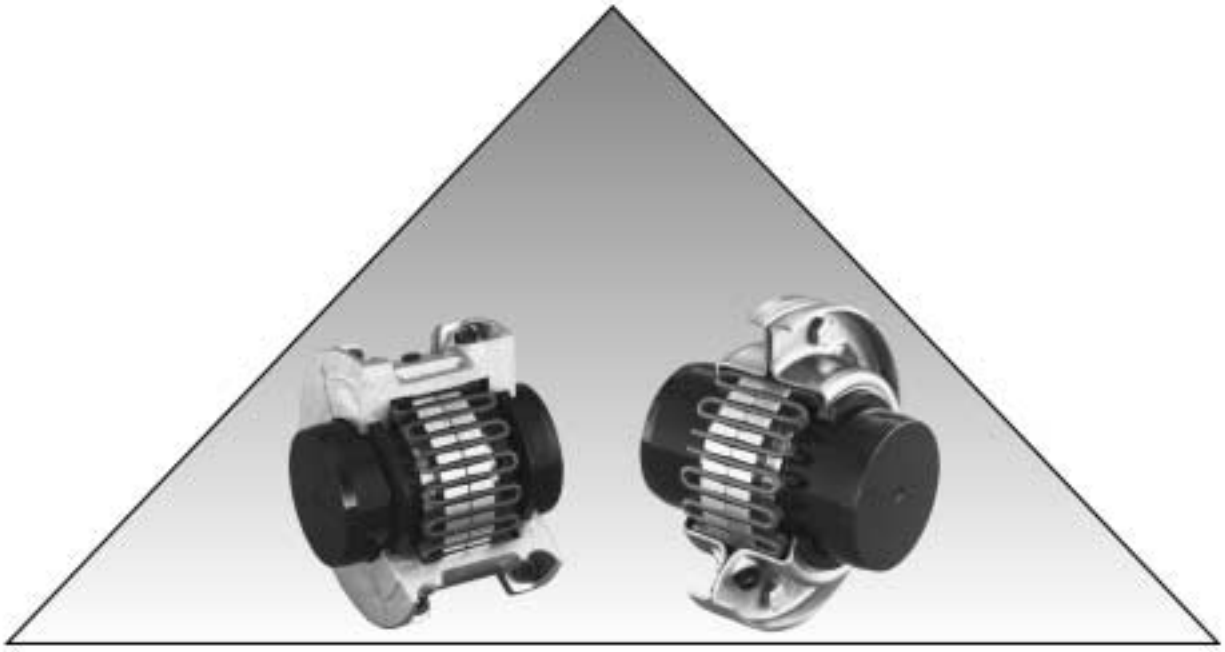
Grid Type



Couplings Reduce Vibration, Absorb Shock and Compensate for Misalignment.

The Power of Torsional Damping

The Lovejoy 1000 Series Flexible 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 supreme performance.

Lovejoy 1000 Series Flexible 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.

Benefits of the Grid Coupling include:

- Our 1000 Series 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 supreme 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.

⚠ WARNING

You must refer to page iv 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.

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.
- Available in sizes 1020-1090.

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-4 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 - Service Factors (pgs. GD-5-6)
Chart 2 - General Service Factors (pg. GD-7)
Chart 3 - Coupling Torque and Horsepower Ratings (pg. GD-7)

Formulas:

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

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

Design Torque = Nominal Torque x Service Factor

Steps In Selecting A Grid Coupling

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

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

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

Step 2: Using the Service Factors Chart 1 (pgs. GD-5-6), 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 (pg. GD-7).

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

Design Torque = Nominal Torque x Service Factor

Step 4: Using the Coupling Torque and Horsepower Ratings Chart 3 (pg. GD-7) 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 Coupling Torque and Horsepower Ratings Chart 3 (pg. GD-7).

Refer to the maximum RPM value (pg. GD-7) 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. Please consult Lovejoy Application Engineering.

Step 5: 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. Refer to Chart 3 (pg. GD-7).

Step 6: Using the Item (UPC) Number Selection charts (pgs. GD-8-10), find the appropriate Bore and Keyway sizes required and locate the Lovejoy Item (UPC) number. Next locate the appropriate Lovejoy Item (UPC) number for the Cover/Grid Assembly Kit.

Selection Example

A coupling is needed to connect a 50 HP standard electric motor rated at 1800 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:

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

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

= 1750.69

Step 2: Using the Service Factors Chart 1 (pgs. GD-5-6), select the service factor which best corresponds to your application. The 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 :

Design Torque = Nominal Torque x Service Factor

= 1750.69 x 1.25

= 2188.37 in-lb

Step 4: Referencing the Coupling Torque and Horsepower Ratings Chart 3 (pg. GD-7), use the Torque Rating column to determine the proper coupling size. Scanning down the Torque Rating 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 4500 RPM maximum allowed for this size with the horizontal cover.

Step 5: Compare the application driver/driven shaft sizes to the maximum bore size available in the coupling selected (pg. GD-7). 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 G1050 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 Item (UPC) Number Selection charts (pgs. GD-8-10), locate the appropriate Lovejoy Item (UPC) numbers.

Locate the Grid Coupling Inch Hubs selection chart (pg. GD-8) 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 Item (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 Item (UPC) number of 05481.

Locate the Grid Coupling Accessory selection chart (pg. GD-10) The cover/grid assembly is selected by scanning accross the Grid Coupling Size row to the 1050 entry. Read down to the Horizontal Cover/Grid Assembly-Inch row to locate the Lovejoy Item (UPC) number of 05352.

Each of these item (UPC) numbers should be prefixed with the Lovejoy Item (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 =

in-lb = System Peak Torque

Nm = System Peak Torque

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

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

Reversing High Peak Torque =

in-lb = 2 x System Peak Torque

Nm = 2 X System Peak Torque

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

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

Occasional Peak Torques (Reversing or Non-Reversing) =

in-lb = 0.5 x System Peak Torque

Nm = 0.5 x System Peak Torque

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

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

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 used with the application service factor selected in Chart 1 (pg. GD-6-7).

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-4 to determine the proper coupling size.

Service Factors—Industries

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

Notes: **1.** For high peak load applications, please refer to selection process on page GD-4.

2. * 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

Service Factors—Industries and Applications

Chart 1, cont.

	Service Factors		
	Electric Motor w/ Standard Torque	Reciprocating Engines-4/5 Cylinder	Reciprocating Engines-6 or more Cyl.
Cane Knife & Crusher	2.00	3.00	2.50
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.** For high peak load applications, please refer to selection process on page GD-4.

2. If people are transported Lovejoy does not recommend and will not warranty the use of the coupling.

3. * 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

Torque Ratings Taper-Lock Bushing Hubs — Chart 1

Size	Taper-Lock Bushing	Maximum Bore[1] Bushing inch	Maximum Torque Bushing in-lbs	Rated Torque Coupling in-lbs
1030	1108	1.125	1300.0	1200.0
1040	1108	1.125	1300.0	2000.0
1050	1215	1.250	3550.0	3500.0
1060	1615	1.625	4300.0	5500.0
1070	2012	2.000	7150.0	8000.0
1080	2525	2.500	11300.0	16500.0
1090	3030	3.000	24000.0	30000.0
1100	3030	3.000	24000.0	50500.0
1110	3535	3.500	44800.0	75000.0
1120	4040	4.000	77300.0	110000.0

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

Torque and Horsepower Ratings — Chart 3

Size	Basic HP Ratings @ Varying RPM 100	1200	1800	3600	Torque Ratings in-lbs	Nm	Maximum Bore inch	mm	Horizontal Max RPM x1000	Vertical Max RPM x1000
1020	0.67	8.04	12.06	24.12	422	48	1.125	27	4.500	6.000
1030	1.88	22.56	33.84	67.68	1200	136	1.375	35	4.500	6.000
1040	3.22	38.64	57.96	115.92	2000	226	1.625	44	4.500	6.000
1050	5.49	65.88	98.82	197.64	3500	395	1.875	51	4.500	6.000
1060	8.71	104.52	156.78	313.56	5500	621	2.125	57	4.350	6.000
1070	12.73	152.76	229.14	458.28	8000	904	2.500	68	4.125	5.500
1080	26.13	313.56	470.34	940.68	16500	1864	3.000	83	3.600	4.750
1090	47.57	570.84	856.26	1712.52	30000	3390	3.500	95	3.600	4.000
1100	80	960.00	1440.00	.....	50500	5706	4.000	108	2.440	3.250
1110	119	1428.00	2142.00	.....	75000	8474	4.500	117	2.250	3.000
1120	175.5	2106.00	3159.00	.....	110000	12428	5.000	137	2.025	2.700
1130	253.3	3039.60	4559.40	.....	160000	18078	6.000	165	1.800	2.400
1140	364.5	4374.00	6561.00	.....	230000	25987	7.000	184	1.650	2.200
1150	509.58	6114.96	.....	.....	320000	36300	8.000	200	1.500	.....
1160	724.14	8689.68	.....	.....	457000	51600	9.000	228	1.350	.....
1170	952.11	11425.32	.....	.....	600000	67800	10.000	254	1.225	.....
1180	1314.18	.....	.....	.....	830000	93600	11.000	280	1.100	.....
G5430	509.58	6114.96	9172.44	.....	320000	36300	8.250	210	.....	2.400
G5431	724.14	8689.68	.....	.....	457000	51600	7.500	190	.....	1.450
G5433	952.11	11425.32	.....	.....	600000	67800	8.438	215	.....	1.300
G5435	1314.18	15770.16	.....	.....	830000	93600	9.250	235	.....	1.200
G5437	1756.71	.....	.....	.....	1100000	125000	10.438	265	.....	1.100
G5439	2386.98	.....	.....	.....	1500000	170000	11.563	295	.....	0.980
G5441	3178.17	.....	.....	.....	2000000	226000	12.750	325	.....	0.860
G5443	4291.2	.....	.....	.....	2700000	306000	16.313	415	.....	0.740

Notes: **1.** The maximum bore for the G54 series includes a shallow keyway.

2. Sizes 1020 through 1140 are tapered grid styles; sizes 1150 through G5443 are straight grid style.

1000 Series Tapered Grid Hub Item (UPC) Numbers—Inch

Chart 1

When referencing the Lovejoy Item (UPC) number, include 697904 as a prefix to the number shown in the table below.

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 3/8	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
7	1 1/2 x 3/4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	05569

Notes: **1.** 1020-1090 hubs are provided with a Clearance Fit bore and 2 Set Screws at 90º.

2. 1100-1140 hubs are provided with an Interference Fit bore and no Set Screws.

3. A complete grid coupling consists of two hubs and one Cover/Grid Assembly.

1000 Series Tapered Grid Hub Item (UPC) Numbers—Metric Chart 2

When referencing the Lovejoy Item (UPC) number, include 697904 as a prefix to the number shown in the table below.

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	25 x 5.4	.....	.....	.....	.....	.....	.....	.....	05837

Notes: **1.** 1020-1090 hubs are provided with a Clearance Fit bore and 2 Set Screws at 90º.

2. A complete grid coupling consists of two hubs and one Cover/Grid Assembly.

GD

1000 Series Taper-Lock Grid Hub Item (UPC) Numbers Chart 3

When referencing the Lovejoy Item (UPC) Number, include 697904 as a prefix to the number shown in the table below.

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

Item (UPC) Numbers—1000 Series Tapered Grid Component Parts — Chart 3

When referencing the Lovejoy Item (UPC) number, include 697904 as a prefix to the number shown in the table below. A complete Grid Coupling consists of two hubs and one Cover/Grid Assembly.

Sizes →	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	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: **1.** "Cover/Grid Assembly" includes ALL components of the coupling, other than the hubs. The terms "metric" and "inch" refer to hardware.
2. "Cover Set" includes all of the above items except the Grid spring.
3. "Seal Kit" contains rubber seals, gasket(s) and lube plugs.
4. "Cover Hardware" includes the fasteners that hold the cover together.
5. Grease packets are included with all Cover Sets and Cover/Grid assemblies thru size 1090.

GD

Item (UPC) Numbers—Straight Grid Component Parts — Chart 4

When referencing the Lovejoy Item (UPC) number, include 697904 as a prefix to the number shown in the table below. A complete Grid Coupling consists of two hubs and one Cover/Grid Assembly.

Sizes →	1150	1160	1170	1180	G5430	G5431	G5433	G5435	G5437	G5439	G5441	G5443
Horizontal Design:					**Vertical Design:**							
Hub 73mm RSB	05587	.....	.....	.....	05265	.....	.....	.....	.....	.....	.....	.....
Hub 100mm RSB	.....	05589	05591	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hub Free 100mm RSB	.....	.....	.....	.....	.....	05266	05267	.....	.....	.....	.....	.....
Hub Fixed 100mm RSB	.....	.....	.....	.....	.....	06764	06765	.....	.....	.....	.....	.....
Hub 125mm RSB	.....	.....	.....	05593	.....	.....	.....	.....	.....	.....	.....	.....
Hub Free 125mm RSB	.....	.....	.....	.....	.....	.....	.....	05268	05269	.....	.....	.....
Hub Fixed 125mm RSB	.....	.....	.....	.....	.....	.....	.....	06766	06767	.....	.....	.....
Hub Free 150mm RSB	.....	.....	.....	.....	.....	.....	.....	.....	.....	05270	05271	.....
Hub Fixed 150mm RSB	.....	.....	.....	.....	.....	.....	.....	.....	.....	06768	06769	.....
Hub Free 175mm RSB	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	05272
Hub Fixed 175mm RSB	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	06770
Grid Only	05257	05258	05259	05260	05257	05258	05259	05260	05261	05262	05263	05264
Cover/Grid Assembly-Metric	05379	05380	05381	05382	05413	05414	05415	05416	05417	05418	05419	05420
Cover/Grid Assembly-Inch	05362	05363	05364	05365	....	.....	.....	.....	.....	.....	.....	.....
Cover Set - Metric	05303	05304	05305	05306	05341	05342	05343	05344	05345	05346	05347	05348
Cover Set - Inch	05286	05287	05288	05289	.....	.....	.....	.....	.....	.....	.....	.....
Seal Kit	05425	05426	05427	05428	05202	05203	05204	05205	05206	05207	05208	05209
Cover Hardware - Metric	05429	05429	05430	05430	05223	05224	05225	05226	05227	05228	05229	05230
Cover Hardware - Inch	05438	05438	05439	05439	.....	.....	.....	.....	.....	.....	.....	.....

Notes: **1.** "Cover/Grid Assembly" includes ALL components of the coupling, other than the hubs. The terms "metric" and "inch" refer to hardware.
2. "Cover Set" includes all of the above items except the Grid spring.
3. "Seal Kit" contains rubber seals, gasket(s) and lube plugs.
4. "Cover Hardware" includes the fasteners that hold the cover together.
5. Grease packets are included with all Cover Sets and Cover/Grid assemblies thru size 1090.

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	.....	.....	.....	.....	.....	.....	.....
G5430	.....	.....	.....	.....	1150T20	.....	.....	.....
G5431	.....	.....	.....	.....	1160T20	.....	.....	.....
G5433	.....	.....	.....	.....	1170T20	.....	.....	.....

Note: 1020 to 1140 interchanges with Falk. 1150 and above are not direct interchanges with Falk.

Torque and Horsepower Ratings

Size	Basic HP Ratings @ Varying RPM				Torque Ratings		Maximum Bore		Horizontal Max RPM	Vertical Max RPM
	100	1200	1800	3600	in-lbs	Nm	inch	mm	x1000	x1000
1020	0.67	8.04	12.06	24.12	422	48	1.125	27	4.500	6.000
1030	1.88	22.56	33.84	67.68	1200	136	1.375	35	4.500	6.000
1040	3.22	38.64	57.96	115.92	2000	226	1.625	44	4.500	6.000
1050	5.49	65.88	98.82	197.64	3500	395	1.875	51	4.500	6.000
1060	8.71	104.52	156.78	313.56	5500	621	2.125	57	4.350	6.000
1070	12.73	152.76	229.14	458.28	8000	904	2.500	68	4.125	5.500
1080	26.13	313.56	470.34	940.68	16500	1864	3.000	83	3.600	4.750
1090	47.57	570.84	856.26	1712.52	30000	3390	3.500	95	3.600	4.000
1100	80.00	960.00	1440.00	.....	50500	5706	4.000	108	2.440	3.250
1110	119.00	1428.00	2142.00	.....	75000	8474	4.500	117	2.250	3.000
1120	175.50	2106.00	3159.00	.....	110000	12428	5.000	137	2.025	2.700
1130	253.30	3039.60	4559.40	.....	160000	18078	6.000	165	1.800	2.400
1140	364.50	4374.00	6561.00	.....	230000	25987	7.000	184	1.650	2.200
1150	509.58	6114.96	.....	.....	320000	36300	8.000	200	1.500	.....
1160	724.14	8689.68	.....	.....	457000	51600	9.000	228	1.350	.....
1170	952.11	11425.32	.....	.....	600000	67800	10.000	254	1.225	.....
1180	1314.18	.....	.....	.....	830000	93600	11.000	280	1.100	.....
G5430	509.58	6114.96	9172.44	.....	320000	36300	8.250	210	.....	2.400
G5431	724.14	8689.68	.....	.....	457000	51600	7.500	190	.....	1.450
G5433	952.11	11425.32	.....	.....	600000	67800	8.438	215	.....	1.300
G5435	1314.18	15770.16	.....	.....	830000	93600	9.250	235	.....	1.200
G5437	1756.71	.....	.....	.....	1100000	125000	10.438	265	.....	1.100
G5439	2386.98	.....	.....	.....	1500000	170000	11.563	295	.....	0.980
G5441	3178.17	.....	.....	.....	2000000	226000	12.750	325	.....	0.860
G5443	4291.2	.....	.....	.....	2700000	306000	16.313	415	.....	0.740

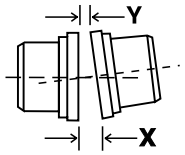
Note: The maximum bore for 5430 to G5443 includes a shallow keyway.

Misalignment Capacity

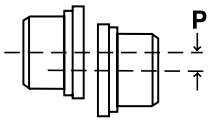
Coupling Size	Max. Installation Misalignment Parallel P	Max. Installation Misalignment Angular X-Y	Operating Misalignment Parallel P	Operating Misalignment Angular X-Y	Normal Gap ±10 % G
1020	0.006	0.003	0.012	0.010	0.125
1030	0.006	0.003	0.012	0.012	0.125
1040	0.006	0.003	0.012	0.013	0.125
1050	0.008	0.004	0.016	0.016	0.125
1060	0.008	0.005	0.016	0.018	0.125
1070	0.008	0.005	0.016	0.020	0.125
1080	0.008	0.006	0.016	0.024	0.125
1090	0.008	0.007	0.016	0.028	0.125
1100	0.010	0.008	0.020	0.033	0.188
1110	0.010	0.009	0.020	0.036	0.188
1120	0.011	0.010	0.022	0.040	0.250
1130	0.011	0.012	0.022	0.047	0.250
1140	0.011	0.013	0.022	0.053	0.250
1150	0.010	0.014	.....	.....	0.248
1160	0.010	0.014	.....	.....	0.248
1170	0.010	0.014	.....	.....	0.248
1180	0.010	0.014	.....	.....	0.248
G5430	0.010	0.014	.....	.....	0.098
G5431	0.010	0.014	.....	.....	0.118
G5433	0.010	0.014	.....	.....	0.118
G5435	0.010	0.014	.....	.....	0.118
G5437	0.010	0.014	.....	.....	0.118
G5439	0.010	0.014	.....	.....	0.118
G5441	0.014	0.020	.....	.....	0.236
G5443	0.014	0.020	.....	.....	0.236

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

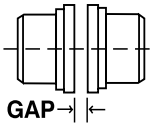
ANGULAR MISALIGNMENT



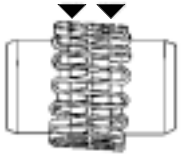
PARALLEL MISALIGNMENT



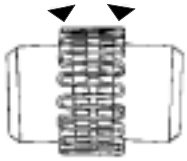
NORMAL GAP



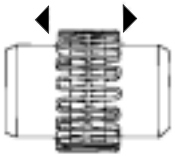
Misalignment Capacity:



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.

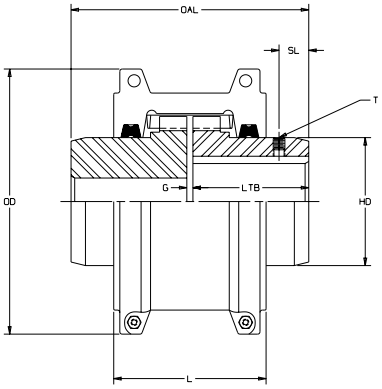


Axial: End float is permitted for both driving and driven members because the grid slides freely in the grooves.

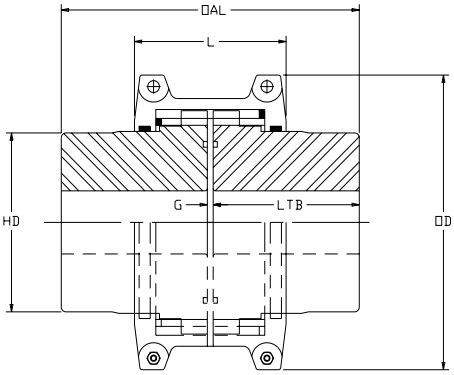
GD

Horizontal Style Grid Couplings

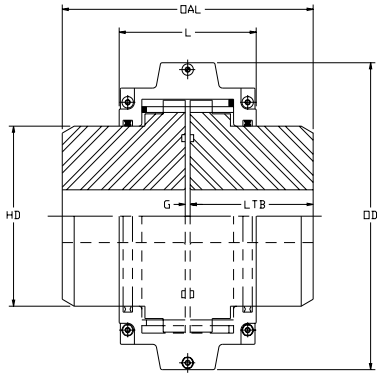
Grid couplings with horizontally split covers are ideal for limited space applications. The cover design allows for easy access to the grid. In addition, this cover style is well-suited for reversing service applications.



1020-1140



1150



1160-1180

GD

Dimensional Data—Inch

Size	Bore Min.	Bore Max.	Outer Dia. OD	Overall Length OAL	Gap G	Length Thru Bore LTB	Hub Dia. HD	Length L	Set Screw Location SL	Set Screw Size T	Weight lbs Solid	Moment of Inertia WR^2 lb-in² Solid
1020	0.500	1.125	4.00	3.88	0.13	1.88	1.56	2.63	0.50	#8-32	4.2	4.830
1030	0.500	1.375	4.38	3.88	0.13	1.88	1.94	2.69	0.31	#8-32	5.7	7.610
1040	0.500	1.625	4.63	4.13	0.13	2.00	2.25	2.75	0.44	#10-24	7.4	11.190
1050	0.500	1.875	5.44	4.88	0.13	2.38	2.63	3.13	0.62	#10-24	12.0	24.850
1060	0.750	2.125	5.94	5.13	0.13	2.50	3.00	3.63	0.44	#10-24	16.0	40.660
1070	0.750	2.500	6.38	6.13	0.13	3.00	3.44	3.75	0.88	1/4 -20	23.0	63.180
1080	1.000	3.000	7.63	7.13	0.13	3.50	4.13	4.56	0.94	1/4 -20	39.0	154.000
1090	1.000	3.500	8.38	7.88	0.13	3.88	4.88	4.81	1.03	5/16 -18	56.0	269.000
1100	1.625	4.000	9.88	9.69	0.19	4.75	5.59	6.13	.....	.....	93.0	609.000
1110	1.625	4.500	10.63	10.19	0.19	5.00	6.31	6.36	.....	.....	120.0	923.000
1120	2.375	5.000	12.13	12.00	0.25	5.88	7.06	7.55	.....	.....	179.0	1755.000
1130	2.625	6.000	13.63	13.00	0.25	6.38	8.56	7.69	.....	.....	266.0	3378.000
1140	2.625	7.000	15.13	14.75	0.25	7.25	10.00	7.92	.....	.....	392.0	6306.000
1150	3.000	8.000	17.91	14.65	0.25	7.20	11.54	8.42	.....	.....	523.0	.....
1160	4.188	9.000	20.47	15.85	0.25	7.80	11.97	10.43	.....	.....	720.0	.....
1170	4.188	10.000	23.03	17.25	0.25	8.50	13.98	11.85	.....	.....	1022.5	.....
1180	5.125	11.000	25.00	19.07	0.25	9.41	15.47	12.24	.....	.....	1341.7	.....

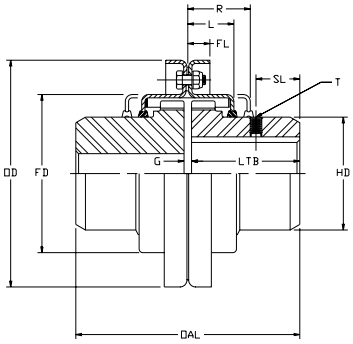
Notes: **1.** Maximum bores are less than shown above when an Interference Fit and Set Screw are required, refer to Lovejoy Application Engineering. Sizes 1020 through 1090 are Clearance Fit with 2 Set Screws at 90º. Sizes 1100 and larger are an Interference Fit with no Set Screw.

2. Based on application data, larger bores may be possible - contact Lovejoy Application Engineering.

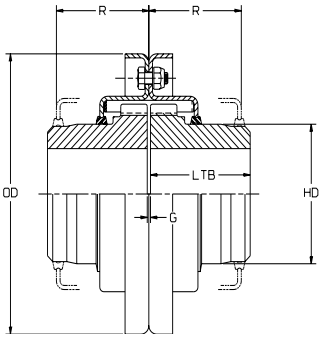
3. See pages GD-11 & GD-12 for Performance Data.

Vertical Style Grid Couplings

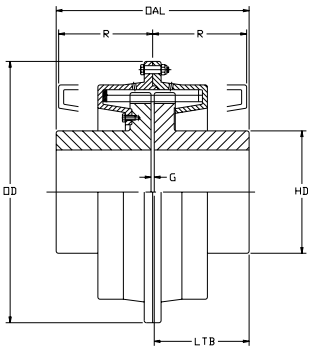
Vertically split cover design grid couplings are ideal for applications with higher operating speeds. Sizes G1020-1140 and G5430 are stamped steel, sizes G5431 and above are cast iron. This cover style offers superior protection and supreme performance.



1020-1140



1050V



1060V-1220V

Dimensional Data—Inch

Size	Bore Min.	Bore Max.	Outer Dia. OD	Overall Length OAL	Gap G	Length Thru Bore LTB	Hub Dia. HD	Flange Dia. FD	Length L	Flange Length FL	Max R	Set Screw Location SL	Set Screw Size T	Weight lbs Solid	Moment of Inertia WR^2 lb.in^2 Solid
1020	0.500	1.125	4.38	3.88	0.13	1.88	1.56	2.50	0.96	0.38	1.88	0.50	#8-32	4.3	5.320
1030	0.500	1.375	4.75	3.88	0.13	1.88	1.94	2.88	1.00	0.38	1.88	0.31	#8-32	5.7	7.990
1040	0.500	1.625	5.06	4.13	0.13	2.00	2.25	3.25	1.03	0.38	2.00	0.44	#10-24	7.4	11.990
1050	0.500	1.875	5.81	4.88	0.13	2.38	2.63	3.88	1.24	0.47	2.38	0.62	#10-24	12.0	25.760
1060	0.750	2.125	6.38	5.13	0.13	2.50	3.00	4.38	1.27	0.50	2.50	0.44	#10-24	16.0	41.160
1070	0.750	2.500	6.81	6.13	0.13	3.00	3.44	4.88	1.33	0.50	2.63	0.88	1/4 -20	23.0	61.680
1080	1.000	3.000	7.88	7.13	0.13	3.50	4.13	5.88	1.74	0.50	3.50	0.94	1/4 -20	39.0	148.000
1090	1.000	3.500	9.13	7.88	0.13	3.88	4.88	6.63	1.86	0.50	3.75	1.03	5/16 -18	56.0	272.000
1100	1.625	4.000	10.50	9.69	0.19	4.75	5.59	7.75	2.38	0.63	4.75	.....	.....	93.0	608.000
1110	1.625	4.500	11.25	10.19	0.19	5.00	6.31	8.50	2.50	0.63	4.88	.....	.....	120.0	930.000
1120	2.375	5.000	12.56	12.00	0.25	5.88	7.06	9.63	2.94	0.68	5.63	.....	.....	180.0	1611.000
1130	2.625	6.000	14.88	13.00	0.25	6.38	8.56	11.13	3.00	0.82	5.75	.....	.....	270.0	3568.000
1140	2.625	7.000	16.38	14.75	0.25	7.50	10.00	12.63	3.13	0.82	6.13	.....	.....	397.0	6431.000
G5430	3.000	8.250	16.73	13.88	0.10	6.89	11.54	.....	.....	.....	5.91	.....	.....	511.6	9740.568
G5431	4.188	7.438	20.87	15.87	0.12	7.87	10.43	.....	.....	.....	7.72	.....	.....	632.8	20472.282
G5433	4.188	8.438	23.23	17.05	0.12	8.46	11.81	.....	.....	.....	8.58	.....	.....	848.9	34587.561
G5435	5.125	9.250	25.20	19.02	0.12	9.45	12.99	.....	.....	.....	8.98	.....	.....	1124.6	52838.309
G5437	5.125	10.375	26.77	20.59	0.12	10.24	14.57	.....	.....	.....	8.98	.....	.....	1459.7	77822.012
G5439	6.125	11.500	30.71	22.17	0.12	11.02	16.34	.....	.....	.....	9.76	.....	.....	1997.7	138486.953
G5441	6.125	12.688	34.25	24.25	0.24	12.01	17.91	.....	.....	.....	11.89	.....	.....	2826.8	259509.239
G5443	7.000	16.313	39.76	25.83	0.24	12.80	22.83	.....	.....	.....	11.89	.....	.....	4343.9	537064.161

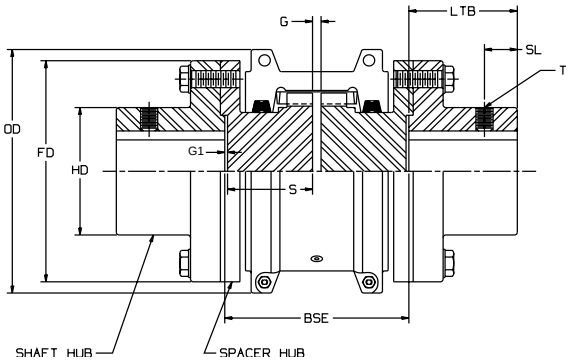
Notes: **1.** Maximum bores are less than shown above when an Interference Fit and Set Screw are required - refer to Lovejoy Application Engineering. Sizes 1020 through 1090 are Clearance Fit with 2 Set Screws at 90º. Sizes 1100 and larger are Interference Fit with no Set Screw.

2. Based on application data, larger bores may be possible - contact Lovejoy Application Engineering.

3. See pages GD-11 & GD-12 for Performance Data.

Spacer Style Grid Couplings

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



Spacer Dimensional Data—Inch

Coupling Size	Bore Max.	LTB	OD	FD	G	HD	OAL	BSE	S	T	SL	G1
1020	1.375	1.38	4	3.38	0.19	2.06	6.26 7.76	3.50 5.00	1.63 2.38	#8-32	0.30	0.03
1030	1.625	1.62	4.38	3.69	0.19	2.34	6.74 8.24 10.49	3.50 5.00 7.25	1.63 2.38 3.50	#8-32	0.38	0.03
1040	2.125	2.12	4.62	4.44	0.19	3.09	7.74 9.24 11.49	3.50 5.00 7.25	1.63 2.38 3.50	#10-24	1.04	0.03
1050	2.375	2.38	5.44	4.94	0.19	3.44	9.76 12.01	5.00 7.25	2.38 3.50	#10-24	0.78	0.03
1060	2.875	2.88	5.94	5.69	0.19	4.06	10.76 13.01	5.00 7.25	2.34 3.47	#10-24	1.18	0.06
1070	3.125	3.12	6.38	6	0.19	4.31	11.24 13.49	5.00 7.25	2.34 3.47	1/4 -20	1.28	0.06
1080	3.5	3.5	7.62	7	0.19	4.81	14.25	7.25	3.47	1/4 -20	1.54	0.06
1090	4	4	8.38	8.25	0.19	5.62	15.25	7.25	3.47	5/16 -18	1.76	0.06

Note: Sizes 1020 through 1090 are Clearance Fit with 2 Set Screws at 90º.

Spacer Grid Couplings Ratings

	Basic HP Ratings @ Varying RPM			Torque Ratings		Maximum Bore		Max RPM
Size	100	1200	1800	in-lbs	Nm	inch	mm	x1000
1020	0.67	8.04	12.06	422	48	1.375	35	3.600
1030	1.88	22.56	33.84	1200	136	1.625	41	3.600
1040	3.22	38.64	57.96	2000	226	2.125	54	3.600
1050	5.49	65.88	98.82	3500	395	2.375	60	3.600
1060	8.71	104.52	156.78	5500	621	2.875	73	3.600
1070	12.73	152.76	229.14	8000	904	3.125	79	3.600
1080	26.13	313.56	470.34	16500	1864	3.500	89	3.600
1090	47.57	570.84	856.26	30000	3390	4.000	102	3.600

Spacer Style Grid Couplings

Full Spacer Coupling BSE—Inch

	BSE														
	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	1.625	1.625	1.625	2.062	2.062	2.375	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hubs S	1.625	2.062	2.375	2.062	2.375	2.375	.....	.....	.....	.....	.....	.....	.....	.....	.....
1030	1.625	1.625	1.625	2.062	2.062	2.375	.....	1.625	.....	2.062	.....	2.375	.....	.....	3.500
Hubs S	1.625	2.062	2.375	2.062	2.375	2.375	.....	3.500	.....	3.500	.....	3.500	.....	.....	3.500
1040	1.625	1.625	1.625	2.062	2.062	2.375	1.625	1.625	2.062	2.062	2.375	2.375	3.344	3.344	3.500
Hubs 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	3.344	3.500	3.500
1050	.....	.....	.....	2.062	2.062	2.375	.....	.....	2.062	2.062	2.375	2.375	3.344	3.344	3.500
Hubs S	.....	.....	.....	2.062	2.375	2.375	.....	.....	3.344	3.500	3.344	3.500	3.344	3.500	3.500
1060	.....	.....	.....	.....	.....	2.344	.....	.....	.....	.....	.....	2.344	.....	.....	3.469
Hubs S	.....	.....	.....	.....	.....	2.344	.....	.....	.....	.....	.....	3.469	.....	.....	3.469
1070	.....	.....	.....	.....	.....	2.344	.....	.....	.....	.....	.....	2.344	.....	.....	3.469
Hubs S	.....	.....	.....	.....	.....	2.344	.....	.....	.....	.....	.....	3.469	.....	.....	3.469
1080	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.469
Hubs S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.469
1090	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.469
Hubs S	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.469

Note: To achieve the Between Shaft End dimension shown, use the two spacer hubs with the specified "S" lengths. To obtain the Between Shaft End dimension, use the two spacer hub lengths and the G and two G1 Dimensions. Assembly includes 2 spacer hubs, 2 shaft hubs, and cover/grid assembly.

Half Spacer Coupling BSE—Inch

	BSE				
	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 dimension shown, use the spacer hub with the specified "S" length. Assembly includes spacer hub, shaft hub, standard hub and cover/grid assembly.

Lovejoy Coupling Grease

Lovejoy Coupling Grease was designed to resist centrifugal separation, thereby keeping the oil portion of the grease in the working areas of the coupling. When using the Lovejoy Coupling Grease, lubrication intervals may be extended. A coupling exposed to extreme temperatures, excessive moisture, frequent reversals or grease leakage may require more frequent lubrication.

The benefits of this product include:

- Highest pressure and wear protection available.
- Built-in rust and corrosion inhibitors.
- Increased coupling life.
- Reduced maintenance costs.
- Reduced downtime.
- Superior lubrication.

Lovejoy Coupling Grease has the U.S. Department of Agriculture Food Safety & Inspection Service approval for use in applications where there is no possibility of contact with edible products.

Specifications

The specifications indicated below are average values, variations which do not affect product performance may occur.

Temperature Operating Range:
-40ºF (-40ºC) to 250ºF (121ºC)

Minimum Base Oil Viscosity:
2625SUS (567cSt) @ 100ºF (38ºC)

Centrifuge Separation Characteristics:
ASTM D-4425-K36 = 0/24

NLGI Grade: 1

Minimum Dropping Point:
225ºF (108ºC)

Minimum Timken Load: 40 lbs

If an alternative grease is used it should meet the minimum specifications listed below. Table 4 is a list of grease products that meet the general specifications but should not be considered exclusive recommendations.

Common Industrial Lubricants (NLGI Grade #2) ***Table 4***

Manufacturer	Ambient Temperature Range: 0º F to 150º F (-18º C to 66º C)	Ambient Temperature Range: -30º F to 100º F[1] (-34º C to 38º C)
Amoco Oil Co.	Amolith Grease #2	Amolith Grease #2
Atlantic Richfield Co.	Litholene HEP 2	Litholene HEP 2
Chevron U.S.A. Inc.	Chevron Dura-Lith EP-2	Chevron Dura-Lith EP 2
Cities Service Co.	Citgo HEP-2	Citgo HEP 2
Conoco Inc.	EP Conolith #2	EP Conolith #2
Exxon Company, USA	Ronex MP	Ronex MP
Gulf Oil Corp.	Gulfcrown Grease #2	Gulfcrown Grease #2
E.F. Houghton & Co.	Cosmolube #2	Cosmolube #1
Imperial Oil Ltd.	Esso MP Grease H	Lotemp EP
Kendall Refining Co.	Kenlube L-421 Gease	Kenlube L-427 Grease
Keystone Div. (Pennwalt)	#81 Light	#84 Light
Mobil Oil Corp.	Mobilux EP 111	Mobilux #1
Phillips Petroleum Co.	IB & RB Grease	Philube IB & RB Grease
Shell Oil Co.	Alvania Grease #2	Alvania Grease #2
Standard Oil Co. (OH)	Factran #2	Factran #2
Sun Oil Company	Prestige 42	Prestige 42
Texaco Lubricants	Starplex HD2	Multifak EP2
Texaco Canada Inc.	Marfak HD 2	Marfak AP
Union Oil Co. (CA)	Union Unoba #2	Union Unoba #2
Valvoline Oil Co.	Val-Lith EP #2	Val-Lith EP #2

Note: Check with lube manufacturer for approved lubricants to use in the food processing industry.

Temperature Operating Range:
0ºF (-18ºC) to 150ºF (66ºC)

Centrifuge Separation Characteristics:
Low oil separation rate and high resistance to separation from centrifuging.

NLGI Grade: 2

Minimum Dropping Point: 190ºF (74ºC)

GD

Lovejoy Coupling Grease Limited 5-year Lubrication Warranty

Since 1927, Lovejoy couplings have saved thousands of companies both time and money by accommodating shaft misalignment, vibrations and shock loads, thus protecting connected equipment.

Now Lovejoy Grid Couplings join this long tradition. For this design, we have identified the best possible lubricants for couplings — those with high viscosity and low bleed rates. Lovejoy Coupling Grease meets these high expectations — and yours.

A Lovejoy Grid coupling initially lubricated with Lovejoy Coupling Grease will have the grid spring member warranted for 5 years against lubrication failures and provide rugged, dependable service. It's our guarantee!

Benefits for your application are:

- Increased coupling life.
- Reduced maintenance cost.
- Reduced downtime.
- Superior lubrication.
- Significantly extended relubrication intervals.

Warranty

Lovejoy, Inc. will replace any grid member which fails during the first five (5) years of normal use due to inadequate lubrication provided that:

- The coupling was initially lubed with the proper amount of Lovejoy Coupling Grease, as described in the Installation Instructions.
- Recommended installation and operational alignment limitations are observed.
- Ambient temperatures are within -20º to +250ºF (-29º to +121ºC).

This guarantee of performance does not mean that a grid member will never need to be replaced. The primary purpose of a coupling is to protect the connected equipment by accommodating shaft misalignment and shock loads. In performing this function, some wear and fatiguing of metal may occur. However, if the grid member fails within the warranty period due to some failure of the lubricant, Lovejoy will replace the grid member free of charge.

Notes