUPLINGS FROM THIS TABLE

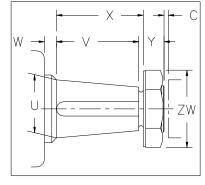
## Net Weight, Lbs.

	Mill Motor	Net Weight, Lbs.							
Coupling Size	Hub Bored For AISE Motor Frame	With Solid Hubs	With Max. Bore Standard Key						
60	2,802A AC1,AC2	13.3	11.1						
70	602,802B 802C,AC4	18.6	16.2						
70	603	19.4	16.6						
70	AC8	20.2	16.6						
80	604,803 804	31.4	26.5						
80	AC12	32.8	27.1						
90	606,806	56.1	47.1						
90	AC18	57.7	47.1						
100	608,808	83.5	70.3						
100	610	83.5	69.9						
100	AC25	85.6	71.3						

TAPERED BORES For Tapered Shafts, with or without locknut, determine applicable AISE Mill Motor frame or give data below:

- 1. U Major diameter.
- 2. V Length of tapered portion of shaft.
- 3. X Length to face of lockwasher.
- 4. Y Length of threaded projection.
- 5. ZW Locknut diameter across corners.
- 6. W Clearance to bearing housing.
- 7. Taper (inches on diameter per foot of length).
- 8. Keyway width and depth.
- 9. Whether keyway is parallel to shaft or to taper.
- 10. C Shaft separation if machines are in place.







## **Coupling Comments**

## **ELASTOMERIC™** Coupling for Runout Table Application

We have some exciting field test results run by a major steel mill customer. As you may know our ELASTOMERIC™ couplings are used throughout industry primarily in pump applications as well as runout (also known as entry/exit/transfer table) applications in hot strip steel mills.

NATIONAL STEEL\* Corporation in Granite City ran a grueling test of Elastomer type couplings on their hot strip mill finishing stand runout tables, between the motor and rolls, with our ELASTOMERIC™, FALK\* TORUS, DODGE\* PARAFLEX, ATRAFLEX and REXNORD\* OMEGA over a four month period. Our size number 60 ELASTOMERIC™ coupling with steel hubs (available as an option, standard hubs are Aluminum) outlasted all of the others. Our ELASTOMERIC™ couplings have been selected as the coupling of choice at GRANITE CITY STEEL\*, on runout table application, after the side by side 'shootout' with our competitors. Price was not the reason we were selected - a case in point - performance outweighing the price!

Just to give you a scope of this success, in a typical hot strip mill there are somewhere between 100 to 300 table rolls - most are motorized - and each driven roll needs a coupling between the motor and the roll. Besides GRANITE CITY STEEL\*, we have many other applications with ELASTOMERIC™ coupling on runout table such as LTV STEEL\* (Cleveland), WHEELING PITTSBURGH STEEL\*, ARMCO STEEL\*, WEIRTON STEEL\*, ALGOMA STEEL\*, NORTH STAR/BHP\*, and the list goes on.

ELASTOMERIC™ couplings have several features:

- Never needs lubrication
- Easy to install wrap around rubber element al lows replacement without removing the connected equipment
- Drives through compression avoids the pitfalls of other rubber/urethane couplings in shear





ELASTOMERIC™ Coupling for Runout table (shown under the guard) at a major hot strip steel mill

Besides the ELASTOMERIC™ coupling the other popular choice for the runout table application is the FAST'S® gear coupling from KOP-FLEX® brand couplings with its unique metal seal design.

<sup>\*</sup>DODGE is a trademark of Reliance Electric Company.

<sup>\*</sup>FALK is a trademark of The Falk Corporation.

<sup>\*</sup>REXNORD is a trademark of Rexnord Industries Inc.

<sup>\*</sup>GRANITE CITY STEEL is a trademark of United States Steel Corporation.

<sup>\*</sup>LTV STEEL is a trademark of LTV Steel Company, Inc.

<sup>\*</sup>NATIONAL STEEL Corporation is a trademark of National Steel Corporation.

<sup>\*</sup>WHEELING PITTSBURGH STEEL is a trademark of Wheeling Pittsburgh Steel Corporation

<sup>\*</sup>ARMCO STEEL is a trademark of AK Steel Corporation.

<sup>\*</sup>WEIRTON STEEL is a trademark of Weirton Steel Corporation.

<sup>\*</sup>ALGOMA STEEL is a trademark of Bank of America, National Association.

<sup>\*</sup>NORTH STEEL/BHP is a trademark of Broken Hill Proprietary Company Limited.

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