where the world turns for couplings

Lovejoy®

Grid

In This Section:

Grid

⚠ 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.

Grid

Table of Contents

The Power of Torsional Dampening

The Lovejoy Grid coupling reduces vibration by as much as 30%, and cushions shock loads to safeguard your driving and driven equipment. The flexible nature of the spring-like grid absorbs impact energy by spreading it out over time, thus reducing the magnitude of the peak loads. This is possible because of the progressive contact that occurs between the curved profile of the hub teeth and the flexible grid. Therefore, as the load increases, more of the tooth comes into contact with the grid, thus supplying superior protection and performance.

Lovejoy's Grid couplings are designed for versatility. Common hubs and grids are used within a given size range for both horizontal and vertical split cover models. Grid installation and replacement is a "snap" at only a fraction of the complete coupling cost.

Features

- Our Tapered Grid coupling is fully interchangeable with industry standards
- Quick installation and easy maintenance reduces labor and downtime costs
- Torsionally flexible and resilient - reduces vibration, plus cushions shock and impact loads
- Versatile stock components can be used with either horizontal or vertical covers
- Cover fasteners available in either Metric or Imperial sizes
- High tensile, shot-peened alloy steel grids and precision machined hubs ensure superior performance and long life

Top Quality Manufacturing

Made from a high tensile alloy steel, the grid spring is carefully formed to shape, then hardened and tempered under controlled conditions. Next, the grids are shot-peened, compressing the surface molecules and leaving a residually stressed surface. This process creates a stronger surface in compression.

Any load applied on the coupling in operation must first surmount the compressive forces created by peening before the tensile stress reaches the grid. This provides a dramatic increase in rating over other coupling types, increases reserve strength for longer life and may permit selection of a smaller coupling, thus reducing cost.

The Lovejoy Grid spring/hub tooth arrangement has been specifically designed for optimum performance and reliability. Not only does the hub tooth profile permit progressive loading under torsional shock conditions, but unique root radii are incorporated to significantly improve the fatigue life of the teeth.

Horizontally Split Cover

- Ideal for limited space
- Allows easy access to grid
- Well-suited for reversing service
- Manufactured from die-cast aluminum

Vertically Split Cover

- Ideal for higher operating speeds
- Manufactured from stamped steel

Full Spacer Design

- Ideal for pump applications because drop-out section allows for pump servicing
- Used only with horizontally split cover
- Stock for sizes 1020-1090

⚠ WARNING

You must refer to page GD-2 (Page 214) 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.

Grid Coupling Selection Process

The selection process for determining the proper grid coupling size requires using the charts shown on the following pages. There are three components to be selected: two hubs and one cover. When the shaft size of the driver and driven of the application are of the same diameter, the hubs selected will be the same. When shaft diameters differ, hubs selected will differ accordingly.

Information necessary before a grid coupling can be selected:

- HP (or KW) and RPM or Torque of driver
- Shaft sizes and type of fit of driver and driven equipment and corresponding keyways
- Shaft gap
- Physical space limitations
- Application description
- Environmental conditions (i.e. extreme temperature, corrosive conditions, space limitations)

For applications with high peak loads or brake applications use the formulas given on page GD-6 or consult Application Engineering for assistance. The following information is required for high peak loads or brake applications:

- System peak torque and frequency
- Duty cycle
- Brake torque rating

List of Charts provided for Selection:

- Chart 1 - Application Service Factors (pages GD-7 and GD-8)
- Chart 2 - General Service Factors (page GD-9)
- Chart 3 - Coupling Torque and Horsepower Ratings (page GD-9)

Formulas:

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

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

Design Torque = Nominal Torque x Service Factor

GD

Steps In Selecting A Grid Coupling

Step 1: Determine the Nominal Torque of your application by using the following formula:

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

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

Step 2: Using the Application Service Factors Chart 1 (pages GD-7 and GD-8), select the service factor which best corresponds to your application. If you cannot locate a service factor for your application, choose an appropriate value from the General Service Factors Chart 2 (page GD-9).

Step 3: Calculate the Design Torque of your application by multiplying the Nominal Torque calculated in Step 1 by the Application Service Factor determined in Step 2.

Design Torque = Nominal Torque x Service Factor

Step 4: Using the Grid Series Torque and Horsepower Performance Data Chart 3 (page GD-9) scan down the torque rating to the first value that is greater than or equal to the Design Torque calculated in Step 3.

Once this value is located, refer to the corresponding coupling size in the first column of the Grid Series Torque and Horsepower Performance Data Chart 3 (page GD-9). Refer to the maximum RPM value for the torque capability to ensure that the application requirements are met. If the requirement is not satisfied at this point, a different cover style or another type of coupling may be required for the application, and Lovejoy Application Engineering should be contacted.

Step 5: Refer to the Grid Series Torque and Horsepower Performance Data Chart 3 (page GD-9) and compare the application driver/driven shaft sizes to the maximum bore size available on the coupling selected. If coupling bore size is not large enough for the shaft diameter, select the next largest coupling that will accommodate the driver/driven shaft diameters.

Step 6: Using the Item Selection tables (pages GD-10 and G-11), find the appropriate Bore and Keyway sizes required and locate the Lovejoy UPC number. Next locate the appropriate Lovejoy UPC number for the Grid and Cover assembly (page GD-12).

Selection Example

A coupling is needed to connect a 50 HP standard electric motor rated at 1,800 RPM to a rotary compressor. The shaft size of the electric motor (driver) is 1.75 inches and the compressor (driven) is 1.5 inches. The shaft connections are .75 inches long. There are no special environmental conditions.

Step 1: Determine the Nominal Torque:

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

$$\text{in-lb} = \frac{(50 \times 63025)}{1800}$$

$$= 1750.69$$

Step 2: Using the Application Service Factors Chart 1 (pages GD-7 and GD-8), select the service factor which best corresponds to your application. The Application Service Factor for an electric motor driving a rotary compressor is 1.25. The value of 1.25 is found under the application category Compressor, Rotary, column; Electric Motor in Chart 1.

Step 3: Calculate the Design Torque of your application :

$$\text{Design Torque} = \text{Nominal Torque} \times \text{Service Factor}$$

$$= 1750.69 \times 1.25$$

$$= 2188.37 \text{ in-lb}$$

Step 4: Referencing the Grid Series Torque and Horsepower Performance Data Chart 3 (page GD-9), use the Torque Ratings column to determine the proper coupling size. Scanning down the Torque Ratings column, the first entry to accommodate the Design Torque value of 2188.37 in-lb is size 1050 with a nominal torque rating of 3500 in-lb. The maximum RPM of 1800 on the electric motor of the application does not exceed the 4,500 RPM maximum allowed for this size with the horizontal cover.

Step 5: Refer to the Grid Series Torque and Horsepower Performance Data Chart 3 (page GD-9) and compare the application driver/driven shaft sizes to the maximum bore size available in the coupling selected. The electric motor (driver) of this application has a shaft size of 1.75 inches and the compressor (driven) has a shaft size of 1.5 inches. The 1050 coupling has a maximum bore of 1.875 inches, so it can accommodate the driver/driven shaft sizes.

Therefore, the proper coupling size for this application is a 1050 coupling with a horizontal cover.

Step 6: Using the UPC Number Selection Tables (pages GD-10 and GD-11), locate the appropriate Lovejoy UPC numbers.

Locate the Tapered Hub Inch selection chart (page GD-10) The first bore size to be located is for the 1.75 inch shaft on the electric motor. Scan down the Bore/Keyway column to the 1.75 inch bore entry. Read across to the 1050 column to locate the Lovejoy UPC number of 05483.

The second bore size to be located is for the 1.5 inch shaft on the compressor. Scan down the Bore/Keyway column to the 1.5 inch bore entry. Read across to the 1050 column to locate the Lovejoy UPC number of 05481.

Using the Components Tables on pages GD-12 locate the cover/grid assembly by scanning accross the Grid Size row to the 1050 entry. Read down to the Horizontal Cover/Grid Assembly-Inch row to locate the Lovejoy UPC number of 05352.

Each of these Lovejoy UPC numbers should be prefixed with the Lovejoy UPC number of 697904.

Selecting A Grid Coupling For High Peak Loads Or Brake Applications

Use this selection method in the following instances: 1) High Peak Loads 2) Brake Applications (A brake is part of the system but it is not part of the actual coupling.)

Step 1: Calculate the Design Peak Torque using one of the following equations:

Non-Reversing High Peak Torque =

$$\text{in-lb} = \text{System Peak Torque}$$

$$\text{Nm} = \text{System Peak Torque}$$

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

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

Reversing High Peak Torque =

$$\text{in-lb} = 2 \times \text{System Peak Torque}$$

$$\text{Nm} = 2 \text{ X System Peak Torque}$$

$$\text{in-lb} = \frac{(2 \times \text{System Peak HP} \times 63025)}{\text{RPM}}$$

$$\text{Nm} = \frac{(2 \times \text{System Peak KW} \times 9550)}{\text{RPM}}$$

Occasional Peak Torques (Reversing or Non-Reversing) =

$$\text{in-lb} = 0.5 \times \text{System Peak Torque}$$

$$\text{Nm} = 0.5 \times \text{System Peak Torque}$$

$$\text{in-lb} = \frac{(0.5 \times \text{System Peak HP} \times 63025)}{\text{RPM}}$$

$$\text{Nm} = \frac{(0.5 \times \text{System Peak KW} \times 9550)}{\text{RPM}}$$

Step 2: If the application is a brake application and the torque rating of the brake exceeds the motor torque, the brake torque needs to be used with the Application Service Factor selected in Chart 1 (pages GD-7 and GD-8).

Design Torque = Brake Torque Rating x Service Factor

Step 3: Once the Design Torque has been determined go through steps 4 through 6 of the selection process on page GD-6 to determine the proper coupling size.

Application Service Factors

Chart 1

	Service Factors		
	Electric Motor w/ Standard Torque	Reciprocating Engines-4/5 Cylinder	Reciprocating Engines-6 or more Cyl
Aggregate Processing, Cement, Mining Kilns; Tube, Rod and Ball Mills			
Dryer, Rotary, Hammermill or Hog,Tumbling Mill or Barrel, Direct or on L.S. Shaft of Reducer, with Final Drive of Single Helical or Herringbone Gears	1.75	2.75	2.25
Grizzly, Direct or on L.S. Shaft of Reducer, with Final Drive of Machined Spur Gears	2.00	3.00	2.50
Crushers, Ore or Stone	2.50	*	*
Brewing and Distilling			
Bottle and Can Filling Machines, Brew Kettle	1.00	2.00	1.50
Cookers, Continuous Duty, Mash Tub	1.25	2.25	1.75
Lauter Tub	1.50	2.50	2.00
Scale Hopper, Frequent Peaks	1.75	2.75	2.25
Clay Working Industry			
Brick Press, Briquette Machine, Clay Working Machine, Plug Mill	1.75	2.75	2.25
Dredges			
Conveyors	1.25	2.25	1.75
Maneuvering Winch, Pumps (Uniform Load), Utility Winch	1.50	2.50	2.00
Cable Reel, Screen Drive, Stacker	1.75	2.75	2.25
Cutter Head, Jig Drive	2.00	3.00	2.50
Food Industry			
Bottling, Can Filling Machine	1.00	2.00	1.50
Cereal Cooker	1.25	2.25	1.75
Beet Slicer, Dough Mixer, Meat Grinder	1.75	2.75	2.25
Lumber			
Rolls, Non-Reversing, Sawdust Conveyor	1.25	2.25	1.75
Band Resaw, Sorting Table	1.50	2.50	2.00
Circular Resaw, Cut-off, Planer, Slab Conveyor, Trimmer	1.75	2.75	2.25
Edger, Head Rig, Hog, Log Haul, Rolls, Reversing	2.00	3.00	2.50
Gang Saw (Reciprocating)	Refer To Lovejoy		
Metal Rolling Mills[1]			
Soaking Pit Cover Drives - Lift	1.00	2.00	1.50
Coilers (Up or Down) Cold Mills only, Cooling Beds, Mill Tables Hot Bed or Transfer, Non-Reversing	1.50	2.50	2.00
Reel Drives, Slitters, Steel Mill only, Wire Drawing Machinery	1.75	2.75	2.25
Coilers (Up or Down) Hot Mills only, Coke Plants Door Opener, Drawbench, Furnace Pushers, Hot and Cold Saws, Ingot Cars, Mill Tables Runout, Non-Reversing, Non-Plugging, Screwdown, Seamless Tube Mills -Thrust Block, Tube Conveyor Rolls, Reeler, Kick Out, Soaking Pit Cover Drives - Travel, Straighteners, Unscramblers	2.00	3.00	2.50
Coke Plants Pusher Ram Drive,	2.50	*	*
Coke Plants Pusher or Larry Car Traction Drive, Feed Rolls-Blooming Mills, Manipulators, Mill Tables Roughing Breakdown Mills, Runout, Reversing, Seamless Tube Mills Piercer, Sideguards	3.00	*	*
Cold Mills, Hot Mills, Merchant Mills, Rod Mills, Skelp Mills	Refer To Lovejoy		
Oil Industry			
Chiller	1.25	2.25	1.75
Paraffin Filter Press	1.50	2.50	2.00
Oilwell Pumping (not over 150% Peak Torque), Rotary Kiln	2.00	3.00	2.50
Paper Mills			
Bleachers, Coaters, Stock Pumps, Centrifugal Constant Speed	1.00	2.00	2.50
Converting Machine, Felt Stretcher, Stock Pumps, Centrifugal Frequent Speed Changes Under Load	1.25	2.25	1.75
Line Shaft, Reel, Rewinder, Winder, Stock Chest, Washer, Thickener	1.50	2.50	2.00
Beater, Pulper, Calender, Couch, Cylinder, Dryer, Pulp Grinder, Fourdrinier, Press, Suction Roll	1.75	2.75	2.25
Barker Auxiliary, Hydraulic, Mechanical, Barking Drum L.S. Shaft of Reducer with Final Drive-Helical or Herringbone Gear, Cutter, Felt Whipper, Jordan, Log Haul	2.00	3.00	2.50
Barking Drum L.S. Shaft of Reducer with Final Drive-Machined Spur Gear, Chipper	2.50	*	*
Barking Drum L.S. Shaft of Reducer with Final Drive-Cast Tooth Spur Gear	3.00	*	*
Rubber Industry			
Tire/Tube Press Opener (Peak Torque)	1.00	2.00	1.50
Extruder, Mixing Mill, Refiner or Sheeter (Five or More in Line), Tuber, Strainer, Pelletizer, Warming Mill (Three or More in Line)	1.75	2.75	2.25
Calender, Mixing Mill, Refiner or Sheeter (Three/Four in Line), Warming Mill (One/Two in Line)	2.00	3.00	2.50
Cracker, Plasticator, Mixing Mill, Refiner or Sheeter (One/Two in line), Intensive or Banbury Mixer, Tire Building Machine, Washer	2.50	*	*
Sewage Disposal Equipment			
Bar Screen, Chemical Feeders, Collectors, Dewatering Screen, Grit Collector	1.00	2.00	1.50
Sugar Industry			
Mill Stands, Turbine Driven with all Helical or Herringbone Gears	1.50	2.50	2.00
Cane Carrier & Leveler, Electric Drive or Steam Engine Drive with Helical Herringbone, or Spur Gears with any Prime Mover	1.75	2.75	2.25
Cane Knife & Crusher	2.00	3.00	2.50

Notes:
- 1 indicates: For high peak load applications, please refer to selection process on page GD-6.
- * indicates: That Lovejoy Application Engineering should be consulted with specific requirements.
- Caution: Applications involving reciprocating engines and reciprocating driven devices are subject to critical rotational speeds which may damage the coupling and/or connected equipment. Contact Lovejoy Application Engineering with specific requirements.

GD

Application Service Factors

Chart 1, Continued

	Electric Motor w/ Standard Torque	Reciprocating Engines-4/5 Cylinder	Reciprocating Engines-6 or more Cyl
Textile Industry			
Batcher, Dyeing Machinery, Mangle, Napper, Soaper	1.25	2.25	1.75
Calender, Card Machine, Cloth Finishing Machine, Dry Can, Loom, Spinner, Tenter Frame, Winder	1.50	2.50	2.00
Knitting Machine	Refer To Lovejoy		
Applications			
Aerator	2.00	3.00	2.50
Agitators			
Vertical/Horizontal Screw, Propeller, Paddle	1.00	2.00	1.50
Barge Haul Puller	1.50	2.50	2.00
Blowers			
Centrifugal	1.00	2.00	1.50
Lobe, Vane	1.25	2.25	1.75
Car Dumpers	2.50	*	*
Car Pullers	1.50	2.50	2.00
Clarifier, Classifier	1.00	2.00	1.50
Compressors			
Centrifugal, Rotary, Screw	1.00	2.00	1.50
Rotary, Lobe or Vane	1.25	2.25	1.75
Reciprocating with Flywheel and Gear between Compressor and Prime Mover 4 or More Cyl. Single/Double Acting	1.75	2.75	2.25
Reciprocating with flywheel and Gear between Compressor and Prime Mover Cyl. Double Acting	2.00	3.00	2.50
Reciprocating with Flywheel and Gear between Compressor and Prime Mover 1/2 Cyl. Single/ Double Acting and 3 cyl. Single Acting	3.00	*	*
Reciprocating Direct Connected, Without Flywheels	Refer To Lovejoy		
Conveyors[2]			
Apron, Assembly, Belt, Chain, Flight, Screw	1.00	2.00	1.50
Bucket	1.25	2.25	1.75
Live Roll, Shaker, Reciprocating	3.00	*	*
Cranes, Hoist[1, 2]			
Slope	1.50	2.50	2.00
Main or Skip Hoist, Bridge, Travel, Trolley[2]	1.75	2.75	2.25
Dynamometer	1.00	2.00	1.50
Elevators[2]			
Bucket, Centrifugal, Discharge, Gravity Discharge	1.25	2.25	1.75
Freight or Passenger	NOT APPROVED		
Escalators	NOT APPROVED		
Exciter, Generator	1.00	2.00	1.50
Extruder, Plastic	1.50	2.50	2.00
Fans			
Centrifugal, Forced Draft Motor Driven thru Fluid or Electric Slip Clutch	1.00	2.00	1.50
Induced Draft with Damper Control or Blade Cleaner	1.25	2.25	1.75
Forced Draft-Across the Line start, Gas Recirculating	1.50	2.50	2.00
Cooling Tower, Induced Draft without Controls	2.00	3.00	2.50
Feeders			
Apron, Belt, Disc, Screw	1.00	2.00	1.50
Reciprocating	2.50	*	*
Generators			
Even Load	1.00	2.00	1.50
Hoist or Railway Service	1.50	2.50	2.00
Welder Load	2.00	3.00	2.50
Hammermill	1.75	2.75	2.25
Laundrywasher or Tumbler	2.00	3.00	2.50
Line Shafts			
Any Processing Machinery	1.50	2.50	2.00
Machine Tools			
Auxiliary, Traverse Drive	1.00	2.00	1.50
Main Drive	1.50	2.50	2.00
Bending Roll, Notching Press, Punch Press, Planer, Plate Reversing	1.75	2.75	2.25
Manlifts	NOT APPROVED		
Metal Forming Machines			
Slitters	1.00	2.00	1.50
Wire Winder, Coilers, Uncoilers	1.50	2.50	2.00
Wire Drawing, Flattening	1.75	2.75	2.25
Draw Bench Carriage, Main Drive, Extruder, Forming Machine, Forming Mills	2.00	3.00	2.50
Mixers (see Agitators)			
Muller	1.50	2.50	2.00
Concrete	1.75	2.75	2.25
Printing Press	1.50	2.50	2.00
Pug Mill	1.75	2.75	2.25
Pulverizers			
Roller	1.50	2.50	2.00
Hammermill, Hog	1.75	2.75	2.25
Pumps			
Centrifugal Constant Speed	1.00	2.00	1.50
Centrifugal Frequent Speed Changes under Load, Descaling, w/ Accumulators, Gear, Rotary, Vane	1.25	2.25	1.75
Reciprocating, 3 or more Cylinders	1.50	2.50	2.00
Reciprocating, 2 Cyl. Double Acting	1.75	2.75	2.25
Reciprocating, 2 Cyl. Single Acting	2.00	3.00	2.50
Reciprocating, 1 Cyl. Single/ Double Acting	3.00	*	*
Screens			
Air Washing, Water	1.00	2.00	1.50
Rotary Coal, Sand	1.50	2.50	2.00
Grizzly	2.00	3.00	2.50
Vibrating	2.50	*	*
Ski Tows, Lifts	NOT APPROVED		
Steering Gear	1.00	2.00	1.50
Stoker	1.00	2.00	1.50
Tumbling Barrel	1.75	2.75	2.25
Winch, Maneuvering			
Dredge, Marine	1.50	2.50	2.00
Windlass	1.50	2.50	2.00
Woodworking Machinery	1.00	2.00	1.50
Work Lift Platforms	NOT APPROVED		

Notes:
- 1 indicates: For high peak load applications, please refer to selection process on page GD-6.
- 2 indicates: If people are transported Lovejoy does not recommend and will not warranty the use of the coupling.
- * indicates: That Lovejoy Application Engineering should be consulted with specific requirements.
- Caution: Applications involving reciprocating engines and reciprocating driven devices are subject to critical rotational speeds which may damage the coupling and/or connected equipment. Contact Lovejoy Application Engineering with specific requirements.

General Service Factors — Chart 2

Typical Applications for Electric Motor or Turbine Driven Equipment	Typical Service Factor
Constant Torque such as Centrifugal Pumps, Blowers, and Compressors.	1.0
Continuous Duty with some torque variations including Printing Presses, Extruders, Forced Draft Fans.	1.5
Light shock loads from Briquetting Machine, Rubber Calender, or Crane and Hoist.	2.0
Moderate shock loading as expected from a Car Dumper, Reciprocating Feeder, or Vibrating Screen.	2.5
Heavy Shock load with some negative torques from Crushers, Manipulators, and Braking Drum.	3.0
Applications like Reciprocating Compressors with frequent torque reversals which do not necessarily cause reverse rotations.	Consult Lovejoy Application Engineering

Taper Lock Bushing Hub Torque Ratings — Chart 1

Size	Taper-Lock Bushing	Max Bore[1] Bushing in	Max Torque Bushing in-lbs	Rated Torque Coupling in-lbs
1030	1108	1.125	1,300	1,200
1040	1108	1.125	1,300	2,000
1050	1215	1.25	3,550	3,500
1060	1615	1.625	4,300	5,500
1070	2012	2	7,150	8,000
1080	2525	2.5	11,300	16,500
1090	3030	3	24,000	30,000
1100	3030	3	24,000	50,500
1110	3535	3.5	44,800	75,000
1120	4040	4	77,300	110,000

Note: ■ 1 indicates: The maximum bore is with a standard keyway.

Grid Series Torque and Horsepower Performance Data — Chart 3

Size	Torque Ratings in-lbs	Torque Ratings Nm	Basic HP Ratings @ Varying RPM 100	1200	1800	3600	Max Bore in	Max Bore mm	Horizontal Max RPM	Vertical Max RPM
1020	460	52	0.73	8.50	13.10	26.30	1.125	27	4,500	6,000
1030	1,320	149	2.09	24.50	37.70	75.40	1.375	35	4,500	6,000
1040	2,200	249	3.49	40.80	62.80	126.00	1.625	44	4,500	6,000
1050	3,850	435	6.11	71.50	110.00	220.00	1.875	51	4,500	6,000
1060	6,050	683	9.60	112.00	173.00	346.00	2.125	57	4,350	6,000
1070	8,800	994	14.00	163.00	251.00	503.00	2.500	68	4,125	5,500
1080	18,150	2 051	28.80	337.00	518.00	1,037.00	3.000	83	3,600	4,750
1090	33,000	3 728	52.40	613.00	942.00	1,885.00	3.500	95	3,600	4,000
1100	55,550	6 276	88.10	1,031.00	1,587.00	—	4.000	108	2,400	3,250
1110	82,500	9 321	131.00	1,532.00	2,356.00	—	4.500	117	2,250	3,000
1120	121,000	13 671	192.00	2,246.00	3,456.00	—	5.000	137	2,025	2,700
1130	176,000	19 884	279.00	3,267.00	5,027.00	—	6.000	165	1,800	2,400
1140	253,000	28 584	401.00	4,697.00	7,226.00	—	7.000	184	1,650	2,200
1150	352,000	39 769	559.00	6,535.00	10,053.00	—	8.000	200	1,500	—
1160	495,000	55 925	785.00	9,189.00	—	—	9.000	228	1,350	—
1170	660,000	74 567	1,047.00	12,252.00	—	—	10.000	254	1,225	—
1180	915,200	103 399	1,452.00	—	—	—	11.000	280	1,100	—
1190	1,210,000	136 706	1,920.00	—	—	—	12.000	305	1,050	—
1200	1,650,000	186 417	2,618.00	—	—	—	13.000	330	900	—

GD

The Grid coupling consists of:
2 hubs
1 cover and Grid set:
- 1 Grid spring
- 1 Grid cover set
- 1 gasket
- 2 seals
- 1 hardware package

Tapered Hub - Inch Bore and Keyway UPC Number Selection Table

Bore	Keyway	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140
SOLID		05231	05232	05233	05234	05235	05236	05237	05238	05239	05240	05241	05242	05243
1/2	1/8 x 1/16	05458	—	—	—	—	—	—	—	—	—	—	—	—
5/8	3/16 x 3/32	05459	05464	—	—	—	—	—	—	—	—	—	—	—
3/4	3/16 x 3/32	05460	05465	06140	—	—	—	—	—	—	—	—	—	—
7/8	3/16 x 3/32	05461	05466	05471	06141	06142	—	—	—	—	—	—	—	—
15/16	1/4 x 1/8	06100	06101	06103	06106	—	—	—	—	—	—	—	—	—
1	1/4 x 1/8	05462	05467	05472	06107	06112	—	—	—	—	—	—	—	—
1-1/8	1/4 x 1/8	05463	05468	05473	05478	06113	06144	07364	—	—	—	—	—	—
1-3/16	1/4 x 1/8	—	06102	06104	06108	06114	—	—	—	—	—	—	—	—
1-1/4	1/4 x 1/8	—	05469	05474	05479	06115	06145	06148	—	—	—	—	—	—
1-3/16	5/16 x 5/32	—	05470	05475	05480	05485	06119	06149	—	—	—	—	—	—
1-7/16	3/8 x 3/16	—	—	06105	06109	06116	06120	—	—	—	—	—	—	—
1-1/2	3/8 x 3/16	—	—	05476	05481	05486	06121	—	—	—	—	—	—	—
1-5/8	3/8 x 3/16	—	—	05477	05482	05487	05492	06150	—	—	—	—	—	—
1-11/16	3/8 x 3/16	—	—	—	06110	06117	06122	—	—	—	—	—	—	—
1-3/4	3/8 x 3/16	—	—	—	05483	05488	05493	06124	—	—	—	—	—	—
1-13/16	1/2 x 1/4	—	—	—	06111	06118	06123	06125	—	—	—	—	—	—
1-7/8	1/2 x 1/4	—	—	—	05484	05489	05494	06126	06154	—	—	—	—	—
1-15/16	1/2 x 1/4	—	—	—	—	06143	06146	06151	—	—	—	—	—	—
2	1/2 x 1/4	—	—	—	—	05490	05495	05500	06155	—	—	—	—	—
2-1/8	1/2 x 1/4	—	—	—	—	05491	05496	05501	06127	—	—	—	—	—
2-3/16	1/2 x 1/4	—	—	—	—	—	06147	06152	06156	—	—	—	—	—
2-1/4	1/2 x 1/4	—	—	—	—	—	05497	05502	06128	—	—	—	—	—
2-3/8	5/8 x 5/16	—	—	—	—	—	05498	05503	06129	—	—	—	—	—
2-1/2	5/8 x 5/16	—	—	—	—	—	05499	05504	05509	05519	—	—	—	—
2-5/8	5/8 x 5/16	—	—	—	—	—	—	05505	05510	05520	—	—	—	—
2-3/4	5/8 x 5/16	—	—	—	—	—	—	05506	05511	05521	—	—	—	—
2-7/8	3/4 x 3/8	—	—	—	—	—	—	05507	05512	05522	—	—	—	—
2-15/16	3/4 x 3/8	—	—	—	—	—	—	06153	06157	—	—	—	—	—
3	3/4 x 3/8	—	—	—	—	—	—	05508	05513	05523	05532	05542	—	—
3-1/8	3/4 x 3/8	—	—	—	—	—	—	—	05514	05524	05533	05543	—	—
3-1/4	3/4 x 3/8	—	—	—	—	—	—	—	05515	05525	05534	05544	—	—
3-3/8	7/8 x 7/16	—	—	—	—	—	—	—	05516	05526	05535	05545	—	—
3 7/16	7/8 x 7/16	—	—	—	—	—	—	—	06158	—	—	—	—	—
3-1/2	7/8 x 7/16	—	—	—	—	—	—	—	05517	05527	05536	05546	05553	—
3-5/8	7/8 x 7/16	—	—	—	—	—	—	—	—	05528	05537	05547	05554	—
3-3/4	7/8 x 7/16	—	—	—	—	—	—	—	—	05529	05538	05548	05555	—
3-7/8	1 x 1/2	—	—	—	—	—	—	—	—	05530	05539	05549	05556	05562
4	1 x 1/2	—	—	—	—	—	—	—	—	05531	05540	05550	05557	05563
4-1/2	1 x 1/2	—	—	—	—	—	—	—	—	—	05541	05551	05558	05564
5	1-1/4 x 5/8	—	—	—	—	—	—	—	—	—	—	05552	05559	05565
5-1/2	1-1/4 x 5/8	—	—	—	—	—	—	—	—	—	—	—	05560	05566
6	1-1/2 x 3/4	—	—	—	—	—	—	—	—	—	—	—	05561	05567
6-1/2	1-1/2 x 3/4	—	—	—	—	—	—	—	—	—	—	—	—	05568

Notes:
- 1020-1090 hubs are provided with a clearance fit bore and 2 set screws at 90°.
- 1100-1140 hubs are provided with an interference fit bore and no set screws.
- When referencing a Lovejoy UPC number in this table, include 697904 as a prefix to the number shown.

The Grid coupling consists of:

2 hubs

1 cover and Grid set:

- 1 Grid spring
- 1 Grid cover set
- 1 gasket
- 2 seals
- 1 hardware package

Tapered Hub - Metric Bore and Keyway UPC Number Selection Table

Bore	Keyway	1020	1030	1040	1050	1060	1070	1080	1090
14	5 x 2.3	05780	—	—	—	—	—	—	—
15	5 x 2.3	05781	—	—	—	—	—	—	—
16	5 x 2.3	05782	—	—	—	—	—	—	—
19	6 x 2.8	05783	05788	—	—	—	—	—	—
20	6 x 2.8	05784	05789	—	—	—	—	—	—
22	6 x 2.8	05785	05790	—	—	—	—	—	—
24	8 x 3.3	05786	05791	05797	—	—	—	—	—
25	8 x 3.3	05787	05792	05798	—	—	—	—	—
28	8 x 3.3	—	05793	05799	05805	—	—	—	—
30	8 x 3.3	—	05794	05800	05806	—	—	—	—
32	10 x 3.3	—	05795	05801	05807	—	—	—	—
35	10 x 3.3	—	05796	05802	05808	05812	05817	—	—
38	10 x 3.3	—	—	05803	05809	05813	05818	05823	—
42	12 x 3.3	—	—	05804	05810	05814	05819	05824	05830
48	14 x 3.8	—	—	—	05811	05815	05820	05825	05831
55	16 x 4.3	—	—	—	—	05816	05821	05826	05832
60	18 x 4.4	—	—	—	—	—	05822	05827	05833
70	20 x 4.9	—	—	—	—	—	—	05828	05834
80	22 x 5.4	—	—	—	—	—	—	05829	05835
85	22 x 5.4	—	—	—	—	—	—	—	05836
95	22 x 5.4	—	—	—	—	—	—	—	05837

Notes:
- 1020-1090 hubs are provided with a clearance fit bore and 2 set screws at 90°.
- When referencing a Lovejoy UPC number in this table, include 697904 as a prefix to the number shown.

Taper Lock Hub - UPC Number Selection Table

Taper-Lock Hub	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120
UNC Thread	06841	06842	06843	06844	06845	06846	06847	06848	06849	06850
BSW Thread	06851	06852	06853	06854	06855	06856	06857	06858	06859	06860

Note:
- When referencing a Lovejoy UPC number in this table, include 697904 as a prefix to the number shown.

Tapered Component UPC Number Selection Table

Sizes	1020	1030	1040	1050	1060	1070	1080	1090	1100	1100	1120	1130	1140
Grid Only	05244	05245	05246	05247	05248	05249	05250	05251	05252	05253	05254	05255	05256
Horizontal Design:													
Cover/Grid Assembly-Metric	05366	05367	05368	05369	05370	05371	05372	05373	05374	05375	05376	05377	05378
Cover/Grid Assembly-Inch	05349	05350	05351	05352	05353	05354	05355	05356	05357	05358	05359	05360	05361
Cover Set-Metric	05290	05291	05292	05293	05294	05295	05296	05297	05298	05299	05300	05301	05302
Cover Set-Inch	05273	05274	05275	05276	05277	05278	05279	05280	05281	05282	05283	05284	05285
Seal Kit	05176	05177	05178	05179	05180	05181	05182	05183	05184	05185	05186	05187	05188
Cover Hardware-Metric	05210	05210	05210	05211	05211	05212	05212	05212	05213	05213	05214	05214	05214
Cover Hardware-Inch	05433	05433	05433	05434	05434	05435	05435	05435	05436	05436	05437	05437	05437
Vertical Design:													
Cover/Grid Assembly-Metric	05400	05401	05402	05403	05404	05405	05406	05407	05408	05409	05410	05411	05412
Cover/Grid Assembly-Inch	05383	05384	05385	05386	05387	05388	05389	05390	05391	05392	05393	05394	05395
Cover Set-Metric	05328	05329	05330	05331	05332	05333	05334	05335	05336	05337	05338	05339	05340
Cover Set-Inch	05307	05308	05309	05310	05311	05312	05313	05314	05315	05316	05317	05318	05319
Seal Kit	05189	05190	05191	05192	05193	05194	05195	05196	05197	05198	05199	05200	05201
Cover Hardware-Metric	05215	05216	05216	05217	05217	05217	05218	05218	05219	05219	05220	05221	05222
Cover Hardware-Inch	05442	05443	05443	05444	05444	05444	05445	05445	05446	05446	05447	05448	05449

Notes:
- "Cover/Grid Assembly" includes ALL components of the coupling, other than the hubs. The terms "metric" and "inch" refer to hardware.
- "Cover Set" includes all of the above items except the Grid spring.
- "Seal Kit" contains rubber seals, gasket(s) and lube plugs.
- "Cover Hardware" includes the fasteners that hold the cover together.
- Grease packets are included with all cover sets and cover/Grid assemblies thru size 1090.
- When referencing a Lovejoy UPC number in this table, include 697904 as a prefix to the number shown.

GD

Tapered Hub Component UPC Number Selection Table

Sizes	1150	1160	1170	1180	1190	1200
Horizontal Design:						
Hub 73mm RSB	05587	—	—	—	—	—
Hub 100mm RSB	—	05589	05591	—	—	—
Hub 125mm RSB	—	—	—	05593	—	—
Hub 152mm RSB	—	—	—	—	99508	—
Hub 178mm RSB	—	—	—	—	—	99257
Grid Only	05257	05258	05329	05260	99254	99255
Cover/Grid Assembly-Metric	05379	05380	05381	05382	99270	10953
Cover/Grid Assembly-Inch	05362	05363	05364	05365	10555	10559
Cover Set-Metric	05303	05304	05305	05306	99271	10951
Cover Set-Inch	05286	05287	05288	05289	10556	10560
Seal Kit	05425	05426	05427	05428	10557	10561
Cover Hardware-Metric	05429	05429	05430	05430	—	—
Cover Hardware-Inch	05438	05438	05439	05439	10558	10562

Notes:
- "Cover/Grid Assembly" includes ALL components of the coupling, other than the hubs. The terms "metric" and "inch" refer to hardware.
- "Cover Set" includes all of the above items except the Grid spring.
- "Seal Kit" contains rubber seals, gasket(s) and lube plugs.
- "Cover Hardware" includes the fasteners that hold the cover together.
- Grease packets are included with all cover sets and cover/Grid assemblies thru size 1090.
- When referencing a Lovejoy UPC number in this table, include 697904 as a prefix to the number shown.

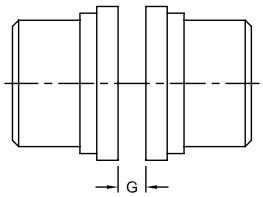
Grid Series Interchange Chart

Lovejoy® Size	Horizontal — Split cover				Vertical — Split Cover			
	Falk® Steelflex®	Morse/Browning® Grid-Flex®	Dodge® Grid-Lign®	Kop-Flex® Kop-Grid®	Falk® Steelflex®	Morse/Browning® Grid-Flex®	Dodge® Grid-Lign®	Kop-Flex® Kop-Grid®
1020	1020T10	GF2020H	1020T10	1020H	1020T20	GF2020V	1020T20	1020V
1030	1030T10	GF2030H	1030T10	1030H	1030T20	GF2030V	1030T20	1030V
1040	1040T10	GF2040H	1040T10	1040H	1040T20	GF2040V	1040T20	1040V
1050	1050T10	GF2050H	1050T10	1050H	1050T20	GF2050V	1050T20	1050V
1060	1060T10	GF2060H	1060T10	1060H	1060T20	GF2060V	1060T20	1060V
1070	1070T10	GF2070H	1070T10	1070H	1070T20	GF2070V	1070T20	1070V
1080	1080T10	GF2080H	1080T10	1080H	1080T20	GF2080V	1080T20	1080V
1090	1090T10	GF2090H	1090T10	1090H	1090T20	GF2090V	1090T20	1090V
1100	1100T10	GF2100H	1100T10	1100H	1100T20	GF2100V	1100T20	1100V
1110	1110T10	GF2110H	1110T10	1110H	1110T20	GF2110V	1110T20	1110V
1120	1120T10	GF2120H	1120T10	1120H	1120T20	GF2120V	1120T20	1120V
1130	1130T10	GF2130H	1130T10	1130H	1130T20	GF2130V	1130T20	1130V
1140	1140T10	GF2140H	1140T10	1140H	1140T20	GF2140V	1140T20	1140V
1150	1150T10	—	—	—	—	—	—	—
1160	1160T10	—	—	—	—	—	—	—
1170	1170T10	—	—	—	—	—	—	—
1180	1180T10	—	—	—	—	—	—	—
1190	1190T10	—	—	—	—	—	—	—
1200	1200T10	—	—	—	—	—	—	—

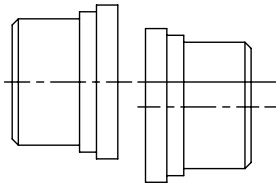
Grid Series Misalignment Capacity

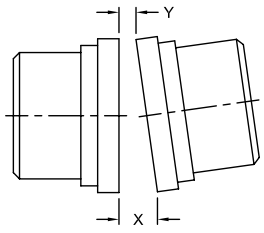
Size	P Max Installation Misalignment Parallel	X-Y Max Installation Misalignment Angular	P Max Operational Misalignment Parallel	X-Y Max Operational Misalignment Angular	G Normal Gap 10%
1020	0.006	0.002	0.012	0.010	0.118
1030	0.006	0.003	0.012	0.011	0.118
1040	0.006	0.003	0.012	0.013	0.118
1050	0.008	0.004	0.016	0.015	0.118
1060	0.008	0.004	0.016	0.018	0.118
1070	0.008	0.005	0.016	0.020	0.118
1080	0.008	0.006	0.016	0.024	0.118
1090	0.001	0.007	0.016	0.028	0.118
1100	0.010	0.008	0.020	0.032	0.177
1110	0.010	0.009	0.020	0.035	0.177
1120	0.011	0.010	0.022	0.040	0.236
1130	0.011	0.012	0.022	0.047	0.236
1140	0.011	0.013	0.022	0.053	0.236
1150	0.012	0.015	0.024	0.061	0.236
1160	0.012	0.017	0.024	0.070	0.236
1170	0.012	0.020	0.024	0.079	0.236
1180	0.015	0.022	0.030	0.089	0.236
1190	0.015	0.024	0.030	0.096	0.236
1200	0.015	0.027	0.030	0.107	0.236

Note: ■ Misalignment ratings pertain to both standard and spacer grid couplings.



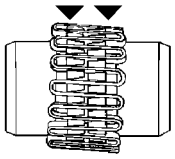
Normal Gap


Parallel Misalignment

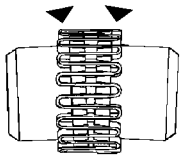


Angular Misalignment

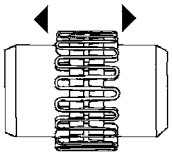
Misalignment Capacity:



Parallel: The movement of the grid in the hub grooves accommodates parallel misalignment and still permits full functioning of the grid-groove action in damping out shock and vibration.



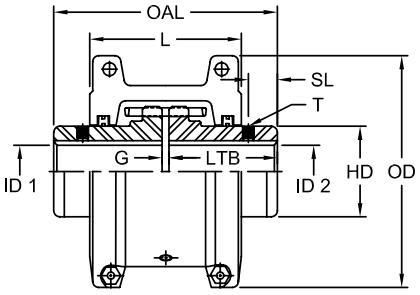
Angular: Under angular misalignment, the grid-groove design permits a rocking and sliding action of the grid and hubs without any loss of power through the resilient grid.



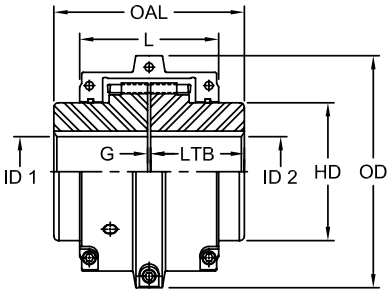
Axial: End float is permitted for both driving and driven members because the grid slides freely in the grooves.

Horizontal Style Grid Couplings

Grid couplings with horizontally split covers are ideal for limited space applications. The cover design allows for easy access to the grid. In addition, this cover style is well-suited for reversing service applications.



1020-1150



1160-1200

Horizontal Style Dimensional Data

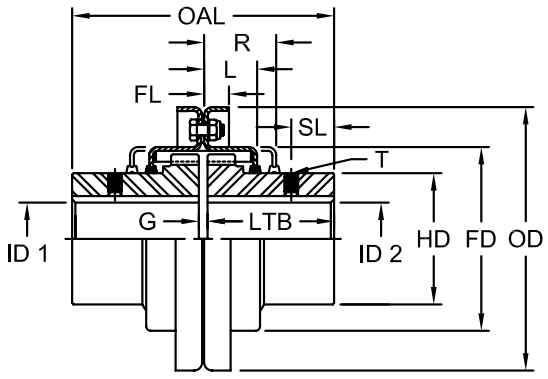
Size	OAL in	L in	SL Set Screw Location	T Set Screw Size	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	G in	LTB in	OD in	HD in	Maximum Torque in-lbs	Maximum Torque Nm	Weight Solid lbs	Moment of Inertia WR² lb-in² Solid
1020	3.88	2.63	0.50	#8-32	0.500	13	1.125	29	0.13	1.88	4.00	1.56	460	52	4.2	4.830
1030	3.88	2.69	0.31	#8-32	0.500	13	1.375	35	0.13	1.88	4.38	1.94	1,320	149	5.7	7.610
1040	4.13	2.75	0.44	#10-24	0.500	13	1.625	41	0.13	2.00	4.63	2.25	2,200	249	7.4	11.190
1050	4.88	3.13	0.62	#10-24	0.500	13	1.875	48	0.13	2.38	5.44	2.63	3,850	435	12.0	24.850
1060	5.13	3.63	0.44	#10-24	0.750	19	2.125	54	0.13	2.50	5.94	3.00	6,050	683	16.0	40.660
1070	6.13	3.75	0.88	1/4-20	0.750	19	2.500	64	0.13	3.00	6.38	3.44	8,800	994	23.0	63.180
1080	7.13	4.56	0.94	1/4-20	1.000	25	3.000	76	0.13	3.50	7.63	4.13	18,150	2 051	39.0	154.000
1090	7.88	4.81	1.03	5/16-18	1.000	25	3.500	89	0.13	3.88	7.38	4.88	33,000	3 728	56.0	269.000
1100	9.69	6.13	—	—	1.625	41	4.000	102	0.19	4.75	9.88	5.59	55,550	6 276	93.0	609.000
1110	10.19	6.36	—	—	1.625	41	4.500	114	0.19	5.00	10.63	6.31	82,500	9 321	120.0	923.000
1120	12.00	7.55	—	—	2.375	60	5.000	127	0.25	5.88	12.13	7.06	121,000	13 671	179.0	1,755.000
1130	13.00	7.69	—	—	2.625	67	6.000	152	0.25	6.38	13.63	8.56	176,000	19 884	266.0	3,375.000
1140	14.75	7.92	—	—	2.625	67	7.000	178	0.25	7.25	15.13	10.00	253,000	28 584	392.0	6,306.000
1150	14.64	8.42	—	—	3.000	76	8.000	203	0.25	7.20	17.84	10.60	352,000	39 769	523.0	—
1160	15.83	10.43	—	—	4.188	106	9.000	229	0.25	7.80	19.74	12.00	495,000	55 925	720.0	—
1170	17.24	11.85	—	—	4.188	106	10.000	254	0.25	8.50	22.30	14.00	660,000	74 567	1,022.5	—
1180	19.04	12.24	—	—	5.125	130	11.000	279	0.25	9.40	24.80	15.50	915,200	103 399	1,341.7	—
1190	20.64	12.80	—	—	6.000	152	12.000	305	0.25	10.20	26.60	17.20	1,210,000	136 706	1,710.0	—
1200	22.24	14.00	—	—	6.000	152	13.000	330	0.25	11.00	29.80	19.60	1,650,000	186 417	2,331.0	—

Notes:
- ■ 2 indicates: Based on application data, larger bores may be possible - contact Lovejoy Application Engineering.
- ■ Sizes 1020 through 1090 are clearance fit with 2 set screws at 90°, sizes 1100 and larger are interference fit with no set screw.
- ■ Maximum bores are less than shown above when an interference fit and set screw are required - refer to Lovejoy Application Engineering.
- ■ See pages GD-9 for performance data and GD-14 for misalignment capacity.

GD

Vertical Style Grid Couplings

Vertically split cover design grid couplings are ideal for applications with higher operating speeds. Sizes 1020-1140 are stamped steel. This cover style offers superior protection and supreme performance.



1020-1140

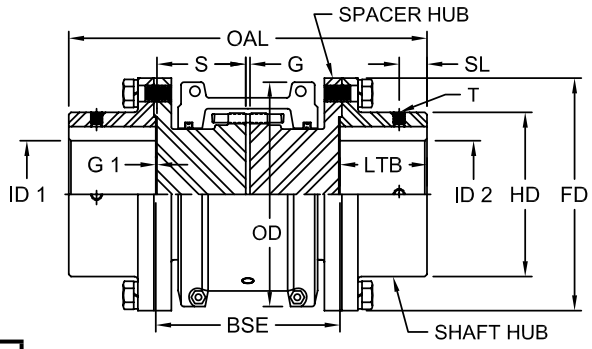
Vertical Style Dimensional Data

Size	OAL in	R in	L in	FL in	SL Set Screw Location	T Set Screw Size	ID1 - ID2 Min Bore in	ID1 - ID2 Min Bore mm	ID1 - ID2 Max Bore in	ID1 - ID2 Max Bore mm	G in	LTB in	OD in	FD in	HD in	Weight Solid lbs	Moment of Inertia WR² lb-in² Solid
1020	3.88	1.88	0.96	0.38	0.50	#8-32	0.500	13	1.125	29	0.13	1.88	4.38	2.50	1.56	4.3	5.320
1030	3.88	1.88	1.00	0.38	0.31	#8-32	0.500	13	1.375	35	0.13	1.88	4.75	2.88	1.94	5.7	7.990
1040	4.13	2.00	1.03	0.38	0.44	#10-24	0.500	13	1.625	41	0.13	2.00	5.06	3.25	2.25	7.4	11.990
1050	4.88	2.38	1.24	0.47	0.62	#10-24	0.500	13	1.875	48	0.13	2.38	5.81	3.88	2.63	12.0	25.760
1060	5.13	2.50	1.27	0.50	0.44	#10-24	0.750	19	2.125	54	0.13	2.50	6.38	4.38	3.00	16.0	41.160
1070	6.13	2.63	1.33	0.50	0.88	1/4-20	0.750	19	2.500	64	0.13	3.00	6.81	4.88	3.44	23.0	61.680
1080	7.13	3.50	1.74	0.50	0.94	1/4-20	1.000	25	3.000	76	0.13	3.50	7.13	5.88	4.13	39.0	148.000
1090	7.88	3.75	1.86	0.50	1.03	5/16-18	1.000	25	3.500	89	0.13	3.88	7.88	6.63	4.88	56.0	272.000
1100	9.69	4.75	2.38	0.63	—	—	1.625	41	4.000	102	0.19	4.75	9.69	7.75	5.59	93.0	608.000
1110	10.19	4.88	2.50	0.63	—	—	1.625	41	4.500	114	0.19	5.00	11.25	8.50	6.31	120.0	930.000
1120	12.00	5.63	2.94	0.68	—	—	2.375	60	5.000	127	0.25	5.88	12.56	9.63	7.06	180.0	1,611.000
1130	13.00	5.75	3.00	0.82	—	—	2.625	67	6.000	152	0.25	6.38	14.88	11.13	8.56	270.0	3,568.000
1140	14.75	6.13	3.13	0.82	—	—	2.625	67	7.000	178	0.25	7.80	16.38	12.63	10.00	397.0	6,431.000

Notes:
- ■ 2 indicates: Based on application data, larger bores may be possible - contact Lovejoy Application Engineering.
- ■ Sizes 1020 through 1090 are clearance fit with 2 set screws one over the keyway and one at 90°, sizes 1100 and larger are interference fit with no set screw.
- ■ Maximum bores are less than shown above when an interference fit and set screw are required - refer to Lovejoy Application Engineering.
- ■ See pages GD-9 for performance data and GD-14 for misalignment capacity.

Spacer Style Grid Couplings

The full spacer design grid coupling is ideal for pump applications.
The drop-out section allows for pump servicing.



Grid Series Spacer Style Performance Data

Size	Basic HP Ratings @ Varying RPM			Torque Ratings		Max RPM x
	100	1200	1800	in-lbs	Nm	1000
1020	0.67	8.04	12.06	422	48	3.600
1030	1.88	22.56	33.84	1,200	136	3.600
1040	3.22	38.64	57.96	2,000	226	3.600
1050	5.49	65.88	98.82	3,500	395	3.600
1060	8.71	104.52	156.78	5,500	621	3.600
1070	12.73	152.76	229.14	8,000	904	3.600
1080	26.13	313.56	470.34	16,500	1 864	3.600
1090	47.57	570.84	856.26	30,000	3 390	3.600

GD

Grid Series Spacer Style Dimensional Data

Size	OAL	S	G	SL	T	ID1 - ID2				LTB	G1	OD	BSE	FD	HD
						Min Bore		Max Bore							
	in	in	in	in	in	in	mm	in	mm	in	in	in	in	in	in
1020	6.26 7.76	1.63 2.38	0.19	0.30	# 8-32	Solid	Solid	1.38	35	1.38	0.03	4.00	3.50 5.00	3.38	2.06
1030	6.74 8.24 10.49	1.63 2.38 3.50	0.19	0.38	# 8-32	Solid	Solid	1.63	41	1.62	0.03	4.38	3.50 5.00 7.25	3.69	2.34
1040	7.74 9.24 11.49	1.63 2.38 3.50	0.19	1.04	# 10-24	Solid	Solid	2.13	54	2.12	0.03	4.62	3.50 5.00 7.25	4.44	3.09
1050	9.76 12.01	2.38 3.50	0.19	0.78	# 10-24	Solid	Solid	2.38	60	2.38	0.03	5.44	5.00 7.25	4.94	3.44
1060	10.76 13.01	2.34 3.47	0.19	1.18	# 10-24	Solid	Solid	2.88	73	2.88	0.06	5.94	5.00 7.25	5.69	4.06
1070	11.24 13.49	2.37 3.47	0.19	1.28	# 1/4-20	Solid	Solid	3.13	79	3.12	0.06	6.38	5.00 7.25	6.00	4.31
1080	14.25	3.47	0.19	1.54	# 1/4-20	Solid	Solid	3.50	89	3.50	0.06	7.62	7.25	7.00	4.81
1090	15.25	3.47	0.19	1.76	# 5-16-18	Solid	Solid	4.00	102	4.00	0.06	8.38	7.25	8.25	5.62

Notes:
- Couplings supplied to American Gear Manufacturers Association (AGMA) standard clearance fit and 2 set screws @ 90°.
- For sizes larger than 1090, consult Lovejoy Application Engineering.
- Changes in the between shaft end (BSE) measurement will change both the spacer hub length (“S” dimension) and the coupling overall length (OAL).
- To calculate the BSE, use the following formula: BSE = (Sx2) + G + (G1 x 2).

Spacer Style Grid Couplings

The Grid Spacer coupling consists of:
2 shaft hubs
2 spacer hubs
1 cover and Grid set:
- 1 Grid spring
- 1 Grid cover set
- 1 gasket
- 2 seals
- 1 hardware package

Grid Series Full Spacer Dimensional Data

Size	Spacer Hubs Dim	BSE (in)														
		3.500	3.938	4.250	4.375	4.688	5.000	5.219	5.375	5.656	5.813	5.969	6.125	6.938	7.094	7.250
1020	S	1.625	1.625	1.625	2.062	2.062	2.375	—	—	—	—	—	—	—	—	—
	S	1.625	2.062	2.375	2.062	2.375	2.375	—	—	—	—	—	—	—	—	—
1030	S	1.625	1.625	1.625	2.062	2.062	2.375	—	1.625	—	2.062	—	2.375	—	—	3.500
	S	1.625	2.062	2.375	2.062	2.375	2.375	—	3.500	—	3.500	—	3.500	—	—	3.500
1040	S	1.625	1.625	1.625	2.062	2.062	2.375	1.625	1.625	2.062	2.062	2.375	2.375	3.444	3.444	3.500
	S	1.625	2.062	2.375	2.062	2.375	2.375	3.344	3.500	3.344	3.500	3.344	3.500	3.444	3.500	3.500
1050	S	—	—	—	2.062	2.062	2.375	—	—	2.062	2.062	2.375	2.375	3.444	3.344	3.500
	S	—	—	—	2.062	2.375	2.375	—	—	3.344	3.500	3.344	3.500	3.444	3.500	3.500
1060	S	—	—	—	—	—	2.344	—	—	—	—	—	2.344	—	—	3.469
	S	—	—	—	—	—	2.344	—	—	—	—	—	3.469	—	—	3.469
1070	S	—	—	—	—	—	2.344	—	—	—	—	—	2.344	—	—	3.469
	S	—	—	—	—	—	2.344	—	—	—	—	—	3.469	—	—	3.469
1080	S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.469
	S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.469
1090	S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.469
	S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.469

Note: ■ To achieve the Between Shaft End (BSE) dimension shown, use the two spacer hubs with the specified "S" lengths. To calculate the BSE, use the following formula: BSE = (Sx2) + G + (G1 x 2).

Grid Series Half Spacer Dimensional Data

Size	BSE (in)				
	1.781	2.219	2.531	3.500	3.656
1020 Hub S	1.625	2.062	2.375	—	—
1030 Hub S	1.625	2.062	2.375	—	3.500
1040 Hub S	1.625	2.062	2.375	3.344	3.500
1050 Hub S	—	—	2.375	3.344	3.500
1060 Hub S	—	—	2.344	—	3.469
1070 Hub S	—	—	2.344	—	3.469
1080 Hub S	—	—	—	—	3.469
1090 Hub S	—	—	—	—	3.469

Note: ■ To achieve the Between Shaft End (BSE) dimension shown, use the spacer hub with the specified "S" length.