

# KOP-FLEX®

## WALDRON® Gear Couplings

### WALDRON® ADVANTAGES:

**IMPROVED SOFT SEAL** offers superior sealing under misaligned conditions.

**UNIQUE TOOTH FORM** using a 40° pressure angle, distributes the load over a larger area than couplings which use a 20° pressure angle.

**FULL TOOTH ENGAGEMENT** reduces uneven wear on teeth that results in longer life plus improved performance.

**QUALITY EXPOSED FASTENERS** consists of SAE Grade 5 bolts with hex nuts and lock washers. Installation is simple, without special tools. Shrouded bolts optional.

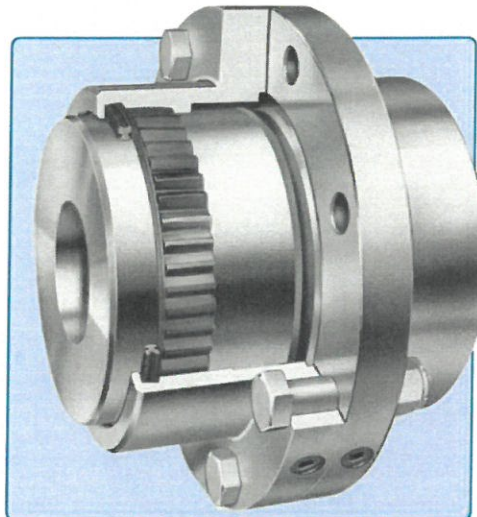
**CLEAR RUST INHIBITIVE AND CORROSION RESISTANT FINISH** protects coupling in normal industrial environments.

**AVAILABLE OFF-THE-SHELF** in reborables with large bore capabilities or stock finish bored.

**OPTIONAL PILOT RINGS** provides positive register between identical halves. Eliminates selective assembly required in male, female sleeves.

**INTERCHANGEABLE** by half coupling with competitive coupling designs.

**HIGHER MISALIGNMENT CAPABILITY** sizes 1-7 compensate for up to  $\pm 1\frac{1}{2}^\circ$  static angular misalignment per gear mesh.



**WALDRON® Size 1-7**

### Advantages of the 40° Pressure Angle Tooth

- **STRONGER TOOTH**

The line of action of the force exerted at the pitch line of the new Performance Profile crosses the root circle near the center of the tooth rather than outside the tooth, as in the case of conventional gear teeth. The result is an appreciable reduction in root stress which helps protect against tooth damage.

- **GREATER TOOTH CONTACT AREA**

The profile of the tooth is significantly flatter due to the large involute radius of curvature. This causes the load to be distributed over a larger area. As a result, compressive stresses, lubricant film pressure and tooth wear are minimized.

- **GREATER SLEEVE CENTERING ABILITY**

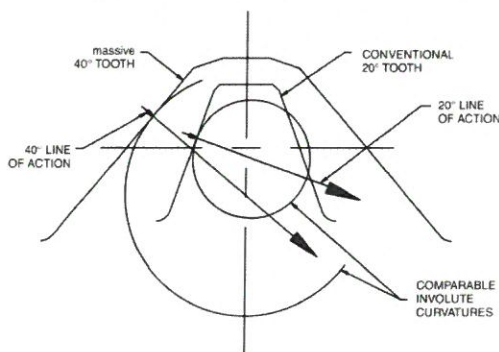
The 40° pressure angle tooth produces greater radial forces which helps to maintain sleeve concentricity with respect to the axis of rotation. As a result, inherent unbalance and centrifugal forces are minimized and a smooth and efficient operation is imparted to the coupling.

- **INCREASED ARC OF CONTACT**

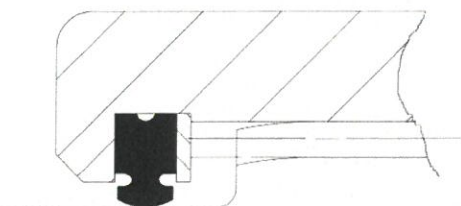
With the 40° pressure angle tooth there is less tendency for some of the teeth to lose contact during misalignment. This prevents a drastic reduction in torque rating with increased misalignment.

- **INCREASED STRENGTH AND DURABILITY**

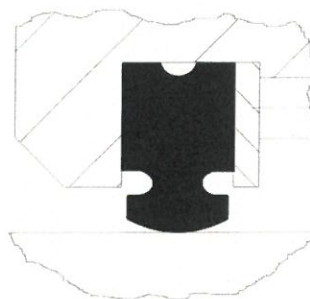
Under maximum loading and misaligned conditions, the stronger tooth, the greater intimacy between the teeth and the increased arc of contact all combine to produce a coupling unit that is additionally rugged and efficiently useful for longer periods of time.



**20° vs. 40° Tooth Comparison  
on the same pitch diameter**

**KOP-FLEX****WALDRON® Gear Couplings****FULL ENGAGEMENT TEETH**

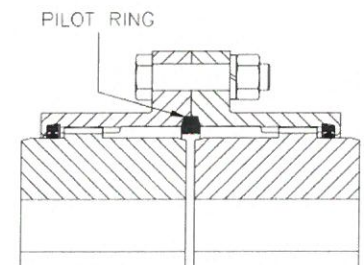
The WALDRON® gear coupling has been designed with full length tooth engagement with the inherent result of longer life and improved performance.

**HIGH MISALIGNMENT SEAL**

Competitive gear couplings incorporate an O-ring seal. In order to conform with today's high misalignment capacities, this O-ring must fit into a groove that is larger than the ring. WALDRON® couplings use a truly high misalignment seal that seals remarkably under misaligned conditions.

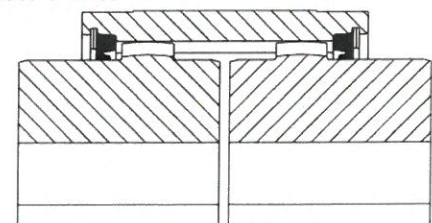
**Optional Pilot Rings**

The standard WALDRON® coupling consists of two identical half couplings. Optional precision steel pilot rings are available when more accurate centering of the two sleeves is required.

**WALDRON POWERLIGN**

This flangeless design transmits identical torques as the standard WALDRON® Coupling. Having a smaller outside diameter, however, it is more compact, lighter, and can run at greater speeds.

This alternative may be selected for applications where space is limited.



| Basic Coupling Size | Pilot Ring Part No. | Wt. (lb.) |
|---------------------|---------------------|-----------|
| 1                   | 1W PR               | .06       |
| 1 1/2               | 1 1/2W PR           | .09       |
| 2                   | 2W PR               | .12       |
| 2 1/2               | 2 1/2W PR           | .21       |
| 3                   | 3W PR               | .25       |
| 3 1/2               | 3 1/2W PR           | .25       |
| 4                   | 4W PR               | .98       |
| 4 1/2               | 4 1/2W PR           | 1.1       |
| 5                   | 5W PR               | 1.2       |
| 5 1/2               | 5 1/2W PR           | 1.5       |
| 6                   | 6W PR               | 1.9       |
| 7                   | 7W PR               | 2.9       |



# KOP-FLEX®

## WALDRON® Gear Couplings 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).

**CAUTION:** All people moving plus overhead crane applications must be referred to engineering.

| Application                             | Typical Service Factor |
|---|------------------------|
| <b>AGITATORS</b>                        |                        |
| Pure Liquids                            | 1.0                    |
| Liquids & Solids                        | 1.25                   |
| Liquids — Variable Density              | 1.25                   |
| <b>BLOWERS</b>                          |                        |
| Centrifugal                             | 1.0                    |
| Lobe                                    | 1.5                    |
| Vane                                    | 1.25                   |
| <b>BRIQUETTE MACHINES</b>               |                        |
| CAR PULLERS — Intermittent Duty         | 1.5                    |
| <b>COMPRESSORS</b>                      |                        |
| Centrifugal                             | 1.0                    |
| Centrifugal                             | 1.25                   |
| Lobe                                    | 1.5                    |
| Reciprocating — Multi-Cylinder          | 2.0                    |
| <b>CONVEYORS — LIGHT DUTY</b>           |                        |
| <b>UNIFORMLY FED</b>                    |                        |
| Apron, Bucket, Chain, Flight, Screw     | 1.25                   |
| Assembly, Belt                          | 1.0                    |
| Oven                                    | 1.5                    |
| <b>CONVEYORS — HEAVY DUTY</b>           |                        |
| <b>NOT UNIFORMLY FED</b>                |                        |
| Apron, Bucket, Chain, Flight, Oven      | 1.5                    |
| Assembly, Belt                          | 1.25                   |
| Reciprocating, Shaker                   | 2.5                    |
| <b>CRANES AND HOISTS (NOTE 1 and 2)</b> |                        |
| Main hoists, Reversing                  | 2.5                    |
| Skip Hoists, Trolley & Bridge Drives    | 2.0                    |
| Slope                                   | 2.0                    |
| <b>CRUSHERS</b>                         |                        |
| Ore, Stone                              | 3.0                    |
| <b>DREDGES</b>                          |                        |
| Cable Reels                             | 1.75                   |
| Conveyors                               | 1.5                    |
| Cutter Head Jig Drives                  | 2.5                    |
| Maneuvering Winches                     | 1.75                   |
| Pumps                                   | 1.75                   |
| Screen Drives                           | 1.75                   |
| Stackers                                | 1.75                   |
| Utility Winches                         | 1.5                    |
| <b>ELEVATORS (NOTE 2)</b>               |                        |
| Bucket                                  | 1.75                   |
| Centrifugal & Gravity Discharge         | 1.5                    |
| Escalators                              | 1.5                    |
| Freight                                 | 2.5                    |
| <b>FANS</b>                             |                        |
| Centrifugal                             | 1.0                    |
| Cooling Towers                          | 1.5                    |
| Forced Draft                            | 1.5                    |
| Induced Draft without Damper            |                        |
| Control                                 | 2.0                    |
| <b>FEEDERS</b>                          |                        |
| Apron, Belt, Disc, Screw                | 1.25                   |
| Reciprocating                           | 2.5                    |

| Application                         | Typical Service Factor |
|-------------------------------------|------------------------|
| <b>GENERATORS —</b>                 |                        |
| (Not Welding)                       | 1.0                    |
| <b>HAMMER MILLS</b>                 |                        |
| <b>LAUNDRY WASHERS —</b>            |                        |
| Reversing                           | 2.0                    |
| <b>LAUNDRY TUMBLERS</b>             |                        |
| Sorting Table                       | 1.5                    |
| <b>LINE SHAFT</b>                   |                        |
| <b>LUMBER INDUSTRY</b>              |                        |
| Barkers — Drum Type                 | 2.0                    |
| Edger Feed                          | 2.0                    |
| Live Rolls                          | 2.0                    |
| Log Haul — Incline                  | 2.0                    |
| Log Haul — Well type                | 2.0                    |
| Off Bearing Rolls                   | 2.0                    |
| Planer Feed Chains                  | 1.75                   |
| Planer Floor Chains                 | 1.75                   |
| Planer Tilt Hoist                   | 1.75                   |
| Slab Conveyor                       | 1.5                    |
| Sorting Table                       | 1.5                    |
| Trimmer Feed                        | 1.75                   |
| <b>MARINE PROPULSION</b>            |                        |
| Main Drives                         | 2.0                    |
| <b>MACHINE TOOLS</b>                |                        |
| Bending Roll                        | 2.0                    |
| Plate Planer                        | 1.5                    |
| Punch Press — Gear Driven           | 2.0                    |
| Tapping Machines                    | 2.5                    |
| Other Machine Tools                 |                        |
| Main Drives                         | 1.5                    |
| Auxiliary Drives                    | 1.25                   |
| <b>METAL MILLS</b>                  |                        |
| Draw Bench — Carnage                | 2.0                    |
| Draw Bench — Main Drive             | 2.0                    |
| Forming Machines                    | 2.0                    |
| Sitters                             | 1.5                    |
| Table Conveyors                     |                        |
| Non-Reversing                       | 2.25                   |
| Reversing                           | 2.5                    |
| Wire Drawing & Flattening Machine   | 2.0                    |
| Wire Winding Machine                | 1.75                   |
| <b>METAL ROLLING MILLS (NOTE 1)</b> |                        |
| Blooming Mills                      | 2.0                    |
| Coilers, hot mill                   | 2.0                    |
| Coilers, cold mill                  | 1.25                   |
| Cold Mills                          | 2.0                    |
| Cooling Beds                        | 1.75                   |
| Door Openers                        | 2.0                    |
| Draw Benches                        | 2.0                    |
| Edger Drives                        | 1.75                   |
| Feed Rolls, Reversing Mills         | 3.5                    |
| Furnace Pushers                     | 2.5                    |
| Hot Mills                           | 3.0                    |
| Ingot Cars                          | 2.5                    |
| Kick-outs                           | 2.5                    |
| Manipulators                        | 3.0                    |
| Merchant Mills                      | 3.0                    |
| Piercers                            | 3.0                    |
| Pusher Rams                         | 2.5                    |
| Reel Drives                         | 1.75                   |
| Reel Drums                          | 2.0                    |
| Reelers                             | 3.0                    |
| Rod and Bar Mills                   | 1.5                    |
| Roughing Mill Delivery Table        | 3.0                    |
| Runout Tables                       |                        |
| Reversing                           | 3.0                    |
| Non-Reversing                       | 2.0                    |
| Saws, hot & cold                    | 2.5                    |
| Screwdown Drives                    | 3.0                    |
| Skelp Mills                         | 3.0                    |
| Sitters                             | 3.0                    |
| Slabbing Mills                      | 3.0                    |
| Soaking Pit Cover Drives            | 3.0                    |
| Straighteners                       | 2.5                    |
| Tables, transfer & runout           | 2.0                    |
| Thrust Block                        | 3.0                    |
| Traction Drive                      | 3.0                    |
| Tube Conveyor Rolls                 | 2.5                    |
| Unscramblers                        | 2.5                    |
| Wire Drawing                        | 1.5                    |
| <b>MILLS, ROTARY TYPE</b>           |                        |
| Ball                                | 2.25                   |
| Dryers & Coolers                    | 2.0                    |
| Hammer                              | 1.75                   |
| Kilns                               | 2.0                    |

| Application                                  | Typical Service Factor |
|--|------------------------|
| Pebble & Rod                                 | 2.0                    |
| Pug  | 1.75                   |
| Tumbling Barrels                             | 2.0                    |
| <b>MIXERS</b>                                |                        |
| Concrete Mixers                              | 1.75                   |
| Drum Type                                    | 1.5                    |
| <b>OIL INDUSTRY</b>                          |                        |
| Chillers                                     | 1.25                   |
| Paraffin Filter Press                        | 1.75                   |
| <b>PAPER MILLS</b>                           |                        |
| Barker Auxiliaries, Hydraulic                | 2.0                    |
| Barker, Mechanical                           | 2.0                    |
| Barking Drum Spur Gear Only                  | 2.25                   |
| Beater & Pulper                              | 1.75                   |
| Bleacher                                     | 1.0                    |
| Calenders                                    | 2.0                    |
| Chippers                                     | 2.5                    |
| Coaters                                      | 1.0                    |
| Converting Machines, except Cutters, Platers | 1.5                    |
| Couch Roll                                   | 1.75                   |
| Cutters, Platers                             | 2.0                    |
| Cylinders                                    | 1.75                   |
| Disc Refiners                                | 1.75                   |
| Dryers                                       | 1.75                   |
| Felt Stretcher                               | 1.25                   |
| Felt Whipper                                 | 2.0                    |
| Jordans                                      | 1.75                   |
| Line Shaft                                   | 1.5                    |
| Log Haul                                     | 2.0                    |
| Pulp Grinder                                 | 1.75                   |
| Press Roll                                   | 2.0                    |
| Reel   | 1.5                    |
| Stock Chests                                 | 1.5                    |
| Suction Roll                                 | 1.75                   |
| Washers & Thickeners                         | 1.5                    |
| Winders                                      | 1.5                    |
| <b>PRINTING PRESSES</b>                      |                        |
| <b>PULLERS — Barge Haul</b>                  |                        |
| <b>PUMPS</b>                                 |                        |
| Centrifugal                                  | 1.0                    |
| Boiler Feed                                  | 1.5                    |
| Reciprocating                                |                        |
| Single Acting                                |                        |
| 1 or 2 Cylinders                             | 2.25                   |
| 3 or more Cylinders                          | 1.75                   |
| Double Acting                                | 2.0                    |
| Rotary Gear, Lobe, Vane                      | 1.5                    |
| <b>RUBBER INDUSTRY</b>                       |                        |
| Mixer — Banbury                              | 2.5                    |
| Rubber Calendar                              | 2.0                    |
| Rubber Mill (2 or more)                      | 2.25                   |
| Sheeter                                      | 2.0                    |
| Tire Building Machines                       | 2.5                    |
| Tire & Tube Press Openers                    | 1.0                    |
| Tubers & Strainers                           | 2.0                    |
| <b>SCREENS</b>                               |                        |
| Air Washing                                  | 1.0                    |
| Grizzly                                      | 2.0                    |
| Rotary — Stone or Gravel                     | 1.5                    |
| Traveling Water Intake                       | 1.25                   |
| Vibrating                                    | 2.5                    |
| <b>SEWAGE DISPOSAL EQUIPMENT</b>             |                        |
| Bar Screens                                  | 1.25                   |
| Chemical Feeders                             | 1.25                   |
| Collectors, Circuline or Straightline        | 1.25                   |
| Dewatering Screens                           | 1.25                   |
| Grit Collectors                              | 1.25                   |
| Scum Breakers                                | 1.25                   |
| Slow or Rapid Mixers                         | 1.25                   |
| Sludge Collectors                            | 1.25                   |
| Thickeners                                   | 1.25                   |
| Vacuum Filters                               | 1.25                   |
| <b>STEERING GEAR</b>                         |                        |
| <b>STOKERS</b>                               |                        |
| <b>WINCH</b>                                 |                        |
| <b>WINDLASS</b>                              |                        |

\* Refer to KOP-FLEX

### NOTES

- (1) Maximum Torque at the coupling must not exceed Rated Torque of the coupling
- (2) Check local and industrial safety codes

# KOP-FLEX®

## WALDRON® Gear Couplings

### Selection Procedure

1. **Select Coupling Based on Bore Capacity.**  
Select the coupling size that has a maximum bore capacity equal to or larger than the larger of the two shafts. For interference fits larger than AGMA standards, consult KOP-FLEX.
2. **Verify Coupling Size Based on Load Rating.**
  - a. Select the appropriate Service Factor from the Table on page 160.
  - b. Calculate required HP / 100 RPM:  

$$\frac{HP \times \text{Service Factor} \times 100}{\text{RPM}} = HP / 100 \text{ RPM}$$
  - c. Verify that the selected coupling has a rating greater than or equal to the required HP / 100 RPM.

3. **Check Balance Requirements.**  
Consult the Dynamic Balancing Guide on page 129 to help determine if balancing is required. Verify that the maximum operating speed does not exceed the maximum speed rating of the coupling. The maximum speed rating does not consider lateral critical speed considerations for floating shaft applications. WALDRON® couplings are available component balanced only.

**Note:** Care must be exercised on proper selection of any shaft coupling. The Users must assure themselves that the design of the shaft to coupling hub connection is adequate for the duty intended.

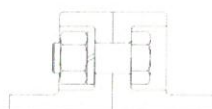
### Fastener Data

| Coupling Size | Type EB Exposed Bolt |               |             | Type SB Shrouded Bolt |               |             |
|---------------|----------------------|---------------|-------------|-----------------------|---------------|-------------|
|               | Qty.                 | Size & Length | Bolt Circle | Qty.                  | Size & Length | Bolt Circle |
| 1             | 6                    | 1/4 x 1 1/2   | 3 3/4       | 6                     | 1/4 x 7/8     | 3 3/4       |
| 1 1/2         | 8                    | 3/8 x 2       | 4 13/16     | 8                     | 3/8 x 1       | 4 13/16     |
| 2             | 6                    | 1/2 x 2 1/2   | 5 7/8       | 10                    | 3/8 x 1       | 5 13/16     |
| 2 1/2         | 6                    | 5/8 x 2 3/4   | 7 1/8       | 10                    | 1/2 x 1 5/16  | 7           |
| 3             | 8                    | 5/8 x 2 3/4   | 8 1/8       | 12                    | 1/2 x 1 5/16  | 8           |
| 3 1/2         | 8                    | 3/4 x 3 3/8   | 9 1/2       | 12                    | 5/8 x 1 5/8   | 9 9/32      |
| 4             | 8                    | 3/4 x 3 3/8   | 11          | 14                    | 5/8 x 1 5/8   | 10 5/8      |
| 4 1/2         | 10                   | 3/4 x 3 3/8   | 12          | 14                    | 5/8 x 1 5/8   | 11 3/4      |
| 5             | 8                    | 7/8 x 4 1/4   | 13 1/2      | 14                    | 3/4 x 2 1/8   | 13 3/16     |
| 5 1/2*        | 14                   | 7/8 x 3 1/4   | 14 1/2      | -                     | -             | -           |
| 6*            | 14                   | 7/8 x 3 1/4   | 15 3/4      | -                     | -             | -           |
| 7*            | 16                   | 1 x 3 5/8     | 18 1/4      | -                     | -             | -           |

Sizes #5 1/2 and larger are available in exposed bolts only.



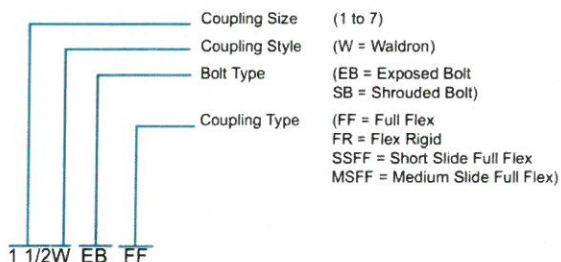
TYPE EB -  
EXPOSED BOLTS



TYPE SB -  
SHROUDED BOLTS

### PART NUMBER EXPLANATION

Complete Rough Bore Coupling



1 1/2W FHUB FB

### HOW TO ORDER

#### Coupling Parts

##### Description

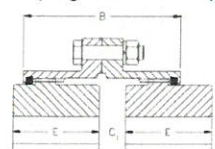
\*FHUB = Flex Hub  
 \*VHUB = Vertical Hub  
 \*RHUB = Rigid Hub  
 SLEEVE = Standard Sleeve  
 FS = Fastener Set (w/gasket)  
 LEFD = LEF Disk  
 SPRxxx = Spacer for x.xx shaft separation  
 SP = Stop Plate for Slide Couplings  
 VP = Vertical Plate

\* For finish bored hubs, add FB and bore size.  
 All finish bores and keyways per  
 AGMA/ANSI 9112 with interference fits.  
 Clearance bores are available on request  
 with one setscrew over keyway.

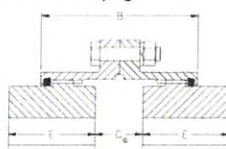


**KOP-FLEX®****WALDRON® Gear Couplings****Full Flex Coupling Size 1-7**

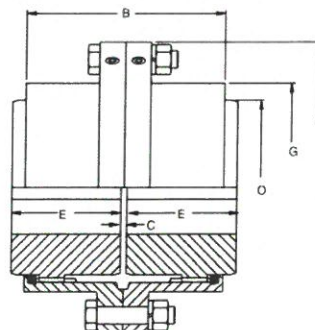
A conventional 4-bearing system has two bearings on the driving shaft and two bearings on the driven shaft. Both angular and offset shaft misalignment will be present to some degree and a full flex coupling is mandatory. The full flex coupling is the standard coupling having two gear ring sets, one set per half coupling. For selection procedure see page 161.



ONE HUB REVERSED



TWO HUBS REVERSED



| Coupling Size | Maximum Bore with Standard Key | Rating HP / 100 RPM | Torque Rating (lb.-in.) | Peak Torque Rating (lb.-in.) | Maximum Speed (RPM) | Dimensions |          |      |                |                |         |         |          |
|---------------|--------------------------------|---------------------|-------------------------|------------------------------|---------------------|------------|----------|------|----------------|----------------|---------|---------|----------|
|               |                                |                     |                         |                              |                     | A          | B        | C    | C <sub>1</sub> | C <sub>2</sub> | E       | G       | O        |
| 1             | 1 5/8                          | 10                  | 6300                    | 12600                        | 10000               | 4 9/16     | 3 3/16   | 1/8  | 3/8            | 5/8            | 1 11/16 | 3       | 2 5/16   |
| 1 1/2         | 2 3/16                         | 24                  | 15100                   | 30200                        | 7400                | 6          | 3 7/8    | 1/8  | 9/16           | 1              | 2 1/16  | 3 13/16 | 3 1/8    |
| 2             | 2 3/4                          | 50                  | 31500                   | 63000                        | 5900                | 7          | 4 5/8    | 1/8  | 13/16          | 1 1/2          | 2 7/16  | 4 13/16 | 4        |
| 2 1/2         | 3 1/4                          | 90                  | 56700                   | 113400                       | 5000                | 8 3/8      | 5 11/16  | 3/16 | 29/32          | 1 5/8          | 3 1/32  | 5 23/32 | 4 23/32  |
| 3             | 4                              | 150                 | 94500                   | 189000                       | 4300                | 9 7/16     | 6 9/16   | 3/16 | 1 1/32         | 1 7/8          | 3 19/32 | 6 23/32 | 5 5/8    |
| 3 1/2         | 4 3/4                          | 230                 | 145000                  | 290000                       | 3900                | 11         | 7 5/8    | 1/4  | 1 5/16         | 2 3/8          | 4 3/16  | 7 3/4   | 6 5/8    |
| 4             | 5 3/8                          | 350                 | 221000                  | 442000                       | 3500                | 12 1/2     | 8 5/8    | 1/4  | 1 7/16         | 2 5/8          | 4 3/4   | 8 31/32 | 7 1/2    |
| 4 1/2         | 6                              | 480                 | 300000                  | 600000                       | 3200                | 13 5/8     | 9 5/8    | 5/16 | 1 5/8          | 2 15/16        | 5 3/8   | 10 1/8  | 8 1/2    |
| 5             | 6 3/4                          | 650                 | 410000                  | 820000                       | 2900                | 15 5/16    | 10 13/16 | 5/16 | 1 11/16        | 3 1/16         | 6 1/8   | 11 3/8  | 9 1/2    |
| 5 1/2*        | 7 1/2                          | 850                 | 536000                  | 1072000                      | 2700                | 16 3/4     | 11 5/8   | 5/16 | 1 7/8          | 3 7/16         | 6 5/8   | 12 9/16 | 10 27/64 |
| 6*            | 8 1/4                          | 1100                | 693000                  | 1386000                      | 2500                | 18         | 13 1/4   | 5/16 | 2 5/16         | 4 5/16         | 7 3/8   | 13 7/8  | 11 3/4   |
| 7*            | 9 1/4                          | 1600                | 1010000                 | 2020000                      | 2200                | 20 3/4     | 14 3/4   | 3/8  | 2 3/16         | 4              | 8 11/16 | 15 3/4  | 13 1/4   |

\* Sizes 5 1/2, 6 and 7 are only available with exposed bolt sleeves. Type EB exposed bolt sleeves are standard.

**Coupling Type EB (Exposed Bolts) Part Numbers**

| Coupling Size | Full Flex Coupling |     |                        | Fastener Set (Includes Gasket) |     | Sleeve           |     | Flex Hub         |     |                        |
|---------------|--------------------|-----|------------------------|--------------------------------|-----|------------------|-----|------------------|-----|------------------------|
|               | No Bore Part No.   | Wt. | Finish Bore ① Part No. | Part No.                       | Wt. | Part No.         | Wt. | No Bore Part No. | Wt. | Finish Bore ① Part No. |
| 1             | 1W EB FF           | 10  | 1W EB FF FB            | 1 EB FS                        | 1   | 1W EB SLEEVE     | 2   | 1W FHUB          | 3   | 1W FHUB FB             |
| 1 1/2         | 1 1/2W EB FF       | 19  | 1 1/2W EB FF FB        | 1 1/2 EB FS                    | 1   | 1 1/2W EB SLEEVE | 6   | 1 1/2W FHUB      | 3   | 1 1/2W FHUB FB         |
| 2             | 2W EB FF           | 30  | 2W EB FF FB            | 2 EB FS                        | 1   | 2W EB SLEEVE     | 8   | 2W FHUB          | 7   | 2W FHUB FB             |
| 2 1/2         | 2 1/2W EB FF       | 52  | 2 1/2W EB FF FB        | 2 1/2 EB FS                    | 2   | 2 1/2W EB SLEEVE | 14  | 2 1/2W FHUB      | 12  | 2 1/2W FHUB FB         |
| 3             | 3W EB FF           | 76  | 3W EB FF FB            | 3 EB FS                        | 3   | 3W EB SLEEVE     | 17  | 3W FHUB          | 20  | 3W FHUB FB             |
| 3 1/2         | 3 1/2W EB FF       | 117 | 3 1/2W EB FF FB        | 3 1/2 EB FS                    | 5   | 3 1/2W EB SLEEVE | 28  | 3 1/2W FHUB      | 28  | 3 1/2W FHUB FB         |
| 4             | 4W EB FF           | 180 | 4W EB FF FB            | 4 EB FS                        | 5   | 4W EB SLEEVE     | 41  | 4W FHUB          | 47  | 4W FHUB FB             |
| 4 1/2         | 4 1/2W EB FF       | 244 | 4 1/2W EB FF FB        | 4 1/2 EB FS                    | 7   | 4 1/2W EB SLEEVE | 53  | 4 1/2W FHUB      | 66  | 4 1/2W FHUB FB         |
| 5             | 5W EB FF           | 361 | 5W EB FF FB            | 5 EB FS                        | 9   | 5W EB SLEEVE     | 80  | 5W FHUB          | 96  | 5W FHUB FB             |
| 5 1/2         | 5 1/2W EB FF       | 422 | 5 1/2W EB FF FB        | 5 1/2 EB FS                    | 14  | 5 1/2W EB SLEEVE | 89  | 5 1/2W FHUB      | 115 | 5 1/2W FHUB FB         |
| 6             | 6W EB FF           | 494 | 6W EB FF FB            | 6 EB FS                        | 14  | 6W EB SLEEVE     | 100 | 6W FHUB          | 140 | 6W FHUB FB             |
| 7             | 7W EB FF           | 822 | 7W EB FF FB            | 7 EB FS                        | 22  | 7W EB SLEEVE     | 160 | 7W FHUB          | 240 | 7W FHUB FB             |

① All finish bores and keyways per AGMA/ANSI 9002 (Imperial) and AGMA/ANSI 9112 (Metric). Clearance fit bores on request and include one setscrew over keyway.

**Coupling Type SB (Shrouded Bolts) Part Numbers**

| Coupling Size | Full Flex Coupling |     |                        | Fastener Set (Includes Gasket) |     | Sleeve           |     | Flex Hub         |     |                        |
|---------------|--------------------|-----|------------------------|--------------------------------|-----|------------------|-----|------------------|-----|------------------------|
|               | No Bore Part No.   | Wt. | Finish Bore ① Part No. | Part No.                       | Wt. | Part No.         | Wt. | No Bore Part No. | Wt. | Finish Bore ① Part No. |
| 1             | 1W SB FF           | 10  | 1W SB FF FB            | 1 SB FS                        | 1   | 1W SB SLEEVE     | 2   | 1W FHUB          | 3   | 1W FHUB FB             |
| 1 1/2         | 1 1/2W SB FF       | 19  | 1 1/2W SB FF FB        | 1 1/2 SB FS                    | 1   | 1 1/2W SB SLEEVE | 6   | 1 1/2W FHUB      | 3   | 1 1/2W FHUB FB         |
| 2             | 2W SB FF           | 30  | 2W SB FF FB            | 2 SB FS                        | 1   | 2W SB SLEEVE     | 8   | 2W FHUB          | 7   | 2W FHUB FB             |
| 2 1/2         | 2 1/2W SB FF       | 52  | 2 1/2W SB FF FB        | 2 1/2 SB FS                    | 2   | 2 1/2W SB SLEEVE | 13  | 2 1/2W FHUB      | 12  | 2 1/2W FHUB FB         |
| 3             | 3W SB FF           | 76  | 3W SB FF FB            | 3 SB FS                        | 2   | 3W SB SLEEVE     | 15  | 3W FHUB          | 20  | 3W FHUB FB             |
| 3 1/2         | 3 1/2W SB FF       | 117 | 3 1/2W SB FF FB        | 3 1/2 SB FS                    | 4   | 3 1/2W SB SLEEVE | 26  | 3 1/2W FHUB      | 28  | 3 1/2W FHUB FB         |
| 4             | 4W SB FF           | 180 | 4W SB FF FB            | 4 SB FS                        | 4   | 4W SB SLEEVE     | 37  | 4W FHUB          | 47  | 4W FHUB FB             |
| 4 1/2         | 4 1/2W SB FF       | 244 | 4 1/2W SB FF FB        | 4 1/2 SB FS                    | 4   | 4 1/2W SB SLEEVE | 50  | 4 1/2W FHUB      | 66  | 4 1/2W FHUB FB         |
| 5             | 5W SB FF           | 361 | 5W SB FF FB            | 5 SB FS                        | 7   | 5W SB SLEEVE     | 72  | 5W FHUB          | 96  | 5W FHUB FB             |

① All finish bores and keyways per AGMA/ANSI 9112 commercial standard tolerances with interference fit bores. Clearance fit bores are available on request and include one setscrew over keyway.

# KOP-FLEX®

## WALDRON® Gear Couplings Spacer Coupling Size 1 1/2 - 7

### Standard Spacer Couplings

Full-flex spacer couplings are used for 4 bearing installations with extended shaft separations. Tabulated below are spacers for industry standard shaft separations,  $C_L$ .

Type EB exposed bolt spacers and Type SB shrouded bolt spacers for standard shaft separations are normally in stock. Other lengths are manufactured to order.

Spacer length,  $L$ , is calculated by subtracting the standard full-flex, close coupled gap,  $C$ , from the shaft separation,  $C_L$ .

$$L = C_L - C \quad (\text{full-flex, close coupled})$$

### Spacer Part Numbers

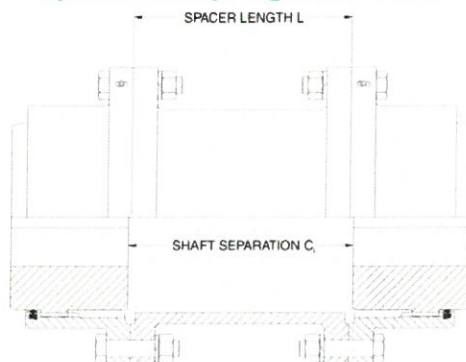
Stock Spacer Part Numbers  
Type SB (Shrouded Bolts)

| Coupling Size | Shaft Separation |     |                 |     |                 |     |                 |     |
|---------------|------------------|-----|-----------------|-----|-----------------|-----|-----------------|-----|
|               | 3 1/2"           |     | 4 3/8"          |     | 5"              |     | 7"              |     |
|               | Part No.         | Wt. | Part No.        | Wt. | Part No.        | Wt. | Part No.        | Wt. |
| 1 1/2         | 1 1/2 SB SPR350  | 6   | 1 1/2 SB SPR438 | 7   | 1 1/2 SB SPR500 | 8   | 2 SB SPR700     | 12  |
| 2             | 2 SB SPR350      | 8   | 2 SB SPR438     | 9   | 2 SB SPR500     | 10  | 2 1/2 SB SPR700 | 17  |
| 2 1/2         |                  |     |                 |     | 2 1/2 SB SPR500 | 14  | 3 SB SPR700     | 20  |
| 3             |                  |     |                 |     | 3 SB SPR500     | 17  |                 |     |
| 3 1/2         |                  |     |                 |     | 3 1/2 SB SPR500 | 27  |                 |     |

Note: Spacer part number references the shaft separation, not the actual length of the spacer.

Stock Spacer Part Numbers  
Type EB (Exposed Bolts)

| Coupling Size | Shaft Separation |     |                 |     |
|---------------|------------------|-----|-----------------|-----|
|               | 5"               |     | 7"              |     |
|               | Part No.         | Wt. | Part No.        | Wt. |
| 1 1/2         | 1 1/2 EB SPR500  | 8   | 2 EB SPR700     | 12  |
| 2             | 2 EB SPR500      | 10  | 2 1/2 EB SPR500 | 14  |
| 2 1/2         | 2 1/2 EB SPR500  | 14  | 3 EB SPR500     | 17  |
| 3             | 3 EB SPR500      | 17  |                 |     |



### LEF Spacer Couplings

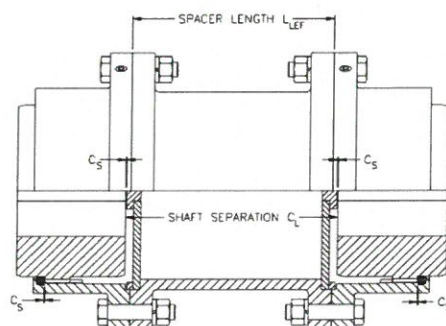
Limited End Float (LEF) spacer couplings are used for sleeve bearing motor applications with extended shaft separations. LEF spacers are supplied with steel LEF plates and pilot rings.

Spacer length,  $L_{LEF}$ , is calculated by subtracting the LEF full-flex, close coupled gap,  $C_{LEF}$ , from the shaft separation,  $C_L$ .

$$L_{LEF} = C_L - C_{LEF} \quad (\text{full-flex, close coupled})$$

LEF spacers are shorter than standard spacers for a given shaft separation, and are manufactured to order.

Note: Spacer part number references the shaft separation, not the actual length of the spacer.



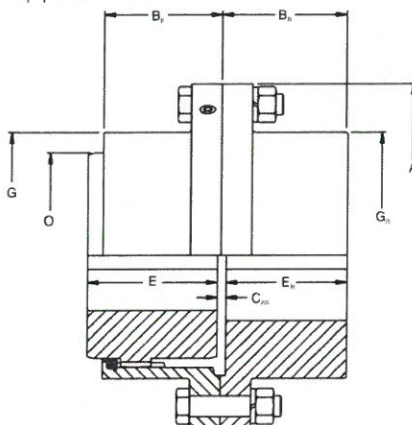
### Coupling Greases

KOP-FLEX offers greases specifically designed for use in coupling applications. For proper lubrication and long service life, use KSG Standard Coupling Grease, or KHP High Performance Coupling Grease. See pages 170-172 for detailed specifications.



**KOP-FLEX®****WALDRON® Gear Couplings****Flex Rigid and Floating Shaft Couplings  
Size 1-7**

When driving and driven shafts are widely separated, an unsupported or floating shaft is used to span the gap. The two couplings required at each end of that shaft consist of one half of a standard coupling bolted to a Rigid Hub, each unit called a Flex-Rigid Coupling. Usually, the rigid hubs are mounted on the driving and driven shafts so that the flex halves on the floating shaft may be replaced without disturbing the connected equipment.

**Coupling Type EB (Exposed Bolts) Part Numbers**

| Coupling Size | Flex Rigid Coupling |     |                      | Rigid Hub        |     |                      |
|---------------|---------------------|-----|----------------------|------------------|-----|----------------------|
|               | No Bore Part No.    | Wt. | Finish Bore Part No. | No Bore Part No. | Wt. | Finish Bore Part No. |
| 1             | 1W EB FR            | 10  | 1W EB FR FB          | 1 EB RHUB        | 5   | 1 EB RHUB FB         |
| 1 1/2         | 1 1/2W EB FR        | 19  | 1 1/2W EB FR FB      | 1 1/2 EB RHUB    | 9   | 1 1/2 EB RHUB FB     |
| 2             | 2W EB FR            | 31  | 2W EB FR FB          | 2 EB RHUB        | 15  | 2 EB RHUB FB         |
| 2 1/2         | 2 1/2W EB FR        | 55  | 2 1/2W EB FR FB      | 2 1/2 EB RHUB    | 27  | 2 1/2 EB RHUB FB     |
| 3             | 3W EB FR            | 83  | 3W EB FR FB          | 3 EB RHUB        | 40  | 3 EB RHUB FB         |
| 3 1/2         | 3 1/2W EB FR        | 126 | 3 1/2W EB FR FB      | 3 1/2 EB RHUB    | 65  | 3 1/2 EB RHUB FB     |
| 4             | 4W EB FR            | 184 | 4W EB FR FB          | 4 EB RHUB        | 90  | 4 EB RHUB FB         |
| 4 1/2         | 4 1/2W EB FR        | 252 | 4 1/2W EB FR FB      | 4 1/2 EB RHUB    | 124 | 4 1/2 EB RHUB FB     |
| 5             | 5W EB FR            | 371 | 5W EB FR FB          | 5 EB RHUB        | 119 | 5 EB RHUB FB         |
| 5 1/2         | 5 1/2W EB FR        | 418 | 5 1/2W EB FR FB      | 5 1/2 EB RHUB    | 200 | 5 1/2 EB RHUB FB     |
| 6             | 6W EB FR            | 504 | 6W EB FR FB          | 6 EB RHUB        | 250 | 6 EB RHUB FB         |
| 7             | 7W EB FR            | 792 | 7W EB FR FB          | 7 EB RHUB        | 370 | 7 EB RHUB FB         |

**Coupling Type SB (Shrouded Bolts) Part Numbers**

| Coupling Size | Flex Rigid Coupling |     |                      | Rigid Hub        |     |                      |
|---------------|---------------------|-----|----------------------|------------------|-----|----------------------|
|               | No Bore Part No.    | Wt. | Finish Bore Part No. | No Bore Part No. | Wt. | Finish Bore Part No. |
| 1             | 1W SB FR            | 10  | 1W SB FR FB          | 1 SB RHUB        | 5   | 1 SB RHUB FB         |
| 1 1/2         | 1 1/2W SB FR        | 19  | 1 1/2W SB FR FB      | 1 1/2 SB RHUB    | 9   | 1 1/2 SB RHUB FB     |
| 2             | 2W SB FR            | 31  | 2W SB FR FB          | 2 SB RHUB        | 15  | 2 SB RHUB FB         |
| 2 1/2         | 2 1/2W SB FR        | 55  | 2 1/2W SB FR FB      | 2 1/2 SB RHUB    | 27  | 2 1/2 SB RHUB FB     |
| 3             | 3W SB FR            | 83  | 3W SB FR FB          | 3 SB RHUB        | 40  | 3 SB RHUB FB         |
| 3 1/2         | 3 1/2W SB FR        | 126 | 3 1/2W SB FR FB      | 3 1/2 SB RHUB    | 65  | 3 1/2 SB RHUB FB     |
| 4             | 4W SB FR            | 184 | 4W SB FR FB          | 4 SB RHUB        | 90  | 4 SB RHUB FB         |
| 4 1/2         | 4 1/2W SB FR        | 252 | 4 1/2W SB FR FB      | 4 1/2 SB RHUB    | 124 | 4 1/2 SB RHUB FB     |
| 5             | 5W SB FR            | 371 | 5W SB FR FB          | 5 SB RHUB        | 119 | 5 SB RHUB FB         |

① All finish bores and keyways per AGMA/ANSI 9002 (Imperial) and AGMA/ANSI 9112 (Metric).  
② Rigid hubs are furnished less fasteners.

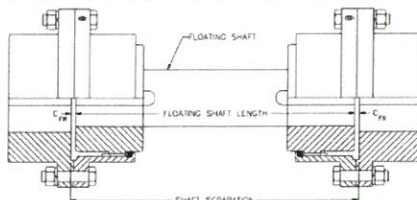
**Flex-Rigid Coupling Data**

| Coupling Size | Maximum Bore with Standard Keyway |         | Rating HP / 100 RPM | Torque Rating (lb.-in.) | Peak Torque Rating (lb.-in.) | Maximum Speed (RPM) ② | Dimensions |                |                |                   |         |                |                |
|---------------|-----------------------------------|---------|---------------------|-------------------------|------------------------------|-----------------------|------------|----------------|----------------|-------------------|---------|----------------|----------------|
|               | Flex                              | Rigid   |                     |                         |                              |                       | A          | B <sub>1</sub> | B <sub>2</sub> | C <sub>FR</sub> ① | E       | E <sub>1</sub> | G <sub>1</sub> |
| 1             | 1 5/8                             | 2 1/4   | 10                  | 6300                    | 12600                        | 10000                 | 4 9/16     | 1 19/32        | 1 21/32        | 5/32              | 1 11/16 | 1 9/16         | 3              |
| 1 1/2         | 2 3/16                            | 2 11/16 | 24                  | 15100                   | 30200                        | 7400                  | 6          | 1 15/16        | 1 15/16        | 5/32              | 2 1/16  | 1 27/32        | 3 13/16        |
| 2             | 2 3/4                             | 3 3/8   | 50                  | 31500                   | 63000                        | 5900                  | 7          | 2 5/16         | 2 3/8          | 5/32              | 2 7/16  | 2 9/32         | 4 13/16        |
| 2 1/2         | 3 1/4                             | 4       | 90                  | 56700                   | 113400                       | 5000                  | 8 3/8      | 2 27/32        | 3              | 3/16              | 3 1/32  | 2 29/32        | 5 3/4          |
| 3             | 4                                 | 4 3/4   | 150                 | 94500                   | 189000                       | 4300                  | 9 7/16     | 3 9/32         | 3 9/16         | 3/16              | 3 19/32 | 3 15/32        | 6 3/4          |
| 3 1/2         | 4 3/4                             | 5 1/2   | 230                 | 145000                  | 290000                       | 3900                  | 11         | 3 13/16        | 4 1/8          | 7/32              | 4 3/16  | 4 1/32         | 7 3/4          |
| 4             | 5 3/8                             | 6 3/8   | 350                 | 221000                  | 442000                       | 3500                  | 12 1/2     | 4 5/16         | 4 5/8          | 5/16              | 4 3/4   | 4 7/16         | 9              |
| 4 1/2         | 6                                 | 7 1/4   | 480                 | 300000                  | 600000                       | 3200                  | 13 5/8     | 4 13/16        | 5 1/4          | 11/32             | 5 3/8   | 5 1/16         | 10 1/8         |
| 5             | 6 3/4                             | 8 1/2   | 650                 | 410000                  | 820000                       | 2900                  | 15 5/16    | 5 13/32        | 5 7/8          | 11/32             | 6 1/8   | 5 11/16        | 11 3/8         |
| 5 1/2         | 7 1/2                             | 8       | 850                 | 536000                  | 1072000                      | 2700                  | 16 3/4     | 5 13/16        | 7 5/32         | 11/32             | 6 5/8   | 6 31/32        | 10 3/4         |
| 6*            | 8 1/4                             | 8 3/4   | 1100                | 693000                  | 1386000                      | 2500                  | 18         | 6 5/8          | 7 21/32        | 11/32             | 7 3/8   | 7 15/32        | 11 1/2         |
| 7*            | 9 1/4                             | 10      | 1600                | 1010000                 | 2020000                      | 2200                  | 20 3/4     | 7 3/8          | 9              | 7/16              | 8 11/16 | 8 3/4          | 13 3/8         |

\* Sizes 5 1/2, 6 and 7 are only available with exposed bolts. Type EB exposed bolts are standard.

① Floating shaft length is equal to the shaft separation minus 2 times the CFR dimension.

② Max. speed is based on flange stress limits and does not consider lateral critical speed considerations for floating shaft applications.

**FLOATING SHAFT ASSEMBLY**

**Ordering Instructions:** When ordering floating shaft couplings, be sure to include hp and rpm, shaft separation, and equipment shaft sizes. Applications with very large shaft separations and/or high speeds may require tubular floating shafts due to lateral critical speed concerns.

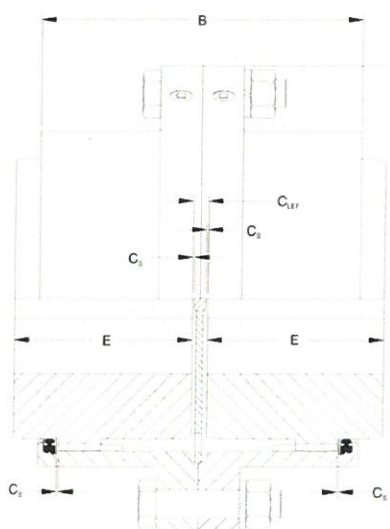
**Important:** Care must be exercised in proper selection of any shaft coupling. The Users must assure themselves that the design of the shaft to coupling hub connection is adequate for the duty intended.

**KOP-FLEX®****WALDRON® Gear Couplings****Limited End Float Coupling Size 1-7**

For sleeve bearing motor applications, a WALDRON® standard full flex coupling is supplied with an LEF disc to limit the axial float of the motor rotor, and protect the motor bearings at start-up and shut-down. The hub separation,  $C_{LEF}$ , is larger than for a standard full flex, and the LEF disc is placed between the hubs at assembly, limiting the float of the motor rotor to the total LEF value shown.

The equipment should be installed with the proper hub separation,  $C_{LEF}$ , when the motor rotor is located on magnetic center.

The LEF disc part numbers are listed below. See page 162 for the standard full flex part numbers.



| Coupling Size | Total LEF (in.) | Dimensions |          |                |                             |         | LEF Disc <sup>①</sup> |     |
|---------------|-----------------|------------|----------|----------------|-----------------------------|---------|-----------------------|-----|
|               |                 | A          | B        | C <sub>s</sub> | C <sub>LEF</sub> (Hub Sep.) | E       | Part No.              | Wt. |
| 1             | 1/8             | 4 9/16     | 3 3/16   | 1/32           | 3/16                        | 1 11/16 | 1W LEFD               | 1   |
| 1 1/2         | 1/8             | 6          | 3 7/8    | 1/32           | 3/16                        | 2 1/16  | 1 1/2W LEFD           | 1   |
| 2             | 1/8             | 7          | 4 5/8    | 1/32           | 3/16                        | 2 7/16  | 2W LEFD               | 1   |
| 2 1/2         | 3/16            | 8 3/8      | 5 11/16  | 3/64           | 9/32                        | 3 1/32  | 2 1/2W LEFD           | 1   |
| 3             | 3/16            | 9 7/16     | 6 9/16   | 3/64           | 9/32                        | 3 19/32 | 3W LEFD               | 1   |
| 3 1/2         | 3/16            | 11         | 7 5/8    | 3/64           | 13/32                       | 4 3/16  | 3 1/2W LEFD           | 2   |
| 4             | 3/16            | 12 1/2     | 8 5/8    | 3/64           | 13/32                       | 4 3/4   | 4W LEFD               | 2   |
| 4 1/2         | 3/16            | 13 5/8     | 9 5/8    | 3/64           | 17/32                       | 5 3/8   | 4 1/2W LEFD           | 2   |
| 5             | 3/16            | 15 5/16    | 10 13/16 | 3/64           | 17/32                       | 6 1/8   | 5W LEFD               | 2   |
| 5 1/2*        | 3/16            | 16 3/4     | 11 5/8   | 3/64           | 17/32                       | 6 5/8   | 5 1/2W LEFD           | 2   |
| 6*            | 3/16            | 18         | 13 1/4   | 3/64           | 19/32                       | 7 3/8   | 6W LEFD               | 2   |
| 7*            | 3/16            | 20 3/4     | 14 3/4   | 3/64           | 25/32                       | 8 11/16 | 7W LEFD               | 2   |

\* Sizes 5 1/2, 6 and 7 are only available with exposed bolts. Type EB exposed bolts are standard.

① LEF Discs are used only in close coupled applications. One disc is required per coupling.

Note: For ratings and max. bores refer to page 162.

**Coupling Greases**

KOP-FLEX offers greases specifically designed for use in coupling applications. For proper lubrication and long service life, use KSG Standard Coupling Grease, or KHP High Performance Coupling Grease. See pages 170-172 for detailed specifications.

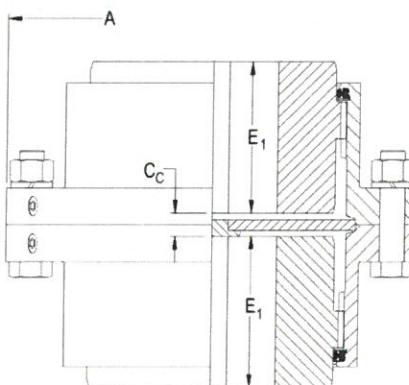
For vertical applications, a standard full flex coupling is supplied with special vertical hubs, a vertical plate, and standard flange fasteners. The vertical plate is installed with button down, and is used to support the assembled sleeves.

| *Coupling Size | Dimensions |                | Vertical Plate |           |     | Vertical Hub |     |
|----------------|------------|----------------|----------------|-----------|-----|--------------|-----|
|                | A          | C <sub>C</sub> | E <sub>1</sub> | Part No.  | Wt. | Part No.     | Wt. |
| 1              | 4 9/16     | 3/8            | 1 9/16         | 1W VP     | 1   | 1W VHUB      | 3   |
| 1 1/2          | 6          | 3/8            | 1 15/16        | 1 1/2W VP | 1   | 1 1/2W VHUB  | 3   |
| 2              | 7          | 3/8            | 2 5/16         | 2W VP     | 2   | 2W VHUB      | 7   |
| 2 1/2          | 8 3/8      | 3/8            | 2 15/16        | 2 1/2W VP | 2   | 2 1/2W VHUB  | 12  |
| 3              | 9 7/16     | 3/8            | 3 1/2          | 3W VP     | 3   | 3W VHUB      | 20  |
| 3 1/2          | 11         | 3/8            | 4 1/8          | 3 1/2W VP | 4   | 3 1/2W VHUB  | 28  |
| 4              | 12 1/2     | 3/4            | 4 1/2          | 4W VP     | 7   | 4W VHUB      | 47  |
| 4 1/2          | 13 5/8     | 3/4            | 5 5/32         | 4 1/2W VP | 10  | 4 1/2W VHUB  | 66  |
| 5              | 15 5/16    | 3/4            | 5 29/32        | 5W VP     | 12  | 5W VHUB      | 96  |
| 5 1/2          | 16 3/4     | 3/4            | 6 13/32        | 5 1/2W VP | 15  | 5 1/2W VHUB  | 115 |
| 6              | 18         | 3/4            | 7 5/32         | 6W VP     | 19  | 6W VHUB      | 140 |
| 7              | 20 3/4     | 7/8            | 8 1/2          | 7W VP     | 25  | 7W VHUB      | 240 |

\* Exposed bolts are standard for all sizes.

Shrouded bolts are available for sizes 1 through 5.

Note: For ratings and max. bores refer to page 162.

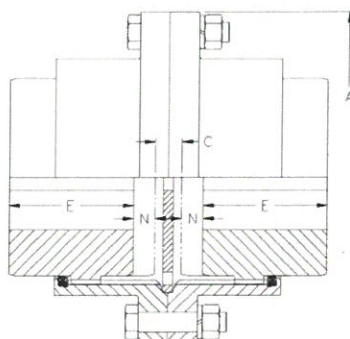
**Vertical Coupling Size 1-7**



**KOP-FLEX®****WALDRON® Gear Couplings****Short Slide Coupling Size 1-7**

To provide additional axial movement a short slide coupling can be assembled using slide sleeves with standard hubs reversed. A center plate is provided as well. The plate is equipped with lube holes so both halves of the coupling will be adequately lubricated.

The center plate part numbers are listed below. See page 162 for the standard hub and fastener set part numbers.



**Special Order Only.**  
Consider the FAST'S® or Series H Slide Couplings for standard applications.

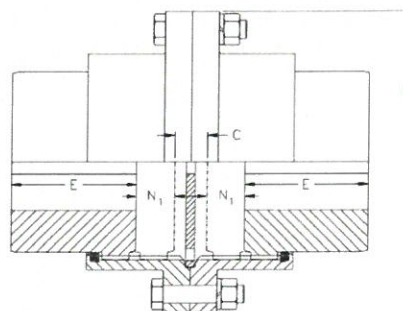
| Coupling Size | Total Slide | Dimensions |                  |         |         | Center Plate |    |
|---------------|-------------|------------|------------------|---------|---------|--------------|----|
|               |             | A          | C <sub>MIN</sub> | N       | E       | Part No.     | WL |
| 1             | 5/16        | 4 9/16     | 5/16             | 5/32    | 1 11/16 | 1W SP        | 1  |
| 1 1/2         | 11/16       | 6          | 5/16             | 11/32   | 2 1/16  | 1 1/2W SP    | 1  |
| 2             | 1 3/16      | 7          | 5/16             | 19/32   | 2 7/16  | 2W SP        | 1  |
| 2 1/2         | 1 1/4       | 8 3/8      | 3/8              | 5/8     | 3 1/32  | 2 1/2W SP    | 1  |
| 3             | 1 1/2       | 9 7/16     | 3/8              | 3/4     | 3 19/32 | 3W SP        | 1  |
| 3 1/2         | 1 15/16     | 11         | 7/16             | 31/32   | 4 3/16  | 3 1/2W SP    | 2  |
| 4             | 2           | 12 1/2     | 5/8              | 1       | 4 3/4   | 4W SP        | 2  |
| 4 1/2         | 2 1/4       | 13 5/8     | 11/16            | 1 1/8   | 5 3/8   | 4 1/2W SP    | 2  |
| 5             | 2 3/8       | 15 5/16    | 11/16            | 1 3/16  | 6 1/8   | 5W SP        | 2  |
| 5 1/2         | 2 3/4       | 16 3/4     | 11/16            | 1 3/8   | 6 5/8   | 5 1/2W SP    | 2  |
| 6             | 3 5/8       | 18         | 11/16            | 1 13/16 | 7 3/8   | 6W SP        | 2  |
| 7             | 3 1/8       | 20 3/4     | 7/8              | 1 9/16  | 8 11/16 | 7W SP        | 2  |

**Medium Slide Coupling Size 1-7**

For even greater axial movement a medium slide coupling can be assembled using slide sleeves and center plates as above. Medium slide hubs are used to provide a longer slide length.

The medium slide hub part numbers are listed at the left. See above for slide sleeve and stop plate part numbers and page 162 for standard fastener set part numbers.

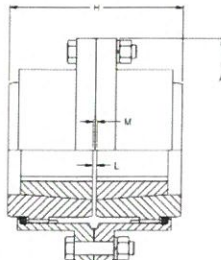
| Coupling Size | Total Slide | Dimensions |                  |         |         |
|---------------|-------------|------------|------------------|---------|---------|
|               |             | A          | C <sub>MIN</sub> | N       | E       |
| 1             | 1           | 4 9/16     | 5/16             | 1/2     | 1 19/32 |
| 1 1/2         | 1 7/16      | 6          | 5/16             | 23/32   | 1 31/32 |
| 2             | 1 15/16     | 7          | 5/16             | 31/32   | 2 11/32 |
| 2 1/2         | 2 1/2       | 8 3/8      | 3/8              | 1 1/4   | 2 15/16 |
| 3             | 3           | 9 7/16     | 3/8              | 1 1/2   | 3 3/8   |
| 3 1/2         | 3 11/16     | 11         | 7/16             | 1 27/32 | 4       |
| 4             | 4 1/16      | 12 1/2     | 5/8              | 2 1/32  | 4 7/16  |
| 4 1/2         | 4 11/16     | 13 5/8     | 11/16            | 2 11/32 | 5       |
| 5             | 5 5/16      | 15 5/16    | 11/16            | 2 21/32 | 5 5/8   |
| 5 1/2         | 5 7/8       | 16 3/4     | 11/16            | 2 15/16 | 6       |
| 6             | 6 13/16     | 18         | 11/16            | 3 13/32 | 6 7/8   |
| 7             | 7 5/8       | 20 3/4     | 7/8              | 3 13/16 | 7 5/8   |



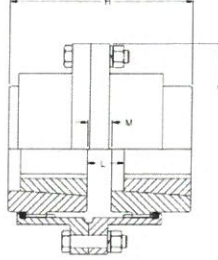
**Special Order Only.**  
Consider the FAST'S® or Series H Slide Couplings for standard applications.

**Coupling Greases**

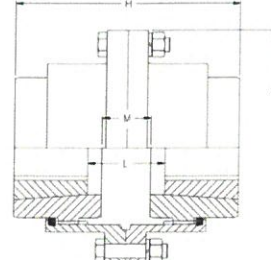
KOP-FLEX offers greases specifically designed for use in coupling applications. For proper lubrication and long service life, use KSG Standard Coupling Grease, or KHP High Performance Coupling Grease. See pages 170-172 for detailed specifications.

**KOP-FLEX®****WALDRON® Gear Couplings**  
**TAPER-LOCK\* Full Flex and Flex Rigid Couplings**

INBOARD



INBOARD, OUTBOARD



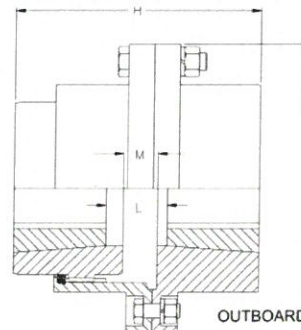
OUTBOARD

**Full-Flex Dimensions**

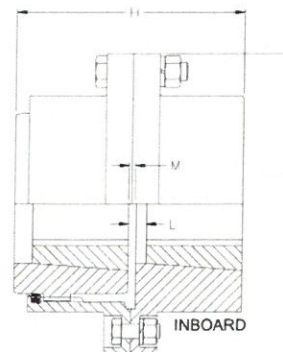
| Coupling Size | Bushing Bore Range |       | Rating HP / 100 RPM | Maximum Speed (RPM) | Dimensions |         |      |      |                   |        |        |          |         |       |
|---------------|--------------------|-------|---------------------|---------------------|------------|---------|------|------|-------------------|--------|--------|----------|---------|-------|
|               |                    |       |                     |                     | A          | Inboard |      |      | Inboard, Outboard |        |        | Outboard |         |       |
|               | Min.               | Max.  |                     |                     |            | H       | L    | M    | H                 | L      | M      | H        | L       | M     |
| 1             | 1/2                | 1 1/4 | 4                   | 6900                | 4 9/16     | 3 1/2   | 1/8  | 1/8  | 3 3/4             | 9/16   | 3/8    | 4        | 1       | 5/8   |
| 1 1/2         | 1/2                | 1 5/8 | 8                   | 5660                | 6          | 4 1/4   | 1/8  | 1/8  | 4 11/16           | 1 1/8  | 9/16   | 5 1/8    | 2 1/8   | 1     |
| 2             | 1/2                | 2     | 15                  | 4850                | 7          | 5       | 1/8  | 1/8  | 5 11/16           | 2      | 13/16  | 6 3/8    | 3 7/8   | 1 1/2 |
| 2 1/2         | 3/4                | 2 1/2 | 29                  | 4100                | 8 3/8      | 6 1/4   | 3/16 | 3/16 | 6 31/32           | 1 7/16 | 29/32  | 7 11/16  | 2 11/16 | 1 5/8 |
| 3             | 15/16              | 3     | 50                  | 3650                | 9 7/16     | 7 3/8   | 3/16 | 3/16 | 8 7/32            | 1 5/8  | 1 1/32 | 9 1/16   | 3 1/16  | 1 7/8 |
| 3 1/2         | 1 3/16             | 3 1/2 | 80                  | 3180                | 11         | 8 5/8   | 1/4  | 1/4  | 9 11/16           | 2 1/16 | 1 5/16 | 10 3/4   | 3 7/8   | 2 3/8 |
| 4             | 1 7/16             | 4     | 120                 | 2710                | 12 1/2     | 9 3/4   | 1/4  | 1/4  | 10 15/16          | 2 3/16 | 1 7/16 | 12 1/8   | 4 1/8   | 2 5/8 |

**Flex-Rigid Dimensions**

| Coupling Size | Dimensions |         |        |         |        |      |
|---------------|------------|---------|--------|---------|--------|------|
|               | Outboard   |         |        | Inboard |        |      |
|               | H          | L       | M      | H       | L      | M    |
| 1             | 3 21/32    | 21/32   | 13/32  | 3 13/32 | 7/32   | 5/32 |
| 1 1/2         | 4 1/2      | 1 1/2   | 19/32  | 4 1/16  | 1/2    | 5/32 |
| 2             | 5 9/16     | 3 1/16  | 27/32  | 4 7/8   | 1 3/16 | 5/32 |
| 2 1/2         | 6 27/32    | 1 27/32 | 29/32  | 6 1/8   | 19/32  | 3/16 |
| 3             | 8 3/32     | 2 3/32  | 1 1/32 | 7 1/4   | 21/32  | 3/16 |
| 3 1/2         | 9 1/2      | 2 1/2   | 1 9/32 | 8 7/16  | 3/4    | 7/32 |
| 4             | 10 11/16   | 2 11/16 | 1 1/2  | 9 1/2   | 3/4    | 5/16 |



OUTBOARD



INBOARD

**Part Numbers**

| Coupling Size | Flex Hubs          |     | Rigid Hubs ②          |     |
|---------------|--------------------|-----|-----------------------|-----|
|               | Part No. ③         | Wt. | Part No.              | Wt. |
| 1             | 1W FHUBTLX1215     | 2   | 1W SB RHUBTLX1215     | 3   |
| 1 1/2         | 1 1/2W FHUBTLX1615 | 2   | 1 1/2W SB RHUBTLX1615 | 7   |
| 2             | 2W FHUBTLX2012     | 6   | 2W SB RHUBTLX2012     | 10  |
| 2 1/2         | 2 1/2W FHUBTLX2525 | 10  | 2 1/2W SB RHUBTLX2525 | 20  |
| 3             | 3W FHUBTLX3030     | 15  | 3W SB RHUBTLX3030     | 31  |
| 3 1/2         | 3 1/2W FHUBTLX3535 | 20  | 3 1/2W SB RHUBTLX3535 | 55  |
| 4             | 4W FHUBTLX4040     | 36  | 4W SB RHUBTLX4040     | 78  |

① See page 162 for part numbers of sleeves and fastener sets.

② Shrouded bolts are standard for Rigid Hubs bored for Taper-Lock\* bushings.

③ Bushing purchased separately, refer to Drive Components catalog.

\* Taper-Lock is believed to be the trademark and/or trade name of Reliance Electric Company, and is not owned or controlled by Regal Power Transmission Solutions.