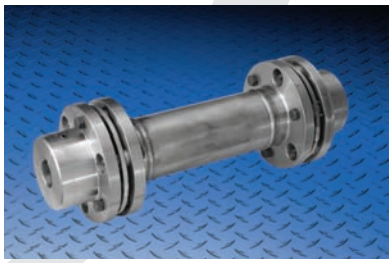
Couplings | Thomas® Flexible Disc Couplings

(English-Inch)



REXNORD

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M.T. Thomas revolutionized the coupling industry by inventing the flexible disc coupling in 1919. Today Thomas' engineers continue to improve the disc coupling through design innovation, modern materials and lean manufacturing processes. The Rex® Thomas® disc coupling is manufactured within a certified ISO 9001 quality system and is unsurpassed in its reputation for quality, reliability and easy maintenance features. The flexible disc packs are engineered for infinite life when applied within the published ratings and environmental guidelines. Our experience and dedication to conservative design standards assures maximum reliability on the most critical drive systems.

DISC COUPLING BENEFITS

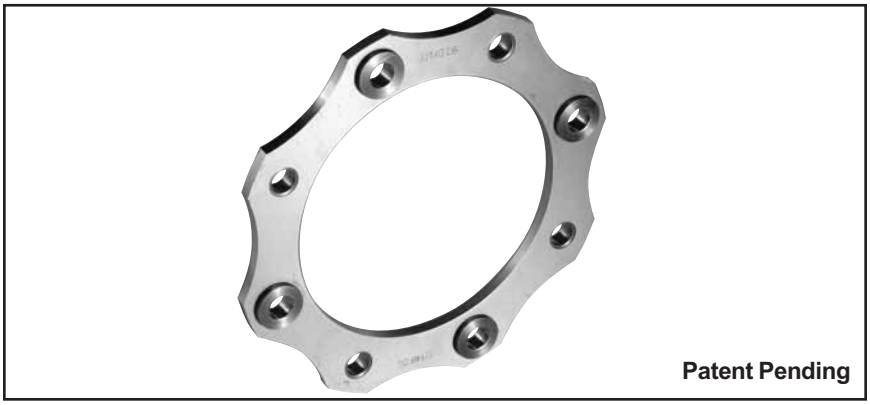
- No lubrication
- Visual inspection
- No backlash
- Low restoring forces
- Wide temperature range

REX® THOMAS® BENEFITS

- High reliability
- Broad range of styles and sizes
- Extensive engineering support
- Custom design capability
- Global support

Tpack™ DISC PACK

Rex Thomas disc couplings are known for high reliability. The Tpack™ advanced technology flexible disc element makes maintenance easy and provides additional torque density. This high quality design functions with our current products and already installed Thomas disc couplings, performing in a variety of applications worldwide.

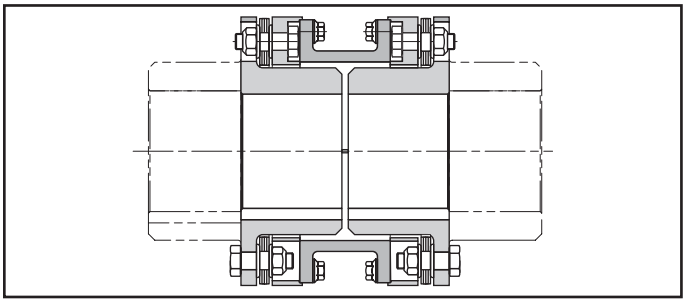


Patent Pending

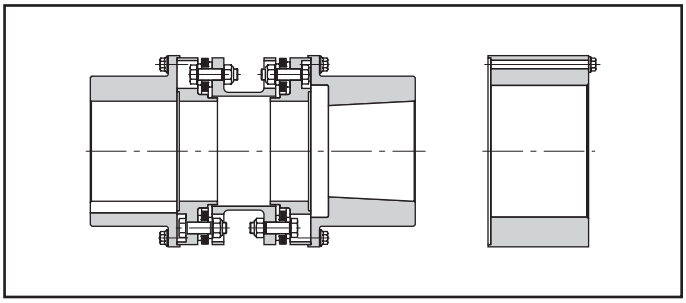
Unitized pack for easy assembly and maintenance, alternating single headed bushings to provide full fastener bearing area and retrofitability into Series 52, AMR, CMR, and SN style coupling sizes 225-750.

OTHER NEW ITEMS IN THIS CATALOGUE

Series 54RDG increased torque density and speed potential for close coupled applications.



Series 71 eight bolt design uses our popular Series 71 design with drop out center section assembly and Tpack™ disc pack, we are able to provide significant increases in torque capacity allowing for a smaller coupling selection and high speed potential.

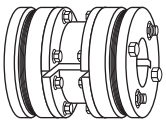
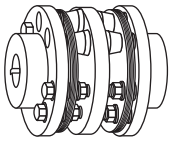
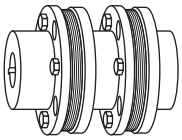
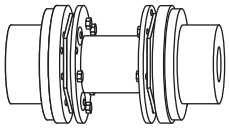
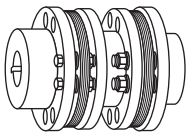
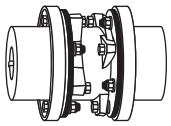
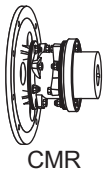
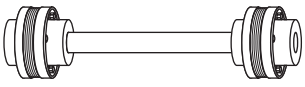
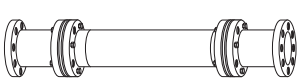


* Tpack not available for size 450 SN

**Tpack used in Series 71 not interchangeable with Series 52, AMR, CMR or SN.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

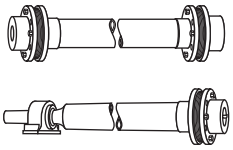
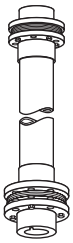
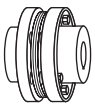
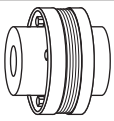
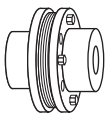
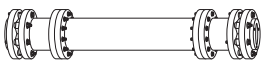
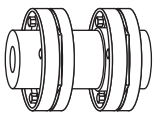
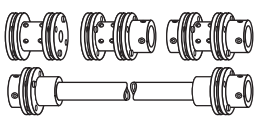
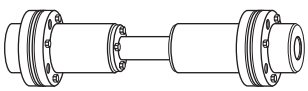
THOMAS® COUPLING APPLICATION GUIDE

Coupling Type	Typical Applications	Torque Range* (lb.-in.)	RPM* Range	Max.* Bore (in.)	Page Number	Max. Ang. Misalignment Per Disc Pack
 Series 54RDG	Close-coupled applications. Suitable as replacement for gear and grid couplings	Up to 1,724,800	Up to 10,500	9.00	15	1/3 °
 DBZ-B	Mixers, Compressors, Agitators, Blowers and Fans, Centrifugal Pumps, Conveyors	Up to 43,400	Up to 9,000	4.75	16	1/2°
 Series 52	Pumps & Compressors (Centrifugal, Rotary, Lobe, and Axial), Speed Increasers, Fans, Dynamometers	Up to 3,390,000	Up to 15,000	14	17	1/3°
 Series 71	Pumps & Compressors with popular Shaft Separation Standards. Blowers, Fans, Speed Increasers	Up to 1,677,600	Up to 20,800	10.8	18, 19	1/2° – 1/3°
 DBZ-C	Process Pumps with ANSI, API, and other shaft separation standards. Blowers, Fans, Mixers, Compressors, Conveyors	Up to 50,000	Up to 9,500	4.75	20	1/2°
 AMR	Reciprocating Pumps and Compressors, Fan Drives, Blowers, Heavy-duty Industrial Drives, Crushers, Extruders, Hoists, Dredges, Generators, Chippers, Calender, Mill Drives, Conveyors	Up to 2,840,000	Up to 2,500	15.5	21	1/3°
 CMR	Engine Drivers, Reciprocating Pumps and Reciprocating Compressors, Heavy-duty industrial drives – where flywheel mounting is required	Up to 2,840,000	Up to 2,500	15.5	22, 23	1/3°
 BMR	Blowers, Fans, Crushers, Marine Drives, Dredge Pumps, Hoists, Heavy-duty Industrial Drives. Reciprocating Pumps and Compressors, Paper Mill Drives, Conveyors	Up to 261,000	Up to 1,800	6	24	1/3°
 SN-GA	Pulp and Paper machines, Line Shafts, Pelletizers, Crushers and Mill Drives. Replacing long span gear couplings, bolting to existing rigid hubs	Up to 1,107,000	Up to 1,800	N/A	25	1/3°

* These ratings are for cataloged coupling sizes. For special requirements, consult Rexnord Industries, Inc.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® COUPLING APPLICATION GUIDE

Coupling Type	Typical Applications	Torque Range* (lb.-in.)	RPM* Range	Max.* Bore (in.)	Page Number	Max. Ang. Misalignment Per Disc Pack
 SN SF	Turbines, Pumps, Compressors, Test Stands, Generators, Speed Increasers, Fans (Cooling Tower, Mine Ventilating, Forced and Induced Draft), Paper Mill Drives, Line Shafts, Printing Machines, Pumps. Available as a standard in corrosion-resistant materials	Up to 1,466,000	Up to 3,600	10.12	26, 27	1/3°
 SV	Vertical Drives such as Sewage Pumps, Printing Machines, Marine Pumps. Available as a standard in corrosion-resistant materials	Up to 1,466,000	Up to 3,600	10.12	26, 27	1/3°
 ST	**Accommodates angular misalignment only.** Three-bearing applications where radial load is supported by the coupling, such as single-bearing generators, V-belt sheaves, etc.	Up to 200,000	Up to 2,500	8	28	1/3°
 BMR Single	**Accommodates angular misalignment only.** May be used with solid intermediate shafts for applications listed for BMR. Not intended as a radial-load-supporting coupling	Up to 1,040,000	Up to 2,500	9.25	29	1/3°
 SN Single	**Accommodates angular misalignment only.** May be used with intermediate solid shaft for applications similar to BMR, but with high speed capacity. Available in corrosion-resistant materials	Up to 838,800	Up to 7,100	8	30	1/3°
 THP	Turbines, Pumps, Compressors, Speed Increasers, Test Stands	Up to 579,000	Up to 28,500	5	31	1/4°, 1/3°
 Series 63	Turbines, Pumps, Compressors, Test Stands, Generators, Speed Increasers	Up to 1,150,000	Up to 36,000	8.84	32, 33	1/4°
 Miniature Couplings	Tachometers, Encoders, Switches, Ball Screws, Test Stands, Pumps, Compressors, Centrifuges, Theodolites, Sonar, Radar, Scales, Carburetors	Up to 700	Up to 150,000	1.25	34 - 36	1/2° - 2 °
 Adjustable Length SN	Same applications as SN but where axial and/or angular adjustment is desired. Many sizes in stock for emergency break down replacement	Up to 22,200	Up to 1,800	3.12	39	1/3°

* These ratings are for cataloged coupling sizes. For special requirements, consult Rexnord Industries, Inc.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE COUPLINGS

A flexible coupling is a device used to connect the ends of two shafts, transmit torque, and at the same time, accommodate slight misalignments which develop in service.

The primary functions of all flexible couplings are:

1. To transmit power from one shaft to another, efficiently and effectively.
2. To accommodate slight shaft misalignments which develop in service.

The secondary functions of flexible couplings are:

1. Protect connected equipment.
   a. Absorb shock, vibration and pulsations.
   b. Decrease cross load on bearings.
   c. Accept load reversals.
   d. Minimize backlash.
2. Minimize “installation” and “maintenance” difficulties.

Shafts become misaligned during operation because of settling foundations, the effects of heat, vibration, etc. These misalignments take place in the form of angular misalignment, parallel misalignment, or axial movement of the shafts. Therefore, to get full service life from any flexible coupling, it is necessary to:

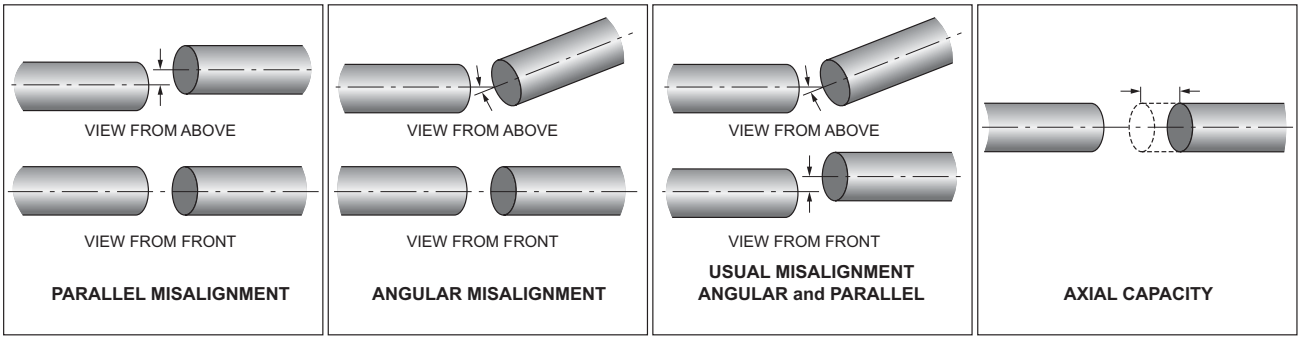
1. **ASSURE PROPER SHAFT ALIGNMENT DURING INITIAL INSTALLATION.**
2. **OCCASIONALLY CHECK FOR AND CORRECT SHAFT MISALIGNMENTS DURING OPERATION.**

CAUTION

All rotating power transmission products are potentially dangerous and must be properly guarded.

Never operate coupling without an OSHA approved guard.

What is Misalignment?



Misaligned shafts not properly coupled are subject to severe stresses which damage bearings and seals. Any or all of the misalignments shown in the above diagrams are present in all connected drives. Therefore, it is imperative that flexible couplings be used to avoid costly damage to your equipment.

Initial alignment of machinery is one of the most critical factors affecting coupling performance and reliability. Each particular style of coupling has its own misalignment capabilities. The installation and alignment instructions outline the initial alignment requirements. These initial values are approximately one-third of the total coupling misalignment capacity. This means that the coupling has ample reserve to compensate for operational misalignments which develop as a result of bearing wear, foundation settling, thermal growth, pipe strain, etc. However, the closer the initial alignment, the more reserve margin a coupling has to compensate for misalignments during the life of the machine. A coupling that operates with large amounts of misalignment will have a limited life, while a coupling operating within capacity will have infinite life.

The customer and coupling manufacturer must mutually select the correct size and type coupling for the application. Good service life will then become a reality if proper installation and alignment procedures are followed.

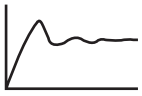
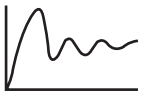
The following pages show basic coupling arrangements and load classifications based on years of experience in coupling applications in all phases of power transmission. Any unusual operating or misalignment conditions should be referred to Rexnord to assure proper selection of size and type of coupling.

THOMAS® COUPLING SELECTION

SELECTION PROCEDURES

SERVICE FACTORS

Service Factors are a means of classifying different equipment and applications into various load classifications. Due to variations in application of equipment, service factors are used to adjust equipment ratings to accommodate for variable loading conditions.

	Load Classifications	Service Factors
	Continuous service and running loads vary only slightly.	1.0
	Torque loading varies during operation of the equipment.	1.5
	Torque loading varies during operation, frequent stop/start cycles are encountered.	2.0
	For shock loading and substantial torque variations.	2.5
	For heavy shock loading or light reversing drives.	3.0
	Reversing torque loads do not necessarily mean reversal of rotation. Depending upon severity of torque reversal, such loads must be classified between "medium" and "extreme."	Consult Rexnord Industries, Inc.

Close Coupled Couplings and Spacer Couplings

The need for flexible couplings in high speed applications continues to grow. Thomas couplings have been particularly successful in these applications due to their desirable qualities of being in balance and staying in balance.

Thomas couplings are manufactured with an inherent high level of balance quality "designed in" to the product. That is, components are manufactured to close tolerances and concentricities, and fits between mating parts are carefully controlled.

The balance requirements of a flexible coupling are in reality governed by the characteristics and requirements of the connected equipment; in other words, the dynamics of the system dictate the required coupling balance quality. Different systems operating at the same horsepower and speed may vary in their balance requirements, depending on the "sensitivity" of the system to coupling unbalance. Some of the factors affecting sensitivity are:

- Stiffness of bearing supports
- Distance between bearing supports
- Shaft overhang between bearing and coupling
- Shaft diameter relative to coupling weight

The American Gear Manufacturers Association (AGMA) has developed Standard 9000-C90, entitled "Balancing Classification for Flexible Couplings which attempt to relate the above factors, and to also define coupling balance quality as related to the system factors.

Rexnord has developed recommendations for coupling balancing based on AGMA 9000-C90 and the inherent balance level of the various couplings shown in this catalog. These are shown on the data sheets as follows:

- "Max RPM Not Balanced". This is the maximum operating speed where the coupling will operate under normal conditions, and not create unacceptable vibration due to coupling unbalance. This is based on many years of operating experience on a wide variety of drive systems.
- "Max. RPM Balanced". This is the maximum operating speed where the coupling, after balancing, will still be compatible with the typical drive system. Consult Rexnord Industries, Inc. for speed requirements in excess of this value; special designs or manufacturing procedures may be required.

Certain coupling types are not suitable for dynamic balancing, and should not be used if balancing is required. These types are:

Type AMR Type CMR
Type BMR Type ST

Series 63 and THP couplings are always furnished dynamically balanced in accordance with the requirements of the application.

DISC COUPLING SELECTION PROCEDURE

The following procedure can be used to select Disc couplings for most applications. For applications involving other than normal loading or design, special consideration must be given to coupling selection. Rexnord application engineers are readily available for selection, advice and assistance.

1. **Determine HP/100RPM:**
   $$\text{HP/100 RPM} = \frac{\text{Horsepower} \times 100}{\text{RPM}}$$
2. **Determine Service Factor:**
   Select the proper Service Factor from Table. Note, if not listed, see Load Classification Table.
   Note: The Service Factor Table considers the driven equipment only and assumes a normal electric motor or turbine driver. For prime movers of the reciprocating type (engines, etc.) add the following to the Service Factor:
   For 8 or more cylinders, add 0.5
   For 6 cylinders, add 1.0
   For 4 cylinders, add 1.5
   For less than 4 cylinders, consult Rexnord Industries, Inc.
3. **Select the Coupling:**
   Turn to the page describing the selected coupling type and select the smallest coupling capable of transmitting the calculated HP/100 RPM at the proper Service Factor.
4. **Check Limiting Conditions:**
   a. Check maximum speed (dynamic balancing may be required – see page 26)
   b. Check maximum bore.
   c. Check other dimensions such as shaft separation, overall length, O.D., etc.
   d. Check to be sure that the maximum torque to be transmitted, such as start-up or stall torques, do not exceed the coupling's Peak Overload Torque Rating.
   Note: Variable frequency and synchronous motors and certain induction motors produce transient torques several times the continuous rating of the unit. Consult motor manufacturer.
5. **Refer to page 10-11 for Ordering Information.**

Note: A coupling is a critical component of any drive system. The basic coupling selection criteria is used to determine the size and style only. It is recommended that the system be analyzed for torsional and lateral stability using the specific coupling mass elastic data. The coupling weight, inertia, lateral stiffness, and torsional stiffness are available for this system analysis. It is the responsibility of the coupling user to assure the system, with the coupling as a component, properly functions.

THOMAS® COUPLING SELECTION

TYPICAL SERVICE FACTORS – MOTOR AND TURBINE DRIVEN EQUIPMENT*

Application	Typical Service Factor
AGITATORS	
Pure Liquids	1.0
Variable Density	1.5
ALTERNATOR	1.5
BLOWERS	
Centrifugal	1.0
Lobe	1.5
Vane	1.5
BRIQUETTER MACHINES	2.0
CAN FILLING MACHINES	1.0
CANE KNIVES	2.0
CAR DUMPERS	2.5
CAR PULLERS	1.5
CLAY WORKING MACHINERY	2.0
COMPRESSORS	
Centrifugal	1.0
Lobe, Vane, Screw	1.5
Reciprocating - Multi-Cylinder	Consult Rexnord Industries, Inc.
Axial	1.0
CONVEYORS - uniformly loaded or fed	1.5
CONVEYORS - heavy duty - not uniformly fed	2.5
CRANES AND HOISTS	2.0
CRUSHERS	3.0
DREDGES	
Cable Reels	2.0
Conveyors	1.5
Cutter Head Drives	2.5
Jig Drives	2.5
Maneuvering Winches	2.0
Pumps	2.0
Screen Drives	2.0
Stackers	2.0
Utility Winches	1.5
ELEVATORS	
Bucket	2.0
Centrifugal Discharge	1.5
Escalators	1.5
Freight	2.0
Gravity Discharge	1.5
EXTRUDERS	
Plastic	2.0
Metal	2.5
FANS	
Centrifugal	
Forced Draft (Hostile Environment)	1.5
Induced Draft (Hostile Environment)	1.5
Axial	
Forced Draft (Hostile Environment)	1.5
Induced Draft (Hostile Environment)	1.5
Mine Ventilation	2.5
Cooling Towers	1.5
Light Duty Blower & Fans	1.0
FEEDERS	
Light Duty	1.5
Heavy Duty	2.5
FOOD INDUSTRY	
Beet Slicer	2.0
Cereal Cooker	1.5
Dough Mixer	2.0
Meat Grinders	2.0
Can Filling Machine	1.0
Bottling	1.5
GENERATORS	
Non-Welding	1.5
Welding	3.0
HAMMER MILLS	3.0
LUMBER INDUSTRY	
Barkers - Drum Type	2.5
Edger Feed	2.0
Live Rolls	2.0
Log Haul - Incline	2.0
Log Haul - Well Type	2.0
Off Bearing Rolls	2.0
Planer Feed Chains	2.0
Planer Floor Chains	2.0
Planer Tilting Hoist	2.0
Slab Conveyor	1.5
Sorting Table	1.5
Trimmer Feed	2.0
MACHINE TOOLS	
Bending Roll	2.0
Plate Planer	1.5
Punch Press - Gear Driven	2.0
Tapping Machines	2.5
Other Machine Tools	
Main Drives	1.5
Auxiliary Drives	1.5
METAL MILLS	
Draw Bench - Carriage	2.5
Draw Bench - Main Drive	2.5
Forming Machines	2.5
Slitters	2.0
Table Conveyors	
Non-Reversing	2.5
Reversing	3.0
Wire Drawing & Flattening Machine	2.0
Wire Winding Machine	2.0
MILLS, ROTARY TYPE	
Ball	2.5
Cement Kilns	2.0
Dryers & Coolers	2.0
Kilns	2.0
Pebble	2.0
Rod	2.0
Tumbling Barrels	2.0
MIXERS	
Concrete Mixers	2.0
Drum Type	2.0
OIL INDUSTRY	
Chillers	1.5
Oil Well Pumping	2.0
Paraffin Filter Press	2.0
Rotary Kilns	2.0
PAPER MILLS	
Barker Auxiliaries, Hydraulic	2.5
Barker, Mechanical	2.5
Barking Drum (Spur Gear Only)	2.5
Beater & Pulper	2.0
Bleacher	1.0
Calenders	2.0
Converting Machines, except	
Cutters, Platers	1.5
Couch	2.0
Cutters, Platers	2.0
Cylinders	2.0
Dryers	2.0
Felt Stretcher	1.5
Felt Whipper	2.0
Jordans	2.0
Log Haul	2.0
Presses	2.0
Reel	1.5
Stock Chests	1.5
Suction Roll	2.0
Washers and Thickeners	1.5
Winders	1.5
PRINTING PRESSES	1.5
PULLERS	
Barge Haul	2.0
PUMPS	
Centrifugal	
General Duty (Liquid)	1.0
Boiler Feed	1.5
Slurry (Sewage, etc.)	1.5
Dredge	2.0
Reciprocating	
Double Acting	2.0
Single Acting	
1 or 2 Cylinders	2.5
3 or more Cylinders	2.0
Rotary - Gear, Lobe, Vane	1.5
RUBBER INDUSTRY	
Mixer - Banbury	3.0
Rubber Calendar	2.0
Rubber Mill (2 or more)	2.5
Sheeter	2.0
Tire Building Machines	2.5
Tire & Tube Press Openers	1.0
Tubers and Strainers	2.0
SCREENS	
Air Washing	1.0
Rotary - Stone or Gravel	1.5
Traveling Water Intake	1.5
Vibratory	2.5
SEWAGE DISPOSAL EQUIPMENT	1.5
SEWAGE TREATMENT PUMPS	1.5
TEXTILE INDUSTRY	
Batchers	1.5
Calenders	2.0
Card Machines	1.5
Cloth Finishing Machines (washers, pads, tenters) (dryers, calenders, etc.)	1.5
Dry Cans	2.0
Dryers	1.5
Dyeing Machinery	1.5
Looms	1.5
Mangles	1.5
Nappers	1.5
Soapers	1.5
Spinners	1.5
Tenter Frames	1.5
Winders (Other than Batchers)	1.5
WINDLASS	2.0
WOODWORKING MACHINERY	1.5

* Service Factors in this table are for driven equipment based on smooth prime movers such as electric motors and turbines. For reciprocating prime movers, such as diesel or gas engines, add the following to the Service Factor:
For 8 or more cylinders, add 0.5
For 6 cylinders, add 1.0
For 4 cylinders, add 1.5
For less than 4 cylinders, consult Rexnord Industries, Inc.

THOMAS® FLEXIBLE DISC COUPLINGS

SELECTION EXAMPLE

A 250 HP electric motor is driving a dredge pump at 1,800 RPM. The shaft size of the motor is 2⅜ the shaft of the pump is 2⅛. The distance between the shaft ends (DBSE) is 5 inches. The environment is 150° F.

$$\text{HP/100 RPM} = \frac{250 \text{ HP} \times 100}{1800 \text{ RPM}} = 13.89 \text{ HP/100 RPM}$$

OR

$$\text{Application Torque} = \frac{250\text{HP} \times 63{,}000}{1{,}800} = 8{,}750 \text{ lb.-in}$$

Service factor (See typical service factor on page 8) = 2.0
Use chart on page 17 for HP/RPM

OR

Application torque requirements × Service factor – 8,750 × 2 = 17,500
Excerpt of page 17 – Series 52

Coupling Size	⑥ Max. Bore	A	B	② Std. C	② Stocked C	Min. C
125	1.38	3.69	1.31	4.00	4	–
162	1.88	4.34	1.75	5.00	5	2.03
200	2.25	5.44	2.06	5.00	5	2.63
225	2.63	5.69	2.63	5.00	5 & 7	2.75
262	3.13	6.62	2.88	5.00	5 & 7	3.22
312	3.63	7.81	3.38	5.50	5.5 & 7	3.75

Coupling Size	Max Horsepower Per 100 RPM	③ Max. RPM		Max. Continuous Torque (lb.-in.)	Peak Weight Overload Torque (lb.-in.)
	Service Factor 1.0	⑤ Not Balanced	Balanced		
125	4.28	5,000	15,000	2,700	5,400
162	8.49	4,600	15,000	5,350	10,700
200	16.7	4,250	15,000	10,500	21,000
225	27.8	4,100	14,000	17,500	35,000
262	52.1	3,900	13,000	32,830	65,660
312	81.6	3,450	11,700	51,400	102,800

Torque requirements suggest a size 225
Bore size requirement indicates a size 225 is required
DBSE requirement is met by 225 with standard 5 inch C dimension

Coupling Selection = Series 52, Size 225 with standard 5" dimension

THOMAS® FLEXIBLE DISC COUPLINGS

ORDERING INSTRUCTIONS

PROCEDURES

The following bore will be furnished when tolerance and type of fit are not specified. (Does not apply to miniature and DBZ stocked bores.)

Nominal Bore Dia.		
Over	Thru	Bore Tolerance
…	1 1/2	+0.0000-0.0005
1 1/2	3	+0.0000-0.001
3	6	+0.0000-0.0015
6	12	+0.0000-0.002

See page 11 for types of fits and shaft diameters.

1. Quantity
2. Coupling Size and Type
3. Bore Sizes
4. Keyway and Setscrew Sizes (if non-standard)
5. Dynamic Balancing if required
6. Additional Data (where applicable)
   (a) Disc Pack material (if other than Tomaloy).
   (b) Free or interference fit on shafts (if shaft diameters are given).
   (c) Complete details on tapered bore requirements, see below.
   (d) On DBZ-A Couplings
      (1) Identify bore of standard hub, and bore of extended hub.
   (e) On SN, SF, and SV Couplings
      (1) Corrosion Resistance Class
      (2) "L" Dimension
      (3) Dynamic Balancing if required
      (4) Sketch of Stub shaft (SF only) if non-standard
      (5) On SV, identify bore of upper hub and lower hub
      (6) Operating speed required
   (f) On BMR Couplings
      (1) Solid Shaft Diameter, if ordered
      (2) "L" Dimension
   (g) On CMR Couplings
      (1) Adapter; 25
         (a) Outside Diameter
         (b) Bolt Circle Diameter
         (c) Bolt Hole Diameter
         (d) Number of Bolts and Spacing

REX® THOMAS® FLEXIBLE DISC COUPLINGS

ORDERING INFORMATION

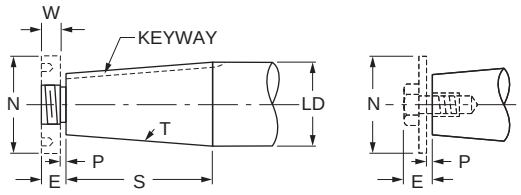
TAPERED BORES

INFORMATION REQUIRED

1. Drawing of HUB showing complete bore and keyway details.

— OR —

2. Drawing of SHAFT with dimensions shown below, allowing Rexnord to bore hubs to suit.

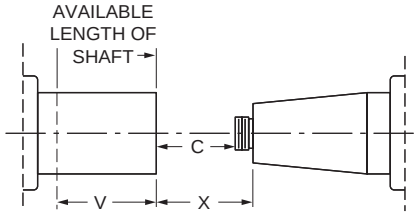


(LD) Large Diameter, Specify in Decimals.
(S) Length of Taper, Measure parallel to Shaft centerline.
(T) Taper per Foot, Difference in Diameter in one foot length.
(P) Clearance space for drawing Hub up on tapered shaft. Usually 1/8" or 1/4", depending on shaft size and taper.
Keyway: Width, Depth.
Note: Specify if keyway is parallel to Taper or if parallel to shaft center line.
Specify depth at larger diameter of Taper if keyway is parallel to shaft center line.

SUPPLEMENTAL TAPER BORE INFORMATION

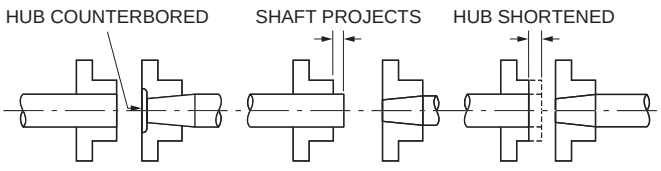
With connected equipment in fixed position, the following additional information is necessary:

Dimensions "V" and "X" must be given when one or both connected machines are fixed on their bases. Advise if dimension "X" is fixed, or if variable between what limits.



A fixed "X" dimension may require altered or special coupling hubs. Often the straight bored hub can be positioned on its shaft allowing the use of a standard coupling. See illustrations below.

Consult AGMA Standard 9002-A86 "Taper Bores for Flexible Couplings" for new applications.



Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

ORDERING INFORMATION

BORE SPECIFICATIONS

Couplings will be bored in accordance with AGMA Standard 9002-A86. The type of bore fit normally supplied by Rexnord is listed below.

DBZ	Straight Bore – Class I Clearance Fit – Stocked Straight Bore – Interference Fit on Bore-To-Order Sizes ① Taper Bore – To Customer Specification
AMR, BMR, CMR, SN, SF, SV, ST, 52, 54RDG, 71	Straight Bore – Interference Fit on All Bores ① Taper bore – To Customer Specification
Series 63/THP	All Bores per Customer Specification
Miniatures	See page 34-36

① Unless specified otherwise by customer.
Note: Rexnord recommends an interference fit be used whenever possible.

Bore Size	50	62	75	101	126	163	201	226	263
.375 .50 .625	• •	• •	•						
.75 .875 1.00			•	• • •	• •	•			
1.125 1.25 1.375				•	• • •	• • •	•		
1.50 1.625 1.875						• • •	• •	•	
2.00 2.125 2.375							•	• • •	• •

Standard Keyways Dimensions – Tolerances (inch)

Nominal Shaft Diameter		Keyway			Keyway Tolerance		
			Depth		Width		
Over	Thru	Width	Sq. ②	Rect. ②	Close Side Fit ③	Free Side Fit ④	Depth
5/16	7/16	3/32	3/64	…	+0.0005 -0.0015	+0.002 -0.000	+0.015 -0.000
7/16	9/16	1/8	1/16	3/64			
9/16	7/8	3/16	3/32	1/16			
7/8	1 1/4	1/4	1/8	3/32			
1 1/4	1 3/8	5/16	5/32	1/8			
1 3/8	1 3/4	3/8	3/16	1/8	+0.0005	+0.0025	
1 3/4	2 1/4	1/2	1/4	3/16	-0.0020	-0.000	+0.023 -0.000
2 1/4	2 3/4	5/8	5/16	7/32	+0.0005 -0.0025	+0.003 -0.000	
2 3/4	3 1/4	3/4	3/8	1/4			
3 1/4	3 3/4	7/8	7/16	5/16			
3 3/4	4 1/2	1	1/2	3/8			
4 1/2	5 1/2	1 1/4	5/8	7/16	+0.0010	+0.0035	
5 1/2	6 1/2	1 1/2	3/4	1/2	-0.0025	-0.000	+0.030 -0.000
6 1/2	7 1/2	1 3/4	7/8	3/4	+0.0010	+0.004	
7 1/2	9	2	1	3/4	-0.0030	-0.000	

② Rectangular keyways recommended for shafts over 6 1/2" diameter.
③ Close Side Fit Keyways – Recommended for reversing torque drives or other drives which are vibratory in nature, or where zero backlash is required. Customers must specify if a close side fit keyway is required.
④ AGMA 9002 Fit Keyways – Recommended for use on smooth, unidirectional drives where fitting of key at assembly cannot be tolerated. An AGMA 9002 fit keyway will be furnished on all couplings unless specified by customer.

Bore Sizes (inch)

Shaft Dia.	Clearance Fit – Class 1	Interference Fit
1/2	0.500-0.501	0.4990-0.4995
5/8	0.625-0.626	0.6240-0.6245
3/4	0.750-0.751	0.7490-0.7495
7/8	0.875-0.876	0.8740-0.8745
1	1.000-1.001	0.9990-0.9995
1 1/8	1.125-1.126	1.1240-1.1245
1 1/4	1.250-1.251	1.2490-1.2495
1 3/8	1.375-1.376	1.3740-1.3745
1 1/2	1.500-1.501	1.4990-1.4995
1 5/8	1.625-1.626	1.623-1.624
1 3/4	1.750-1.751	1.748-1.749
1 7/8	1.875-1.876	1.873-1.874
2	2.000-2.001	1.998-1.999
2 1/8	2.1250-2.1265	2.123-2.124
2 1/4	2.2500-2.2515	2.248-2.249

Shaft Dia.	Clearance Fit – Class 1	Interference Fit
2 3/8	2.3750-2.3765	2.373-2.374
2 1/2	2.5000-2.5015	2.498-2.499
2 5/8	2.6250-2.6265	2.623-2.624
2 3/4	2.7500-2.7515	2.748-2.749
2 7/8	2.8750-2.8765	2.873-2.874
3	3.0000-3.0015	2.998-2.999
3 1/4	3.2500-3.2515	3.2470-3.2485
3 1/2	3.5000-3.5015	3.4970-3.4985
3 5/8	3.6250-3.6265	3.6220-3.6235
3 3/4	3.7500-3.7515	3.7470-3.7485
4	4.000-4.0015	3.9970-3.9985
4 1/2	4.500-4.502	4.4965-4.4980
5	5.000-5.002	4.9965-4.998
5 1/2	5.500-5.502	5.4960-5.4975
6	6.000-6.002	5.9960-5.9975

Consult Rexnord for unlisted sizes or bores over 6-inch diameter.

TAPER-LOCK AND QD BUSHING SELECTION CROSS REFERENCE

In order to cross reference tapered bushing and bore sizes to a coupling selection, the following tables will cover the majority of cases.
* Reg. TM of others.

Taper-Lock* Type

Bushing Size	Coupling Size and Type					
	Maximum Bore	DBZ	SV, SF, SN	Series 52	Series 54RDG	AMR, BMR, CMR, ST
1108	1 1/8	126	125	125	162	162
1215	1 1/4	163	162	162	200	200
1310	1 3/8	201	200	200	200	200
1610	1 5/8	201	200	200	200	200
1615	1 5/8	201	200	200	225	200
2012	2	226	226	225	262	262
2517	2 1/2	263	262	262	312	312
2525	2 1/2	263	262	262	312	262
3020	3	351	350	350	375	375
3030	3	351	312	312	350	350
3535	3 1/2	401	375	375	450	425

Note: "C" Dimension will be as listed for all couplings.
"F" Dimension will vary according to bushing selection.
Consult Rexnord for "F" dimensions with bushings.

Hubs bored for Q.D. or Taper-Lock® bushings will be modified for proper fit with bushing length. Consult Rexnord Industries, Inc. for specific dimensional data.

If specific reference to the coupling series or type is not found in the table, i.e. special designs, comparison of the shaft size with the maximum bore table only, will indicate the correct taper bushing in the left side of each table. Other flange style and compression bushings can be used with coupling hubs.

Q.D. Type

Bushing Size	Coupling Size and Type						
	Maximum Bore	DBZ	SV, SF, SN	Series 52	Series 54RDG	Series 71	AMR, BMR, CMR, ST
JA	1 1/4	126	125	125	162	150	162
SH	1 5/8	163	162	200	200	175	200
SDS	1 15/16	201	226	225	225	300	200
SD	1 15/16	201	226	225	225	300	200
SK	2 1/2	263	262	262	312	300	262
SF	2 15/16	301	312	350	350	350	312
E	3 7/16	401	375	375	425	462	375
F	3 15/16	–	450	450	500	512	450

⑤ With shallow keyway. Key supplied with bushing where shallow keyway is furnished.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

GENERAL ALIGNMENT INSTRUCTIONS

Correct installation and alignment will assure long life and smooth, trouble free service. Refer to specific instruction sheet, which accompanies shipment, for style of coupling being installed.

Two methods are commonly accepted:

1. Reverse Indicator Method **(preferred)**
2. Face/Rim Method (angular/offset)

For complete alignment information, contact Rexnord Industries, Inc.

THE REVERSE INDICATOR METHOD

1. Rigidly mount a dial indicator on one hub or shaft, reading the shaft or other hub out side diameter as shown. Compensate for indicator set-up sag. Rotate both shafts together. Adjust the equipment by shimming and/or moving so that the indicator reading is within maximum allowable variations for the coupling style.
2. Reverse the set-up as shown and repeat #1 above.
3. When the results of #1 and #2 above are both within maximum allowable variations for the coupling style the shafts are in good alignment.

Angular Alignment. Rigidly mount a dial indicator on one hub or shaft, reading the face of the other hub flange, as shown in Figure 2. Rotate both shafts together making sure the shaft axial spacing remains constant. Adjust the equipment by shimming and/or moving so that the indicator reading is within maximum allowable variations for the coupling style.

Parallel Offset. Rigidly mount a dial indicator on one hub or shaft, reading the other hub flange outside diameter, as shown in Figure 3. Indicator set-up sag must be compensated for. Rotate both shafts together. Adjust the equipment by shimming and/or moving so that the indicator reading is within maximum allowable variations for the coupling style.

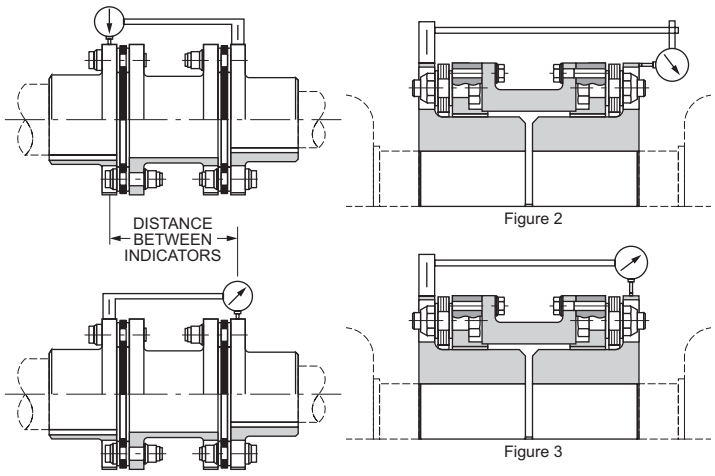


Figure 2

Figure 3

LOCKNUT TIGHTENING TORQUES

Properly tightened locknuts are essential in achieving maximum coupling torque. This table suggests the approximate locknut tightening torque values of disc couplings. Torque should be measured at the locknut while it is being turned.

The tightening torques apply to locknuts as received from the factory. If plated hardware is used, tightening torque must be modified to suit.

Stainless steel hardware requires special consideration. The tightening torques must be reduced to 60% of the values shown. Bolt and locknut threads must also be liberally coated with a molybdenum disulphide grease if using stainless steel hardware.

Bolting instructions for Series 63 Couplings are included with coupling installation procedures.

Series 71
Locknut and Capscrew Tightening Torques

Coupling Size	Locknut Torque lb.-ft. (lb.-in.)	Capscrew Torque lb.-ft. (lb.-in.)
150	(130)	(113)
175	(162)	(108)
225	(162)	(108)
300	25	(108)
350	34	18
376	60	18
412	80	18
462	130	33
512	164	52
562	190*	80
600	190*	80
712	190*	95
800	255*	165
875	335*	270
1038	425*	270

Disc Couplings
Approximate Locknut Torque – lb.-ft.

Coupling Size	Coupling Types: DBZ DBZ-A DBZ-B DBZ-C	Coupling Types: SN, SF, SV, AMR, BMR, ST 52, 54RDG	Coupling Size	Coupling Types: DBZ DBZ-A DBZ-B DBZ-C	Coupling Types: SN, SF, SV, AMR, BMR, ST 52, 54RDG
50	2	2	**312**	–	40
62	3	3	**350**	–	95
75	3	3	**351**	175	–
100	–	8	**375**	–	130
101	8	–	**401**	150*	–
125	–	13	**425**	–	175
126	13	–	**450**	–	150*
162	–	13	**451**	190*	–
163	13	–	**500**	–	190*
200	–	25	**550**	–	255*
201	25	–	**600**	–	335*
225	–	25	**700**	–	425*
226	30	25	**750**	–	560*
262	–	30	**800**	–	740*
263	40	–	**850**	–	950*
301	95	–	**925**	–	1,800

Note:
1. These torque values are approximate for steel bolts with oil lubricated threads.
2. Bolts should be held from rotating while the locknuts are torqued to the values shown.

* These locknuts are cadmium plated.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

APPLICATION DATA FORM – ENGINEERED PRODUCTS

Rex® Thomas® couplings are adaptable to virtually any special drive system.
Please fill out this page and the facing page and send to Rexnord Industries, Inc.
Coupling Operation, Warren, PA 16365. Telephone: (814) 723-6600.

NAME: _____

TITLE: _____

COMPANY: _____

ADDRESS: _____

PHONE: _____

DATE: ___/___/___

APPLICATION DATA

DRIVER: _____

DRIVEN: _____

NEW APPL.: Yes ❑ No ❑

REPLACING: _____

SERVICE: Cont. ❑ Intermit. ❑

TEMP.: Norm. _____°F Max. _____°F

SERVICE FACTOR: _____

CORROSION PROTECTION: Yes ❑ No ❑

PLATE/COAT.: _____

THERMAL GROWTH:

BSE (Cold): _____

BSE (Hot): _____

AXIAL FLOAT REQ'D.±: _____

CUSTOMER REQUIREMENTS

WT: ❑ Solo Plate ❑

WR2: ❑ WT/2 — CG Simulator ❑

KT: ❑ Puller Holes ❑

CG: ❑ Sketch ❑

NCR: ❑ Dwg. ❑

FN: ❑ Quote ❑

BALANCE CPLG.: Yes ❑ No ❑

BALANCE HUBS: No ❑

DR.: ❑ DN. ❑

FIELD BAL. TAPS: Yes ❑ No ❑

OTHER: ❑ _____

INQUIRY NO. T: _____

COUPLING OPERATION DATA

DATE QUOTED: ___/___/___

CPLG. SIZE/STYLE: _____

DESIGN: Std. ❑ Rm. ❑ Spec. ❑

ORDER NO.: _____

DWG. NO.: _____

QTY.: _____

PRICE: _____

DELIVERY: _____

TORQUE DATA

	NOR.	MAX.	START	TRIP
H.P.:	_____	_____	_____	_____
kW:	_____	_____	_____	_____
RPM:	_____	_____	_____	_____
Torque (In-Lbs):	_____	_____	_____	_____

SPECIFICATION APPLICABLE

API-671: Yes ❑ No ❑ EDITION _____

API-610: Yes ❑ No ❑ EDITION _____

OTHER: _____

DESIGN LIMITS

WEIGHT: Yes ❑ No ❑ — _____ lbs.

WR2: Yes ❑ No ❑ — _____ lbs.-in.^{2}

KT: Yes ❑ No ❑ — _____ x 10^6 in.-lb./Rad.

O.D.: Yes ❑ No ❑ — _____ in.

MISALIGNMENT: Yes ❑ No ❑

ANG.: _____ Deg./Element

PARA.: _____ in. Offset

Axial ±: _____ in.

OTHER: _____

SPECIAL NOTES: _____

_____

_____

_____

_____

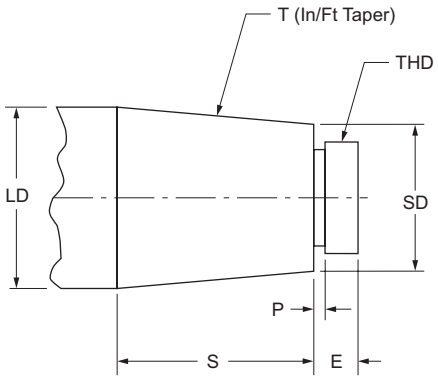
APPLICATION DATA FORM – ENGINEERED PRODUCTS

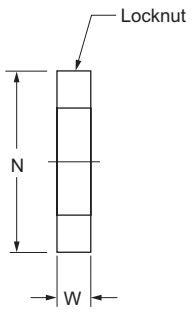
DIMENSIONAL DATA

BORE/KWY DATA

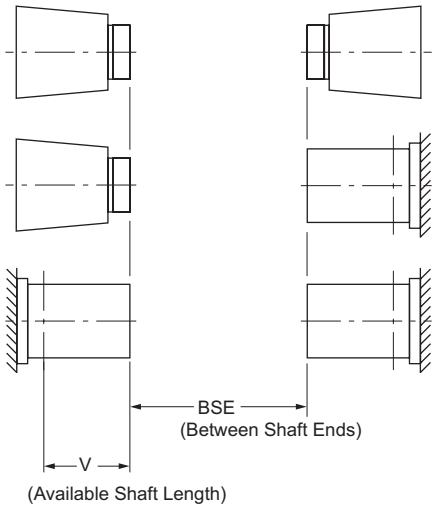
	Driver:	Driven:
Bore Dia: Straight:	_____	_____
Taper (L.D.):	_____	_____
Keyway Size:	_____W. x Dp. _____	_____W. x Dp. _____
	Depth From Opp. Side of Bore at LD _____	Depth From Opp. Side of Bore at LD _____
Kwy. Parallel To:	℄ ❑ Taper ❑	℄ ❑ Taper ❑
Hydraulic Fit:	Yes ❑ No ❑ Inter. _____/___	Yes ❑ No ❑ Inter. _____/___
Spine (Provide Details):	P.D. _____ Lg. _____	P.D. _____ Lg. _____
Fig. Adapter:	No. Holes _____	No. Hole _____
* — Provide Sketch	BCD _____	BCD _____
	Spacing _____	Spacing _____
	Pilot Dia. _____	Pilot Dia. _____
	Pilot Hgt. _____	Pilot Hgt. _____
Other:	_____	_____

SHAFT DATA





		Driver:	Driven:
LD		_____	_____
SD		_____	_____
S		_____	_____
E		_____	_____
P		_____	_____
T (In/Ft)		_____	_____
W		_____	_____
N		_____	_____
THD	RH	_____	_____
	LH	_____	_____
BSE		_____	_____
V		_____	_____



SKETCH AREA

CLOSE-COUPLED SERIES 54RDG

Series 54RDG couplings are reduced diameter gear and grid replacement couplings. Applications include any situation where the overall shaft to shaft spacing is minimal. The center member of the 54RDG is split axially, which permits maintenance of the couplings without moving the hubs or the connected equipment. Center member is piloted into the adapter providing high speed potential at high torque density.

Construction
Hubs and Center members: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Stainless Steel
Coatings Available: Black Oxide, Zinc, Cadmium

Other materials such as Tomaloy, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

When Specified, Series 54RDG couplings meet all requirements of API 610, or API 671. If application requires API specification, please consult Rexnord Industries, Inc.

****NEW DESIGN****

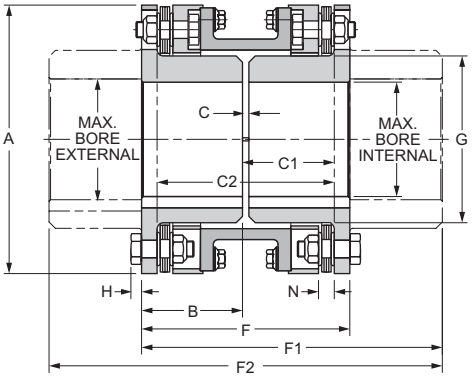
****INCREASED TORQUE RATINGS****

General Dimensions (inch)

Coupling Size	Max Bore* Internal	Max Bore* External	A	B	C	C1**	F	F1**	H	N	G	C2***	F2***
125	1.188	1.375	3.81	1.88	0.12	1.75	3.88	4.94	0.17	0.27	1.75	3.38	6.00
162	1.625	1.875	4.47	1.88	0.12	1.77	3.88	5.40	0.17	0.29	2.34	3.42	6.92
200	2.250	2.250	5.56	2.12	0.12	1.96	4.36	6.14	0.22	0.36	3.25	3.80	7.92
225	2.375	2.625	5.88	2.19	0.12	2.03	4.50	6.84	0.22	0.36	3.50	3.94	9.18
262	2.750	3.125	6.88	2.59	0.19	2.42	5.37	7.89	0.25	0.47	4.12	4.65	10.41
312	3.375	3.625	7.84	2.84	0.19	2.62	5.87	8.84	0.30	0.50	5.00	5.05	11.81
350	3.750	4.000	8.78	3.28	0.25	3.06	6.81	10.09	0.34	0.54	5.50	5.87	13.37
375	4.188	4.500	9.72	3.56	0.25	3.26	7.37	10.82	0.39	0.59	6.06	6.27	14.27
425	4.500	4.750	10.50	3.97	0.25	3.61	8.19	11.83	0.42	0.62	6.56	6.97	15.47
450	4.750	5.125	11.31	4.50	0.31	4.15	9.31	13.15	0.47	0.71	7.00	7.99	16.99
500	5.000	5.375	12.88	4.78	0.31	4.32	9.87	14.10	0.50	0.78	7.88	8.33	18.33
550	5.500	6.000	14.44	5.37	0.38	4.87	11.12	15.74	0.58	0.91	8.75	9.36	20.36
600	6.000	6.500	16.00	6.00	0.38	5.40	12.38	17.40	0.67	0.98	9.31	10.42	22.42
700	7.000	7.500	18.25	7.00	0.38	6.22	14.38	20.22	0.75	1.20	10.88	12.06	26.06
750	7.500	8.000	19.81	7.75	0.50	7.00	16.00	22.25	0.84	1.27	11.75	13.50	28.50
800	8.000	8.750	21.50	8.25	0.50	7.37	17.00	23.87	0.91	1.34	12.50	14.24	30.74
850	8.500	9.250	23.00	8.88	0.56	7.97	18.32	25.60	1.00	1.40	13.19	15.38	32.88
925	9.000	10.125	25.00	9.91	0.62	8.91	20.44	28.32	1.09	1.50	14.12	17.20	36.20

* Non-bored hubs available upon request.
** Hubs may be reversed for alternate shaft spacing
*** Both hubs reversed

Patent Pending



Engineering Data

Coupling Size	Max Horsepower Per 100 RPM Service Factor 1	Maximum RPM ① Not Balanced	Maximum RPM ① Balanced	Maximum Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	② Weight (lb.)	⑤ WR^2 (lb.-in.^{2})	Axial Capacity (in.)
125	4.3	4,600	10,500	2,700	5,400	6.9	12.5	±0.036
162	8.5	4,200	9,700	5,350	10,700	9.3	24.0	±0.036
200	16.7	3,800	8,600	10,500	21,000	16	67.0	±0.036
225	27.8	3,700	8,400	17,500	35,000	19	85.0	±0.036
262	52.1	3,600	7,400	32,830	65,660	31	192	±0.043
312	81.6	3,000	6,700	51,400	102,800	46	384	±0.051
350	106	2,800	6,200	66,900	133,800	66	689	±0.056
375	159	2,500	4,800	100,300	200,600	88	1,160	±0.062
425	213	2,300	5,400	134,300	268,600	117	1,780	±0.067
450	239	2,200	5,000	150,400	300,800	154	2,690	±0.072
500	391	2,000	4,600	246,400	492,800	224	4,970	±0.082
550	524	1,900	4,200	330,400	660,800	324	8,970	±0.092
600	688	1,800	3,900	433,800	867,600	437	14,900	±0.102
700	1,071	1,700	3,600	674,800	1,349,600	657	29,000	±0.115
750	1,331	1,550	3,400	838,800	1,677,600	839	43,400	±0.125
800	1,712	1,450	3,200	1,078,700	2,157,400	1,040	63,900	±0.136
850	2,020	1,350	3,000	1,273,000	2,546,000	1,260	88,900	±0.144
925	2,735	1,300	2,800	1,724,000	3,448,000	1,690	140,000	±0.156

For ordering instructions, see Page 10-11.
① See page 7 for explanation of RPM limits and balancing recommendations.
② Weight and WR^2 with standard length hubs, maximum bore and standard "C".
③ Extended hub length is designed longer in order to include a counter-bore for the threaded extension on a tapered shaft.
④ Large hub length. For sizes not shown, consult Rexnord.
⑤ All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modifications or the addition of end-float restricting devices.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

CLOSE-COUPLED TYPES DBZ, DBZ-A, DBZ-B

The standard DBZ coupling has two hubs inverted inside the disc pack and is used where overall shaft to shaft spacing is minimal.

DBZ style has both hubs with inverted orientation.

DBZ-A style has one hub extended to permit taper boring.

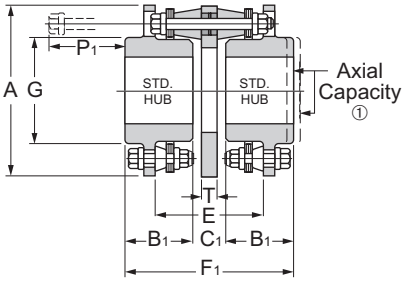
DBZ-B style has both hubs extended to allow for greater spacing where required.

Construction

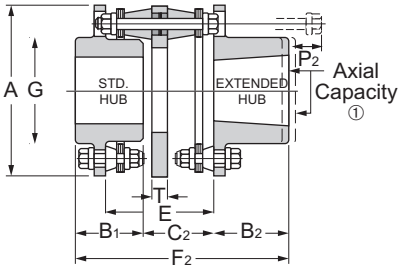
Hubs and Center Assembly: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Tomaloy
Coatings Available: Black Oxide, Zinc, Cadmium

Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

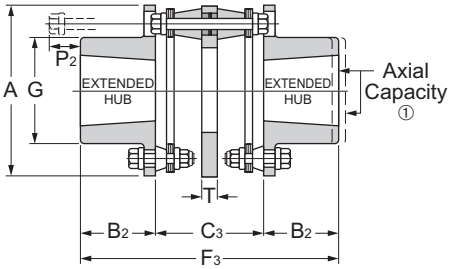
Misalignment: ½° per disc pack



DBZ



DBZ-A
(one standard and one extended hub)*



DBZ-B
(two extended hubs)*

General Dimensions (inch)

Coupling Size	Standard Hub Maximum Bore	② ⑤ Extended Hub Maxmum Bore	② ⑤ A	B1	B2	C1	C2	C3	E	F1	F2	F3	G	P1	P2	T
50	0.63	0.63	2.00	0.88	0.88	0.32	0.84	1.36	1.36	2.08	2.60	3.12	1.00	1.25	0.78	0.19
62	0.75	0.75	2.44	1.09	1.09	0.38	1.05	1.72	1.72	2.56	3.23	3.90	1.19	1.56	1.06	0.25
75	0.88	0.88	2.69	1.12	1.12	0.37	1.06	1.75	1.75	2.61	3.30	3.99	1.44	1.56	1.06	0.25
101	1.13	1.16	3.22	1.38	1.38	0.69	1.39	2.08	2.08	3.45	4.15	4.84	1.69	1.69	1.00	0.31
126	1.38	1.38	3.84	1.50	1.62	0.96	1.70	2.45	2.45	3.96	4.82	5.69	2.06	2.00	1.13	0.41
163	1.88	1.88	4.56	1.69	1.88	0.95	1.70	2.45	2.45	4.33	5.27	6.21	2.75	1.81	0.88	0.41
201	2.13	2.25	5.34	1.94	2.12	0.96	1.96	2.96	2.96	4.84	6.02	7.20	3.28	2.31	1.13	0.56
226	2.38	2.63	6.06	2.38	3.62	1.22	2.53	3.84	3.84	5.98	7.53	9.08	3.78	2.69	1.13	0.66
263	2.88	3.00	7.00	2.75	3.00	1.31	2.81	4.31	4.31	6.81	8.56	10.31	4.44	3.00	1.25	0.75
301	3.13	3.50	8.00	3.12	3.44	1.50	3.19	4.88	4.88	7.74	9.75	11.76	5.06	3.56	1.56	0.84
351	3.63	4.00	9.38	3.69	4.06	1.80	3.86	5.92	5.92	9.18	11.61	14.04	5.81	4.50	2.06	1.06
401	4.13	4.50	10.69	4.19	4.62	1.94	4.32	6.70	6.70	10.32	13.13	15.94	6.63	5.13	2.31	1.19
451	4.63	4.75	12.13	4.75	5.25	2.12	4.72	7.28	7.28	11.66	14.72	17.78	7.38	5.44	2.38	1.34

Engineering Data

Coupling Size	Max. Horsepower Per 100 RPM Service Factor 1.0	③ Max. RPM Not Balanced	③ Max. RPM Balanced	Max. Continous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	④ Weight (lb.) DBZ	④ Weight (lb.) DBZ-A	④ Weight (lb.) DBZ-B	④ WR² (lb.-in.) DBZ	④ WR² (lb.-in.) DBZ-A	④ WR² (lb.-in.) DBZ-B	① Axial Capacity (in.)
50	0.23	6,000	9,000	145	220	0.7	0.7	0.7	0.3	0.3	0.3	±0.023
62	0.39	6,000	8,200	246	370	1.5	1.5	1.5	0.7	0.7	0.7	±0.028
75	0.56	6,000	7,800	353	530	1.9	1.9	1.9	1.5	1.5	1.5	±0.032
101	1.10	6,000	7,100	693	1,040	3.3	3.3	3.3	4.5	4.5	4.5	±0.038
126	2.00	5,500	6,500	1,260	1,900	5.5	5.6	5.7	9.9	10.1	10.1	±0.046
163	2.70	5,000	6,000	1,700	2,600	8.4	8.6	8.8	21.0	21.0	22.0	±0.057
201	4.79	4,600	5,500	3,020	4,500	14.4	14.4	15.4	53.0	53.0	54.0	±0.067
226	8.73	4,100	5,200	5,500	8,300	21.0	22.0	23.0	95.0	95.0	105	±0.076
263	13.6	3,700	4,800	8,600	12,900	33.0	34.0	35.0	199	209	209	±0.089
301	20.5	3,300	4,500	12,900	19,400	50.0	52.0	54.0	365	375	385	±0.102
351	35.9	2,900	4,100	22,600	33,900	83.0	87.0	90.0	916	936	965	±0.118
401	52.7	2,700	3,900	33,200	49,800	125	125	135	1,705	1,710	1,710	±0.136
451	68.9	2,600	3,600	43,400	65,100	170	180	180	3,168	3,170	3,270	±0.154

For ordering instructions, see Page 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Popular sized standard hubs bore with keyway and setscrew are stocked. See page 11 for stocked bore sizes.
③ See Page 7 for explanation of RPM limits and balancing recommendations.
④ Weight and WR² at maximum bore.
⑤ Hubs furnished without a finished bore will be solid.
* Extended hubs can be supplied with straight bores or taper bores.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

SPACER TYPE SERIES 52

Series 52 couplings are all purpose high speed, high torque couplings used where minimum coupling weight is desirable. They are commonly used on motor and turbine driven pumps, compressors and fans. Design modifications may be made to further reduce the coupling weight, making it an economic alternative to high performance disc and diaphragm couplings.

Construction

Hubs and Center Assembly: Carbon Steel

Bolts: Alloy Steel

Disc Packs: Tomaloy Tpack™ (225-750 Size)

Coatings Available: Black Oxide, Zinc, Cadmium

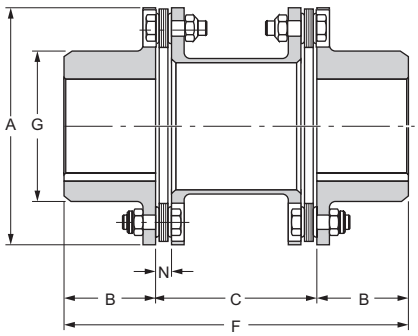
When Specified, Series 52 couplings meet all requirements of API 610, or API 671. If application requires API specification, please consult Rexnord Industries, Inc.

Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

****INCREASED TORQUE RATINGS****

Series 52



Series 52
TAPER BORES ALSO AVAILABLE

General Dimensions (inch)

Coupling Size	⑥ Max. Bore	A	B	② Std. C	② Stocked C	Min. C	F	G	N
125	1.38	3.69	1.31	4.00	4	–	6.63	2.06	0.27
162	1.88	4.34	1.75	5.00	5	2.03	8.50	2.75	0.29
200	2.25	5.44	2.06	5.00	5	2.63	9.13	3.28	0.36
225	2.63	5.69	2.63	5.00	5 & 7	2.75	10.25	3.78	0.36
262	3.13	6.62	2.88	5.00	5 & 7	3.22	10.75	4.50	0.47
312	3.63	7.81	3.38	5.50	5.5 & 7	3.75	12.25	5.25	0.50
350	4.00	8.69	3.75	6.00	6 & 7	4.16	13.50	5.88	0.54
375	4.50	9.69	4.00	7.00	7	4.59	15.00	6.50	0.59
425	4.75	10.50	4.25	7.00	7	4.94	15.50	7.00	0.62
450	5.13	11.31	4.50	8.00	7 & 8	5.34	17.00	7.44	0.71
500	5.38	12.88	5.00	9.00	9	6.03	19.00	8.38	0.78
550	6.00	14.44	5.50	10.00	10	6.88	21.00	9.44	0.91
600	6.50	16.00	6.00	10.00	10	7.50	22.00	10.25	0.98
700	7.50	18.25	7.00	11.00	–	8.56	25.00	11.75	1.20
750	8.00	19.81	7.50	11.00	–	9.25	26.00	12.63	1.27
800	8.75	21.50	8.25	12.00	–	10.02	28.50	13.62	1.34
850	9.25	23.00	8.75	13.00	–	10.75	30.50	14.50	1.40
925	10.12	25.00	9.50	14.00	–	11.50	33.00	15.75	1.50
1000	11.00	27.50	10.50	14.50	–	–	35.50	17.25	1.69
1100	12.00	29.19	11.25	16.00	–	–	38.50	18.50	1.75
1200	13.00	32.12	12.25	17.00	–	–	41.50	20.25	1.97
1300	14.00	34.50	13.25	18.00	–	–	44.50	21.88	2.03

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM Service Factor 1	③ Maximum RPM ⑤ Not Balanced	③ Maximum RPM Balanced	Maximum Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	④ Weight (lb.)	Weight Change Per inch of "C" (lb.)	④ WR^2 (lb.-in.^{2})	WR^2 Change Per Inch of "C" (lb.-in.^{2})	① Axial Capacity (in.)
125	4.28	5,000	15,000	2,700	5,400	4.6	0.16	7.4	0.15	±0.036
162	8.49	4,600	15,000	5,350	10,700	7.2	0.21	15.8	0.27	±0.036
200	16.7	4,250	15,000	10,500	21,000	12.4	0.25	43.7	0.58	±0.036
225	27.8	4,100	14,000	17,500	35,000	16.0	0.35	61	0.85	±0.036
262	52.1	3,900	13,000	32,830	65,660	26.0	0.50	137	1.6	±0.043
312	81.6	3,450	11,700	51,400	102,800	41.4	0.66	300	3.1	±0.051
350	106	3,200	10,500	66,900	133,800	58.6	0.83	528	4.8	±0.056
375	159	3,000	9,400	100,300	200,600	80.0	1.03	909	7.2	±0.062
425	213	2,800	8,700	134,300	268,600	104.0	1.43	1,380	11.7	±0.067
450	239	2,700	8,100	150,400	300,800	127	1.44	1,970	13.5	±0.072
500	391	2,500	7,100	246,400	492,800	196	2.30	3,800	27.2	±0.082
550	524	2,300	6,300	330,400	660,800	281	2.90	6,900	43.0	±0.092
600	688	2,150	5,700	433,800	867,600	370	3.30	11,200	61.2	±0.102
700	1,071	1,950	5,000	674,800	1,349,600	567	4.60	22,300	103.0	±0.115
750	1,331	1,850	4,600	838,800	1,677,600	712	5.20	33,100	143.0	±0.125
800	1,712	1,750	4,300	1,078,700	2,157,400	911	6.00	51,450	200.0	±0.136
850	2,020	1,600	3,900	1,273,000	2,546,000	1,109	6.00	71,700	200.0	±0.144
925	2,735	1,500	3,600	1,724,000	3,448,000	1,459	8.00	111,400	400.0	±0.156
1000	3,094	–	3,250	1,950,000	3,900,000	1,880	9.00	171,900	506.0	±0.172
1100	3,689	–	3,100	2,325,000	4,650,000	2,250	11.00	235,500	794.0	±0.183
1200	4,498	–	2,800	2,835,000	5,670,000	3,010	15.00	376,500	1,196.0	±0.203
1300	5,379	–	2,600	3,390,000	6,780,000	3,660	15.00	523,700	1,350.0	±0.218

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Additional "C" dimensions available. Consult Rexnord.
③ Series 52 couplings meet AGMA Class 9 balance requirements as manufactured with interference fit bore and close fit keyway. If clearance fit and/or setscrews are required, please consult Rexnord. See page 7 for explanation of RPM limits and balancing recommendations.
④ Weight and WR^2 at maximum bore and standard "C" dimension listed.
⑤ Balance recommendations based on AGMA Specification 9000-C90 Average Sensitivity.
⑥ Consult Rexnord for minimum rough bore sizes.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

SPACER TYPE SERIES 71

Series 71 couplings are designed for applications requiring a spacer-type coupling such as ANSI, API and other process pumps. Series 71 couplings are most commonly applied on motor, turbine, and gear driven pumps, compressors and blowers.

Series 71 is a simple three piece design. Hubs are piloted fit to the factory assembled center member. The piloting provides repeatable assembly of components for better dynamic balance characteristics. The center assembly simply "drops out" for fast installation or removal without special tools. The disc design allows for low flexing forces and high overload capacity.

Construction

Hubs and Center Assembly: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Stainless Steel for 4 & 6 bolt designs Stainless Steel Tpack™ for 8 bolt design
Coatings Available: Black Oxide, Zinc, Cadmium

When Specified, Series 71 couplings meet all requirements of API 610, or API 671. If application requires API specification, please consult Rexnord Industries, Inc.

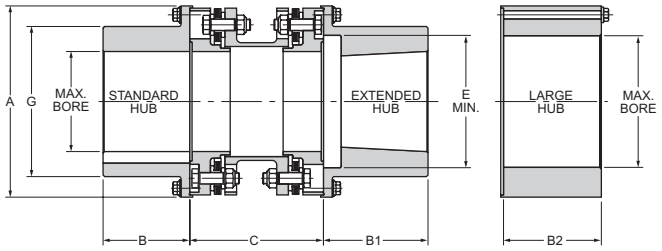
Benefits

Three piece design features unitized center member assembly and two piloted hubs

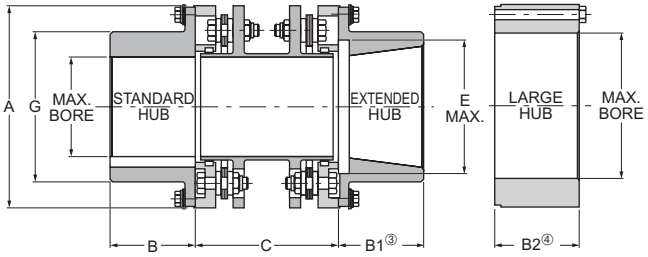
Unique jacking bolt feature compresses coupling for easy installation and removal of center section assembly.

Other materials such as Monel and Inconel are available; please consult Rexnord Industries, Inc.

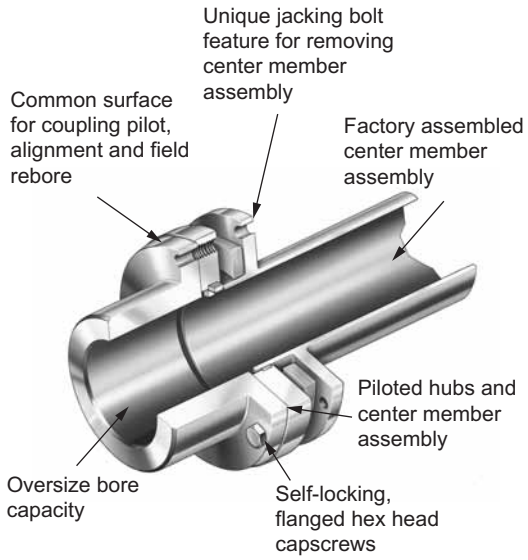
Misalignment: ½° per disc pack for 4 and 6 bolt designs, ⅓° per disc pack for 8 bolt design



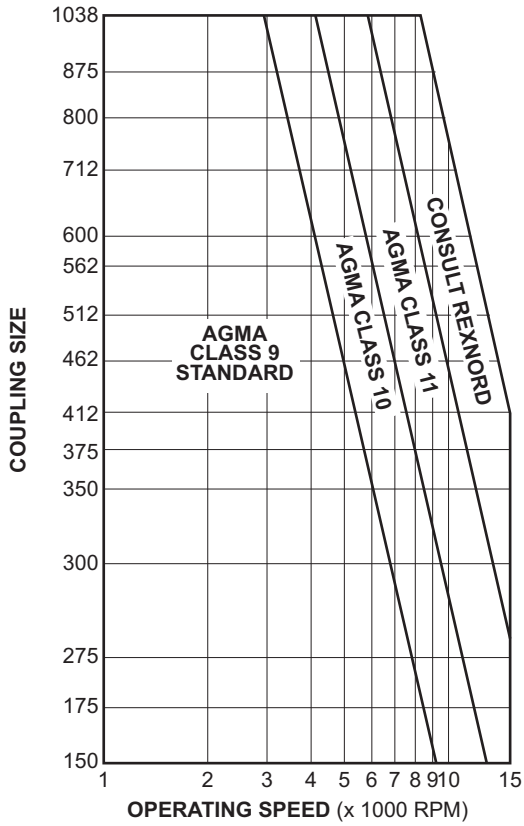
8 Bolt Design



4 & 6 Bolt Design



Series 71 Balance Recommendations



Note:

These recommendations and balance classes are based on AGMA Specifications 9000-C90, high sensitivity. If conditions exist other than as defined in 9000-C90, for sensitivity, consult Rexnord Industries, Inc.. The above information should be used as a guide only. AGMA Class 9 balance is furnished as standard when Series 71 couplings are finished bored with interference fits.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

SPACER TYPE SERIES 71 – 4 & 6 BOLT

General Dimensions (inch)

Coupling Size	⑦ B & B¹ Hub Max. Bore	⑦ B² Hub Max. Bore	A	③ B	④ B1	Std. B2	Std. C	Min. C	E	G
150	1.500	2.375	3.59	1.31	1.69	1.62	3.50	3.44	2.06	2.31
175	1.875	2.750	4.16	1.56	2.06	1.81	3.50	3.44	2.56	2.81
225	2.250	3.250	4.94	2.00	2.50	2.06	5.00	3.44	3.09	3.34
300	3.000	4.000	5.97	2.62	3.25	2.75	5.00	4.00	4.13	4.44
350	3.500	4.500	6.75	3.12	3.75	3.00	5.00	4.88	5.00	5.25
375	3.750	5.000	7.62	3.25	4.00	3.25	5.50	5.00	5.31	5.66
412	4.125	5.310	8.00	3.62	4.38	3.62	7.00	6.12	5.75	6.09
462	4.625	6.000	9.00	4.12	5.00	4.12	7.00	7.00	6.31	6.84
512	5.125	6.690	10.03	4.50	5.38	4.50	7.00	7.00	7.06	7.62
562	5.625	7.310	10.97	5.00	6.00	5.00	8.00	8.00	7.69	8.38
600	6.000	7.810	11.72	5.25	6.38	5.25	9.00	9.00	8.31	8.94

Stocked "C" Dimensions

Coupling Size	"C" Dimensions							
	3.50	4.38	5	5.5	7	7.5	8	9
150	•	•	•					
175	•	•	•					
225	•		•	•	•			
300			•	•	•			
350			•	•	•			
375			•	•	•			
412					•			
462					•	•	•	
512					•		•	
562							•	
600								•

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM, Service Factor 1	Max. RPM ① ⑥ Not Balanced	Max. RPM ① Balanced	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	② Weight (lb.)	Weight Change Per inch of "C" (lb.)	⑤ WR² (lb.-in.²)	WR² Change Per Inch of "C" (lb.-in.²)	Axial Capacity (in.)
150	1.48	9,000	20,800	930	1,860	6.7	0.10	10.6	0.03	±0.050
175	2.59	8,300	17,000	1,630	3,260	9.4	0.14	20.6	0.09	±0.070
225	4.86	7,700	16,000	3,060	6,120	14	0.19	42	0.25	±0.075
300	11.5	6,800	14,000	7,260	14,520	26	0.26	121	0.66	±0.085
350	21.3	6,200	13,500	13,400	26,800	43	0.42	259	1.18	±0.090
375	30.6	5,650	12,000	19,300	38,600	55	0.43	423	1.62	±0.095
412	35.7	5,350	11,000	22,500	45,000	71	0.60	615	2.90	±0.110
462	64.1	5,000	10,000	40,400	80,800	101	0.80	1,110	4.65	±0.120
512	87.3	4,700	9,200	55,000	110,000	135	1.04	1,830	7.43	±0.130
562	133	4,350	8,300	84,100	168,200	186	1.28	3,020	10.38	±0.145
600	145	4,150	7,800	91,700	183,400	228	1.75	4,250	17.51	±0.160

SPACER TYPE SERIES 71 – 8 BOLT

General Dimensions (inch)

Coupling Size	⑦ B & B¹ Hub Max. Bore	⑦ B² Hub Max. Bore	A	③ B	④ B1	Std. B2	Std. C	Min. C	E	G
225	3.000	3.750	5.97	2.50	3.12	3.06	5.00	4.75	4.19	4.56
262	3.438	4.188	6.88	3.06	3.69	3.56	7.00	5.50	4.69	5.19
312	4.188	5.125	8.00	3.56	4.31	4.12	7.50	6.00	5.75	6.31
350	4.688	5.562	8.94	3.88	4.75	4.50	7.50	6.75	6.50	7.06
375	5.250	6.500	9.94	4.44	5.31	5.16	7.50	7.25	7.13	7.94
425	5.625	6.750	10.75	4.88	5.88	5.50	8.00	7.50	7.44	8.44
450	6.188	7.500	11.56	5.06	6.19	6.00	9.00	8.75	8.38	9.28
500	7.000	8.750	13.12	5.94	7.06	6.75	11.00	10.25	9.13	10.50
550	7.625	–	14.69	6.56	7.81	–	–	11.50	10.00	11.50
600	8.812	–	16.38	7.19	8.44	–	–	12.50	11.75	13.22
700	9.750	–	18.56	8.31	9.69	–	–	14.50	12.78	14.69
750	10.812	–	20.12	8.94	10.31	–	–	15.75	14.31	16.25

Stocked "C" Dimensions

Coupling Size	"C" Dimensions							
	3.50	4.38	5	5.5	7	7.5	8	9
225			•	•	•			
262				•	•			
312					•	•		
350					•	•	•	
375						•		
425						•	•	
450								
500								
550								
600								
700								
750								

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM, Service Factor 1	Maximum RPM ① ⑥ Not Balanced	Maximum RPM ① Balanced	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	② Weight (lb.)	Weight Change Per inch of "C" (lb.)	⑤ WR² (lb.-in.²)	WR² Change Per Inch of "C" (lb.-in.²)	Axial Capacity (in.)
225	27.77	7,500	14,000	17,500	35,000	27.8	0.38	128	1.07	±0.036
262	52.09	6,800	12,500	32,830	65,660	43	0.46	265	1.95	±0.043
312	81.55	6,200	11,500	51,400	102,800	67	0.55	580	3.34	±0.051
350	106	5,700	10,500	66,900	133,800	95	0.75	1,031	5.63	±0.056
375	159	5,200	9,800	100,300	200,600	134	1.05	1,784	9.23	±0.062
425	213	5,000	9,300	134,300	268,600	169	1.22	2,616	12.60	±0.067
450	239	4,700	8,700	150,400	300,800	220	1.59	4,020	18.00	±0.072
500	391	4,200	7,900	246,400	492,800	341	2.12	8,040	31.40	±0.082
550	524	3,900	7,300	330,400	660,800	475	2.65	13,930	49.80	±0.092
600	688	3,600	6,800	433,800	867,600	653	3.05	24,130	69.10	±0.102
700	1,071	3,300	6,200	674,800	1,349,600	961	4.13	44,900	118.00	±0.115
750	1,331	3,100	5,800	838,800	1,677,600	1,242	5.17	69,220	175.00	±0.125

For ordering instructions, see Pages 10-11.

① See page 7 for explanation of RPM limits and balancing recommendations.
② Weight and WR² with standard length hubs, maximum bore and standard "C".
③ Extended hub length is designed longer in order to include a counter-bore for the threaded extension on a tapered shaft.
④ Large hub length. For sizes not shown, consult Rexnord.
⑤ All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modifications or the addition of end-float restricting devices.
⑥ Series 71 Coupling assembly meets AGMA Class 9 Balance when finish bored with interference fits.
⑦ Consult Rexnord for minimum rough bore sizes..
⑧ If a block hub is supplied, extra capscrews will be provided for center member jacking feature.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

SPACER TYPE DBZ-C

DBZ-C couplings use the same disc pack and materials as the DBZ. The center member is available in a variety of lengths and is recommended for ANSI and API process pumps. The "drop out" center member feature of this coupling allows for coupling maintenance and pump seal replacement with out disturbing the connected equipment.

Construction

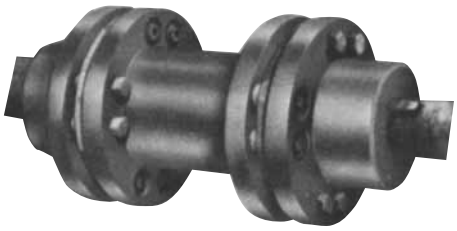
Hubs and Center Assembly: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Tomaloy
Coatings Available: Black Oxide, Zinc, Cadmium

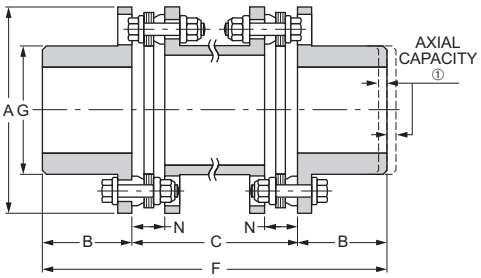
Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: ½° per disc pack

Stocked "C" Dimensions

Coupling Size	"C" Dimensions								
	3.5	4	4.38	4.75	5	5.5	7	7.5	8
101	•								
126	•		•		•				
163	•	•	•	•	•		•		
201	•		•		•	•	•		
226			•		•	•	•		
263					•	•	•		
301						•	•		
351								•	
401									•





ALSO AVAILABLE WITH TAPERED-BORE HUBS

General Dimensions (inch)

Cplg. Size	②⑤ Max Bore	A	B	Std. C	Min. C	F	G	N
50	0.63	2.00	0.88	3.50	–	5.26	1.00	0.24
62	0.75	2.44	1.09	3.50	–	5.68	1.19	0.32
75	0.88	2.69	1.13	3.50	–	5.76	1.44	0.33
101	1.16	3.22	1.38	3.50	–	6.26	1.69	0.45
126	1.38	3.84	1.63	3.50	2.88	6.76	2.06	0.52
163	1.88	4.56	1.88	3.50	2.88	7.26	2.75	0.52
201	2.25	5.34	2.13	3.50	3.31	7.76	3.28	0.59
226	2.63	6.06	2.63	5.00	4.31	10.26	3.78	0.98
263	3.00	7.00	3.00	5.00	4.75	11.00	4.44	1.04
301	3.50	8.00	3.44	5.50	5.44	12.38	5.06	1.11
351	4.00	9.38	4.06	7.50	6.38	15.62	5.81	1.34
401	4.50	10.69	4.63	8.00	6.94	17.26	6.63	1.44
451	4.75	12.13	5.25	9.50	7.69	20.00	7.38	1.55

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM, Service Factor 1	③ Max. RPM, Not Balanced	③ Max. RPM, Balanced	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	② Weight (lb.)	Weight Change Per inch of "C" (lbs.)	⑤ WR^2 (lb.-in.^{2})	WR^2 Change Per Inch of "C" (lb.-in.^{2})	Axial Capacity (in.)
50	0.27	6,000	9,500	170	340	1.0	0.075	0.45	0.016	±0.023
62	0.46	6,000	8,600	290	580	1.8	0.091	1.4	0.027	±0.028
75	0.65	6,000	8,200	410	820	2.4	0.11	1.8	0.051	±0.032
101	1.30	6,000	7,500	820	1,640	4.6	0.28	6.0	0.16	±0.038
126	2.22	5,500	6,800	1,400	2,800	7.4	0.45	13.0	0.36	±0.046
163	3.09	5,000	6,300	1,950	3,900	10.8	0.43	27.4	0.70	±0.057
201	5.60	4,600	5,700	3,530	7,060	16.4	0.67	60.3	1.6	±0.067
226	10.0	4,100	5,500	6,300	12,600	24	0.78	104	2.4	±0.076
263	15.7	3,700	5,000	9,900	19,800	37	0.93	220	4.1	±0.089
301	23.5	3,300	4,700	14,800	29,600	54	1.20	425	6.9	±0.102
351	41.3	2,900	4,400	26,000	52,000	91	1.80	970	13	±0.118
401	60.3	2,700	4,100	38,000	76,000	135	2.70	1,860	26	±0.136
451	79.3	2,600	3,800	50,000	100,000	190	3.10	3,240	36	±0.154

For ordering instructions, see Page 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Popular sized bores with keyway and setscrew are stocked. Consult your Rexnord representative for stock bore size availability.
③ See page 7 for explanation of RPM limits and balancing recommendations.
④ Weight and WR^2 as shown are for maximum bores and standard. "C".
⑤ Consult Rexnord for minimum rough bore sizes.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

TYPE AMR

AMR couplings are used in heavy duty slow to medium speed applications, where high starting torque, shock loads, torque reversals or continuous alternating torque is present. The open lug type center member provides ample clearance for assembly while minimizing the space required for coupling installation.

Construction

Hubs: Cast Alloy Iron
Center Section: Sizes 162 – 750 are Cast Alloy Iron, Sizes 800 and above are Cast Steel
Bolts: Alloy Steel
Disc Packs: Tomaloy Tpack™ (225-750 Size)
Coatings Available: Black Oxide, Zinc, Cadmium

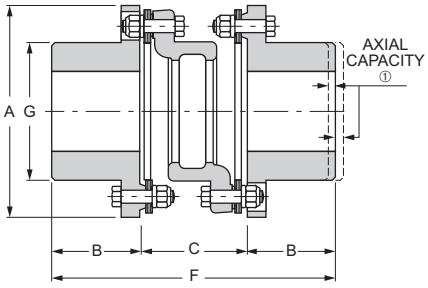
Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

****INCREASED TORQUE RATINGS****

General Dimensions (inch)

Cplg. Size	④ Rough Bore	⑥ Max Bore	A	B	C	F	G
162	–	1.62	4.56	1.75	2.62	6.12	2.75
200	–	2.00	5.75	2.12	3.00	7.25	3.62
225	–	2.25	6.00	2.50	3.00	8.00	3.88
262	–	2.62	6.88	2.88	3.50	9.25	4.50
312	–	3.12	8.12	3.38	4.12	10.88	5.44
350	–	3.50	9.12	3.75	4.56	12.06	6.00
375	–	3.75	10.06	4.00	5.12	13.12	6.50
425	–	4.25	11.00	4.25	5.56	14.06	7.00
450	–	4.50	11.88	4.50	5.94	14.94	7.44
500	2.69	5.00	13.44	5.00	6.81	16.81	8.38
550	2.69	5.50	15.00	5.50	7.69	18.69	9.44
600	3.69	6.00	16.75	6.00	8.44	20.44	10.31
700	4.25	7.00	18.94	7.00	9.62	23.62	11.75
750	4.94	7.50	20.62	7.25	10.50	25.00	12.62
800	5.19	8.00	22.38	7.75	11.38	26.88	13.75
850	5.44	8.50	23.75	8.25	12.12	28.62	14.50
925	5.94	9.25	25.75	9.00	13.25	31.25	15.88
1000	6.50	10.00	28.25	9.50	14.50	33.50	17.50
1100	7.00	11.00	30.25	10.25	15.50	36.00	18.50
1200	7.50	12.00	33.38	11.00	17.06	39.06	20.25
1300	8.00	13.00	36.00	12.00	18.31	42.31	22.50
1550	8.50	15.50	39.25	14.50	19.44	48.44	26.00



Engineering Data

Coupling Size	Max Horsepower Per 100 RPM Service Factor 1	③ Max. RPM	Max. Continuous Torque (lb.-in.)	⑦ Peak Overload Torque (lb.-in.)	② Weight (lb.)	⑤ WR^2 (lb.-in.^{2})	① Axial Capacity (in.)
162	9.1	2,500	5,740	6,888	8	18	±0.036
200	17.5	2,500	11,030	13,236	16	57	±0.036
225	24.7	2,500	15,575	18,690	20	76	±0.036
262	33.4	2,500	21,038	25,245	32	162	±0.043
312	37.5	2,500	23,650	28,380	47	365	±0.051
350	83.8	2,300	52,800	63,360	71	659	±0.056
375	126	2,200	79,442	95,330	92	1,025	±0.062
425	140	2,000	88,000	105,600	117	1,590	±0.067
450	216	1,900	136,125	163,350	144	2,250	±0.072
500	319	1,800	200,750	240,900	212	4,240	±0.082
550	436	1,800	275,055	330,066	290	7,220	±0.092
600	569	1,800	358,875	430,650	389	12,000	±0.102
700	724	1,500	456,500	547,800	587	22,800	±0.115
750	1,023	1,500	644,930	773,916	722	33,900	±0.125
800	1,291	1,200	813,780	976,536	938	55,600	±0.136
850	1,426	1,100	898,700	1,078,440	1,150	75,600	±0.144
925	2,033	1,000	1,281,280	1,537,536	1,400	102,000	±0.156
1000	2,360	900	1,487,200	1,784,640	1,900	172,000	±0.172
1100	3,246	800	2,046,000	2,455,200	2,280	245,000	±0.183
1200	3,494	650	2,202,200	2,642,640	2,990	394,000	±0.203
1300	3,787	600	2,387,000	2,864,400	3,900	561,000	±0.218
1550	4,957	600	3,124,000	3,748,800	5,150	889,000	±0.242

For larger sizes, consult Rexnord. For ordering instructions, see Page 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Weight and WR^2 at maximum bore.
③ Consult Rexnord if balancing is required.
④ Consult Rexnord for minimum rough bore on sizes 162-450.
⑤ Special hub available for size 600 with 6 3/4 max. bore. Consult Rexnord.
⑥ Straight bores with no keyway require a steel hub. Consult Rexnord.
⑦ The Peak Overload Torque is not an alternating torque limit.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

FLYWHEEL ADAPTER TYPE CMR

CMR couplings are used in heavy duty slow to medium speed applications, where high starting torque, shock loads, torque reversals or continuous alternating torque is present. The open lug type center member provides ample clearance for assembly while minimizing the space required for coupling installation.

The CMR couplings are designed with a flywheel adapter plate which bolts directly to the flywheel of an engine or compressor. The adapters are made to fit accurately into the recess in the flywheel, and external strains on the crankshaft resulting from the misalignment of the driven equipment is minimized.

Construction

Hubs: Cast Alloy Iron
Center Section: Sizes 162 – 750 are Cast Alloy Iron, Sizes 800 and above are Cast Steel
Bolts: Alloy Steel
Disc Packs: Tomaloy Tpack™ (225-750 Size)
Coatings Available: Black Oxide, Zinc, Cadmium

Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

****INCREASED TORQUE RATINGS****

CMR coupling between engine and reciprocating compressor.

FLYWHEEL ADAPTER INFORMATION

Adapters can be furnished to accommodate virtually any flange design. Where possible, the user should select dimensions from the tables below, as these represent industry standards and thus are the most economical selection. Note that most sizes are available either with SAE bolting or Thomas heavy duty bolting.

Available Adapters

Coupling Size	Adapters Available in Shaded Sizes (inch)										
Adapter Tolerance	8.500 8.498	9.500 9.498	10.375 10.373	12.375 12.373	13.875 13.873	16.000 15.998	18.375 18.373	20.375 20.372	22.500 22.497	26.500 26.497	28.875 28.872
162											
200											
225											
262											
312											
350											
375											
425											
450											
500											
550											
600											
700											
750											
800											
850											

AVAILABLE IN THESE SIZES

Bolting

Standard A Diameter (in.)	Light Duty SAE Bolting			Heavy Duty Thomas Bolting		
	Bolt Circle	No. Holes	Size (Dia.)	Bolt Circle	No. Holes	Size (Dia.)
8.5	7.88	6	0.34	7.5	8	0.41
9.5	8.75	8	0.34	8.62	8	0.47
10.38	9.62	6	0.41	9.5	8	0.47
12.38	11.62	8	0.41	11.5	8	0.53
13.88	13.12	8	0.41	12.5	8	0.66
16	–	–	–	14.38	8	0.078
18.38	17.25	8	0.53	16.75	8	0.078
20.38	19.25	8	0.53	18.5	8	0.091
22.5	21.38	6	0.66	20.5	8	1.03
26.5	25.25	12	0.66	24.5	12	1.03
28.88	27.25	12	0.78	26.88	12	1.03

Sizes 925 to 1550 – Adapting dimensions on request.

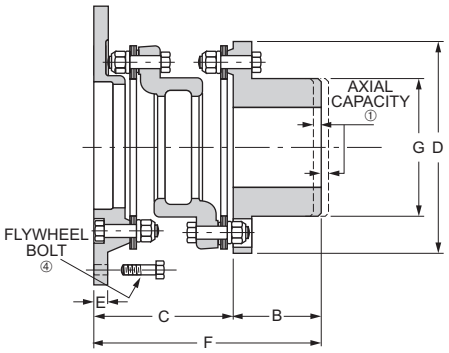
Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

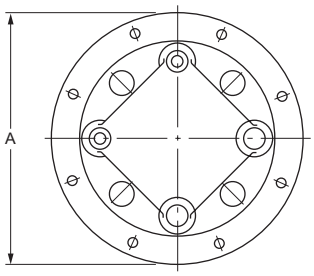
THOMAS® FLEXIBLE DISC COUPLINGS

FLYWHEEL ADAPTER TYPE CMR

General Dimensions (inch)

Coupling Size	④ Rough Bore	⑥ Max Bore	Min. A Dia.	B	C	D	E	F	G
162	–	1.62	6.25	1.75	3.31	4.56	0.31	5.06	2.75
200	–	2.00	7.38	2.12	3.88	5.75	0.38	6.00	3.62
225	–	2.25	7.62	2.50	3.88	6.00	0.38	6.38	3.88
262	–	2.62	8.50	2.88	4.44	6.88	0.44	7.31	4.50
312	–	3.12	9.50	3.38	5.31	8.12	0.50	8.69	5.44
350	–	3.50	10.88	3.75	5.88	9.12	0.50	9.62	6.00
375	–	3.75	11.88	4.00	6.62	10.06	0.56	10.62	6.50
425	–	4.25	13.12	4.25	7.12	11.00	0.62	11.38	7.00
450	–	4.50	14.75	4.50	7.62	11.88	0.69	12.12	7.44
500	2.69	5.00	16.00	5.00	8.75	13.44	0.75	13.75	8.38
550	2.69	5.50	18.00	5.50	9.88	15.00	0.88	15.38	9.44
600	3.69	6.00	18.38	6.00	10.88	16.75	1.00	16.88	10.31
700	4.25	7.00	20.38	7.00	12.44	18.94	1.00	19.44	11.75
750	4.94	7.50	24.00	7.25	13.50	20.62	1.12	20.75	12.62
800	5.19	8.00	25.62	7.75	14.75	22.38	1.25	22.50	13.75
850	5.44	8.50	27.38	8.25	15.75	23.75	1.25	24.00	14.50
925	5.94	9.25	28.88	9.00	17.25	25.75	1.38	26.25	15.88
1000	6.50	10.00	31.62	9.50	18.56	28.25	1.62	28.06	17.50
1100	7.00	11.00	33.38	10.25	19.81	30.25	1.75	30.06	18.50
1200	7.50	12.00	37.50	11.00	21.56	33.88	2.00	32.56	20.25
1300	8.00	13.00	39.88	12.00	23.31	36.00	2.12	35.31	22.12
1550	8.50	15.50	43.62	14.50	23.75	39.25	2.12	38.25	26.00





Engineering Data

Coupling Size	Max Horsepower Per 100 RPM — Service Factor 1	③ Max. RPM	Max. Continuous Torque (lb.-in.)	⑦ Peak Overload Torque (lb.-in.)	② Weight (lb.)	⑤ WR^2 (lb.-in.^{2})	① Axial Capacity (in.)
162	9.1	2,500	5,740	6,888	8	27	±0.036
200	17.5	2,500	11,030	13,236	12	68	±0.036
225	24.7	2,500	15,575	18,690	16	83	±0.036
262	33.4	2,500	21,038	25,245	25	178	±0.043
312	37.5	2,500	23,650	28,380	39	367	±0.051
350	83.8	2,300	52,800	63,360	56	630	±0.056
375	126	2,200	79,442	95,330	77	1,040	±0.062
425	140	2,200	88,000	105,600	101	1,780	±0.067
450	216	1,900	136,125	163,350	126	2,470	±0.072
500	319	1,800	200,750	240,900	178	4,310	±0.082
550	436	1,800	275,055	330,066	245	7,700	±0.092
600	569	1,800	358,875	430,650	321	11,500	±0.102
700	724	1,500	456,500	547,800	481	21,200	±0.115
750	1,023	1,500	644,930	773,916	610	34,300	±0.125
800	1,291	1,200	813,780	976,536	800	58,700	±0.136
850	1,426	1,100	898,700	1,078,440	975	73,300	±0.144
925	2,033	1,000	1,281,280	1,537,536	1,180	107,000	±0.156
1000	2,360	900	1,487,200	1,784,640	1,650	156,000	±0.172
1100	3,246	800	2,046,000	2,455,200	1,950	247,000	±0.183
1200	3,494	650	2,202,200	2,642,640	2,550	407,000	±0.203
1300	3,787	600	2,387,000	2,864,400	3,320	567,000	±0.218
1550	4,957	600	3,124,000	3,748,800	4,100	840,000	±0.242

For larger sizes, consult Rexnord. For ordering instructions, see pages 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Straight bores with no keyway require a steel hub. Consult Rexnord.
③ Maximum speeds are based on smallest available adapter O.D. For higher speeds, consult Rexnord.
④ Flywheel bolts are not supplied with coupling.
⑤ Weight and WR^2 at maximum bore and minimum adapter diameter.
⑥ Special hub available for size 600 with 6 3/4 max. bore. Consult Rexnord.
⑦ Consult Rexnord for minimum rough bore on sizes 162-450.
⑧ The Peak Overload Torque is not an alternating torque limit.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

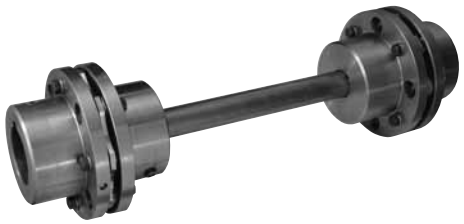
THOMAS® FLEXIBLE DISC COUPLINGS

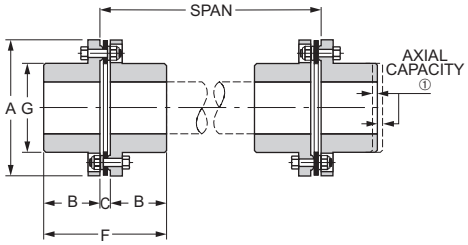
TYPE BMR

Type BMR couplings are recommended for heavy duty motor and engine driven service such as paper machines, grinding mills, dredges, and marine propulsion.

The BMR uses a solid intermediate shaft which can be furnished complete by Rexnord or fabricated by the user. Hubs are cast alloy iron, shafting is hot or cold-rolled steel, and disc packs are Tomaloy Tpack (225-750 sizes) (stainless steel also available).

Misalignment: ⅓° per disc pack





General Dimensions (inch)

④ Cplg. Size	③ Rough Bore	Max Bore	A	B	C	F	G
162	–	1.62	4.56	1.75	0.41	3.91	2.75
200	–	2.00	5.75	2.12	0.44	4.68	3.62
225	–	2.25	6.00	2.50	0.44	5.44	3.88
262	–	2.62	6.88	2.88	0.53	6.29	4.50
312	–	3.12	8.12	3.38	0.62	7.38	5.44
350	–	3.50	9.12	3.75	0.67	8.17	6.00
375	–	3.75	10.06	4.00	0.81	8.81	6.50
425	–	4.25	11.00	4.25	0.88	9.38	7.00
450	–	4.50	11.88	4.50	0.88	9.88	7.44
500	2.69	5.00	13.44	5.00	1.06	11.06	8.38
550	2.69	5.50	15.00	5.50	1.25	12.25	9.44
600	3.69	6.00	16.75	6.00	1.38	13.38	10.31

Engineering Data

④ Coupling Size	Max Horsepower Per 100 RPM / Service Factor 1	Max. RPM	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	② Weight (lb.)	② WR^2 (lb.-in.^{2})	① Axial Capacity (in.)
162	9.1	1,800	5,740	6,888	13	29	±0.036
200	17.5	1,800	11,030	13,236	25	81	±0.036
225	24.7	1,800	15,575	18,690	29	105	±0.036
262	33.4	1,800	21,038	25,246	43	214	±0.043
312	37.5	1,800	23,650	28,380	79	566	±0.051
350	84	1,800	52,800	63,360	106	934	±0.056
375	126	1,800	79,442	95,330	139	1,470	±0.062
425	140	1,800	88,000	105,600	174	2,320	±0.067
450	216	1,500	136,125	163,350	213	3,085	±0.072
500	319	1,500	200,750	240,900	292	5,500	±0.082
550	436	1,500	275,055	330,066	420	9,850	±0.092
600	569	1,200	358,875	430,650	550	15,700	±0.102

BMR Shafting Selection Table

④ Cplg. Size	Shaft Dia. (in.)	Max HP/100 For Given Shaft Dia.	Max Allowable shaft Wt. (lb.)	Max Span (in.) at Max. Allow Shaft Wt.	Max. Span (in.) For Various RPM			
					1800	1200	900	720
162	1.62	6.9	60	102	54	66	76	85
200	2.00	13.5	74	83	60	73	83	83
225	2.25	19.0	86	76	64	76	76	76
262	2.50	24.3	178	128	67	82	95	106
312	2.88	34.1	233	127	72	88	102	114
350	3.50	76.2	290	107	79	97	107	107
375	3.75	99.7	412	132	82	100	116	130
425	4.25	127	502	125	87	107	123	125
450	4.50	157	596	132	90	110	127	132
500	5.00	232	804	145	95	116	134	145
550	5.50	300	1,027	153	99	122	140	153
600	6.00	414	1,296	162	104	127	147	162

For ordering instructions, see pages 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modifications or the addition of end-float restricting devices.
② Weight and WR^2 at maximum bore and minimum "L".
③ Consult Rexnord for minimum rough bore on sizes 162-450.
④ Consult Rexnord for larger sizes.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

TYPE SN-GA

Replaces troublesome gear couplings on pulp and paper applications. The Thomas one-piece, factory-torqued assembly is easy to install. This coupling is designed to bolt directly to existing rigid hubs using the gear coupling bolts. Axial shims are supplied for minor axial positioning adjustment.

Construction

Hubs and Center Assembly: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Stainless Tpack™
Coatings Available: Black Oxide, Zinc, Cadmium

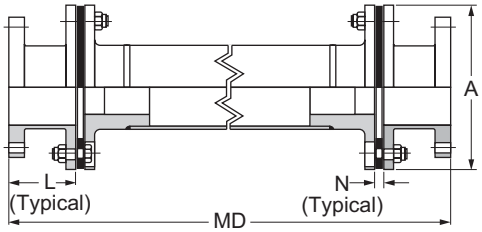
Other materials such as Tomaloy, Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

Available Adapters

Thomas Coupling \ Gear Coupling (Falk)	#1 1/2 (1015)	#2 (1020)	#2 1/2 (1025)	#3 (1030)	#3 1/2 (1035)	#4 (1040)	#4 1/2 (1045)	#5 (1050)	#5 1/2 (1055)	#6 (1060)	#7 (1070)
226											
262											
312											
350											
375											
425											
450											
500T											
550T											
600T											
700T											
750T											
800T											
850T											

Other sizes available – consult Rexnord.



Engineering Data

Coupling Size	Max Horsepower Per 100 RPM Service Factor 1.0	Max. Continuous Torque (lb.-in.)	② Peak Overload Torque (lb.-in.)	A	L	Min. MD (3)	N	① Axial Capacity (in.)
226	22.6	14,260	28,520	5.81	4.00	16.25	0.58	0.036
262	34.9	22,000	44,000	6.69	4.50	17.25	0.47	0.043
312	44.7	28,200	56,400	7.81	5.12	20.00	0.50	0.051
350	55.7	35,100	70,200	8.75	5.31	22.12	0.54	0.056
375	123	77,300	154,600	9.69	6.62	26.00	0.59	0.062
425	187	117,850	235,700	10.50	6.50	26.25	0.62	0.067
450③	216	136,000	272,000	11.31	6.75	28.50	0.78	0.072
500T	369	232,400	464,800	12.88	7.25	30.00	0.78	0.082
550T	427	269,200	538,400	14.44	7.75	33.50	0.91	0.092
600T	652	411,000	822,000	16.00	9.12	36.74	0.98	0.102
700T	871	549,000	1,098,000	18.25	9.25	40.50	1.20	0.115
750T	1,001	631,000	1,262,000	19.81	9.75	43.00	1.27	0.125
800T	1,441	908,000	1,816,000	21.50	10.25	–	1.34	0.136
850T	1,756	1,107,000	2,214,000	23.00	10.25	–	1.40	0.144

For larger sizes, consult Rexnord. For ordering instructions, see Page 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② The Peak Overload Torque is not an alternating torque limit.
③ Available with Tpackfor new couplings, not retrofittable in size 450.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

FLOATING SHAFT TYPES SN, SF, SV

Floating shaft couplings are used to connect units which are relatively far apart. Such arrangements are particularly suited to transmit power into areas where moisture, dust or corrosive conditions would adversely affect the driving machinery.
Floating shaft couplings' operating speeds are dependent upon the length of span required. Refer to the speed/span table for speed recommendations. In addition, special balancing may be required for high speed service or for extended shaft lengths. Consult Rexnord Industries, Inc. for intended applications at speeds not covered in the table.
The SN, SF and SV type couplings are furnished with stainless steel disc packs unless otherwise specified.

TYPE SN

Full-Floating Shaft Coupling

Type SN couplings use a tubular center shaft, fabricated complete by Rexnord. Typical applications include cooling tower fan drives, paper machinery, printing presses, pumps and compressors.

Connected shafts should be rigidly supported and long shaft overhang should be avoided. The tubular coupling shaft MUST NOT be supported with a bearing. They may be operated vertically if length does not exceed 36 inches.

TYPE SF

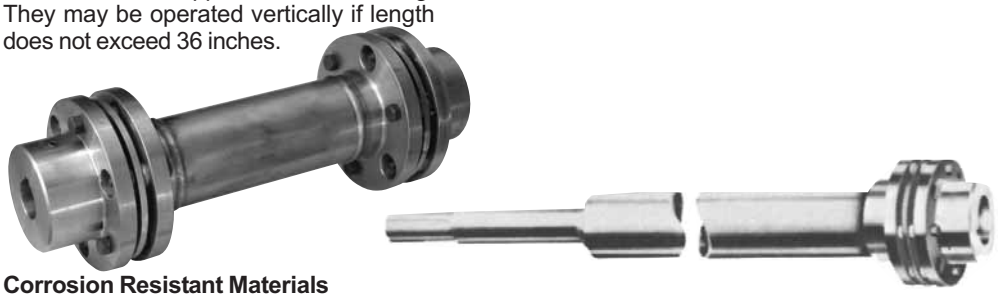
Semi-Floating Shaft Coupling

Type SF couplings are a tubular shaft design with a stub shaft and bearing journal replacing the half-coupling on one end. They are typically used in tandem with the Type SN or Type SV where spans are too long for a single section of shafting.

TYPE SV

Vertical Floating Shaft Couplings

Type SV couplings are similar to the Type SN except that the lower half-coupling is modified to support the weight of the floating shaft. Typical applications include fresh-water pumps, sewage pumps, and marine cargo pumps. They may be used in tandem with the Type SF where spans are too long for a single shaft.



Corrosion Resistant Materials

Types SN, SV and SF couplings are particularly suited to applications involving wet or corrosive conditions, for this reason they are all furnished with 300 series stainless steel disc packs. For extremely corrosive environments 316 stainless steel, Inconel 625 or Monel disc pack materials are available on request. As standard, these couplings are available in the following material classes.

CLASS

A – All steel
B – All Steel – zinc plated
C – All Steel – zinc plated w/stainless steel hardware
D – Stainless steel except for zinc plated hubs
E – All 300 series stainless steel

Note:

1. The stub shaft on the SF coupling is always furnished as unplated carbon steel in classes A, B, C and D.
2. Couplings may be painted with acid and alkali resistant paints or coating besides the corrosion resistant classes listed.

Engineering Data
Maximum Span (L) in Inches for Various Speeds - For SN & SV①
Maximum Span (X) in Inches for Various Speeds for SF①

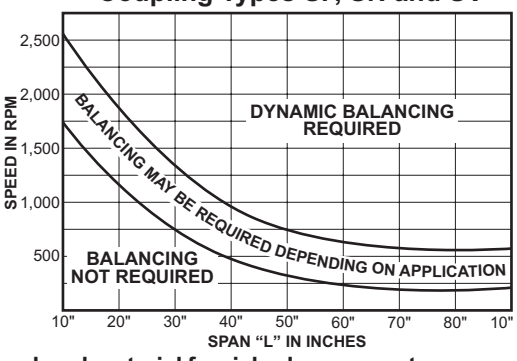
Coupling Size	③ 3600 RPM	3600 RPM	② 1800 RPM	1500 RPM	1200 RPM	1000 RPM	900 RPM	750 RPM	720 RPM	600 RPM	500 RPM
50	See	See	43	47	52	56	56	56	56	56	56
62	Footnote	Footnote	50	54	61	67	70	75	75	75	75
75	③	③	56	61	68	75	79	86	88	94	94
100	41	45	57	64	71	78	82	91	93	102	102
125	47	51	64	72	81	88	93	103	105	114	114
162	54	59	75	84	94	103	109	119	122	133	133
200	60	66	85	93	104	114	120	132	135	147	161
226	64	70	90	99	112	122	128	141	144	157	172
262	71	77	100	110	123	135	142	156	160	173	191
312	75	82	107	117	130	143	151	165	173	185	203
350	79	87	113	123	138	151	159	174	178	195	213
375	87	95	123	135	151	165	174	191	195	213	234
425	90	99	128	141	157	172	182	199	203	222	244
450⑧	90	99	128	141	157	172	182	199	203	222	244
500	104	113	147	161	180	197	207	227	232	254	279
550T	See	See	147	161	180	197	207	227	232	254	279
600T	Footnote	Footnote	165	180	202	221	233	255	260	285	312
700T	③	③	164	179	200	219	231	253	258	283	310
750T	See	See	164	179	200	219	231	253	258	283	310
800T	Footnote	Footnote	179	196	219	240	252	276	282	309	See
850T	③	③	187	205	229	251	265	290	296	See	Footnote
925T			200	220	245	269	284	311	317	Footnote ③	③

① Do not use floating shaft couplings on equipment having long overhung shafts.
② Speeds 1800 rpm and under see page 12 for balancing recommendations. Consult Rexnord on speeds in excess of 1800 rpm. Advise operating speed when ordering.
③ For spans not shown, consult Rexnord with application data for "span/speed" review. Consult Rexnord for speeds in excess of 3600 rpm. Advise speed when ordering.

Floating Shaft Couplings

Types SN, SV and SF center members are of tubular construction, requiring special considerations for the operating speed and span length. The graph to the right may be used as a guide when determining whether it is desirable to balance the center member.
The standard procedure for balancing of SN, SV and SF couplings includes straightening of the tubular shaft prior to balancing. Many couplings of this type operate relatively near to the lateral resonant frequency of the coupling center member, and special balancing techniques are often required.
Consult Rexnord Industries, Inc. for any application with speed in excess of 1800 RPM.

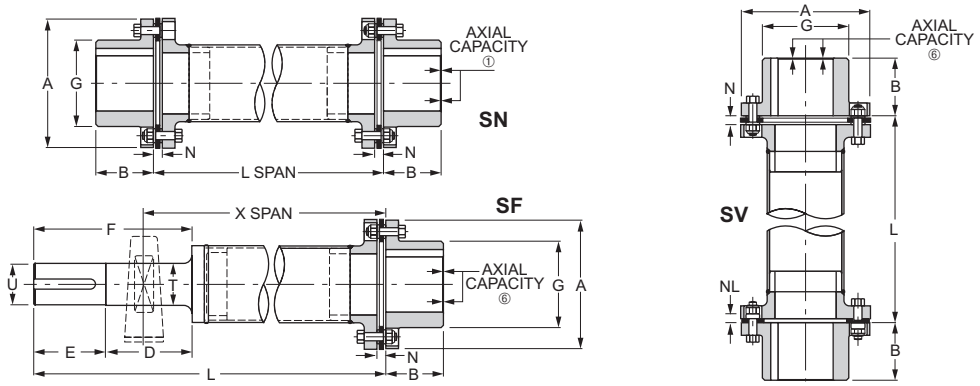
Coupling Types SF, SN and SV



Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLOATING SHAFT COUPLING

TYPES SN, SF, SV



General Dimensions (inch)

⑤ Coupling Size	Coupling Size			Max. Bore	A	B	D	E	③ T	③ U	F	G	N	NL	② Min. L	
	SN	SV	SF												SN	SF
50	•			0.63	2.00	0.88	–	–	–	–	–	1.00	0.24	–	4.00	–
62	•			0.75	2.44	1.09	–	–	–	–	–	1.19	0.32	–	4.50	–
75	•			0.88	2.69	1.13	–	–	–	–	–	1.44	0.33	–	4.75	–
100	•	•	•	1.16	3.22	1.38	3.75	1.75	0.94	0.88	5.50	1.69	0.45	0.13	5.75	12.00
125	•	•	•	1.38	3.84	1.63	4.25	2.13	1.19	1.13	6.38	2.06	0.52	0.15	6.25	12.25
162	•	•	•	1.88	4.47	1.88	4.50	2.63	1.44	1.38	7.13	2.75	0.54	0.16	6.75	13.25
200	•	•	•	2.25	5.44	2.13	5.50	2.88	1.69	1.63	8.38	3.28	0.57	0.16	7.50	15.50
226⑧	•	•	•	2.63	5.81	2.63	5.63	3.38	1.94	1.88	9.00	3.78	0.58	0.18	8.25	16.50
262	•	•	•	3.13	6.69	3.00	6.13	3.75	2.19	2.13	9.88	4.50	0.47	0.22	8.25	18.00
312	•	•	•	3.63	7.81	3.38	6.38	4.00	2.44	2.38	10.38	5.25	0.50	0.25	9.75	19.50
350	•	•	•	4.00	8.75	3.75	7.50	4.50	2.94	2.88	12.00	5.88	0.54	0.29	11.50	20.50
375	•	•	•	4.50	9.69	4.00	8.00	4.75	3.44	3.38	12.75	6.50	0.59	0.33	12.75	23.25
425	•	•	•	4.75	10.50	4.25	9.00	5.00	3.69	3.63	14.00	7.00	0.62	0.37	13.25	25.25
450⑧	•	•		5.13	11.31	4.50	–	–	–	–	–	7.44	0.78	0.40	15.00	–
500T	•	•		5.38	12.88	5.00	–	–	–	–	–	8.38	0.78	0.47	15.50	–
550T	•	•		6.00	14.44	5.50	–	–	–	–	–	9.44	0.91	0.53	18.00	–
600T	•	•		6.50	16.00	6.00	–	–	–	–	–	10.25	0.98	0.60	18.50	–
700T	•	•		7.50	18.25	7.00	–	–	–	–	–	11.75	1.20	0.70	22.00	–
750T	•	•		8.00	19.81	7.50	–	–	–	–	–	12.63	1.27	0.77	23.50	–
800T	•	•		8.75	21.50	8.25	–	–	–	–	–	13.62	1.34	0.84	26.00	–
850T	•	•		9.25	23.00	8.75	–	–	–	–	–	14.50	1.40	0.90	36.00	–
925T	•	•		10.12	25.00	9.50	–	–	–	–	–	15.75	1.50	1.00	36.00	–

Engineering Data

⑤ Coupling Size	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	Weight (lb.) ④		Weight Change Per Inch of "L" (lb.)	④ WR^2 (lb.-in.^{2})		WR^2 Change Per Inch of "L" (lb.-in.^{2})	① ⑥ Type SN Axial Capacity (in.)
			SN, SV	SF		SN, SV	SF		
50	170	340	1.1	–	0.022	0.5	–	0.0026	±0.023
62	290	580	1.6	–	0.030	1.2	–	0.0063	±0.028
75	410	820	2.4	–	0.052	1.9	–	0.018	±0.032
100	820	1,640	4.9	3.6	0.076	5.3	3.1	0.033	±0.038
125	2,230	4,460	7.5	6.5	0.095	12.2	7.1	0.068	±0.046
162	4,250	8,500	11	10.5	0.130	27	15	0.22	±0.036
200	8,600	17,200	21	11	0.290	32	17	0.56	±0.036
226	14,260	28,520	26.6	25	0.330	105	61	0.82	±0.036
262	22,000	44,000	38.6	36	0.410	218	133	1.6	±0.043
312	28,200	56,400	60.7	54	0.470	456	291	2.2	±0.051
350	35,100	70,200	85.5	78	0.520	807	478	3.1	±0.056
375	77,300	154,600	127	110	0.970	1,421	844	7.3	±0.062
425	117,850	235,700	173	–	1.58	2,448	–	15.9	±0.067
450⑧	136,000	272,000	206	–	1.58	3,350	–	15.9	±0.072
500T	232,400	464,800	239	–	2.38	4,955	–	41.1	±0.082
550T	269,200	538,400	337	–	2.38	8,400	–	41.1	±0.092
600T	411,000	822,000	442	–	3.37	14,510	–	91	±0.102
700T	549,000	1,098,000	717	–	4.56	27,970	–	120	±0.115
750T	631,000	1,262,000	882	–	4.56	40,270	–	120	±0.125
800T	908,000	1,816,000	1,140	–	5.45	64,170	–	205	±0.136
850T	1,107,000	2,214,000	1,420	–	6.00	91,730	–	274	±0.144
925T	1,466,000	2,932,000	1,820	–	6.89	143,500	–	414	±0.156

For larger sizes and longer spans, consult Rexnord. For ordering instructions, see pages 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Shorter "L" requires special construction. Consult Rexnord.
③ Shaft tolerances: $^{5}/_{16}$ to $1^{1}/_{2}$ + .000 - .0005. $1\ ^{5}/_{8}$ to $3^{11}/_{16}$ .000 - .001. Key furnished with standard keyway in SF stub shaft.
④ Weight and WR^2 at max. bore and min. "L" dimension.
⑤ T suffix to coupling size indicates thin flange design. Consult Rexnord for larger sizes.
⑥ Types SF and SV end-float is one half ± value shown for type SN.
⑦ Consult Rexnord for minimum rough bore sizes.
⑧ Not available with Tpack

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® SINGLE-FLEXING DISC COUPLINGS

TYPE ST

ST couplings are designed for applications which require the coupling to support a substantial radial load while accommodating angular misalignment. Typical installations include units where one shaft is fully supported in its own bearings, and the other shaft is single-bearing supported. The radial load is transmitted through the coupling to the inner bearing of the other shaft.

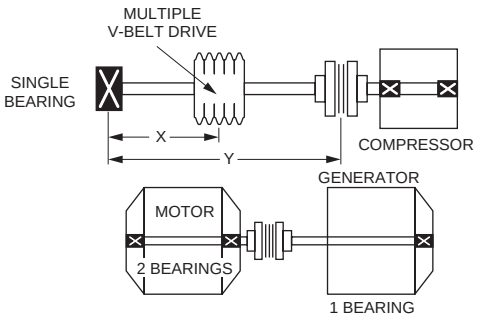
Belt drives can be designed to utilize this type of coupling to eliminate a jack shaft bearing and transfer radial loading directly to a machine bearing. Such arrangements are economical and space saving. See the sketches below.

Construction

Hubs: Cast Alloy Iron
Bolts: Alloy Steel
Disc Packs: Tomaloy Tpack™ (225-750 Sizes)
Coatings Available: Black Oxide, Zinc, Cadmium
Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

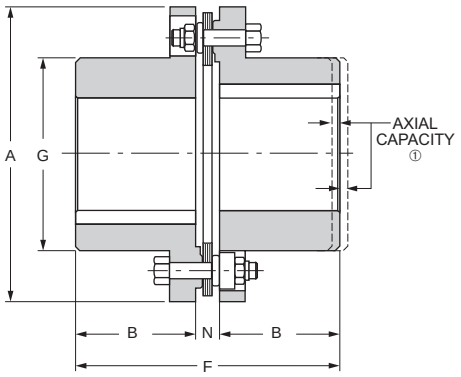
Note:

Single-flexing couplings cannot accommodate parallel misalignment. They are not suitable for connecting equipment where both shafts are held rigidly in their own bearings.



General Dimensions (inch)

Coupling Size	⑦ Rough Bore	Max Bore	A	B	F	G	N
162	–	1.62	4.59	1.75	3.91	2.75	0.41
200	–	2.00	5.75	2.12	4.69	3.62	0.44
225	–	2.25	6.00	2.50	5.44	3.88	0.44
262	–	2.62	6.88	2.88	6.28	4.50	0.53
312	–	3.12	8.12	3.38	7.38	5.44	0.62
350	–	3.50	9.12	3.75	8.19	6.00	0.69
375	–	3.75	10.06	4.00	8.88	6.50	0.88
425	–	4.25	11.00	4.25	9.38	7.00	0.88
450	–	4.50	11.88	4.50	9.94	7.44	0.94
500	2.69	5.00	13.44	5.00	11.12	8.38	1.12
550	2.69	5.50	15.00	5.50	12.31	9.44	1.31
600	3.69	6.00	16.75	6.00	13.38	10.31	1.38
700	4.25	7.00	18.94	7.00	15.62	11.75	1.62
750	4.94	7.50	20.62	7.25	16.31	12.62	1.81
800	5.19	8.00	22.38	7.75	17.38	13.75	1.88



Engineering Data

Coupling Size	Max. Radial Load (lb.)	Max Horsepower Per 100 RPM						Max. RPM	⑥ Max. Continuous Torque (lb.-in.)	⑥ Peak Overload Torque (lb.-in.)	② Weight (lb.)	② WR^2 (lb.-in.^{2})	① Axial Capacity (in.)
		Smooth			Pulsating								
		③ Col. 1	④ Col. 2	⑤ Col. 3	③ Col. 4	④ Col. 5	⑤ Col. 6						
162	150	0.8	1.1	1.4	0.4	0.6	0.7	2,500	880	1,320	7	16	±0.018
200	225	1.5	2.1	2.7	0.7	1.0	1.3	2,500	1,700	2,550	14	46	±0.018
225	340	2.1	3.0	3.8	1.0	1.5	1.9	2,500	2,400	3,600	15	59	±0.018
262	520	3.8	5.3	6.8	1.9	2.6	3.4	2,500	4,280	6,420	23	120	±0.022
312	700	6.0	8.4	10.7	3.0	4.2	5.4	2,500	6,740	10,100	41	310	±0.026
350	900	8.5	11.9	15.3	4.2	6.0	7.6	2,300	9,640	14,500	56	520	±0.028
375	1,250	13.1	18.3	23.6	6.6	9.2	11.8	2,200	14,900	22,400	71	820	±0.031
425	1,500	17.0	23.8	30.6	8.5	11.9	16.3	1,900	19,300	29,000	93	1,300	±0.034
450	1,800	21.7	30.4	39.0	10.8	15.2	19.5	1,500	24,600	36,900	110	1,700	±0.036
500	2,400	33.5	46.9	60.3	16.8	23.4	30.2	1,500	38,000	57,000	160	3,100	±0.041
550	3,200	48.9	68.4	87	24.4	34.2	43.5	1,500	54,800	82,200	230	5,600	±0.046
600	4,000	68.6	96	123	34.3	48.0	61.5	1,200	77,500	116,000	300	8,400	±0.051
700	5,500	106	148	190	53.0	74.0	95.0	1,100	120,000	180,000	440	18,000	±0.058
750	6,500	139	194	250	69.5	97.0	125	1,000	158,000	237,000	590	27,000	±0.062
800	7,700	177	247	318	88.5	124	159	900	200,000	300,000	700	39,000	±0.068

For ordering instructions, see pages 10-11.

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Weight and WR^2 at maximum bore.
③ Col. 1 gives maximum HP/100 RPM permitted when combined with maximum radial load.
④ Col. 2 gives maximum HP/100 RPM permitted when combined with $^2/_3$ maximum radial load.
⑤ Col. 3 gives maximum HP/100 RPM permitted when combined with $^1/_3$ maximum radial load.
⑥ Maximum torque and peak overload torque are based on $^1/_3$ maximum radial load.
⑦ Consult Rexnord for minimum rough bore on sizes 162-450.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® SINGLE-FLEXING DISC COUPLINGS

TYPE BMR SINGLE

BMR single couplings are used for single flex applications for light to moderate load. BMR is also available in a double flexing design.

Construction

Hubs: Cast Alloy Iron
Center Section: Sizes 162 – 750 are Cast Alloy Iron, Sizes 800 and above are Cast Steel
Bolts: Alloy Steel
Disc Packs: Stainless Tpack™ (225-750 Sizes)
Coatings Available: Black Oxide, Zinc, Cadmium

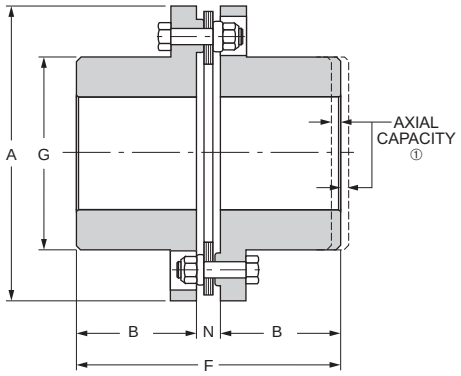
Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: ⅓° per disc pack

Note:

Single-flexing couplings cannot accommodate parallel misalignment. They are not suitable for connecting equipment where both shafts are held rigidly in their own bearings.

TYPE BMR SINGLE



General Dimensions (inch)

Coupling Size	① Rough Bore	Max Bore	A	B	F	G	N
162	–	1.62	4.56	1.75	3.91	2.75	0.41
200	–	2.00	5.75	2.12	4.68	3.62	0.44
225	–	2.25	6.00	2.50	5.44	3.88	0.44
262	–	2.62	6.88	2.88	6.29	4.50	0.53
312	–	3.12	8.12	3.38	7.38	5.44	0.62
350	–	3.50	9.12	3.75	8.17	6.00	0.67
375	–	3.75	10.06	4.00	8.81	6.50	0.81
425	–	4.25	11.00	4.25	9.38	7.00	0.88
450	–	4.50	11.88	4.50	9.88	7.44	0.88
500	2.69	5.00	13.44	5.00	11.06	8.38	1.06
550	2.69	5.50	15.00	5.50	12.25	9.44	1.25
600	3.69	6.00	16.75	6.00	13.38	10.31	1.38
700	4.25	7.00	18.94	7.00	15.56	11.75	1.56
750	4.94	7.50	20.62	7.25	16.25	12.62	1.75
800	5.19	8.00	22.38	7.75	17.31	13.75	1.81
850	5.44	8.50	23.75	8.25	18.50	14.50	2.00
925	5.94	9.25	25.75	9.00	20.25	15.88	2.25

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM, Service Factor 1	Max. RPM	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	③ Weight (lb.)	③ WR^2 (lb.-in.^{2})	② Axial Capacity (in.)
162	9.1	2,500	5,740	6,888	6.5	14.5	±0.018
200	17.5	2,500	11,030	13,236	13	40.5	±0.018
225	24.7	2,500	15,575	18,690	15	58	±0.018
262	33.4	2,500	21,038	25,246	22	107	±0.022
312	37.5	2,500	23,650	28,380	40	283	±0.025
350	83.8	2,300	52,800	63,360	53	467	±0.025
375	126	2,200	79,442	95,330	70	735	±0.031
425	140	2,000	88,000	105,600	87	1,160	±0.034
450	216	1,900	136,125	163,350	107	1,540	±0.036
500	319	1,800	200,750	240,900	146	2,750	±0.041
550	436	1,800	275,055	330,066	210	4,930	±0.046
600	569	1,500	358,875	430,650	275	7,850	±0.051
700	724	1,250	456,500	547,800	410	15,300	±0.058
750	1,023	1,100	644,930	773,916	500	22,700	±0.062
800	1,291	1,000	813,780	976,536	645	40,520	±0.068
850	1,426	1,000	898,700	1,078,440	795	47,080	±0.072
925	2,033	1,000	1,281,280	1,537,536	1,010	70,600	±0.078

① Consult Rexnord for minimum rough bore on sizes 162-450.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
③ Weight and WR^2 shown at maximum bore.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® SINGLE-FLEXING DISC COUPLINGS

TYPE SN SINGLE

Type SN single couplings are used for floating shaft applications where the user wishes to supply his own intermediate solid shaft, or for single-flexing applications where light-to-moderate radial loads occur. They are generally more economical than ST couplings.

Construction

Hubs: Carbon Steel
Bolts: Alloy Steel
Disc Packs: Tomaloy Tpack™
Coatings Available: Black Oxide, Zinc, Cadmium

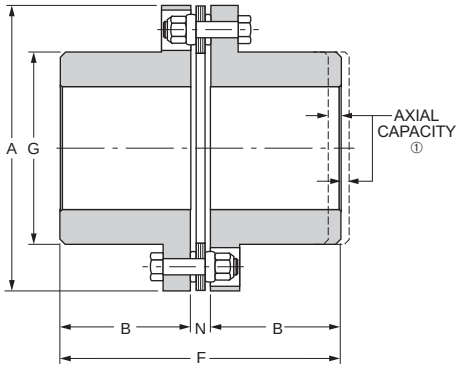
Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.

Misalignment: 1/3° per disc pack

Note:

Single-flexing couplings cannot accommodate parallel misalignment. They are not suitable for connecting equipment where both shafts are held rigidly in their own bearings.

TYPE SN SINGLE



General Dimensions (inch)

Coupling Size	① Max Bore	A	B	F	G	N
100	1.16	3.22	1.38	3.21	1.69	0.45
125	1.38	3.84	1.63	3.78	2.06	0.52
162	1.88	4.47	1.88	4.30	2.75	0.54
200	2.25	5.44	2.13	4.83	3.28	0.57
226	2.63	5.81	2.63	5.84	3.78	0.58
262	3.13	6.69	3.00	6.47	4.50	0.47
312	3.63	7.81	3.38	7.26	5.25	0.50
350	4.00	8.75	3.75	8.04	5.88	0.54
375	4.50	9.69	4.00	8.59	6.50	0.59
425	4.75	10.50	4.25	9.12	7.00	0.62
450	5.13	11.31	4.50	9.78	7.44	0.78
500T	5.38	12.88	5.00	10.78	8.38	0.78
550T	6.00	14.44	5.50	11.91	9.44	0.91
600T	6.50	16.00	6.00	12.98	10.25	0.98
700T	7.50	18.25	7.00	15.20	11.75	1.20
750T	8.00	19.81	7.50	16.27	12.63	1.27

Engineering Data

Coupling Size	Max Horsepower Per 100 RPM Service Factor 1	③ Max. RPM	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	③ Weight (lb.)	③WR² (lb.-in.²)	② Axial Capacity (in.)
100	1.3	7,100	820	1,640	2.3	2.7	±0.019
125	3.5	6,500	2,230	4,460	3.8	6.5	±0.023
162	7.1	6,000	4,450	8,900	5.8	17.1	±0.018
200	13.6	5,500	8,600	17,200	11	37	±0.018
226	22.6	5,200	14,260	28,520	14	53	±0.018
262	52.1	4,800	32,830	65,660	23	117	±0.022
312	81.6	4,500	51,400	102,800	37	264	±0.026
350	106	4,100	66,900	133,800	52	459	±0.028
375	159	3,900	100,300	200,600	71	770	±0.031
425	213	3,700	134,300	268,600	89	1,160	±0.034
450	239	3,600	150,400	300,800	121	1,580	±0.036
500T	391	2,800	246,400	492,800	150	2860	±0.041
550T	524	2,500	330,400	660,800	210	5,130	±0.046
600T	688	2,300	433,800	867,600	257	7,010	±0.051
700T	1,071	2,000	674,800	1,349,600	390	12,100	±0.057
750T	1,331	1,800	838,800	1,677,600	534	24,650	±0.062

For larger sizes, consult Rexnord. For ordering instructions, see pages 10-11.

① Consult Rexnord for minimum rough bore on sizes 162-450.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
③ Weight and WR^2 at maximum bore.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

HIGH PERFORMANCE THP

THP couplings are designed for use on high speed equipment where coupling size and weight must be kept to a minimum. Typically, these couplings connect prime movers such as motors, steam and gas turbines, rotary engines and gas expanders, to centrifugal and rotary compressors, generators, process and boiler feed pumps. Test stand and marine propulsion drives also benefit from this unique coupling design.

The flexing elements are precision-stamped from a high strength 300 series stainless steel. This material has been used successfully for many years in Thomas couplings manufactured for helicopter drive shaft applications. Special materials for hubs, spacers and/or flexing elements are available to meet unique application requirements.

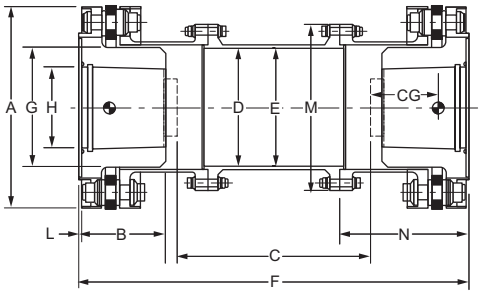
Construction

Hubs and Center Member: Heat Treated 4140 and 4340 Alloy Steel
Bolts: Aircraft quality Alloy Steel with twelve point wrenching pattern
Disc Packs: High Strength 300 Series Stainless Steel
Coatings Available: Black Oxide, Zinc, Cadmium, other coatings available per customer specifications

Other materials such as, Monel and Inconel are available; please consult Rexnord Industries, Inc.

System Analysis

A coupling is a critical component of any drive system. The basic coupling selection criteria is used to determine the size and style only. It is recommended that the system be analyzed for torsional and lateral stability using the specific coupling mass elastic data. The coupling weight, inertia, lateral stiffness, and torsional stiffness are available for this system analysis. It is the responsibility of the coupling user to assure the system, with the coupling as a component, properly functions.



General Dimensions (inch)

Coupling Size	A	B	C	D	E	F	② G	① Max Bore Hydraulic H	L	M	N
442-6	5.375	2.062	18.00	3.125	2.875	23.125	3.000	2.0	0.125	4.500	3.79
519-6	6.375	2.594	18.00	3.875	3.625	24.312	3.750	2.5	0.125	5.312	4.56
519-8	6.438	2.594	18.00	3.875	3.625	24.312	3.750	2.5	0.125	5.312	4.56
638-6	7.688	3.094	18.00	4.625	4.375	25.438	4.500	3.0	0.125	6.375	5.00
638-8	7.688	3.094	18.00	4.625	4.375	25.438	4.500	3.0	0.125	6.375	5.05
744-6	8.875	3.688	18.00	5.438	5.125	26.625	5.250	3.5	0.125	7.438	5.29
744-8	8.875	3.688	18.00	5.438	5.125	26.625	5.250	3.5	0.125	7.438	5.31
850-6	10.125	4.188	18.00	6.250	5.875	27.750	6.000	4.0	0.125	8.312	6.26
850-8	10.125	4.188	18.00	6.250	5.875	27.750	6.000	4.0	0.125	8.312	6.32
948-6	11.438	4.688	18.00	7.000	6.562	28.875	6.750	4.5	0.125	9.344	7.26
948-8	11.438	4.688	18.00	7.000	6.562	28.875	6.750	4.5	0.125	9.344	7.27
1025-6	12.500	5.281	18.00	7.750	7.250	30.312	7.500	5.0	0.125	10.344	8.12
1025-8	12.500	5.281	18.00	7.750	7.250	30.312	7.500	5.0	0.125	10.344	8.19

Engineering Data

Cont. Size	① Max. Standard Bore (in.)	③ ④ Max. Cont. Torque Rating (lb.-in.)	Max. Speed RPM	⑤ Wt. (lb.)	⑤ WR^2 (lb-in.^{2})	⑤ Half Coupling C.G. (in.)	⑤ Torsional Stiffness Kt x 10^6 (lb.-in./Rad.)	Spacer Tube Per Inch			⑥ Axial Capacity (Continuous) (in.)
								Kt x 10^6 (lb.-in./Rad.)	Weight (lb.)	WR^2 (lb-in.^{2})	
442-6	2.0	27,000	28,500	21.3	65.8	1.64	0.782	30.5	0.33	0.74	±0.120
519-6	2.5	51,000	24,000	35.3	163	2.01	1.60	59.6	0.41	1.45	±0.145
519-8	2.5	75,000	23,800	36.2	173	2.01	1.84	59.6	0.41	1.45	±0.100
638-6	3.0	78,000	19,900	54.5	365	2.43	2.85	103	0.50	2.51	±0.175
638-8	3.0	120,000	19,900	55.4	378	2.44	3.27	103	0.50	2.51	±0.125
744-6	3.5	124,500	17,200	82.3	730	2.87	5.01	208	0.73	5.07	±0.205
744-8	3.5	176,250	17,200	83.7	759	2.88	5.81	208	0.73	5.07	±0.145
850-6	4.0	195,000	15,100	125	1,470	3.18	8.12	378	1.00	9.20	±0.235
850-8	4.0	294,000	15,100	127	1,530	3.19	9.54	378	1.00	9.20	±0.165
948-6	4.5	285,000	13,400	174	2,600	3.57	12.8	617	1.31	15.0	±0.265
948-8	4.5	427,500	13,400	178	2,730	3.57	15.4	617	1.31	15.0	±0.185
1025-6	5.0	375,000	12,250	235	4,230	4.02	18.5	954	1.65	23.2	±0.290
1025-8	5.0	579,000	12,250	240	4,430	4.04	22.3	954	1.65	23.2	±0.205

① For larger bores, consult Rexnord.
② May be reduced for smaller shaft sizes. Consult Rexnord.
③ Minimum application factor to be applied = 1.5.
④ Max. peak overload torque = 1.33 x max. cont. torque
⑤ Information based on standard dimensional data shown.
⑥ Max. transient axial misalignment = 120% of values shown above.
Consult Rexnord with specific application requirements.
Note: Catalog dimensions subject to change.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® FLEXIBLE DISC COUPLINGS

HIGH PERFORMANCE SERIES 63

Series 63 couplings incorporate a patented* one-piece disc/diaphragm flexing element for positive torque transmission with low restoring forces. This unitized assembly accommodates misalignment and transmits torque through a multiple disc arrangement which provides redundancy in construction with a high degree of reliability. Pilot plates on the sides of each flexing element give accurate, repeatable registration of coupling components, and retain original dynamic balance repeatability while protecting the flexing members from damage.

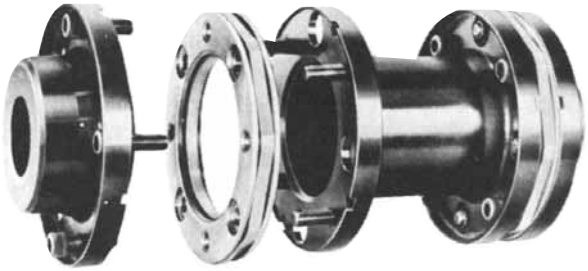
Series 63 couplings are ideal for the most demanding drive requirements. Prime movers include motor, steam and gas turbines, rotary engines, and gas expanders. Driven equipment applications include centrifugal and rotary compressors, generators, test stands, boiler feed pumps and other multi-stage pumps, and marine propulsion drives. Special designs available for torsional tuning and reduced moment.

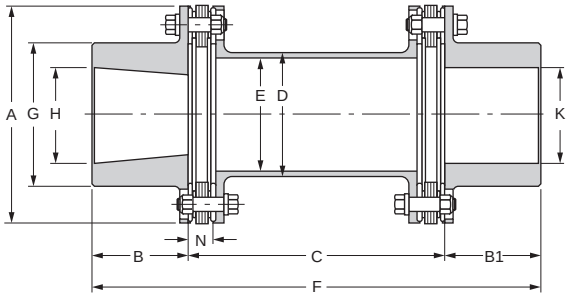
* U.S. Patent 4055966

Construction

Hubs and Center Member: Heat Treated 4140 Steel
Bolts: Alloy Steel
Disc Packs: High Strength 300 Series Stainless Steel
Coatings Available: Black Oxide, Zinc, Cadmium, other coatings available per customer specifications

Other materials such as Stainless Steel, Monel and Inconel are available; please consult Rexnord Industries, Inc.





SERIES 63 COUPLINGS MAY BE FURNISHED TO MEET REQUIREMENTS OF API 671

General Dimensions (inch)

Coupling Size	Max. Bore Hydraulic H	Max. Bore Keyed K	A	B	B1	① Std. C	Min. C	D	E	F	② G Max.	N	Axial Capacity (in.)
162	2.00	1.88	4.25	2.06	1.88	5.00	3.25	2.41	2.22	8.94	2.81	0.53	±0.050
200	2.62	2.45	5.47	2.75	2.45	5.00	4.12	3.38	3.19	10.20	3.68	0.68	±0.070
225	2.81	2.62	5.72	2.91	2.62	5.00	4.25	3.50	3.31	10.53	3.94	0.70	±0.055
262	3.22	3.00	6.72	3.38	3.00	6.00	4.75	3.94	3.69	12.38	4.50	0.78	±0.060
312	3.75	3.50	8.00	3.94	3.50	6.00	5.00	4.75	4.44	13.44	5.25	0.94	±0.075
350	4.16	3.88	8.91	4.38	3.88	7.00	6.44	5.00	4.69	15.26	5.81	1.13	±0.080
375	4.69	4.38	9.88	4.88	4.38	7.00	6.62	6.06	5.72	16.26	6.56	1.17	±0.090
425	4.97	4.62	10.69	5.28	4.62	8.00	7.37	6.50	6.06	17.90	6.94	1.31	±0.100
450	5.36	5.00	11.50	5.69	5.00	8.00	7.62	7.00	6.55	18.69	7.50	1.37	±0.110
500	6.00	5.58	13.12	6.47	5.58	9.00	8.50	7.75	7.19	21.05	8.38	1.48	±0.120
550	6.70	6.25	14.75	7.38	6.25	9.88	9.88	8.75	8.06	23.51	9.38	1.73	±0.140
600	7.33	6.83	16.38	8.06	6.83	11.25	11.25	9.38	8.58	26.14	10.25	2.03	±0.150
700	8.17	7.62	18.69	8.97	7.62	12.00	–	10.63	9.67	28.59	11.44	2.10	±0.175
750	8.84	8.25	20.31	9.69	8.25	14.00	–	11.81	10.80	31.94	12.38	2.30	±0.190

For Complete Selection, Dimensions And Mass-Elastic Data, Refer To Rexnord High Performance Coupling Catalog Or Contact Rexnord.
Larger sizes are available. Consult Rexnord with specific application requirements.
① Standard dimension - may be modified as necessary.
② "G" dimension at listed maximum bore. Dimension "G" will vary depending on bore size.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

HIGH PERFORMANCE SERIES 63

Engineering Data				Standard Mass-Elastic Data						
								Change Per Inch of "C"		
Cplg. Size	③ Max. Speed (RPM)	Max. Continuous Torque (lb.-in.)	Peak Overload Torque (lb.-in.)	Weight (lb.)	WR^2 (lb.-in.^{2})	$K_t \times 10^6$ (lb.-in./Rad.)	C.G. (in.)	Weight (lb.)	WR^2 (lb.-in.^{2})	$K_t \times 10^6$ (lb.-in./Rad.)
162	36,000	5,890	14,700	7.76	16.5	0.502	0.37	0.19	0.26	10.5
200	28,600	13,600	34,000	16.4	59.8	1.78	0.56	0.27	0.76	29.9
225	26,700	21,100	52,700	19.2	78.2	2.33	0.62	0.28	0.82	33.6
262	22,500	37,800	94,500	30.7	167	3.90	0.67	0.42	1.53	62.7
312	19,100	64,100	160,000	51.0	397	5.66	0.74	0.63	3.33	137
350	17,200	81,900	205,000	69.2	666	9.54	0.79	0.67	3.9	160
375	15,600	126,000	315,000	93.1	1,100	12.30	0.99	0.89	7.72	317
425	14,300	169,000	423,000	118	1,630	19.0	0.97	1.21	11.9	491
450	13,300	213,000	533,000	147	2,330	21.0	1.09	1.35	15.5	636
500	11,600	316,000	790,000	214	4,350	34.80	1.20	1.85	25.8	1,060
550	10,300	454,000	1,135,000	308	7,870	49.90	1.35	2.54	45	1,850
600	9,300	630,000	1,575,000	416	13,000	61.3	1.37	3.15	63.5	2,610
700	8,200	903,000	2,258,000	605	24,600	100	1.46	4.25	110	4,510
750	7,500	1,150,000	2,875,000	773	37,000	131	1.52	5.02	162	6,600

Weight and C.G. data based on standard "C" dimension, maximum hydraulic bores (H) and hydraulic hub lengths (B). Torsional stiffness (Kt) assumes a one-third shaft penetration factor. To determine K_t for a coupling with longer than standard "C" dimension, use the following formula $K_t = \frac{1}{\frac{1}{K_t} + \frac{\blacktriangle L}{\blacktriangle K_t}}$ where ▲L = additional "C" dimension required ▲K_t = torsional stiffness change per inch of "C" dimension and $1/K_t$ - inverse of catalog value.

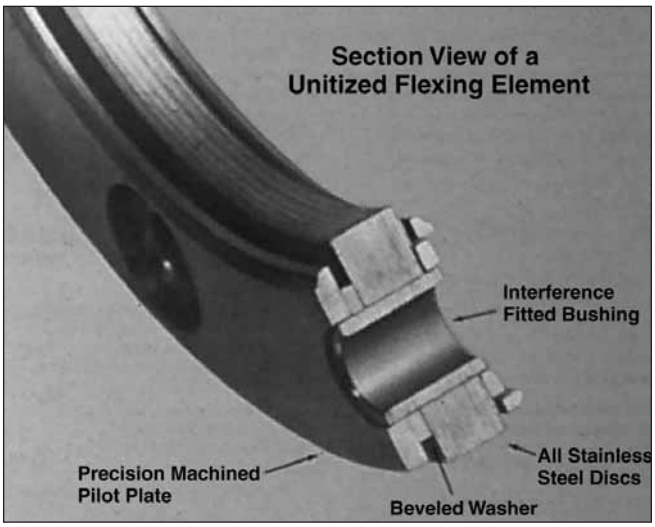
For Complete Selection, Dimensions And Mass-Elastic Data, Refer To Rexnord High Performance Coupling Catalog Or Contact Rexnord.
Larger sizes are available. Consult Rexnord with specific application requirements.
③ Consult Rexnord with higher speed requirements.

SERIES 63 UNITIZED FLEXING ELEMENT

UNITIZED FLEXING ELEMENT

Features and Benefits

- One-piece assembly–no loose parts
- Replaceable in the field
- Individually balanced
- Assures repeatable coupling dynamic balance
- Piloted fit between hubs and spacer
- Complies with API 671
- Visual inspection without coupling disassembly
- Compact and lightweight
- Easy to use

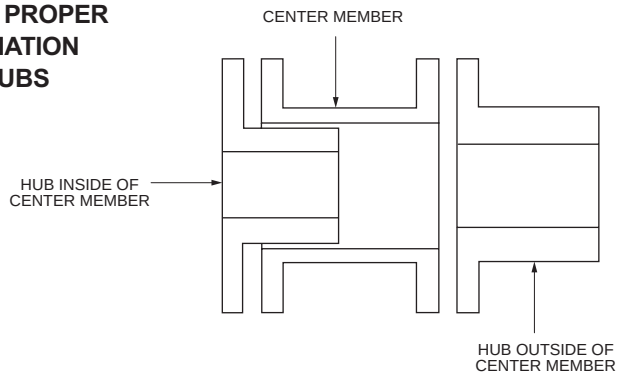


NOTE: A coupling is a critical component of any drive system. The basic coupling selection criteria is used to determine the size and style only. It is recommended that the system be analyzed for torsional and lateral stability using the specific coupling mass elastic data. The coupling weight, inertia, lateral stiffness, and torsional stiffness are available for this system analysis. It is the responsibility of the coupling user to assure the system, with the coupling as a component, properly functions.

THOMAS® MINIATURE COUPLINGS

THOMAS MINIATURE FLEXIBLE DISC COUPLINGS

GUIDE TO PROPER DESIGNATION OF HUBS



MATERIAL SPECIFICATIONS FOR STANDARD COUPLINGS:

Hubs and Center Member: Aluminum Alloy, Anodized

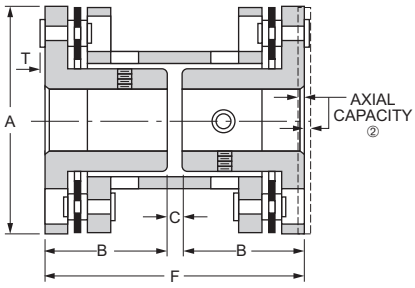
Rivets: Brass
Washers: Brass
Discs: Stainless Steel. Beryllium

Set screws: 18-8 Stainless Steel, Passivated

Available with electronically insulated phenolic material

STYLE CC

This coupling has both hubs inverted and is designed to fit shafts normally encountered at a given torque range. Ideal for use where space limitations require close coupling of the shafts.



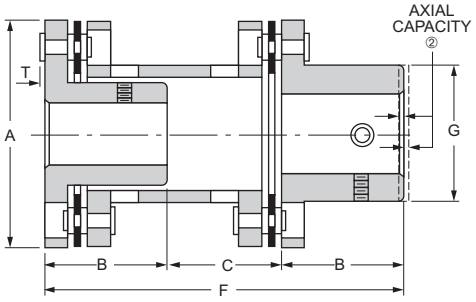
General Dimensions (inch)

Coupling Size	A	B	C	F	T	① Torque Capacity (lb.-in.)
12	1/2	1/4	1/32	17/32	0.018	1.1
18	3/4	3/8	1/16	13/16	0.023	2.2
25	1	1/2	1/16	1 1/16	0.025	4.7
37	1 7/16	11/16	1/8	1 1/2	0.035	19.0
50	1 3/4	15/16	1/8	2	0.045	75.0
62	2 1/4	1 1/16	1/8	2 1/4	0.060	300
75	2 1/2	1 3/16	1/8	2 1/2	0.060	440
100	3	1 3/8	1/4	3	0.060	700

① Torque capacities are based on smooth drives with moderate torque fluctuations. Reduce ratings to 1/3 the value shown for severe applications such as indexing drives where torque reversals occur.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.

STYLE CA

This design of our miniature coupling has one inverted hub to accept a normal shaft and one extended hub to accommodate oversize shafts. It also accommodates a larger shaft gap than the Style CC.



General Dimensions (inch)

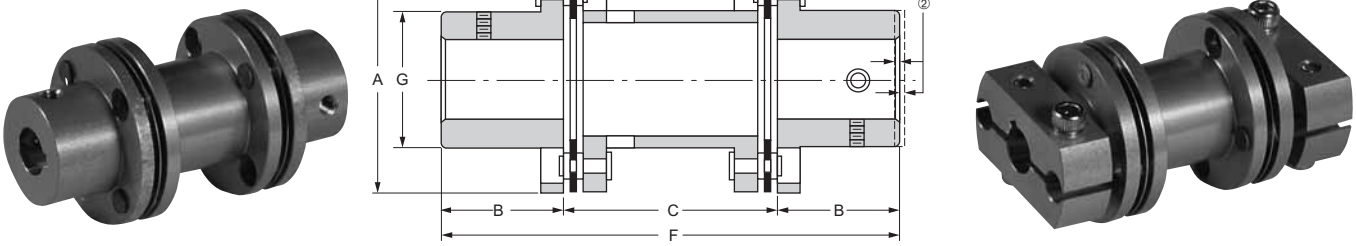
Coupling Size	A	B	C	F	G	T	① Torque Capacity (lb.-in.)
12	1/2	1/4	15/64	47/64	5/16	0.018	1.1
18	3/4	3/8	3/8	1 1/8	15/32	0.023	2.2
25	1	1/2	15/32	1 15/32	5/8	0.025	4.7
37	1 7/16	11/16	11/16	2 1/16	7/8	0.035	19.0
50	1 3/4	15/16	29/32	2 25/32	1 1/16	0.045	75.0
62	2 1/4	1 1/16	1	3 1/8	1 3/8	0.060	300
75	2 1/2	1 3/16	1 1/8	3 1/2	1 5/8	0.060	440
100	3	1 3/8	1 3/8	4 1/8	1 7/8	0.060	700

① Torque capacities are based on smooth drives with moderate torque fluctuations. Reduce ratings to 1/3 the value shown for severe applications such as indexing drives where torque reversals occur.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.

STYLE CB & CBC

This coupling design has both hubs extended to accept two oversized shafts. Shaft gap is larger than that of the Style CA or CC couplings.

Style CBC is the newest addition to our miniature coupling line. It offers clamping hubs that are an integral part of the coupling. The clamping hubs assure positive fit on the shafts. There are no loose parts to handle during installation. The Style CBC coupling has the same dimensions and torque capacities as the Style CB. Consult Rexnord Industries, Inc. for additional design and engineering data.



General Dimensions (inch)

Coupling Size	A	B	C	F	G	① Torque Capacity (lb.-in.)
12	1/2	1/4	7/16	15/16	5/16	1.1
18	3/4	3/8	11/16	1 7/16	15/32	2.2
25	1	1/2	7/8	1 7/8	5/8	4.7
37	1 7/16	11/16	1 1/4	2 5/8	7/8	19.0
50	1 3/4	15/16	1 11/16	3 9/16	1 1/16	75.0
62	2 1/4	1 1/16	1 7/8	4	1 3/8	300
75	2 1/2	1 3/16	2 1/8	5	1 5/8	440
100	3	1 3/8	2 1/2	5	1 7/8	700

① Weight and WR^2 at maximum bore.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.

STYLES CC, CA, CB & CBC

RATINGS AND MASS ELASTIC DATA

Size No.	Max. RPM	① Approx. Weight (oz.)	① Approx. WR^2 (oz.-in.^{2})	Torsional Rigidity $K_t \times 10^6$ (oz.-in./Rad.)	Max. Angular Misalignment, Continuous Per Flexing Element	Max. Parallel Misalignment, Continuous (in)	② Axial Capacity (in.)
12	150,000	0.09	0.0026	0.148	2°	0.015	±0.016
18	100,000	0.29	0.0177	0.0908	2°	0.015	±0.016
25	80,000	0.74	0.0799	0.037	2°	0.028	±0.031
37	55,000	2.02	0.4740	0.00554	1.5°	0.028	±0.031
50	45,000	4.02	1.418	0.00362	1°	0.028	±0.031
62	35,000	9.36	4.99	0.00139	0.67°	0.028	±0.031
75	30,000	11.57	8.61	0.00089	0.67°	0.028	±0.031
100	25,000	20.00	23.00	0.00066	0.50°	0.020	±0.031

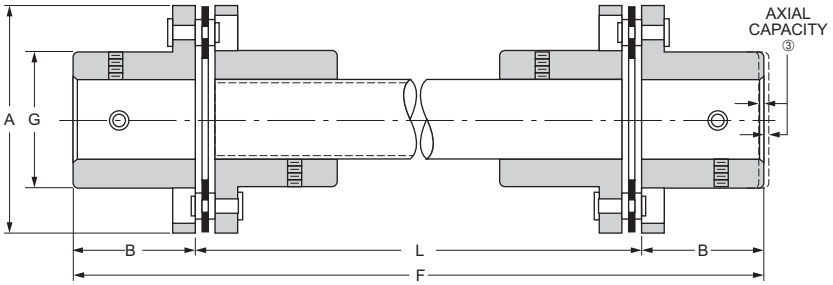
① Weight and WR^2 at maximum bore.
② All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

THOMAS® MINIATURE COUPLINGS

STYLE CE

Two single-flexing units are connected by a tubular shaft in this type of miniature coupling. It's designed to span large distances between shafts. Ideal for those applications where a large amount of parallel misalignment is anticipated.



General Dimensions (inch)

Coupling Size	A	B	F	G	L	② Torque Capacity (lb.-in.)	① Weight (oz)	Weight Change per inch of "L" (oz.)
12	1/2	1/4	Varies With "L" Specified	5/16	Variable To Suit Requirements	1.1	0.45	0.027
18	3/4	3/8		15/32		2.2	0.97	0.048
25	1	1/2		5/8		4.7	1.70	0.059
37	1 7/16	11/16		7/8		19.0	4.10	0.110
50	1 3/4	15/16		1 1/16		75.0	7.80	0.180
62	2 1/4	1 1/16		1 3/8		300	14.30	0.220
75	2 1/2	1 3/16		1 5/8		440	18.10	0.380
100	3	1 3/8		1 7/8		700		

① Weight calculated at maximum bore and "L" = 12 inches.
② Torque capacities are based on smooth drives with moderate torque fluctuations. Reduce ratings to 1/3 the value shown for severe applications such as indexing drives where torque reversals occur.
③ All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
④ For WR^2, misalignment capacities, and torsional rigidity, consult Rexnord.

MINIATURE COUPLINGS STANDARD BORE SIZES ①

CC, CA, CB, CBC & CE Couplings

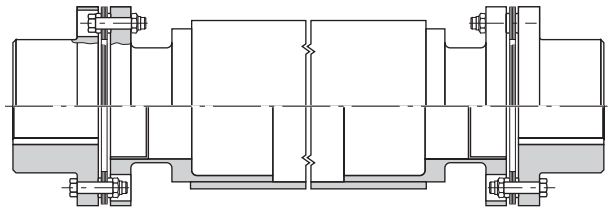
Coupling Size	Bores ② ③ (in.) Hub Inside Center Member	Hub Outside Center Member	Coupling Size	Bores ② ③ (in.) Hub Inside Center Member	Hub Outside Center Member
12	0.0781, 0.0937 0.1200, 0.1250	0.1200, 0.1250 0.1562, 0.1875	**50**	0.2505, 0.3130 0.3755, 0.4380 0.5005	0.2505, 0.3130 0.3755, 0.4380 0.5005, 0.6255
18	0.0937, 0.1200 0.1250, 0.1562 0.1875	0.1250, 0.1562 0.1875, 0.2500	**62**	0.3755, 0.4380 0.5005, 0.6255	0.4380, 0.5005 0.6255, 0.7505
25	0.1255, 0.1880 0.2505	0.1255, 0.1880 0.2505, 0.3130 0.3755	**75**	0.4380, 0.5005 0.6255, 0.7505	0.5005, 0.6255 0.7505, 0.8755 1.0005
37	0.1255, 0.1880 0.2505, 0.3130 0.3755	0.1880, 0.2505 0.3130, 0.3755 0.4380, 0.5005	**100**	0.6255, 0.7505 0.8755, 1.0005	0.7505, 0.8755 1.0005, 1.1255 1.2505

① Coupling not available with rough bore. Other bore sizes can be furnished. Consult Rexnord.
② Tolerances. Sizes 12 and 18, ±0.0003". Other sizes, ±0.0005".
③ The largest bore shown for each hub is maximum allowable bore. If larger bore is required, consult Rexnord.

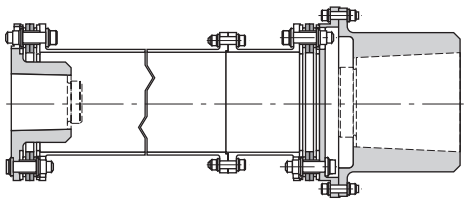
Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

SPECIAL FLEXIBLE DISC COUPLINGS

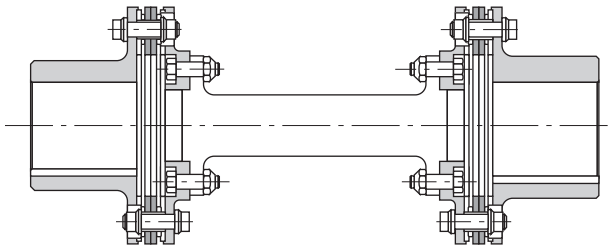
The following pages illustrate a sampling of the special disc coupling products designed and manufactured by Rexnord Industries, Inc. For applications requiring special coupling designs, please contact your Rexnord Industries, Inc. representative.



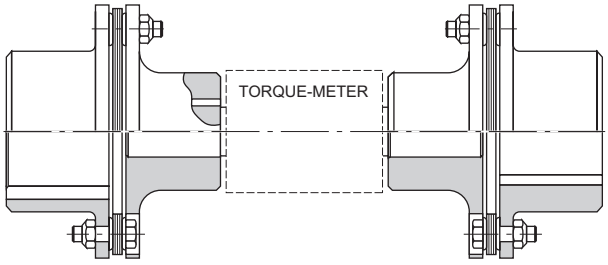
SN-EL - Extra Long Span



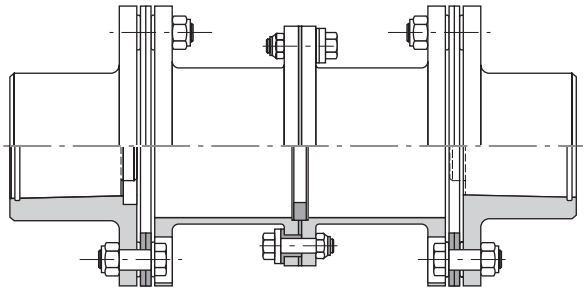
Semi-Reduced Movement – Bolt On Hub



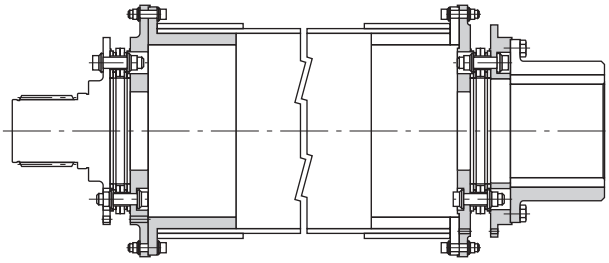
Torsionally Tuned Center Members



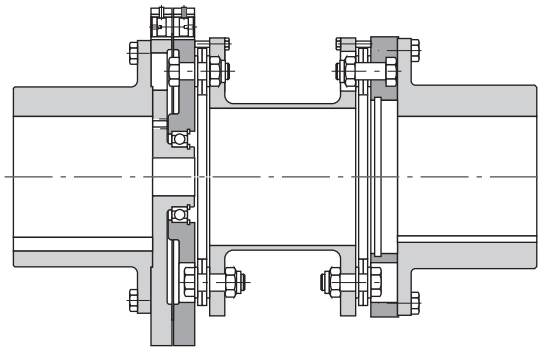
Torque Meter Coupling



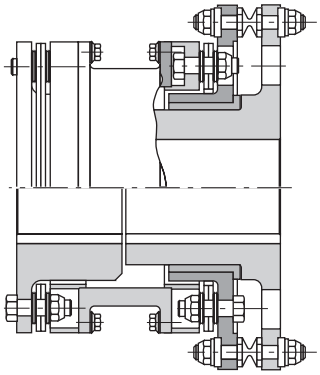
Electrically Insulated Couplings



High Speed-Composite Tube Coupling

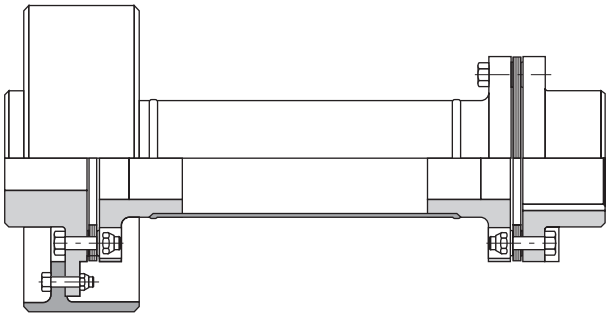


Breaker Pin Coupling-Bearing Style

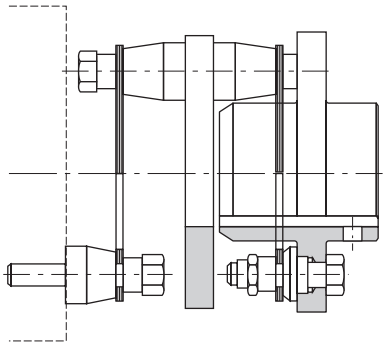


Breaker Pin Coupling-Bushing Style

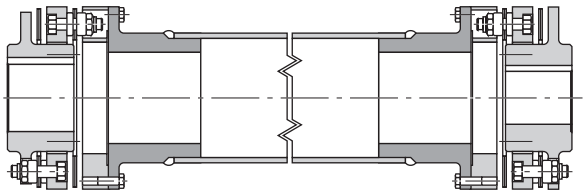
SPECIAL FLEXIBLE DISC COUPLINGS



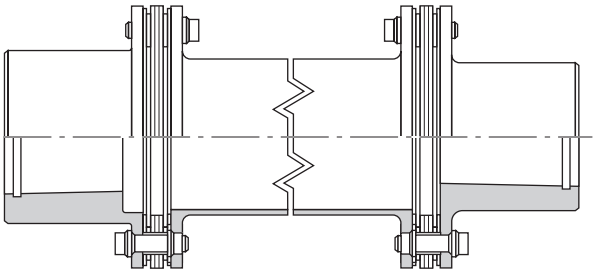
Brake Drum Hub



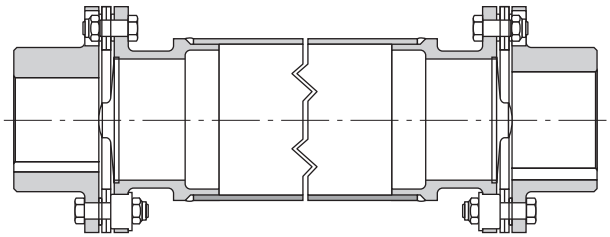
Motor-Tachometer Coupling



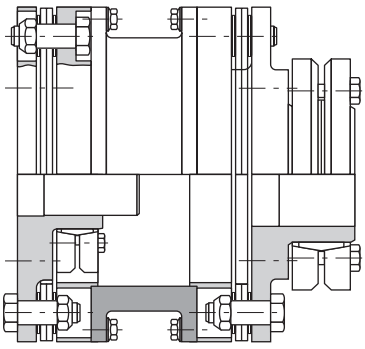
Double Disc Packs Provide
High Axial Capacity



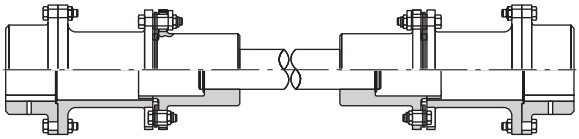
Hydraulic Hub Mounting



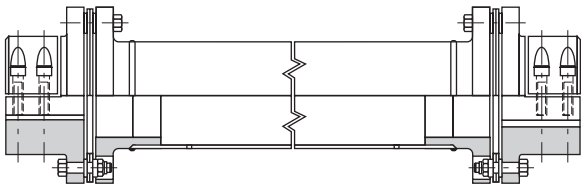
Axial Limiting Stops



Shrink Disc Hub Mounting



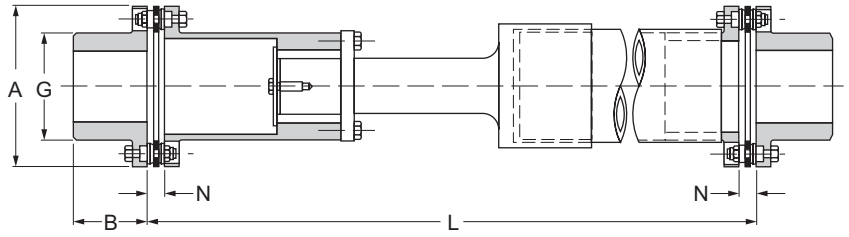
Slide Coupling For Axial Positioning



Clamp Hub Mounting

TYPE SN ADJUSTABLE

Type SN adjustable couplings were developed as emergency replacements for standard Type SN couplings and are available from stock in most sizes required for cooling tower applications. Each shaft may be adjusted thru a four-inch length range, using a special compression bushing to lock the shaft in place once the length is set.



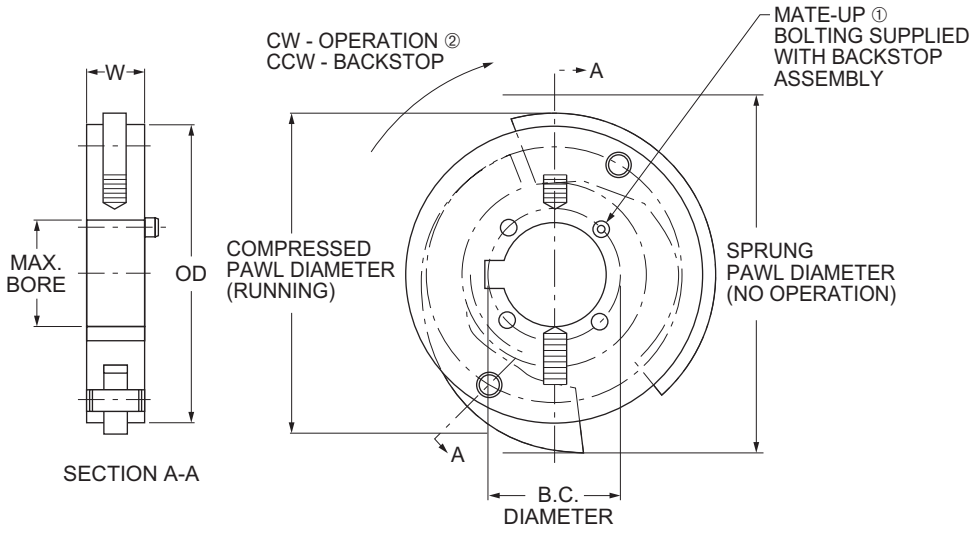
General Dimensions (inch) & Engineering Data

Coupling Size	Max Bore	A	B	G	H	Min. "L"	Adjustment Range	② Weight (lb.)	Weight Change Per Inch of "L" (lb.)	② WR^2 (lb.-in.^{2})	WR^2 Change per inch of "L" (lb.-in.^{2})	① Axial Capacity (in.)
162	1.88	4.47	1.88	2.75	0.54	14.25	4.00	19	0.13	37	0.22	± 0.036
200	2.25	5.44	2.12	3.28	0.57	15.12	4.00	30	0.29	80	0.56	± 0.036
226	2.62	5.81	2.62	3.78	0.58	17.28	4.00	43	0.33	151	0.82	± 0.036
262	3.12	6.69	3.00	4.50	0.47	18.88	4.00	61	0.41	253	1.60	± 0.043

① All Thomas disc couplings meet NEMA frame sleeve bearing motor specifications without modification or the addition of end-float restricting devices.
② Weight and WR^2 at maximum bore.
Note: See page 27 for selection data.

REX® THOMAS® BACKSTOP

- Bolts Directly to Thomas SN & TSN-CT Hubs
- Prevents reverse shaft rotation of Cooling Tower Fans
- All Stainless Steel Construction
- Available from Stock
- For non-Corrosive environments this can be supplied in carbon steel.



Bolt-On Backstop Tabulation (inch)

Coupling Size	Max Bore	Mating Hub bckstop Bolting Info				OD	W (Ref)	Pawl Dia. (Ref)		Compressed Speed (RPM Ref)
		B.C. Dia.	Capscrew Size	Min Tap DP	Tight Torque (lb.-in.)			Compressed	Sprung	
162	1.88	2.312	1/4 - 20 NC × 1.50	0.62	25					
200	2.12	2.688	1/4 - 20 NC × 1.50	0.62	25	5.25	1.00	5.69	6.50	450 RPM Ref
226	2.62	3.250	1/4 - 20 NC × 1.50	0.62	40					
262	3.12	3.875	3/8 - 16 NC × 1.75	0.88	142					
312	3.62	4.438	7/16 - 14 NX × 2.00	1.12	225	9.12	1.12	9.19	10.56	400 RPM Ref
350/375	4.00	4.875	1/2 - 13 NC × 2.00	1.12	350					

Special integral hub/backstop can be supplied.
① 162 & 200 size supplied with (4) socket head capscrews. All other sizes supplied with (4) hex head capscrews.
② Backstop may be inversely mounted for opposite rotation.

Note: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

World Class Customer Service

For more than 100 years, the dedicated people of Rexnord have delivered excellence in quality and service to our customers around the globe. Rexnord is a trusted name when it comes to providing skillfully engineered products that improve productivity and efficiency for industrial applications worldwide. We are committed to exceeding customer expectations in every area of our business: product design, application engineering, operations, and customer service.

Because of our customer focus, we are able to thoroughly understand the needs of your business and have the resources available to work closely with you to reduce maintenance costs, eliminate redundant inventories and prevent equipment down time.

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