

where the world turns for couplings

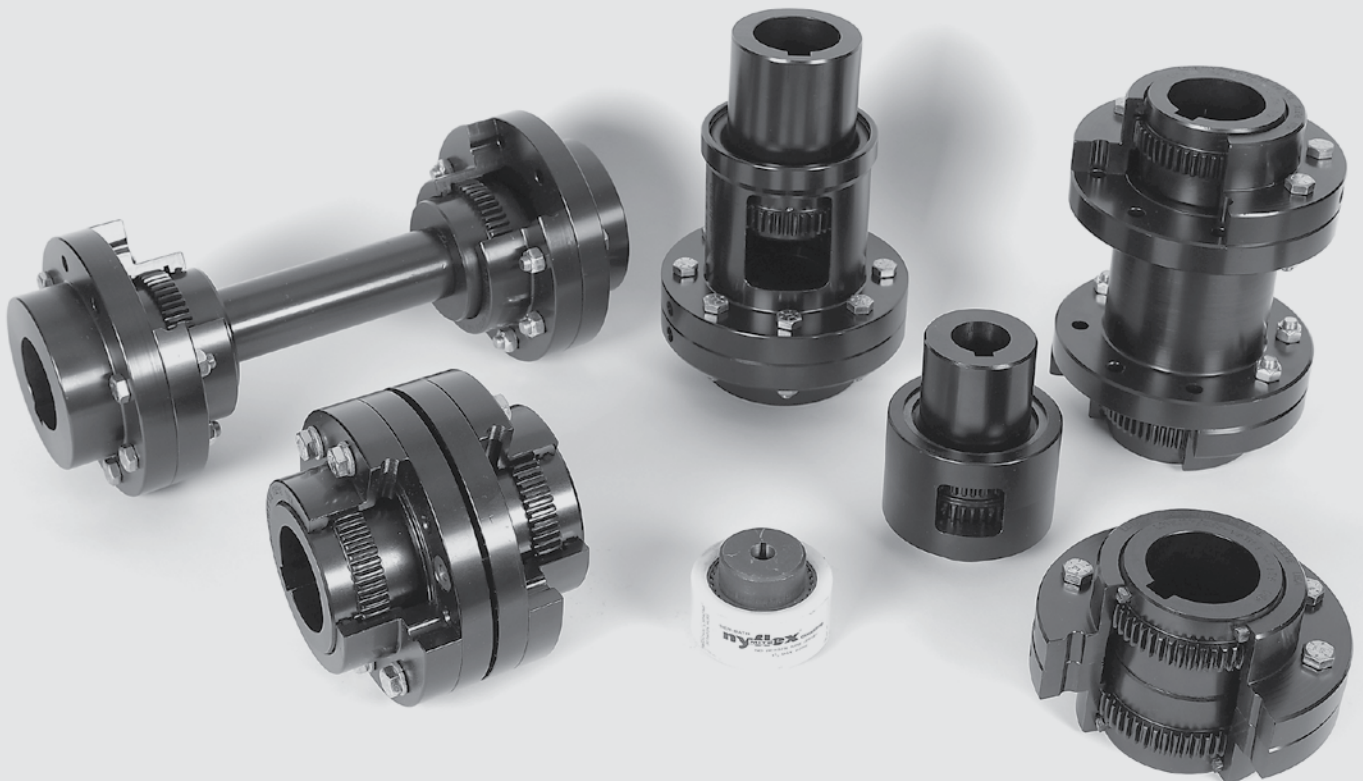
Lovejoy[®]

Gear

In This Section:

- C Types – Continuous Sleeve
- Nyflex[®] and Mite[®]
- Dentex[®]
- F Types – Flanged Sleeve
- R Types – Rigid Adjustable
- Coupling Grease

G





Gear

Safety Warning

When using Lovejoy products, you must follow these instructions and take the following precautions. Failure to do so may cause the power transmission product to break and parts to be thrown with sufficient force to cause severe injury or death.

Refer to this Lovejoy Catalog for proper selection, sizing, horsepower, torque range, and speed range of power transmission products, including elastomeric elements for couplings. Follow the installation instructions included with the product, and in the individual product catalogs for proper installation of power transmission products. Do not exceed catalog ratings.

During start up and operation of power transmission product, avoid sudden shock loads. Coupling assembly should operate quietly and smoothly. If coupling assembly vibrates or makes beating sound, shut down immediately, and recheck alignment. Shortly after initial operation and periodically thereafter, where applicable, inspect coupling assembly for: alignment, wear of elastomeric element, bolt torques, and flexing elements for signs of fatigue. Do not operate coupling assembly if alignment is improper, or where applicable, if elastomeric element is damaged, or worn to less than 75% of its original thickness.

Do not use any of these power transmission products for elevators, man lifts, or other devices that carry people. If the power transmission product fails, the lift device could fall resulting in severe injury or death.

For all power transmission products, you must install suitable guards in accordance with OSHA and American Society of Mechanical Engineers Standards. Do not start power transmission product before suitable guards are in place. Failure to properly guard these products may result in severe injury or death from personnel contacting moving parts or from parts being thrown from assembly in the event the power transmission product fails.

If you have any questions, contact the Lovejoy Engineering Department at 1-630-852-0500.



Gear

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Lovejoy / Sier-Bath Continuous Sleeve and Flanged Sleeve Couplings



Continuous Sleeve Series

Features

- Simple and inexpensive all steel type of gear coupling constructed with a single sleeve and 2 hubs
- Comparatively simple installation
- Precision cut 20° pressure angle gear teeth with minimum backlash
- Most standard configurations are available as stock items
- Angular misalignment of 1/2° per gear mesh (flex-plane)
- Sizes 7/8 through 12, to accommodate bore sizes up to and including 12.50 inches
- Interference fit (standard) and Clearance fit on bores are available
- Load Capacities range from 2,500 in-lbs up to 2,520,000 in-lbs
- Designs for applications requiring horizontal and vertical orientation, full-flex, flex-rigid, mill-motor, disengagement, sliding hubs, Shear Pin, floating shaft, and spacers
- Patented and tested BUNA N seal design with reinforced washers bonded to the inside edges which positively retain lubricant and seal the interior from outside contaminants
- Reinforced rubber seals with snap rings to hold in lubricant
- Two snap rings made of hardened spring steel which securely hold the coupling together, are easy to install or remove, yet withstand 100,000 pounds of end thrust
- Inch and Metric bore sizes available

Standard Types and Sizes

Lovejoy / Sier-Bath couplings are stocked in an assortment of configurations which include C and F standard hubs and sleeves, Mill Motor hubs, Vertical style, Floating Shaft, and Spacer designs. Lovejoy's superb engineering staff make it possible to support many additional coupling types such as the Brakedrum type, Sliding Hub type, Shear Pin type, Jordan type, and custom lengths for non standard shaft separations. Additional size ranges and designs to meet unusual application requirements can also be manufactured by Lovejoy to meet market demands. Material can range from standard steel to alloy steel and even stainless steel. The exceptional simplicity of the Lovejoy coupling design make this all possible.

Flanged Sleeve Series

Features

- Patented Vari-Crown® tooth form for long coupling life
- Precision cut 20° pressure angle gear teeth with minimum backlash
- All steel sleeves and hubs (stainless steel available)
- Designs for applications requiring horizontal and vertical orientation
- Most standard configurations are available as stock items
- Angular misalignment of 1-1/2° per gear mesh (flex-plane) up to size 5.5, 3/4° for sizes 6 and above
- Coupling sizes available through size 30 to accommodate bore sizes up to and including 44 inches
- Interference fit (standard) and Clearance fit on bores are available
- Load capacities range from 7,600 in-lbs up to 47,269,000 in-lbs
- Exposed bolts standard on all sizes, shrouded available by request up to size 6
- Standard bolts supplied by Lovejoy are treated to be corrosion resistant
- Flanged sleeve couplings are interchangeable with industry standards
- Piloted gear fit for higher speeds and less vibration
- Labyrinth all steel seal design in FL series
- Inch and Metric bore sizes available

Misalignment and End-Float Capability

The basic principle of Lovejoy / Sier-Bath C and F type couplings is similar to that of other conventional flexible gear couplings. While it is desirable to align shafts as accurately as possible, the purpose of any flexible coupling is to absorb probable angular, parallel, and axial (end-float) misalignment. Lovejoy/Sier-Bath couplings utilize a unique gear tooth geometry developed specifically to resolve issues with shaft misalignment and accommodate from 1/2° to 1-1/2° per gear mesh or flex plane. The hub teeth are fully crowned to provide for a larger contact area and lower stresses under misaligned conditions. The crowned tooth design also eliminates most of the end loading that occurs on straight gear teeth under misalignment.



WARNING

You must refer to page G-2 (Page 116) for Important Safety Instructions and Precautions for the selection and use of these products. Failure to follow the instructions and precautions can result in severe injury or death.



Overview

Lovejoy / Sier-Bath Nyflex® and Mite®

Lovejoy / Sier-Bath Nylon couplings are compact and require no lubrication. They operate over a wide temperature range at speeds up to 5,000 RPM and are effectively used in applications such as Motor/ Generator sets, pump sets, and many light to medium duty industrial coupling applications.

No lubricants are ever required, eliminating the need for seals. The resilient nature of the nylon material makes the contact of the hubs and sleeves almost frictionless. Since no lubrication is used, the coupling can readily be adapted to many applications including vertical and blind installations where the slip-together components offer easy inspection and adjustment.

Operationally, the coupling offers a minimum backlash solution that will operate in ambient temperature environments from -40° to 150° F. Nylon Sleeve couplings have precision molded sleeves and hubs with no bolts, pins, flanges, or protrusions to affect balance or safety. The nylon sleeve permits misalignment up to 5° for Dentex and Nyflex couplings and 3° for the Mite.

When completely assembled, the Mite coupling weighs less than 1lb and the Nyflex only 3.50 lbs. Weights for Dentex® couplings can be found on page G-30.

Features

- Molded nylon sleeve
- No internal frictional loss or heat buildup
- Minimum backlash
- High ambient temperature allowed
- Resistance to dirt, moisture, most chemicals
- Low maintenance (no seals, lubricant, retainers)
- High torque, low inertia
- Standard bores are available



2 Spirolox Retaining Rings

Sleeve is securely held on the hubs by these spring-steel retaining rings. They can be removed in seconds, yet they'll withstand 5,000 lbs endthrust.

Nylon Sleeve

Resilient, lightweight, abrasion and corrosion resistant nylon is accurately molded to mesh precisely with hubs. Their almost frictionless properties eliminate the need for lubrication.

2 Hubs

Sintered iron is standard in the Nyflex and Mite. Teeth are crowned to provide greater misalignment capacity and to prevent gouging of Nylon sleeve. Maintain 0.13 inch spacing between hubs.



Dentex® / Dentex® FL - The Flexible Coupling



Features

Compensation of axial, radial and angular misalignment of shafts through double cardanic action

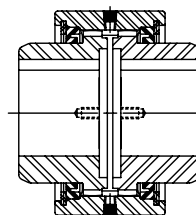
- Simple and easy assembly
- High electrical insulating property
- High thermal stability
- No maintenance



Lovejoy / Sier-Bath Continuous Sleeve Series Couplings

Standard C Type

- Basis for all types of Lovejoy / Sier-Bath Continuous Sleeve Couplings
- Low profile compact design is easy to implement
- Single (flex-rigid) or double (flex-flex) engagement

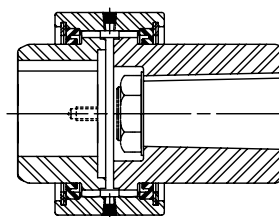


C Type
CFR Type

Section Pages G-16 and G-17

Mill Motor CMM Type

- Designed with longer universal hub on one end to accommodate straight or tapered shafts
- Standard hub and sleeve on the other end
- Universal hub bored to customer specifications
- Available with longer universal hubs on both ends

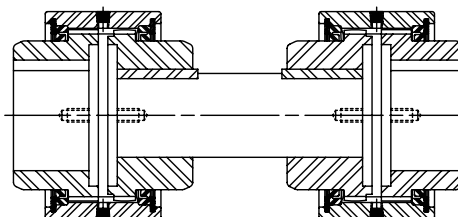


CMM Type

Section Pages G-18 and G-19

Floating Shaft CFS Type

- Two flex-rigid couplings connected by an intermediate shaft
- Increased capability to accommodate parallel misalignment
- Allows for longer shaft separations

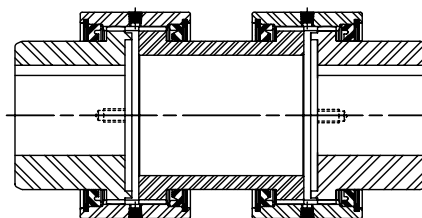


CFS Type

Section Pages G-20 and G-21

Spacer CSPCR Type

- Drop-out spacer design allows for ease of maintenance without disturbing the equipment mountings
- Spacer has rigid teeth to mate with sleeves on each coupling
- Increased capability to accommodate parallel misalignment
- Allows for longer shaft separations

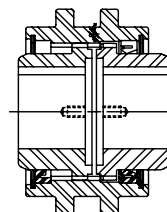


CSPCR Type

Section Pages G-22 and G-23

Cut-out Shifter CCS Type

- Designed for quick disengagement between the driver and driven equipment
- Special seal in disengagement hub to prevent undue friction when hub turns in sleeve
- Widely used on dual drive operations and equipment operating in tandem
- Available with pins to maintain sleeve in engaged and disengaged positions
- Shifting mechanisms available upon request

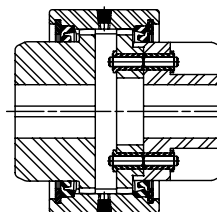


CCS Type

Section Pages G-24 and G-25

Shear Pin CSHP Type

- Designed to limit and protect against excessive torque or sudden shock loads
- Shear pins designed and manufactured for predetermined loads
- Pins are inserted in hardened bushings to minimize wear
- Easy to install new pins
- For Flanged FSHP Style see page G-8



CSHP Type

Section Pages G-26 and G-27

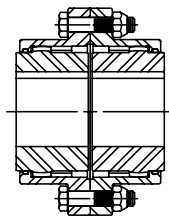
G



Lovejoy / Sier-Bath Flanged Sleeve Series Couplings

Standard F Type

- Double engagement ('F' flex-flex) for parallel and angular misalignment
- Single engagement ('FFR' flex-rigid) accommodates angular misalignment only and is ideal for floating shaft applications
- Industry standard flange bolt patterns
- FHD Type standard for sizes 10 through 30 (other sizes available upon request)

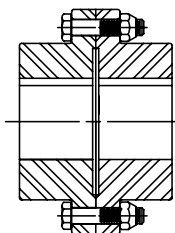


F Type
FFR Type
FHD Type

Section Pages G-34 and G-35
Section Pages G-36 and G-37
Section Pages G-40 and G-41

Rigid-Rigid FRR Type

- Designed for connecting two rigidly mounted shafts with no misalignment capability



FRR Type
FARR Type

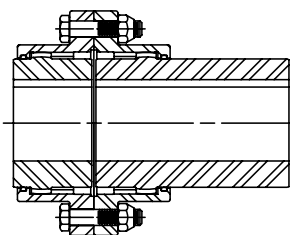
Section Pages G-58 and G-59
Contact Lovejoy Technical Support

Alloy Rigid-Rigid FARR Type

- Longer piloted hubs maintain rigidity and concentricity
- Used for cantilevered loads such as gear boxes that hang off conveyor systems
- Alloy steel available for greater strength (FARR)

Mill Motor FMM Type

- First hub designed with longer universal hub on one end to accommodate straight or tapered shafts
- Second hub bored to customer specifications
- Standard design accommodates AISE Mill Motor frame sizes
- Sleeves and second hub are standard

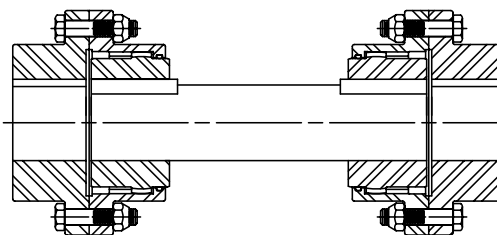


FMM Type

Section Pages G-46, G-47, G-48 and G-49

Floating Shaft FFS Type

- Two flex-rigid couplings connected by an intermediate shaft
- Increased ability to accommodate parallel misalignment
- Accommodate longer shaft separations
- Standard construction with rigid hubs on outboard (equipment) shafts, flex on inboard (floating) shaft
- Rigid hubs inboard (on floating shaft) available upon request

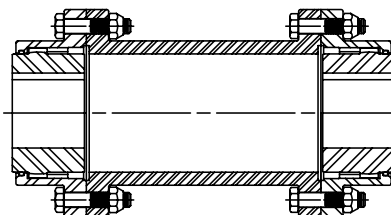


FFS Type
Section Pages G-38 and G-39

FHDFS Type
Section Pages G-44 and G-45

Spacer FSPCR Type

- Drop-out spacer design allows for ease of maintenance without disturbing the equipment mountings
- Lightweight construction reduces load on equipment bearings

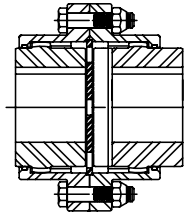


FSPCR Type
Section Pages G-54 and G-55



Slide FSL and FSLX Types

- Allows for a predetermined amount of axial slide
- Longer hubs and sleeves available to accommodate additional slide capacity
- Custom slide lengths available

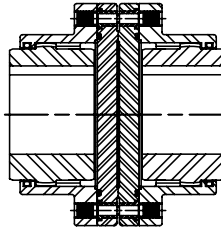


FSL Type
FSLX Type

Section pages G-50, G-51,
G-52 and G-53

Shear Pin FSHP and FSHPB Types

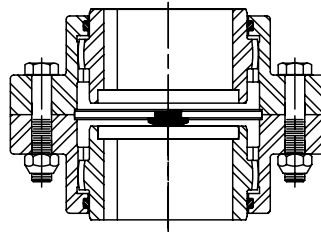
- Designed to limit and protect equipment against excessive torque or sudden shock loads
- Shear pins designed and manufactured to shear at predetermined torque loads
- Pins are inserted in hardened bushings to minimize wear
- Easy to install new pins
- Available with bearing support to maintain alignment after the pins shear



FSHP and FSHPB Type
Contact Lovejoy Technical Support

Standard Vertical FVX Type

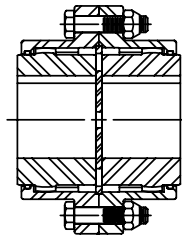
- Designed for use with vertical shafts
- Vertical kit prevents shafts from contacting each other
- Maintains ability to accommodate misalignment
- Available in vertical floating shaft design



FV and FVX Type
Contact Lovejoy Technical Support

Limited End Float FLEF Type

- Designed for equipment with sleeve bearings
- Designed to limit axial travel of the rotor in the motor and prevent the rotor from coming into contact and damaging sleeve bearings



FLEF Type Section pages G-56 and G-57

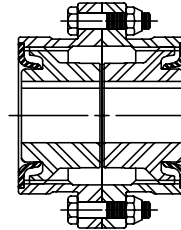


Lovejoy / Sier-Bath All Metal Labyrinth Seal Series Couplings

- All AISI 4140 Alloy Steel Design
- No rubber seals – metal labyrinth design
- Standard with exposed bolts
- Fully interchangeable with Industry standards
- Ideal for higher temperature applications

Standard FLA Type

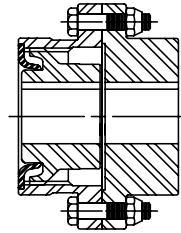
- Double engagement ('F' flex-flex) for parallel and angular misalignment
- Industry standard flange bolt patterns



FLA Type Section Pages G-60 and G-61

Single Engagement FLAFR Type

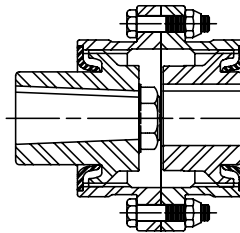
- Single engagement ('FFR' flex-rigid) accommodates angular misalignment only and is ideal for floating shaft applications



FLAFR Type Section Pages G-62 and G-63

Mill Motor FLAMM Type

- First hub designed with longer universal hub on one end to accommodate straight or tapered shafts
- Second hub bored to customer specifications
- Standard design accommodates AISE Mill Motor frame sizes
- Sleeves and second hub are standard

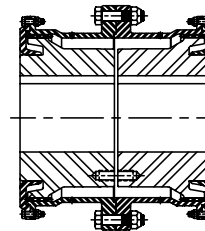


FLAMM Type Section Pages G-64 and G-65

Lovejoy Forged Steel Series

Standard FLHD Type

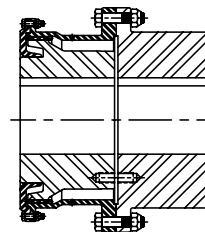
- Piloted Sleeves
- Exposed Bolts Standard
- Excellent for high torque at low speeds
- Bore range from 7.75 inches up to 44.88 inches
- Torque capacity up to 54,390,000 in-lbs
- Alloy Steel (AISI 4140) construction available



FLHD Type Contact Lovejoy Technical Support

Single Engagement FLHDFR Type

- Capacities the same as FHD
- Ideal for heavy duty floating shaft applications



FLHDFR Type Contact Lovejoy Technical Support

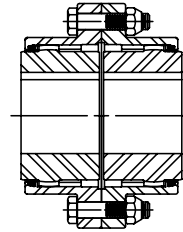


Lovejoy Alloy Steel Series Couplings

- All alloy steel construction
- Fully molded seals maintain lubricant retention under misalignment conditions
- Exposed bolts are standard, shrouded bolts are optional

Standard FA Type

- Double engagement ('F' flex-flex) for parallel and angular misalignment
- Industry standard flange bolt patterns



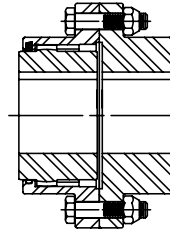
FA Type

Section Pages G-66 and G-67

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Single engagement FAFR Type

- Single engagement ('FFR' Flex-Rigid) accommodates angular misalignment only and is ideal for floating shaft applications

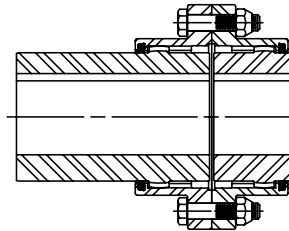


FAFR Type

Contact Lovejoy Technical Support

Mill Motor FAMM Type

- First hub designed with longer universal hub on one end to accommodate straight or tapered shafts
- Second hub bored to customer specifications
- Standard design accommodates AISE Mill Motor frame sizes
- Sleeves and second hub are standard



FAMM Type

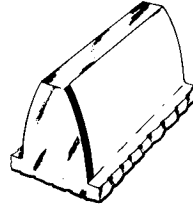
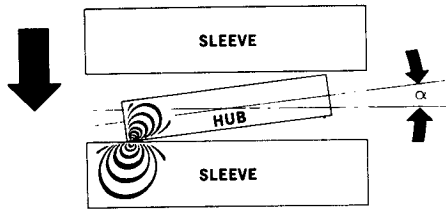
Contact Lovejoy Technical Support

Additional Specialty Coupling Types

- Stainless Steel
- Nylon Sleeves
- High Speed RAHS Type
- Brake Drum FBD and FBW Types
- Insulated FI Type
- Vertical Floating Shaft FVFS Type
- F Style Cutout Shifter FCS Type

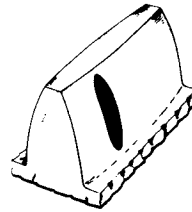
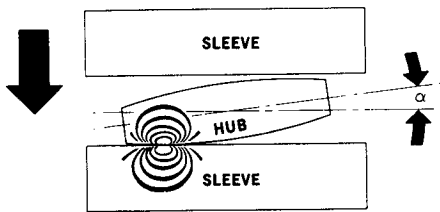


Vari-Crown® Tooth Form



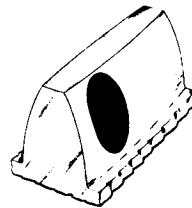
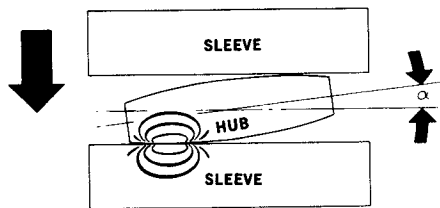
Straight

With straight hub teeth, there is a high concentration of load under misaligned conditions. As misalignment increases, more of the load is carried by the ends of the teeth, resulting in premature breakdown and coupling failure.



Conventional Crown

Some manufacturers use a conventionally crowned hub tooth known by various trade names. Regardless of the nomenclature, however, the contour of the tooth is a segment of an arc. Under all operating conditions, equal or similar contact areas between the hub teeth and the sleeve teeth exist.



Lovejoy / Sier-Bath Vari-Crown®

The Sier-Bath Vari-Crown tooth form has a crown at the center of the tooth which is similar to a conventionally crowned tooth coupling. However, as soon as misalignment occurs, the transmitted torque is carried on a flattened area of the hub tooth which is considerably broader and stronger than the conventionally crowned tooth form. Note the larger contact area and reduced stress area of the Vari-Crown tooth form.

Patented Vari-Crown® Tooth Form for Long Life

Facts

- It can be shown¹ that bodies with the smallest relative curvature have the largest area of contact under load, or specifically, a body with the largest radius of curvature has the largest area of contact with another body when under load. More importantly, under a given load the bodies with the greater radii of curvature have lower induced surface contact stresses.
- Gear tooth couplings have fewer teeth in contact as misalignment increases.

Lower Stresses

Lovejoy / Sier-Bath's solution to these facts was the development of the patented Vari-Crown tooth form. The Vari-Crown tooth form is a curve with constantly changing radii of curvature. The tooth contact area under misaligned conditions has a much larger radius of curvature than conventional crowning. The contact area is larger, thus reducing the unit stress.

Note: ■ 1 indicates: Hertz's study of contact stresses of curved surfaces.

Constant Velocity Power Transmission

Lovejoy / Sier-Bath produces the Vari-Crown tooth form by a generating method maintaining the necessary characteristics for conjugate tooth action, which are:

1. Constant normal base pitch at any position on the crowned teeth.
2. Correct pressure angle matching of the normal to the curved surface and the sleeve surface at any position of misalignment.

Less Backlash

The tooth design requires less backlash for a given angle of misalignment than the conventional or circular arc crown. In many applications this is a desirable feature in a gear tooth coupling.



Gear Coupling Selection Process

Factors Affecting Selection

The following is a list of the information necessary to assist in making a coupling selection. Not all of these items will come into play in all selection processes. These items include, but are not limited to:

Application related:

- Application details
- Type of motor and driven equipment
- Motor horsepower or KW
- Operating/coupling speed
- Shaft sizes and separation
- Space and size constraints
- Environment (temperature, chemicals, etc)
- Balance requirements
- Special modifications

Steps In Selecting A Gear Coupling

G Refer to the gear coupling specifications charts displayed with each type of coupling throughout the Gear Coupling Products section of this catalog. The pictures and charts provide visualization, specifications, and dimensional data for Lovejoy's wide range of gear coupling products. Typically start with an F Type flanged gear coupling (page G-34) or a C Type continuous sleeve gear coupling (page G-16) and proceed from there.

Step 1: Review the gear coupling series and type as selected to ensure the selection meets application requirements.

Step 2: Determine the nominal application torque in in-lbs by using the following formula:

$$\text{Application Torque (in-lb)} = \frac{(\text{HP} \times 63025)}{\text{RPM}}$$

or
$$\text{Nm} = \frac{(\text{KW} \times 9550)}{\text{RPM}}$$

Step 3: Review the Application Service Factor chart for the service factor number associated with the application where this coupling will be used. Multiply the application torque by the application service factor to determine the total torque required for the coupling selection.

Step 4: Compare the required total torque value with the nominal torque capacity listed in the Gear Coupling Selection chart for the desired coupling type.

Step 5: Check that the maximum bore size and the maximum RPM of the coupling type selected to ensure the coupling will meet these application requirements.

Step 6: Note any special requirements including the BSE dimension for floating shaft and spacer types, shear pin torque, slide coupling details, mill motor tapered shaft data, and any other pertinent information.

Consult with Lovejoy Technical support or Engineering for any unique application concerns.

Selection Example (Flanged Gear Coupling)

Application Data: This sample application calls for a coupling to connect the output side of a reducer gearbox to a dredge pump. There is a 400 HP electric motor, running at 3,600 RPM driving the gearbox which has a 10:1 speed reduction. The gearbox has a 6 inch diameter shaft, the pump has a 6-1/2 inch diameter shaft. There is an angular misalignment potential of slightly more than 1°.

Step 1: Since C Type gear couplings are only capable of 1/2° misalignment per flex plane, the F Type coupling is selected. The F Type coupling is capable of accommodating 1-1/2° per flex plane. Note, it is highly recommended that couplings are installed at no more than 20% of the allowable misalignment since the alignment often changes during operation.

Step 2: Refer to page G-34 and G-35 for Flanged series (F Type) double engagement, or flex-flex, coupling information. The bore size and torque should be addressed interactively when selecting a coupling size.

Step 3: The application service factor can be found on page G-13. Application service factors are multipliers assigned to assorted applications for the purpose of guiding the coupling selection process to a torque rating that will prevent premature failure caused by the characteristics of that application. For this sample application, note that the service factor for a dredge pump application is 2.0.

Step 4: Calculate the torque requirements for the application using the formula:

$$\text{Design Torque (in-lbs)} = \frac{\text{HP} \times 63025}{\text{RPM}}$$

or
$$\text{Nm} = \frac{(\text{KW} \times 9550)}{\text{RPM}}$$

$$\text{Selection Torque} = \text{Application Torque} \times \text{Service Factor}$$

In this example, a gearbox is in use that reduces the operating speed where the coupling is being used from 3,600 RPM on the input side to 360 RPM on the gearbox output side.

Please note that any speed decrease at the reducer (gear box) will cause an increase in the application torque.

Application Torque (in-lbs) =

$$\frac{(\text{HP} \times 63025)}{\text{RPM}} = \frac{(400 \times 63025)}{360} = 70,028 \text{ in-lbs}$$

$$\text{Selection Torque} = \text{Application Torque} \times \text{Service Factor} = 70,028 \times 2.0 = 140,056 \text{ in-lbs}$$

An F 3.5 coupling is rated at 151,200 in-lbs and could easily accommodate the torque requirement, however, to accommodate the 6-1/2 inch pump shaft diameter the selection of an F 5E size coupling will be necessary. The F 5 coupling is rated at 434,700 in-lbs and may seem to be too large or overrated for this application, but the larger size is necessary to accommodate the shaft size.

Step 5: Confirm that the RPM is within range specified for the selected coupling. The chart shows the F 5 has a 2,500 RPM maximum speed and this will accommodate the 360 RPM speed requirement on the output side of the gearbox.

Step 6: Please refer to the coupling specifications on page G-34 and G-35. Note that F 5E couplings are manufactured with interference fits and exposed bolts as standard. When contacting your sales representative, the description for this coupling would be an F 5E gear coupling and include the bore size, keyway information, and shaft separation. Also, provide a list of any requirements that might supersede the coupling defaults.

Special Note: If the shaft separation is greater than specified in the chart on Page G-35, refer to the Floating shaft or Spacer style couplings on pages G-39 or G-55. If the desired shaft separation, or BSE, is not listed, contact Lovejoy Technical Support for assistance.

Please refer to the Lovejoy website for installation instructions and lubrication requirements for gear couplings.



Gear

Application Service Factors

Selection Data

Application Service Factors

| | | |
|---|---|--|
| <p>Agitators</p> <ul style="list-style-type: none"> Pure Liquids1.0 Liquids—Variable Density1.0 <p>Blowers</p> <ul style="list-style-type: none"> Centrifugal1.0 Lobe1.2 <p>Can Filling Machines1.0</p> <p>Car Dumpers2.0</p> <p>Car Pullers, Intermittent Duty1.5</p> <p>Compressors</p> <ul style="list-style-type: none"> Centrifugal1.0 Reciprocating2.2 Multi-Cylinder2.0 Single Cylinder2.0 <p>Conveyors, Uniformly Loaded or Fed</p> <ul style="list-style-type: none"> Assembly1.2 Belt1.2 Screw1.2 <p>Conveyors, Heavy Duty</p> <ul style="list-style-type: none"> Not Uniformly Fed Assembly1.5 Belt1.5 Oven1.5 Reciprocating2.0 Screw1.5 Shaker1.5 <p>Cranes and Hoists¹</p> <ul style="list-style-type: none"> Main Hoists2.0 Reversing2.0 Skip Hoists2.0 Trolley Drive2.0 Bridge Drive2.0 <p>Crushers</p> <ul style="list-style-type: none"> Ore3.0 Stone3.0 <p>Dredges</p> <ul style="list-style-type: none"> Conveyors2.0 Cutter Head Drives2.0 Maneuvering Winches2.0 Pumps2.0 <p>Fans</p> <ul style="list-style-type: none"> Centrifugal1.0 Cooling Towers Forced Draft1.5 <p>Feeders</p> <ul style="list-style-type: none"> Screw1.5 <p>Generators</p> <ul style="list-style-type: none"> Not Welding1.0 Welding1.5 <p>Hammer Mills2.0</p> <p>Laundry Washers</p> <ul style="list-style-type: none"> Reversing1.5 <p>Lumber Industry</p> <ul style="list-style-type: none"> Barkers—Drum Type2.0 Edger Feed2.0 Live Rolls2.0 Log Haul—Incline2.0 Log Haul—Well Type2.0 Off Bearing Rolls2.0 Planer Feed Chains1.75 Planer Tilting Hoist1.75 Planer Floor Chains1.75 Slab Conveyor1.5 Sorting Table1.5 Trimmer Feed1.5 | <p>Machine Tools</p> <ul style="list-style-type: none"> Bending Roll2.0 Punch Press, Gear Driven2.0 Tapping Machines2.0 Main Drives1.5 Auxiliary Drives1.5 <p>Metal Mills</p> <ul style="list-style-type: none"> Draw Bench—Carriage2.0 Draw Bench—Main Drive2.0 Forming Machines2.0 Slitters1.5 Table Conveyors <ul style="list-style-type: none"> Non-Reversing2.25 Reversing2.5 Wire Drawing & Flattening Machine2.0 Wire Winding Machine1.75 <p>Metal Rolling Mills</p> <ul style="list-style-type: none"> Blooming Mills2.5 Coilers, hot mill2.0 Coilers, cold mill1.5 Cold Mills2.0 Cooling Beds1.75 Door Openers2.0 Draw Benches2.0 Edger Drives1.75 Feed Rolls, Reversing Mills3.5 Furnace Pushers2.5 Hot Mills3.0 Ingot Cars2.5 Kick-outs2.5 Manipulators3.0 Merchant Mills3.0 Piercers3.0 Pusher Rams2.5 Reel Drives1.75 Reel Drums2.0 Reelers3.0 Rod and Bar Mills3.0 Roughing Mill Delivery Table3.0 Runout Tables2.5 Saws, hot & cold2.5 Screwdown Drives3.0 Skelp Mills3.0 Slitters3.0 Slabbing Mills1.75 Soaking Pit Cover Drives3.0 Straighteners2.5 Tables, transfer & runout2.5 Thrust Block3.0 Traction Drive3.0 Tube Conveyor Rolls2.5 Unscramblers2.5 Wire Drawing1.75 <p>Mills, Rotary Type</p> <ul style="list-style-type: none"> Ball2.25 Dryers & Coolers2.0 Hammer1.75 Kilns2.0 Pebble & Rod2.0 Pug1.75 Tumbling Barrels2.0 | <p>Mixers</p> <ul style="list-style-type: none"> Concrete Mixers, Continuous1.5 Concrete Mixers, Intermittent2.0 <p>Oil Industry</p> <ul style="list-style-type: none"> Oil Well Pumping2.0 Rotary Kilns2.0 <p>Paper Mills</p> <ul style="list-style-type: none"> Agitators, Mixers1.5 Barker Auxiliaries, Hydraulic2.0 Barker Mechanical2.0 Barking Drum Spur Gear Only2.0 Beater & Pulper1.75 Bleacher1.0 Calenders2.0 Calenders, Super1.5 Chippers2.5 Coaters1.0 Converting Machines, except Cutters, Platers1.5 Conveyors1.5 Couch Roll1.75 Cutters, Platters2.0 Cylinders1.75 Disc Refiners1.75 Dryers1.75 Felt Stretcher1.25 Felt Whipper2.0 Jordans1.75 Line Shaft1.5 Log Haul2.0 Pulp Grinder1.75 Press Roll2.0 Reel1.5 Stock Chests1.5 Suction Roll1.75 Washers & Thickeners1.5 Winders1.5 <p>Printing Presses1.5</p> <p>Pumps</p> <ul style="list-style-type: none"> Centrifugal1.0 Reciprocating <ul style="list-style-type: none"> Single Acting 3 or more Cylinders1.5 Double Acting 2 or more Cylinders2.0 Rotary, Gear Type, Lobe Vane1.5 <p>Rubber Industry</p> <ul style="list-style-type: none"> Mixer2.0 Rubber Calendar2.0 <p>Screens</p> <ul style="list-style-type: none"> Rotary, Stone or Gravel1.5 <p>Steering Gear1.0</p> <p>Stokers1.0</p> <p>Textile Industry</p> <ul style="list-style-type: none"> Dryers1.5 Dyeing Machinery1.5 <p>Windlass2.0</p> |
|---|---|--|

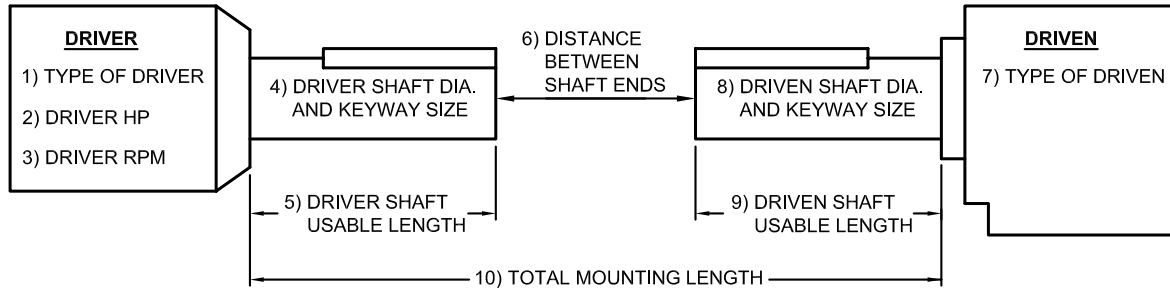
Notes: ■ 1 indicates: If people are transported, Lovejoy does not recommend and will not warranty the use of the coupling.
 ■ Values contained in the table should be used as a general guide and are to be applied to smooth power sources such as electric motors and steam turbines.
 ■ For drives involving internal combustion engines add 1.0 to the values listed.



Selection Worksheet

Customer Name: _____ Contact Name: _____

Phone Number: _____ Email Address: _____



1. Type of Driver (Electric Motor, Combustion Engine, Gearbox, etc.) : _____

For combustion engines, define type
Gasoline, Diesel, Natural Gas, etc. : _____ Number of cylinders _____

2. Driver Horse Power : _____ 3. Driver or Gearbox output RPM : _____

Retrieve the Application Service Factor from Page G-13 : _____ then
calculate the Selection Torque using the following formula:

$$\text{Torque (in-lbs)} = \frac{\text{HP} \times 63025}{\text{RPM}} \times \text{Service Factor} = \text{Selection Torque} = \text{_____ in-lbs}$$

4. Driver Shaft Diameter : _____ Keyway size : KW Height _____ KW Width _____

Specify Clearance Fit, Interference Fit, Metric (P7, H7, etc), Shaft Locking Device, and Set Screw or No Set Screw

5. Driver Usable Shaft Length : _____ (Measure from the end of the shaft to any obstruction)

6. Distance between shaft ends (BSE) : _____

7. Type of Driven Equipment : _____

8. Driven Shaft Diameter : _____ Keyway size : KW Height _____ KW Width _____

Specify Clearance Fit, Interference Fit, Metric (P7, H7, etc), Shaft Locking Device, and Set Screw or No Set Screw

9. Driven Usable Shaft Length : _____ (Measure from the end of the shaft to any obstruction)

10. Total Mounting Length : _____ (Advise of any obstructions, walls, beams, guards, pipes, etc.)

11. For Tapered Shafts specify the following

Minimum or Maximum Taper diameter: _____

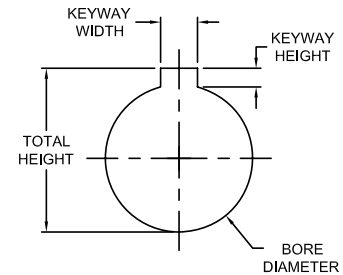
Taper Length: _____ T (Taper Inch per Foot) : _____

Gap or Hub Overhang amount: _____

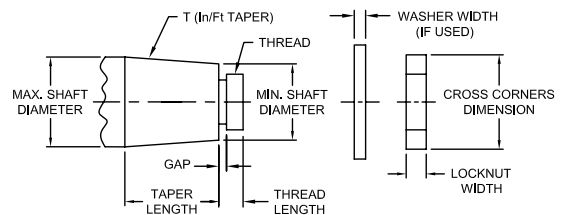
Locknut Width: _____ Size of nut cross corners: _____

Thread Size: _____ Thread Length: _____

Washer Diameter (if used) : _____ Washer Width: _____



For additional bore and keyway information, see the Engineering Data Section of the Power Transmission Products Catalog



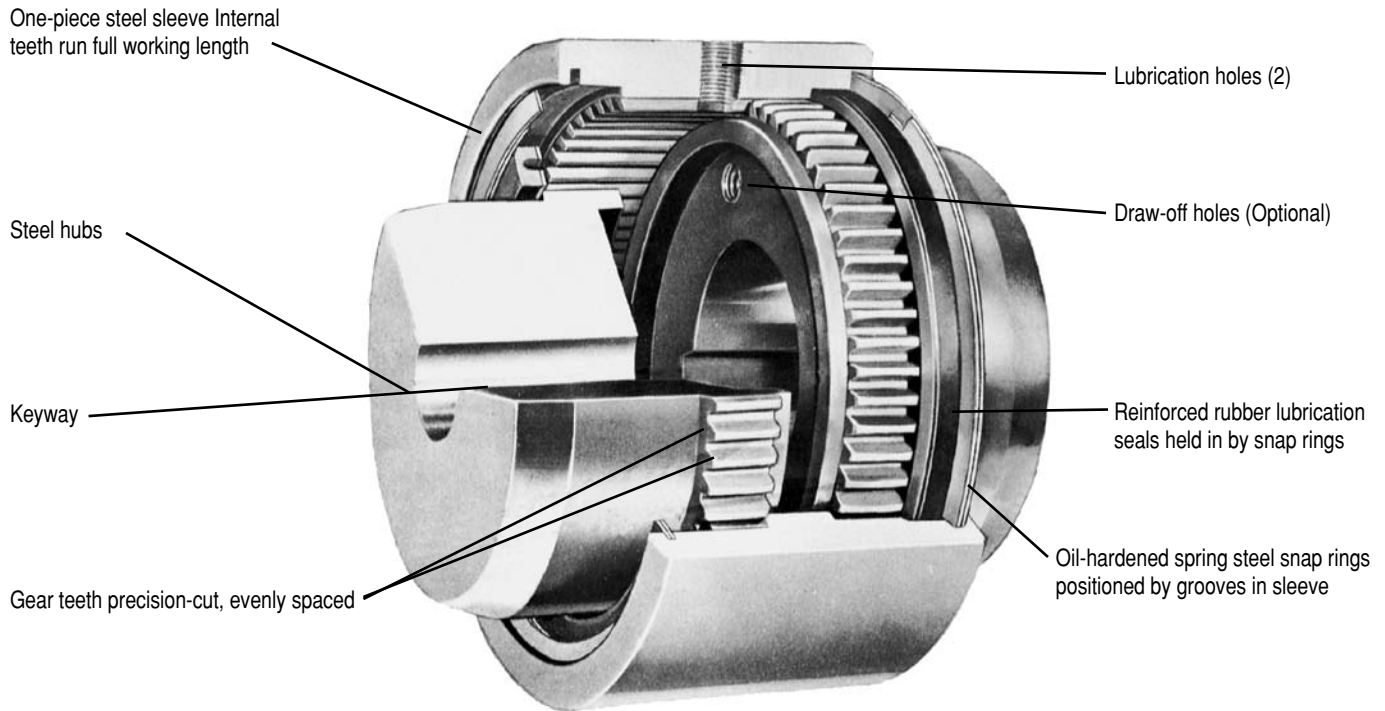
Lovejoy, Inc.
World Headquarters
2655 Wisconsin Avenue
Downers Grove, IL 60515

Send this form to:
apleng@lovejoy-inc.com
or fax to: 800-446-0878



Gear Continuous Sleeve Cut Away

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings



The One-Piece Sleeve Gear Coupling



Gear C and CFR Type Performance Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

C Type Flex-Flex Couplings

The C Type coupling consists of two flex hubs, one sleeve and one accessory kit consisting of seals and snap rings.

CFR Type Flex-Rigid Couplings

The CFR Type coupling consist of one flex hub, one rigid hub, one sleeve, one accessory kit consisting of seals and snap rings.

Features

- Simple and inexpensive type of gear coupling
- All steel sleeves and hubs
- Reinforced rubber seals with snap rings to hold lubricant in place
- Available as vertical and horizontal couplings
- Wide variety of special variations such as full-flex, flex-rigid mill motor
- Standard configurations are available of the shelf



G

C - CFR Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Angular Misalignment Degrees |
|------|----------------|---------|---------------|---------|-----------------------|-----|-------------------------------|-----|--------|-----|-----------------------|------|------------------------------|
| | | | | | Flex & Rigid Max Bore | | Flex & Rigid Rough Stock Bore | | | | | | |
| | in-lb | Nn | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | in | mm | |
| 7/8 | 2,500 | 300 | 6,000 | 18,000 | 1.25 | 31 | 0.44 | 11 | 5 | 2 | 0.005 | 0.13 | 1/2° per Mesh |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.63 | 16 | 8 | 4 | 0.007 | 0.18 | |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 0.73 | 19 | 13 | 6 | 0.007 | 0.18 | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 0.88 | 22 | 20 | 9 | 0.007 | 0.25 | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 1.19 | 30 | 33 | 15 | 0.010 | 0.30 | |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 1.25 | 32 | 63 | 29 | 0.012 | 0.30 | 1/4° per Mesh |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 1.75 | 44 | 91 | 41 | 0.012 | 0.30 | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 2.38 | 60 | 126 | 57 | 0.007 | 0.18 | |
| 5 | 270,900 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 2.88 | 73 | 195 | 89 | 0.007 | 0.48 | |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 3.88 | 99 | 267 | 121 | 0.009 | 0.23 | |
| 7 | 598,500 | 67 600 | 1,000 | 3,000 | 7.50 | 200 | 4.69 | 119 | 320 | 145 | 0.010 | 0.25 | |
| 9 | 1,260,000 | 142 400 | 800 | 2,400 | 9.50 | 240 | 5.88 | 149 | 520 | 236 | 0.011 | 0.28 | |
| 11 | 2,205,000 | 249 200 | 600 | 1,800 | 11.50 | 305 | 7.75 | 197 | 925 | 420 | 0.013 | 0.33 | |
| 12 | 2,520,000 | 284 700 | 550 | 1,650 | 12.50 | 330 | 9.75 | 248 | 1,200 | 545 | 0.014 | 0.36 | |

Ordering Information

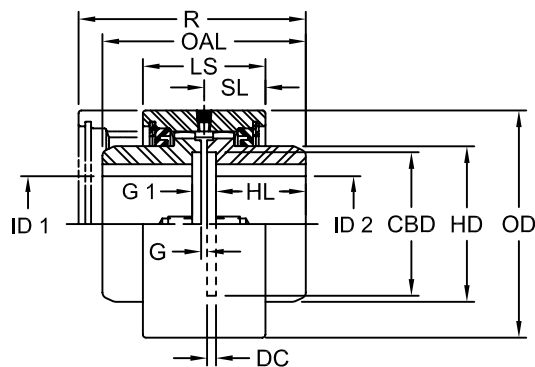
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



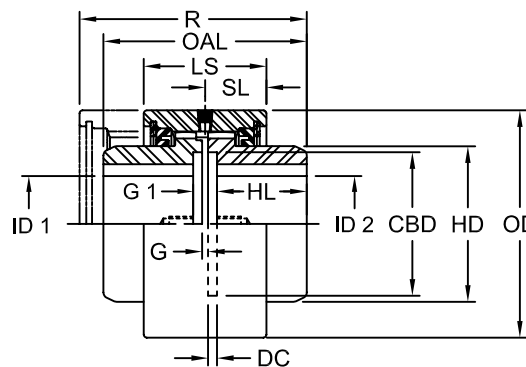
Gear C and CFR Type Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

C and CFR Type Couplings



C Type Flex-Flex Coupling



CFR Type Flex-Rigid Coupling

C and CFR Type Dimensional Data

| Size | R in | OAL in | LS in | SL in | ID1 - ID2 | | | | HL in | DC in | BSE | | OD in | HD in | CBD in |
|------|---------|-----------|----------|----------|--------------------------|-----|-------------------------------------|-----|----------|----------|---------|----------|----------|----------|-----------|
| | | | | | Flex & Rigid Max Bore | | Flex & Rigid Rough Stock Bore | | | | G in | G1 in | | | |
| | | | | | in | mm | in | mm | | | | | | | |
| 7/8 | 3.75 | 3.13 | 2.00 | 1.00 | 1.25 | 31 | 0.44 | 11 | 1.50 | 0.13 | 0.13 | 0.38 | 3.31 | 2.00 | 1.94 |
| 1.5 | 4.59 | 3.75 | 2.53 | 1.27 | 1.63 | 42 | 0.63 | 16 | 1.81 | 0.19 | 0.13 | 0.50 | 3.75 | 2.38 | 2.25 |
| 2 | 4.88 | 4.25 | 2.56 | 1.28 | 2.13 | 56 | 0.73 | 19 | 2.06 | 0.19 | 0.13 | 0.50 | 4.75 | 3.25 | 3.00 |
| 2.5 | 5.72 | 4.75 | 3.06 | 1.53 | 2.63 | 70 | 0.88 | 22 | 2.25 | 0.25 | 0.25 | 0.75 | 5.50 | 3.94 | 3.75 |
| 3 | 6.88 | 5.50 | 3.75 | 1.88 | 3.13 | 84 | 1.19 | 30 | 2.63 | 0.25 | 0.25 | 0.75 | 6.63 | 4.75 | 4.75 |
| 3.5 | 9.25 | 8.75 | 4.00 | 2.00 | 3.63 | 97 | 1.25 | 30 | 4.25 | 0.25 | 0.25 | 0.75 | 7.50 | 5.38 | 5.50 |
| 4 | 9.50 | 9.00 | 4.63 | 2.31 | 4.13 | 111 | 1.75 | 44 | 4.38 | 0.25 | 0.25 | 0.75 | 8.75 | 6.25 | 6.50 |
| 4.5 | 10.38 | 10.25 | 4.88 | 2.44 | 4.75 | 130 | 2.38 | 60 | 5.00 | 0.25 | 0.25 | 0.75 | 9.50 | 7.25 | 7.25 |
| 5 | 12.25 | 12.25 | 5.75 | 2.88 | 5.75 | 160 | 2.88 | 73 | 6.00 | 0.25 | 0.25 | 0.75 | 10.75 | 8.25 | 8.12 |
| 6 | 13.38 | 13.00 | 6.50 | 3.25 | 6.63 | 186 | 3.88 | 99 | 6.38 | 0.25 | 0.25 | 0.75 | 12.25 | 9.50 | 9.25 |
| 7 | 15.38 | 14.88 | 7.50 | 3.75 | 7.50 | 200 | 4.69 | 119 | 7.25 | 0.25 | 0.38 | 0.88 | 14.00 | 10.50 | 9.75 |
| 9 | 19.00 | 19.00 | 8.13 | 4.06 | 9.50 | 240 | 5.88 | 149 | 9.25 | 0.25 | 0.50 | 1.00 | 16.25 | 12.63 | 12.25 |
| 11 | 22.50 | 22.50 | 8.13 | 4.06 | 11.50 | 305 | 7.75 | 197 | 11.00 | 0.25 | 0.50 | 1.00 | 19.25 | 15.63 | 15.00 |
| 12 | 25.00 | 25.00 | 8.38 | 4.19 | 12.50 | 330 | 9.75 | 248 | 12.25 | 0.25 | 0.50 | 1.00 | 20.50 | 16.50 | 16.00 |

Ordering Information

- Puller Holes are standard on sizes 4 through 12.
- Puller Holes are available for sizes 7/8 through 3.5 at an additional charge.
- The BSE (distance Between Shaft Ends) may vary between G and G1.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bores and keyway tolerances, consult Lovejoy Engineering Section.
- Larger sizes are available, please consult Lovejoy Technical Support.



Gear
CMM Type
Performance Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CMM Type Mill Motor Couplings

The CMM Type coupling consists of one standard flex hub, one universal hub, one standard sleeve and one accessory kit consisting of seals and snap rings.

Features

- Specifically designed for mill motors with tapered bores
- Universal hub counterbored for the nut on the end of the motor shaft
- One piece cylindrical sleeve for smoother, faster, quieter and safer operation
- Quick assembly and disassembly



CMM Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|--------|-----------|-----|------------------|----|--------|-------|-----------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | | | | | Unbal | Bal | in | mm | | | | | |
| 7/8 | 2,500 | 300 | 6,000 | 18,000 | 1.25 | 31 | 0.44 | 11 | 7 | 3.2 | 0.005 | .13 | 1/2° |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.63 | 16 | 11 | 5.0 | 0.007 | .18 | |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 0.73 | 19 | 19 | 8.6 | 0.007 | .18 | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 0.88 | 22 | 29 | 13.0 | 0.007 | .18 | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 1.19 | 30 | 46 | 21.0 | 0.010 | .25 | |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 1.25 | 32 | 77 | 35.0 | 0.012 | .30 | 1/4° |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 1.75 | 44 | 109 | 49.0 | 0.012 | .30 | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 2.38 | 60 | 155 | 70.0 | 0.007 | .18 | |
| 5 | 270,000 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 2.88 | 73 | 220 | 100.0 | 0.007 | .18 | |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 3.88 | 99 | 315 | 143.0 | 0.009 | .23 | |

Ordering Information

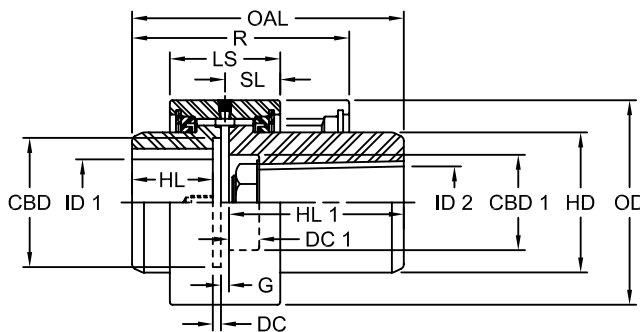
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Length and taper per foot of Mill Motor shaft.
- Size of nut to be used on Mill Motor (DC1 and CBD1).
- Specify if keyways are to be parallel to shaft axis or tapered.



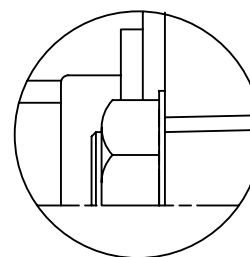
Gear CMM Type Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CMM Type Mill Motor Couplings



Standard Type



Alternative Type

CMM Type Dimensional Data

| Size | OAL in | R in | LS in | SL in | ID1 - ID2 | | | | HL in | HL1 in | DC in | DC1 in | G in | OD in | HD in | CBD in | CBD 1 in |
|------|--|---------|----------|----------|-----------|-----|------------------|----|----------|-----------|----------|---------------------------------------|---------|----------|----------|-----------|-------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | | | | | |
| | | | | | in | mm | in | mm | | | | | | | | | |
| 7/8 | Determined by Length of Mill Motor Hub | 3.75 | 2.00 | 1.00 | 1.25 | 31 | 0.44 | 11 | 1.50 | 3.75 | 0.13 | Determined by Customer Specifications | 0.13 | 3.31 | 2.00 | 1.94 | 1.63 |
| 1.5 | | 4.59 | 2.53 | 1.27 | 1.63 | 42 | 0.63 | 16 | 1.81 | 4.00 | 0.19 | | 0.13 | 3.75 | 2.38 | 2.25 | 1.88 |
| 2 | | 4.88 | 2.56 | 1.28 | 2.13 | 56 | 0.73 | 19 | 2.06 | 4.63 | 0.19 | | 0.13 | 4.75 | 3.25 | 3.00 | 2.75 |
| 2.5 | | 5.72 | 3.06 | 1.53 | 2.63 | 70 | 0.88 | 22 | 2.25 | 5.13 | 0.25 | | 0.25 | 5.50 | 3.94 | 3.75 | 3.25 |
| 3 | | 6.88 | 3.75 | 1.88 | 3.13 | 84 | 1.19 | 30 | 2.63 | 5.75 | 0.25 | | 0.25 | 6.63 | 4.75 | 4.75 | 3.88 |
| 3.5 | | 9.25 | 4.00 | 2.00 | 3.63 | 97 | 1.25 | 32 | 4.25 | 6.50 | 0.25 | | 0.25 | 7.50 | 5.38 | 5.50 | 4.50 |
| 4 | | 9.50 | 4.63 | 2.31 | 4.13 | 111 | 1.75 | 44 | 4.38 | 6.63 | 0.25 | | 0.25 | 8.75 | 6.25 | 6.50 | 5.13 |
| 4.5 | | 10.38 | 4.88 | 2.44 | 4.75 | 130 | 2.38 | 60 | 5.00 | 7.75 | 0.25 | | 0.25 | 9.50 | 7.25 | 7.25 | 5.50 |
| 5 | | 12.25 | 5.75 | 2.88 | 5.75 | 160 | 2.88 | 73 | 6.00 | 7.88 | 0.25 | | 0.25 | 10.75 | 8.25 | 8.13 | 6.50 |
| 6 | | 13.38 | 6.50 | 3.25 | 6.63 | 186 | 3.88 | 99 | 6.38 | 9.25 | 0.25 | | 0.25 | 12.25 | 9.50 | 9.25 | 7.75 |

Ordering Information

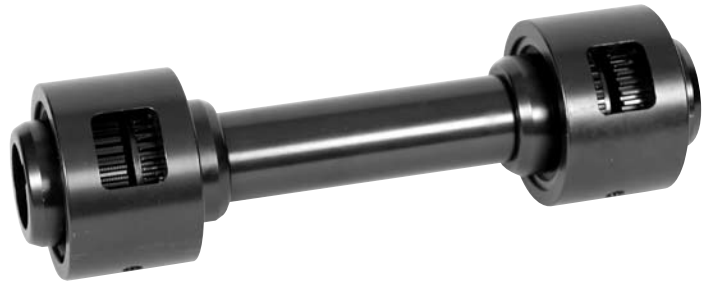
- HL1 Dimensions are the maximum lengths of Universal hubs kept in stock and altered to customer specifications. Longer length hubs are made to order.
- Dimension CBD1 as shown is the maximum safe counterbore. Diameter of this counterbore is to customer specifications.
- Rough bore mill motor hubs are manufactured to HL1 length with straight bores.
- Puller Holes are standard on sizes 4 through 12.
- Puller Holes are available for sizes 7/8 through 3.5 at an additional charge.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
- For metric bores and keyway, consult Lovejoy Engineering Section.
- Larger sizes are available, please consult Lovejoy Technical Support.



Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CFS Type Floating Shaft Coupling

The CFS Type coupling consists of two flex-rigid (CFR) couplings with a shaft between them. Normally the driver and driven ends are rigid while the two center hubs connected by the center shaft are flexible. These hubs can be reversed if necessary without sacrificing ease of installation or disassembly.



CFS Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight Coupling Only | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|--------|-----------------------|---------|-------------------------------|----|----------------------|-------|-----------------------|-----|----------------------------------|
| | | | | | Flex & Rigid Max Bore | | Flex & Rigid Rough Stock Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | | | |
| 7/8 | 2,500 | 300 | 6,000 | 18,000 | 1.25 | 31 | 0.44 | 11 | 10 | 4.5 | 0.005 | .13 | 1/2° |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.63 | 16 | 16 | 7.3 | 0.007 | .18 | |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 0.73 | 19 | 26 | 12.0 | 0.007 | .18 | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 0.88 | 22 | 40 | 18.0 | 0.007 | .18 | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 1.19 | 30 | 66 | 30.0 | 0.010 | .25 | |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 1.25 | 32 | 126 | 57.0 | 0.012 | .30 | 1/4° |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 1.75 | 44 | 182 | 83.0 | 0.012 | .30 | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 2.38 | 60 | 252 | 114.0 | 0.007 | .18 | |
| 5 | 270,000 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 2.88 | 73 | 390 | 177.0 | 0.007 | .18 | |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 3.88 | 99 | 534 | 242.0 | 0.009 | .23 | |

Ordering Information

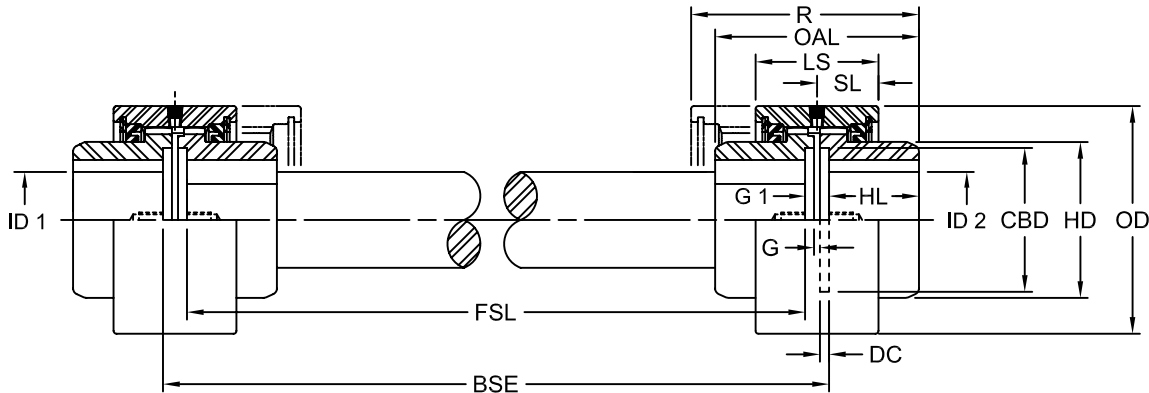
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
CFS Type
Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CFS Type Floating Shaft Couplings



CFS Type Dimensional Data

| Size | R | OAL | LS | SL | ID1 - ID2 | | | | HL | DC | BSE | G | G1 | OD | HD | CBD |
|------|-------|-------|------|------|--------------------------|-----|-------------------------------------|----|------|------|-------|------|------|-------|------|------|
| | | | | | Flex & Rigid Max Bore | | Flex & Rigid Rough Stock Bore | | | | | | | | | |
| | | | | | in | mm | in | mm | | | | | | | | |
| 7/8 | 3.75 | 3.13 | 2.00 | 1.00 | 1.25 | 31 | 0.44 | 11 | 2.00 | 0.13 | 3.75 | 0.13 | 0.38 | 3.31 | 2.00 | 1.94 |
| 1.5 | 4.59 | 3.75 | 2.53 | 1.27 | 1.63 | 42 | 0.63 | 16 | 2.38 | 0.19 | 4.63 | 0.13 | 0.50 | 3.75 | 2.38 | 2.25 |
| 2 | 4.88 | 4.25 | 2.56 | 1.28 | 2.13 | 56 | 0.73 | 19 | 3.25 | 0.19 | 5.13 | 0.13 | 0.50 | 4.75 | 3.25 | 3.00 |
| 2.5 | 5.72 | 4.75 | 3.06 | 1.53 | 2.63 | 70 | 0.88 | 22 | 3.94 | 0.25 | 6.00 | 0.25 | 0.75 | 5.50 | 3.94 | 3.75 |
| 3 | 6.88 | 5.50 | 3.75 | 1.88 | 3.13 | 84 | 1.19 | 30 | 4.75 | 0.25 | 6.75 | 0.25 | 0.75 | 6.63 | 4.75 | 4.75 |
| 3.5 | 9.25 | 8.75 | 4.00 | 2.00 | 3.63 | 97 | 1.25 | 32 | 5.38 | 0.25 | 9.50 | 0.25 | 0.75 | 7.50 | 5.38 | 5.50 |
| 4 | 9.50 | 9.00 | 4.63 | 2.31 | 4.13 | 111 | 1.75 | 44 | 6.25 | 0.25 | 9.75 | 0.25 | 0.75 | 8.75 | 6.25 | 6.50 |
| 4.5 | 10.38 | 10.25 | 4.88 | 2.44 | 4.75 | 130 | 2.38 | 60 | 7.25 | 0.25 | 11.00 | 0.25 | 0.75 | 9.50 | 7.25 | 7.25 |
| 5 | 12.25 | 12.25 | 5.75 | 2.88 | 5.75 | 160 | 2.88 | 73 | 8.25 | 0.25 | 13.00 | 0.25 | 0.75 | 10.75 | 8.25 | 8.13 |
| 6 | 13.38 | 13.00 | 6.50 | 3.25 | 6.63 | 186 | 3.88 | 99 | 9.50 | 0.25 | 13.75 | 0.25 | 0.75 | 12.25 | 9.50 | 9.25 |

- Notes:
- FSL Dimension is the minimum length of the floating shaft.
 - The BSE (distance Between Shaft Ends) vary between G and G1.
 - Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 7/8 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.
 - Larger sizes are available, please consult Lovejoy Technical Support.



Gear
CSPCR Type
Performance Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CSPCR Type Spacer Couplings

The CSPCR Type coupling consists of two flex hubs, two sleeves, one spacer, one accessory kit, two split seals and two lock rings.

Features

- Easy removal of hubs without disturbing the mounting of connected units
- Spacer teeth are rigid with a slight interference fit with the mating flex hub
- Split seals on the spacer



CSPCR Type Performance Data

| Size | Nominal Torque | | Maximum Speed ¹ | | ID1 - ID2 | | | | Weight Couplings Only | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|----------------------------|---------|-----------|-----|------------------|----|-----------------------|-------|-----------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | in | mm | |
| 7/8 | 2,500 | 300 | 6,000 | 18,000 | 1.25 | 31 | 0.44 | 11 | 7 | 3.2 | 0.005 | .13 | 1/2° per Mesh |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.63 | 16 | 11 | 5.0 | 0.007 | .18 | |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 0.73 | 19 | 16 | 7.3 | 0.007 | .18 | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 0.88 | 22 | 26 | 12.0 | 0.007 | .18 | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 1.19 | 30 | 43 | 20.0 | 0.010 | .25 | |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 1.25 | 32 | 79 | 36.0 | 0.012 | .30 | 1/4° per mesh |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 1.75 | 44 | 115 | 52.0 | 0.012 | .30 | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 2.38 | 60 | 158 | 72.0 | 0.007 | .18 | |
| 5 | 270,000 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 2.88 | 73 | 248 | 113.0 | 0.007 | .18 | |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 3.88 | 99 | 340 | 154.0 | 0.009 | .23 | |

Note: ■ 1 indicates: Maximum RPM of spacer coupling determined by critical speed of spacer shaft.

Ordering Information

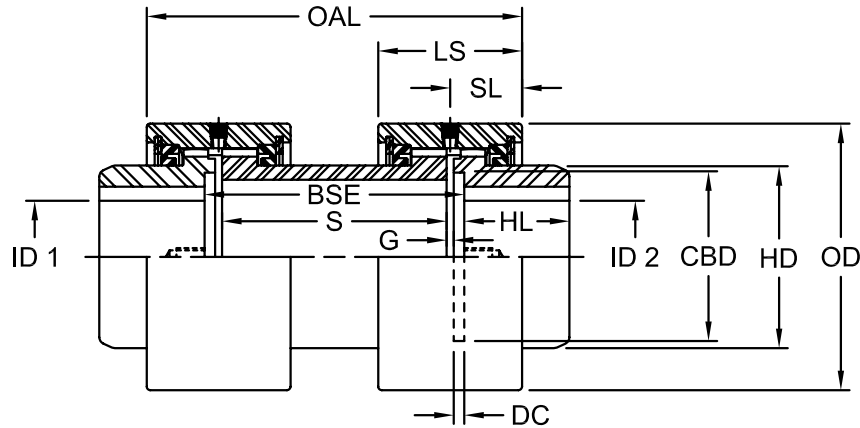
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
CSPCR Type
Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CSPCR Type Spacer Couplings



CSPCR Type Dimensional Data

| Size | OAL Min in | LS in | SL in | ID1 - ID2 | | | | BSE Min in | S Min in | HL in | G in | DC in | OD in | HD in | CBD in |
|------|------------------|----------|----------|-----------|-----|------------------|----|------------------|----------------|----------|---------|----------|----------|----------|-----------|
| | | | | Max Bore | | Rough Stock Bore | | | | | | | | | |
| | | | | in | mm | in | mm | | | | | | | | |
| 7/8 | 6.76 | 2.00 | 1.00 | 1.25 | 31 | 0.44 | 11 | 4.00 | 3.50 | 1.50 | 0.13 | 0.13 | 3.31 | 2.00 | 1.94 |
| 1.5 | 7.38 | 2.53 | 1.27 | 1.63 | 42 | 0.63 | 16 | 4.13 | 3.50 | 1.81 | 0.13 | 0.19 | 3.75 | 2.38 | 2.25 |
| 2 | 8.51 | 2.56 | 1.28 | 2.13 | 56 | 0.73 | 19 | 4.75 | 4.13 | 2.06 | 0.13 | 0.19 | 4.75 | 3.25 | 3.00 |
| 2.5 | 9.50 | 3.06 | 1.53 | 2.63 | 70 | 0.88 | 22 | 5.50 | 4.50 | 2.25 | 0.25 | 0.25 | 5.50 | 3.94 | 3.75 |
| 3 | 11.01 | 3.75 | 1.88 | 3.13 | 84 | 1.19 | 30 | 6.25 | 5.25 | 2.63 | 0.25 | 0.25 | 6.63 | 4.75 | 4.75 |
| 3.5 | 15.00 | 4.00 | 2.00 | 3.63 | 97 | 1.25 | 32 | 7.00 | 6.00 | 4.25 | 0.25 | 0.25 | 7.50 | 5.38 | 5.50 |
| 4 | 15.89 | 4.63 | 2.31 | 4.13 | 111 | 1.75 | 44 | 7.63 | 6.63 | 4.38 | 0.25 | 0.25 | 8.75 | 6.25 | 6.50 |
| 4.5 | 17.38 | 4.88 | 2.44 | 4.75 | 130 | 2.38 | 60 | 7.88 | 6.88 | 5.00 | 0.25 | 0.25 | 9.50 | 7.25 | 7.25 |
| 5 | 20.25 | 5.75 | 2.88 | 5.75 | 160 | 2.88 | 73 | 8.75 | 7.75 | 6.00 | 0.25 | 0.25 | 10.75 | 8.25 | 8.13 |
| 6 | 21.76 | 6.50 | 3.25 | 6.63 | 186 | 3.88 | 99 | 9.50 | 8.50 | 6.38 | 0.25 | 0.25 | 12.25 | 9.50 | 9.25 |

- Notes:
- Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 7/8 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.
 - Larger sizes are available, please consult Lovejoy Technical Support.



Gear
CCS Type
Performance Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CCS Type Cut-Out Shifter Couplings

The CCS Type coupling consists of two flex hubs, one special sleeve without lubrication holes and one accessory kit which includes a special seal for the hub that disengages to eliminate undue friction when the disengaged hub is turning in the sleeve. Standard hub is hand packed with grease.



Features

- Permits quick disengagement of driver and driven shafts without disassembling the coupling
- Widely used on dual drives and equipment operated in tandem
- Special seal for disengaging hub
- Also available with pins to maintain sleeve in both engaged and disengaged positions

CCS Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|--------|-----------|-----|------------------|----|---|-------|-----------------------|------|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | | | | | Unbal | Bal | in | mm | | | | | |
| 7/8 | 2,500 | 300 | 6,000 | 18,000 | 1.25 | 31 | 0.44 | 11 | Weight Determined by W & OD Dimensions supplied by Customer | 0.005 | .13 | 1/2° | |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.63 | 16 | | 0.007 | .18 | | |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 0.73 | 19 | | 0.007 | .18 | | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 0.88 | 22 | | 0.007 | .18 | | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 1.19 | 30 | | 0.010 | .25 | | |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 1.25 | 32 | | 0.012 | .30 | 1/4° | |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 1.75 | 44 | 0.012 | .30 | | | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 2.38 | 60 | 0.007 | .18 | | | |
| 5 | 270,000 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 2.88 | 73 | 0.007 | .18 | | | |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 3.88 | 99 | 0.009 | .23 | | | |

Ordering Information

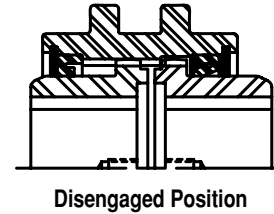
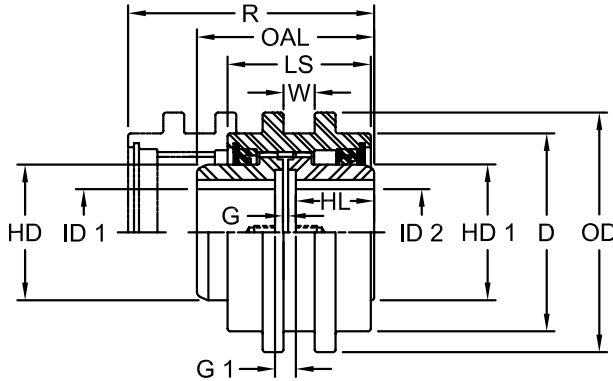
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Dimensions of Shifter Groove (width and outside diameter).
- Specify which hub will be stationary when coupling is disengaged.



Gear
CCS Type
Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CCS Type Cut-Out Shifter Couplings



CCS Type Dimensional Data

| Size | R | OAL | LS | W | ID1 - ID2 | | | | HL | BSE | | OD | D | HD1 | HD | T ¹ |
|------|-------|-------|------|----------------------|-----------|------|------------------|------|------|------|-------|----------------------|-------|-------|------|----------------|
| | | | | | Max Bore | | Rough Stock Bore | | | G | G1 | | | | | |
| | | | | | in | mm | in | mm | | | | | | | | |
| 7/8 | 4.31 | 3.13 | 2.56 | Per Cust Specs | 1.25 | 31 | 0.44 | 11 | 1.50 | 0.13 | 0.38 | Per Cust Specs | 3.31 | 1.985 | 2.00 | 0.38 |
| 1.5 | 5.38 | 3.75 | 3.31 | | 1.63 | 42 | 0.63 | 16 | 1.81 | 0.13 | 0.50 | | 3.75 | 2.365 | 2.38 | 0.63 |
| 2 | 5.75 | 4.25 | 3.44 | | 2.13 | 56 | 0.73 | 19 | 2.06 | 0.13 | 0.50 | | 4.75 | 3.235 | 3.25 | 0.56 |
| 2.5 | 6.41 | 4.75 | 3.88 | | 2.63 | 70 | 0.88 | 22 | 2.25 | 0.25 | 0.75 | | 5.50 | 3.925 | 3.94 | 0.69 |
| 3 | 7.69 | 5.50 | 4.63 | | 3.13 | 84 | 1.19 | 30 | 2.63 | 0.25 | 0.75 | | 6.63 | 4.735 | 4.75 | 0.75 |
| 3.5 | 9.63 | 8.75 | 4.88 | | 3.63 | 97 | 1.25 | 32 | 4.25 | 0.25 | 0.75 | | 7.50 | 5.365 | 5.38 | 0.81 |
| 4 | 10.69 | 9.00 | 5.81 | | 4.13 | 111 | 1.75 | 44 | 4.38 | 0.25 | 0.75 | | 8.75 | 6.235 | 6.25 | 1.00 |
| 4.5 | 11.44 | 10.25 | 5.94 | | 4.75 | 130 | 2.38 | 60 | 5.00 | 0.25 | 0.75 | | 9.50 | 7.235 | 7.25 | 1.00 |
| 5 | 14.00 | 12.25 | 7.50 | | 5.75 | 160 | 2.88 | 73 | 6.00 | 0.25 | 0.75 | | 10.75 | 8.235 | 8.25 | 1.50 |
| 6 | 15.44 | 13.00 | 8.56 | 6.63 | 186 | 3.88 | 99 | 6.38 | 0.25 | 0.75 | 12.25 | 9.485 | 9.50 | 1.88 | | |

- Notes:
- 1 indicates: T is the length of travel to disengage sleeve.
 - The BSE (distance Between Shaft Ends) vary between G and G1.
 - Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 7/8 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.
 - Larger sizes are available, please consult Lovejoy Technical Support.



Gear
CSHP Type
Performance Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CSHP Type Shear Pin Couplings

The CSHP Type coupling consists of one standard flex hub, two piece shear hub and one set of shear pins, one standard sleeve and accessory kit.

Features

- Designed to prevent damage to connected equipment
- Manufactured to shear at predetermined loads
- New Pins can be quickly inserted



CSHP Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|--------|------------------------|---------|--------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Flex or Rigid Max Bore | | Shear Hub Max Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | | | |
| 1.5 | 7,600 | 900 | 5,000 | 15,000 | 1.63 | 42 | 0.938 | 24 | 8 | 4 | 0.007 | .18 | 1/2° |
| 2 | 20,200 | 2 300 | 4,200 | 12,600 | 2.13 | 56 | 1.500 | 38 | 10 | 5 | 0.007 | .18 | |
| 2.5 | 30,200 | 3 400 | 3,750 | 11,250 | 2.63 | 70 | 1.750 | 44 | 15 | 7 | 0.007 | .18 | |
| 3 | 50,400 | 5 700 | 3,600 | 9,000 | 3.13 | 84 | 2.250 | 57 | 23 | 10 | 0.010 | .25 | 1/4° |
| 3.5 | 88,200 | 10 000 | 2,800 | 8,400 | 3.63 | 97 | 2.625 | 66 | 47 | 21 | 0.012 | .30 | |
| 4 | 126,000 | 14 200 | 2,400 | 7,200 | 4.13 | 111 | 3.625 | 92 | 90 | 41 | 0.012 | .30 | |
| 4.5 | 184,000 | 20 800 | 2,200 | 6,600 | 4.75 | 130 | 4.125 | 104 | 112 | 51 | 0.007 | .18 | |
| 5 | 270,000 | 30 600 | 2,100 | 6,300 | 5.75 | 160 | 4.500 | 114 | 177 | 80 | 0.007 | .18 | 1/4° |
| 6 | 378,000 | 42 700 | 2,000 | 6,000 | 6.63 | 186 | 5.875 | 149 | 250 | 114 | 0.009 | .23 | |

Ordering Information

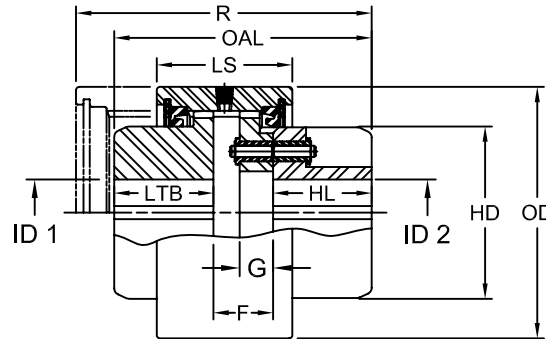
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Specify which is the Shear Pin hub.
- Specify the required shear torque.



Gear
CSHP Type
Dimensional Data

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

CSHP Type Spacer Couplings



CSHP Type Dimensional Data

| Size | R | OAL | LS | SL | ID1 | | ID2 | | LTB | HL | G | F | OD | HD |
|------|-------|-------|------|------|---------------|----------|-----------|----------|------|------|------|------|-------|------|
| | | | | | Flex or Rigid | Max Bore | Shear Hub | Max Bore | | | | | | |
| | in | in | in | in | in | m | in | mm | in | in | in | in | in | in |
| 1.5 | 5.28 | 4.38 | 2.53 | 1.27 | 1.63 | 42 | 0.938 | 24 | 1.63 | 2.25 | 0.50 | 1.13 | 3.75 | 2.38 |
| 2 | 5.56 | 4.88 | 2.56 | 1.28 | 2.13 | 56 | 1.500 | 38 | 1.88 | 2.50 | 0.50 | 1.13 | 4.75 | 3.25 |
| 2.5 | 6.50 | 5.44 | 3.06 | 1.53 | 2.63 | 70 | 1.750 | 44 | 2.00 | 2.69 | 0.75 | 1.50 | 5.50 | 3.94 |
| 3 | 7.75 | 6.38 | 3.75 | 1.88 | 3.13 | 84 | 2.250 | 57 | 2.38 | 3.25 | 0.75 | 1.63 | 6.63 | 4.75 |
| 3.5 | 8.13 | 8.13 | 4.00 | 2.00 | 3.63 | 97 | 2.625 | 66 | 4.00 | 3.38 | 0.75 | 1.75 | 7.50 | 5.38 |
| 4 | 9.50 | 9.00 | 4.63 | 2.31 | 4.13 | 111 | 3.625 | 92 | 4.13 | 4.13 | 0.75 | 2.00 | 8.75 | 6.25 |
| 4.5 | 9.88 | 9.75 | 4.88 | 2.44 | 4.75 | 130 | 4.125 | 104 | 4.75 | 4.25 | 0.75 | 2.00 | 9.50 | 7.25 |
| 5 | 11.50 | 11.50 | 5.75 | 2.88 | 5.75 | 160 | 4.500 | 114 | 5.75 | 5.00 | 0.75 | 2.25 | 10.75 | 8.25 |
| 6 | 13.13 | 13.00 | 6.50 | 3.25 | 6.63 | 186 | 5.875 | 149 | 6.13 | 6.13 | 0.75 | 2.88 | 12.25 | 9.50 |

- Notes:
- Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 1.5 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bores and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.
 - Larger sizes are available, please consult Lovejoy Technical Support.



Gear Nyflex® and Mite® Type Performance Data

Lovejoy / Sier-Bath Nylon Sleeve Gear Couplings

Nyflex® and Mite® Type Couplings

The Nyflex and Mite coupling consists of two sintered iron flex hubs, one Nylon sleeve and two Spirolox rings.

Features

- No lubrication required eliminating the need for seals
- Sintered Iron hubs with crowned teeth to provide greater misalignment and gouging of nylon sleeve
- Resilient, lightweight, abrasion and corrosion resistant nylon sleeve accurately molded to mesh with hubs eliminating friction and need of lubrication
- Center groove in sleeves readily permits their use in vertical applications and for blind assembly
- Securely held hubs and sleeves by spring-steel retaining rings yet capable of easy removal and still withstand a 5,000 lbs end thrust
- Minimum backlash operating in an ambient temperature environment of -40 to 150° F



G

Nyflex and Mite Type Performance Data

| Speed RPM | Nyflex | | | Mite | | |
|--------------|--------|-------|-----|-------|-----|------|
| | HP | in-lb | Nm | HP | in | Nm |
| 100 | 2.25 | 1,420 | 164 | 0.60 | 360 | 40.7 |
| 500 | 9.50 | 1,190 | 135 | 2.40 | 307 | 34.7 |
| 1,000 | 18.00 | 1,125 | 127 | 4.50 | 285 | 32.2 |
| 1,150 | 20.30 | 1,110 | 125 | 5.10 | 282 | 31.9 |
| 1,500 | 24.00 | 970 | 110 | 6.40 | 274 | 30.9 |
| 1,750 | 25.00 | 900 | 102 | 7.50 | 270 | 30.5 |
| 2,000 | 26.60 | 840 | 95 | 8.40 | 267 | 30.2 |
| 2,500 | 29.80 | 750 | 85 | 11.10 | 262 | 29.6 |
| 3,000 | 32.50 | 680 | 77 | 12.10 | 256 | 28.9 |
| 3,500 | 35.30 | 630 | 76 | 13.80 | 254 | 28.7 |
| 4,000 | 37.50 | 590 | 67 | 17.60 | 251 | 28.3 |
| 5,000 | 42.00 | 530 | 60 | 19.40 | 243 | 27.4 |

- Notes: ■ Angular Misalignment: Nyflex 5°; Mite 3°.
 ■ Clearance fit bores standard through 1.250 inch bores.
 ■ Interference fit bores standard over 1.250 inch bores.

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.

| Nyflex | | Mite | |
|------------|--------------|------------|--------------|
| Bore in | Keyway in | Bore in | Keyway in |
| 0.375* | No Keyway | 0.312** | No Keyway |
| 0.500 | 1/8 x 1/16 | 0.500 | 1/8 x 1/16 |
| 0.625 | 3/16 x 3/32 | 0.625 | 3/16 x 3/32 |
| 0.750 | 3/16 x 3/32 | 0.750 | 3/16 x 3/32 |
| 0.875 | 3/16 x 3/32 | 0.875 | 3/16 x 3/32 |
| 0.937 | 1/4 x 1/8 | 0.937 | 1/4 x 1/8 |
| 1.000 | 1/4 x 1/8 | 1.000 | 1/4 x 1/8 |
| 1.125 | 1/4 x 1/8 | 1.125 | 1/4 x 1/8 |
| 1.187 | 1/4 x 1/8 | | |
| 1.250 | 1/4 x 1/8 | | |
| 1.312 | 5/16 x 5/32 | | |
| 1.375 | 5/16 x 5/32 | | |
| 1.437 | 3/8 x 3/16 | | |
| 1.500 | 3/8 x 3/16 | | |
| 1.625 | 3/8 x 3/16 | | |

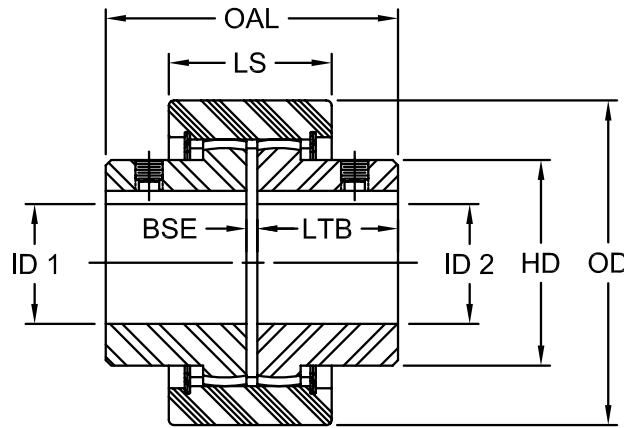
- Notes: ■ * indicates: Rough Stock Bore .375 – .390 inches.
 ■ ** indicates: Rough Stock Bore .312 – .327 inches.



Gear
Nyflex® and Mite® Type
Dimensional Data

Lovejoy / Sier-Bath Nylon Sleeve Gear Couplings

Nyflex® and Mite® Type Couplings



Nyflex and Mite Type Dimensional Data

| Size | ID1 - ID2 Max Bore in | OAL in | LS in | LTB in | BSE in | OD in | HD in | Weight lbs |
|--------|-----------------------------|-----------|----------|-----------|-----------|----------|----------|---------------|
| Nyflex | 1.625 | 3.38 | 1.88 | 1.63 | 0.13 | 3.75 | 2.38 | 3.50 |
| Mite | 1.125 | 2.38 | 1.31 | 1.13 | 0.13 | 2.88 | 1.75 | 1.00 |

- Notes:
- Clearance fit bores with set screw over keyway is standard through 1.250 inch bores.
 - Interference fit bores with no set screw is standard for bores over 1.250 inch.
 - Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.



Gear

Dentex® (Nylon Sleeve Series)

Performance Data

Dentex® Nylon Sleeve Series Flexible Couplings

The series is a standard coupling with two hubs, a nylon sleeve, and retaining rings depending on the model selected. The coupling has a precision molded nylon sleeve and powder metal hub with no bolts, pins, flanges, or protrusions that could have an effect on balance or operational safety. Since no lubrication is used, the couplings can readily be adapted to many applications including vertical and blind installations.

Features

- Compact in size
- Maintenance Free – No Lubrication required
- Can accommodate axial, angular, and parallel misalignment
- Easy to assemble
- Electrically insulating
- Can be used in temperature ranges from -25° to 80° C (optional 140° C)
- Nylon sleeve has high resistance to condensation and water, hydrocarbon based petroleum, and alcohols
- Not ideal for use with acids, benzyl based products, cresol, or glycols



Dentex® B - Series Performance Data

| Size | Torque Capacity | | | | Max Speed RPM | Misalignment | | | | Weight ¹ | | ID1 - ID2 ² | | | | |
|-------|-----------------|-------|---------|-------|---------------|-----------------|----------|------|----------|---------------------|------|------------------------|------|----------|------|-----|
| | Nominal | | Maximum | | | Angular Degrees | Axial | | Parallel | | | Min Bore | | Max Bore | | |
| | in-lbs | Nm | in-lbs | Nm | | | in | mm | in | mm | in | mm | in | mm | | |
| B 14 | 89 | 10 | 177 | 20 | 8,000 | 1° Per Hub | +/-0.039 | +/-1 | 0.012 | 0.3 | 0.2 | 0.4 | 0.25 | 6 | 0.56 | 14 |
| B 19 | 142 | 16 | 283 | 32 | 8,000 | | | | 0.012 | 0.3 | 0.3 | 0.7 | 0.38 | 9 | 0.75 | 19 |
| B 24 | 177 | 20 | 354 | 40 | 8,000 | | | | 0.016 | 0.4 | 0.3 | 0.7 | 0.44 | 10 | 0.94 | 24 |
| B 28 | 398 | 45 | 797 | 90 | 8,000 | | | | 0.016 | 0.4 | 0.7 | 1.6 | 0.44 | 10 | 1.13 | 28 |
| B 32 | 531 | 60 | 1,062 | 120 | 7,000 | | | | 0.016 | 0.4 | 1.0 | 2.1 | 0.50 | 12 | 1.25 | 32 |
| B 38 | 708 | 80 | 1,416 | 160 | 6,000 | | | | 0.016 | 0.4 | 1.2 | 2.7 | 0.56 | 14 | 1.38 | 38 |
| B 42 | 885 | 100 | 1,770 | 200 | 5,400 | | | | 0.016 | 0.4 | 1.5 | 3.3 | 0.81 | 20 | 1.56 | 42 |
| B 48 | 1,239 | 140 | 2,478 | 280 | 5,000 | | | | 0.016 | 0.4 | 1.8 | 4.0 | 0.81 | 20 | 1.75 | 48 |
| B 55 | 2,213 | 250 | 4,425 | 500 | 4,000 | | | | 0.016 | 0.4 | 3.5 | 7.6 | 1.00 | 25 | 2.06 | 55 |
| B 65 | 3,452 | 390 | 6,903 | 780 | 3,800 | | | | 0.024 | 0.6 | 5.2 | 11.4 | 1.25 | 32 | 2.38 | 65 |
| B 80 | 6,195 | 700 | 12,390 | 1,400 | 3,000 | | | | 0.028 | 0.7 | 11.5 | 25.3 | 1.19 | 30 | 3.00 | 80 |
| B 100 | 11,063 | 1,250 | 22,125 | 2,500 | 2,400 | | | | 0.031 | 0.8 | 20.5 | 45.2 | 1.62 | 40 | 3.75 | 100 |

Notes: ■ 1 indicates: Weight is calculated using maximum bore and no keyway.
 ■ 2 indicates: Minimum and maximum bore sizes are given for straight bores. For Taper bores and splines, contact Lovejoy Technical Support.

Dentex® B4R - Series Performance Data

| Size | Torque Capacity | | | | Max Speed RPM | Misalignment | | | | Weight 1 | | ID1 - ID2 2 | | | | |
|---------|-----------------|-------|---------|-------|---------------|-----------------|----------|------|----------|----------|------|-------------|------|----------|------|-----|
| | Nominal | | Maximum | | | Angular Degrees | Axial | | Parallel | | | Min Bore | | Max Bore | | |
| | in-lbs | Nm | in-lbs | Nm | | | in | mm | in | mm | in | mm | in | mm | | |
| B4R 32 | 708 | 80 | 1,416 | 160 | 7,000 | 1° Per Hub | +/-0.039 | +/-1 | 0.016 | 0.4 | 1.1 | 2.4 | 0.50 | 12 | 1.25 | 32 |
| B4R 45 | 1,239 | 140 | 2,478 | 280 | 5,000 | | | | 0.016 | 0.4 | 1.5 | 3.3 | 0.81 | 20 | 1.56 | 42 |
| B4R 65 | 3,452 | 390 | 6,903 | 780 | 3,800 | | | | 0.024 | 0.6 | 5.4 | 11.9 | 1.00 | 25 | 2.38 | 65 |
| B4R 80 | 6,195 | 700 | 12,390 | 1,400 | 3,000 | | | | 0.028 | 0.7 | 11.7 | 25.8 | 1.19 | 30 | 3.00 | 80 |
| B4R 100 | 11,063 | 1,250 | 22,125 | 2,400 | 2,400 | | | | 0.031 | 0.8 | 20.8 | 45.9 | 1.62 | 40 | 3.75 | 100 |

Notes: ■ 1 indicates: Weight is calculated using maximum bore and no keyway.
 ■ 2 indicates: Minimum and maximum bore sizes are given for straight bores. For Taper bores and splines, contact Lovejoy Technical Support.

Dentex® B3R - Series Performance Data

| Size | Torque Capacity | | | | Max Speed RPM | Misalignment | | | | Weight 1 | | ID1 - ID2 2 | | | | |
|---------|-----------------|-------|---------|-------|---------------|-----------------|----------|------|----------|----------|------|-------------|------|----------|------|-----|
| | Nominal | | Maximum | | | Angular Degrees | Axial | | Parallel | | | Min Bore | | Max Bore | | |
| | in-lbs | Nm | in-lbs | Nm | | | in | mm | in | mm | in | mm | in | mm | | |
| B3R 24 | 177 | 20 | 354 | 40 | 10,200 | 1° Per Hub | +/-0.039 | +/-1 | 0.016 | 0.4 | 0.3 | 0.7 | 0.44 | 10 | 0.94 | 24 |
| B3R 28 | 398 | 45 | 797 | 90 | 8,300 | | | | 0.016 | 0.4 | 0.8 | 1.8 | 0.44 | 10 | 1.13 | 28 |
| B3R 32 | 708 | 80 | 1,416 | 160 | 7,000 | | | | 0.016 | 0.4 | 1.1 | 2.4 | 0.50 | 12 | 1.25 | 32 |
| B3R 45 | 1,239 | 140 | 2,478 | 280 | 5,000 | | | | 0.016 | 0.4 | 1.5 | 3.3 | 0.81 | 20 | 1.56 | 42 |
| B3R 65 | 3,452 | 390 | 6,903 | 780 | 3,800 | | | | 0.024 | 0.6 | 5.4 | 11.9 | 1.25 | 32 | 2.38 | 65 |
| B3R 80 | 6,195 | 700 | 12,390 | 1,400 | 3,000 | | | | 0.028 | 0.7 | 11.6 | 25.6 | 1.19 | 30 | 3.00 | 80 |
| B3R 100 | 11,063 | 1,250 | 22,125 | 2,400 | 2,400 | | | | 0.031 | 0.8 | 20.7 | 45.6 | 1.62 | 40 | 3.75 | 100 |

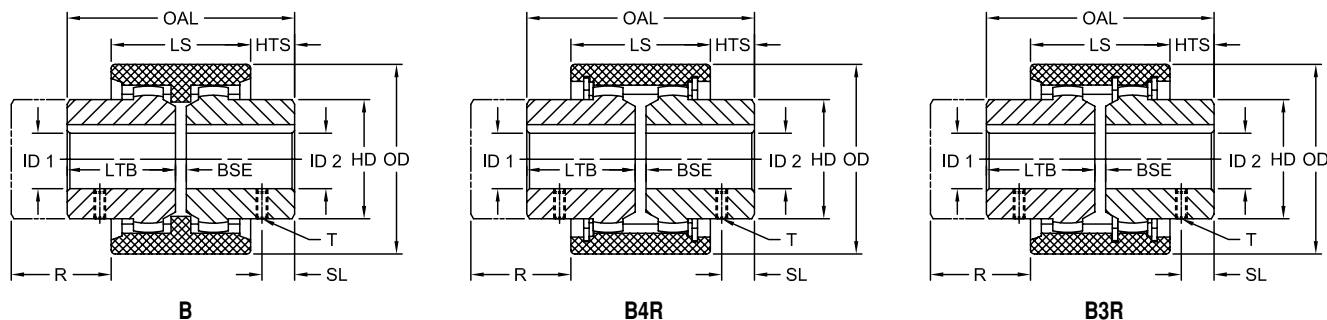
Notes: ■ 1 indicates: Weight is calculated using maximum bore and no keyway.
 ■ 2 indicates: Minimum and maximum bore sizes are given for straight bores. For Taper bores and splines, contact Lovejoy Technical Support.



Gear

Dentex® (Nylon Sleeve Series)

Dimensional Data



Dentex® B - Series Dimensional Data

| Size | OAL | | LS | | HTS | | LTB | | BSE | | OD | | HD | | R (Clearance) | | T - Metric Set Screw | | T - Inch Set Screw | |
|-------|------|-----|------|-----|------|------|------|-----|------|----|------|-----|------|-----|---------------|------|----------------------|---------|--------------------|---------|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Size | SL (mm) | Size | SL (in) |
| B 14 | 1.97 | 50 | 1.46 | 37 | 0.26 | 6.5 | 0.91 | 23 | 0.16 | 4 | 1.57 | 40 | 0.98 | 25 | 0.65 | 16.5 | M5 | 6 | 10-24 | 0.24 |
| B 19 | 2.13 | 54 | 1.46 | 37 | 0.28 | 7.0 | 0.98 | 25 | 0.16 | 4 | 1.89 | 48 | 1.18 | 30 | 0.71 | 18.0 | M5 | 6 | 10-24 | 0.24 |
| B 24 | 2.20 | 56 | 1.61 | 41 | 0.30 | 7.5 | 1.02 | 26 | 0.16 | 4 | 2.05 | 52 | 1.42 | 36 | 0.73 | 18.5 | M5 | 6 | 10-24 | 0.24 |
| B 28 | 3.31 | 84 | 1.81 | 46 | 0.75 | 19.0 | 1.57 | 40 | 0.16 | 4 | 2.60 | 66 | 1.73 | 44 | 0.83 | 21.0 | M8 | 10 | 5/16-18 | 0.39 |
| B 32 | 3.31 | 84 | 1.89 | 48 | 0.71 | 18.0 | 1.57 | 40 | 0.16 | 4 | 2.99 | 76 | 1.97 | 50 | 0.87 | 22.0 | M8 | 10 | 5/16-18 | 0.39 |
| B 38 | 3.31 | 84 | 1.89 | 48 | 0.71 | 18.0 | 1.57 | 40 | 0.16 | 4 | 3.27 | 83 | 2.28 | 58 | 0.87 | 22.0 | M8 | 10 | 5/16-18 | 0.39 |
| B 42 | 3.46 | 88 | 1.97 | 50 | 0.75 | 19.0 | 1.65 | 42 | 0.16 | 4 | 3.62 | 92 | 2.56 | 65 | 0.91 | 23.0 | M8 | 10 | 5/16-18 | 0.39 |
| B 48 | 4.09 | 104 | 1.97 | 50 | 1.06 | 27.0 | 1.97 | 50 | 0.16 | 4 | 3.94 | 100 | 2.68 | 68 | 0.91 | 23.0 | M8 | 10 | 5/16-18 | 0.39 |
| B 55 | 4.88 | 124 | 2.56 | 65 | 1.16 | 29.5 | 2.36 | 60 | 0.16 | 4 | 4.92 | 125 | 3.27 | 83 | 1.20 | 30.5 | M10 | 20 | 3/8-16 | 0.79 |
| B 65 | 5.67 | 144 | 2.83 | 72 | 1.42 | 36.0 | 2.76 | 70 | 0.16 | 4 | 5.51 | 140 | 3.78 | 96 | 1.34 | 34.0 | M10 | 20 | 3/8-16 | 0.79 |
| B 80 | 7.32 | 186 | 3.66 | 93 | 1.83 | 46.5 | 3.54 | 90 | 0.24 | 6 | 6.89 | 175 | 4.88 | 124 | 1.71 | 43.5 | M10 | 20 | 3/8-16 | 0.79 |
| B 100 | 8.98 | 228 | 4.02 | 102 | 2.48 | 63.0 | 4.33 | 110 | 0.31 | 8 | 8.27 | 210 | 5.98 | 152 | 1.85 | 47.0 | M12 | 30 | 3/8-16 | 1.18 |

Dentex® B4R - Series Dimensional Data

| Size | OAL | | LS | | HTS | | LTB | | BSE | | OD | | HD | | R (Clearance) | | T - Metric Set Screw | | T - Inch Set Screw | |
|---------|------|-----|------|-----|------|------|------|-----|------|----|------|-----|------|-----|---------------|------|----------------------|---------|--------------------|---------|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Size | SL (mm) | Size | SL (in) |
| B4R 32 | 3.31 | 84 | 2.28 | 58 | 0.51 | 13.0 | 1.57 | 40 | 0.16 | 4 | 3.31 | 84 | 1.97 | 50 | 1.06 | 27.0 | M8 | 10 | 5/16-18 | 0.39 |
| B4R 45 | 3.46 | 88 | 2.36 | 60 | 0.55 | 14.0 | 1.65 | 42 | 0.16 | 4 | 3.94 | 100 | 2.56 | 65 | 1.10 | 28.0 | M8 | 10 | 5/16-18 | 0.39 |
| B4R 65 | 5.67 | 144 | 3.31 | 84 | 1.18 | 30.0 | 2.76 | 70 | 0.16 | 4 | 5.51 | 140 | 3.78 | 96 | 1.57 | 40.0 | M10 | 20 | 3/8-16 | 0.79 |
| B4R 80 | 7.32 | 186 | 3.66 | 93 | 1.83 | 46.5 | 3.54 | 90 | 0.24 | 6 | 6.89 | 175 | 4.88 | 124 | 1.71 | 43.5 | M10 | 20 | 3/8-16 | 0.79 |
| B4R 100 | 8.98 | 228 | 4.02 | 102 | 2.48 | 63.0 | 4.33 | 110 | 0.31 | 8 | 8.27 | 210 | 5.98 | 152 | 1.85 | 47.0 | M12 | 30 | 3/8-16 | 0.79 |

Dentex® B3R - Series Dimensional Data

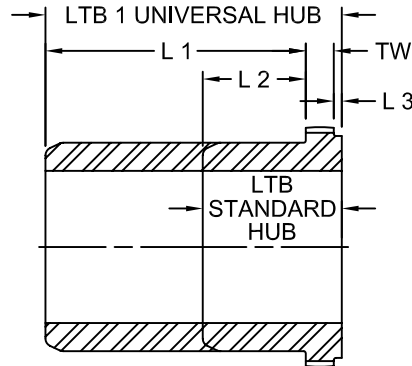
| Size | OAL | | LS | | HTS | | LTB | | BSE | | OD | | HD | | R (Clearance) | | T - Metric Set Screw | | T - Inch Set Screw | |
|---------|------|-----|------|-----|------|------|------|-----|------|----|------|-----|------|-----|---------------|------|----------------------|---------|--------------------|---------|
| | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Size | SL (mm) | Size | SL (in) |
| B3R 24 | 2.20 | 56 | 2.01 | 51 | 0.10 | 2.5 | 1.02 | 26 | 0.16 | 4 | 2.28 | 58 | 1.42 | 36 | 0.93 | 23.5 | M5 | 6 | 10-24 | 0.24 |
| B3R 28 | 3.31 | 84 | 2.20 | 56 | 0.55 | 14.0 | 1.57 | 40 | 0.16 | 4 | 2.76 | 70 | 1.73 | 44 | 1.02 | 26.0 | M8 | 10 | 3/8-16 | 0.39 |
| B3R 32 | 3.31 | 84 | 2.28 | 58 | 0.51 | 13.0 | 1.57 | 40 | 0.16 | 4 | 3.31 | 84 | 1.97 | 50 | 1.06 | 27.0 | M8 | 10 | 3/8-16 | 0.39 |
| B3R 45 | 3.46 | 88 | 2.36 | 60 | 0.55 | 14.0 | 1.65 | 42 | 0.16 | 4 | 3.94 | 100 | 2.56 | 65 | 1.10 | 28.0 | M8 | 10 | 3/8-16 | 0.39 |
| B3R 65 | 5.67 | 144 | 3.31 | 84 | 1.18 | 30.0 | 2.76 | 70 | 0.16 | 4 | 5.51 | 140 | 3.78 | 96 | 1.57 | 40.0 | M10 | 20 | 3/8-16 | 0.39 |
| B3R 80 | 7.32 | 186 | 3.66 | 93 | 1.83 | 46.5 | 3.54 | 90 | 0.24 | 6 | 6.89 | 175 | 4.88 | 124 | 1.71 | 43.5 | M10 | 20 | 3/8-16 | 0.39 |
| B3R 100 | 8.98 | 228 | 4.02 | 102 | 2.48 | 63.0 | 4.33 | 110 | 0.31 | 8 | 8.27 | 210 | 5.98 | 152 | 1.85 | 47.0 | M12 | 30 | 3/8-16 | 0.39 |

Notes: ■ Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 ■ Metric bores and keyway tolerances conform to ISO 286 and ANSI / AGMA 9112-A04.



Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

C Type Universal Hub



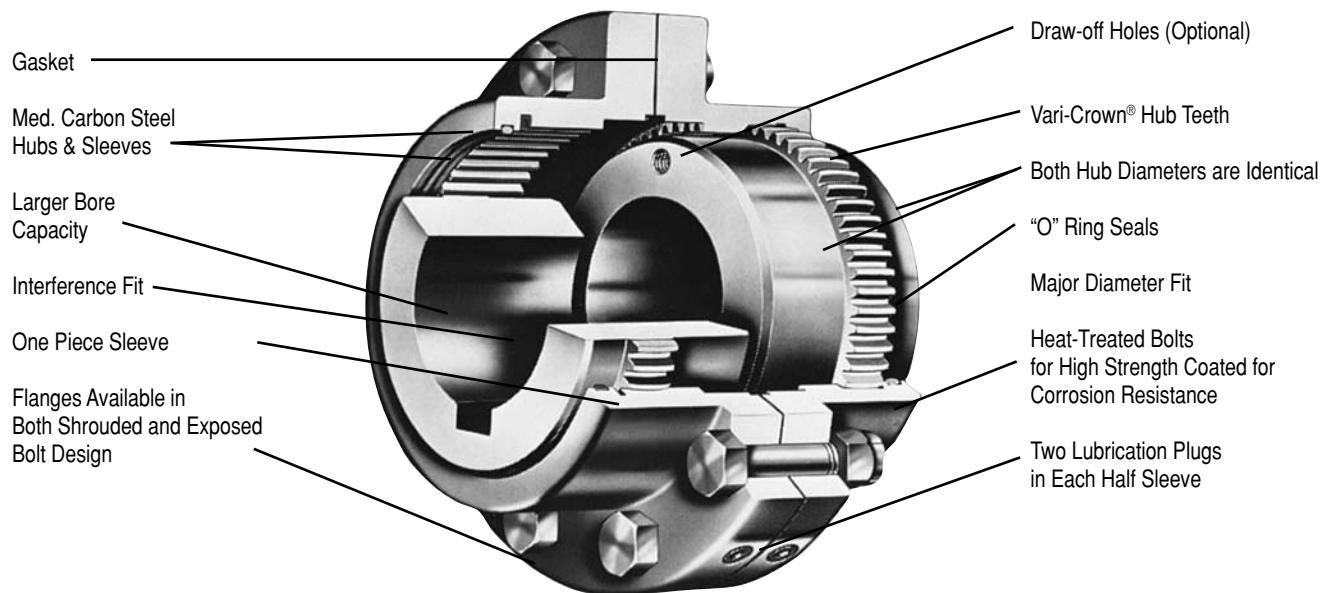
C Standard and Universal Hub Dimensions

| Size | L1 in | L2 in | L3 in | TW in | LTB STD HUB in | LTB1 UNIV HUB in |
|------|----------|----------|----------|----------|----------------------|------------------------|
| 7/8 | 3.38 | 1.13 | 0.13 | 0.25 | 1.50 | 3.75 |
| 1.5 | 3.36 | 1.17 | 0.13 | 0.52 | 1.81 | 4.00 |
| 2 | 4.06 | 1.50 | 0.13 | 0.44 | 2.06 | 4.63 |
| 2.5 | 4.39 | 1.52 | 0.16 | 0.58 | 2.25 | 5.13 |
| 3 | 4.89 | 1.77 | 0.25 | 0.61 | 2.63 | 5.75 |
| 3.5 | 5.58 | 3.33 | 0.25 | 0.67 | 4.25 | 6.50 |
| 4 | 5.52 | 3.27 | 0.25 | 0.86 | 4.38 | 6.63 |
| 4.5 | 6.64 | 3.89 | 0.25 | 0.86 | 5.00 | 7.75 |
| 5 | 6.39 | 4.52 | 0.25 | 1.23 | 6.00 | 7.88 |
| 6 | 7.64 | 4.52 | 0.25 | 1.61 | 6.38 | 9.50 |



Gear Flanged Sleeve Cut Away

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings





**Gear
F Type
Performance Data**

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

F Type Flex-Flex Couplings

The F Type coupling consists of two flex hubs, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards



F Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Axial Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|-------|-----------|---------|------------------|-----|--------|-----|--------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | | | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 0.056 | 1.4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | 0.060 | 1.5 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 34 | 15 | 0.085 | 2.2 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 54 | 25 | 0.105 | 2.7 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | 0.115 | 2.9 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 130 | 59 | 0.130 | 3.3 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 190 | 86 | 0.150 | 3.8 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 250 | 114 | 0.175 | 4.4 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | 0.200 | 5.1 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | 0.220 | 5.6 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | 0.120 | 3.0 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.00 | 127 | 950 | 431 | 0.135 | 3.4 | |
| 8 | 1,323,000 | 149 500 | 1,900 | 2,850 | 11.500 | 310 | 6.00 | 152 | 1,560 | 708 | 0.160 | 4.1 | |
| 9 | 1,827,000 | 206 400 | 1,800 | 2,700 | 12.500 | 340 | 6.00 | 177 | 2,015 | 915 | 0.165 | 4.2 | |

Ordering Information

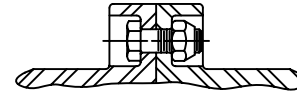
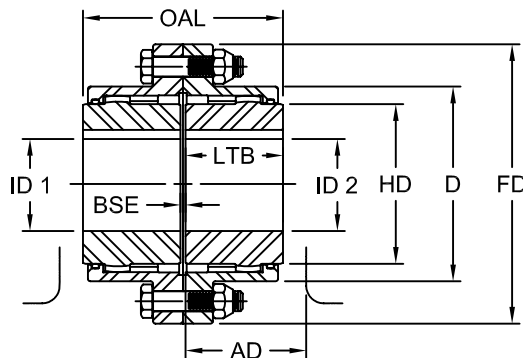
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



**Gear
F Type
Dimensional Data**

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

F Type Flex-Flex Couplings



Shrouded bolt design also available

F Type Dimensional Data

| Size | OAL in | ID1 - ID2 | | | | LTB in | BSE in | AD in | FD in | D in | HD in |
|------|-----------|-----------|-----|------------------|-----|-----------|-----------|----------|----------|---------|----------|
| | | Max Bore | | Rough Stock Bore | | | | | | | |
| | | in | mm | in | mm | | | | | | |
| 1 | 3.50 | 1.625 | 42 | 0.44 | 11 | 1.69 | 0.13 | 2.04 | 4.56 | 3.06 | 2.31 |
| 1.5 | 4.00 | 2.125 | 56 | 0.69 | 18 | 1.94 | 0.13 | 2.32 | 6.00 | 3.97 | 3.00 |
| 2 | 5.00 | 2.750 | 73 | 0.94 | 24 | 2.44 | 0.13 | 2.94 | 7.00 | 4.86 | 4.00 |
| 2.5 | 6.25 | 3.250 | 85 | 1.44 | 37 | 3.03 | 0.19 | 3.47 | 8.38 | 5.84 | 4.63 |
| 3 | 7.38 | 4.000 | 107 | 1.44 | 37 | 3.59 | 0.19 | 3.97 | 9.44 | 6.84 | 5.63 |
| 3.5 | 8.63 | 4.625 | 125 | 1.81 | 46 | 4.19 | 0.25 | 4.57 | 11.00 | 7.91 | 6.50 |
| 4 | 9.75 | 5.375 | 145 | 2.44 | 62 | 4.75 | 0.25 | 5.00 | 12.50 | 9.25 | 7.50 |
| 4.5 | 10.94 | 6.000 | 165 | 3.00 | 76 | 5.31 | 0.31 | 5.50 | 13.63 | 10.38 | 8.50 |
| 5 | 12.38 | 6.500 | 180 | 3.00 | 76 | 6.03 | 0.31 | 6.34 | 15.31 | 11.56 | 9.50 |
| 5.5 | 14.13 | 7.500 | 200 | 4.00 | 101 | 6.91 | 0.31 | 7.04 | 16.75 | 12.72 | 10.50 |
| 6 | 15.13 | 8.250 | 225 | 4.00 | 101 | 7.41 | 0.31 | 8.35 | 18.00 | 14.00 | 11.50 |
| 7 | 17.75 | 9.500 | 255 | 5.00 | 127 | 8.69 | 0.38 | 9.82 | 20.75 | 15.75 | 13.00 |
| 8 | 22.38 | 11.500 | 310 | 6.00 | 152 | 11.00 | 0.38 | 12.31 | 23.25 | 18.34 | 15.50 |
| 9 | 23.50 | 12.500 | 340 | 6.00 | 177 | 11.50 | 0.50 | 13.00 | 26.00 | 20.38 | 17.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FFR Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFR Single Engagement (Flex-Rigid)

The FFR Type coupling consists of one flex hub, one rigid hub, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



Features

- Patented Vari-Crown® tooth form on the Flex Hub for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates angular misalignment only
- Half coupling interchangeable with industry standards

G FFR Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 | | | | ID2 | | | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|---------|--------------------|-----|----------------------------|-----|---------------------|-----|-----------------------------|-------|--------|-----|-------------------------------------|
| | | | | | Flex Hubs Max Bore | | Flex Hubs Rough Stock Bore | | Rigid Hubs Max Bore | | Rigid Hubs Rough Stock Bore | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | in | mm | in | mm | lbs | kg | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 2.125 | 56 | solid | solid | 9 | 4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 2.813 | 76 | solid | solid | 17 | 8 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 3.500 | 95 | solid | solid | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 4.250 | 114 | solid | solid | 55 | 25 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 4.875 | 134 | solid | solid | 86 | 39 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 5.625 | 150 | solid | solid | 125 | 61 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 6.500 | 176 | solid | solid | 195 | 89 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 7.625 | 202 | solid | solid | 268 | 122 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 8.750 | 230 | 4.00 | 101 | 394 | 179 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 9.500 | 260 | 4.50 | 114 | 526 | 239 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 10.500 | 285 | 5.50 | 127 | 687 | 312 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.00 | 127 | 12.000 | 320 | 5.75 | 139 | 1,017 | 462 | |
| 8 | 1,323,000 | 149 500 | 1,900 | 2,850 | 11.500 | 310 | 6.00 | 152 | 14.000 | 375 | 6.50 | 165 | 1,609 | 730 | |
| 9 | 1,827,000 | 206 400 | 1,800 | 2,700 | 12.500 | 340 | 7.00 | 177 | 15.500 | 415 | 7.50 | 190 | 2,128 | 966 | |

Ordering Information

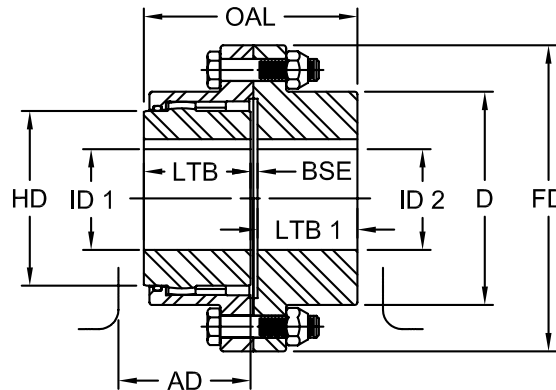
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FFR Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFR Type Flex-Rigid Couplings



FFR Type Dimensional Data

| Size | OAL in | ID1 | | | | ID2 | | | | LTB in | LTB 1 in | BSE in | AD in | FD in | D in | HD in |
|------|-----------|-----------------------|-----|----------------------------------|-----|------------------------|-----|-----------------------------------|-------|-----------|-------------|-----------|----------|----------|---------|----------|
| | | Flex Hubs Max Bore | | Flex Hubs Rough Stock Bore | | Rigid Hubs Max Bore | | Rigid Hubs Rough Stock Bore | | | | | | | | |
| | | in | mm | in | mm | in | mm | in | mm | | | | | | | |
| 1 | 3.41 | 1.625 | 42 | 0.44 | 11 | 2.125 | 56 | solid | solid | 1.69 | 1.56 | 0.16 | 2.19 | 4.56 | 3.06 | 2.31 |
| 1.5 | 3.94 | 2.125 | 56 | 0.69 | 18 | 2.813 | 76 | solid | solid | 1.94 | 1.84 | 0.16 | 2.47 | 6.00 | 3.97 | 3.00 |
| 2 | 4.88 | 2.750 | 73 | 0.94 | 24 | 3.500 | 95 | solid | solid | 2.44 | 2.28 | 0.16 | 3.10 | 7.00 | 4.86 | 4.00 |
| 2.5 | 6.13 | 3.250 | 85 | 1.44 | 37 | 4.250 | 114 | solid | solid | 3.03 | 2.91 | 0.19 | 3.65 | 8.38 | 5.84 | 4.63 |
| 3 | 7.19 | 4.000 | 107 | 1.44 | 37 | 4.875 | 134 | solid | solid | 3.59 | 3.41 | 0.19 | 4.15 | 9.44 | 6.84 | 5.63 |
| 3.5 | 8.38 | 4.625 | 125 | 1.81 | 46 | 5.625 | 150 | solid | solid | 4.19 | 3.97 | 0.22 | 4.78 | 11.00 | 7.91 | 6.50 |
| 4 | 9.50 | 5.375 | 145 | 2.44 | 62 | 6.500 | 176 | solid | solid | 4.75 | 4.44 | 0.31 | 5.31 | 12.50 | 9.25 | 7.50 |
| 4.5 | 10.69 | 6.000 | 165 | 3.00 | 76 | 7.625 | 202 | solid | solid | 5.31 | 5.03 | 0.34 | 5.97 | 13.63 | 10.38 | 8.50 |
| 5 | 12.06 | 6.500 | 180 | 3.00 | 76 | 8.750 | 230 | 4.00 | 101 | 6.03 | 5.69 | 0.34 | 6.69 | 15.31 | 11.56 | 9.50 |
| 5.5 | 13.41 | 7.500 | 200 | 4.00 | 101 | 9.500 | 260 | 4.50 | 114 | 6.91 | 6.16 | 0.34 | 7.34 | 16.75 | 12.72 | 10.50 |
| 6 | 15.22 | 8.250 | 225 | 4.00 | 101 | 10.500 | 285 | 5.50 | 127 | 7.41 | 7.41 | 0.41 | 8.78 | 18.00 | 14.00 | 11.50 |
| 7 | 17.88 | 9.500 | 255 | 5.00 | 127 | 12.000 | 322 | 5.75 | 139 | 8.69 | 8.69 | 0.50 | 10.31 | 20.75 | 15.75 | 13.00 |
| 8 | 22.50 | 11.500 | 310 | 6.00 | 152 | 14.000 | 375 | 6.50 | 165 | 11.00 | 11.00 | 0.50 | 12.81 | 23.25 | 18.34 | 15.50 |
| 9 | 23.56 | 12.500 | 340 | 7.00 | 177 | 15.500 | 415 | 7.50 | 190 | 11.50 | 11.50 | 0.56 | 13.56 | 26.00 | 20.38 | 17.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FFS Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FFS – Floating Shaft Gear Coupling

The FFS Type coupling consists of two flex-rigid couplings and one floating shaft. This coupling is supplied with rigid hubs outboard unless otherwise specified. Exposed bolts are standard. Shrouded bolts are available upon request tru sizes 5.5.



Features

- Patented Vari-Crown® tooth form on Flex Hubs for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates angular, parallel, and axial misalignment
- Removal of center assembly allows for ease of maintenance without repositioning machinery
- Rigid hubs outboard allows for larger shaft diameters

G

FFS Type Performance Data

| Size | Nominal Torque | | Maximum Speed ¹ | | ID1 - ID2 | | ID1 - ID2 | | ID1 - ID2 | | ID1 - ID2 | | Weight | | Angular Misalignment Max Degrees |
|------|----------------|---------|----------------------------|---------|---------------------|-----|-----------------------------|-----|--------------------|-----|----------------------------|-----|--------|-----|----------------------------------|
| | in-lb | Nm | Unbal RPM | Bal RPM | Rigid Hubs Max Bore | | Rigid Hubs Rough Stock Bore | | Flex Hubs Max Bore | | Flex Hubs Rough Stock Bore | | lbs | kg | |
| | | | | | in | mm | in | mm | in | mm | in | mm | | | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 2.125 | 56 | Solid w/Center | | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.813 | 76 | | | 2.125 | 56 | 0.69 | 18 | 19 | 9 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 3.500 | 95 | | | 2.750 | 73 | 0.94 | 24 | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 4.250 | 114 | | | 3.250 | 85 | 1.44 | 37 | 54 | 25 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.875 | 134 | | | 4.000 | 107 | 1.44 | 37 | 80 | 36 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 5.625 | 150 | | | 4.625 | 125 | 1.81 | 46 | 130 | 59 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 6.500 | 176 | | | 5.375 | 145 | 2.44 | 62 | 190 | 86 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 7.625 | 202 | | | 6.000 | 165 | 3.00 | 76 | 250 | 114 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 8.750 | 231 | 4.000 | 101 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 9.500 | 260 | 4.500 | 114 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 10.500 | 288 | 5.500 | 127 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 12.000 | 318 | 5.750 | 139 | 9.500 | 255 | 5.00 | 127 | 950 | 431 | |
| 8 | 1,323,000 | 149 500 | 1,900 | 2,850 | 14.000 | 380 | 6.500 | 165 | 11.500 | 310 | 6.00 | 152 | 1,560 | 708 | |
| 9 | 1,827,000 | 206 400 | 1,800 | 2,700 | 15.500 | 418 | 7.500 | 190 | 12.500 | 340 | 6.00 | 177 | 2,015 | 915 | |

Note: ■ 1 indicates: Maximum RPM of floating shaft set determined by critical speed of floating shaft.

Ordering Information

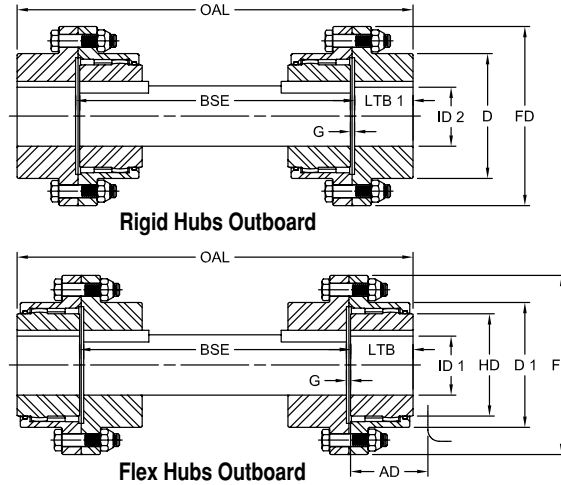
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Equipment shaft sizes.
- Specify which hubs are to be used on the equipment (Rigid or Flex).
- Rigid hubs will be used on the equipment unless otherwise specified.



Gear FFS Type Dimensional Data

Lovejoy / Sier-Bath Flanged Gear Couplings

FFS Type Floating Shaft Couplings



Maximum RPM of floating shaft set determined by critical speed of floating shaft

FFS Type Dimensional Data

| Size | OAL Min in | BSE Min in | ID1 - ID2 | | | | ID1 - ID2 | | | | LTB 1 in | LTB in | G in | AD in | FD in | D in | D 1 in | HD in | | |
|------|------------------|------------------|------------------------|-----|-----------------------------------|-----|-----------------------|-----|----------------------------------|-----|-------------|-----------|---------|----------|----------|---------|-----------|----------|-------|------|
| | | | Rigid Hubs Max Bore | | Rigid Hubs Rough Stock Bore | | Flex Hubs Max Bore | | Flex Hubs Rough Stock Bore | | | | | | | | | | | |
| | | | in | mm | in | mm | in | mm | in | mm | | | | | | | | | | |
| 1 | 8.07 | 4.94 | 2.125 | 56 | Solid w/Center | | | | 1.625 | 42 | 0.44 | 11 | 1.56 | 1.69 | 0.16 | 2.06 | 4.56 | 3.06 | 3.06 | 2.31 |
| 1.5 | 9.19 | 5.50 | 2.813 | 76 | | | | | 2.125 | 56 | 0.69 | 18 | 1.84 | 1.94 | 0.16 | 2.37 | 6.00 | 3.97 | 3.97 | 3.00 |
| 2 | 12.06 | 7.50 | 3.500 | 95 | | | | | 2.750 | 73 | 0.94 | 24 | 2.28 | 2.44 | 0.16 | 2.94 | 7.00 | 4.84 | 4.91 | 4.00 |
| 2.5 | 14.37 | 8.56 | 4.250 | 114 | | | | | 3.250 | 85 | 1.44 | 37 | 2.91 | 3.03 | 0.19 | 3.53 | 8.38 | 5.84 | 5.91 | 4.63 |
| 3 | 16.69 | 9.88 | 4.875 | 134 | | | | | 4.000 | 107 | 1.44 | 37 | 3.41 | 3.59 | 0.19 | 3.97 | 9.44 | 6.84 | 6.91 | 5.63 |
| 3.5 | 19.25 | 11.31 | 5.625 | 150 | | | | | 4.625 | 125 | 1.81 | 46 | 3.97 | 4.19 | 0.22 | 4.56 | 11.00 | 7.91 | 7.91 | 6.50 |
| 4 | 21.82 | 12.94 | 6.500 | 176 | | | | | 5.375 | 145 | 2.44 | 62 | 4.44 | 4.75 | 0.31 | 5.00 | 12.50 | 9.25 | 9.25 | 7.50 |
| 4.5 | 24.69 | 14.63 | 7.625 | 202 | | | | | 6.000 | 165 | 3.00 | 76 | 5.03 | 5.31 | 0.34 | 5.69 | 13.63 | 10.38 | 10.38 | 8.50 |
| 5 | 28.07 | 16.69 | 8.750 | 231 | 4.000 | 101 | 6.500 | 180 | 3.00 | 76 | 5.69 | 6.03 | 0.34 | 6.35 | 15.31 | 11.56 | 11.56 | 9.50 | | |
| 5.5 | 30.87 | 18.56 | 9.500 | 260 | 4.500 | 114 | 7.500 | 200 | 4.00 | 101 | 6.16 | 6.91 | 0.34 | 6.59 | 16.75 | 12.72 | 12.81 | 10.50 | | |
| 6 | 35.37 | 20.56 | 10.500 | 288 | 5.500 | 127 | 8.250 | 225 | 4.00 | 101 | 7.41 | 7.41 | 0.41 | 8.78 | 18.00 | 14.00 | 14.00 | 11.50 | | |
| 7 | 40.63 | 23.25 | 12.000 | 318 | 5.750 | 139 | 9.500 | 255 | 5.00 | 127 | 8.69 | 8.69 | 0.50 | 10.31 | 20.75 | 15.75 | 15.75 | 13.00 | | |
| 8 | 49.63 | 27.63 | 14.000 | 380 | 6.500 | 165 | 11.500 | 310 | 6.00 | 152 | 11.00 | 11.00 | 0.50 | 12.81 | 23.25 | 18.34 | 18.50 | 15.50 | | |
| 9 | 52.13 | 29.13 | 15.500 | 418 | 7.500 | 190 | 12.500 | 340 | 6.00 | 177 | 11.50 | 11.50 | 0.56 | 13.56 | 26.00 | 20.38 | 20.38 | 17.00 | | |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bores and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FHD Type
Performance Data

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHD Type Flex-Flex Couplings

The FHD Type coupling consists of two flex hubs, two sleeves with bolt-on steel carriers and one accessory kit. This coupling is supplied with exposed bolts only.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Designed for high-torque low-speed applications that occur in mill operations



FHD Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | Weight | | Parallel Misalignment | | Angular Misalignment Degrees |
|------|----------------|-----------|---------------|---------|--------------------------|-----|--------|--------|-----------------------|-------|------------------------------|
| | | | | | Max Bore Standard Keyway | | | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | lbs | kg | in | mm | |
| 7 | 1,008,000 | 110 000 | 2,000 | 3,000 | 9.500 | 255 | 950 | 431 | 0.135 | 3.429 | 0.75° Per Gear Mesh |
| 8 | 1 235,000 | 150 000 | 1,900 | 2,850 | 11.500 | 310 | 1,560 | 708 | 0.160 | 4.064 | |
| 9 | 1,827,700 | 210 000 | 1,750 | 2,625 | 12.500 | 340 | 2,015 | 915 | 0.165 | 4.191 | |
| 10 | 2,521,000 | 280 000 | 1,550 | 2,325 | 13.750 | 355 | 2,500 | 1,135 | 0.180 | 4.572 | |
| 11 | 3,466,000 | 390 000 | 1,400 | 2,100 | 15.500 | 410 | 3,380 | 1,535 | 0.205 | 5.207 | |
| 12 | 4,412,000 | 500 000 | 1,300 | 1,950 | 17.000 | 435 | 4,165 | 1,891 | 0.210 | 5.334 | |
| 13 | 5,249,000 | 600 000 | 1,150 | 1,725 | 18.250 | 480 | 5,215 | 2,368 | 0.230 | 5.842 | |
| 14 | 6,429,000 | 730 000 | 1,050 | 1,575 | 19.500 | — | 6,400 | 2,906 | 0.255 | 6.477 | |
| 15 | 7,752,000 | 880 000 | 900 | 1,350 | 21.000 | — | 7,710 | 3,500 | 0.280 | 7.112 | |
| 16 | 9,454,000 | 1 070 000 | 800 | 1,200 | 22.500 | — | 9,250 | 4,200 | 0.295 | 7.493 | |
| 18 | 12,605,000 | 1 420 000 | 550 | 825 | 25.500 | — | 11,890 | 5,398 | 0.295 | 7.493 | |
| 20 | 17,017,000 | 1 920 000 | 450 | 675 | 28.000 | — | 16,830 | 7,641 | 0.280 | 7.112 | |
| 22 | 21,429,000 | 2 420 000 | 380 | 570 | 31.000 | — | 21,970 | 9,974 | 0.310 | 7.874 | |
| 24 | 26,471,000 | 2 990 000 | 325 | 485 | 34.000 | — | 27,735 | 12,592 | 0.300 | 7.620 | |
| 26 | 32,773,000 | 3 700 000 | 280 | 420 | 37.000 | — | 34,370 | 15,604 | 0.300 | 7.620 | |
| 28 | 39,076,000 | 4 410 000 | 240 | 360 | 40.000 | — | 40,910 | 18,573 | 0.320 | 8.128 | |
| 30 | 47,269,000 | 5 340 000 | 220 | 330 | 42.000 | — | 47,470 | 21,551 | 0.320 | 8.128 | |

Ordering Information

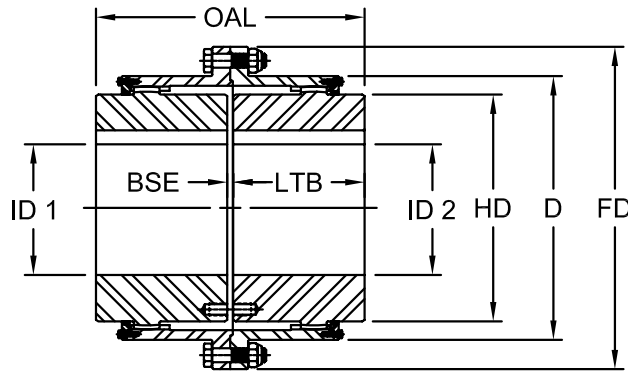
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FHD Type
Dimensional Data

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHD Type Flex-Flex Couplings



FHD Type Dimensional Data

| Size | OAL in | ID1 - ID2 Max Bore Standard Keyway | | 1 Rectangular Keyway | | LTB in | BSE in | FD in | D in | HD in |
|------|-----------|---|-----|-------------------------|-------------|-----------|-----------|----------|---------|----------|
| | | in | mm | Width in | Depth in | | | | | |
| 7 | 17.25 | 9.500 | 255 | 2.5000 | 0.8750 | 8.69 | 0.38 | 20.75 | 15.75 | 13.00 |
| 8 | 22.38 | 11.500 | 310 | 3.0000 | 1.0000 | 11.00 | 0.38 | 23.25 | 18.34 | 15.50 |
| 9 | 23.50 | 12.500 | 340 | 3.0000 | 1.0000 | 11.50 | 0.50 | 26.00 | 20.38 | 17.00 |
| 10 | 24.50 | 13.750 | 355 | 3.5000 | 1.2500 | 12.00 | 0.50 | 28.00 | 22.31 | 18.50 |
| 11 | 26.75 | 15.500 | 410 | 4.0000 | 1.5000 | 13.13 | 0.50 | 30.50 | 24.36 | 21.00 |
| 12 | 28.25 | 17.000 | 435 | 4.0000 | 1.5000 | 13.88 | 0.50 | 33.00 | 26.63 | 22.75 |
| 13 | 30.00 | 18.250 | 480 | 5.0000 | 1.7500 | 14.63 | 0.75 | 33.75 | 28.88 | 24.75 |
| 14 | 31.75 | 19.500 | — | 5.0000 | 1.7500 | 15.50 | 0.75 | 38.00 | 31.00 | 26.50 |
| 15 | 33.75 | 21.000 | — | 5.0000 | 1.7500 | 16.50 | 0.75 | 40.50 | 32.97 | 28.50 |
| 16 | 35.75 | 22.500 | — | 6.0000 | 2.0000 | 17.38 | 1.00 | 43.00 | 35.13 | 30.38 |
| 18 | 37.00 | 25.500 | — | 6.0000 | 2.0000 | 18.00 | 1.00 | 47.25 | 39.25 | 34.25 |
| 20 | 43.25 | 28.000 | — | 7.0000 | 2.5000 | 21.13 | 1.00 | 53.50 | 43.50 | 38.00 |
| 22 | 47.00 | 31.000 | — | 8.0000 | 2.7500 | 23.00 | 1.00 | 59.00 | 47.63 | 41.81 |
| 24 | 50.50 | 34.000 | — | 9.0000 | 3.0000 | 24.75 | 1.00 | 64.25 | 51.75 | 45.50 |
| 26 | 54.00 | 37.000 | — | 9.0000 | 3.0000 | 26.50 | 1.00 | 68.50 | 55.88 | 49.38 |
| 28 | 55.25 | 40.000 | — | 10.0000 | 3.5000 | 27.13 | 1.00 | 73.75 | 60.00 | 53.00 |
| 30 | 56.25 | 42.000 | — | 10.0000 | 3.5000 | 27.63 | 1.00 | 78.00 | 64.13 | 57.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Puller Holes are standard.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores above 18 inches, keyways conform to ANSI B17.1.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FHDFR Type
Performance Data

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFR Type Flex-Rigid Couplings

The FHDFR Type coupling consists of one flex hub, one sleeve with bolt-on seal carrier, one rigid hub and one accessory kit. This coupling is supplied with exposed bolts only.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Designed for high-torque low-speed applications that occur in mill operations



G FHDFR Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 | | ID2 | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|-------|---------------|---------|--------------------|---------------------|------------|------------|--------|--------|----------------------------------|
| | | | | | Flex Hubs Max Bore | Rigid Hubs Max Bore | Std Keyway | Std Keyway | | | |
| | in-lb x 1000 | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | |
| 7 | 1,008 | 110 | 2,000 | 3,000 | 9.500 | 255 | 12.000 | 320 | 1,017 | 462 | 0.75° Per Gear Mesh |
| 8 | 1,324 | 150 | 1,900 | 2,850 | 11.500 | 310 | 14.000 | 375 | 1,609 | 730 | |
| 9 | 1,827 | 210 | 1,750 | 2,625 | 12.500 | 340 | 15.500 | 415 | 2,128 | 966 | |
| 10 | 2,521 | 280 | 1,550 | 2,325 | 13.750 | 355 | 17.000 | 455 | 2,723 | 1,236 | |
| 11 | 3,466 | 390 | 1,400 | 2,100 | 15.500 | 410 | 18.500 | 500 | 3,640 | 1,653 | |
| 12 | 4,412 | 500 | 1,300 | 1,950 | 17.000 | 435 | 20.250 | — | 4,508 | 2,047 | |
| 13 | 5,249 | 600 | 1,150 | 1,725 | 18.250 | 480 | 22.000 | — | 5,600 | 2,542 | |
| 14 | 6,429 | 730 | 1,050 | 1,575 | 19.500 | — | 23.500 | — | 6,837 | 3,104 | |
| 15 | 7,752 | 880 | 900 | 1,350 | 21.000 | — | 24.250 | — | 8,244 | 3,743 | |
| 16 | 9,454 | 1 070 | 800 | 1,200 | 22.500 | — | 26.000 | — | 9,848 | 4,471 | |
| 18 | 12,605 | 1 420 | 550 | 825 | 25.500 | — | 28.000 | — | 12,673 | 5,754 | |
| 20 | 17,017 | 1 920 | 450 | 675 | 28.000 | — | 31.000 | — | 18,113 | 8,223 | |
| 22 | 21,429 | 2 420 | 380 | 570 | 31.000 | — | 34.000 | — | 23,671 | 10,747 | |
| 24 | 26,471 | 2 990 | 325 | 485 | 34.000 | — | 37.000 | — | 29,958 | 13,601 | |
| 26 | 32,773 | 3 700 | 280 | 420 | 37.000 | — | 40.000 | — | 37,014 | 16,845 | |
| 28 | 39,076 | 4 410 | 240 | 360 | 40.000 | — | 43.000 | — | 44,012 | 19,981 | |
| 30 | 47,269 | 5 340 | 220 | 330 | 42.000 | — | 46.000 | — | 51,065 | 23,184 | |

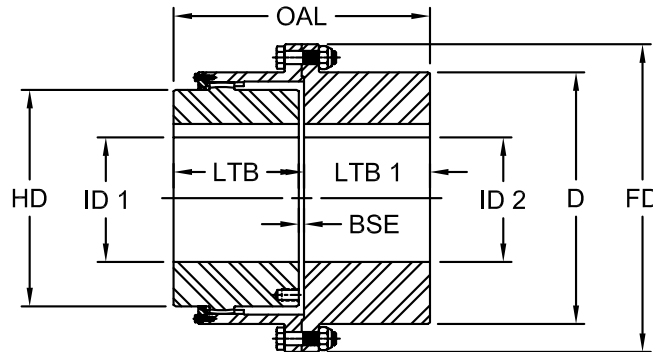
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFR Type Flex-Rigid Couplings



FHDFR Type Dimensional Data

| Size | OAL in | ID1 | | ID2 | | LTB in | LTB1 in | BSE in | FD in | D in | HD in |
|------|-----------|---|-----|--|-----|-----------|------------|-----------|----------|---------|----------|
| | | Flex Hubs Max Bore Std Keyway in | mm | Rigid Hubs Max Bore Std Keyway in | mm | | | | | | |
| 7 | 17.81 | 9.500 | 255 | 12.000 | 320 | 8.69 | 8.69 | 0.50 | 20.75 | 15.75 | 13.00 |
| 8 | 22.50 | 11.500 | 310 | 14.000 | 375 | 11.00 | 11.00 | 0.50 | 23.25 | 18.34 | 15.50 |
| 9 | 23.56 | 12.500 | 340 | 15.500 | 415 | 11.50 | 11.50 | 0.56 | 26.00 | 20.38 | 17.00 |
| 10 | 24.63 | 13.750 | 355 | 17.000 | 455 | 12.00 | 12.00 | 0.63 | 28.00 | 22.31 | 18.50 |
| 11 | 26.88 | 15.500 | 410 | 18.500 | 500 | 13.13 | 13.13 | 0.63 | 30.50 | 24.36 | 21.00 |
| 12 | 28.38 | 17.000 | 435 | 20.250 | — | 13.88 | 13.88 | 0.63 | 33.00 | 26.63 | 22.75 |
| 13 | 30.00 | 18.250 | 480 | 22.000 | — | 14.63 | 14.63 | 0.75 | 33.75 | 28.88 | 24.75 |
| 14 | 31.75 | 19.500 | — | 23.500 | — | 15.50 | 15.50 | 0.75 | 38.00 | 31.00 | 26.50 |
| 15 | 33.75 | 21.000 | — | 24.250 | — | 16.50 | 16.50 | 0.75 | 40.50 | 32.97 | 28.50 |
| 16 | 35.75 | 22.500 | — | 26.000 | — | 17.38 | 17.38 | 1.00 | 43.00 | 35.13 | 30.38 |
| 18 | 37.00 | 25.500 | — | 28.000 | — | 18.00 | 18.00 | 1.00 | 47.25 | 39.25 | 34.25 |
| 20 | 43.25 | 28.000 | — | 31.000 | — | 21.13 | 21.13 | 1.00 | 53.50 | 43.50 | 38.00 |
| 22 | 47.13 | 31.000 | — | 34.000 | — | 23.00 | 23.00 | 1.13 | 59.00 | 47.63 | 41.81 |
| 24 | 50.63 | 34.000 | — | 37.000 | — | 24.75 | 24.75 | 1.13 | 64.25 | 51.75 | 45.50 |
| 26 | 54.13 | 37.000 | — | 40.000 | — | 26.50 | 26.50 | 1.13 | 68.50 | 55.88 | 49.38 |
| 28 | 55.38 | 40.000 | — | 43.000 | — | 27.13 | 27.13 | 1.13 | 73.75 | 60.00 | 53.00 |
| 30 | 56.38 | 42.000 | — | 46.000 | — | 27.63 | 27.63 | 1.13 | 78.00 | 64.13 | 57.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Puller Holes are standard.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores above 18 inches, keyways are to ANSI B17.1.
 - Metric bore and keyway tolerances conform to ISO 286 and ANSI / AGMA 9112-A04.
 - Consult Lovejoy Technical Support for metric bores larger than 500mm.



Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFS Type Floating Shaft Couplings

The FHDFS Type coupling consists of two flex-rigid couplings and one floating shaft. The coupling is supplied with the rigid hubs outboard unless otherwise specified. The coupling comes with exposed bolts only.

Features

- Patented Vari-Crown® tooth form on Flex Hubs for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Accommodates parallel and angular misalignment
- Removal of center assembly allows forease of maintenance without repositioning machinery
- Rigid hubs outboard allows for larger shaft diameters
- Designed for high-torque low-speed applications that occur in mill operations

G

FHDFS Type Performance Data

| Size | Nominal Torque | | Maximum Speed ¹ | | ID1 | | ID2 | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|-----------|----------------------------|---------|-------------------------------|-----|--------------------------------|-----|--------|--------|----------------------------------|
| | | | | | Flex Hubs Max Bore Std Keyway | | Rigid Hubs Max Bore Std Keyway | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 12.000 | 320 | 1,017 | 462 | 0.75° Per Gear Mesh |
| 8 | 1,323,000 | 149 000 | 1,900 | 2,850 | 11.500 | 310 | 14.000 | 375 | 1,609 | 730 | |
| 9 | 1,827,000 | 206 400 | 1,750 | 2,625 | 12.500 | 340 | 15.500 | 415 | 2,128 | 966 | |
| 10 | 2,500,000 | 280 000 | 1,550 | 2,325 | 13.750 | 355 | 17.000 | 455 | 2,723 | 1,236 | |
| 11 | 3,500,000 | 390 000 | 1,400 | 2,100 | 15.500 | 410 | 18.500 | 500 | 3,640 | 1,653 | |
| 12 | 4,400,000 | 500 000 | 1,300 | 1,950 | 17.000 | 435 | 20.250 | — | 4,508 | 2,047 | |
| 13 | 5,300,000 | 600 000 | 1,150 | 1,725 | 18.250 | 480 | 22.000 | — | 5,600 | 2,542 | |
| 14 | 6,400,000 | 730 000 | 1,050 | 1,575 | 19.500 | — | 23.500 | — | 6,837 | 3,104 | |
| 15 | 7,700,000 | 880 000 | 900 | 1,350 | 21.000 | — | 24.250 | — | 8,244 | 3,743 | |
| 16 | 9,500,000 | 1 070 000 | 800 | 1,200 | 22.500 | — | 26.000 | — | 9,848 | 4,471 | |
| 18 | 12,600,000 | 1 420 000 | 550 | 825 | 25.500 | — | 28.000 | — | 12,673 | 5,754 | |
| 20 | 17,000,000 | 1 920 000 | 450 | 675 | 28.000 | — | 31.000 | — | 18,113 | 8,223 | |
| 22 | 21,400,000 | 2 420 000 | 380 | 570 | 31.000 | — | 34.000 | — | 23,671 | 10,747 | |
| 24 | 26,500,000 | 2 990 000 | 325 | 488 | 34.000 | — | 37.000 | — | 29,958 | 13,601 | |
| 26 | 32,800,000 | 3 700 000 | 280 | 420 | 37.000 | — | 40.000 | — | 37,104 | 16,845 | |
| 28 | 39,100,000 | 4 410 000 | 240 | 360 | 40.000 | — | 43.000 | — | 44,012 | 19,981 | |
| 30 | 47,300,000 | 5 340 000 | 220 | 330 | 42.000 | — | 46.000 | — | 51,065 | 23,184 | |

Note: ■ 1 indicates: Maximum RPM of floating shaft set determined by critical speed of floating shaft.

Ordering Information

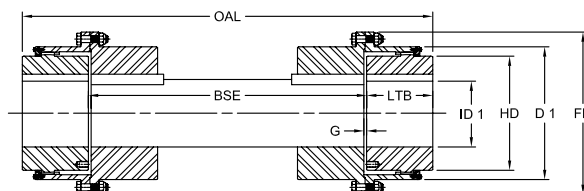
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Connecting equipment shaft sizes.
- Specify which hubs are to be used on the equipment (Rigid or Flex).
- Rigid hubs will be used on the equipment unless otherwise specified.
- Length of floating shaft may affect max angular misalignment.



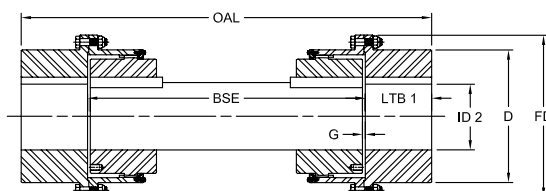
Gear
FHDFS Type
Dimensional Data

Lovejoy / Sier-Bath Heavy Duty Flanged Sleeve Gear Couplings

FHDFS Type Floating Shaft Couplings



Flex Hubs Outboard



Rigid Hubs Outboard

Maximum RPM of floating shaft set determined by critical speed of floating shaft

FHDFS Type Dimensional Data

| Size | OAL in | BSE in | ID1 | | ID2 | | LTB 1 in | LTB in | G in | FD in | D in | D 1 in | HD in |
|------|---|-----------|--------|-----|--------|-------|-------------|-----------|---------|----------|---------|-----------|----------|
| | | | in | mm | in | mm | | | | | | | |
| 7 | To Be Determined From Customer Specifications | | 9.500 | 255 | 12.000 | 320 | 8.69 | 8.69 | 0.50 | 20.75 | 15.75 | 15.75 | 13.00 |
| 8 | | | 11.500 | 310 | 14.000 | 375 | 11.00 | 11.00 | 0.50 | 23.25 | 18.34 | 18.50 | 15.50 |
| 9 | | | 12.500 | 340 | 15.500 | 415 | 11.50 | 11.50 | 0.56 | 26.00 | 20.38 | 20.38 | 17.00 |
| 10 | | | 13.750 | 355 | 17.000 | 455 | 12.00 | 12.00 | 0.63 | 28.00 | 22.31 | 22.38 | 18.50 |
| 11 | | | 15.500 | 410 | 18.500 | 500 | 13.13 | 13.13 | 0.63 | 30.50 | 24.36 | 24.50 | 21.00 |
| 12 | | | 17.000 | 435 | 20.250 | — | 13.88 | 13.88 | 0.63 | 33.00 | 26.63 | 26.63 | 22.75 |
| 13 | | | 18.250 | 480 | 22.000 | — | 14.63 | 14.63 | 0.75 | 33.75 | 28.88 | 28.88 | 24.75 |
| 14 | | | 19.500 | — | 23.500 | — | 15.50 | 15.50 | 0.75 | 38.00 | 31.00 | 31.00 | 26.50 |
| 15 | | | 21.000 | — | 24.250 | — | 16.50 | 16.50 | 0.75 | 40.50 | 32.97 | 33.13 | 28.50 |
| 16 | | | 22.500 | — | 26.000 | — | 17.38 | 17.38 | 1.00 | 43.00 | 35.13 | 35.13 | 30.38 |
| 18 | | | 25.500 | — | 28.000 | — | 18.00 | 18.00 | 1.00 | 47.25 | 39.25 | 39.25 | 34.25 |
| 20 | | | 28.000 | — | 31.000 | — | 21.13 | 21.13 | 1.00 | 53.50 | 43.50 | 43.50 | 38.00 |
| 22 | | | 31.000 | — | 34.000 | — | 23.00 | 23.00 | 1.13 | 59.00 | 47.63 | 47.63 | 41.81 |
| 24 | | | 34.000 | — | 37.000 | — | 24.75 | 24.75 | 1.13 | 64.25 | 51.75 | 51.75 | 45.50 |
| 26 | | | 37.000 | — | 40.000 | — | 26.50 | 26.50 | 1.13 | 68.50 | 55.88 | 55.88 | 49.38 |
| 28 | 40.000 | — | 43.000 | — | 27.13 | 27.13 | 1.13 | 73.75 | 60.00 | 60.00 | 53.00 | | |
| 30 | 42.000 | — | 46.000 | — | 27.63 | 27.63 | 1.13 | 78.00 | 64.13 | 64.13 | 57.00 | | |

- Exposed Bolt Design is standard.
- Puller Holes are standard.
- Interference bores with no set screws are standard unless otherwise specified.
- Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04, for bores about 18 inches, keyways are to ANSI B17.1.
- For metric bore and keyway tolerances, consult Lovejoy Engineering Section.
- Consult Lovejoy Technical Support for metric bores larger than 500mm.



Gear
FMM Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Couplings

The FMM Type coupling consists of one standard flex hub, one universal straight bored hub as standard, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub supplied to customer specifications with straight or tapered bores



G

FMM Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|---------|-----------|-----|------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | in | mm | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 12 | 5 | 0.056 | 1.4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 24 | 11 | 0.060 | 1.5 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 45 | 20 | 0.085 | 2.2 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 71 | 32 | 0.105 | 2.7 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 104 | 47 | 0.115 | 2.9 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 151 | 69 | 0.130 | 3.3 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 234 | 86 | 0.150 | 3.8 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 310 | 141 | 0.175 | 4.4 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 450 | 204 | 0.200 | 5.1 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 609 | 276 | 0.220 | 5.6 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 764 | 347 | 0.120 | 3.0 | |

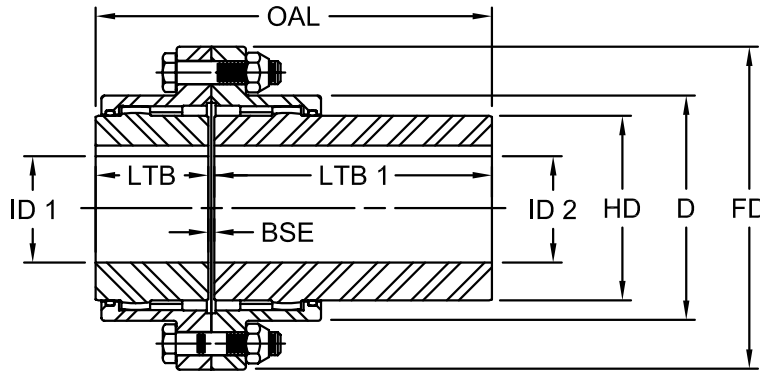
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Taper per foot and length of taper if tapered bore is required.
- Specify counterbore dimensions if desired.
- Submit a drawing if available.



Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Couplings



FMM Type Dimensional Data

| Size | OAL in | ID1 - ID2 | | | | LTB in | LTB1 Max in | BSE in | FD in | D in | HD in |
|------|-----------|-----------|-----|------------------|-----|-----------|-------------------|-----------|----------|---------|----------|
| | | Max Bore | | Rough Stock Bore | | | | | | | |
| | | in | mm | in | mm | | | | | | |
| 1 | 5.81 | 1.625 | 42 | 0.44 | 11 | 1.69 | 4.00 | 0.13 | 4.56 | 3.06 | 2.31 |
| 1.5 | 6.56 | 2.125 | 56 | 0.69 | 18 | 1.94 | 4.50 | 0.13 | 6.00 | 3.97 | 3.00 |
| 2 | 8.06 | 2.750 | 73 | 0.94 | 24 | 2.44 | 5.50 | 0.13 | 7.00 | 4.86 | 4.00 |
| 2.5 | 9.72 | 3.250 | 85 | 1.44 | 37 | 3.03 | 6.50 | 0.19 | 8.38 | 5.84 | 4.63 |
| 3 | 10.78 | 4.000 | 107 | 1.44 | 37 | 3.59 | 7.00 | 0.19 | 9.44 | 6.84 | 5.63 |
| 3.5 | 11.94 | 4.625 | 125 | 1.81 | 46 | 4.19 | 7.50 | 0.25 | 11.00 | 7.91 | 6.50 |
| 4 | 13.25 | 5.375 | 145 | 2.44 | 62 | 4.75 | 8.25 | 0.25 | 12.50 | 9.25 | 7.50 |
| 4.5 | 14.63 | 6.000 | 165 | 3.00 | 76 | 5.31 | 9.00 | 0.31 | 13.63 | 10.38 | 8.50 |
| 5 | 15.84 | 6.500 | 180 | 3.00 | 76 | 6.03 | 9.50 | 0.31 | 15.31 | 11.56 | 9.50 |
| 5.5 | 17.72 | 7.500 | 200 | 4.00 | 101 | 6.91 | 10.50 | 0.31 | 16.75 | 12.72 | 10.50 |
| 6 | 18.97 | 8.250 | 225 | 4.00 | 101 | 7.41 | 11.25 | 0.31 | 18.00 | 14.00 | 11.50 |

- Notes:
- LTB1 Dimensions are the maximum lengths of Universal Hubs kept in stock and altered to customer specifications. Longer length hubs are made to order.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FMM Mill Motor Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Motor Couplings

The FMM Type coupling consists of one standard flex hub, one universal straight bored hub as standard, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub used for AISE Motor Frames



G

FMM Type Mill Motor Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|--------|---------------|---------|-----------|-----|------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | | | | | in | mm | in | mm | | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | | | | | | | | | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 12 | 5 | 0.056 | 1.4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 24 | 11 | 0.060 | 1.5 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.75 | 73 | 0.94 | 24 | 45 | 20 | 0.085 | 2.2 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.25 | 85 | 1.44 | 37 | 71 | 32 | 0.105 | 2.7 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 104 | 47 | 0.115 | 2.9 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 151 | 69 | 0.130 | 3.3 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 234 | 86 | 0.150 | 3.8 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 310 | 141 | 0.175 | 4.4 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 450 | 204 | 0.200 | 5.1 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 609 | 276 | 0.220 | 5.6 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 764 | 347 | 0.120 | 3.0 | |

Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Mill Motor frame size.
- Submit a drawing if available.



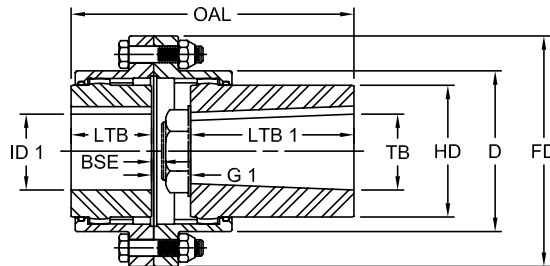
Gear

FMM Mill Motor Type

Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FMM Type Mill Motor Couplings



FMM Type Mill Motor Dimensional Data

| Size | AISE Frame No | OAL in | ID1 in | LTB in | LTB1 in | G1 in | BSE in | FD in | D in | HD in | TB in | Mill Motor Hub Kw | |
|------|---------------|--------|--------|--------|---------|--------|--------|-------|-------|-------|-----------------|-------------------|------|
| | | | | | | | | | | | | W in | H in |
| 1.5 | 602/802 | 6.00 | 2.125 | 1.94 | 3.00 | 1.06 * | 0.13 | 6.00 | 3.97 | 3.00 | 1.7485 - 1.7495 | 0.50 | 0.25 |
| | 603/803 | 6.56 | | | 3.50 | 1.13 * | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 6.56 | | | 3.50 | 1.13 * | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| 2 | 603/803 | 7.06 | 2.750 | 2.44 | 3.50 | 1.13 | 0.13 | 7.00 | 4.86 | 4.00 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 7.06 | | | 3.50 | 1.13 | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 606/806 | 7.69 | | | 4.00 | 1.25 | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| 2.5 | 603/803 | 7.72 | 3.250 | 3.03 | 3.50 | 1.19 | 0.19 | 8.38 | 5.84 | 4.63 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 7.72 | | | 3.50 | 1.19 | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 606/806 | 8.34 | | | 4.00 | 1.31 | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| 3 | 608/808 | 8.34 | 4.000 | 3.59 | 4.50 | 1.44 | 0.19 | 9.44 | 6.84 | 5.63 | 2.998 - 2.999 | 0.75 | 0.25 |
| | 606/806 | 8.91 | | | 4.00 | 1.31 | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| | 612/812 | 10.28 | | | 5.00 | 1.69 | | | | | 3.623 - 3.624 | 0.75 | 0.25 |
| 3.5 | 608/808 | 10.19 | 4.625 | 4.19 | 4.50 | 1.50 | 0.25 | 11.00 | 7.91 | 6.50 | 2.998 - 2.999 | 0.75 | 0.25 |
| | 610/810 | 10.31 | | | 4.50 | 1.63 | | | | | 3.248 - 3.249 | 0.75 | 0.25 |
| | 612/812 | 10.94 | | | 5.00 | 1.75 | | | | | 3.623 - 3.624 | 0.75 | 0.25 |
| 4 | 614/814 | 11.06 | 5.375 | 4.75 | 5.00 | 1.88 | 0.25 | 12.50 | 9.25 | 7.50 | 4.270 - 4.2485 | 1.00 | 0.38 |
| | 610/810 | 10.88 | | | 4.50 | 1.63 | | | | | 3.248 - 3.249 | 0.75 | 0.25 |
| | 612/812 | 11.50 | | | 5.00 | 1.75 | | | | | 3.623 - 3.624 | 0.75 | 0.25 |
| 4.5 | 614/814 | 11.63 | 6.000 | 5.31 | 5.00 | 1.88 | 0.31 | 13.63 | 10.38 | 8.50 | 4.2470 - 4.2485 | 1.00 | 0.38 |
| | 616/816 | 12.25 | | | 5.50 | 2.06 | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| | 618/818 | 12.31 | | | 6.00 | 1.56 | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| 5 | 614/814 | 12.25 | 6.500 | 6.03 | 5.00 | 1.94 | 0.31 | 15.31 | 11.56 | 9.50 | 4.2470 - 4.2485 | 1.00 | 0.38 |
| | 616/816 | 12.97 | | | 5.50 | 2.06 | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| | 618/818 | 13.66 | | | 6.00 | 1.63 | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| 5.5 | 620 | 14.84 | 7.500 | 6.91 | 6.75 | 2.06 | 0.31 | 16.75 | 12.72 | 10.50 | 5.8720 - 5.8735 | 1.50 | 0.75 |
| | 616/816 | 14.47 | | | 5.50 | 2.06 | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| | 618/818 | 14.53 | | | 6.00 | 1.63 | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| 6 | 620 | 15.72 | 8.250 | 7.41 | 6.75 | 2.06 | 0.31 | 18.00 | 14.00 | 11.50 | 5.8720 - 5.8735 | 1.50 | 0.75 |
| | 622 | 16.84 | | | 7.25 | 2.69 | | | | | 6.2470 - 6.2485 | 1.50 | 0.75 |
| | 616/816 | 14.97 | | | 5.50 | 2.06 | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| 6 | 618/818 | 15.03 | 8.250 | 7.41 | 6.00 | 1.63 | 0.31 | 18.00 | 14.00 | 11.50 | 4.9970 - 4.9985 | 1.25 | 0.50 |
| | 620 | 16.22 | | | 6.75 | 2.06 | | | | | 5.8720 - 5.8735 | 1.50 | 0.75 |
| | 622 | 17.34 | | | 7.25 | 2.69 | | | | | 6.2470 - 6.2485 | 1.50 | 0.75 |

- Notes:
- * indicates: That a counterbore is required.
 - Bore taper is 1-1/4 inch per foot on diameter.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1.5 through 5.5.
 - Puller Holes are standard on sizes 4 through 6.
 - Puller Holes are available for sizes 1.5 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to ANSI / AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.
 - 1/4 inch hub standoff.



Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSL Type Slide Coupling

The FSL Type coupling consists of one or two modified flex hubs depending on the maximum slide required, two sleeves, one plate with lube holes and one accessory kit. The coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Assembled to suit a wide range of axial movement
- Plates with lube holes so both halves of the coupling will be adequately lubricated

G

FSL Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|---------|-----------|-----|------------------|-----|--------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 54 | 25 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 130 | 59 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 190 | 86 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 250 | 114 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.75 | 139 | 950 | 431 | |

Ordering Information

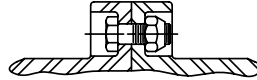
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (maximum-minimum shaft separation).
- Shaft sizes.
- Amount of slide required.



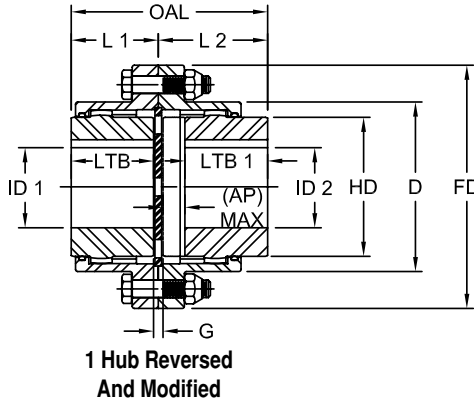
Gear
FSL Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

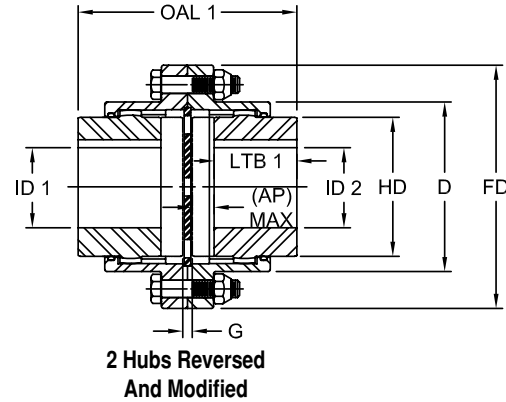
FSL Type Slide Couplings



Shrouded Bolt Design
Also Available



1 Hub Reversed
And Modified



2 Hubs Reversed
And Modified

FSL Type Dimensional Data

| Size | OAL | OAL1 | L1 Std Hub | L2 Slide Half | ID1 - ID2 | | | | LTB Std Hub | LTB1 Slide Hub | AP ¹ Max | G Min | FD | D | HD |
|------|---------------------|----------------------|------------------|---------------------|-----------|-----|---------------------|-----|-------------------|----------------------|------------------------|----------|-------|-------|-------|
| | One Hub Reversed | Two Hubs Reversed | | | Max Bore | | Rough Stock Bore | | | | | | | | |
| | in | in | | | in | mm | in | mm | | | | | | | |
| 1 | 3.81 | 4.13 | 1.75 | 2.06 | 1.625 | 42 | 0.44 | 11 | 1.59 | 1.50 | 0.41 | 0.31 | 4.56 | 3.06 | 2.31 |
| 1.5 | 4.25 | 4.50 | 2.00 | 2.25 | 2.125 | 56 | 0.69 | 18 | 1.84 | 1.75 | 0.34 | 0.31 | 6.00 | 3.97 | 3.00 |
| 2 | 5.69 | 6.38 | 2.50 | 3.19 | 2.750 | 73 | 0.94 | 24 | 2.34 | 2.25 | 0.78 | 0.31 | 7.00 | 4.86 | 4.00 |
| 2.5 | 7.03 | 7.81 | 3.13 | 3.91 | 3.250 | 85 | 1.44 | 37 | 2.94 | 2.78 | 0.94 | 0.38 | 8.38 | 5.84 | 4.63 |
| 3 | 8.03 | 8.69 | 3.69 | 4.34 | 4.000 | 107 | 1.44 | 37 | 3.50 | 3.13 | 1.03 | 0.38 | 9.44 | 6.84 | 5.63 |
| 3.5 | 9.19 | 9.75 | 4.31 | 4.88 | 4.625 | 125 | 1.81 | 46 | 4.09 | 3.59 | 1.06 | 0.44 | 11.00 | 7.91 | 6.50 |
| 4 | 10.44 | 11.13 | 4.88 | 5.56 | 5.375 | 145 | 2.44 | 62 | 4.56 | 3.94 | 1.31 | 0.63 | 12.50 | 9.25 | 7.50 |
| 4.5 | 12.00 | 13.06 | 5.47 | 6.53 | 6.000 | 165 | 3.00 | 76 | 5.13 | 4.50 | 1.69 | 0.69 | 13.63 | 10.38 | 8.50 |
| 5 | 13.72 | 15.06 | 6.19 | 7.53 | 6.500 | 180 | 3.00 | 76 | 5.84 | 5.22 | 1.97 | 0.69 | 15.31 | 11.56 | 9.50 |
| 5.5 | 15.34 | 16.56 | 7.06 | 8.28 | 7.500 | 200 | 4.00 | 101 | 6.72 | 5.88 | 2.06 | 0.69 | 16.75 | 12.72 | 10.50 |
| 6 | 16.53 | 17.94 | 7.56 | 8.97 | 8.250 | 225 | 4.00 | 101 | 7.16 | 7.09 | 1.47 | 0.81 | 18.00 | 14.00 | 11.50 |
| 7 | 19.06 | 20.38 | 8.88 | 10.19 | 9.500 | 255 | 5.75 | 139 | 8.38 | 7.78 | 1.91 | 1.00 | 20.75 | 15.75 | 13.00 |

- Notes:
- 1 indicates: AP Max = Maximum slide per coupling half.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FSLX Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSLX Type Long Slide Couplings

The FSLX Type basic coupling consists of a standard flex half and a custom designed long slide half. The standard flex half can be replaced by a reversed and modified hub for additional slide requirement. These couplings are also supplied with a plate with lube holes. The coupling is supplied with exposed bolts as standard. Shrouded bolts available upon request through size 5.5.



Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Assembled to suit a wide range of axial movement
- Plates with lube holes so both halves of the coupling will be adequately lubricated

G

FSLX Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|-------|-----------|---------|------------------|-----|--------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | 1.5° Per Gear Mesh |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 54 | 25 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 130 | 59 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 190 | 86 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 250 | 114 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.75 | 139 | 950 | 431 | |

Ordering Information

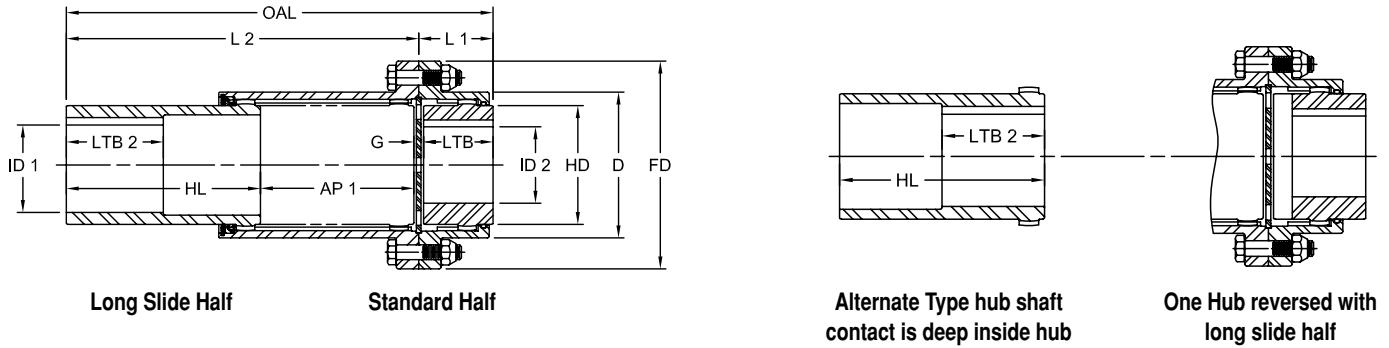
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (maximum-minimum shaft separation).
- Shaft sizes.
- Amount of slide required.
- HL Dimension.
- LTB2 Dimension.



Gear FSLX Type Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSLX Type Long Slide Couplings



FSLX Type Dimensional Data

| Size | OAL | L1 Std Hub | L2 Slide Half | ID1 - ID2 | | | | LTB Std Hub | LTB2 Slide Hub | G Min | AP1 Long Slide Max | AP2 Long Slide w/one Hub Reversed Max | AP3 Long Slide Both Ends Max | HL | FD | D | HD |
|------|-------|------------------|---------------------|-----------|-----|------------------------|-----|-------------------|----------------------|----------|-----------------------------|---|---------------------------------------|-------|-------|-------|-------|
| | | | | Max Bore | | Rough Stock Bore | | | | | | | | | | | |
| | | | | in | mm | in | mm | | | | | | | | | | |
| 1.5 | 10.41 | 2.00 | 8.41 | 2.125 | 56 | 0.69 | 18 | 1.84 | 2.19 | 0.31 | 3.38 | 3.72 | 6.75 | 4.88 | 6.00 | 3.97 | 3.00 |
| 2 | 10.88 | 2.50 | 8.38 | 2.750 | 73 | 0.94 | 24 | 2.34 | 2.69 | 0.31 | 3.31 | 4.09 | 6.63 | 4.91 | 7.00 | 4.86 | 4.00 |
| 2.5 | 13.59 | 3.13 | 10.47 | 3.250 | 85 | 1.44 | 37 | 2.94 | 3.28 | 0.38 | 4.16 | 5.09 | 8.31 | 6.13 | 8.83 | 5.84 | 4.63 |
| 3 | 21.72 | 3.69 | 18.03 | 4.000 | 107 | 1.44 | 37 | 3.50 | 3.84 | 0.38 | 7.78 | 8.81 | 15.56 | 10.06 | 9.44 | 6.84 | 5.63 |
| 3.5 | 22.38 | 4.31 | 18.06 | 4.625 | 125 | 1.81 | 46 | 4.09 | 4.44 | 0.44 | 7.66 | 8.72 | 15.31 | 10.19 | 11.00 | 7.91 | 6.50 |
| 4 | 23.00 | 4.88 | 18.13 | 5.375 | 145 | 2.44 | 62 | 4.56 | 5.00 | 0.63 | 7.50 | 8.81 | 15.00 | 10.31 | 12.50 | 9.25 | 7.50 |
| 4.5 | 23.75 | 5.47 | 18.28 | 6.000 | 165 | 3.00 | 76 | 5.13 | 5.56 | 0.69 | 7.38 | 9.06 | 14.75 | 10.56 | 13.63 | 10.38 | 8.50 |
| 5 | 24.16 | 6.19 | 17.97 | 6.500 | 180 | 3.00 | 76 | 5.84 | 6.28 | 0.69 | 7.06 | 9.03 | 14.13 | 10.56 | 15.31 | 11.56 | 9.50 |
| 5.5 | 25.09 | 7.06 | 18.03 | 7.500 | 200 | 4.00 | 101 | 6.72 | 6.88 | 0.69 | 6.81 | 8.88 | 13.63 | 10.88 | 16.75 | 12.72 | 10.50 |
| 6 | 25.66 | 7.56 | 18.09 | 8.250 | 225 | 4.00 | 101 | 7.16 | 7.66 | 0.81 | 6.81 | 8.28 | 13.63 | 10.88 | 18.00 | 14.00 | 11.50 |
| 7 | 27.06 | 8.88 | 18.19 | 9.500 | 255 | 5.75 | 139 | 8.38 | 8.94 | 1.00 | 6.81 | 8.72 | 13.63 | 10.88 | 20.75 | 15.75 | 13.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FSPCR Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSPCR Type Spacer Couplings

The FSPCR Type coupling consists of two flex hubs, two sleeves, one spacer and two accessory kits. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Removal of spacer provides adequate space for the removal of either coupling half without moving the driver or driven units



G

FSPCR Type Performance Data

| Size | Nominal Torque | | Maximum Speed ¹ | | ID1 - ID2 | | | | Weight Less Spacer | | Max Angular Misalignment Degrees |
|------|----------------|---------|----------------------------|-------|-----------|---------|------------------|-----|--------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 54 | 25 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 130 | 59 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 190 | 86 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 250 | 114 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.00 | 127 | 950 | 431 | |

Note: ■ 1 indicates: Maximum RPM of spacer set determined by critical speed of spacer.

Ordering Information

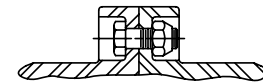
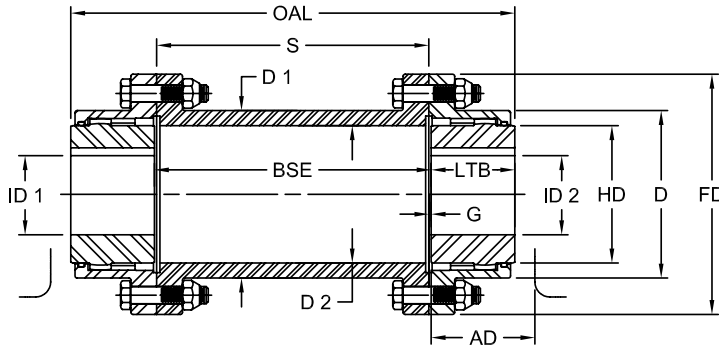
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FSPCR Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FSPCR Type Spacer Couplings



Shrouded bolt design also available



FSPCR Type Dimensional Data

| Size | OAL in | S in | AD in | ID1 - ID2 | | | | LTB in | BSE in | G in | FD in | D in | HD in | D1 in | D2 in |
|------|---|---------|----------|-----------|-----|------------------|------|-----------|---------------------------------------|---------|----------|---------|----------|----------|----------|
| | | | | Max Bore | | Rough Stock Bore | | | | | | | | | |
| | | | | in | mm | in | mm | | | | | | | | |
| 1 | Determined by Shaft Separation | | 2.04 | 1.625 | 42 | 0.44 | 11 | 1.69 | Determined by Customer Specs | 0.06 | 2.31 | 3.06 | 2.31 | 3.00 | 2.41 |
| 1.5 | | | 2.32 | 2.125 | 56 | 0.69 | 18 | 1.94 | | 0.06 | 3.00 | 3.97 | 3.00 | 3.75 | 3.13 |
| 2 | | | 2.94 | 2.750 | 73 | 0.94 | 24 | 2.44 | | 0.06 | 4.00 | 4.86 | 4.00 | 4.75 | 4.00 |
| 2.5 | | | 3.47 | 3.250 | 85 | 1.44 | 37 | 3.03 | | 0.09 | 4.63 | 5.84 | 4.63 | 5.50 | 4.78 |
| 3 | | | 3.97 | 4.000 | 107 | 1.44 | 37 | 3.59 | | 0.09 | 5.63 | 6.84 | 5.63 | 6.50 | 5.75 |
| 3.5 | | | 4.57 | 4.625 | 125 | 1.81 | 46 | 4.19 | | 0.13 | 6.50 | 7.91 | 6.50 | 7.38 | 6.63 |
| 4 | | | 5.00 | 5.375 | 145 | 2.44 | 62 | 4.75 | | 0.13 | 7.50 | 9.25 | 7.50 | 8.63 | 7.75 |
| 4.5 | | | 5.50 | 6.000 | 165 | 3.00 | 76 | 5.31 | | 0.16 | 8.50 | 10.38 | 8.50 | 9.38 | 8.50 |
| 5 | | | 6.34 | 6.500 | 180 | 3.00 | 76 | 6.03 | | 0.16 | 9.50 | 11.56 | 9.50 | 10.38 | 9.56 |
| 5.5 | | | 7.04 | 7.500 | 200 | 4.00 | 101 | 6.91 | | 0.16 | 10.50 | 12.72 | 10.50 | 11.44 | 10.56 |
| 6 | 8.35 | 8.250 | 225 | 4.00 | 101 | 7.41 | 0.16 | 11.50 | 14.00 | 11.50 | 12.38 | 11.44 | | | |
| 7 | 9.82 | 9.500 | 255 | 5.00 | 127 | 8.69 | 0.19 | 13.00 | 15.75 | 13.00 | 14.00 | 13.00 | | | |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FLEF Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLEF Type Limited End Float Couplings

The FLEF Type coupling consists of two flex hubs, two sleeves, one accessory kit and a steel plate to limit the movement. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



Features

- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides and maintains restricted end float in sleeve bearings and rotor systems where thrust is not permitted
- Optional flow-through steel plate with lube holes available

G FLEF Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|-------|-----------|---------|------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | | | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 0.056 | 1.4 | 1.5° Per Gear Mesh |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | 0.060 | 1.5 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.750 | 73 | 0.94 | 24 | 34 | 15 | 0.085 | 2.2 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 3.250 | 85 | 1.44 | 37 | 54 | 25 | 0.105 | 2.7 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | 0.115 | 2.9 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 4.625 | 125 | 1.81 | 46 | 130 | 59 | 0.130 | 3.3 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 5.375 | 145 | 2.44 | 62 | 190 | 86 | 0.150 | 3.8 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 6.000 | 165 | 3.00 | 76 | 250 | 114 | 0.175 | 4.4 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 6.500 | 180 | 3.00 | 76 | 380 | 173 | 0.200 | 5.1 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 7.500 | 200 | 4.00 | 101 | 520 | 236 | 0.220 | 5.6 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | 0.120 | 3.0 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 9.500 | 255 | 5.00 | 127 | 950 | 431 | 0.135 | 3.4 | |

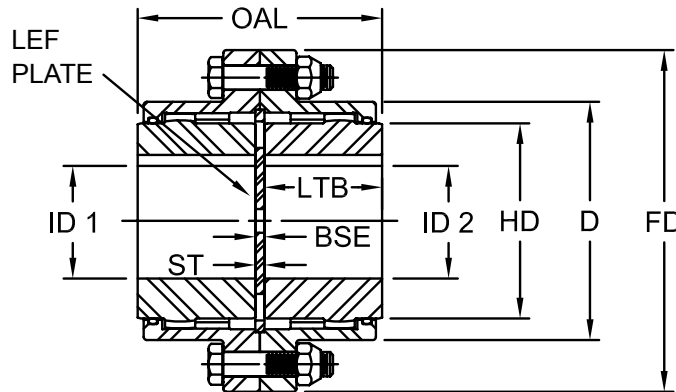
Ordering Information

- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Amount of thrust on either or both shafts.
- Submit a drawing if available.



Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLEF Type Limited End Float Couplings



FLEF Type Dimensional Data

| Size | OAL in | ID1 - ID2 | | | | LTB in | BSE in | F ¹ (ref) in | ST in | FD in | D in | HD in |
|------|-----------|-----------|-----|------------------|-----|-----------|-----------|-------------------------------|----------|----------|---------|----------|
| | | Max Bore | | Rough Stock Bore | | | | | | | | |
| | | in | mm | in | mm | | | | | | | |
| 1 | 3.56 | 1.625 | 42 | 0.44 | 11 | 1.69 | 0.19 | 0.13 | 0.13 | 4.56 | 3.06 | 2.31 |
| 1.5 | 4.06 | 2.125 | 56 | 0.69 | 18 | 1.94 | 0.19 | 0.13 | 0.13 | 6.00 | 3.97 | 3.00 |
| 2 | 5.06 | 2.750 | 73 | 0.94 | 24 | 2.44 | 0.19 | 0.13 | 0.13 | 7.00 | 4.86 | 4.00 |
| 2.5 | 6.34 | 3.250 | 85 | 1.44 | 37 | 3.03 | 0.28 | 0.19 | 0.19 | 8.38 | 5.84 | 4.63 |
| 3 | 7.47 | 4.000 | 107 | 1.44 | 37 | 3.59 | 0.28 | 0.19 | 0.19 | 9.44 | 6.84 | 5.63 |
| 3.5 | 8.59 | 4.625 | 125 | 1.81 | 46 | 4.19 | 0.31 | 0.25 | 0.19 | 11.00 | 7.91 | 6.50 |
| 4 | 9.88 | 5.375 | 145 | 2.44 | 62 | 4.75 | 0.38 | 0.25 | 0.25 | 12.50 | 9.25 | 7.50 |
| 4.5 | 11.06 | 6.000 | 165 | 3.00 | 76 | 5.31 | 0.44 | 0.25 | 0.31 | 13.63 | 10.38 | 8.50 |
| 5 | 12.59 | 6.500 | 180 | 3.00 | 76 | 6.03 | 0.53 | 0.31 | 0.38 | 15.31 | 11.56 | 9.50 |
| 5.5 | 14.34 | 7.500 | 200 | 4.00 | 101 | 6.91 | 0.53 | 0.31 | 0.38 | 16.75 | 12.72 | 10.50 |
| 6 | 15.28 | 8.250 | 225 | 4.00 | 101 | 7.41 | 0.47 | 0.31 | 0.31 | 18.00 | 14.00 | 11.50 |
| 7 | 17.94 | 9.500 | 255 | 5.00 | 127 | 8.69 | 0.56 | 0.38 | 0.38 | 20.75 | 15.75 | 13.00 |

- Notes:
- 1 indicates: F is the total end float. (May be modified.)
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 9.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FRR Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FRR Type Rigid-Rigid Couplings

The F Type coupling consists of two rigid hubs and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- All Steel construction
- Torque capacities that exceed the mild steel shafts to be coupled
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Rigid Half coupling interchangeable with industry standards



G FRR Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|---------|-----------|-----|------------------|-------|--------|-----|----------------------------------|
| | | | | | Max Bore | | Rough Stock Bore | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | lbs | kg | |
| 1 | 7,600 | 850 | 6,000 | 9,000 | 2.125 | 56 | solid | solid | 10 | 5 | 0° |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 2.813 | 76 | solid | solid | 20 | 9 | |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 3.500 | 95 | solid | solid | 34 | 15 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 4.250 | 114 | solid | solid | 60 | 27 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 4.875 | 134 | solid | solid | 91 | 41 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 5.625 | 150 | solid | solid | 143 | 65 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 6.500 | 176 | solid | solid | 211 | 96 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 7.625 | 202 | solid | solid | 289 | 131 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 8.750 | 230 | 4.00 | 101 | 417 | 189 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 9.500 | 260 | 4.50 | 114 | 541 | 246 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 10.500 | 285 | 5.50 | 127 | 724 | 329 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 12.000 | 320 | 5.75 | 139 | 1,084 | 492 | |

Ordering Information

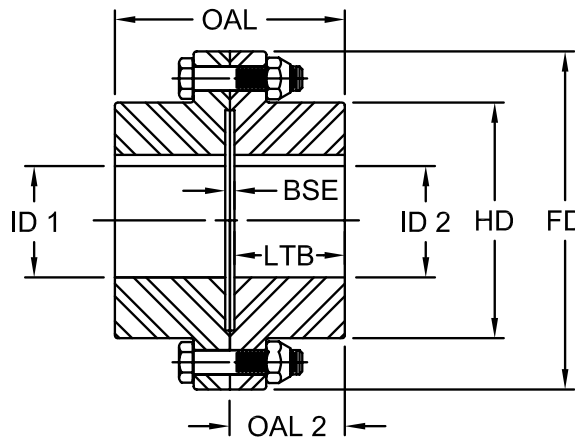
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Submit drawing if available.



Gear
FRR Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FRR Type Rigid-Rigid Couplings



FRR Type Dimensional Data

| Size | OAL in | OAL2 in | ID1 - ID2 | | | | LTB in | BSE in | FD in | HD in |
|------|-----------|------------|-----------|-----|------------------|-------|-----------|-----------|----------|----------|
| | | | Max Bore | | Rough Stock Bore | | | | | |
| | | | in | mm | in | mm | | | | |
| 1 | 3.31 | 1.66 | 2.125 | 56 | solid | solid | 1.56 | 0.19 | 4.56 | 3.06 |
| 1.5 | 3.88 | 1.94 | 2.813 | 76 | solid | solid | 1.84 | 0.19 | 6.00 | 3.97 |
| 2 | 4.75 | 2.38 | 3.500 | 95 | solid | solid | 2.28 | 0.19 | 7.00 | 4.86 |
| 2.5 | 6.00 | 3.00 | 4.250 | 114 | solid | solid | 2.91 | 0.19 | 8.38 | 5.84 |
| 3 | 7.00 | 3.50 | 4.875 | 134 | solid | solid | 3.41 | 0.19 | 9.44 | 6.84 |
| 3.5 | 8.13 | 4.07 | 5.625 | 150 | solid | solid | 3.97 | 0.19 | 11.00 | 7.91 |
| 4 | 9.25 | 4.63 | 6.500 | 176 | solid | solid | 4.44 | 0.38 | 12.50 | 9.25 |
| 4.5 | 10.44 | 5.22 | 7.625 | 202 | solid | solid | 5.03 | 0.38 | 13.63 | 10.38 |
| 5 | 11.75 | 5.88 | 8.750 | 230 | 4.00 | 101 | 5.69 | 0.38 | 15.31 | 11.56 |
| 5.5 | 12.69 | 6.35 | 9.500 | 260 | 4.50 | 114 | 6.16 | 0.38 | 16.75 | 12.72 |
| 6 | 14.88 | 7.44 | 10.500 | 285 | 5.50 | 127 | 7.25 | 0.50 | 18.00 | 14.00 |
| 7 | 17.88 | 8.94 | 12.000 | 320 | 5.75 | 139 | 8.69 | 0.63 | 20.75 | 15.75 |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 7.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FLA Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLA Type Flex-Flex All-Metal Labyrinth Seal Couplings

The FLA Type coupling consists of two special flex hubs, Two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



Features

- All-Metal Labyrinth Seals
- AISI 4140 Alloy Steel Construction
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards

G

FLA Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|--------|--------------------|---------|------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Max Bore Standard | | Rough Stock Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | Keyway | in | | | | | |
| 1.5 | 15,000 | 1 700 | 12,000 | 18,000 | 1.625 | 41 | 0.38 | 9 | 17.6 | 8 | 0.028 | 0.7 | 1.5° Per Gear Mesh |
| 2 | 35,500 | 4 000 | 9,300 | 13,950 | 2.125 | 53 | 0.5 | 12 | 29.1 | 13 | 0.035 | 0.9 | |
| 2.5 | 69,300 | 7 800 | 7,900 | 11,850 | 2.750 | 69 | 0.75 | 19 | 50.9 | 23 | 0.044 | 1.1 | |
| 3 | 118,900 | 13 400 | 6,800 | 10,200 | 3.125 | 79 | 1.13 | 28 | 74.4 | 34 | 0.052 | 1.3 | |
| 3.5 | 188,500 | 21 300 | 6,000 | 9,000 | 3.750 | 95 | 1.50 | 38 | 120 | 55 | 0.061 | 1.5 | |
| 4 | 283,800 | 32 100 | 5,260 | 7,890 | 4.250 | 107 | 1.50 | 38 | 185 | 84 | 0.700 | 1.8 | |
| 4.5 | 393,800 | 44 500 | 4,770 | 7,155 | 4.750 | 120 | 1.50 | 38 | 240 | 109 | 0.079 | 2.0 | |
| 5 | 551,300 | 62 300 | 4,300 | 6,450 | 5.500 | 139 | 2.50 | 63 | 365 | 166 | 0.087 | 2.2 | |
| 5.5 | 732,500 | 82 800 | 3,880 | 5,820 | 5.875 | 149 | 3.00 | 76 | 435 | 198 | 0.096 | 2.4 | |
| 6 | 952,500 | 107 600 | 3,600 | 5,400 | 6.500 | 165 | 4.00 | 101 | 538 | 244 | 0.105 | 2.7 | |
| 7 | 1,512,500 | 170 900 | 3,000 | 4,500 | 8.000 ¹ | 203 | 4.50 | 114 | 860 | 390 | 0.122 | 3.1 | |

Note: ■ 1 Indicates: Maximum bore for square keyway.

Ordering Information

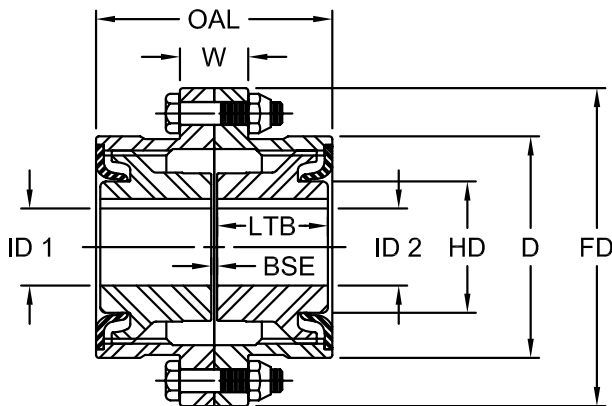
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FLA Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLA Type All Metal Labyrinth Seal Couplings



FLA Type Dimensional Data

| Size | OAL in | W in | ID1 - ID2 | | | | LTB in | BSE in | FD in | D in | HD in | C/L - C/L of Teeth* | Puller Holes |
|------|-----------|---------|--------------------------------|-----|---------------------|-----|-----------|-----------|----------|---------|----------|------------------------|-----------------|
| | | | Max Bore Standard Keyway | | Rough Stock Bore | | | | | | | | |
| | | | in | mm | in | mm | | | | | | | |
| 1.5 | 4.19 | 1.50 | 1.625 | 41 | 0.38 | 9 | 1.94 | 0.13 | 6.00 | 3.97 | 2.19 | 3.25 | 1/4-20 |
| 2 | 5.19 | 1.50 | 2.125 | 53 | 0.50 | 12 | 2.44 | 0.13 | 7.00 | 4.91 | 2.88 | 4.00 | 38-16 |
| 2.5 | 6.44 | 1.75 | 2.750 | 69 | 0.75 | 19 | 3.03 | 0.19 | 8.38 | 5.91 | 3.63 | 5.00 | 1/2-13 |
| 3 | 7.69 | 1.75 | 3.125 | 79 | 1.13 | 28 | 3.59 | 0.19 | 9.44 | 6.91 | 4.25 | 6.00 | 5/8-11 |
| 3.5 | 8.88 | 2.25 | 3.750 | 95 | 1.50 | 38 | 4.19 | 0.25 | 11.00 | 7.91 | 5.00 | 7.00 | 5/8-11 |
| 4 | 10.13 | 2.50 | 4.250 | 107 | 1.50 | 38 | 4.75 | 0.25 | 12.50 | 9.25 | 5.75 | 8.00 | 7/8-9 |
| 4.5 | 11.38 | 2.50 | 4.750 | 120 | 1.50 | 38 | 5.31 | 0.31 | 13.63 | 10.38 | 6.50 | 9.00 | 1-8 |
| 5 | 12.63 | 3.00 | 5.500 | 139 | 2.50 | 63 | 6.03 | 0.31 | 15.31 | 11.56 | 7.31 | 10.00 | 1-8 |
| 5.5 | 14.13 | 1.88 | 5.875 | 149 | 3.00 | 76 | 6.91 | 0.31 | 16.75 | 12.81 | 8.00 | 11.00 | 1-8 |
| 6 | 15.13 | 2.00 | 6.500 | 165 | 4.00 | 101 | 7.41 | 0.31 | 18.00 | 14.00 | 8.81 | 12.00 | 1-8 |
| 7 | 17.75 | 2.25 | 8.000 ¹ | 203 | 4.50 | 114 | 8.69 | 0.38 | 20.75 | 15.75 | 10.31 | 14.00 | 1 1/4-7 |

- Notes:
- 1 indicates: Maximum bore for square keyway.
 - * indicates: Center line to center line of teeth.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 7.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FLAFR Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAFR Type Flex-Rigid All-Metal Labyrinth Seal Couplings

The FLAFR Type coupling consists of one special flex hub, one rigid hub, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



Features

- All-metal labyrinth seal
- AISI 4140 alloy steel construction (flex half)
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides angular misalignment only
- Flex Half coupling interchangeable with industry standards

G

FLAFR Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 | | ID2 | | ID1 | | ID2 | | Weight | | Max Angular Misalignment Degrees |
|------|----------------|---------|---------------|---------|--------------------------|------------------|--------------------------|------------------|------------|-----|------------|-----|--------|-----|----------------------------------|
| | | | | | Flex Hubs | | Flex Hubs | | Rigid Hubs | | Rigid Hubs | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | Max Bore Standard Keyway | Rough Stock Bore | Max Bore Standard Keyway | Rough Stock Bore | in | mm | in | mm | lbs | kg | |
| 1.5 | 15,000 | 1 700 | 12,000 | 18,000 | 1.625 | 41 | 0.38 | 9 | 2.813 | 76 | 0.75 | 19 | 19 | 8 | 1.5° Per Gear Mesh |
| 2 | 35,500 | 4 000 | 9,300 | 13,950 | 2.125 | 53 | 0.50 | 12 | 3.500 | 95 | 1.00 | 25 | 31 | 14 | |
| 2.5 | 69,300 | 7 800 | 7,900 | 11,850 | 2.750 | 69 | 0.75 | 19 | 4.250 | 114 | 1.50 | 38 | 55 | 25 | |
| 3 | 118,900 | 13 400 | 6,800 | 10,200 | 3.125 | 79 | 1.13 | 28 | 4.875 | 134 | 1.75 | 44 | 83 | 38 | |
| 3.5 | 188,500 | 21 300 | 6,000 | 9,000 | 3.750 | 95 | 1.50 | 38 | 5.625 | 150 | 2.50 | 63 | 131 | 60 | |
| 4 | 283,800 | 32 100 | 5,260 | 7,890 | 4.250 | 107 | 1.50 | 38 | 6.500 | 176 | 3.00 | 76 | 193 | 88 | |
| 4.5 | 393,800 | 44 500 | 4,770 | 7,155 | 4.750 | 120 | 1.50 | 38 | 7.625 | 202 | 3.50 | 88 | 258 | 117 | |
| 5 | 551,300 | 62 300 | 4,300 | 6,450 | 5.500 | 139 | 2.50 | 63 | 8.750 | 230 | 4.00 | 101 | 383 | 174 | |
| 5.5 | 732,500 | 82 800 | 3,880 | 5,820 | 5.875 | 149 | 3.00 | 76 | 9.500 | 260 | 4.50 | 114 | 436 | 198 | |
| 6 | 952,500 | 107 600 | 3,600 | 5,400 | 6.500 | 165 | 4.00 | 101 | 10.500 | 285 | 5.00 | 127 | 536 | 243 | |
| 7 | 1,512,500 | 170 900 | 3,000 | 4,500 | 8.000 ¹ | 203 | 4.50 | 114 | 12.000 | 320 | 5.50 | 139 | 851 | 386 | |

Note: ■ 1 indicates: Maximum bore for square keyway.

Ordering Information

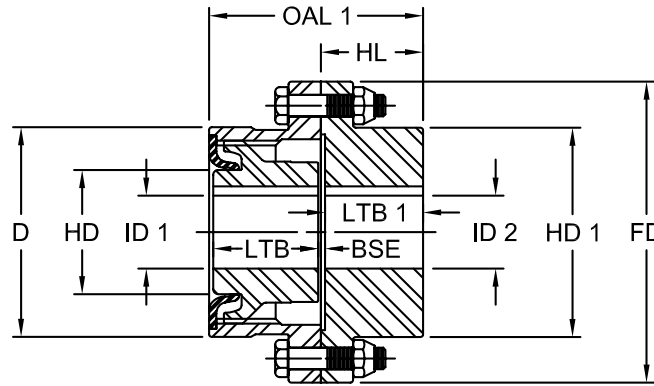
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FLAFR Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAFR Type Flex-Rigid All Metal Labyrinth Seal Couplings



FLAFR Type Dimensional Data

| Size | OAL | HL | ID1 | | ID2 | | ID1 | | ID2 | | LTB | LTB1 | BSE | FD | HD1 | HD | D | Puller Holes | | |
|------|-------|------|--------------------|-----------|------------|------------|----------|-------|----------|-------|------|------|------|-------|-------|-------|-------|--------------|---------|----------|
| | | | Flex Hubs | Flex Hubs | Rigid Hubs | Rigid Hubs | in | in | in | in | | | | | | | | in | in | |
| | | | Max Bore | Rough | Max Bore | Rough | | | | | | | | | | | | | | Flex Hub |
| | | | Standard | Stock | Standard | Stock | Standard | Stock | Standard | Stock | | | | | | | | | | |
| | | | Keyway | Bore | Keyway | Bore | Keyway | Bore | Keyway | Bore | | | | | | | | | | |
| | in | in | in | mm | in | mm | in | mm | in | mm | in | in | in | in | in | in | in | in | in | in |
| 1.5 | 4.03 | 1.94 | 1.625 | 41 | 0.38 | 9 | 2.813 | 76 | 0.75 | 19 | 1.94 | 1.84 | 0.16 | 6.00 | 3.97 | 2.19 | 3.97 | 1/4-20 | None | |
| 2 | 4.97 | 2.38 | 2.125 | 53 | 0.50 | 12 | 3.500 | 95 | 1.00 | 25 | 2.44 | 2.28 | 0.16 | 7.00 | 4.86 | 2.88 | 4.91 | 38-16 | 5/16-18 | |
| 2.5 | 6.22 | 3.00 | 2.750 | 69 | 0.75 | 19 | 4.250 | 114 | 1.50 | 38 | 3.03 | 2.91 | 0.19 | 8.38 | 5.84 | 3.63 | 5.91 | 1/2-13 | 3/8-16 | |
| 3 | 7.41 | 3.50 | 3.125 | 79 | 1.13 | 28 | 4.875 | 134 | 1.75 | 44 | 3.59 | 3.41 | 0.19 | 9.44 | 6.84 | 4.25 | 6.91 | 5/8-11 | 1/2-13 | |
| 3.5 | 8.56 | 4.06 | 3.750 | 95 | 1.50 | 38 | 5.625 | 150 | 2.50 | 63 | 4.19 | 3.97 | 0.22 | 11.00 | 7.91 | 5.00 | 7.91 | 5/8-11 | 1/2-13 | |
| 4 | 9.69 | 4.63 | 4.250 | 107 | 1.50 | 38 | 6.500 | 176 | 3.00 | 76 | 4.75 | 4.44 | 0.31 | 12.50 | 9.25 | 5.75 | 9.25 | 7/8-9 | 5/8-11 | |
| 4.5 | 10.91 | 5.22 | 4.750 | 120 | 1.50 | 38 | 7.625 | 202 | 3.50 | 88 | 5.31 | 5.03 | 0.34 | 13.63 | 10.38 | 6.50 | 10.38 | 1-8 | 5/8-11 | |
| 5 | 12.19 | 5.88 | 5.500 | 139 | 2.50 | 63 | 8.750 | 230 | 4.00 | 101 | 6.03 | 5.69 | 0.34 | 15.31 | 11.56 | 7.31 | 11.56 | 1-8 | 3/4-10 | |
| 5.5 | 13.41 | 6.34 | 5.875 | 149 | 3.00 | 76 | 9.500 | 260 | 4.50 | 114 | 6.91 | 6.16 | 0.34 | 16.75 | 12.72 | 8.00 | 12.81 | 1-8 | 1-8 | |
| 6 | 15.22 | 7.66 | 6.500 | 165 | 4.00 | 101 | 10.500 | 285 | 5.00 | 127 | 7.41 | 7.41 | 0.41 | 18.00 | 14.00 | 8.81 | 14.00 | 1-8 | 1-8 | |
| 7 | 17.88 | 9.00 | 8.000 ¹ | 203 | 4.50 | 114 | 12.000 | 320 | 5.50 | 139 | 8.69 | 8.69 | 0.50 | 20.75 | 15.75 | 10.31 | 15.75 | 1 1/4-7 | 1-8 | |

- Notes:
- 1 indicates: Maximum bore for square keyway.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 7.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FLAMM and FLAMMFR Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FLAMM Type Flex-Flex Mill Motor Couplings

The FLAMM Type coupling consists of one standard FLA flex hub, one universal flex hub bored to an A.I.S.E. frame size, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.



FLAMMFR Type Flex-Rigid Mill Motor Couplings

The FLAMMFR Type coupling consists of a rigid hub, one universal flex hub bored to A.I.S.E. frame size, one sleeve and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Patented Vari-Crown® tooth form for long life on Flex Half
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards
- Long Universal Hub used for A.I.S.E. Motor Frames

FLAMM and FLAMMFR Type Performance Data

| Size | Nominal Torque | | Max Speed | | ID1 | | ID2 | | ID1 | | ID2 | | Weight | | Parallel Misalignment FLAMM only | | Max Angular Misalignment Degrees |
|------|----------------|---------|-----------|---------|-----------------------------------|---------------------------|------------------------------------|----------------------------|--------|-----|-------|-------|--------|-----|----------------------------------|-----|----------------------------------|
| | | | | | Flex Hub Max Bore Standard Keyway | Flex Hub Rough Stock Bore | Rigid Hub Max Bore Standard Keyway | Rigid Hub Rough Stock Bore | | | | | | | | | |
| | in-lb | Nm | Unbal RPM | Bal RPM | in | mm | in | mm | in | mm | in | mm | lbs | kg | in | mm | |
| 1.5 | 18,900 | 2 140 | 5,500 | 8,250 | 1.625 | 41 | 0.38 | 9 | 2.813 | 76 | solid | solid | 24 | 11 | 0.28 | 0.7 | .5° Per Gear Mesh |
| 2 | 31,500 | 3 560 | 5,000 | 7,500 | 2.125 | 53 | 0.50 | 12 | 3.500 | 95 | solid | solid | 45 | 20 | 0.35 | 0.9 | |
| 2.5 | 56,700 | 6 410 | 4,400 | 6,600 | 2.750 | 69 | 0.75 | 19 | 4.250 | 114 | solid | solid | 71 | 32 | 0.44 | 1.1 | |
| 3 | 94,500 | 10 700 | 4,000 | 6,000 | 3.125 | 79 | 1.13 | 28 | 4.875 | 134 | solid | solid | 104 | 47 | 0.52 | 1.3 | |
| 3.5 | 151,200 | 17 100 | 3,500 | 5,250 | 3.750 | 95 | 1.50 | 38 | 5.625 | 150 | solid | solid | 151 | 69 | 0.61 | 1.5 | |
| 4 | 220,500 | 24 900 | 3,000 | 4,500 | 4.250 | 117 | 1.50 | 38 | 6.500 | 176 | solid | solid | 234 | 86 | 0.70 | 1.8 | |
| 4.5 | 302,400 | 34 200 | 2,700 | 4,050 | 4.750 | 120 | 1.50 | 38 | 7.625 | 202 | solid | solid | 310 | 141 | 0.79 | 2.0 | |
| 5 | 434,700 | 49 100 | 2,500 | 3,750 | 5.500 | 139 | 2.50 | 63 | 8.750 | 230 | 4.00 | 101 | 450 | 204 | 0.87 | 2.2 | |
| 5.5 | 573,300 | 64 800 | 2,200 | 3,300 | 5.875 | 149 | 3.00 | 76 | 9.500 | 260 | 4.50 | 114 | 609 | 276 | 0.96 | 2.4 | |
| 6 | 749,700 | 84 700 | 2,100 | 3,150 | 6.500 | 165 | 4.00 | 101 | 10.500 | 285 | 5.50 | 127 | 764 | 347 | 0.105 | 2.7 | |
| 7 | 1,008,000 | 113 900 | 2,000 | 3,000 | 8.000 ¹ | 203 | 4.50 | 114 | 12.000 | 320 | 5.75 | 139 | 1,212 | 551 | 0.122 | 3.1 | |

- Notes:
- 1 indicates: Maximum bore for square keyway.
 - Application: Driver and Driven.
 - Type and size of coupling, horizontal, vertical etc.
 - Power: Motor horsepower or torque requirement.
 - Speed: Motor RPM or Driven RPM.
 - Distance between shaft ends (BSE).
 - Shaft sizes.
 - Mill Motor frame size.
 - Submit a drawing if available.

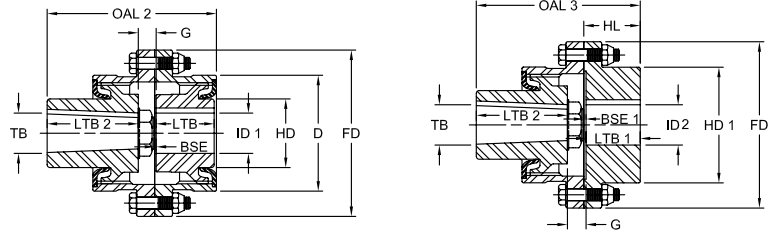


Gear FLAMM and FLAMMFR Type Dimensional Data

Lovejoy / Seir-Bath Flanged Sleeve Gear Couplings

FLAMM and FLAMMFR Type

All Metal Labyrinth Seal Mill Motor Couplings



FLAMM and FLAMMFR Type Dimensional Data

| Size | AISE Frame No | OAL 2 in | OAL 3 in | LTB in | LTB1 in | LTB2 in | G in | BSE in | BSE 1 in | FD in | D in | HD in | HD 1 in | TB in | Mill Mtr Hub Kw | |
|------|---------------|----------|----------|--------|---------|---------|------|--------|----------|-------|-------|-------|---------|-----------------|-----------------|------|
| | | | | | | | | | | | | | | | W in | H in |
| 1.5 | 602/802 | 6.00 | 5.91 | 1.94 | 1.84 | 3.00 | 1.06 | 0.13 | 0.16 | 6.00 | 3.97 | 2.19 | 3.97 | 1.7485 - 1.7495 | 0.50 | 0.13 |
| | 602/802 | 6.50 | 6.34 | | | 3.00 | 1.06 | | | | | | | 1.7485 - 1.7495 | 0.50 | 0.25 |
| 2 | 603/803 | 7.06 | 6.91 | 2.44 | 2.28 | 3.50 | 1.13 | 0.13 | 0.16 | 7.00 | 4.91 | 2.88 | 4.86 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 7.06 | 6.91 | | | 3.50 | 1.13 | | | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 602/802 | 7.16 | 7.03 | | | 3.00 | 1.13 | | | | | | | 1.7485 - 1.7495 | 0.50 | 0.25 |
| 2.5 | 603/803 | 7.72 | 7.59 | 3.03 | 2.28 | 3.50 | 1.19 | 0.19 | 0.19 | 8.38 | 5.91 | 3.63 | 5.84 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 7.72 | 7.59 | | | 3.50 | 1.19 | | | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 606/806 | 8.34 | 8.22 | | | 4.00 | 1.31 | | | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| | 602/802 | 7.72 | 7.53 | | | 3.00 | 1.13 | | | | | | | 1.7485 - 1.7495 | 0.50 | 0.25 |
| 3 | 603/803 | 8.28 | 8.09 | 3.59 | 2.91 | 3.50 | 1.19 | 0.19 | 0.19 | 9.44 | 6.91 | 4.25 | 6.84 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 8.28 | 8.09 | | | 3.50 | 1.19 | | | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 606/806 | 8.91 | 8.72 | | | 4.00 | 1.31 | | | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| | 608/808 | 9.53 | 9.34 | | | 4.50 | 1.44 | | | | | | | 2.998 - 2.999 | 0.75 | 0.25 |
| | 610/810 | 9.66 | 9.47 | | | 4.50 | 1.56 | | | | | | | 3.248 - 3.249 | 0.75 | 0.25 |
| 3.5 | 603/803 | 8.88 | 8.66 | 4.19 | 3.97 | 3.50 | 1.19 | 0.25 | 0.22 | 11.00 | 7.91 | 5.00 | 7.91 | 1.998 - 1.999 | 0.50 | 0.25 |
| | 604/804 | 8.88 | 8.66 | | | 3.50 | 1.19 | | | | | | | 1.998 - 1.999 | 0.50 | 0.25 |
| | 606/806 | 9.50 | 9.28 | | | 4.00 | 1.31 | | | | | | | 2.498 - 2.499 | 0.50 | 0.25 |
| | 608/808 | 10.13 | 9.91 | | | 4.50 | 1.44 | | | | | | | 2.998 - 2.999 | 0.75 | 0.25 |
| | 610/810 | 10.25 | 10.03 | | | 4.50 | 1.56 | | | | | | | 3.248 - 3.249 | 0.75 | 0.25 |
| | 612/812 | 10.94 | 10.72 | | | 5.00 | 1.75 | | | | | | | 3.623 - 3.624 | 0.75 | 0.25 |
| 4 | 606/806 | 10.13 | 9.81 | 4.75 | 4.44 | 4.00 | 1.38 | 0.25 | 0.31 | 12.50 | 9.25 | 5.75 | 9.25 | 2.498 - 2.499 | 0.50 | 0.25 |
| | 608/808 | 10.75 | 10.44 | | | 4.50 | 1.50 | | | | | | | 2.998 - 2.999 | 0.75 | 0.25 |
| | 610/810 | 10.88 | 10.56 | | | 4.50 | 1.63 | | | | | | | 3.248 - 3.249 | 0.75 | 0.25 |
| | 612/812 | 11.50 | 11.19 | | | 5.00 | 1.75 | | | | | | | 3.623 - 3.624 | 0.75 | 0.25 |
| | 614/814 | 11.63 | 11.31 | | | 5.00 | 1.88 | | | | | | | 4.2470 - 4.2485 | 1.00 | 0.38 |
| 4.5 | 616/816 | 12.25 | 11.94 | | | 5.00 | 2.00 | | | | | | | 4.6220 - 4.6235 | 1.25 | 0.28 |
| | 610/810 | 11.50 | 11.22 | 5.31 | 5.03 | 4.50 | 1.69 | 0.31 | 0.34 | 13.63 | 10.38 | 6.50 | 10.38 | 3.248 - 3.249 | 0.75 | 0.25 |
| | 612/812 | 12.12 | 11.84 | | | 5.00 | 1.81 | | | | | | | 6.623 - 3.624 | 0.75 | 0.25 |
| | 614/814 | 12.25 | 11.97 | | | 5.00 | 1.94 | | | | | | | 4.2470 - 4.2485 | 1.00 | 0.38 |
| | 616/816 | 12.88 | 12.59 | | | 5.50 | 2.06 | | | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| 5 | 618/818 | 12.94 | 12.66 | | | 6.00 | 1.63 | | | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| | 612/812 | 12.84 | 12.50 | 6.03 | 5.69 | 5.00 | 1.81 | 0.31 | 0.34 | 15.31 | 11.56 | 7.31 | 11.56 | 3.623 - 3.624 | 0.75 | 0.25 |
| | 614/814 | 12.97 | 12.63 | | | 5.00 | 1.94 | | | | | | | 4.2470 - 4.2485 | 1.00 | 0.38 |
| | 616/816 | 13.59 | 13.25 | | | 5.50 | 2.06 | | | | | | | 4.6220 - 4.6235 | 1.25 | 0.38 |
| 5.5 | 618/818 | 13.66 | 13.31 | | | 6.00 | 1.63 | | | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| | 616/816 | 14.47 | 13.72 | 6.91 | 6.16 | 5.50 | 2.06 | 0.31 | 0.34 | 16.75 | 12.81 | 8.00 | 12.72 | 4.6220 - 4.6235 | 1.25 | 0.38 |
| | 618/818 | 14.53 | 13.78 | | | 6.00 | 1.63 | | | | | | | 4.9970 - 4.9985 | 1.25 | 0.50 |
| | 620 | 15.72 | 14.97 | | | 6.75 | 2.06 | | | | | | | 5.8720 - 5.8735 | 1.50 | 0.75 |
| 6 | 622 | 16.84 | 16.09 | | | 7.25 | 2.69 | | | | | | | 6.2470 - 6.2485 | 1.50 | 0.56 |
| | 620 | 16.22 | 16.22 | 7.41 | 7.41 | 6.75 | 2.06 | 0.31 | 0.41 | 18.00 | 14.00 | 8.81 | 14.00 | 5.8720 - 5.8735 | 1.50 | 0.75 |
| | 622 | 17.34 | 17.34 | | | 7.25 | 2.69 | | | | | | | 6.2470 - 6.2485 | 1.50 | 0.75 |
| 7 | 624 | 19.34 | 19.34 | | | 9.25 | 2.69 | | | | | | | 6.9970 - 6.9985 | 1.50 | 0.50 |
| | 622 | 18.69 | 18.69 | 8.69 | 8.69 | 7.25 | 2.75 | 0.38 | 0.50 | 20.75 | 15.75 | 10.31 | 15.75 | 6.2470 - 6.2485 | 1.50 | 0.75 |
| | 624 | 20.69 | 20.69 | | | 9.25 | 2.75 | | | | | | | 6.9970 - 6.9985 | 1.50 | 0.75 |

- Notes:
- Bore taper is 1-1/4 inch per foot on diameter.
 - Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1.5 through 5.5
 - Puller Holes are standard on sizes 4 through 7.
 - Puller Holes are available for sizes 1.5 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
FA Type
Performance Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FA Type Alloy Steel Flex-Flex Couplings

The FA Type coupling consists of two flex hubs, two sleeves and one accessory kit. This coupling is supplied with exposed bolts as standard. Shrouded bolts are available upon request through size 5.5.

Features

- Molded seals maintain proper lubricant retention during misalignment conditions
- AISI 4140 Alloy Steel Construction
- Patented Vari-Crown® tooth form for long life
- Standard 20° pressure angle
- Heat treated bolts for greater strength
- Corrosion resistant bolts and nuts for ease of maintenance
- Provides parallel, angular misalignment and end float
- Flex Half coupling interchangeable with industry standards



G

FA Type Performance Data

| Size | Nominal Torque | | Maximum Speed | | ID1 - ID2 | | | | Weight | | Parallel Misalignment | | Max Angular Misalignment Degrees |
|------|----------------|-----------|---------------|-------|--------------------------|---------|------------------|-----|--------|-----|-----------------------|-----|----------------------------------|
| | | | | | Max Bore Standard Keyway | | Rough Stock Bore | | | | | | |
| | | | | | Unbal RPM | Bal RPM | in | mm | | | | | |
| 1 | 11,300 | 1 280 | 6,000 | 9,000 | 1.625 | 42 | 0.44 | 11 | 9 | 4 | 0.056 | 1.4 | 1.5° Per Gear Mesh |
| 1.5 | 22,700 | 2 560 | 5,500 | 8,250 | 2.125 | 56 | 0.69 | 18 | 19 | 9 | 0.060 | 1.5 | |
| 2 | 39,000 | 4 410 | 5,000 | 7,500 | 2.75 | 73 | 0.94 | 24 | 34 | 15 | 0.085 | 2.2 | |
| 2.5 | 69,300 | 7 930 | 4,400 | 6,600 | 3.25 | 88 | 1.44 | 37 | 54 | 25 | 0.105 | 2.7 | |
| 3 | 118,000 | 13 300 | 4,000 | 6,000 | 4.000 | 107 | 1.44 | 37 | 80 | 36 | 0.115 | 2.9 | |
| 3.5 | 177,000 | 20 000 | 3,500 | 5,250 | 4.625 | 124 | 1.81 | 46 | 130 | 59 | 0.130 | 3.3 | |
| 4 | 263,400 | 29 760 | 3,000 | 4,500 | 5.375 | 147 | 2.44 | 62 | 190 | 86 | 0.150 | 3.8 | |
| 4.5 | 354,000 | 40 000 | 2,700 | 4,050 | 6.000 | 167 | 3.00 | 76 | 250 | 114 | 0.175 | 4.4 | |
| 5 | 508,600 | 57 470 | 2,500 | 3,750 | 6.500 | 176 | 3.00 | 76 | 380 | 173 | 0.200 | 5.1 | |
| 5.5 | 670,700 | 75 790 | 2,200 | 3,300 | 7.500 | 202 | 4.00 | 101 | 520 | 236 | 0.220 | 5.6 | |
| 6 | 877,100 | 99 110 | 2,100 | 3,150 | 8.250 | 225 | 4.00 | 101 | 650 | 295 | 0.120 | 3.0 | |
| 7 | 1,179,300 | 1 332 600 | 2,000 | 3,000 | 9.500 | 255 | 5.00 | 127 | 950 | 431 | 0.135 | 3.4 | |

Ordering Information

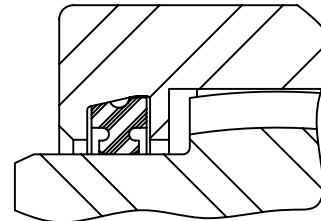
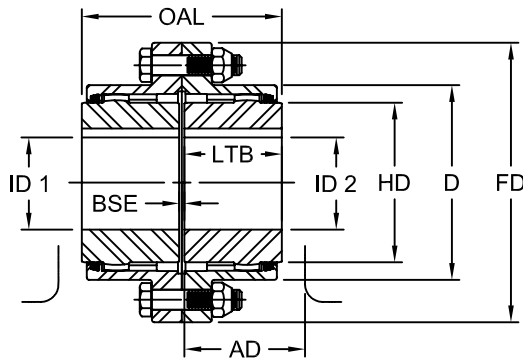
- Application: Driver and Driven.
- Type and size of coupling, horizontal, vertical etc.
- Power: Motor horsepower or torque requirement.
- Speed: Motor RPM or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.



Gear
FA Type
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

FA Type Alloy Steel Couplings



FA Type Dimensional Data

| Size | OAL in | AD in | ID1 - ID2 | | | | LTB in | BSE in | FD in | D in | HD in |
|------|-----------|----------|--------------------------------|-----|---------------------|-----|-----------|-----------|----------|---------|----------|
| | | | Max Bore Standard Keyway | | Rough Stock Bore | | | | | | |
| | | | in | mm | in | mm | | | | | |
| 1 | 3.50 | 4.19 | 1.625 | 42 | 0.44 | 11 | 1.69 | 0.13 | 4.56 | 3.06 | 2.31 |
| 1.5 | 4.00 | 4.75 | 2.125 | 56 | 0.69 | 18 | 1.94 | 0.13 | 6.00 | 3.97 | 3.00 |
| 2 | 5.00 | 6.00 | 2.750 | 73 | 0.94 | 24 | 2.44 | 0.13 | 7.00 | 4.86 | 4.00 |
| 2.5 | 6.25 | 7.13 | 3.250 | 88 | 1.44 | 37 | 3.03 | 0.19 | 8.38 | 5.84 | 4.63 |
| 3 | 7.38 | 8.13 | 4.000 | 107 | 1.44 | 37 | 3.59 | 0.19 | 9.44 | 6.84 | 5.63 |
| 3.5 | 8.63 | 9.38 | 4.625 | 124 | 1.81 | 46 | 4.19 | 0.25 | 11.00 | 7.91 | 6.50 |
| 4 | 9.75 | 10.25 | 5.375 | 147 | 2.44 | 62 | 4.75 | 0.25 | 12.50 | 9.25 | 7.50 |
| 4.5 | 10.94 | 11.50 | 6.000 | 167 | 3.00 | 76 | 5.31 | 0.31 | 13.63 | 10.38 | 8.50 |
| 5 | 12.38 | 13.00 | 6.500 | 176 | 3.00 | 76 | 6.03 | 0.31 | 15.31 | 11.56 | 9.50 |
| 5.5 | 14.13 | 14.38 | 7.500 | 202 | 4.00 | 101 | 6.91 | 0.31 | 16.75 | 12.72 | 10.50 |
| 6 | 15.13 | 17.00 | 8.250 | 225 | 4.00 | 101 | 7.41 | 0.31 | 18.00 | 14.00 | 11.50 |
| 7 | 17.75 | 20.00 | 9.500 | 255 | 5.00 | 127 | 8.69 | 0.38 | 20.75 | 15.75 | 13.00 |

- Notes:
- Exposed Bolt Design is standard.
 - Shrouded Bolt Design available upon request for sizes 1 through 5.5.
 - Puller Holes are standard on sizes 4 through 7.
 - Puller Holes are available for sizes 1 through 3.5 at an additional charge.
 - Interference bores with no set screws are standard unless otherwise specified.
 - Inch bore and keyway tolerances conform to AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.



Gear
RA and RAHS Type
Performance Data

Lovejoy / Sier-Bath Rigid Adjustable Couplings

RA and RAHS Type Rigid Adjustable Couplings

The RA and RAHS couplings are offered in two different styles. Type II coupling consists of two rigid hubs, adjusting nut and split ring and split ring for motor hub. Type IV coupling consists of two rigid hubs, adjusting nut, split ring for motor hub and spacer.

Features

- Axial positioning of the pump impeller in vertical pump applications
- Clearance fit bores allows for easy installation and maintenance for pump and/or motor
- Easily adjustable for vertical clearance
- Removable spacer for easy maintenance
- AISI 1045 Steel
- Stainless Steel coupling also available



G

RA and RAHS Type Performance Data

| Size | HP/100 RPM | Nominal Torque in-lb | Thrust Capacity lbs | Motor & Pump Hubs | | Motor & Pump Hubs | |
|-------|---------------|----------------------------|---------------------------|-------------------|-----|-------------------|-----|
| | | | | Min Bore | | Max Bore | |
| | | | | in | mm | in | mm |
| 1125 | 2.7 | 1,702 | 4,500 | 0.44 | 11 | 1.125 | 29 |
| 1625 | 8.0 | 5,042 | 11,000 | 0.63 | 16 | 1.625 | 42 |
| 2125 | 17.9 | 11,282 | 31,000 | 0.73 | 18 | 2.125 | 56 |
| 2625 | 33.8 | 21,302 | 31,000 | 0.88 | 22 | 2.625 | 70 |
| 2875 | 44.4 | 27,983 | 31,000 | 0.88 | 22 | 2.875 | 77 |
| 3125 | 57.0 | 35,924 | 41,000 | 1.19 | 30 | 3.125 | 84 |
| 3875 | 109.0 | 68,697 | 73,000 | 1.25 | 31 | 3.875 | 103 |
| 5000 | 310.0 | 195,378 | 160,000 | 2.38 | 60 | 5.000 | 135 |
| 6000 | 404.0 | 254,621 | 300,000 | 2.88 | 73 | 6.000 | 167 |
| 7250 | 712.0 | 448,738 | 300,000 | 4.00 | 101 | 7.250 | 194 |
| 8500 | 1148.0 | 723,527 | 350,000 | 4.00 | 101 | 8.500 | 225 |
| 10500 | 2164.0 | 1,363,861 | 400,000 | 5.00 | 127 | 10.500 | 276 |

Ordering Information

- Application: Driver and Driven.
- Power: Motor horsepower or torque requirement.
- Speed: Motor Speed or Driven RPM.
- Distance between shaft ends (BSE).
- Shaft sizes.
- Adjusting nut threads.
- Amount of trust on either or both shafts.
- Submit drawing if available.

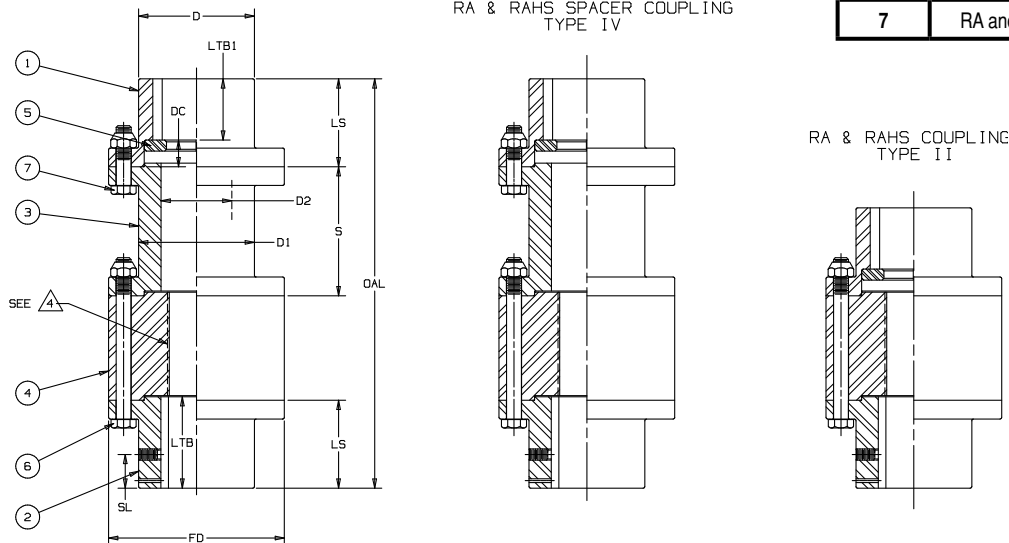


Gear RA and RAHS Type Dimensional Data

Lovejoy / Sier-Bath Rigid Adjustable Couplings

RA and RAHS Type Rigid Adjustable Couplings

| Item | Description |
|------|---------------------------|
| 1 | Upper Hub - Motor |
| 2 | Lower hub - Pump |
| 3 | Spacer |
| 4 | Adjusting Nut, Threaded |
| 5 | Washer, Split |
| 6 | RA and RAHS Accessory Kit |
| 7 | RA and RAHS Accessory Kit |



RA and RAHS Type Dimensional Data

| Size | STD OAL | | FD | D | LTB | LTB1 | LS | DC | N | SL | D1 | D2 | S | | BOLTS | | B.C. Dia in |
|-------|---------------|---------------|-------|-------|-------|-------|-------|------|------|------|-------|-------|-----------|-----------|-------|------------|-------------------|
| | Type II in | Type IV in | | | | | | | | | | | Std in | Min in | Qty | Size | |
| 1125 | 5.25 | 9.56 | 3.00 | 1.75 | 2.13 | 1.11 | 2.00 | 0.89 | 1.25 | 0.88 | 1.75 | 1.25 | 4.44 | 1.63 | 4 | 1/4 - 28 | 2.375 |
| 1625 | 6.00 | 10.31 | 4.00 | 2.50 | 2.38 | 1.36 | 2.25 | 0.89 | 1.50 | 0.88 | 2.50 | 1.75 | 4.44 | 1.75 | 6 | 5/16 - 24 | 3.250 |
| 2125 | 7.13 | 11.44 | 5.13 | 3.13 | 2.81 | 1.80 | 2.69 | 0.89 | 1.75 | 1.00 | 3.13 | 2.25 | 4.44 | 2.63 | 6 | 1/2 - 20 | 4.250 |
| 2625 | 9.38 | 13.69 | 5.88 | 3.88 | 3.06 | 2.05 | 2.94 | 0.89 | 3.50 | 1.13 | 3.88 | 2.75 | 4.44 | 2.63 | 6 | 1/2 - 20 | 4.938 |
| 2875 | 10.38 | 14.69 | 6.38 | 4.38 | 3.56 | 2.55 | 3.44 | 0.89 | 3.50 | 1.38 | 4.38 | 3.00 | 4.44 | 2.88 | 6 | 1/2 - 20 | 5.438 |
| 3125 | 11.50 | 15.81 | 6.75 | 4.63 | 4.13 | 3.11 | 4.00 | 0.89 | 3.50 | 1.63 | 4.63 | 3.25 | 4.44 | 2.88 | 8 | 1/2 - 20 | 5.813 |
| 3875 | 12.75 | 17.06 | 8.94 | 5.88 | 4.50 | 3.48 | 4.38 | 0.89 | 4.00 | 1.75 | 5.88 | 4.00 | 4.44 | 3.13 | 6 | 3/4 - 16 | 7.625 |
| 5000 | 15.00 | NO STD | 11.75 | 7.50 | 6.25 | 4.63 | 6.00 | 1.38 | 3.00 | 2.44 | 7.50 | 5.13 | NO STD | 4.50 | 8 | 1 - 14 | 10.000 |
| 6000 | 20.88 | NO STD | 13.25 | 9.00 | 9.50 | 7.63 | 9.25 | 1.63 | 2.38 | 4.00 | 9.00 | 6.13 | NO STD | 4.75 | 10 | 1 - 14 | 11.500 |
| 7250 | 25.19 | NO STD | 15.00 | 10.75 | 11.06 | 8.81 | 10.75 | 1.94 | 3.69 | 4.75 | 10.75 | 7.38 | NO STD | 7.06 | 14 | 1 - 14 | 13.250 |
| 7500 | 33.56 | NO STD | 17.25 | 12.50 | 15.31 | 13.06 | 15.00 | 1.94 | 3.56 | 6.63 | 12.50 | 8.63 | NO STD | 7.31 | 12 | 1-1/8 - 12 | 15.000 |
| 10500 | 40.94 | NO STD | 20.50 | 15.00 | 18.69 | 16.44 | 18.38 | 1.94 | 4.19 | 8.13 | 15.00 | 10.63 | NO STD | 8.31 | 12 | 1-1/8 - 12 | 18.000 |

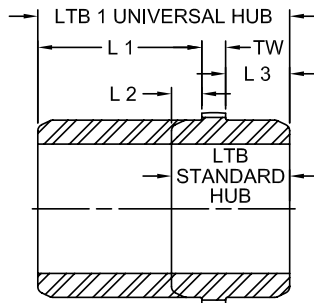
- Notes:
- Clearance fit bores with set screw are standard.
 - RA couplings meet standard tolerances.
 - Inch bore and keyway tolerances conform to AINSI / AGMA 9002-B04.
 - For metric bore and keyway tolerances, consult Lovejoy Engineering Section.
 - RAHS couplings conform to API 610 8th edition tolerances.



Gear

**F Universal Hub and Puller Holes
Dimensional Data**

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

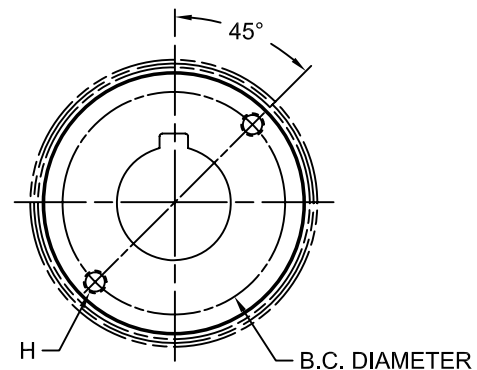


F Type Standard and Universal Hub Dimensions

| Size | L1 in | L2 in | L3 in | TW in | LTB STD in | LTB1 UNIV HUB in |
|------|----------|----------|----------|----------|------------------|------------------------|
| 1 | 2.75 | 0.44 | 0.75 | 0.50 | 1.69 | 4.00 |
| 1.5 | 3.13 | 0.56 | 0.81 | 0.56 | 1.94 | 1.50 |
| 2 | 3.63 | 0.56 | 1.25 | 0.63 | 2.44 | 4.50 |
| 2.5 | 4.22 | 0.75 | 1.53 | 0.75 | 3.03 | 6.50 |
| 3 | 4.44 | 1.03 | 1.69 | 0.88 | 3.59 | 7.00 |
| 3.5 | 4.63 | 1.31 | 1.88 | 1.00 | 4.19 | 7.50 |
| 4 | 4.97 | 1.47 | 2.16 | 1.13 | 4.75 | 8.25 |
| 4.5 | 5.19 | 1.50 | 2.56 | 1.25 | 5.31 | 9.00 |
| 5 | 5.06 | 1.59 | 2.94 | 1.50 | 6.03 | 9.50 |
| 5.5 | 5.56 | 1.97 | 3.19 | 1.75 | 6.91 | 10.50 |

Flex Hubs Puller Bolt Holes

| Size | B.C. Diameter in | Tap Size | |
|------|---------------------|-----------|-------|
| | | UNC | Depth |
| 1 | None | None | None |
| 1.5 | None | None | None |
| 2 | 3.38 | 5/8 - 18 | 0.50 |
| 2.5 | 3.94 | 3/8 - 16 | 0.56 |
| 3 | 4.94 | 1/2 - 13 | 0.75 |
| 3.5 | 5.56 | 1/2 - 13 | 0.75 |
| 4 | 6.44 | 5/8 - 11 | 0.94 |
| 4.5 | 7.38 | 5/8 - 11 | 0.94 |
| 5 | 8.00 | 3/4 - 10 | 1.13 |
| 5.5 | 9.00 | 1 - 8 | 1.50 |
| 6 | 9.75 | 1 - 8 | 1.50 |
| 7 | 11.63 | 1 - 8 | 1.50 |
| 8 | 14.00 | 1 - 8 | 1.50 |
| 9 | 15.25 | 1-1/4 - 7 | 1.88 |



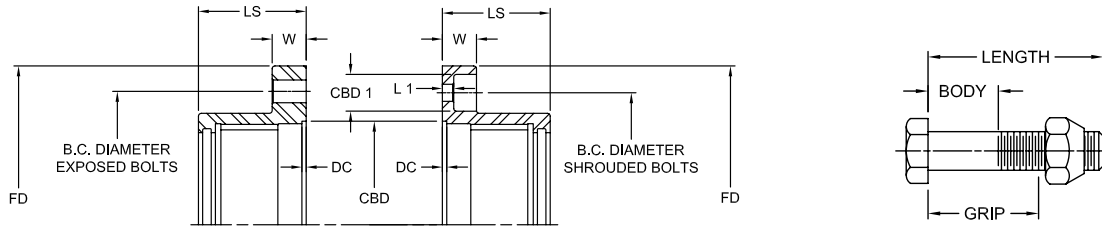


Gear

F Flange and Hub Gap Details

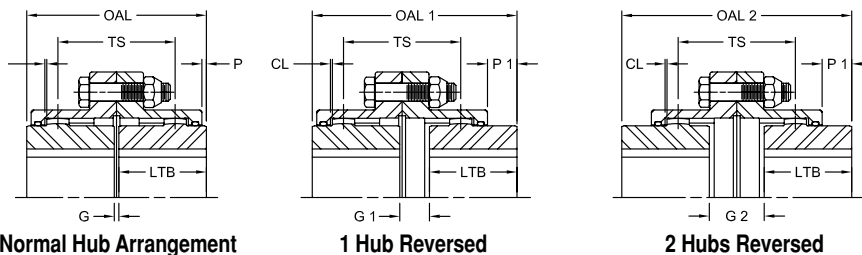
Dimensional Data

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings



Flange Details

| Size | LS in | W in | DC in | FD in | CBD in | B.C. Dia | | Exposed Bolts | | | | Shrouded Bolts | | | | CBD 1 in | L1 in | | | |
|------|----------|---------|----------|----------|-----------|----------|----|---------------|-------|--------------|----------------|--------------------|----|--------|-------|-------------|----------|--------------|----------------|----------------|
| | | | | | | in | in | Qty | Size | Length in | Min Body in | Max Grip in | in | Qty | Size | | | Length in | Min Body in | Max Grip in |
| | | | | | | | | | | | | | | | | | | | | |
| 1 | 1.66 | 0.56 | 0.09 | 4.56 | 2.812 | 3.750 | 6 | 1/4-28 | 1-1/2 | 3/4 | 1 | 3.750 | 6 | 1/4-28 | 3/4 | 9/32 | 7/16 | 0.64 | 0.25 | |
| 1.5 | 1.88 | 0.75 | 0.09 | 6.00 | 3.562 | 4.812 | 8 | 3/8-24 | 2 | 15/16 | 1-1/4 | 4.812 | 8 | 3/8-24 | 1 | 9/32 | 7/16 | 0.81 | 0.25 | |
| 2 | 2.38 | 0.75 | 0.09 | 7.00 | 4.562 | 5.875 | 6 | 1/20 | 2-1/4 | 15/16 | 1-1/4 | 5.812 | 10 | 3/8-24 | 1 | 9/32 | 7/16 | 0.81 | 0.25 | |
| 2.5 | 2.88 | 0.88 | 0.09 | 8.38 | 5.437 | 7.125 | 6 | 5/8-18 | 2-3/4 | 7/8 | 1-1/4 | 7.000 | 10 | 1/2-20 | 1-1/8 | 3/8 | 1/2 | 1.06 | 0.31 | |
| 3 | 3.31 | 0.88 | 0.09 | 9.44 | 6.437 | 8.125 | 8 | 5/8-18 | 2-3/4 | 7/8 | 1-1/4 | 8.000 | 12 | 1/2-20 | 1-1/8 | 3/8 | 1/2 | 1.06 | 0.31 | |
| 3.5 | 3.81 | 1.13 | 0.09 | 11.00 | 7.375 | 9.500 | 8 | 3/4-16 | 3-1/4 | 1 | 1-7/16 | 9.281 | 12 | 5/8-18 | 1-3/8 | 7/16 | 5/8 | 1.31 | 0.38 | |
| 4 | 4.25 | 1.13 | 0.19 | 12.50 | 8.750 | 11.000 | 8 | 3/4-16 | 3-1/4 | 1 | 1-7/16 | 10.625 | 14 | 5/8-18 | 1-3/8 | 7/16 | 5/8 | 1.31 | 0.38 | |
| 4.5 | 4.81 | 1.13 | 0.19 | 13.63 | 9.750 | 12.000 | 10 | 3/4-16 | 3-1/4 | 1-1/4 | 1-7/16 | 11.750 | 14 | 5/8-18 | 1-3/8 | 7/16 | 5/8 | 1.31 | 0.38 | |
| 5 | 5.50 | 1.50 | 0.19 | 15.31 | 10.750 | 13.500 | 8 | 7/8-14 | 4-1/4 | 1-3/4 | 2-1/4 | 13.188 | 14 | 3/8-16 | 1-7/8 | 5/8 | 1 | 1.56 | 0.56 | |
| 5.5 | 6.00 | 1.50 | 0.19 | 16.75 | 12.125 | 14.500 | 14 | 7/8-14 | 4-1/4 | 1-3/4 | 2-1/4 | 14.437 | 16 | 3/4-16 | 1-7/8 | 5/8 | 1 | 1.56 | 0.56 | |
| 6 | 6.69 | 1.00 | 0.25 | 18.00 | 13.000 | 15.750 | 14 | 7/8-14 | 3-1/4 | 23/32 | 1-1/4 | EXPOSED BOLTS ONLY | | | | | | | | |
| 7 | 7.38 | 1.13 | 0.31 | 20.75 | 14.625 | 18.250 | 16 | 1-14 | 3-1/2 | 5/8 | 1-1/4 | | | | | | | | | |
| 8 | 8.38 | 1.31 | 0.31 | 23.75 | 17.750 | 20.750 | 16 | 1-1/8-12 | — | — | — | | | | | | | | | |
| 9 | 9.00 | 1.50 | 0.31 | 26.00 | 19.000 | 23.250 | 18 | 1-1/4-12 | — | — | — | | | | | | | | | |



Minimum and Maximum Hub Gaps

| Size | OAL in | OAL1 in | OAL2 in | TS in | CL in | P in | P1 in | LTB in | G in | G1 in | G2 in |
|------|-----------|------------|------------|----------|----------|---------|----------|-----------|---------|----------|----------|
| 1 | 3.50 | 3.81 | 4.13 | 2.13 | 0.06 | 0.09 | 0.41 | 1.69 | 0.13 | 0.44 | 0.75 |
| 1.5 | 4.00 | 4.25 | 4.50 | 2.31 | 0.06 | 0.13 | 0.38 | 1.94 | 0.13 | 0.38 | 0.63 |
| 2 | 5.00 | 5.81 | 6.38 | 3.25 | 0.06 | 0.13 | 0.81 | 2.44 | 0.13 | 0.81 | 1.50 |
| 2.5 | 6.25 | 7.03 | 7.81 | 4.00 | 0.09 | 0.25 | 1.03 | 3.03 | 0.19 | 0.97 | 1.75 |
| 3 | 7.38 | 8.03 | 8.69 | 4.44 | 0.09 | 0.38 | 1.03 | 3.59 | 0.19 | 0.84 | 1.50 |
| 3.5 | 8.63 | 9.19 | 9.75 | 5.00 | 0.09 | 0.50 | 1.06 | 4.19 | 0.25 | 0.81 | 1.38 |
| 4 | 9.75 | 10.44 | 11.13 | 5.69 | 0.13 | 0.63 | 1.31 | 4.75 | 0.25 | 0.94 | 1.63 |
| 4.5 | 10.94 | 12.00 | 13.06 | 6.69 | 0.13 | 0.66 | 1.72 | 5.31 | 0.31 | 1.38 | 2.44 |
| 5 | 12.38 | 13.72 | 15.06 | 7.69 | 0.19 | 0.69 | 2.03 | 6.03 | 0.31 | 1.66 | 3.00 |
| 5.5 | 14.13 | 15.34 | 16.56 | 8.44 | 0.19 | 1.06 | 2.38 | 6.91 | 0.31 | 1.53 | 2.75 |
| 6 | 15.13 | 16.53 | 17.94 | 9.13 | 0.16 | 0.88 | 2.28 | 7.41 | 0.31 | 1.72 | 3.13 |
| 7 | 17.75 | 19.06 | 20.38 | 10.38 | 0.19 | 1.50 | 2.81 | 8.69 | 0.38 | 1.69 | 3.00 |
| 8 | 22.38 | 23.13 | 23.88 | 12.13 | 0.19 | 2.81 | 3.56 | 11.00 | 0.38 | 1.13 | 1.88 |
| 9 | 23.50 | 24.25 | 25.00 | 12.75 | 0.38 | 2.75 | 3.50 | 11.50 | 0.50 | 1.25 | 2.00 |

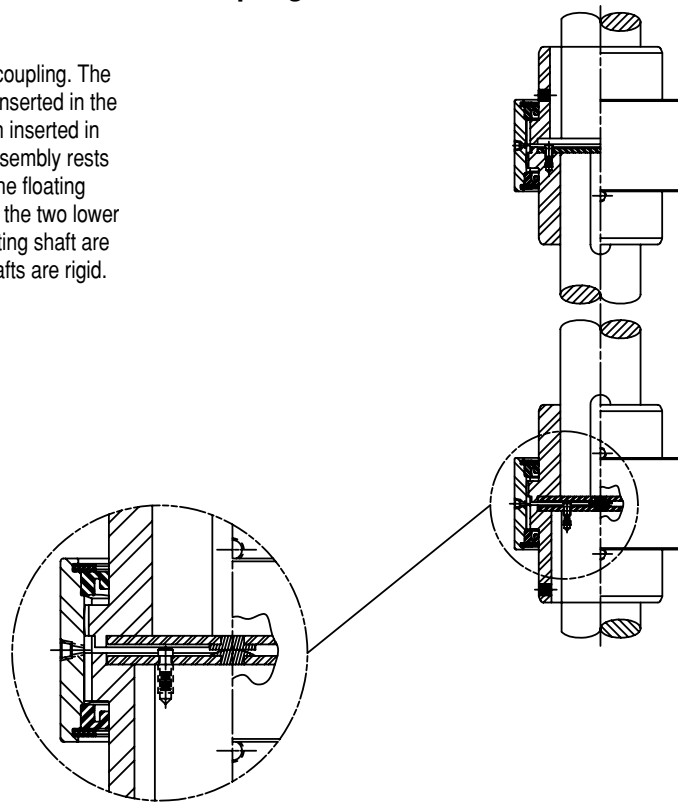


Gear Continuous Sleeve Overview

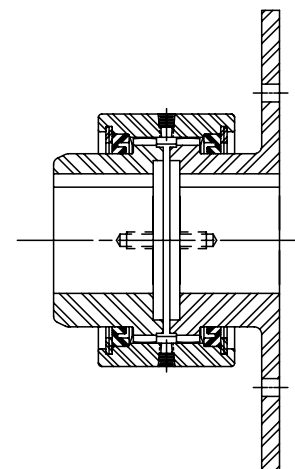
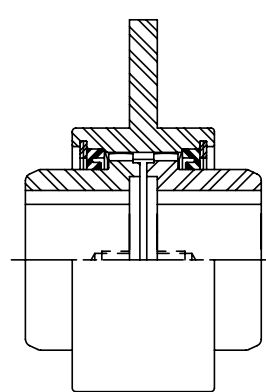
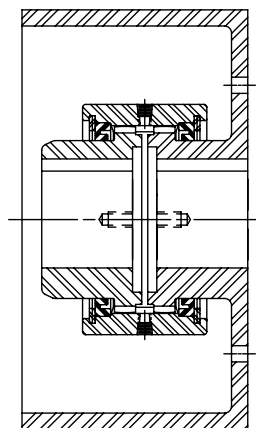
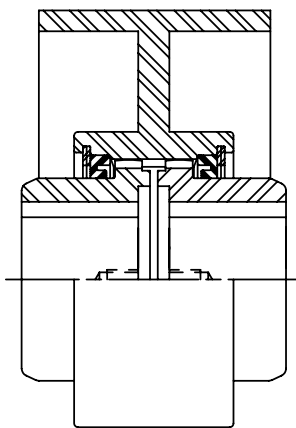
Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings

Vertical Floating Shaft Type

The upper coupling is a Standard Vertical Type coupling. The lower coupling has a hardened crowned button inserted in the plate of the lower hub and a hardened flat button inserted in the plate of the upper hub. The entire floating assembly rests on these two buttons which carry the weight of the floating assembly thus maintaining the spacing between the two lower hubs allowing for flexibility. The hubs on the floating shaft are flexible and the hubs of the driver and driven shafts are rigid.



G



Brakedrum Type

Two different designs of brakedrum couplings are illustrated. One shows the brakedrum as an integral part of the sleeve and the two hubs are standard. The other design utilizes one standard hub and a standard sleeve with the brakedrum as part of a special hub.

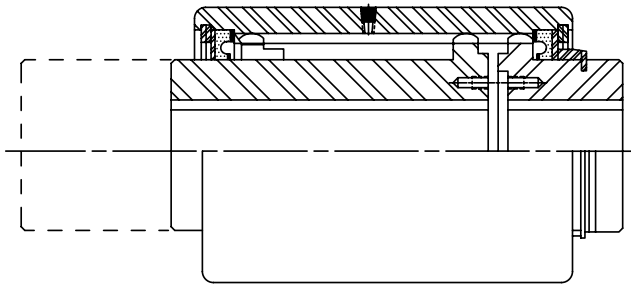
Brake Disc Type

Two different designs of brake disc couplings are illustrated. One shows the brake disc as an integral part of the sleeve and the two hubs are standard. The other design utilizes one standard hub and a standard sleeve with the brakedrum as part of a special hub.



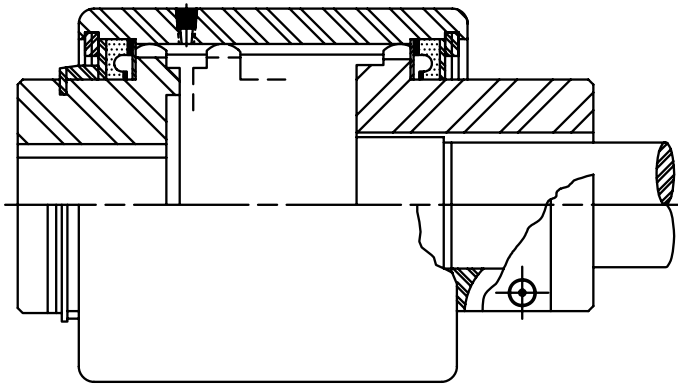
Gear Continuous Sleeve Overview

Lovejoy / Sier-Bath Continuous Sleeve Gear Couplings



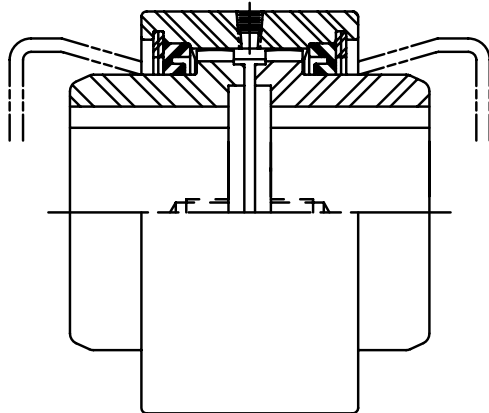
Sliding Hub Type

The sleeve is longer than standard and is designed to allow for a predetermined amount of axial travel on one shaft. The short hub is secured to the sleeve by means of a spacer washer and snap ring which prevents travel. This type is also manufactured to allow for travel of both hubs in the sleeve. This coupling is also available with a rigid type short hub.



Jordan Type

Used on Jordan machines and refiners, this design is similar to the Sliding Hub Type coupling except the long hub is split and secured to the shaft with a bolt. This permits for quick axial adjustment of the Jordan shafts in the hub.



Continuous Lubricated Type

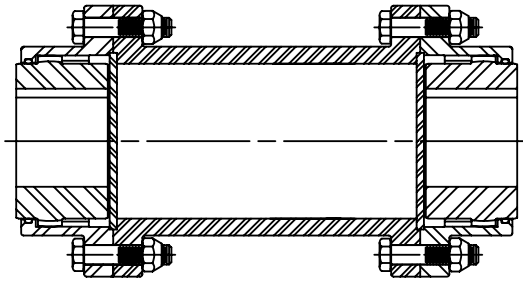
This coupling is adapted from our Standard Type coupling, except the standard seals have been replaced with the special spacer washers. These washers have a snug fit in the sleeve with sufficient clearance on the hub OD to allow for injection of a continuous stream of lubricant.

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Gear Flanged Sleeve Overview

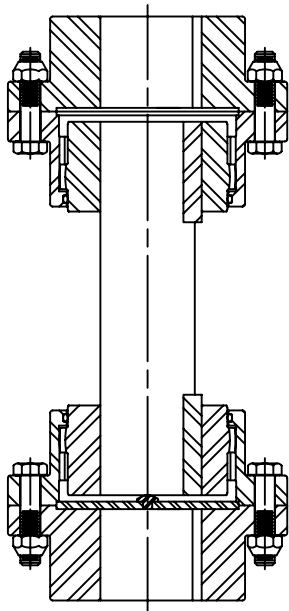
Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings



Limited End Float Spacer Type

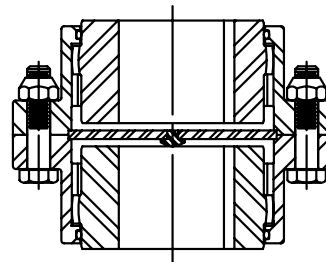
The addition of plates restricts axial travel to the drive or driven shaft. The spacer makes it possible to remove the hubs from either shaft without disturbing the connected units.

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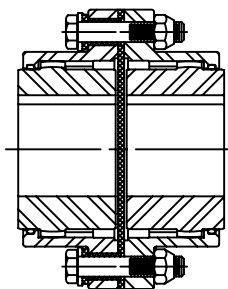
Vertical Floating Shaft Type

The lower coupling has a hardened crowned button inserted in the plate of the lower hub. The entire floating assembly rest on the button. Optional construction of the upper coupling would be a rigid hub on the floating shaft with a flex half on the top.



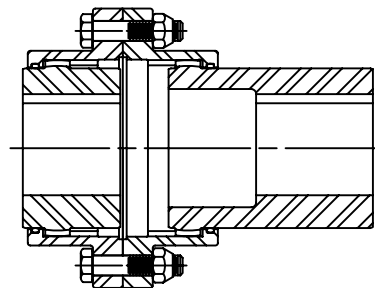
Vertical Type

This coupling has the same horsepower, RPM and misalignment capabilities as the standard couplings of corresponding sizes. A plate with a hardened crowned button rests on the lower shaft which supports the weight of the sleeve.



Insulated Type

Use of a non-metallic material between flanges and around the bolts prevents any stray currents from one shaft to the other.



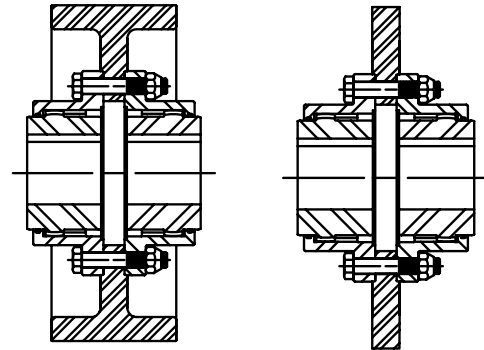
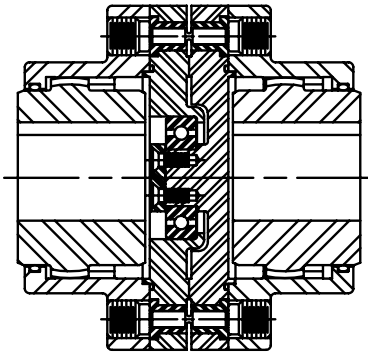
Jordan Type

Used on Jordan machines and refiners, this design is similar to the slide type coupling except the long hub is split and secured to the shaft with a bolt clamp. This permits quick axial adjustment of the Jordan shafts i this hub.



Gear Flanged Sleeve Overview

Lovejoy / Sier-Bath Flanged Sleeve Gear Couplings

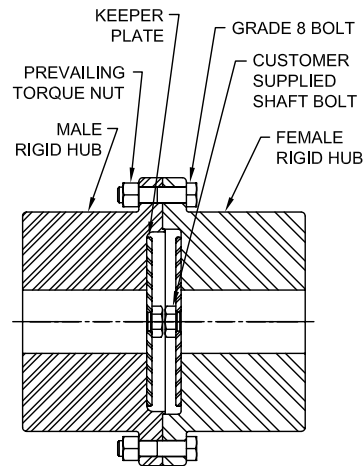
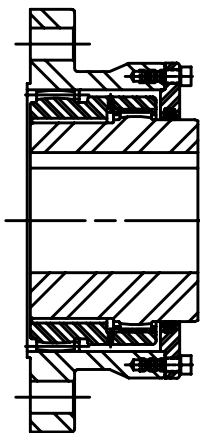


Engineered Shear Pin Type

Shear pin couplings are primarily used to limit transmitted torque to a redetermined load. This in turn disconnects the driver and driven shafts if torque exceeds the specified limits. They are especially suited to protect equipment when jams occur. Components are re-useable after pins shear. The coupling will retain lubricant for a short period to allow equipment to be shut down.

Brakewheel and Brake Disc Type

Replaceable brakewheel and brake disc piloted on the outside diameter of a standard sleeve and/or rigid hub. Offers a choice of applying braking effort to the load or driving motor.



Double Engagement Half Gear Type

Both internal and external teeth in a single sleeve. Can be bolted to a rotating flywheel, shaft or drum to connect driver or driven machine with a shaft extension. This coupling has the same features, ratings and misalignment capability as the standard group of couplings.

Rigid Alloy Steel FARR Type

Male/Female piloted rigid coupling coupling with keeper plates. This coupling is used when a rigid connection is required between the low speed shaft of a gearbox and the head shaft of a conveyor, bucket elevator, mixer or any overhung or suspended load.



Gear
Standard Flanged Sleeve Maximum Bores Inch / Metric
Dimensional Data

Standard Flanged Sleeve Maximum Bores - Inches and Millimeters

Flex Hub Maximum Bores - Interference Fit

| Size | Inch | | | | | | Metric | | |
|------|-------------|---|-------|-------------|--|-------|-------------|---|------|
| | Max Bore in | 1 Square Keyway Width in Depth in | | Max Bore in | 1 Rectangular Keyway Width in Depth in | | Max Bore mm | Metric Keyway Width mm Depth mm | |
| 1 | 1.625 | 0.375 | 0.188 | 1.750 | 0.375 | 0.125 | 42 | 12 | 3.3 |
| 1.5 | 2.125 | 0.500 | 0.250 | 2.250 | 0.500 | 0.188 | 56 | 16 | 4.3 |
| 2 | 2.750 | 0.625 | 0.313 | 2.875 | 0.750 | 0.250 | 73 | 20 | 4.9 |
| 2.5 | 3.250 | 0.750 | 0.375 | 3.375 | 0.875 | 0.313 | 85 | 25 | 5.4 |
| 3 | 4.000 | 1.000 | 0.500 | 4.250 | 1.000 | 0.375 | 107 | 28 | 6.4 |
| 3.5 | 4.625 | 1.250 | 0.625 | 4.875 | 1.250 | 0.438 | 125 | 32 | 7.4 |
| 4 | 5.375 | 1.250 | 0.625 | 5.625 | 1.500 | 0.500 | 145 | 36 | 8.4 |
| 4.5 | 6.000 | 1.500 | 0.750 | 6.500 | 1.500 | 0.500 | 165 | 40 | 9.4 |
| 5 | 6.500 | 1.500 | 0.750 | 7.000 | 1.750 | 0.750 | 180 | 45 | 10.4 |
| 5.5 | 7.250 | 1.750 | 0.875 | 7.500 | 1.750 | 0.750 | 200 | 45 | 10.4 |
| 6 | 8.000 | 2.000 | 1.000 | 8.250 | 2.000 | 0.750 | 225 | 50 | 11.4 |
| 7 | 9.000 | 2.000 | 1.000 | 9.500 | 2.500 | 0.875 | 255 | 56 | 12.4 |
| 8 | 11.000 | 2.500 | 1.250 | 11.500 | 3.000 | 1.000 | 310 | 70 | 14.4 |
| 9 | 12.000 | 3.000 | 1.500 | 12.500 | 3.000 | 1.000 | 340 | 80 | 15.4 |
| 10 | | | | 13.750 | 3.500 | 1.250 | 355 | 80 | 15.4 |
| 11 | | | | 15.500 | 4.000 | 1.500 | 410 | 90 | 17.4 |
| 12 | | | | 17.000 | 4.000 | 1.500 | 435 | 90 | 17.4 |
| 13 | | | | 18.250 | 5.000 | 1.750 | 480 | 100 | 19.5 |
| 14 | | | | 19.500 | 5.000 | 1.750 | | | |
| 15 | | | | 21.000 | 5.000 | 1.750 | | | |
| 16 | | | | 22.500 | 6.000 | 2.000 | | | |
| 18 | | | | 25.500 | 6.000 | 2.000 | | | |
| 20 | | | | 28.000 | 7.000 | 2.500 | | | |
| 22 | | | | 31.000 | 8.000 | 2.750 | | | |
| 24 | 34.000 | 9.000 | 3.000 | | | | | | |
| 26 | 37.000 | 9.000 | 3.000 | | | | | | |
| 28 | 40.000 | 10.000 | 3.500 | | | | | | |
| 30 | 42.000 | 10.000 | 3.500 | | | | | | |

Notes: ■ Rectangular (reduced) keyways preferred for bores above 6-1/2 inches.
 ■ Maximum bores may be reduced for clearance fit bore applications.



Gear

**Rigid Hub Maximum Bores – Interference Fit
Dimensional Data**

Rigid Hub Maximum Bores – Interference Fit

Rigid Hub Maximum Bores - Interference Fit

| Size | Inch | | | | | | Metric | | |
|------|----------------|---|-------|----------------|--|-------|----------------|---|------|
| | Max Bore in | 1 Square Keyway Width in Depth in | | Max Bore in | 1 Rectangular Keyway Width in Depth in | | Max Bore mm | Metric Keyway Width mm Depth mm | |
| 1 | 2.125 | 0.500 | 0.250 | 2.250 | 0.500 | 0.188 | 56 | 16 | 4.3 |
| 1.5 | 2.813 | 0.750 | 0.375 | 3.062 | 0.750 | 0.250 | 76 | 22 | 5.4 |
| 2 | 3.500 | 0.875 | 0.438 | 3.750 | 0.875 | 0.313 | 95 | 25 | 5.4 |
| 2.5 | 4.250 | 1.000 | 0.500 | 4.500 | 1.000 | 0.375 | 114 | 32 | 7.4 |
| 3 | 4.875 | 1.250 | 0.625 | 5.250 | 1.250 | 0.438 | 134 | 36 | 8.4 |
| 3.5 | 5.625 | 1.500 | 0.750 | 5.875 | 1.500 | 0.500 | 150 | 36 | 8.4 |
| 4 | 6.500 | 1.500 | 0.750 | 6.500 | 1.500 | 0.500 | 176 | 45 | 10.4 |
| 4.5 | 7.375 | 1.750 | 0.875 | 7.625 | 2.000 | 0.750 | 202 | 50 | 11.4 |
| 5 | 8.375 | 2.000 | 1.000 | 8.750 | 2.000 | 0.750 | 230 | 50 | 11.4 |
| 5.5 | 9.250 | 2.500 | 1.250 | 9.500 | 2.500 | 0.875 | 260 | 56 | 12.4 |
| 6 | 10.125 | 2.500 | 1.250 | 10.500 | 2.500 | 0.875 | 285 | 63 | 12.4 |
| 7 | 11.250 | 3.000 | 1.500 | 12.000 | 3.000 | 1.000 | 320 | 70 | 14.4 |
| 8 | 13.500 | 3.500 | 1.750 | 14.000 | 3.500 | 1.250 | 375 | 80 | 15.4 |
| 9 | 15.000 | 3.500 | 1.750 | 15.500 | 4.000 | 1.500 | 415 | 90 | 17.4 |
| 10 | | | | 17.000 | 4.000 | 1.500 | 455 | 100 | 19.5 |
| 11 | | | | 18.500 | 5.000 | 1.750 | 500 | 100 | 19.5 |
| 12 | | | | 20.250 | 5.000 | 1.750 | | | |
| 13 | | | | 22.000 | 5.000 | 1.750 | | | |
| 14 | | | | 23.500 | 6.000 | 2.000 | | | |
| 15 | | | | 24.250 | 6.000 | 2.000 | | | |
| 16 | | | | 26.000 | 6.000 | 2.000 | | | |
| 18 | | | | 28.000 | 7.000 | 2.500 | | | |
| 20 | | | | 31.000 | 8.000 | 2.750 | | | |
| 22 | | | | 34.000 | 8.000 | 2.750 | | | |
| 24 | | | | 37.000 | 9.000 | 3.000 | | | |
| 26 | | | | 40.000 | 10.000 | 3.500 | | | |
| 28 | | | | 43.000 | 11.000 | 3.750 | | | |
| 30 | | | | 46.000 | 11.000 | 3.750 | | | |

Notes: ■ Rectangular (reduced) keyways preferred for bores above 6-1/2 inches.
 ■ Maximum bores may be reduced for clearance fit bore applications.



Why Coupling Grease?

Adequate lubrication is essential for satisfactory gear coupling operation. Lovejoy Gear Coupling Grease is specifically designed for gear coupling applications to increase coupling life while drastically reducing maintenance time. Its high viscosity base oil and tackifier combine to keep the grease in place and prevent separation and it is in complete compliance with NSI/AGMA 9001-B97 lubrication recommendations.

Lovejoy Coupling Grease is dark brown in color and manufactured with a lithium soap/polymer thickener, which has superior resistance to oil separation when subjected to high centrifugal forces normally found in couplings. Bearing or general purpose greases tend to separate and lose effectiveness due to high centrifugal forces on the various ingredients at high rotational speeds. These high centrifugal forces encountered in couplings separate the base oil from the thickeners. Heavy thickeners, which have no lubrication qualities, accumulate in the gear tooth mesh area resulting in premature coupling failure. Lovejoy Gear Coupling Grease is designed to be highly resistant to centrifugal separation of the oil and thickener, which allows the lubricant to be used for a relatively long period of time.

One of the secrets to the success of Lovejoy Gear Coupling Grease is the variable consistency throughout the working cycle of the application. The consistency of our gear coupling grease changes with the operating conditions. Working of the lubricant under actual service conditions causes the grease to become semi-fluid, functionally solash lubricating the wear surfaces of the coupling. As the grease cools, it returns to the original consistency, thereby preventing leakage.

Lovejoy Gear Coupling Grease is available from stock in 14 oz. cartridges, 1 lb. and 5 lb. cans.

Features

- Minimizing of coupling wear
- Resistance to water washing
- Corrosion and rust protection
- High load carrying capabilities
- Extended relubrication frequency
- Use at temperatures up to 325° F
- Staying in place under high speeds
- Resistance to centrifugal separation
- Reduction in down time & maintenance cost

Lovejoy Gear Coupling Grease has a consistency which overlaps the NLGI grades 0 and 1. This grease is specially formulated with a lithium/polymer thickener and fortified with corrosion, oxidation, extreme pressure, and an effective rust inhibitor additive package.



Typical Properties of Lovejoy Gear Coupling Grease

| | |
|----------------------------------|---------------------|
| NLGI Grade | 0/1 |
| Appearance | Dark Brown, Tacky |
| Lithium Soap / Polymer, wt% | 10.0 |
| Viscosity | |
| @ 40° C, cST | >3200 |
| @ 100° C, cSt | >50 |
| Penetration, Dmm | |
| Worked, 60x | 350 |
| Worked, 10,000, % Change | 10 |
| Dropping Point, ° F | 320° (160° C) |
| Centrifugal Oil Separation, vol% | None |
| Water Spray-Off, wt% | >3 |
| Rust Protection | Pass |
| Timken, OK Load, lbs | 40+ |
| Four-Bal EP | |
| Load Wear Index, kgf | 68 |
| Weld Point, kgf | 400 |
| Four-Ball Wear, mm | |
| 1 hr, 75° C, 1200 RPM, 40 kgf | 0.4 |
| Guide to Usable Temperature | |
| Min, ° F | Below -20° (-29° C) |
| Continuous Service, Max, ° F | 250° (121° C) |
| Short Exposure, Max, ° F | 325° (163° C) |