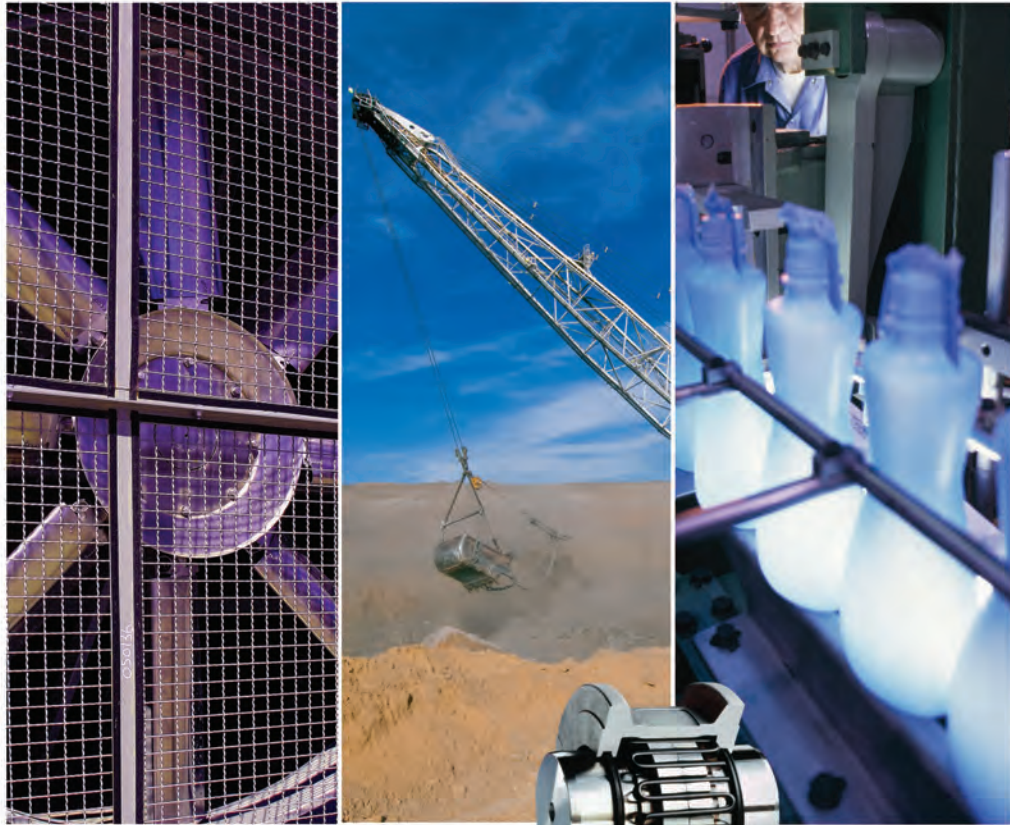


Flexible Couplings



TB Wood's

TB Wood's is an industry leading designer and manufacturer of mechanical power transmission equipment for industrial control. Our mechanical product lines include: clutch and brake, synchronous and belted variable speed drives; grid, disc, jaw, gear coupling and elastomeric coupling products; sheaves and bushings. Registered trademarks include Sure-Flex®, Dura-Flex®, G-Flex®, and QT Bushings®.

TB Wood's was founded in 1857 and began as a foundry producing wood burning stoves. Our company's tradition of product innovation started early. Wood's entered the power transmission industry at the turn of the century with the introduction of flat belted drives and line shafting.

In April 2007, TB Wood's was purchased by Altra Holdings, Inc. This acquisition placed TB Wood's as part of a larger company with complementary products to help grow the business.



Altra Industrial Motion

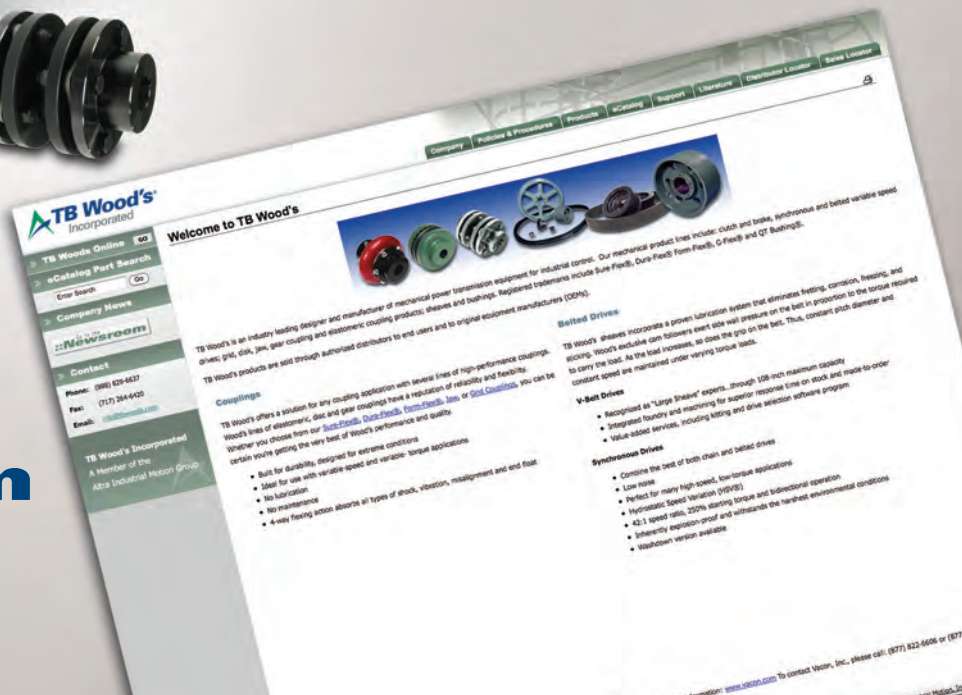
Altra is a leading multinational designer, producer and marketer of a wide range of mechanical power transmission products. We sell our products in over 70 countries throughout the world. Our products are frequently used in critical applications, such as fail-safe brakes for elevators, wheelchairs and forklifts, and in high-volume manufacturing processes, where the reliability and accuracy of our products are critical in both avoiding costly down time and enhancing the overall efficiency of manufacturing operations.

Our products are marketed under a variety of well recognized and established manufacturing brand names. These leading brands are Ameridrives, Boston Gear, Warner Electric, Formsprag Clutch, TB Wood's Incorporated, Industrial Clutch, Kilian Manufacturing, Marland Clutch, Nuttall Gear, Stieber Clutch, Twiflex Ltd, Huco Dynatork, Bibby Turboflex, Matrix International, Inertia Dynamics, Delroyd Worm Gear, Warner Linear, Wichita Clutch and Lamiflex Couplings.



Visit us on the web at

tbwoods.com



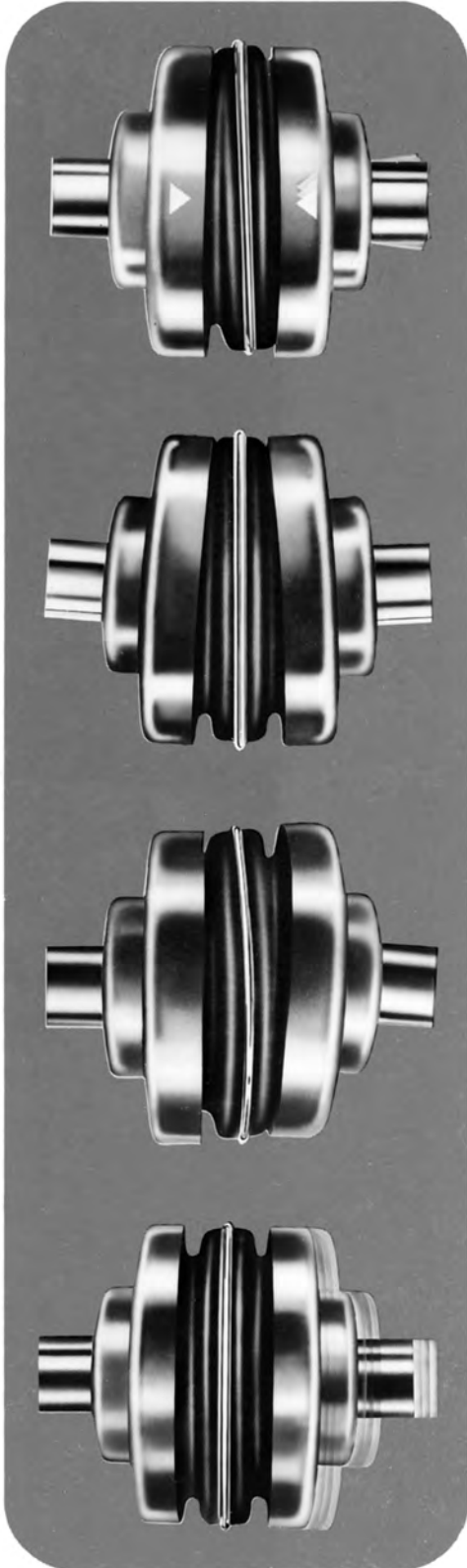
Sure-Flex[®] Elastomeric Couplings

F1



- **Need No Lubrication, No Maintenance**
- **Quick, Easy Installation**
- **Clean, Quiet Performance**

4-WAY FLEXING ACTION absorbs all types of shock, vibration and misalignment



TORSIONAL

Sure-Flex coupling sleeves have an exceptional ability to absorb torsional shock and dampen torsional vibrations. The EPDM and Neoprene sleeves wind-up approximately 15° torsionally at their rated torque. Hytrel sleeves will wind-up about 7°.

ANGULAR

The unique design of the Sure-Flex coupling's teeth allows for the absorption of angular misalignment without wear. Refer to page F1—18 for actual allowable misalignment limits. These limits allow for the alignment of the coupling using only a scale and calipers.

PARALLEL

Parallel misalignment is absorbed without wear or appreciable energy losses. The lateral flexibility of the coupling sleeve minimizes radial bearing loads normally associated with parallel misalignment. This feature also allows for easier installation by the use of components bored for slip fits without fretting corrosion occurring at the shaft. Refer to page F1—18 for parallel misalignment limits. Only a straight-edge and feeler gage are required to obtain these limits.

AXIAL

Sure-Flex couplings may be used in applications with limited axial shaft movements. The axial compressibility of the EPDM and Neoprene sleeves allows for shaft end-float without the absolute transfer of thrust loads.



EASY, QUICK INSTALLATION

Sure-Flex can be installed quickly and easily, because there are no bolts, gaskets, covers or seals. Alignment can be checked with a straightedge placed across the outside of the precision-machined flanges. No special tools are needed for installation, alignment or removal.



NO LUBRICATION, TROUBLE-FREE OPERATION

The teeth of the sleeve lock into the teeth of the flanges without clamps or screws, tightening under torque to provide smooth transmission of power. There is no rubbing action of metal against rubber to cause wear. Couplings are not affected by abrasives, dirt, or moisture. This eliminates the need for lubrication or maintenance, provides clean, dependable, quiet performance.

SURE-FLEX SELECTION

Sure-Flex couplings are selected as component parts.

1. Determine SLEEVE material and type.
Refer to pages F1—4 & 5
2. Determine coupling SIZE.
Refer to pages F1—6, 7, & 8
3. Determine FLANGES to be used.
Refer to pages F1—9 thru 16

Specify coupling components.

- Example #1 - Close coupled
 - Size 6, Type S flange w 1-3/8 bore
 - Size 6, Type S flange w 1" bore
 - Size 6, Solid EPDM sleeve
- Example #2 - 5" Between shaft spacer
 - Size 9, Type SC flange for #11 hub
 - Size 9, Type SC flange for #9 hub
 - Size 11 hub w 2-3/8 bore
 - Size 9 short hub w 1-1/8 bore
 - Size 9 Solid Hytrel sleeve

PROD. NUMBER	PROD. DESCRIPTION
6S138	6Sx1-3/8
6S1	6Sx1
6J	6JE
9SC5011	9SC50-11
9SC50	9SC50
11SCH238	11SCH x 2-3/8
9SCHS118	9SCHS x 1-1/8
9H	9H

Sure-Flex® Sleeve

Selection

Sure-Flex Sleeves are available in four materials or compounds and various shape configurations.

	EPDM	Neoprene	Hytrel	Urethane
CONSTRUCTIONS AVAILABLE				
1 pc, unsplit	JE	JN	H	U
1 pc, split	JES	JNS	—	—
2 piece	E	N	HS	—
TYPICAL USE	General Purpose	Oil Resist Non-flame	General Purpose	Stiffness
REL. RATING	1X	1X	4X	4X
WIND-UP ANGULAR	15°	15°	7°	3°
MISALIGN	1°	1°	1/4°	1/4°
TEMPERATURE (F)				
maximum	+275°	+200°	+250°	+200°
minimum	-30°	-0°	-65°	-80°

SURE-FLEX SLEEVES


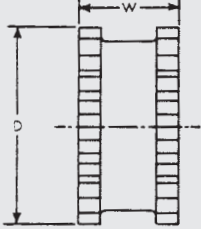


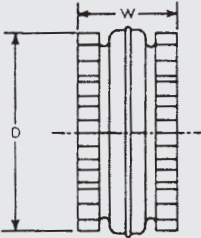


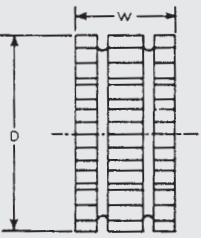

Product No.	Product Description
3J	3JE EPDM
4J	4JE EPDM
5J	5JE EPDM
6J	6JE EPDM
7J	7JE EPDM
8J	8JE EPDM
9J	9JE EPDM
10J	10JE EPDM
3JS	3JES EPDM Split
4JS	4JES EPDM Split
5JS	5JES EPDM Split
6JS	6JES EPDM Split
7JS	7JES EPDM Split
8JS	8JES EPDM Split
9JS	9JES EPDM Split
10JS	10JES EPDM Split
3JN	3JN Neoprene
4JN	4JN Neoprene
5JN	5JN Neoprene
6JN	6JN Neoprene
7JN	7JN Neoprene
8JN	8JN Neoprene
3JNS	3JNS Neoprene Split
4JNS	4JNS Neoprene Split
5JNS	5JNS Neoprene Split
6JNS	6JNS Neoprene Split
7JNS	7JNS Neoprene Split
8JNS	8JNS Neoprene Split

Product No.	Product Description
4	4E EPDM
5	5E EPDM
6	6E EPDM
7	7E EPDM
8	8E EPDM
9	9E EPDM
10	10E EPDM
11	11E EPDM
12	12E EPDM
13	13E EPDM
14	14E EPDM
16	16E EPDM
4N	4N Neoprene
5N	5N Neoprene
6N	6N Neoprene
7N	7N Neoprene
8N	8N Neoprene
9N	9N Neoprene
10N	10N Neoprene
11N	11N Neoprene
12N	12N Neoprene
13N	13N Neoprene
14N	14N Neoprene

Product No.	Product Description
6H	6H Hytrel
7H	7H Hytrel
8H	8H Hytrel
9H	9H Hytrel
10H	10H Hytrel
11H	11H Hytrel
12H	12H Hytrel
6HS	6HS Split Hytrel
7HS	7HS Split Hytrel
8HS	8HS Split Hytrel
9HS	9HS Split Hytrel
10HS	10HS Split Hytrel
11HS	11HS Split Hytrel
12HS	12HS Split Hytrel
13HS	13HS Split Hytrel
14HS	14HS Split Hytrel
10U	10U Urethane
11U	11U Urethane
12U	12U Urethane

Selection

Flexible sleeves for Wood's Sure-Flex couplings are available in four materials (EPDM Neoprene, Hytrel and Urethane) and in three basic constructions. Characteristics of the materials are given on page F1—4 and the various types are shown and described here.

 <p>JE, JN</p>		 <p>Types JES, JNS</p>	<p>JE-JES-JN-JNS</p> <p>J sleeves are molded EPDM rubber (E) or Neoprene (N). They are available in one-piece solid construction (JE, JN) or one-piece split construction (JES, JNS). These sleeves may be used in any Sure-Flex flange within a given size.</p>
 <p>E and N (Assembled)</p>		 <p>Types E and N (Disassembled)</p>	<p>E-N</p> <p>These sleeves are of two-piece design with a retaining ring. They are available in either EPDM (E) or Neoprene (N). They may be used with any flange within a given size. Sleeves are shown here assembled and disassembled.</p>
 <p>H or U</p>		 <p>HS</p>	<p>H-HS-U</p> <p>H (Hytrel) and U (Urethane) sleeves, designed for high-torque applications, transmit four times as much power as an equivalent EPDM or Neoprene sleeve. Available in one-piece solid construction (H or U) or two-piece split construction (HS), these can be used only with S, C and SC flanges. They cannot be used with J or B flanges or as direct replacements for EPDM or Neoprene sleeves.</p>

DIMENSIONS (in.)

Coupling Size	JE, JES, JN & JNS Sleeves EPDM & Neoprene			E and N Sleeves EPDM & Neoprene			H, U & HS Sleeves Hytrel & Urethane		
	D	W	Wt. (lbs.)	D	W	Wt. (lbs.)	D	W	Wt. (lbs.)
3	1 7/8	1	.06	...	...	...	...	...	...
4	2 5/16	1 1/4	.10	2 5/16	1 1/4	.11	...	...	...
5	2 15/16	1 9/16	.20	2 15/16	1 9/16	.25	...	...	...
6	3 3/4	1 7/8	.40	3 3/4	1 7/8	.49	3 3/4	1 7/8	.44
7	4 11/32	2 3/16	.62	4 11/32	2 3/16	.77	4 11/32	2 3/16	.69
8	5 1/16	2 1/2	1.13	5 1/16	2 1/2	1.4	5 1/16	2 1/2	1.4
9*	6	3	1.46	6	3	2.0	6	3	1.8
10*	7 1/16	3 7/16	2.32	7 1/16	3 7/16	3.2	7 1/16	3 7/16	2.9
11	...	...	...	8 3/16	4	5.1	8 3/16	4	4.5
12	...	...	...	9 9/16	4 11/16	8.1	9 9/16	4 11/16	7.3
13	...	...	...	11 3/16	5 1/2	13.0	11 3/16	5 1/2	11.8
14	...	...	...	13 3/32	6 1/2	21.1	13 3/32	6 1/2	19.3
16	...	...	...	17 29/32	8 3/4	45.3	...	...	...

The 13 and 14 Hytrel available with HS sleeves only.

*All 9J and 10J sleeves available in EPDM only. Only sizes available in Urethane.

Sure-Flex® Coupling

Selection

1. Select Load Symbol based on your driveN machine.

Application	Load Symbol	Application	Load Symbol	Application	Load Symbol
AGITATORS—Paddle, Propeller, Screw	L	DEWATERING SCREEN (sewage)	M	MILLS	
BAND RESAW (lumber)	M	DISC FEEDER	L	Ball, Pebble, Rod, Tube, Rubber Tumbling	H
BARGE HAUL PULLER	H	DOUGH MIXER	M	Dryer and Cooler	M
BARKING (lumber)	H	DRAW BENCH CONVEYOR and MAIN DRIVE	H	MIXERS	
BAR SCREEN (sewage)	L	DREDGES		Concrete, Muller	M
BATCHES (textile)	L	Cable Reel, Pumps	M	Banbury	H
BEATER AND PULPER (paper)	M	Cutter Head Drive, Jig Drive, Screen Drive	H	ORE CRUSHER	H
BENDING ROLL (metal)	M	Maneuvering and Utility Winch, Stack	M	OVEN CONVEYOR	L
BLEACHER (paper)	L	DYNAMOMETER	L	PLANER (metal or wood)	M
BLOWERS		DRYERS (rotary)	M	PRESSES	
Centrifugal, Vane	L	EDGER (lumber)	H	Brick, Briquette Machine	H
Lobe	M	ELEVATOR		Notching, Paper, Punch, Printing	M
BOTTLING MACHINERY	L	Bucket	M	PUG MILL	M
BREW KETTLES (distilling)	L	Escalator	L	PULP GRINDER (paper)	H
BUCKET ELEVATOR OR CONVEYOR	M	Freight, Passenger, Service, Man Lift	H	PULVERIZERS	
CALENDERS		ESCALATORS	L	Hammermill—light duty, Roller	M
Calendar (paper)	M	EXTRUDER (metal)	H	Hammermill—heavy duty, Hog	H
Calendar-super (paper), Calendar (rubber)	H	FANS		PUMPS	
CANE KNIVES (sugar)	M	Centrifugal	L	Centrifugal, Axial	L
CARD MACHINE (textile)	H	Cooling Tower	H	Gear, Lobe, Vane	M
CAR DUMPERS	H	Forced Draft, Large Industrial or Mine	M	Reciprocating—sgl. or dbl. acting, cylinder	*
CAR PULLERS	M	FEEDERS		REEL, REWINDER (paper) CABLE	M
CEMENT KILN	H	Apron, Belt, Disc	L	ROD MILL	H
CENTRIFUGAL BLOWERS,		Reciprocating	H	SAWDUST CONVEYOR	L
COMPRESSORS, FANS or PUMPS	L	Screw	M	SCREENS	
CHEMICAL FEEDERS (sewage)	L	FILTER, PRESS-OIL	M	Air Washing, Water	L
CHILLER (oil)	M	GENERATORS		Rotary for coal or sand	M
CHIPPER (paper)	H	Uniform load	L	Vibrating	H
CIRCULAR RESAW (lumber)	M	Varying load, Hoist	M	SCREW CONVEYOR	L
CLARIFIER or CLASSIFIER	L	Welders	H	SLAB CONVEYOR (lumber)	M
CLAY WORKING MACHINERY	M	GRIT COLLECTOR (sewage)	L	SLITTERS (metal)	M
COLLECTORS (sewage)	L	GRIZZLY	H	SOAPERS (textile)	L
COMPRESSORS		HAMMERMILL		SORTING TABLE (lumber)	M
Centrifugal	L	Light Duty, Intermittent	M	SPINNER (textile)	M
Reciprocating	*	Heavy Duty, Continuous	H	STOKER	L
Screw, Lobe	L	HOISTS		SUCTION ROLL (paper)	M
CONCRETE MIXERS	M	Heavy Duty	H	TENTER FRAMES (textile)	M
CONVERTING MACHINE (paper)	M	Medium Duty	M	TIRE BUILDING MACHINES	H
CONVEYORS		JORDAN (paper)	H	TIRE & TUBE PRESS OPENER	L
Apron, Assembly Belt, Flight, Oven, Screw	L	KILN, ROTARY	H	TUMBLING BARRELS	H
Bucket	M	LAUNDRY WASHER or TUMBLER	H	WASHER and THICKENER (paper)	M
COOKERS—Brewing, Distilling, Food	L	LINE SHAFTS	L	WINCHES	M
COOLING TOWER FANS	H	LOG HAUL (lumber)	H	WINDERS, Paper, Textile, Wire	M
COUCH (paper)	M	LOOM (textile)	M	WINDLASS	M
CRANES and HOISTS	M	MACHINE TOOLS, MAIN DRIVE	M	WIRE	
Heavy Duty Mine	H	MANGLE (textile)	L	Drawing	H
CRUSHERS—Cane (sugar), Stone or Ore	H	MASH TUBS (distilling)	L	Winding	M
CUTTER—Paper	H	MEAT GRINDER	M	WOODWORKING MACHINERY	L
CYLINDER (paper)	H	METAL FORMING MACHINES	M		

*Consult Factory

2. Determine Service Factor using Load Symbol and driveR.

Load Symbol	L Light	M Medium	H Heavy
Standard AC Motor DC Shunt Motor *Engine, 8 or more cylinders	1.25	1.5	2.0
High Torque AC Motor DC Series & Comp. *Engine, 4-6 cylinders	1.5	2.0	2.5
*Engine, 3 cylinders or less	2.0	2.5	3.0
Turbine	1.0	1.25	1.5

*On applications involving varying torque loads, design around the maximum load. Then determine the resulting service factor at minimum load. If this value is greater than 4.0, special coupling alignment will be required (see page F1—18).

Caution: Applications involving reciprocating engines and reciprocating driven devices are subject to rotational vibrational critical speeds which may destroy the coupling. The factory can determine these speeds when the rotational inertia (WR^2) of the driveR and driveN units is known.

3. If coupling to the shaft of a 60 HZ AC motor, you may refer to page 8, locate the correct chart & columns for your sleeve material, motor speed and service factor; you can read the coupling size across from the motor horsepower.

Example: For 150 HP @ 1750 RPM and 1.5 Service Factor - Use #13 EPDM or Neoprene or #10 Hytrel or Urethane.

4. For other speeds, use the following formula to calculate the required coupling horsepower rating @ 100 rpm.

$$\text{HP @ 100 rpm} = \text{HP} \times \text{Service Factor} \times 100 / \text{coupling RPM}$$

5. Use the chart below to find a coupling with a HP @ 100 RPM rating which is greater than calculated above.

Example: For 5 HP @ 55 RPM and 1.25 Service Factor:

$$\text{HP @ 100} = 5 \times 1.25 \times 100 / 55 = 11.36$$

Use #12 EPDM or Neoprene or #9 Hytrel with rating of 11.4 HP.

COUPLING RATINGS

Size	EPDM Sleeves	Neoprene Sleeves	HP @ RPM				Torque (in. lbs.)	Stiffness (in. lbs./rad)	Max RPM
			100	1160	1750	3500			
3	JE,JES	JN,JNS	0.1	1.1	1.7	3.3	60	229	9200
4	E,JE,JES	N,JN,JNS	0.2	2.2	3.3	6.7	120	458	7600
5	E,JE,JES	N,JN,JNS	0.4	4.4	6.7	13	240	916	7600
6	E,JE,JES	N,JN,JNS	0.7	8.3	12.5	25	450	1718	6000
7	E,JE,JES	N,JN,JNS	1.2	13	20	40	725	2769	5250
8	E,JE,JES	N,JN,JNS	1.8	20	32	63	1135	4335	4500
9	E,JE,JES	N	2.9	33	50	100	1800	6875	3750
10	E,JE,JES	N	4.6	53	80	160	2875	10980	3600
11	E	N	7.2	83	126	252	4530	17300	3600
12	E	N	11.4	132	200		7200	27500	2800
13	E	N	18.0	209	315		11350	43350	2400
14	E	N	28.6	331	500		18000	68755	2200
16	E		75.0	870			47250	180480	1500
Size	Hytrel Sleeves	Urethane Sleeves	HP @ RPM				Torque (in. lbs.)	Stiffness (in. lbs./rad)	Max RPM
			100	1160	1750	3500			
6	H, HS		2.9	33	50	100	1800	10000	6000
7	H, HS		4.6	53	80	160	2875	20000	5250
8	H, HS		7.2	84	126	252	4530	30000	4500
9	H, HS		11.4	132	200	400	7200	47500	3750
10	H, HS	U	18.0	209	315	630	11350	100000*	3600
11	H, HS	U	28.6	331	500	1000	18000	125000*	3600
12	H, HS	U	50.0	580	875		31500	225000*	2800
13	HS		75.0	870	1312		47268	368900	2400
14	HS		115.0	1334	2013		72480	593250	2200

* Urethane values are 220000, 350000, and 600000.

Sure-Flex® Coupling

Selection

EPDM or NEOPRENE SLEEVES

860 RPM MOTORS						1160 RPM MOTORS					1750 RPM MOTORS					3500 RPM MOTORS							
HP	Service Factors					HP	Service Factors					HP	Service Factors					HP	Service Factors				
	1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5
1/2	3	3	3	4	4	1/2	3	3	3	3	4	1/2	3	3	3	3	3	1/2
3/4	3	4	4	4	5	3/4	3	3	4	4	4	3/4	3	3	3	3	4	3/4	3	3	3	3	3
1	4	4	4	5	5	1	3	4	4	4	5	1	3	3	3	4	4	1	3	3	3	3	3
1 1/2	4	5	5	5	6	1 1/2	4	4	5	5	5	1 1/2	3	4	4	4	5	1 1/2	3	3	3	3	4
2	5	5	5	6	6	2	4	5	5	5	6	2	4	4	4	5	5	2	3	3	3	4	4
3	5	6	6	6	7	3	5	5	6	6	6	3	4	5	5	5	6	3	3	4	4	4	5
5	6	6	7	7	8	5	6	6	6	7	7	5	5	5	6	6	6	5	4	4	5	5	5
7 1/2	7	7	8	8	9	7 1/2	6	7	7	8	8	7 1/2	6	6	6	7	7	7 1/2	5	5	5	6	6
10	7	8	8	9	9	10	7	7	8	8	9	10	6	6	7	7	8	10	5	5	6	6	6
15	8	9	9	10	10	15	8	8	9	9	10	15	7	7	8	8	9	15	6	6	6	7	7
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125	13	13	14	14	...	125	12	13	13	14	14	125	11	12	12	13	13	125	10	10	11	11	...
150	13	14	14	16	16	150	13	13	14	14	16	150	12	12	13	13	14	150	10	11	11
200	14	14	16	16	16	200	13	14	14	16	16	200	12	13	13	14	14	200	11	11
250	14	16	16	16	16	250	14	14	16	16	16	250	13	13	14	14	...	250	11
300	16	16	16	16	...	300	14	16	16	16	16	300	13	14	14	300
350	16	16	16	350	16	16	16	16	16	350	14	14	350
400	16	16	16	400	16	16	16	16	...	400	14	14	400
450	16	16	450	16	16	450	14	450
500	16	16	500	16	16	500	14	500
600	16	600	16	600	600
700	700	700	700
800	800	800	800

HYTREL or URETHANE SLEEVES

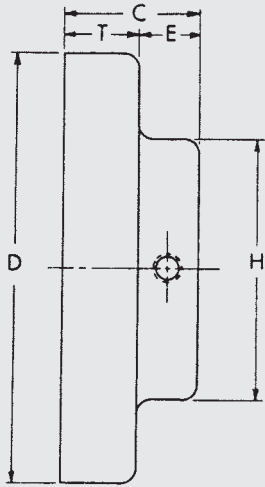
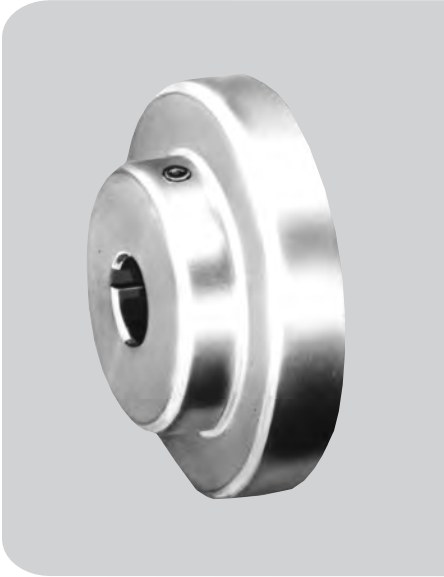
860 RPM MOTORS						1160 RPM MOTORS					1750 RPM MOTORS					3500 RPM MOTORS							
HP	Service Factors					HP	Service Factors					HP	Service Factors					HP	Service Factors				
	1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5		1.0	1.25	1.5	2.0	2.5
7 1/2	6	6	6	6	6	7 1/2	...	...	...	...	...	7 1/2	...	...	...	...	...	7 1/2	...	...	...	...	...
10	6	6	6	6	6	10	6	6	6	6	6	10	...	...	...	...	...	10	...	...	...	...	...
15	6	6	6	7	7	15	6	6	6	6	7	15	6	6	6	6	6	15	...	...	...	...	...
20	6	6	7	7	8	20	6	6	6	7	7	20	6	6	6	6	6	20	...	...	...	...	...
25	6	7	7	8	8	25	6	6	7	7	8	25	6	6	6	6	7	25	...	...	...	...	...
30	7	7	8	8	9	30	6	7	7	8	8	30	6	6	6	7	7	30	6	6	6	6	6
40	7	8	8	9	9	40	7	7	8	8	9	40	6	6	7	7	8	40	6	6	6	6	6
50	8	8	9	9	10	50	7	8	8	9	9	50	6	7	7	8	8	50	6	6	6	6	7
60	8	9	9	10	10	60	8	8	9	9	10	60	7	7	8	8	9	60	6	6	6	7	7
75	9	9	10	10	11	75	8	9	9	10	10	75	7	8	8	9	9	75	6	6	7	7	8
100	9	10	10	11	11	100	9	9	10	10	11	100	8	8	9	9	10	100	6	7	7	8	8
125	10	10	11	11	12	125	9	10	10	11	11	125	8	9	9	10	10	125	7	7	8	8	9
150	10	11	11	12	12	150	10	10	11	11	12	150	9	9	10	10	11	150	7	8	8	9	9
200	11	11	12	12	13	200	10	11	11	12	12	200	9	10	10	11	11	200	8	8	9	9	10
250	11	12	12	13	13	250	11	11	12	12	13	250	10	10	11	11	12	250	8	9	9	10	10
300	12	12	13	13	14	300	11	12	12	13	13	300	10	11	11	12	12	300	9	9	10	10	11
350	12	12	13	14	14	350	12	12	12	13	14	350	11	11	12	12	12	350	9	10	10	11	11
400	12	13	13	14	14	400	12	12	13	13	14	400	11	11	12	12	13	400	9	10	10	11	11
500	13	13	14	14	...	500	12	13	13	14	14	500	11	12	12	13	13	500	10	10	11	11	...
600	13	14	14	...	...	600	13	13	13	14	...	600	12	12	13	13	14	600	10	11	11	...	...
700	14	14	...	...	...	700	13	13	14	14	...	700	12	12	13	14	14	700	11	11	...	...	...
800	14	14	...	...	...	800	13	14	14	...	...	800	12	13	13	14	14	800	11	11	...	...	...
900	14	...	...	...	...	900	14	14	14	...	...	900	13	13	14	14	...	900	11	...	...	...	...
1000	...	...	...	...	...	1000	14	14	...	...	...	1000	13	13	14	14	...	1000	11	...	...	...	...

Type J Sure-Flex® BTS

For Close Coupled Applications

FLANGES

Type J flanges sizes 3.4 and 5 are manufactured of sintered carbon steel. The powdered metal manufacturing process provides high dimensional accuracy and uniform material properties for high strength. Size 6 is made of high strength cast iron. All flanges are bored-to-size for a slip fit on standard shafts. The outside diameter of the flange is machined so the surface can be used to check alignment without a special tool. Type J flanges can be used with sleeves of any construction except the Hytrel. Each flange has a keyseat and one (1) setscrew over the keyway. All have a setscrew at 90° from the keyway.

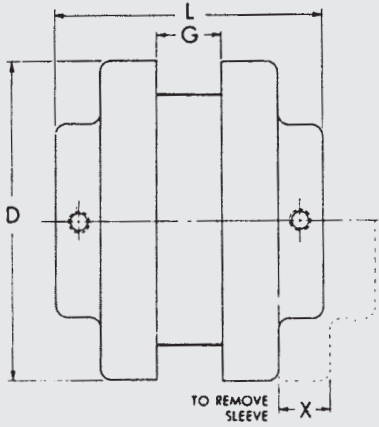


COUPLINGS

Type J Sure-Flex Couplings are bored-to-size. Normally, they employ the one-piece JE sleeve, or the one-piece JES sleeve with saw cut to permit replacement where there is insufficient gap between shafts.

Spacing between internal flange hubs equals G. Spacing between shafts should be greater than 1/8 in. and less than L minus .85 times the sum of the two bore diameters.

To order complete couplings, specify coupling size with flange symbol (J) giving bore and keyseat. Refer to page F1-3 to order the required coupling.



DIMENSIONS (in.)

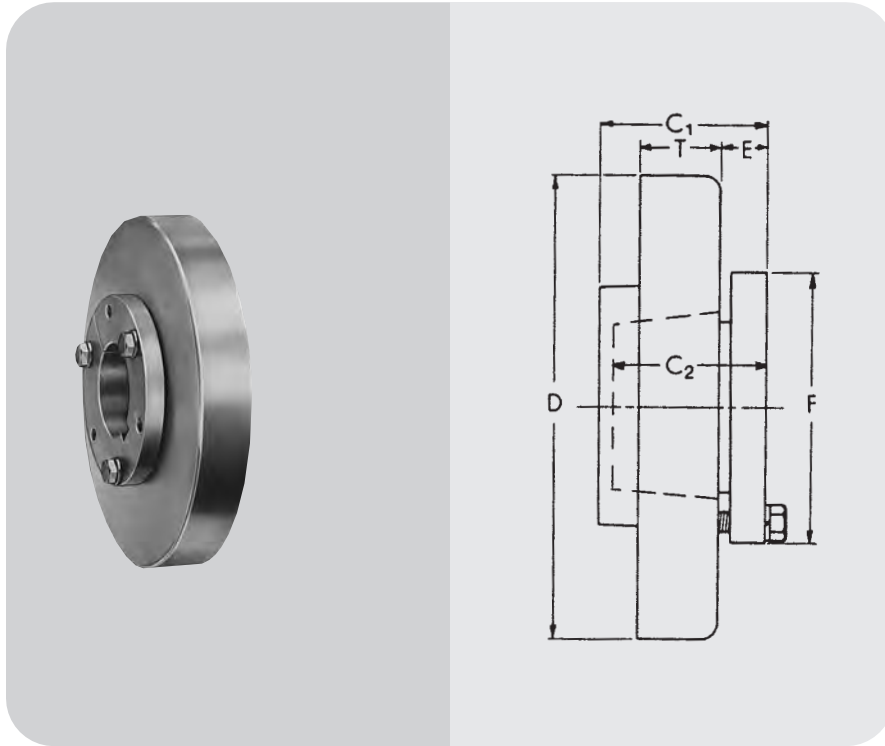
Product No.	Dimensions								Wt. (lbs.)	STOCK BORES*																					
										(Inches)										Millimeters											
	C	D	E	G	H	L	T	X		3/8	1/2	5/8	3/4	7/8	15/16	1	1-1/8	1-3/16	1-1/4	1-3/8	Max Bore	9	11	12	14	15	16	19	20	24	25
3J	51/64	2.062	13/32	3/8	1-1/2	1-31/32	25/64	5/8	0.3	X	X	X	X	X							7/8	...	X	X	X	X	X	X			
4J	55/64	2.500	27/64	43/64	1-5/8	2-25/64	7/16	5/8	0.4		X	X	X	X	X	X					1	...	...	...	X	X	X	X	X	X	X
5J	1-3/64	3.250	29/64	3/4	1-7/8	2-27/32	19/32	59/64	0.9		X	X	X	X	X	X					1-1/8	...	...	...	...	...	...	...	...	...	...
6J	1-5/16	4.000	9/16	7/8	2-1/2	3-1/2	3/4	1-3/32	1.2			X	X	X	X	X	X	X	X	1-3/8	...	...	...	...	...	...	...	...	...	...	...

*We do not recommend reboring the 3J and 4J Flanges. See page F1-13 for standard keyseat dimensions & F1-10 for bore tolerances.

■ Approximate weight for each flange.

Type B Bushed - Flex QD

For Close Coupled Applications



FLANGES

Type B flanges are made of high-strength cast iron the same as Types S, C and SC Sure-Flex flanges. Type B, however, is designed to accommodate Wood's Sure-Grip Bushing for easy installation and removal.

BUSHINGS

Sure-Grip Bushings offer convenient mounting of the flange to the shaft securely without setscrews. They are tapered and are split through both the bushing flange and taper to provide a clamp fit, eliminating wobble, vibration and fretting corrosion. This is the same bushing used in Wood's sheaves and pulleys and is readily available everywhere.

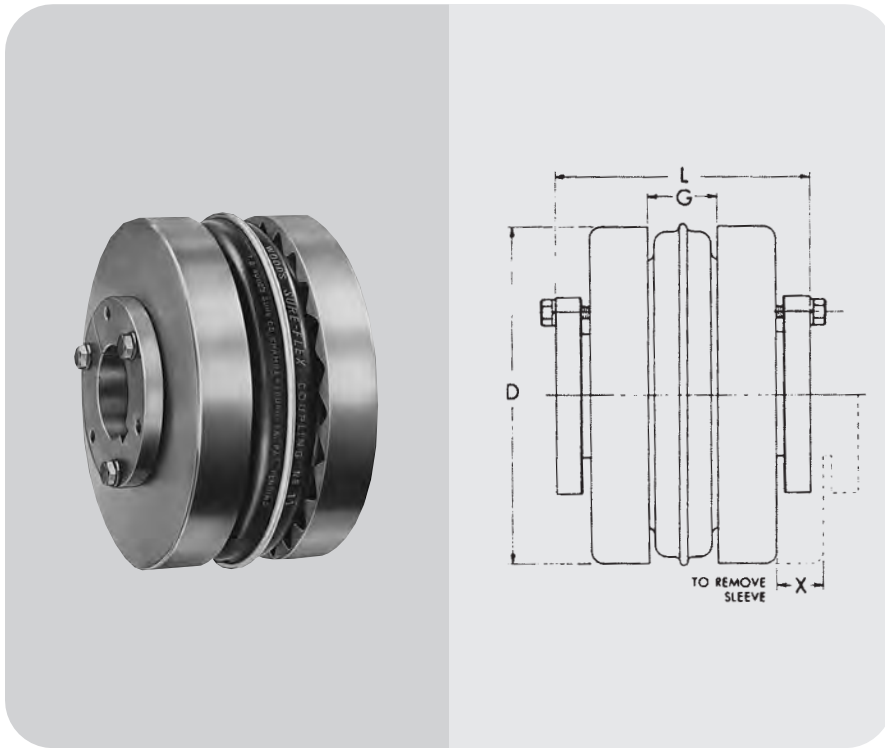
DIMENSIONS (in.)

Product No.	Bushing Required	Dimensions									Max. * Bore	Flange	Weight (lbs.) ■ Bushing
		C ₁	C ₂	D	E	F	G	L	T	X			
6B	JA	1 7/32	1	4.000	15/32	2	7/8	3 3/8	25/32	1 3/32	1 1/4	1.4	.8
7B	JA	1 5/8	1	4.625	15/32	2	1	3 1/2	25/32	1 5/16	1 1/4	1.9	.8
8B	SH	1 29/32	1 1/4	5.450	9/16	2 11/16	1 1/8	4 1/16	29/32	1 1/2	1 5/8	2.9	1.0
9B	SD	2 1/4	1 13/16	6.350	5/8	3 3/16	1 7/16	4 3/4	1 1/32	1 3/4	1 15/16	4.8	1.5
10B	SK	1 15/16	1 7/8	7.500	23/32	3 7/8	1 5/8	5 1/2	1 7/32	2	2 1/2	7.8	2.0
11B	SF	2 3/16	2	8.625	11/16	4 5/8	1 7/8	6 1/4	1 1/2	2 3/8	2 15/16	12.0	3.5
12B	E	2 23/32	2 5/8	10.000	29/32	6	2 5/16	7 1/2	1 11/16	2 11/16	3 1/2	18.0	9.0
13B	F	3 3/4	3 5/8	11.750	1 1/16	6 5/8	2 11/16	8 3/4	1 31/32	3	3 15/16	31.2	14.0
14B	F	3 3/4	3 5/8	13.875	1 1/16	6 5/8	3 1/4	9 7/8	2 1/4	3 1/2	3 15/16	51.4	14.0
16B	J	4 13/16	4 1/2	18.875	1 1/4	7 1/4	4 3/4	12 3/4	2 3/4	4 1/4	4 1/2	120.0	22.0

*Maximum bore with keyseat. ■ Approximate weight for each flange.

Type B Bushed - Flex QD

For Close Coupled Applications



COUPLINGS

Type B Sure-Flex Couplings are normally supplied with the two-piece E sleeve, and can use any EPDM or Neoprene sleeves. DO NOT use Hytrel sleeves with Type B couplings.

Spacing between internal flange hubs equals L minus 2 times C. Spacing between shafts should be greater than 1/8 in. and less than G.

To order complete couplings, specify coupling size with flange symbol (B) and bushing. Refer to page F1-3 to order the required coupling. Refer to charts below for bushings.

SURE-GRIP® BUSHING KEYSEAT DIMENSIONS (in.)

Bushing	Bores	Keyseat
JA	1/2 - 1	Standard ②
	1 1/16 - 1 3/16	1/4 X 1/16
	1 1/4	1/4 X 1/32
SH	1/2 - 1 3/8	Standard ②
	1 7/16 - 1 5/8	3/8 X 1/16
	1 11/16	No K.S.
SD	1/2 - 1 11/16	Standard ②
	1 3/4	3/8 X 1/8
	1 13/16	1/2 X 1/8
	1 7/8 - 1 15/16	1/2 X 1/16
SK	1/2 - 2 1/8	Standard ②
	2 3/16 - 2 1/4	1/2 X 1/8
	2 5/16 - 2 1/2	5/8 X 1/16
	2 9/16 - 2 5/8	No K.S.

Bushing	Bores	Keyseat
SF	1/2 - 2 1/4	Standard ②
	2 5/16 - 2 1/2	5/8 X 3/16
	2 9/16 - 2 3/4	5/8 X 1/16
	2 13/16 - 2 7/8	3/4 X 1/16
	2 15/16	3/4 X 1/32
E	7/8 - 2 7/8	Standard ②
	2 15/16 - 3 1/4	3/4 X 1/8
	3 5/16 - 3 1/2	7/8 X 1/16
F	1 - 3 1/4	Standard ②
	3 5/16 - 3 3/4	7/8 X 3/16
	3 13/16 - 3 15/16	1 X 1/8
	4	No K.S.
J	1 7/16 - 3 13/16	Standard ②
	3 7/8 - 3 15/16	1 X 3/8
	4 - 4 1/2	1 X 1/8

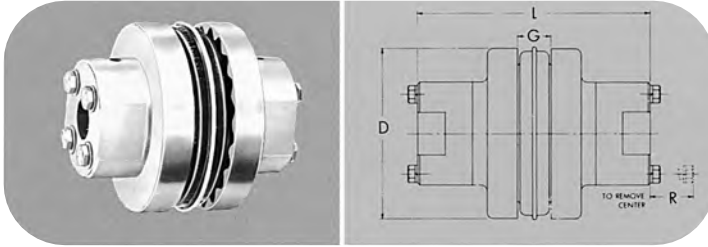
②

Standard Keyseat Dimension

Shaft Dia.	Width	Depth
1/2 - 9/16	1/8	1/16
5/8 - 7/8	3/16	3/32
15/16 - 1 1/4	1/4	1/8
1 5/16 - 1 3/8	5/16	5/32
1 7/16 - 1 3/4	3/8	3/16
1 13/16 - 2 1/4	1/2	1/4
2 5/16 - 2 3/4	5/8	5/16
2 13/16 - 3 1/4	3/4	3/8
3 5/16 - 3 3/4	7/8	7/16
3 13/16 - 4 1/2	1	1/2
4 9/16 - 5 1/2	1 1/4	5/8
5 9/16 - 6 1/2	1 1/2	3/4

Type SC Spacer Couplings BTS

Conventional Spacer Design



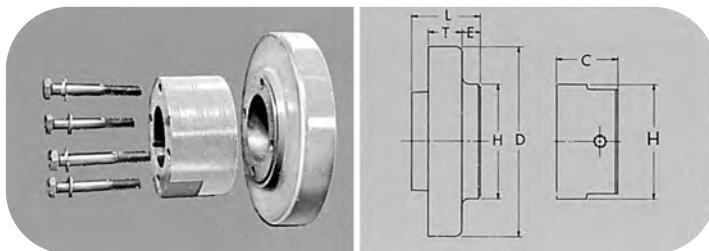
The table below shows assembled dimensions of Sure-Flex Type SC Spacer Couplings. For dimensions of separate components, refer to page F1—15.

Coupling Size	Required Distance Between Shafts	Use Flange No.	Use Hub No.	Max. Bore Std. KS	Dimensions				Wt. (lbs.) ■
					D	L (2)	G	R	
4JSC	3-1/2	4JSC35	....	1-1/8 ⁽¹⁾	2.460	5-5/8	5/8	....	2.7
5SC	3-1/2	5SC35	5SCH	1-1/8	3.250	5-5/8	3/4	9/16	4.5
6SC	3-1/2	6SC35	6SCH-6SCHS	1-3/8	4.000	5-7/8	7/8	3/4	7.3
	4-3/8	6SC44	6SCH-6SCHS	1-3/8	4.000	6-3/4	7/8	3/4	8.1
	5	6SC50	6SCH-6SCHS	1-3/8	4.000	7-3/8	7/8	3/4	8.7
7SC	3-1/2	7SC35	7SCH-7SCHS	1-5/8	4.625	6-3/8	1	5/8	9.9
	4-3/8	7SC44	7SCH-7SCHS	1-5/8	4.625	7-1/4	1	5/8	10.8
	5	7SC50	7SCH-7SCHS	1-5/8	4.625	7-7/8	1	5/8	11.4
8SC	3-1/2	8SC35	8SCH-8SCHS	1-7/8	5.450	6-7/8	1-1/8	13/16	15.2
		8SC35-10	10SCH-10SCHS	2-3/8	5.450	8-1/8	1-1/8	13/16	23.2
	4-3/8	8SC44	8SCH-8SCHS	1-7/8	5.450	7-3/4	1-1/8	13/16	16.4
		8SC50	8SCH-8SCHS	1-7/8	5.450	8-3/8	1-1/8	1-3/16	17.4
5	8SC50-10	10SCH-10SCHS	2-3/8	5.450	9-5/8	1-1/8	1-3/16	27.2	
	3-1/2	9SC35	9SCH-9SCHS	2-1/8	6.350	7-1/2	1-7/16	1-1/16	18.6
9SC	4-3/8	9SC44	9SCH-9SCHS	2-1/8	6.350	8-1/4	1-7/16	1-1/16	22.2
		9SC50	9SCH-9SCHS	2-1/8	6.350	8-7/8	1-7/16	1-1/16	23.2
	5	9SC50-11	11SCH-11SCHS	2-7/8	6.350	10-3/8	1-7/16	1-3/16	40.4
		9SC70-11	11SCH-11SCHS	2-7/8	6.350	12-3/8	1-7/16	1-3/16	48.2
		9SC78-11	11SCH-11SCHS	2-7/8	6.350	13-1/8	1-7/16	1-3/16	51.0
10SC	4-3/4	10SC48	10SCH-10SCHS	2-3/8	7.500	9-3/8	1-5/8	1-3/16	37.6
	5	10SC50	10SCH-10SCHS	2-3/8	7.500	9-5/8	1-5/8	1-3/16	38.4
		10SC70-13	13SCH-13SCHS	3-3/8	7.500	13-5/8	1-5/8	1-7/8	72.0
	7-3/4	10SC78-13	13SCH-13SCHS	3-3/8	7.500	14-3/8	1-5/8	1-7/8	76.0
	10	10SC100-13	13SCH-13SCHS	3-3/8	7.500	16-5/8	1-5/8	1-7/8	88.0
11SC	4-3/4	11SC48	11SCH-11SCHS	2-7/8	8.625	10-5/16	1-7/8	1-3/16	54.5
	5	11SC50	11SCH-11SCHS	2-7/8	8.625	10-3/8	1-7/8	1-3/16	54.7
		11SC70-14	14SCH	3-7/8	8.625	14-5/8	1-7/8	2	86.1
	7-3/4	11SC78-14	14SCH	3-7/8	8.625	15-3/8	1-7/8	2	90.3
	10	11SC100-14	14SCH	3-7/8	8.625	17-5/8	1-7/8	2	102.7
12SC	7	12SC70	12SCH-12SCHS	2-7/8	10.000	12-7/8	2-5/16	1-1/2	88.1
		12SC70-14	14SCH	3-7/8	10.000	14-5/8	2-5/16	2	99.1
	7-3/4	12SC78	12SCH-12SCHS	2-7/8	10.000	13-5/8	2-5/16	1-1/2	91.9
		12SC78-14	14SCH	3-7/8	10.000	15-3/8	2-5/16	2	103.3
		12SC100-14	14SCH	3-7/8	10.000	17-5/8	2-5/16	2	115.7
13SC	7-3/4	13SC78	13SCH-13SCHS	3-3/8	11.750	14-3/8	2-11/16	1-7/8	129.6
14SC	7-3/4	14SC78	14SCH	3-7/8	13.875	15-3/8	3-1/4	2	179.9

■ Approximate weight for completely assembled spacer coupling.

(1) 4JSC35 x 1-1/8 has shallow keyseat. (2) "L" dimension and weight will change if one or two short (HS) hubs used.

Note: Refer to page F1—15 to order — specify components separately.



TYPE SC FLANGES AND HUBS

Tables on page F1—15 provide dimensional information for flanges and hubs used for Spacer Couplings. For assembled dimensions, see table above. Any of the sleeves shown on page F1—5 may be used.

Type SC Flanges And Hubs BTS

Conventional Spacer Design

(ILLUSTRATION AND DIMENSIONAL DRAWINGS SHOWN AT BOTTOM OF PAGE F1—14.)

Coupling Size	Flange No.	For Distance Between Shafts*	For Hub	Dimensions					Wt. (lbs.) ■
				D	E	H	L	T	
4JSC	4JSC35	3-1/8	...	2.460	2-1/16	2	2-1/2	7/16	1.3
5SC	5SC35	3-1/2	5SCH	3.250	51/64	2	1-11/16	19/32	1.3
6SC	6SC35	3-1/2	6SCH-6SCHS	4.000	19/32	2-1/2	1-5/8	23/32	2.0
	6SC44	4-3/8	6SCH-6SCHS	4.000	1-1/32	2-1/2	2-1/16	23/32	2.4
	6SC50	5	6SCH-6SCHS	4.000	1-11/32	2-1/2	2-3/8	23/32	2.7
7SC	7SC35	3-1/2	7SCH-7SCHS	4.625	15/32	2-13/16	1-5/8	25/32	2.5
	7SC44	4-3/8	7SCH-7SCHS	4.625	29/32	2-13/16	2-1/16	25/32	3.0
	7SC50	5	7SCH-7SCHS	4.625	1-7/32	2-13/16	2-3/8	25/32	3.3
8SC	8SC35	3-1/2	8SCH-8SCHS	5.450	9/32	3-1/4	1-5/8	29/32	3.7
	8SC35-10	3-1/2	10SCH-10SCHS	5.450	9/32	4-3/8	1-5/8	29/32	3.5
	8SC44	4-3/8	8SCH-8SCHS	5.450	23/32	3-1/4	2-1/16	29/32	4.3
	8SC50	5	8SCH-8SCHS	5.450	1-1/32	3-1/4	2-3/8	29/32	4.8
	8SC50-10	5	10SCH-10SCHS	5.450	1-1/32	4-3/8	2-3/8	29/32	5.5
9SC	9SC35	3-1/2	9SCH-9SCHS	6.350	1/16	3-5/8	1-11/16	1-1/32	4.1
	9SC44	4-3/8	9SCH-9SCHS	6.350	7/16	3-5/8	2-1/16	1-1/32	5.9
	9SC50	5	9SCH-9SCHS	6.350	3/4	3-5/8	2-3/8	1-1/32	6.4
	9SC50-11	5	11SCH-11SCHS	6.350	3/4	5-1/4	2-3/8	1-1/32	7.0
	9SC70-11	7	11SCH-11SCHS	6.350	1-3/4	5-1/4	3-3/8	1-1/32	10.9
	9SC78-11	7-3/4	11SCH-11SCHS	6.350	2-1/8	5-1/4	3-3/4	1-1/32	12.3
10SC	10SC48	4-3/4	10SCH-10SCHS	7.500	11/32	4-3/8	2-1/4	1-7/32	9.8
	10SC50	5	10SCH-10SCHS	7.500	15/32	4-3/8	2-3/8	1-7/32	10.2
	10SC70-13	7	13SCH-13SCHS	7.500	1-15/32	6-1/8	3-3/8	1-7/32	14.5
	10SC78-13	7-3/4	13SCH-13SCHS	7.500	1-27/32	6-1/8	3-3/4	1-7/32	16.5
	10SC100-13	10	13SCH-13SCHS	7.500	2-31/32	6-1/8	4-7/8	1-7/32	22.5
11SC	11SC48	4-3/4	11SCH-11SCHS	8.625	1/32	5-1/4	1-1/2	1-1/2	12.5
	11SC50	5	11SCH-11SCHS	8.625	1/16	5-1/4	1-9/16	1-1/2	12.6
	11SC70-14	7	14SCH	8.625	1-1/16	6-1/2	2-9/16	1-1/2	16.3
	11SC78-14	7-3/4	14SCH	8.625	1-7/16	6-1/2	2-15/16	1-1/2	18.4
	11SC100-14	10	14SCH	8.625	2-9/16	6-1/2	4-1/16	1-1/2	24.6
12SC	12SC70	7	12SCH-12SCHS	10.000	21/32	5-3/4	2-15/32	1-11/16	23.4
	12SC70-14	7	14SCH	10.000	21/32	6-1/2	2-15/32	1-11/16	21.3
	12SC78	7-3/4	12SCH-12SCHS	10.000	1-1/32	5-3/4	2-27/32	1-11/16	25.3
	12SC78-14	7-3/4	14SCH	10.000	1-1/32	6-1/2	2-27/32	1-11/16	23.4
	12SC100-14	10	14SCH	10.000	2-5/32	6-1/2	3-31/32	1-11/16	29.6
13SC	13SC78	7-3/4	13SCH-13SCHS	11.750	9/16	6-1/8	3-1/4	1-31/32	38.4
14SC	14SC78	7-3/4	14SCH	13.875	1/32	6-1/2	2-23/32	2-1/4	55.2

* Flanges can be mixed to form different Between-Shaft Dimensions. See chart page F1—16. ■ Approximate weight for each flange.
▲ If using 10HS hub, 7/16-14NC x 2-1/4 long capscrew needed (not furnished).

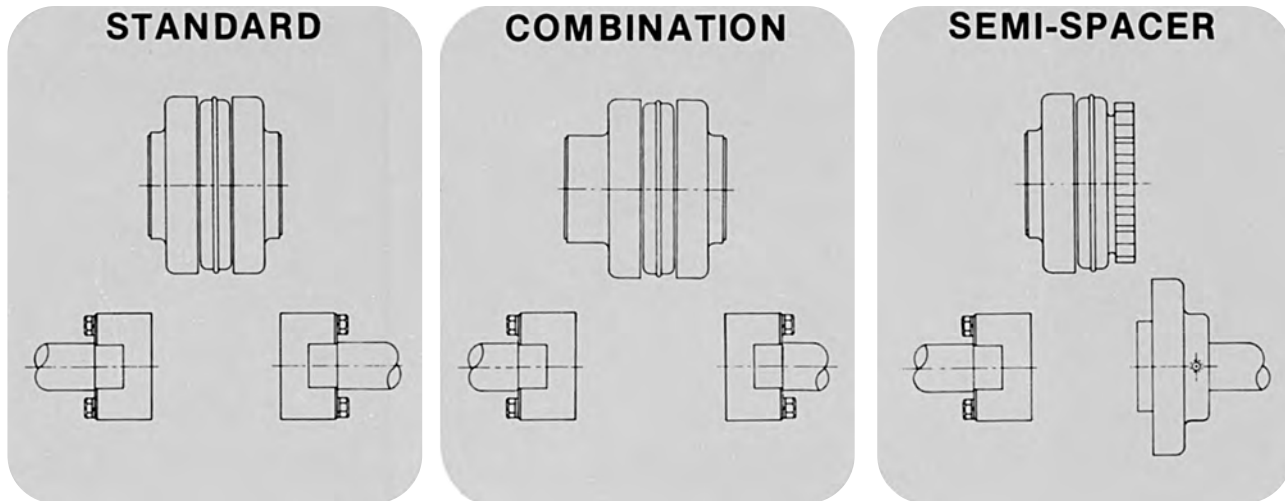
Coupling Size	Hub No.	Max. Bore	STOCK BORES *		Dimensions			Wt. (lbs.) Ⓢ
			Plain Bore	Bore with Standard Keyway & Set Screw	C	H	Cap Screws Furnished	
4JSC	†	1-1/8	...	5/8 - 7/8 - 1 - 1-1/8*	1-1/16	2	...	...
5SC	5SCH	1-1/8	1/2	5/8 - 3/4 - 7/8 - 1 - 1-1/8	1-3/32	2	4-10 x 1-1/2	.8
6SC	6SCH	1-3/8	5/8	3/4 - 7/8 - 1 - 1-1/8 - 1-1/4 - 1-3/8	1-7/32	2-1/2	4-1/4 x 1-3/4	1.4
	6SCHS	7/8	...	7/8	31/32	2-1/2	4-1/4 x 1-1/2	1.1
7SC	7SCH	1-5/8	5/8	7/8 - 1 - 1-1/8 - 1-3/8 - 1-1/2 - 1-5/8	1-15/32	2-13/16	4-1/4 x 1-7/8	2.0
	7SCHS	7/8	...	7/8	1-3/32	2-13/16	4-1/4 x 1-1/2	1.5
8SC	8SCH	1-7/8	3/4	7/8 - 1 - 1-1/8 - 1-3/8 - 1-1/2 - 1-5/8 - 1-3/4 - 1-7/8	1-23/32	3-1/4	4-5/16 x 2-1/4	3.2
	8SCHS	7/8	...	7/8	1-7/32	3-1/4	4-5/16 x 1-3/4	2.0
9SC	9SCH	2-1/8	7/8	1 - 1-1/8 - 1-3/8 - 1-1/2 - 1-5/8 - 1-3/4 - 1-7/8 - 2-1/8	1-31/32	3-5/8	4-3/8 x 2-3/4	4.2
	9SCHS	1-1/2	...	1-1/8	1-17/32	3-5/8	4-3/8 x 2-1/4	3.7
10SC	10SCH	2-3/8	1-1/8	1-5/8 - 1-7/8 - 2-1/8 - 2-3/8	2-11/32	4-3/8	4-7/16 x 3-1/4	7.4
	10SCHS	1-5/8	...	1-1/8	1-21/32	4-3/8	4-7/16 x 2-1/2	5.5
11SC	11SCH	2-7/8	1-1/8	1-7/8 - 2-1/8 - 2-3/8 - 2-7/8	2-23/32	5-1/4	4-1/2 x 3-1/2	12.2
	11SCHS	1-7/8	...	1-1/8 - 1-5/8	1-29/32	5-1/4	4-1/2 x 2-3/4	9.3
12SC	12SCH	2-7/8	1-3/8	2-1/8 - 2-3/8 - 2-7/8	2-31/32	5-3/4	4-5/8 x 4	16.6
	12SCHS	2-1/2	...	2-3/8	2-17/32	5-3/4	4-5/8 x 3-1/2	14.1
13SC	13SCH	3-3/8	1-3/8	2-3/8 - 2-7/8 - 3-3/8	3-11/32	6-1/8	4-5/8 x 4-1/2	19.9
	13SCHS	2-1/2	...	2-1/8 - 2-3/8	2-15/32	6-1/8	4-5/8 x 3-1/2	16.0
14SC	14SCH	3-7/8	1-5/8	2-3/8 - 2-7/8 - 3-3/8 - 3-7/8	3-27/32	6-1/2	4-5/8 x 5	24.2

† FOR 4JSC the hub is an integral part of the flange. 4JSC x 1-1/8 has 1/4 x 1/16 shallow keyseat. ■ Approximate weight for each hub.
* See page F1—10 for bore tolerances F1—13 for std. keyseat dimensions.

Between Shaft Spacings

Spacer couplings are available having the most popular between shaft dimensions. Other spacings can be achieved by mixing flanges.

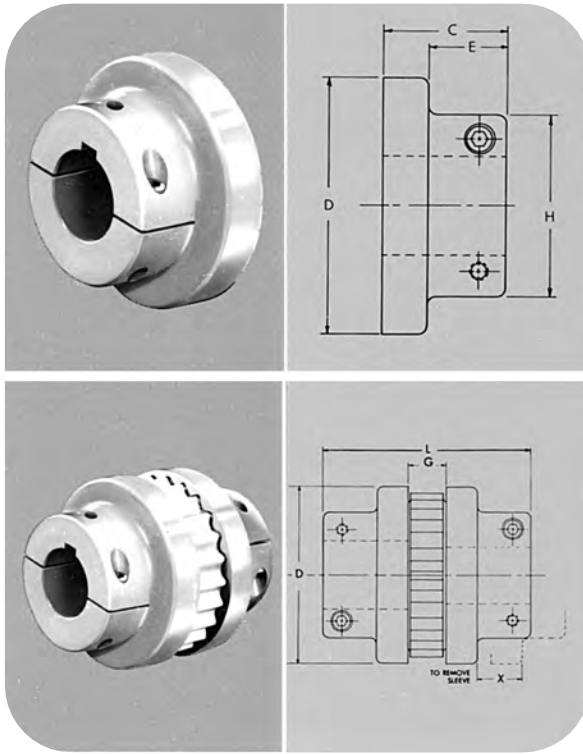
The “Standard” column provides spacings using identical flanges; the “Combination” column mixes flanges; the column headed “Semi-Spacer” uses one flange that is not made for spacer coupling applications and thus does not have a detachable hub.



STANDARD		COMBINATION		SEMI-SPACER	
Spacing	Use Flanges*	Spacing	Use Flanges*	Spacing	Use Flanges*
3-1/2	2-() SC35	3-15/16	SC35 & SC44	1-7/8	S & SC35
4-3/8	2-() SC44	4-1/4	SC35 & SC50	2-5/16	S & SC44
5	2-() SC50	4-11/16	SC44 & SC50	2-5/8	S & SC50
7	2-() SC70	5-1/4	SC35 & SC70	3-5/8	S & SC70
7-3/4	2-() SC78	5-5/8	SC35 & SC78	4	S & SC78
10	2-() SC100	5-11/16	SC44 & SC70	5-1/8	S & SC100
		6	SC50 & SC70		
		6-1/16	SC44 & SC78		
		6-3/8	SC50 & SC78		
		6-3/4	SC35 & SC100**		
		7-3/16	SC44 & SC100**		
		7-3/8	SC70 & SC78		
		7-1/2	SC50 & SC100		
		8-1/2	SC70 & SC100		
		8-7/8	SC78 & SC100		

* Check individual coupling size for flange availability.
 ** Non-Stock
 Note: Other combinations available — consult factory.

CLAMP HUB – SPACER DESIGN



FLANGES

Sure-Flex® Type C Clamp Hub flanges employ integral locking collars and screws to assure a clamp fit on the shaft. One setscrew is furnished over the key. They are designed primarily for applications where flanges must be removed from one or both shafts without moving either the driver or driven units. A typical application is a screw compressor which uses a replaceable face seal around the input shaft.

COUPLINGS

Type C Clamp Hub Couplings normally use Hytrel sleeves. However, any of the sleeves shown on page F1-5 can be used. Type C couplings may often be used where spacer couplings are required.

Spacing between internal flange hubs equals G.

To order complete couplings, specify coupling size with flange symbol (C), giving bore required. Refer to page F1-3 to order the required coupling.

DIMENSIONS (in.)

Flange Size	Stock Bores	Min. Bore	Maximum Bore		Distance Between Shafts		Dimensions						Approx. Wt. (lbs.)*	
			Standard Keyseat	Shallow Keyseat	Min.	Max.	C	D	E	G	H	L		X
6C	1-1/8, 1-7/8, 40mm	7/8	1-5/8	1-7/8	2	2-3/4	1-15/16	4.000	1.16	7/8	3	4-3/4	1	2.6
7C	1-3/8, 1-7/8, 35mm, 40mm	1-1/8	1-7/8	-	2-5/16	3-7/16	2-3/16	4.625	1.41	1-1/16	3-1/4	5-7/16	1-3/16	3.6
8C	1-3/8, 1-5/8, 1-3/4, 1-7/8, 2-1/8, 2-1/4, 2-3/8, 40mm	1-3/8	2-1/4	2-3/8	2-9/16	4	2-1/2	5.450	1.59	1-1/8	3-7/8	6-1/8	1-3/8	6.5
9C	1-5/8, 1-3/4, 1-7/8, 2, 2-1/8, 2-1/4, 2-3/8, 2-1/2	1-5/8	2-1/2	2-11/16	3-1/16	4-5/8	3	6.350	1.97	1-7/16	4-1/4	7-7/16	1-9/16	9.8
10C	1-5/8, 1-7/8, 2-1/4, 2-3/8, 2-1/2	1-5/8	2-7/8	-	3-9/16	5-1/4	3-1/2	7.500	2.28	1-11/16	5	8-11/16	1-13/16	16.6
11C	2-1/8, 2-3/8, 2-1/2	1-7/8	3-3/8	-	4-1/8	5-7/8	4	8.625	2.5	1-7/8	5-3/8	9-7/8	2-1/8	26.0
12C	2-1/8	1-7/8	3-3/8	-	4-7/8	6-1/2	4-3/8	10.000	2.69	2-3/8	6	11-1/8	2-3/8	38.3

For Standard keyseat dimensions, see chart page F1-13. * Weight of one flange.

Bore Tolerances for Type C Flanges

These bores provide a slip fit.

Bore (in.)	Tolerance (in.)
Up to and including 2"	+0.0005 to +0.0015
Over 2"	+0.0005 to +0.0020

Shallow Keyseat Dimensions

Some large bore Type C flanges are supplied with shallow keyseats. In these cases, a rectangular key is furnished. The flanges and bores involved are as follows:

Size	Bore Range	KS	Key Furnished
6C	1-11/16 to 1-7/8	1/2 X 1/16	1/2 x 5/16 x 1-15/16
8C	2-5/16 to 2-3/8	5/8 x 1/16	5/8 x 3/8 x 2-1/2
9C	2-7/16 to 2-11/16	5/8 x 3/16	5/8 x 1/2 x 3

Sure-Flex® Couplings

Installation Instructions

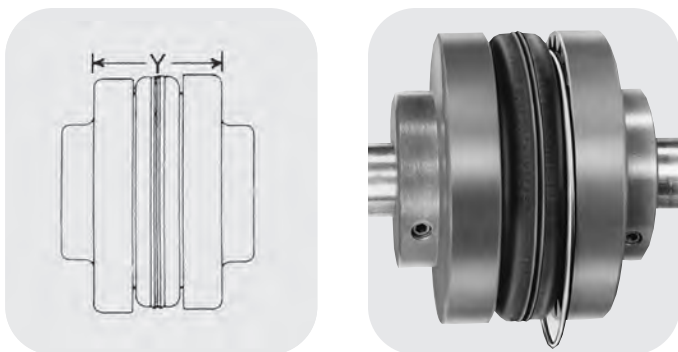
Installation Instructions

Sure-Flex flanges (outer metallic parts) and sleeves (inner elastomeric members) come in many sizes and types. First, determine the size and type of components being used. Remove all components from their boxes, and loosely assemble the coupling on any convenient surface. (Do not attempt to install the wire ring on the two-piece E or N sleeve at this time.) Also check maximum RPM values in the table against operating speed. All rubber sleeves (EPDM and Neoprene) have the same ratings for a given size and may be used interchangeably. However, because rubber and Hytrel sleeves have completely different ratings, they never should be used interchangeably.

1 Inspect all coupling components and remove any protective coatings or lubricants from bores, mating surfaces and fasteners. Remove any existing burrs, etc. from the shafts.

2 Slide one coupling flange onto each shaft, using snug-fitting keys where required. When using Type B flanges, follow the instructions furnished with the Sure-Grip bushing.

3 Position the flanges on the shafts to approximately achieve the Y dimension shown in the table. It is usually best to have an equal length of shaft extending into each flange. Move one flange to its final position. Torque fasteners to proper values. Slide the other flange far enough away to install the sleeve. With a two-piece sleeve, do not move the wire ring to its final position; allow it to hang loosely in the groove adjacent to the teeth.



4 Slide the loose flange on the shaft until the sleeve is completely seated in the teeth of each flange. (The “Y” dimension is for reference and not critical.) Secure the flange to the shaft. Different coupling sleeves require different degrees of alignment precision. Locate the alignment values for your sleeve size and type in the table.

5 Check parallel alignment by placing a straight-edge across the two coupling flanges and measuring the maximum offset at various points around the periphery of the coupling without rotating the coupling. If the maximum offset exceeds the figure shown under “Parallel” in the table, realign the shafts.

6 Check angular alignment with a micrometer or caliper. Measure from the outside of one flange to the outside of the other at intervals around the periphery of the coupling. Determine the maximum and minimum dimensions without rotating the coupling. The difference between the maximum and minimum must not exceed the figure given under “Angular” in the table. If a correction is necessary, be sure to recheck the parallel alignment.



Parallel



Angular

MAXIMUM RPM AND ALLOWABLE MISALIGNMENT

(Dimensions in inches)

Sleeve Size	Maximum RPM	Types JE, JN, JES, JNS, E & N			*Type H, HS, Urethane		
		Parallel	Angular	Y	Parallel	Angular	Y
3	9200	.010	.035	1.188	...	...	...
4	7600	.010	.043	1.500	...	...	...
5	7600	.015	.056	1.938	...	...	...
6	6000	.015	.070	2.375	.010	.016	2.375
7	5250	.020	.081	2.563	.012	.020	2.563
8	4500	.020	.094	2.938	.015	.025	2.938
9	3750	.025	.109	3.500	.017	.028	3.500
10	3600	.025	.128	4.063	.020	.032	4.063
11	3600	.032	.151	4.875	.022	.037	4.875
12	2800	.032	.175	4.688	.025	.042	5.688
13	2400	.040	.195	6.688	.030	.050	6.625
14	2200	.045	.242	7.750	.035	.060	7.750
16	1500	.062	.330	10.250	...	...	...

Note: Values shown above apply if the actual torque transmitted is more than 1/4 the coupling rating. For lesser torque, reduce the above values by 1/2.

*Type H and HS sleeves **should not** be used as direct replacements for EPDM or Neoprene sleeves.

7 If the coupling employs the two-piece sleeve with the wire ring, force the ring into its groove in the center of the sleeve. It may be necessary to pry the ring into position with a blunt screwdriver.

8 Install coupling guards per OSHA requirements.

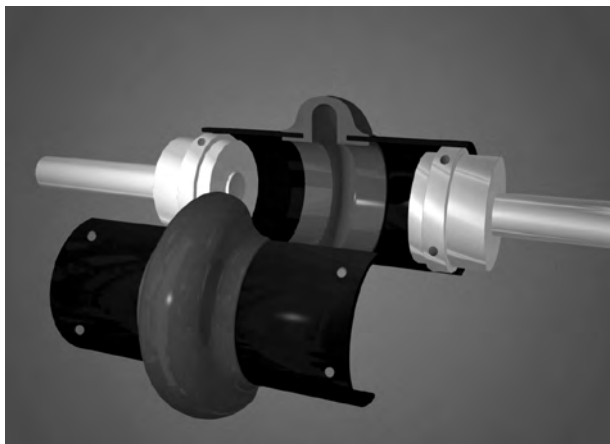
CAUTION: Coupling sleeves may be thrown from the coupling assembly with substantial force when the coupling is subjected to a severe shock load or abuse.

Dura-Flex® Couplings

F2



Patent No. 5,611,732



The specially designed split-in-half element can be easily replaced without moving any connected equipment.

FEATURES

- Designed from the ground up using finite element analysis to maximize flex life.
- Easy two piece element installation. No need to move the hubs during replacement.
- One spacer size to handle most different between shaft spacings.
- Light weight element absorbs shock loading and torsional vibration.
- Same hubs used on both spacer and standard elements.
- No lubrication.
- Good chemical resistance.
- Stock bore-to-size (BTS), Sure-Grip bushed (QD) and Taper-Lock® bushed (TL) Hubs.

® Taper-Lock is a registered tradename of Rockwell Automation-Dodge.

Dura-Flex® Coupling

Selection

A. Determine the Prime Mover Classification

Prime Mover	Class
• Electric Motors (Standard duty), Hydraulic Motors, Turbines	A
• Gasoline or Steam Engines (4 or more cylinders)	B
• Diesel or Gas Engines, High Torque Electric Motors	C

B. Determine the Load Characteristics and the Service Factor

Typical Applications	Load	Characteristics	Prime Mover Class		
			A	B	C
Agitators (pure liquids), Blowers (centrifugal, Can and Bottle Filling Machines, Conveyors - uniformly loaded or fed (belt, chain, screw), Fans (centrifugal), Generators (uniform load), Pumps (centrifugal), Screens (air washing, water), Stokers (uniform load), Woodworking Machines (planers, routers, saws)	Uniform	Even loads - no shock - non reversing - infrequent starts (up to 10 per hour) - low starting torques	1.0	1.5	2.0
Beaters, Blowers (lobe, vane), Compressors (centrifugal, rotary), Conveyors - non uniformly loaded or fed (belt, bucket, chain, screw), Dredge Pumps, Fans (forced draft, propeller), Kilns, Paper Mills (calendars, converting machines, conveyors, dryers, mixers, winders), Printing Presses, Pumps (gear, rotary), Shredders, Textile Machinery (dryers, dyers)	Moderate shock	Uneven loads - moderate shock Infrequent reversing-moderate torques	1.5	2.0	2.5
Cranes (bridge, hoist, trolley), Fans (cooling tower), Generators (welding), Hammer Mills, Mills (ball, pebble, rolling, tube, tumbling), Pumps (oil well), Wire Drawing Machines	Heavy shock	Uneven loads - heavy shock - frequent starts and stops - high starting torques - high inertia peak loads	2.0	2.5	3.0

Note: The above applications depict the generally accepted conditions encountered in industry. Conditions subject to extreme temperatures, abrasive dusts, corrosive liquids, excessively high starting torques, etc., must be considered as extra heavy shock loads. These conditions will increase service factors. Consult TB Wood's for these selections.

C. Calculate Design Horsepower or Design Torque

- If Prime Mover is a 1160, 1750, or 3500 rpm motor.
Design Hp = Prime Mover HP x Service Factor
Go to page F2—3 and reference the corresponding motor rpm column.
- If Prime Mover is not one of the three speeds listed above.
Design HP @ 100 rpm = (Prime Mover Hp x Service Factor x 100) / Coupling RPM
Go to page F2—3 and reference HP @ 100 RPM column.
- If Using Prime Mover Torque
Design Torque = Prime Mover Torque x Service Factor
Go to page F2—3 and reference Torque column.

D. Select Coupling (DURA-FLEX Couplings are sold by component)

A DURA-FLEX Assembly consists of one element (STD or Spacer) and two hubs (BTS or QD). Optional high speed rings may also be ordered for spacer elements. Below is an ordering example for Dura-Flex Couplings.

	Part #	Description	Size 20 Example
Element (1)	WE2 - WE80 WES2 - WES80	Standard element, sizes 2 through 80 Spacer element, sizes 2 through 80	WE20 WES20
Hubs (2)	WE[2-80] x Bore WE[4-80] - Bushing WE[3-80] - TL Bushing	BTS hubs - stock bore (specify bore size) QD hubs (sizes 4 through 80, bushing not included) TL hubs (sizes 3 through 80, bushing not included)	WE20H138 WE20H WE20HTL
HS Rings (1)	WE[20-80]R	High speed rings - sizes 20-80 (standard for sizes 2-10)	WE20R

COUPLING RATINGS (STD & SPACER)

Coupling Size	HP @ RPM				Torque (IN LBS)	Stiffness in lbs/Radian	Maximum Rpm		Max. Misalignment	
	100	1160	1750	3500			Standard	Spacer*	Parallel	Angular
WE2	.30	3.50	5.28	10.55	190	3170	7500	7500	1/16	4°
WE3	.58	6.72	10.13	20.27	365	4710	7500	7500	1/16	4°
WE4	.88	10.12	15.27	30.54	550	5370	7500	7500	1/16	4°
WE5	1.48	17.02	25.68	51.37	925	9820	7500	7500	1/16	4°
WE10	2.30	26.69	40.26	80.52	1450	15800	7500	7500	1/16	4°
WE20	3.65	42.33	63.86	127.73	2300	27600	6600	4800	3/32	3°
WE30	5.79	67.18	101.35	202.70	3650	42200	5800	4200	3/32	3°
WE40	8.85	101.23	152.72	305.43	5500	65200	5000	3600	3/32	3°
WE50	12.14	140.80	212.42	424.83	7650	123000	4200	3100	3/32	3°
WE60	19.84	230.07	347.08	694.17	12500	167000	3800	2800	1/8	2°
WE70	35.12	407.39	614.60	1229.20	22125	205000	3600	2600	1/8	2°
WE80	62.70	727.32	1097.30	2194.50	39500	305000	2000	1800	1/8	2°

*Maximum spacer RPM = Maximum standard RPM if using optional high speed rings. Operating temperature range is -40 F to 200 F.

BTS HUBS - STOCK BORES

BORE SIZE	PRODUCT NO.*	WE2H	WE3H	WE4H	WE5H	WE10H	WE20H	WE30H	WE40H	WE50H	WE60H	WE70H	WE80H
1/2	12	OS	OS										
5/8	58	X	X	OSX									
3/4	34	XS	XS		OS								
7/8	78	XS	XS	XS	X	OS	OS						
15/16	15/16			X									
1	1	XS	XS	XS	X	X	X	OS	OS				
1-1/16	1116				X								
1-1/8	118	XS	XS	XS	XS	XS	XS	X					
1-3/16	1316			X	X								
1-1/4	114		XS	X	X	X	XS			O			
1-5/16	1516			X	X								
1-3/8	138		XS	XS	XS	XS	XS	XS					
1-7/16	1716			X	X	X							
1-1/2	112			X	X	X	XS	XS	XS				
1-9/16	1916			X									
1-5/8	158			XS	XS	XS	XS	XS	XS		O		
1-11/16	11116			X	X	X	X	X					
1-3/4	134				X	X	XS	XS	XS	X			
1-7/8	178				XS	XS	XS	XS	XS	X			
1-15/16	11516					X	X						
2	2					S	X	XS					
2-1/8	218					X	XS	XS	X	X	X	O	
2-3/16	2316						X						
2-1/4	214						XS	XS	X	X			
2-3/8	238						XS	XS	XS	X	X	X	O
2-1/2	212							XS	X				
2-5/8	258											X	
2-3/4	234							XS	XS				
2-7/8	278							XS	XS	X	X	X	X
3-3/8	338								XS	X	X	X	X
3-3/4	334												X
3-7/8	378										X	X	X
4	4										X		
4-3/8	438											X	
4-7/8	478												X
MAX BORE		1-1/8	1-3/8	1-11/16	1-7/8	2-1/8	2-3/8	2-7/8	3-3/8	3-5/8	4	4-1/2	6

O NO KEYSEAT

X STANDARD KEYSEAT

S STEEL HUB OPTION

MAX. BORE INCLUDES STANDARD KEYSEAT

* **PRODUCT NUMBER EXAMPLE** → WE5H114 for WE5 x 1-1/4 HUB
WE5HS118 for WE5 x 1-1/8 STEEL HUB

BORE TOLERANCES (BTS)

BORE SIZE	TOLERANCE
UP TO AND INCLUDING 2"	+ .0005 to + .0015
OVER 2"	+ .0005 to + .0020

Dura-Flex® BTS Couplings

Dimensions

Assembly Dimensions for BTS Couplings.

(All dimensions in inches) Minimum Shaft Spacing = .25"

Dimensions Common to BTS Standard and Spacer Assemblies

SIZE	A	B	C	Max. Bore
WE2 & WES2	3.70	1.85	0.94	1-1/8
WE3 & WES3	4.24	2.32	1.50	1-3/8
WE4 & WES4	4.52	2.6	1.69	1-5/8
WE5 & WES5	5.40	3.13	1.75	1-7/8
WE10 & WES10	6.48	3.65	1.88	2-1/8
WE20 & WES20	7.36	4.48	2.06	2-3/8
WE30 & WES30	8.41	5.42	2.31	2-7/8
WE40 & WES40	9.71	6.63	2.50	3-3/8
WE50 & WES50	11.34	8.13	2.75	3-5/8
WE60 & WES60	12.53	8.75	3.25	4
WE70 & WES70	14.00	9.25	3.62	4-1/2
WE80 & WES80	16.00	11.3	4.98	6

Standard Element Assembly

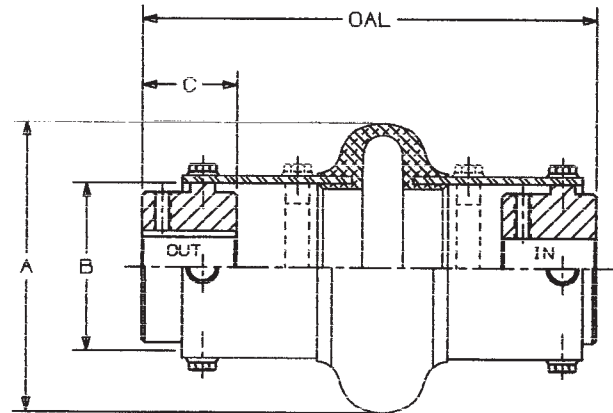
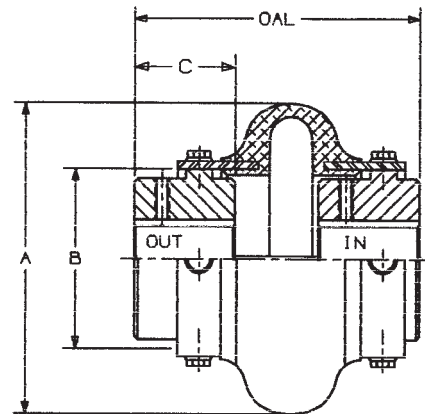
Product No.*	OAL MAX	OAL MIN	Maximum DBSE	Weight lbs.
WE2	3.78	3.22	1.90	1.5
WE3	4.32	3.80	1.32	3.3
WE4	4.68	3.82	1.30	4.4
WE5	5.30	4.32	1.80	7.4
WE10	5.57	4.33	1.81	11.2
WE20	6.82	4.62	2.70	16.3
WE30	7.61	5.19	2.99	27.7
WE40	8.16	5.56	3.16	45.4
WE50	9.21	6.13	3.71	59.0
WE60	10.70	7.20	4.20	82.6
WE70	11.88	8.24	4.64	109.0
WE80	16.60	10.48	6.64	242.0

* Product number is element only.

Spacer Element Assembly

Product No.*	OAL MAX	OAL MIN	Maximum DBSE	Weight lbs.
WES2	5.92	5.72	4.04	2.5
WES3	8.02	7.50	5.02	4.8
WES4	8.38	7.52	5.00	6.1
WES5	8.50	7.52	5.00	9.4
WES10	8.76	7.52	5.00	13.6
WES20	11.17	9.35	7.05	19.2
WES30	11.65	9.35	7.03	31.0
WES40	11.89	9.35	6.89	48.9
WES50	12.31	9.35	6.81	63.5
WES60	16.28	12.78	9.78	91.0
WES70	16.81	13.17	9.57	128
WES80	19.73	13.61	9.77	258

* Product number is element only.



Sizes WES2 through WES10 are furnished with high speed rings. All larger sizes, rings can be ordered as an option.

All weights shown are with MPB style hubs.

Shaft Spacing from 1/4" up to the MAX DBSE can be accommodated by positioning hubs IN or OUT or by using various existing hole patterns. OAL - Over All Length does not include bolt heads

Dura-Flex® QD Bushed Couplings

Dimensions

Assembly Dimensions for QD Bushed Couplings.

(All dimensions in inches) Minimum Shaft Spacing = .25"

Dimensions Common to QD Bushed Standard and Spacer Assemblies

SIZE	A	B	D	Bushing	Max. Bore
WE4 & WES4	4.52	2.60	1.00	JA	1-1/4
WE5 & WES5	5.40	3.13	1.25	SH	1-11/16
WE10 & WES10	6.48	3.65	1.31	SDS	2
WE20 & WES20	7.36	4.48	1.88	SK	2-5/8
WE30 & WES30	8.41	5.42	2.00	SF	2-15/16
WE40 & WES40	9.71	6.63	2.63	E	3-1/2
WE50 & WES50	11.34	8.13	2.63	E	3-1/2
WE60 & WES60	12.53	8.75	3.63	F	4
WE70 & WES70	14.00	9.25	4.50	J	4-1/2
WE80 & WES80	16.00	11.3	6.75	M	5-1/2

Standard Element Assembly

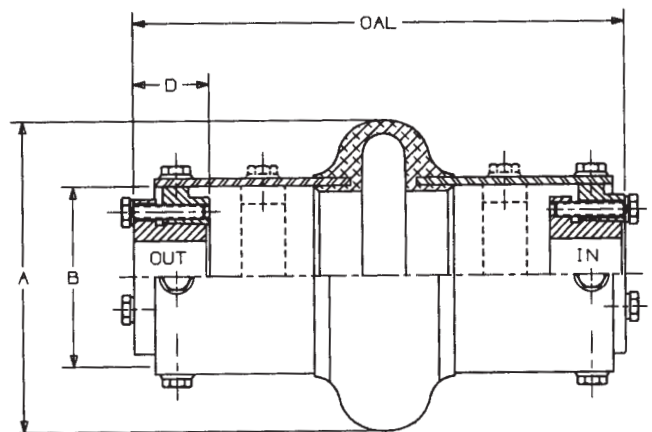
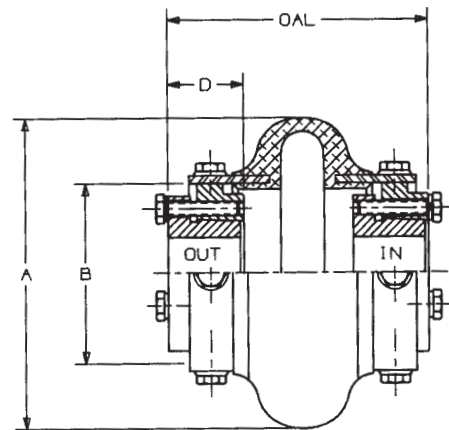
Product No.*	OAL MAX	OAL MIN	Maximum DBSE	Weight lbs.
WE4	3.88	3.24	1.88	3.8
WE5	4.50	4.24	2.00	6.0
WE10	5.07	3.83	2.45	8.8
WE20	6.62	4.38	2.86	15.9
WE30	6.19	5.43	2.19	25.1
WE40	7.00	6.50	1.74	47.0
WE50	8.13	6.61	2.87	48.0
WE60	9.00	8.68	1.74	79.4
WE70	10.86	10.12	1.86	124
WE80	15.10	13.97	1.60	268

* Product number is element only.

Spacer Element Assembly

Product No.*	OAL MAX	OAL MIN	Maximum DBSE	Weight lbs.
WES4	7.58	7.28	5.58	5.5
WES5	7.70	7.44	5.20	8.0
WES10	8.26	7.28	5.64	11.2
WES20	10.97	9.35	7.21	18.8
WES30	10.23	9.47	6.23	28.4
WES40	10.73	10.23	5.47	50.5
WES50	11.23	9.71	5.99	52.5
WES60	14.58	14.34	7.32	106.8
WES70	15.79	15.05	6.79	143
WES80	18.23	17.11	4.73	284

* Product number is element only.



Sizes WES4 through WES10 are furnished with high speed rings. All larger sizes, rings can be ordered as an option.

All weights shown are with MPB bushings.

Shaft Spacing from 1/4" up to the MAX DBSE can be accommodated by positioning hubs IN or OUT or by using various existing hole patterns. OAL - Over All Length does not include bolt heads

Dura-Flex® Taper-Lock® Bushed Couplings

Dimensions

Assembly Dimensions for Taper-Lock® Bushed Couplings.

(All dimensions in inches) Minimum Shaft Spacing = .25"

Dimensions Common to Taper-Lock® Bushed Standard and Spacer Assemblies

SIZE	A	B	H	Bushing	Max. Bore
WE3 & WES3	4.24	2.32	0.88	TL1008	1
WE4 & WES4	4.52	2.60	0.88	TL1008	1
WE5 & WES5	5.40	3.13	0.88	TL1108	1-1/8
WE10 & WES10	6.48	3.65	1.00	TL1310	1-7/16
WE20 & WES20	7.36	4.48	1.00	TL1610	1-11/16
WE30 & WES30	8.41	5.42	1.25	TL2012	2-1/8
WE40 & WES40	9.71	6.63	1.75	TL2517	2-11/16
WE50 & WES50	11.34	8.13	1.75	TL2517	2-11/16
WE60 & WES60	12.53	8.75	2.00	TL3020	3-1/4
WE70 & WES70	14.00	9.25	3.50	TL3535	3-15/16
WE80 & WES80	16.00	11.3	4.00	TL4040	4-7/16

Standard Element Assembly

Product No.*	OAL	Maximum DBSE	Weight lbs.
WE3	3.44	1.68	1.8
WE4	3.44	1.68	2.6
WE5	3.94	2.18	4.0
WE10	4.07	2.07	6.0
WE20	4.50	2.50	9.0
WE30	5.07	2.57	13.6
WE40	5.88	2.38	21.8
WE50	6.51	3.01	31.5
WE60	7.32	3.32	46.6
WE70	9.42	2.42	66.7
WE80	11.72	3.72	82.0

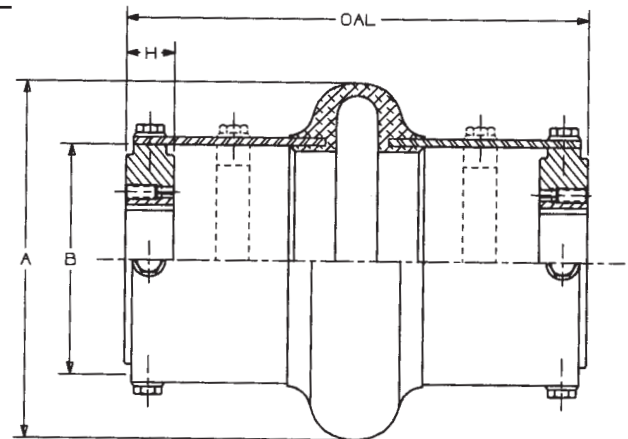
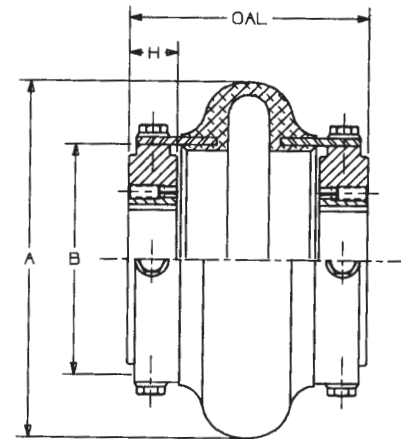
* Product number is element only.

Spacer Element Assembly

Product No.*	OAL MAX	OAL MIN	Maximum DBSE	Weight lbs.
WES3	7.14	7.28	5.38	3.2
WES4	7.14	7.28	5.38	4.2
WES5	7.14	7.28	5.38	6.0
WES10	7.26	7.28	5.26	7.9
WES20	8.85	9.35	6.85	11.9
WES30	9.11	9.35	6.61	18.0
WES40	9.61	9.61	6.11	26.8
WES50	9.61	9.61	6.11	37.4
WES60	12.90	12.90	8.90	60.7
WES70	14.35	14.35	7.35	81.4
WES80	14.85	14.35	6.85	93.2

* Product number is element only.

®Taper-Lock is a registered tradename of Rockwell Automation-Dodge.



Sizes WES3 through WES10 are furnished with high speed rings. All larger sizes, rings can be ordered as an option.

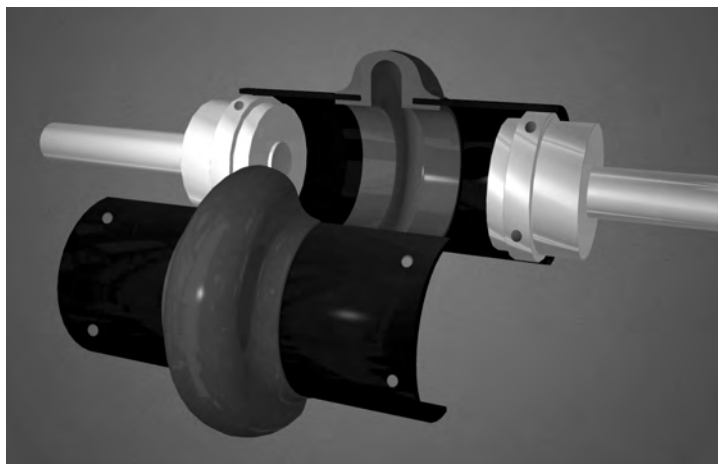
All weights shown are with MPB bushings.



Patent No. 5,611,732

FEATURES

- Metric Hardware
- Designed from the ground up using finite element analysis to maximize flex life.
- Easy two piece element installation. No need to move the hubs during replacement.
- One spacer size to handle most different between shaft spacings.
- Light weight element absorbs shock loading and torsional vibration.
- Same hubs used on both spacer and standard elements.
- No lubrication.
- Good chemical resistance.



The specially designed split-in-half element can be easily replaced without moving any connected equipment.

Dura-Flex® Metric Couplings

Dimensions

A. Determine the Prime Mover Classification

Prime Mover	Class
• Electric Motors (Standard duty), Hydraulic Motors, Turbines	A
• Gasoline or Steam Engines (4 or more cylinders)	B
• Diesel or Gas Engines, High Torque Electric Motors	C

B. Determine the Load Characteristics and the Service Factor

Typical Applications	Load	Characteristics	Prime Mover Class		
			A	B	C
Agitators (pure liquids), Blowers (centrifugal, Can and Bottle Filling Machines, Conveyors - uniformly loaded or fed (belt, chain, screw), Fans (centrifugal), Generators (uniform load), Pumps (centrifugal), Screens (air washing, water), Stokers (uniform load), Woodworking Machines (planers, routers, saws)	Uniform	Even loads - no shock - non reversing - infrequent starts (up to 10 per hour) - low starting torques	1.0	1.5	2.0
Beaters, Blowers (lobe, vane), Compressors (centrifugal, rotary), Conveyors - non uniformly loaded or fed (belt, bucket, chain, screw), Dredge Pumps, Fans (forced draft, propeller), Kilns, Paper Mills (calendars, converting machines, conveyors, dryers, mixers, winders), Printing Presses, Pumps (gear, rotary), Shredders, Textile Machinery (dryers, dyers)	Moderate shock	Uneven loads - moderate shock Infrequent reversing-moderate torques	1.5	2.0	2.5
Cranes (bridge, hoist, trolley), Fans (cooling tower), Generators (welding), Hammer Mills, Mills (ball, pebble, rolling, tube, tumbling), Pumps (oil well), Wire Drawing Machines	Heavy shock	Uneven loads - heavy shock - frequent starts and stops - high starting torques - high inertia peak loads	2.0	2.5	3.0

Note: The above applications depict the generally accepted conditions encountered in industry. Conditions subject to extreme temperatures, abrasive dusts, corrosive liquids, excessively high starting torques, etc., must be considered as extra heavy shock loads. These conditions will increase service factors. Consult TB Wood's for these selections.

C. Calculate Design Horsepower or Design Torque

- If Prime Mover is a 970, 1450, or 3000 rpm motor.
Design KW = Prime Mover KW x Service Factor
Go to page F2—9 and reference the corresponding motor rpm column.
- If Prime Mover is not one of the three speeds listed above.
Design KW @ 100 rpm = (Prime Mover KW x Service Factor x 100) / Coupling RPM
Go to page F2—9 and reference KW @ 100 RPM column.
- If Using Prime Mover Torque
Design Torque = Prime Mover Torque x Service Factor
Go to page F2—9 and reference Torque column.

Dura-Flex® Metric Couplings

Dimensions

D. DURA-FLEX Couplings are sold by component

A DURA-FLEX Assembly consists of one element (STD or Spacer) and two hubs (BTS or QD). Optional high speed rings may also be ordered for spacer elements. Below is an ordering example for Dura-Flex Couplings.

	Part #	Description	Size 20 Example
Element (1)	WE2M – WE80M	Standard Metric Element, sizes 2 through 80	WE20M
	WES2M – WES80M	Spacer Metric Element, sizes 2 through 80	WES20M
Hubs (2)	WE[2-80] HMPB	BTS Hubs – MPB suitable to rebore	WE20HMMPB
	WE[3-80] HMTL Bushing	TL Hubs (sizes 3 through 80, bushing not included)	WE20HMTL
*HS Rings (1)	WE[20-80]RM	High speed rings – sizes 20-80 (standard for sizes 2-10)	WE20RM

*Spacer element only

COUPLING RATINGS (STD & SPACER)

Coupling Size	KW @ RPM				Torque (Nm)	Stiffness NM/RAD	Maximum Rpm		Max. Misalignment	
	100	970	1450	3000			Standard	Spacer*	Parallel (MM)	Angular
WE2M	0.22	2.17	3.24	6.71	22	358	7500	7500	1.6	4°
WE3M	0.43	4.20	6.27	12.98	41	532	7500	7500	1.6	4°
WE4M	.66	6.37	9.52	19.69	62	607	7500	7500	1.6	4°
WE5M	1.10	10.71	16.00	33.11	105	1110	7500	7500	1.6	4°
WE10M	1.72	16.64	24.87	51.45	164	1790	7500	7500	1.6	4°
WE20M	2.72	26.40	39.47	81.65	260	3120	6600	4800	2.4	3°
WE30M	4.32	41.88	62.61	129.53	412	4770	5800	4200	2.4	3°
WE40M	6.60	64.01	95.69	197.98	621	7370	5000	3600	2.4	3°
WE50M	9.05	87.81	131.27	271.58	864	13900	4200	3100	2.4	3°
WE60M	14.79	143.51	214.52	443.84	1412	18900	3800	2800	3.2	2°
WE70M	26.19	254.03	379.74	785.67	2500	23200	3600	2600	3.2	2°
WE80M	46.76	453.53	677.95	1402.66	4463	34500	2000	1800	3.2	2°

*Maximum spacer RPM = Maximum standard RPM if using optional high speed rings

Dura-Flex® Metric BTS Couplings

Dimensions

Assembly Dimensions for BTS Couplings.

(All dimensions in millimeters) Minimum Shaft Spacing = 6.35mm

Dimensions Common to BTS Standard and Spacer Assemblies

SIZE	A	B	C	Max Bore
WE2M & WES2M	94	1.85	24	29
WE3M & WES3M	108	2.32	38	35
WE4M & WES4M	115	2.6	43	41
WE5M & WES5M	137	3.13	44	48
WE10M & WES10M	165	3.65	48	54
WE20M & WES20M	187	4.48	52	60
WE30M & WES30M	214	5.42	59	73
WE40M & WES40M	247	6.63	64	86
WE50M & WES50M	288	8.13	70	92
WE60M & WES60M	318	8.75	83	102
WE70M & WES70M	356	9.25	92	114
WE80M & WES80M	406	11.3	124	152

Standard Element Assembly

Product No.	OAL MAX	OAL MIN	Maximum DBSE	Weight kg
WE2M	96	82	48	.07
WE3M	110	97	34	1.5
WE4M	119	97	33	2.0
WE5M	135	110	46	3.4
WE10M	141	105	46	5.1
WE20M	173	109	69	7.4
WE30M	193	118	76	12.6
WE40M	207	129	80	20.6
WE50M	234	147	94	26.8
WE60M	272	164	107	37.5
WE70M	279	183	123	49.4
WE80M	375	236	169	110

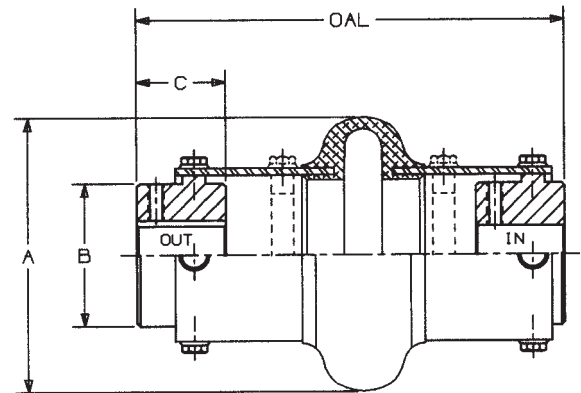
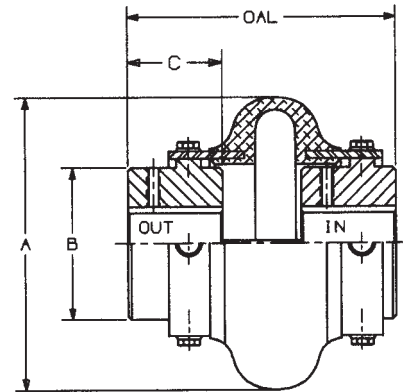
Product number is element only.

Spacer Element Assembly

Product No.	OAL MAX	OAL MIN	Maximum DBSE	Weight kg
WES2M	145	145	103	1.1
WES3M	204	185	128	2.2
WES4M	213	185	127	2.8
WES5M	216	185	127	4.3
WES10M	223	185	127	6.2
WES20M	284	237	180	8.7
WES30M	296	237	180	14.1
WES40M	302	237	175	22.2
WES50M	313	237	173	28.8
WES60M	414	315	248	41.3
WES70M	427	318	243	58.1
WES80M	501	318	248	117.0

Product number is element only.

Shaft Spacing from 6.35 mm up to the MAX DBSE can be accommodated by positioning hubs IN or OUT or by using various existing hole patterns. OAL — Over All Length does not include bolt heads.



Sizes WES2M through WES10M are furnished with high speed rings. All larger sizes, rings can be ordered as an option.
All weights shown are with MPB style hubs.

Dura-Flex® Metric Taper-Lock® Bushed Couplings

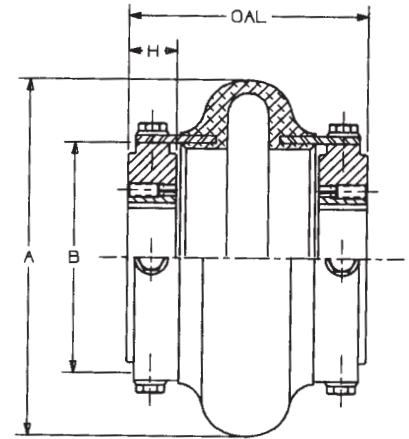
Dimensions

Assembly Dimensions for TAPER-LOCK® Bushed Couplings.

(All dimensions in millimeters) Minimum Shaft Spacing = 6.35 mm

Dimensions Common to TAPER-LOCK® Bushed Standard and Spacer Assemblies

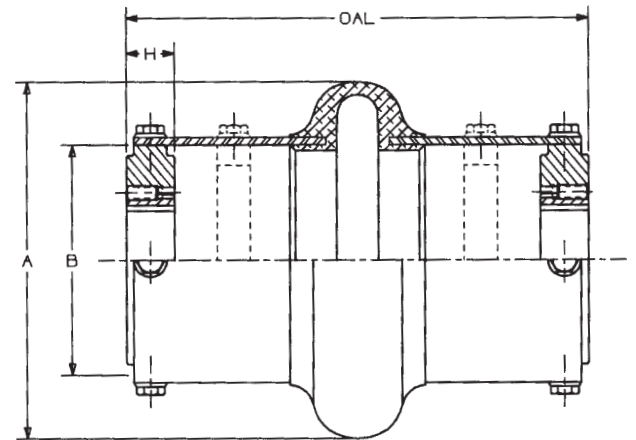
SIZE	A	B	H	Bushing	Max Bore
WE3M & WES3M	108	59	22	TL1008	26
WE4M & WES4M	115	66	22	TL1008	26
WE5M & WES5M	137	80	22	TL1210	32
WE10M & WES10M	165	93	25	TL1610	44
WE20M & WES20M	187	114	25	TL1610	44
WE30M & WES30M	214	138	32	TL2012	55
WE40M & WES40M	247	168	44	TL2517	68
WE50M & WES50M	288	207	44	TL2517	68
WE60M & WES60M	318	222	51	TL3020	82
WE70M & WES70M	356	235	89	TL3535	100
WE80M & WES80M	406	287	102	TL4040	113



Standard Element Assembly

Product No.	OAL	Maximum DBSE	Weight kg
WE3M	87	43	0.8
WE4M	87	43	1.2
WE5M	100	56	1.8
WE10M	103	52	2.7
WE20M	114	64	4.1
WE30M	129	65	6.2
WE40M	149	60	9.9
WE50M	165	76	14.3
WE60M	186	84	21.1
WE70M	238	60	30.3
WE80M	298	95	37.2

Product number is element only.



Spacer Element Assembly

Product No.	OAL MAX	OAL MIN	Maximum DBSE	Weight kg
WES3M	185	185	137	1.5
WES4M	185	185	137	1.9
WES5M	185	185	137	2.7
WES10M	185	185	133	3.6
WES20M	237	237	174	5.4
WES30M	237	237	168	8.2
WES40M	244	237	155	12.2
WES50M	244	237	155	17.0
WES60M	328	315	226	27.5
WES70M	364	318	186	36.9
WES80M	377	318	174	42.3

Product number is element only.

Sizes WES3M through WES10M are furnished with high speed rings. All larger sizes, rings can be ordered as an option. All weights shown are with MPB bushings.

® TAPER-LOCK: J.H. Fenner & Co. Limited, England.

Shaft Spacing from 6.35 mm up to the MAX DBSE can be accommodated by positioning hubs IN or OUT or by using various existing hole patterns. OAL — Over All Length does not include bolt heads.

We Have A Product For All Your Coupling Needs

*Besides the full line of stock DURA-FLEX couplings —
Wood's has other stock coupling lines that may fill your application.*



Sure-Flex®

- Operates in shear
- No lubrication
- Four-way flexibility
- Easy installation

**Up to 115 HP
@ 100 rpm**

Gear Couplings

- High Torque Capacity
- Torsionally Stiff
- Good Inherent Balance
- Rated for Higher Speeds
- Many Types and Configurations

**Up to 2714 HP
@ 100 rpm**



Jaw Couplings

- Economical
- No maintenance
- Industry standard
- Large inventories

**Up to 30 HP
@ 100 rpm**

Form-Flex®

- All metal construction
- No lubrication
- Wide temperature range
- Zero backlash
- API offering

**Up to 3175 HP
@ 100 rpm**



Jaw Type Elastomeric Couplings

F3

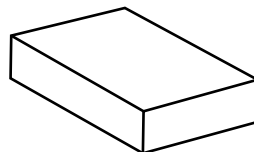
L-JAW



Straight Jaw

- 100% interchangeable with industry standard
- 4 Insert materials available
- Large selection of sizes

C-JAW



Straight Jaw

- Uses individual cushions
- For higher torque loads
- Cushions easily replaced

Jaw Couplings

Selection

Determine the Prime Mover Classification

Prime Mover	Class
• Electric Motors (Standard duty), Hydraulic Motors, Turbines	A
• Gasoline or Steam Engines (4 or more cylinders)	B
• Diesel or Gas Engines, High Torque Electric Motors	C

Determine the Load Characteristics and the Service Factor

Typical Applications	Load	Characteristics	Prime Mover Class		
			A	B	C
Agitators (pure liquids), Blowers (centrifugal, Can and Bottle Filling Machines, Conveyors - uniformly loaded or fed (belt, chain, screw), Fans (centrifugal), Generators (uniform load), Pumps (centrifugal), Screens (air washing, water), Stokers (uniform load), Woodworking Machines (planers, routers, saws)	Uniform	Even loads - no shock - non reversing - infrequent starts (up to 10 per hour) - low starting torques — Up to 8 hours per day — Over 8 hours per day	1.0 1.5	1.5 2.0	2.0 2.5
Beaters, Blowers (lobe, vane), Compressors (centrifugal, rotary), Conveyors - non uniformly loaded or fed (belt, bucket, chain, screw), Dredge Pumps, Fans (forced draft, propeller), Kilns, Paper Mills (calendars, converting machines, conveyors, dryers, mixers, winders), Printing Presses, Pumps (gear, rotary), Shredders, Textile Machinery (dryers, dyers)	Moderate shock	Uneven loads - moderate shock Infrequent reversing-moderate torques — Up to 8 hours per day — Over 8 hours per day	1.5 2.0	2.0 2.5	2.5 3.0
Cranes (bridge, hoist, trolley), Fans (cooling tower), Generators (welding), Hammer Mills, Mills (ball, pebble, rolling, tube, tumbling), Pumps (oil well), Wire Drawing Machines	Heavy shock	Uneven loads - heavy shock - frequent starts and stops - high starting torques - high inertia peak loads — Up to 8 hours per day — Over 8 hours per day	2.0 2.5	2.5 3.0	3.0 3.5

Note: The above applications depict the generally accepted conditions encountered in industry. Conditions subject to extreme temperatures, abrasive dusts, corrosive liquids and dusts. Excessively high starting torques, etc., must be considered as extra heavy shock loads. These conditions will increase service factors. Consult factor y for these selections.

Calculate Design Horsepower or Design Torque

- If Prime Mover is a 1200, 1800, or 3600 rpm motor.
Design Hp = Prime Mover HP x Service Factor
Go to page F3—3 and reference the corresponding motor rpm column.
- If Prime Mover is not one of the three speeds listed above.
Design Hp @ 100 rpm = (Prime Mover Hp x Service Factor x 100) / Coupling RPM
Go to page F3—3 and reference HP @ 100 RPM column.
- If Using Prime Mover Torque
Design Torque = Prime Mover Torque x Service Factor
Go to page F3—3 and reference Torque column.

Jaw Couplings are sold by component

Below is an ordering example for each Jaw style coupling.
All listed components must be ordered to receive a complete coupling.

Components	L-JAW		C-JAW	
	Product No.	Description	Product No.	Description
Driver Hub	L09958	L099 x 5/8	C280178	C280 x 1-7/8
Driven Hub	L09912NK no keyseat	L099 x 1/2	C280158	C280 x 1-5/8
Insert	L099N	L099 Buna-N	C280N (contains 6 cushions)	C280 Buna-N
Cover	none	none	C280CH w/ hardware	C280 Cover

Torque - Horsepower

Ratings

L-JAW TYPE

PRODUCT NO.	MAX BORE	MAX RPM	BUNA-N SPIDER (N)					HYTREL SPIDER (H)				
			TORQUE IN. LBS.	HP PER 100 RPM	HP/SPEEDS (RPM)			TORQUE IN. LBS.	HP PER 100 RPM	HP/SPEED (RPM)		
					1200	1800	3600			1200	1800	3600
L035	3/8	31000	3.5	0.006	0.07	0.10	0.20					
L050	5/8	18000	26.3	0.042	0.50	0.75	1.50	50.0	0.079	0.95	1.43	2.86
L070	3/4	14000	43.2	0.069	0.82	1.23	2.47	114	0.181	2.17	3.26	6.51
L075	7/8	11000	90.0	0.143	1.71	2.57	5.14	227	0.360	4.32	6.48	12.97
L090	1	9000	144.0	0.228	2.74	4.11	8.23	401	0.636	7.64	11.45	22.91
1. L095	1-1/8	9000	194.0	0.308	3.69	5.54	11.08	561	0.890	10.68	16.02	32.04
L099	1-3/16	7000	318.0	0.505	6.05	9.08	18.16	792	1.257	15.08	22.62	45.24
2. L100	1-7/16	7000	417.0	0.662	7.94	11.91	23.82	1134	1.799	21.59	32.39	64.77
L110	1-5/8	5000	792.0	1.257	15.08	22.62	45.24	2268	3.599	43.18	64.77	129.55
L150	1-7/8	5000	1240.0	1.967	23.61	35.41	70.83	3708	5.883	70.60	105.90	211.80
L190	2-1/8	5000	1726.0	2.739	32.86	49.29	98.59	4680	7.426	89.11	133.66	267.32
L225	2-5/8	4600	2340.0	3.713	44.55	66.83	133.66	6228	9.882	118.58	177.87	355.74
L276	2-7/8	4200	4716.0	7.483	89.79	134.69	269.38					

BRONZE INSERTS HAVE SAME RATING AS HYTREL INSERTS.
 URETHANE INSERTS RATINGS MULTIPLY BUNA-N INSERT BY 1.5.
 1. USES L090 SPIDERS 2. USES L099 SPIDERS

WARNING: DO NOT USE BRONZE INSERT OVER 250 RPM.

C-JAW TYPE

PRODUCT NO.	MAX BORE	MAX RPM	BUNA-N CUSHION SET (N)				
			TORQUE IN. LBS.	HP PER 100 RPM	HP SPEEDS (RPM)		
					1200	1800	3600
C226	2-1/2	4800	2988.0	4.700	56.40	84.60	169.20
C276	2-7/8	4200	4716.0	7.500	90.00	135.00	270.00
C280	3	3500	7560.0	12.000	144.00	216.00	432.00
C285	4	3200	9182.0	14.600	175.20	262.80	525.60
C295	3-1/2	2300	11340.0	18.000	216.00	324.00	648.00
C2955	4	2300	18900.0	30.000	360.00	540.00	1080.00

SPIDER CHARACTERISTICS

CHARACTERISTICS	BUNA-N (N)	URETHANE (U)	HYTREL (H)	BRONZE (B)
OIL RESISTANCE	GOOD	GOOD	EXCELLENT	EXCELLENT
CHEMICAL RESISTANCE	POOR	GOOD	EXCELLENT	EXCELLENT
FLEXIBILITY	EXCELLENT	GOOD	FAIR	POOR
TEMPERATURE RANGE	F C -40 TO +212 -40 TO +100	-30 TO +160 -35 TO +71	-60 TO +250 -51 TO +121	-40 TO +450 -40 TO +232
TORSIONAL STIFFNESS	FULL SOFT	MEDIUM SOFT	HARD	HARD
AVERAGE HARDNESS (SHORE NUMBER)	80A	90A	55D	—
MAX. MISALIGNMENT				
• ANGULAR	1°	1°	1/2°	1/2°
• PARALLEL	.015"	.015"	.015"	.010"
AVAILABILITY	L-JAW C-JAW	X X	X X	X X
COLOR	BLACK	BLUE	WHITE	BRONZE

TO ORDER SPIDER OR CUSHION SET SPECIFY THE COUPLING SIZE WITH THE MATERIAL SUFFIX.

EXAMPLE:
 L150H =
 HYTREL SPIDER FOR
 L150 COUPLING

Stock Bores

Dimensions

STOCK L-JAW INCH HUBS

BORE (IN.)	PRODUCT NO.	L035	L050	L070	L075	L090	L095	L099	L100	L110	L150	L190	L225	L276
1/8	18	0												
3/16	316	0												
1/4	14	X	X	X	X	X								
5/16	516	0	0	X	0	X								
3/8	38	X	X	X	X	X								
7/16	716		X	X	X	X	X	X	X					
1/2	12		X	X	X	X	X	X	X					
9/16	916		1	1	X	1	1	1	X					
5/8	58		X	X	1	1	1	1	1	X	X			
11/16	1116			1	1	1	1	1	1					
3/4	34			1	1	X	1	1	1	1	1	X	X	
7/8	78				1	1	1	1	1	1	1	1	1	0
15/16	1516					1	1	1	1	1	1	1	1	
1	1					1	1	1	1	1	1	1	1	
1 1/16	1116						1		1	1	1		1	
1 1/8	118						1	1	1	1	1	1	1	1
1 3/16	1316							1	1	1	1	1	1	
1 1/4	114								1	1	1	1	1	1
1 5/16	1516								1	1				
1 3/8	138								1	1	1	1	1	1
1 7/16	1716								1	1	1	1	1	
1 1/2	112									1	1	1	1	
1 9/16	1916									1	1		1	
1 5/8	158									1	1	1	1	
1 11/16	11116										1	1	1	
1 3/4	134										1	1	1	1
1 13/16	11316										1			
1 7/8	178										1	1	1	
1 15/16	11516											1	1	
2	2											1	1	1
2 1/16	2116													
2 1/8	218											1	1	1
2 3/16	2316												1	
2 1/4	214												1	1
2 3/8	238												1	
2 1/2	212												1	1
2 5/8	258												1	
2 7/8	278													1

0 NO KEYSEAT 1 STANDARD KEYSEAT X NO KEYSEAT OR STANDARD KEYSEAT

Product Number Example → L09012 for L090 x 1/2 HUB

NOTE: L-JAW Hubs also available in aluminum – contact factory.

BORE TOLERANCES

BORE SIZE	TOLERANCE
UP TO AND INCLUDING 2"	+0.005 +0.015
OVER 2"	+0.005 +0.020

Standard Keyseat Dimensions

Shaft Dia.	Width	Depth
1/2 - 9/16	1/8	1/16
5/8 - 7/8	3/16	3/32
15/16 - 1-1/4	1/4	1/8
1-5/16 - 1-3/8	5/16	5/32
1-7/16 - 1-3/4	3/8	3/16
1-13/16 - 2-1/4	1/2	1/4
2-5/16 - 2-3/4	5/8	5/16
2-13/16 - 3-1/4	3/4	3/8
3-5/16 - 3-3/4	7/8	7/16
3-13/16 - 4-1/2	1	1/2
4-9/16 - 5-1/2	1-1/4	5/8
5-9/16 - 6-1/2	1-1/2	3/4

Stock Bores

Dimensions

STOCK L-JAW METRIC BORE HUBS

BORE (MM)	PRODUCT NO.	L035	L050	L070	L075	L090	L095	L099	L100	L110	L150	L190	L225	L276
5	5	0												
6	6	1												
7	7		0											
8	8	0	0	0										
9	9													
10	10		X											
11	11		1		1									
12	12		1	1	1	1	1							
14	14		X	1	1	1	1	1	1					
15	15		1	1	1	1	1							
16	16			1	1	1	1		1					
17	17				1		1							
18	18				1	1	1		1	1				
19	19			1	1	1	1		1					
20	20				1	1	1	1	1	1	1			
22	22				1		1	1	1	1				
24	24					1	1	1	1	1				
25	25					1	1	1	1	1	1	1		
28	28						1	1	1	1				
30	30							1	1	1	1	1		
32	32								1	1	1		1	
35	35								1	1	1	1		
38	38									1	1	1	1	
40	40									1	1	1	1	
42	42									1	1	1	1	
45	45										1			
48	48										1	1		
50	50											1		
55	55													
60	60												1	
65	65													1

0 No Keyseat **1** Standard Keyseat **X** No Keyseat or Standard Keyseat

C-Jaw Product Number Example:

Item	Part No.	Description
Hub	C226212	C226x2 ¹ / ₂
Cushion	C226N	Cushion Kit
Cover	C226CH	Cover Kit

C-JAW HUBS

BORE SIZE	PRODUCT NO.	C226	C276	C280	C285	C295	C2955
SOLID	S						
1/8	18						
3/16	3/16						
1/4	14						
5/16	5/16						
3/8	38						
7/16	7/16						
1/2	12						
9/16	9/16						
5/8	58						
11/16	11/16						
3/4	34						
7/8	78	0	0				
15/16	15/16						
1	1						
1 1/16	1116						
1 1/8	118						
1 3/16	1316						
1 1/4	114			X	X		
1 5/16	1516						
1 3/8	138	1					
1 7/16	1716						
1 1/2	112	1				0	
1 9/16	1916						
1 5/8	158	1					
1 11/16	11116						
1 3/4	134	1	1				0
1 7/8	178	1	1				
1 15/16	11516						
2	2	1	1				
2 1/8	218	1	1	1			
2 1/4	214						
2 3/8	238	1	1	1			1
2 1/2	212			1			
2 5/8	258		1	1			1
2 7/8	278						1
3	3						
3 3/8	338						
3 1/2	312						
3 5/8	358						
3 3/4	334						
3 7/8	378						

Standard Keyseat Dimensions

Shaft Dia.	Width	Depth
1/2 - 9/16	1/8	1/16
5/8 - 7/8	3/16	3/32
15/16 - 1-1/4	1/4	1/8
1-5/16 - 1-3/8	5/16	5/32
1-7/16 - 1-3/4	3/8	3/16
1-13/16 - 2-1/4	1/2	1/4
2-5/16 - 2-3/4	5/8	5/16
2-13/16 - 3-1/4	3/4	3/8
3-5/16 - 3-3/4	7/8	7/16
3-13/16 - 4-1/2	1	1/2
4-9/16 - 5-1/2	1-1/4	5/8
5-9/16 - 6-1/2	1-1/2	3/4

BORE TOLERANCES

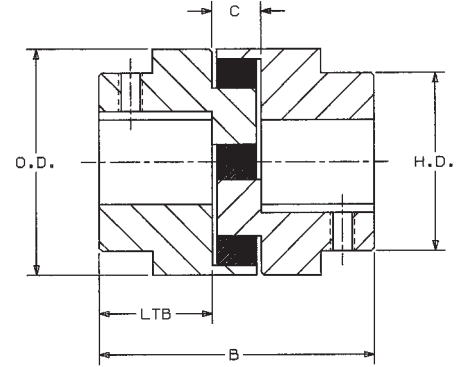
BORE SIZE	TOLERANCE
UP TO AND INCLUDING 2"	+0.005 +0.015
OVER 2"	+0.005 +0.020

L-Jaw And C-Jaw Couplings

Dimensions

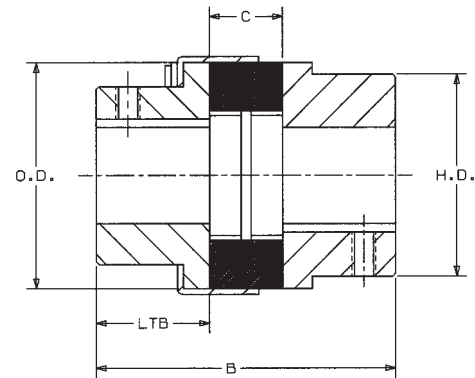
L-JAW DIMENSIONS

Coupling Size	Hub Mat'l	DIMENSIONS					Weight Lbs*
		OD	HD	LTB	B	C	
L035	S.I.	0.63	0.63	0.27	0.81	0.28	0.10
L050	S.I.	1.08	1.08	0.63	1.72	0.47	0.30
L070	S.I.	1.36	1.36	0.75	2.00	0.50	0.60
L075	S.I.	1.75	1.75	0.81	2.13	0.50	1.00
L090	S.I.	2.11	2.11	0.81	2.13	0.50	1.50
L095	S.I.	2.11	2.11	1.00	2.50	0.50	1.80
L099	S.I.	2.53	2.53	1.06	2.88	0.75	2.50
L100	S.I.	2.53	2.53	1.38	3.50	0.75	3.50
L110	S.I.	3.33	3.33	1.69	4.23	0.85	6.60
L150	S.I.	3.75	3.75	1.75	4.50	1.00	9.10
L190	C.I.	4.50	4.00	1.94	4.88	1.00	17.00
L225	C.I.	5.00	4.25	2.19	5.38	1.00	23.00
L276	C.I.	6.19	5.00	3.13	7.88	1.63	47.00



C-JAW DIMENSIONS

Coupling Size	Hub Mat'l	DIMENSIONS					Weight Lbs*
		OD	HD	LTB	B	C	
C226	C.I.	5.15	4.12	2.75	7.00	1.50	29.00
C276	C.I.	6.18	5.00	3.12	7.87	1.63	47.00
C280	C.I.	7.50	5.50	3.12	7.87	1.63	61.00
C285	C.I.	8.50	6.50	3.75	9.13	1.63	87.00
C295	C.I.	9.12	6.31	3.75	9.38	1.88	97.00
C2955	C.I.	9.12	7.12	4.25	10.38	1.88	117.00



S.I. = Powdered metal • C.I. = Cast Iron

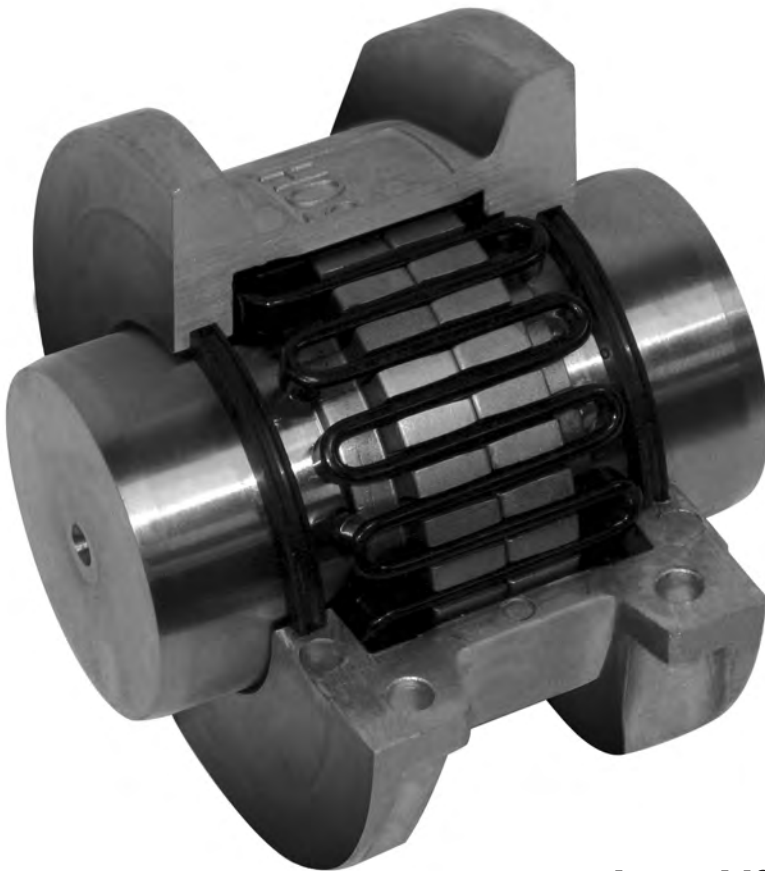
*Weight of coupling assembly with minimum bores.

NOTE: L-JAW Hubs also available in aluminum – contact factory.

G-Flex Grid Couplings

The Original Bibby
Grid Coupling

F4



- Long Life
- Low Maintenance
- Design Flexibility

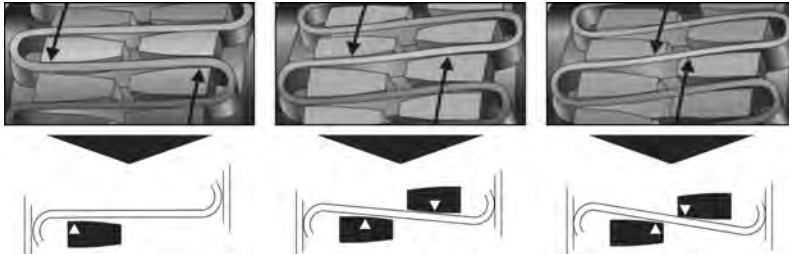
G-Flex Grid Couplings

Features

Principal of Operation

Positive protection against the damaging effects of shock loads, impact loads and vibration.

The grid is torsionally flexible. The circumferential flexibility is progressive due to the curved profile of the grooves – ‘state-of-the-art’ in resilient coupling design.



Accommodating Shaft Misalignment and End-Float

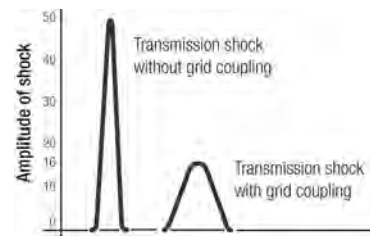
The grid will accommodate combinations of misalignments present at set-up or occurring during machine displacement, settlement, etc.



Effectiveness of Torsional Damping

As the grid coupling transmits torque, the flexing of the tapered grid spring damps vibrations and cushions shock loads.

This unique characteristic is due to the torsional flexibility of the coupling being proportionate to the unsupported length of each flexible grid rung. The resultant reduction in peak loading protects and extends the life of the transmission equipment.



Versatile Design

Both 1000T10 and 1000T20 couplings feature identical hubs and grid springs, the different cover styles provide great versatility – one is horizontally split “T10”, the other is vertically split “T20”.

All coupling components are designed to be interchangeable with other taper grid couplings. The stock coupling can be used vertically or horizontally without modification.

Easy Installation and Maintenance

The grid springs are easily installed by hand or with a soft mallet. The cover fasteners can be tightened with standard wrenches. Every TB Wood’s coupling is delivered with detailed installation instructions. Periodic Lubrication of the coupling is required and each cover half is supplied with standard plugs which can be easily removed for re-lubrication.

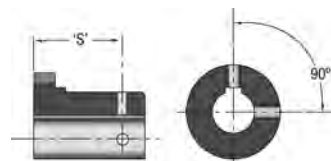
Recommended Fits between Shafts and Hubs

Coupling bore tolerances for sizes up to and including 1090T can be specified to suit a clearance fit with the shaft. In these instances the hub is provided with set screws. Relative positions are given in the following table.

“S” Position from Hub Faces

1020 = 1.2”	1060 = 2.0”
1030 = 1.3”	1070 = 2.1”
1040 = 1.5”	1080 = 2.5”
1050 = 1.7”	1090 = 2.8”

For sizes above 1090T or where interference fits are preferred for smaller coupling sizes, bore tolerances will be consistent with AGMA standards.



Taper Grid Resilient Couplings

Series 1000T10 And Series 1000T20

Dr. James Bibby originally invented the Resilient Coupling in 1917 and the 1000 Series is the latest level of this well accepted product. This Bibby Turboflex product has become universally accepted where reliable protection against shaft misalignment and vibration is desirable.

Since those early days refinements in design and material specifications have kept pace with advancing technology, achieving significant improvements in power/weight ratios.

TB Woods is proud to offer this proven product.



1000T10

- Horizontally Split Cover
- General Purpose
- Easy access to grid minimizes downtime
- Ideal for limited space applications
- Stop lug in cover prevents spinning during reversing service



1000T20

- Vertically Split Cover
- General purpose
- Ideal for higher running speeds

High Performance

The TB Wood's Taper Grid Coupling continues that tradition. The tapered grid is made from high tensile alloy steel which is carefully formed to the grid shape before hardening and tempering under controlled conditions. The grid surface is then shot-peened. This process leaves the grid spring with a residually stressed surface layer which is in compression and which impedes the propagation of cracks. Since nearly all fatigue and stress corrosion failures originate at the surface of a part, the layer of compressive stress induced by shot-peening produces a dramatic increase in the working life and fatigue strength of the grid. This technological improvement in manufacturing process coupled with precise monitoring of raw material specification and control of trapezoidal shape, permits TB Wood's to offer state of the art grid springs of high performance and reliability.

Scientific Design

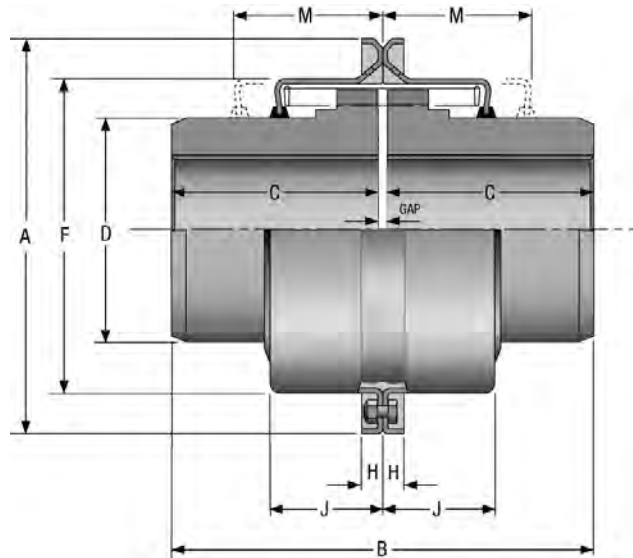
The hub is precision manufactured from high quality materials, with the hub tooth profile scientifically designed to permit progressive loading under torsional shock conditions. The combination of tapered grid and precision manufactured hub provides easy assembly. The excellent shock absorption characteristics, and the ability to accommodate misalignment protects the connected equipment.

Long Life

While the coupling is designed for long life under tough conditions, maintenance and taper grid replacement can be performed quickly and easily without the need to move and realign connected equipment. Two cover design options are available in the TB Wood's range of couplings. Both designs have been carefully engineered to provide a shaft coupling which is highly reliable and easy to install.

Vertically Split Cover Couplings

Series 1000T20



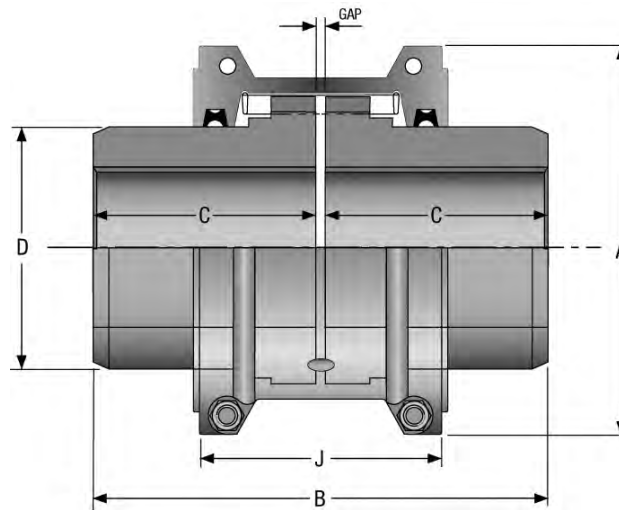
SIZE	COUPLING RATING (IN-LBS)	MAX RPM	MIN BORE (IN)	MAX BORE (IN)**	CPLG WT (LBS)*	WR2/ (LB/FT2)*	DIMENSIONS IN INCHES								
							A	B	C	D	F	H	J	M	GAP
1020	460	6000	0.50	1.13	3.50	3.80	4.37	3.86	1.87	1.56	2.48	0.37	0.96	1.89	0.13
1030	1,319	6000	0.50	1.38	4.90	6.20	4.76	3.86	1.87	1.94	2.83	0.37	0.99	1.89	0.13
1040	2,204	6000	0.50	1.63	6.60	9.20	5.08	4.13	2.00	2.25	3.15	0.37	1.02	2.01	0.13
1050	3,850	6000	0.50	1.88	11.00	21.50	5.83	4.88	2.37	2.63	3.82	0.51	1.24	2.40	0.13
1060	6,054	6000	0.75	2.13	14.80	34.20	6.38	5.12	2.50	3.00	4.33	0.51	1.27	2.52	0.13
1070	8,798	5500	0.75	2.50	21.40	54.70	6.81	6.14	3.00	3.44	4.76	0.51	1.33	2.64	0.13
1080	18,144	4750	1.06	3.00	36.60	133.30	7.87	7.13	3.50	4.13	5.87	0.51	1.74	3.50	0.13
1090	33,013	4000	1.06	3.50	52.00	246.00	9.13	7.87	3.87	4.87	6.61	0.51	1.86	3.78	0.13
1100	55,582	3250	1.63	4.00	87.10	587.70	10.51	9.69	4.75	5.59	7.80	0.63	2.37	4.76	0.19
1110	82,489	3000	1.63	4.50	114.40	891.90	11.26	10.20	5.00	6.31	8.50	0.63	2.49	4.88	0.19
1120	121,255	2700	2.38	5.00	167.10	1708.60	12.56	12.01	5.87	7.06	9.69	0.63	2.91	5.63	0.25
1130	176,129	2400	2.63	6.00	253.50	3690.50	14.88	12.99	6.37	8.56	11.18	0.87	2.97	5.79	0.25
1140	253,130	2200	2.63	7.25	381.40	6475.40	16.38	14.76	7.25	10.00	12.68	0.87	3.09	6.14	0.25

* Coupling weight and WR² with no bore

** Max bore is for hub with keyway for rectangular key

Horizontally Split Cover Couplings

Series 1000T10



SIZE	COUPLING RATING (IN-LBS)	MAX SPEED	MIN BORE (IN)	MAX BORE (IN)**	CPLG WT (LBS)*	WR ² / (LB/FT ²)*	DIMENSIONS IN INCHES					
							A	B	C	D	J	GAP
1020	460	4500	0.50	1.13	4.00	4.80	4.02	3.86	1.87	1.56	2.64	0.13
1030	1,319	4500	0.50	1.38	5.30	7.50	4.37	3.86	1.87	1.94	2.68	0.13
1040	2,204	4500	0.50	1.63	7.10	11.30	4.65	4.13	2.00	2.25	2.76	0.13
1050	3,850	4500	0.50	1.88	11.50	23.90	5.43	4.88	2.37	2.63	3.11	0.13
1060	6,054	4350	0.75	2.13	15.70	41.00	5.94	5.12	2.50	3.00	3.62	0.13
1070	8,798	4125	0.75	2.50	22.30	61.50	6.38	6.14	3.00	3.44	3.74	0.13
1080	18,144	3600	1.06	3.00	39.00	153.80	7.64	7.13	3.50	4.13	4.57	0.13
1090	33,013	3600	1.06	3.50	54.00	268.90	8.39	7.87	3.87	4.87	4.80	0.13
1100	55,582	2440	1.63	4.00	91.00	615.10	9.88	9.69	4.75	5.59	6.14	0.19
1110	82,489	2250	1.63	4.50	118.20	922.60	10.63	10.20	5.00	6.31	6.42	0.19
1120	121,255	2025	2.38	5.00	173.50	1742.70	12.13	12.01	5.87	7.06	7.56	0.25
1130	176,129	1800	2.63	6.00	260.10	3382.90	13.66	12.99	6.37	8.56	7.68	0.25
1140	253,130	1650	2.63	7.25	388.00	6321.60	15.12	14.76	7.25	10.00	7.91	0.25

* Coupling weight and WR² with no bore

** Max bore is for hub with keyway for rectangular key

Coupling Selection

Procedure

Use the Application Service Factor table, Torque Rating and Maximum Coupling Bore Sizes tables to assist you in the selection procedure for products listed in this catalog. Contact TB Wood's technical staff to discuss any special requirements.

1. Select Service Factor (SF).
From Table 1 (see page F4-8) and
Table 1A (see page F4-9)

2. Calculate required minimum
basic rating:

a) Normal Service (Nominal Torque)

$$\text{Basic Rating (in.lb.)} = \frac{\text{Transmitted Power (HP)} \times 63025 \times \text{SF}}{\text{RPM}}$$

b) Repetitive High Peak Torque Applications – See *Note

i. Non Reversing Duty

$$\text{Selection Torque (in.lb.)} = \text{Nominal Torque (from a. above)}$$

ii. Reversing Duty

$$\text{Selection Torque (in.lb.)} = 2 \times \text{Nominal Torque (from a. above)}$$

3. Select coupling having a basic rating equal to or exceeding the calculated value.
4. Check that speed does not exceed the coupling maximum speed.
5. Use Maximum Coupling Bore Sizes Table to determine Maximum Coupling Bore suitable for respective driving and driven shafts.

***Note:**

- The system peak torque is the maximum load created by the driving or driven equipment.

- Occasional peak torques of twice the catalog rating can be accommodated providing they occur less than 1000 times during the life of the coupling.

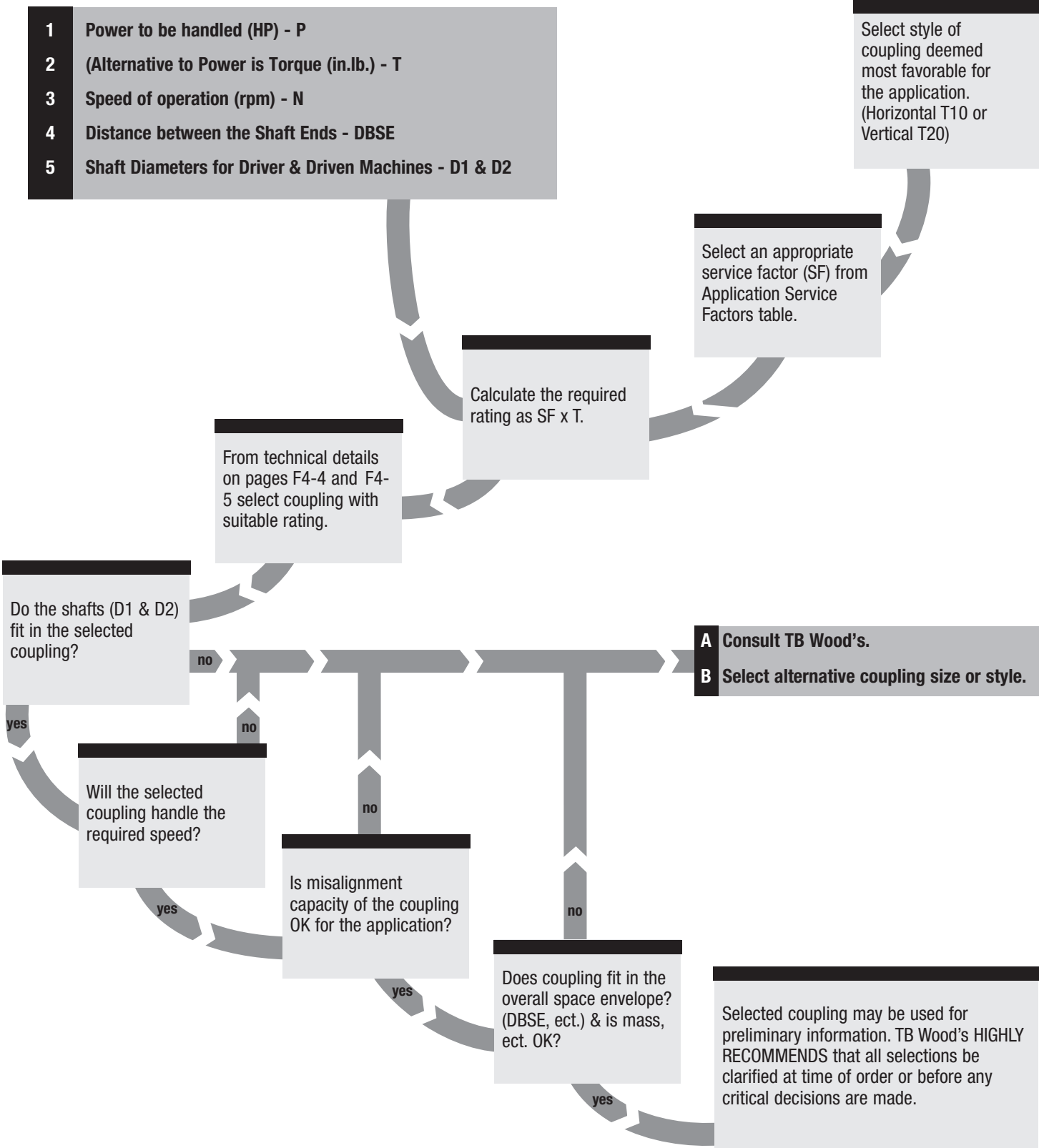
Recommended fit between shafts and hubs

Stock bore hubs are supplied with a clearance fit on sizes VP to and including 1090. Larger sizes are supplied with an interference fit.

How To Select A Grid Coupling

The standard selection method can be used for most motor or engine driven applications. The following information is required to make a selection.

- 1 Power to be handled (HP) - P
- 2 (Alternative to Power is Torque (in.lb.) - T
- 3 Speed of operation (rpm) - N
- 4 Distance between the Shaft Ends - DBSE
- 5 Shaft Diameters for Driver & Driven Machines - D1 & D2



Application Service Factors

Table 1

Application	Service Factor	Application	Service Factor	Application	Service Factor
Agitators	1.0	Laundry Machines	2.0	Rubber Industry	
Blowers		Machine Tools		Extruder	1.75
Centrifugal	1.0	Main drives.....	1.5	Calender	2.0
Lobe/Vane	1.25	Notching press/Planer/Punch.....	1.75	Bunbury mixer/Cracker/Mixing mill/Plasticator/Refiner	2.5
Clay Working Machines		Auxiliary and traverse drives.....	2.0	Steel Industry	
Brick press, Pug mill, Briquette machine	1.75	Metalworking		Soaking pit/Cover drive:	
Compressors		Presses	2.0	Lift	1.0
Centrifugal.....	1.0	Hammers.....	2.0	Travel	2.0
Lobe/Rotary.....	1.25	Straighteners.....	2.0	Coilers (up or down) cold mills only.....	1.5
Reciprocating		Bending.....	1.5	Coilers (up or down) hot mills only.....	2.0
1 to 3 cylinders	3.0	Shears	1.5		
4 or more cylinders.....	1.75	Punching	2.0	Coke Plants	
Conveyors		Mills (Rotary type)		Pusher rain drive	2.5
Uniformly fed horizontal:		Ball or pebble.....	2.0	Door opener.....	2.0
Screw, Apron, Assembly, Belt, Chain, Flight, Oven	1.0	Rod or tube.....	2.0	Pusher and Lorry car traction drive	3.0
Heavy Duty:		Dryer and cooler.....	1.75	Cold mills – Strip and temper mills	2.0
Dredge, Inclined belt and screw	1.5	Mixers		Hot mills – Strip and sheet mills	3.0
Reciprocating	3.0	Drum	1.5	Reversing, blooming or slabbing mills	Refer to TB Wood's
Cranes and Hoists		Concrete (continuous or intermittent)	1.75	Edging mills	
Main hoist – medium duty/mine haulage.....	2.5	Grizzly	2.0	.....	Refer to TB Wood's
Main hoist – heavy duty.....	3.0	Oil Industry		Cooling beds.....	1.5
Long or cross travel/Slew or luff skip hoist/slope.....	1.75	Chiller	1.25	Wire drawing/Slitters, steel mills only	1.75
Crushers	2.5	Oil well pumping (<than 150% peak torque)	2.0	Drawbench/Furnace pusher/hot and cold saws/Ingot curs/Reelers/Straighteners	2.0
Dredgers	2.0	Paper Mills		Seamless tube mills piercer/Rod mills/mill tables/Manipulators/ Feed rolls-blooming mills.....	3.0
Elevators		Bleacher	1.0	Sugar Industry	
Centrifugal and gravity discharge	1.25	Felt stretcher	1.25	Cane carrier and leveller.....	1.75
Fans		Stock chest/stock pump – rotary/winder.....	1.5	Cane knife and crusher.....	2.0
Centrifugal.....	1.0	Bleacher and pulper/Calender/Couch/Dryer/Fourdrinier/ Press/Pulp grinder/Suction roll.....	1.75	Mill stands Turbine driven-Helical or Herringbone gears	1.5
Forced draft.....	1.5	Jordan/Stock pump-reciprocating	2.0	Electric drive or steam driven with all Helical or Herringbone or spur gears with any prime mover.....	1.75
Induced draft with damper.....	1.5	Barking drum/Chipper.....	2.5	Textiles	
Mine/Cooling tower.....	2.0	Plastic		Batcher.....	1.25
Induced draught without control	2.0	Calenders/Crushers/Extruders/Mixers.....	1.5	Dyeing machinery	1.25
Food		Pulverizers		Calender/Card machine/Dry can/Loom.....	1.5
Beet slicer.....	1.75	Roller/Hammer mill, light duty	1.5	Tobacco and Cigarette Machinery	1.5
Cereal cooker	1.25	Hog/Hummer mill, heavy duty.....	1.75	Water Waste Treatment	
Dough mixer	1.75	Pumps		Aerators.....	1.5
Meat grinder	1.75	Centrifugal.....	1.0	Screw pumps.....	1.5
Bottling, can filling	1.00	Descaling with accumulators/ Rotary gear, Lobe and Vane.....	1.25	Screens.....	1.5
Generators		Reciprocating		Wind Turbines	1.25
Even load.....	1.0	1 cylinder, single or double acting	3.0	Wood Working Machinery	
Hoist and Railway service	1.5	2 cylinder, single acting.....	2.0	Trimmers, haulage, barkers, planes, saws	2.0
Welder load	2.0	2 cylinders, double acting.....	1.75		
Kiln	2.0	3 cylinders or more.....	1.5		

The above service factors are for general guidance only and should be considered as a minimum. They are complimentary to customers specialist knowledge for their own equipment.

Reciprocating Engines

Table 1A

Number of Cylinders	Service Factor
6 and over	0.5 + S.F. Table 1
4 or less	1.0 + S.F. Table 1
Less than 4	Refer to TB Wood's

For drives where the operation is near or actually passes through a major torsional natural frequency, a mass elastic analysis of the system is advised. When the Service Factor in Table 1 is greater than 2.0, consult your supplier or TB Wood's.

Rating – To determine the torque rating, calculate using the procedures given on page F4-6. Information may also be found on the nameplate of the motor, etc.

Service Factor – When selecting a coupling it is important to consider the characteristics of the drive and driven equipment. A figure known as the Service Factor has been calculated based on an average of a wide range of applications. This can be used as a guide in the selection process and is displayed in Table 1 on page F4-8.

Size – In making the decision from the following product groups which is most suited to the application, select a size equal to or higher than the rating calculated. Particular attention should be made to bore sizes, and guidance for this is in the Table related to Max Bore Sizes.

Speed – Ensure that the speed is compatible.

Should full information not be supplied to TB Wood's at the time of ordering, it will be the responsibility of the customer to ensure that the coupling has been correctly selected.

As our policy is one of continual improvement, this specification is not to be regarded as binding in any way, and is subject to alteration without notice. Certified drawings are available on request.

Stock Bores

Stock Grid Inch Hubs

BORE (IN.)	PRODUCT NO.	1020T	1030T	1040T	1050T	1060T	1070T	1080T	1090T	1100T	1110T	1120T	1130T	1140T
Solid - No bore	RB	X	X	X	X	X	X	X	X	X	X	X	X	X
1/2	12	X												
9/16	9/16	X												
5/8	58	X	X											
3/4	34	X	X	X	X									
7/8	78	X	X	X	X	X								
15/16	15/16	X	X	X	X									
1	1	X	X	X	X	X	X							
1-1/16	1116	X	X	X	X			X						
1-1/8	118	X	X	X	X	X	X							
1-3/16	1316		X	X										
1-1/4	114		X	X	X	X	X	X						
1-3/8	138		X	X	X	X	X	X	X					
1-7/16	1716			X	X	X	X	X	X					
1-1/2	112			X	X	X	X	X	X					
1-9/16	1916			X	X	X	X							
1-5/8	158			X	X	X	X	X	X					
1-11/16	11116				X		X	X						
1-3/4	134				X	X	X	X	X					
1-13/16	11316				X	X	X							
1-7/8	178				X	X	X	X	X					
1-15/16	11516					X	X	X	X					
2	2					X	X	X	X	X				
2-1/8	218					X	X	X	X	X				
2-3/16	2316						X	X						
2-1/4	214						X	X	X	X				
2-3/8	238					X	X	X	X	X				
2-7/16	2716						X	X	X	X				
2-1/2	212						X	X	X	X	X			
2-5/8	258							X	X	X				
2-11/16	21116							X						
2-3/4	234							X	X	X	X			
2-7/8	278							X	X	X	X			
2-15/16	21516							X	X	X				
3	3							X	X	X	X	X		
3-1/8	318								X	X				
3-1/4	314								X	X	X	X		
3-3/8	338								X	X	X			
3-7/16	3716								X	X	X			
3-1/2	312								X	X	X	X		
3-5/8	358								X	X	X			
3-3/4	334										X			
3-7/8	378									X	X	X		
3-15/16	31516									X	X	X		
4	4									X	X	X		
4-1/8	418										X			
4-3/16	4316										X			
4-7/16	4716										X			
4-1/2	412										X	X	X	
4-15/16	41516											X	X	
5	5											X		
5-7/16	5716												X	
Max Bore		1-1/8	1-3/8	1-5/8	1-7/8	2-1/8	2-1/2	3	3-1/2	4	4-1/2	5	6	7-1/4

Max bore is for hub w/ keyway for rectangular key

Example: Size 1020 coupling hub with 1-1/8" bore = 1020T118

Size 1040 coupling hub with NO bore - for rebores = 1040TRB

Form-Flex® Flexible Disc Couplings

F5



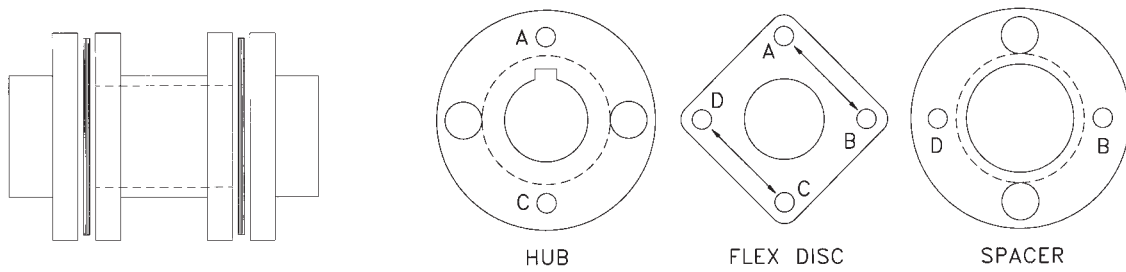
- Long Life
- Low Maintenance
- Design Flexibility

Form-Flex® Metal Disc Flexible Couplings

Features

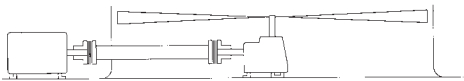
Form-Flex couplings transmit torque while compensating for angular, parallel and axial misalignment between two connected shafts. Flexible disc couplings minimize the misalignment forces on the connected equipment.

The Basic flex coupling consists of two hubs, a spacer and two flexible discs. The flex disc is an assembly of thin metal laminations. In figure shown below, flex disc holes A & C are bolted to the hub and holes B & D are bolted to the spacer. Torque is transmitted in direct tensions from A to B and from C to D through the flex disc. Misalignment is taken through bending in the link between the bolt holes.

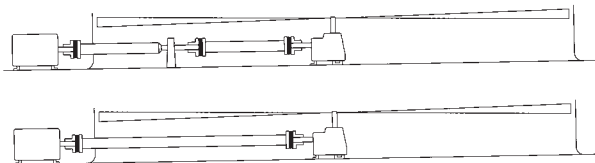


COOLING TOWER DRIVES

Form-Flex metal disc couplings are widely used in cooling fan drive applications. Form-Flex 4 bolt disc couplings offer more misalignment capacity than any competing metal disc design.

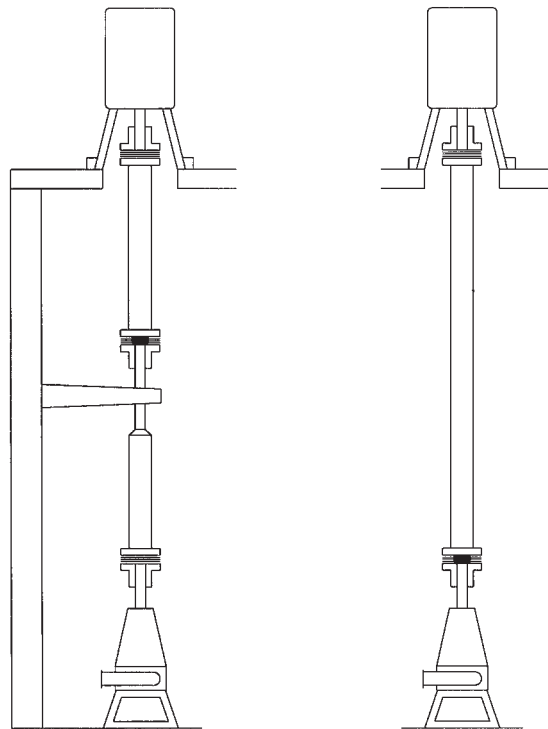


For smaller towers up to about 100 inches DBSE, TB Wood's offers steel and composite spacer tubing options. TrueTube composite torque tubes are lighter than steel and eliminate thermal growth and vibration problems.



Form-Flex composite floating shaft couplings are recommended as a replacement for older multi-section drivelines. Composite couplings can span up to 240 inches without high maintenance center support bearings.

VERTICAL PUMP DRIVES



Form-Flex floating shaft couplings are a cost-effective, maintenance free alternative to cardan U-joints for vertical pump drivelines. Form-Flex couplings are available with either steel or composite spacer tubing. Composite spacer tubing can reduce total cost by eliminating the need for bearings and support structures.

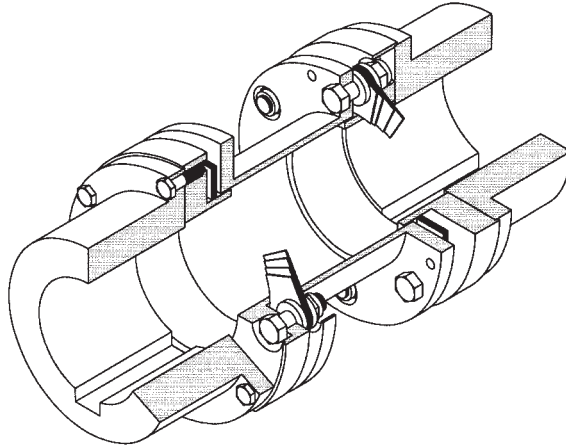
Form-Flex® Metal Disc Flexible Couplings

Features

COMPLETE PRODUCT OFFERING

- TORQUE CAPACITY TO 3175 HP/100 RPM
- CLOSE COUPLE, SPACER AND FLOATING SHAFT DESIGNS

OVER 30 YEARS
EXPERIENCE IN
METAL DISC
COUPLINGS



HIGH STRENGTH STEEL FASTENERS

- NO MOVING PARTS
- ZERO BACKLASH

HIGH STRENGTH STAINLESS STEEL FLEX DISCS

- HIGH Torsional Stiffness
- NO LUBRICATION REQUIRED

APPLICATIONS

- PUMPS
- COMPRESSORS
- PRINTING

- FANS AND BLOWERS
- FOOD PROCESSING
- MACHINE TOOLS

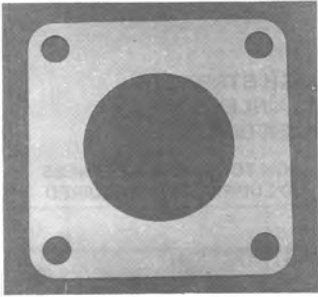
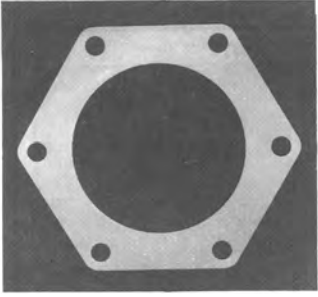
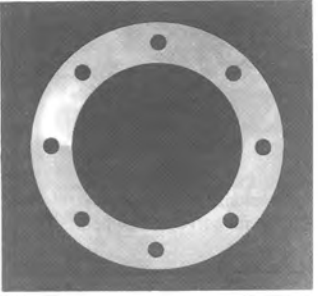
ALL METAL CONSTRUCTION

- WIDE TEMPERATURE RANGE
- AVAILABLE IN CARBON OR STAINLESS STEEL
- COMPOSITE MATERIALS NOW AVAILABLE

TYPICAL APPLICATIONS

- **PUMPS**
Form-Flex spacer and close couple designs are ideally suited for all types of pump applications
- **ENGINE DRIVEN EQUIPMENT**
Form-Flex heavy duty FSH series couplings are commonly used to drive reciprocating compressors and other engine driven equipment
- **PRINTING**
Form-Flex couplings' high Torsional Stiffness allows precise registration for high quality printing lineshaft applications
- **POSITIONING SYSTEMS**
Zero backlash and high Torsional Stiffness make Form-Flex the first choice for servo and stepper drives

Form-Flex® Disc Designs

DISC STYLE	DESIGN FEATURES	WHERE USED
4 BOLT (A, M SERIES) 	Straight sided flex disc. 1 degree angular misalignment. Torque range: 35 LB. IN. to 30,240 LB. IN. Zero backlash. All machined steel construction. Stainless steel flex discs. Steel or stainless steel materials. Minimum reaction forces.	Ideal for general industrial applications with motor or turbine drivers and smooth to moderate load conditions. Low to moderate speed ranges. Serve or stepper driven positioning systems. Applications where misalignment may be a problem. 4 bolt designs offer the highest misalignment capacity of any metal disc design. Not recommended for engine driven applications.
6 BOLT (B SERIES) 	Straight sided disc. 0.7 degree angular misalignment. Torque range: 3050 LB. IN. to 233,000 LB. IN. Suitable for precision balancing. Zero backlash. All machined steel construction. Stainless steel flex discs. Steel or stainless steel materials.	Ideal for motor or turbine drivers with any load conditions. Use for reversing, reciprocating or other rough load conditions. May be used with industrial engines driving smooth loads. Moderate to high speed ranges and applications where dynamic balancing is required. Consider 6 bolt where 4 bolt size requires increasing coupling size to meet bore size requirements.
8 BOLT (D, F, H SERIES) 	Round disc design. 0.3 degree angular misalignment. Torque range: 9500 LB. IN. to 2,000,000 LB. IN. Zero backlash. Heavy duty cast construction. Alloy or stainless steel flex discs. Flywheel mount designs.	High torque-low speed applications. Industrial engines driving reciprocating equipment. Heavy-duty reversing applications. Custom designs for high torque applications.

MATERIAL CLASSES

APPLIES TO 4 AND 6 BOLT DESIGNS

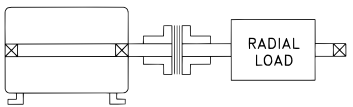
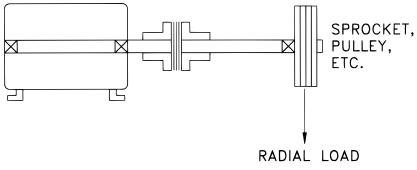
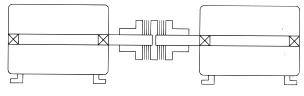
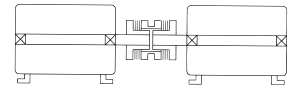
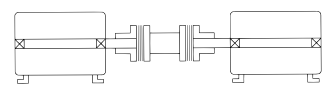
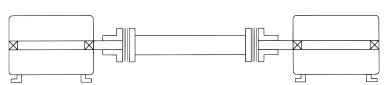
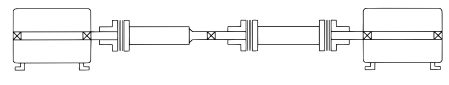
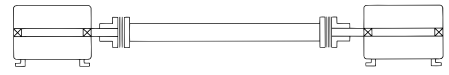
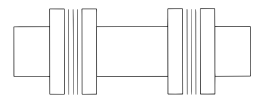
MATERIAL CLASS BY COMPONENT				DESCRIPTION
COUPLING	HUB	SPACER ASSY	REPAIR KIT	
A	A	A	A	Mild steel hubs and spacer, alloy steel hardware, 300 series SS flex disc
B	B	B	A	Zinc plated steel hubs and spacer, alloy steel hardware, 300 series SS flex disc
C	B	C	E	Zinc plated steel hubs and spacer, 300 series SS flex disc and hardware
E	E	E	E	All 300 series stainless steel construction

PRODUCT FEATURES AND OPTIONS

FEATURE	AR, AK, AP AX, AY	BH, BP, BY DP*	BF	BA, DA*	A5, A7	B5	HFTH	HH, HSH, FSH
STANDARD BORE FIT	CLEARANCE	INTERFERENCE			CLEARANCE	INTERFERENCE		
SET SCREWS	STANDARD	OPTIONAL			STANDARD	OPTIONAL		
PULLER HOLES	OPTIONAL	STANDARD			OPTIONAL	STANDARD	OPTIONAL	
STANDARD FLEX DISCS	300 SERIES STAINLESS STEEL*						ALLOY STEEL	
BALANCE CLASS	AGMA 7	AGMA 8	AGMA 9	AGMA 7	N/A			N/A
DYNAMIC BALANCE	OPTIONAL				PER TBW COMMERCIAL STANDARD			N/A

*Alloy steel flex disc is standard for DA and DP series. Stainless steel is optional.

Coupling/Application Types

COUPLING TYPE	TYPICAL APPLICATIONS	PAGES		
		SERIES	PAGE	
SINGLE FLEX	<p>Single flexing couplings compensate for angular and axial misalignment only. Single couplings should only be used in a three bearing system with a self-aligning bearing as shown in the illustration.</p> <p>Single couplings may also be used in pairs to support a clutch, transducer or other system component. These arrangements are double flexing and must be used with two fully supported shafts as described below.</p>	 	AR	F5-12
			BH	F5-13
HH	F5-14			
CLOSE COUPLE DOUBLE FLEX	<p>Close couple designs accommodate angular, parallel and axial misalignment types where two fully supported shafts are located very close together. Close shaft separations are generally in the range of 1/8 to 2 inches.</p>	 	AX	F5-15
			AA	F5-16
			AY	F5-17
			BY	F5-18
			BA	F5-19
			DA	F5-19
SPACER COUPLINGS DOUBLE FLEX	<p>Spacer couplings are used to connect fully supported shafts with wider separations than can be reached with a close couple design. Spacer couplings allow room for installation and maintenance without moving the connected equipment. Shaft separations are generally in the range of 3 to 12 inches. These couplings accommodate angular, parallel and axial misalignment.</p>		AK	F5-20
			AP	F5-20
			BP	F5-21
			BF	F5-23
			DP	F5-22
			HS	F5-24
			FSH	F5-25
FLOATING SHAFT COUPLINGS	<p>Floating shaft couplings are spacer style couplings which are designed to connect widely separated shafts. The coupling spacers are fabricated. Both steel and TrueTube composite tubing options are available.</p> <p>Semi-floating shaft couplings are a special single flex version of the floating shaft coupling. These may be used alone for some applications or in combination with floating shaft couplings and pillow block bearings to span long distances.</p> <p>Composite floating shaft couplings should be considered as an alternative to multiple span applications with center bearings.</p>	  	A5	F5-26
			A7	F5-27
			B5	F5-28
			HFTH	F5-29
			C/S	F5-30, 31
MICRO COUPLINGS DOUBLE FLEX	<p>Form-Flex Micro Couplings are used for precision low torque applications. They are a smaller version of our 4 bolt line. Micro Couplings are constructed of aluminum for reduced inertia. Close couple and spacer designs are available.</p>		MA	F5-32
			MB	F5-32
			MC	F5-32

Selecting And Ordering Form-Flex® Couplings

1) Select correct service factor from the chart below.

2) Calculate HP @ 100 or Design Torque (in lbs).

$$\text{HP @ 100} = \frac{\text{HP} \times \text{service factor} \times 100}{\text{coupling RPM}}$$

OR

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

OR

$$\text{Design Torque} = \text{Torque (in lbs)} \times \text{Service Factor}$$

3) Compare this to the HP @100 column or the Rated Torque column.

4) Check other limiting factors such as bores and overall dimensions.

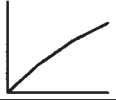
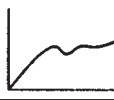
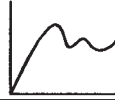
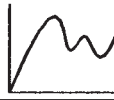



5) Standard Four or Six bolt couplings can be ordered as hubs and a center assembly.
All other couplings should be ordered by description.

SERVICE FACTOR TABLE

These service factors assume a smooth motor or turbine type driver. The adders listed for other driver types must be added to the service factor shown for the driven equipment.

ADDERS FOR DRIVER TYPE		DRIVEN EQUIPMENT	S.F.	DRIVEN EQUIPMENT	S.F.	DRIVEN EQUIPMENT	S.F.
DRIVER	ADD	CONVEYORS-Uniform load (Cont.)		FANS		PAPER MILLS-(Cont.)	
TURBINE	0	Flight	1.25	Centrifugal	1.00	Couch	1.75
AC MOTORS		Oven	1.50	Cooling Tower	2.00	Cutters, Platers	2.00
With Soft Start	0	Screw	1.25	FEEDERS		Cylinders	1.75
NEMA A or B	0	CONVEYORS-Non-Uniform Load		Apron	1.25	Dryers	1.75
NEMA C or D	1	Apron	1.50	Belt	1.25	Felt Stretchers	1.25
DC MOTORS		Assembly	1.25	Disc	1.25	Felt Whipper	2.00
Shunt Type	0	Belt	1.25	Reciprocating	2.50	Presses	2.00
Series or Compound	1	Bucket	1.50	Screw	1.25	Reel	1.50
I/C ENGINES		Chain	1.50	FOOD INDUSTRY		Stock Chests	1.50
8 or More Cylinders	1	Flight	1.50	Cereal Cookers	1.25	Suction Roll	1.75
4-6 Cylinders	1.5	Oven	1.50	Dough Mixers	1.75	Washers and Thickeners	1.50
1-3 Cylinders	2	Reciprocating	2.50	Meat Grinders	1.75	Winders	1.50
DRIVEN EQUIPMENT	S.F.	Screw	1.50	Slicers	1.75	PRINTING PRESSES	1.50
		Shaker	2.50	LUMBER INDUSTRY		PUMPS	
AGITATORS		CRANES AND HOISTS		Barkers-Drum Type	2.00	Centrifugal	1.00
Pure Liquids	1.00	Main Cranes	2.00	Edger Feeders	2.00	Reciprocating	
Liquids and Solids	1.25	Reversing	2.00	Live Rolls	2.00	Double Acting	2.00
Liquids-Variable Density	1.25	Skip Hoists	1.75	Log Haul	2.00	Single Acting 1-2 Cylinders	2.25
BLOWERS		Trolley Drive	1.75	Off Bearing Rolls	2.00	Single Acting 3+ Cylinders	1.75
Centrifugal	1.00	Bridge Drive	1.75	Planers	1.75	Rotary-Gear, Lobe, Vane	1.50
Lobe	1.50	Slope	1.50	Slab Conveyors	1.50	TEXTILE INDUSTRY	
Vane	1.25	DREDGES		Sorting Table	1.50	Batchers	1.25
BRIQUETTER MACHINE	1.00	Cable Reels	1.75	Trimmer Feed	1.75	Calenders	1.75
CAN FILLING MACHINE	1.00	Conveyors	1.50	MACHINE TOOLS		Card Machines	1.50
COMPRESSORS		Maneuvering Winches	1.75	Bending Roll	2.00	Cloth Finishing Machines	1.50
Centrifugal	1.25	Pumps	1.75	Plate Planer	1.50	Dry Cans	1.75
Lobe	1.50	Screen Drives	1.75	Spindle Drives	1.50	Dryers	1.50
Reciprocating	C/F	Stracers	1.75	Table/Axis Drives	1.25	Dyeing Machinery	1.25
CONVEYORS-Uniform Load		Utility Winches	1.50	Tapping Machines	2.50	Looms	1.50
Apron	1.25	ELEVATORS		PAPER MILLS		Mangles	1.25
Assembly	1.00	Bucket	1.75	Beater & Pulper	1.75	Nappers	1.25
Belt	1.00	Centrifugal Discharge	1.50	Bleacher	1.00	Soapers	1.25
Bucket	1.25	Freight	2.00	Calendars	2.00	Spinners	1.50
Chain	1.25	Gravity Discharge	1.50	Converting Machines	1.50	Tinter Frames	1.50

- 1) CONSULT FACTORY FOR APPLICATIONS IN SHADED AREAS.
- 2) TORQUE RATINGS MAY VARY BY COUPLING SERIES.
- 3) USE THE 1.0 SERVICE FACTOR COLUMN IF A SERVICE FACTOR WAS USED IN THE HP/100 RPM CALCULATION.

TYPICAL APPLICATION CONDITIONS						
SMOOTH MOTOR OR TURBINE DRIVEN	STEADY MOTOR OR TURBINE DRIVEN	MODERATE MOTOR OR TURBINE DRIVEN	MEDIUM MOTOR OR TURBINE DRIVEN	HEAVY-HIGH TQ. MOTOR OR ENGINE DRIVEN	EXTRA HEAVY ENGINE DRIVEN	EXTREMELY HEAVY ENGINE DRIVEN
						
SOFT START WITH STEADY LOAD	AVERAGE STARTING LOADS AND SLIGHT TORQUE VARIATIONS	ABOVE AVERAGE STARTING LOADS AND MODERATE LOAD VARIATIONS	HIGH STARTING TORQUES AND MEDIUM TO HEAVY LOAD VARIATIONS	MILD SHOCK LOADING ENGINES. DRIVING SMOOTH LOADS. EXTREME RELIABILITY	HEAVY SHOCK LOADING OR LIGHT REVERSING	EXTREME SHOCK LOADING. FREQUENT WIDE TORQUE VARIATIONS

TYPE/SIZE	RATED TORQUE LB'IN	MAX RPM	O.D.	MAX BORE	SERVICE FACTOR								
					1.0	1.5	2.0	2.5	3.0	3.25	4.0		
					RATED HP/100 RPM AT SERVICE FACTOR SHOWN								
MICRO 4 BOLT	01	9	20,000	1.02	0.38	0.01	0.01	0.01	NOT RECOMMENDED FOR THESE APPLICATIONS				
	02	17	20,000	1.26	0.59	0.03	0.02	0.01					
	03	35	20,000	1.65	0.79	0.06	0.04	0.03					
	04	87	20,000	2.24	0.79	0.14	0.09	0.07					
A SERIES 4 BOLT	05	300	8,500	2.65	0.87	0.48	0.32	0.24		0.19			
	10	800	7,500	3.19	1.25	1.27	0.85	0.63		0.51			
	15	1,575	6,700	3.65	1.37	2.50	1.67	1.25		1.00			
	20	2,200	6,200	4.08	1.62	3.49	2.33	1.75		1.40			
	25	3,800	5,500	4.95	2.00	6.03	4.02	3.02		2.41			
	30	6,930	5,000	5.63	2.37	11.00	7.33	5.50		4.40			
	35	11,340	4,400	6.63	2.87	18.00	12.00	9.00	7.20				
	40	18,270	4,000	7.64	3.25	29.00	19.33	14.50	11.60				
	45	30,240	3,700	8.43	3.75	48.00	32.00	24.00	19.20				
	B SERIES 6 BOLT	33	3,050	17,400	4.69	2.50	4.84	3.23	2.42	1.94	1.61	1.49	
38		6,860	14,300	5.87	3.25	10.89	7.26	5.44	4.36	3.63	3.35		
43		13,500	12,700	6.7	3.75	21.43	14.29	10.71	8.57	7.14	6.59		
48		18,400	11,000	7.5	4.38	29.21	19.47	14.60	11.68	9.74	8.99		
53		24,000	10,700	7.87	4.50	38.10	25.40	19.05	15.24	12.70	11.72		
58		41,000	9,475	9	5.13	65.08	43.39	32.54	26.03	21.69	20.02		
63		48,000	8,590	10	5.50	76.19	50.79	38.10	30.48	25.40	23.44		
68		72,000	7,800	10.75	6.00	114.29	76.19	57.14	45.71	38.10	35.16		
73		125,000	6,740	12.5	6.50	198.41	132.28	99.21	79.37	66.14	61.05		
78		233,000	5,600	15.05	7.50	369.84	246.56	184.92	147.94	123.28	113.80		
D SERIES 8 BOLT	22	9,500	3,800	6.00	2.25	15.08	10.05	7.54	6.03	5.03	4.64	3.77	
	26	16,000	3,300	6.88	2.63	25.40	16.93	12.70	10.16	8.47	7.81	6.35	
	31	24,000	2,800	8.13	3.13	38.10	25.40	19.05	15.24	12.70	11.72	9.52	
	35	44,000	2,600	9.13	3.63	69.84	46.56	34.92	27.94	23.28	21.49	17.46	
	37	60,000	2,500	10.06	3.75	95.24	63.49	47.62	38.10	31.75	29.30	23.81	
	42	73,000	2,400	11.00	4.50	115.87	77.25	57.94	46.35	38.62	35.65	28.97	
	45	99,000	2,250	11.88	4.75	157.14	104.76	78.57	62.86	52.38	48.35	39.29	
	50	128,000	2,000	13.44	5.50	203.17	135.45	101.59	81.27	67.72	62.52	50.79	
	55	189,000	1,800	15.00	6.25	300.00	200.00	150.00	120.00	100.00	92.31	75.00	
	60	261,000	1,600	16.75	7.12	414.29	276.19	207.14	165.71	138.10	127.47	103.57	
	70	415,000	1,400	18.94	7.87	658.73	439.15	329.37	263.49	219.58	202.69	164.68	
	75	533,000	1,300	20.63	8.75	846.03	564.02	423.02	338.41	282.01	260.32	211.51	
	80	685,000	1,200	22.38	9.12	1,087.30	724.87	543.65	434.92	362.43	334.55	271.83	
	85	829,000	1,100	23.75	9.62	1,315.87	877.25	657.94	526.35	438.62	404.88	328.97	
	92	1,040,000	1,000	25.75	11.00	1,650.79	1,100.53	825.40	660.32	550.26	507.94	412.70	
105	1,250,000	1,000	29.25	12.00	1,984.13	1,322.75	992.06	793.65	661.38	610.50	496.03		
160	2,000,000	900	33.50	17.00	3,174.60	2,116.40	1,587.30	1,269.84	1,058.20	976.80	793.65		

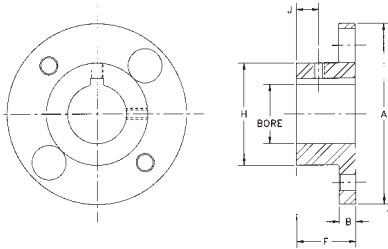
CONSULT WOOD'S SAN MARCOS

4 Bolt Coupling Hub Options

TO ORDER A COMPLETE COUPLING, ORDER TWO HUBS OF ANY TYPE AND A COUPLING (SPACER) SUB ASSEMBLY FOR THE REQUIRED COUPLING TYPE. ALL DIMENSIONS SHOWN IN INCHES.

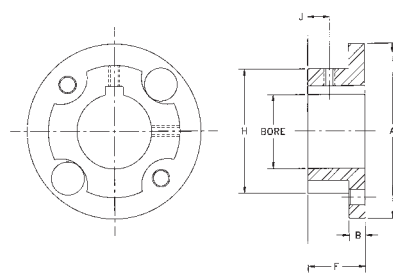
AJ STANDARD HUBS

PROVIDED WITH STRAIGHT BORE AND KEYWAY
SOLID HUBS AVAILABLE FROM STOCK



AZ OVERSIZE BORE HUBS

PROVIDED WITH STRAIGHT BORE AND KEYWAY

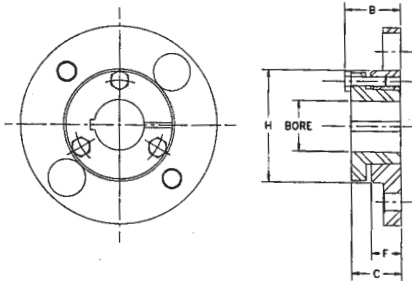


SIZE	MAX BORE	A	B	F	H	J	STD SET SCREW SIZE
05	0.87	2.65	0.25	1.00	1.30	0.38	10-24 UNC
10	1.25	3.19	0.30	1.00	1.80	0.38	1/4-20 UNC
15	1.37	3.65	0.35	1.13	2.00	0.41	1/4-20 UNC
20	1.62	4.08	0.35	1.32	2.40	0.50	1/4-20 UNC
25	2.00	4.95	0.45	1.62	2.80	0.63	5/16-18 UNC
30	2.38	5.63	0.55	1.88	3.30	0.69	5/16-18 UNC
35	2.88	6.63	0.55	2.25	4.15	0.88	1/2-13 UNC
40	3.25	7.64	0.65	2.50	4.65	0.94	1/2-13 UNC
45	3.75	8.43	0.65	3.00	5.40	1.20	1/2-13 UNC

SIZE	MAX BORE	A	B	F	H	J	STD SET SCREW SIZE
05	1.13	2.65	0.25	1.00	1.88	0.38	10-24 UNC
10	1.63	3.19	0.30	1.00	2.37	0.38	1/4-20 UNC
15	1.88	3.65	0.35	1.13	2.69	0.41	1/4-20 UNC
20	2.13	4.08	0.35	1.32	3.13	0.50	1/4-20 UNC
25	2.38	4.95	0.45	1.62	3.75	0.63	5/16-18 UNC
30	2.88	5.63	0.55	1.88	4.25	0.69	5/16-18 UNC
35	3.75	6.63	0.55	2.25	5.25	0.88	1/2-13 UNC
40	4.00	7.64	0.65	2.50	6.02	0.94	1/2-13 UNC
45	4.63	8.43	0.65	3.00	6.75	1.20	1/2-13 UNC

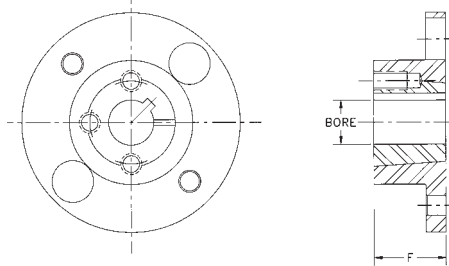
QD BORED HUBS

MATERIAL CLASS A OR B ONLY - CLASS A AVAILABLE FROM STOCK



HUBS FOR TAPER LOCK BUSHINGS

AVAILABLE MTO ONLY

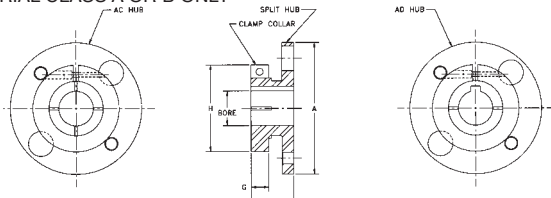


CPLG SIZE	BUSH. SIZE	BUSH. TQ. LB*IN	MAX BORE	B	C	F	H	BOLT SIZE UNC
15	JA	1000	1-1/4	1.17	1.00	.56	2.00	#10
20	JA	1000	1-1/4	1.17	1.00	.56	2.40	#10
25	SH	3500	1-11/16	1.50	1.25	.75	2.80	1/4
30	SD	5000	2	2.06	1.81	1.25	3.30	1/4
35	SK	7000	2-5/8	2.19	1.87	1.25	4.15	5/16
40	SF	11000	2-15/16	2.38	2.06	1.37	4.65	3/8

CPLG SIZE	REGULAR MOUNT				REVERSE MOUNT			
	BUSH SIZE	BUSH TQ LB*IN	MAX BORE	F	BUSH SIZE	BUSH TQ LB*IN	MAX BORE	F
15	N/A	...	...	...	1108	1300	1.12	0.87
20	1108	1300	1.12	0.87	1215	3550	1.25	1.50
25	1215	3550	1.25	1.50	1310	3850	1.37	1.00
30	1310	3850	1.37	1.00	1615	4300	1.62	1.50
35	2012	7150	2.00	1.25	2517	11600	2.50	1.75
40	2525	11300	2.50	2.50	2525	11300	2.50	2.50

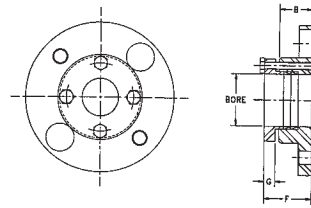
AC/AD CLAMPING HUBS

AC HUBS PROVIDED WITHOUT KEYWAY
AD HUBS PROVIDED WITH KEYWAY
MATERIAL CLASS A OR B ONLY



AL LOCK ELEMENT HUBS

THESE HUBS USE RINGFEDER TAPERED LOCKING ELEMENTS
MATERIAL CLASS A OR B ONLY



SIZE	MAX BORE		A	F	G	H	SCREW SIZE
	AC	AD					
05	1.00	0.87	2.65	1.13	.50	2.06	1/4-20 UNC
10	1.00	0.87	3.19	1.18	.50	2.06	1/4-20 UNC
	1.50	1.25		1.36	.69	2.75	5/16-18 UNC
15	1.00	0.87	3.65	1.27	.50	2.06	1/4-20 UNC
	1.75	1.37		1.46	.69	3.00	5/16-18 UNC
20	1.31	1.00	4.08	1.32	.55	2.38	1/4-20 UNC
	2.12	1.62		1.52	.75	3.50	3/8-16 UNC
25	2.13	1.62	4.95	1.62	.64	3.50	5/16-18 UNC
	2.50	1.87		1.86	.88	4.00	3/8-16 UNC

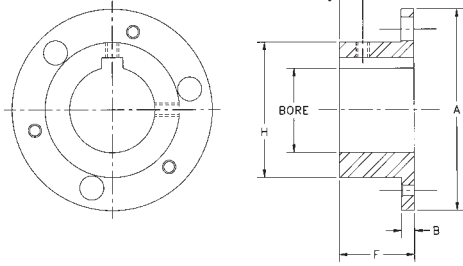
SIZE	HUB TYPE	BORE SIZE-mm		B	F	G	SCREW SIZE
		MIN	MAX				
05	AJ	6	13	1.00	1.32	.32	10-32 UNF
	AZ	14	19	1.00	1.42	.42	1/4-28 UNF
10	AJ	12	18	1.00	1.42	.42	1/4-28 UNF
	AZ	19	30	1.00	1.42	.42	1/4-28 UNF
15	AJ	12	22	1.13	1.55	.42	1/4-28 UNF
	AZ	24	35	1.13	1.55	.42	1/4-28 UNF
20	AJ	22	30	1.32	1.78	.42	1/4-28 UNF
	AZ	32	42	1.32	1.83	.51	5/16-24 UNF
25	AJ	22	32	1.63	2.05	.42	1/4-28 UNF
	AZ	35	50	1.63	2.23	.60	3/8-24 UNF

NOTE: AC and AL Hubs do not carry full torque capacity. Please consult engineering.

Coupling Hub Options

6 BOLT COUPLING HUBS

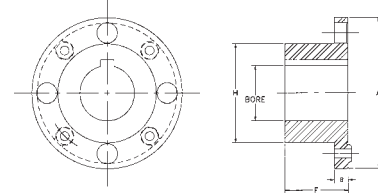
BH SERIES—USED ON BH, BP, B5, BY SERIES
 PROVIDED WITH STRAIGHT BORE AND KEYWAY
 INTERFERENCE FIT WITHOUT SETSCREWS IS RECOMMENDED



SIZE	MAX BORE	A	B	F	H	J	OPTIONAL SET SCREW SIZE
33	2.25	4.69	0.30	1.75	3.14	0.88	1/4-20 UNC
38	3.00	5.87	0.35	2.25	4.13	1.13	3/8-16 UNC
43	3.25	6.70	0.42	2.50	4.63	1.25	3/8-16 UNC
48	3.75	7.50	0.40	2.75	5.40	1.50	1/2-13 UNC
53	3.88	7.87	0.55	2.88	5.65	1.44	1/2-13 UNC
58	4.25	9.00	0.65	3.25	6.22	1.63	1/2-13 UNC
63	4.88	10.00	0.65	3.38	7.14	1.69	3/4-10 UNC
68	5.00	10.75	0.75	3.75	7.33	1.88	3/4-10 UNC
73	5.25	12.50	1.00	5.13	7.80	2.50	3/4-10 UNC
78	6.50	15.05	1.15	6.38	9.50	3.12	3/4-10 UNC

8 BOLT COUPLING HUBS

Dxx-3 CAST IRON MATERIAL, Dxx-3ST CAST STEEL MATERIAL
 USED ON HH, HSH, FSH, HFTH SERIES
 INTERFERENCE FIT WITHOUT SETSCREWS IS RECOMMENDED



SIZE	MAX BORE		A	B	F	H
	IRON	STEEL				
22	2.25	—	6.00	0.53	2.50	3.88
26	2.62	—	6.87	0.62	2.88	4.50
31	3.12	—	8.12	0.69	3.38	5.50
35	3.62	—	9.12	0.88	3.75	6.12
37	3.75	—	10.06	0.88	4.00	6.50
42	4.25	4.50	11.00	1.00	4.25	7.00
45	4.50	4.75	11.87	1.13	4.50	7.43
50	5.12	5.50	13.43	1.25	5.00	8.38
55	5.62	6.25	15.00	1.25	5.50	9.50
60	6.50	7.12	16.75	1.44	6.25	10.50
70	7.00	7.87	18.93	1.75	7.00	11.75
75	7.75	8.75	20.62	1.75	7.25	13.00
80	8.00	9.12	22.37	2.09	7.75	13.75
85	8.50	9.62	23.75	2.13	8.25	14.50
92	10.00	11.00	25.75	2.62	9.00	15.87

FORM-FLEX DISC IDENTIFICATION CHART

ALL DIMENSIONS ARE ROUNDED TO THE NEAREST FRACTIONAL SIZE FOR IDENTIFICATION PURPOSES. NO TOLERANCES ARE SPECIFIED OR IMPLIED.
 DISC SET THICKNESS VARIES FOR TYPE BA AND DA

4 BOLT DISCS		SIZE	WIDTH	I.D.	HOLE DIA	B.C. DIA	CHORD	DISC SET THICKNESS
	5	1-13/16	1	1/4	1-7/8	1-5/16	0.06	
	10	2-3/16	1-3/16	1/4	2-3/8	1-5/8	0.09	
	15	2-9/16	1-1/4	5/16	2-5/8	1-7/8	0.12	
	20	2-13/16	1-5/8	5/16	3-1/8	2-3/16	0.14	
	25	3-9/16	1-3/4	7/16	3-3/4	2-5/8	0.15	
	30	4	2-1/16	1/2	4-1/4	3	0.18	
	35	4-3/4	2-3/4	1/2	5-1/4	3-3/4	0.28	
	40	5-1/2	3	5/8	6	4-1/4	0.30	
	45	6-1/16	3-1/2	5/8	6-3/4	4-3/4	0.40	
	50	7	4	3/4	7-3/4	5-1/2	0.43	
55	7-3/4	4-1/4	1	8-1/2	6	0.51		
6 BOLT DISCS		SIZE	WIDTH	I.D.	HOLE DIA	B.C. DIA	CHORD	DISC SET THICKNESS
	33	3-3/4	2-3/4	1/4	3-3/4	1-7/8	0.10	
	38	4-13/16	3-9/16	5/16	4-7/8	2-7/16	0.13	
	43	5-11/16	3-15/16	7/16	5-9/16	2-7/8	0.16	
	48	6-3/8	4-5/8	7/16	6-3/8	3-3/16	0.19	
	53	6-3/4	4-3/4	1/2	6-5/8	3-5/16	0.24	
	58	7-3/4	5-1/4	5/8	7-7/16	3-3/4	0.25	
	63	8-1/2	6	5/8	8-3/8	4-3/16	0.30	
	68	9-1/4	6-1/4	3/4	9-15/16	5	0.34	
8 BOLT DISCS		SIZE	WIDTH	I.D.	HOLE DIA	B.C. DIA	CHORD	DISC SET THICKNESS
	22	5-5/8	3-7/8	5/16	4-3/4	1-13/16	0.17	
	26	6-9/16	4-7/16	13/32	5-1/2	2-1/8	0.23	
	31	7-3/4	5-1/4	15/32	6-1/2	2-1/2	0.25	
	35	8-5/8	5-3/4	17/32	7-1/4	2-3/4	0.29	
	37	9-5/8	6-5/16	5/8	8	3-1/16	0.31	
	42	10-1/2	6-3/4	11/16	8-5/8	3-5/16	0.31	
	45	11-1/4	7-1/4	3/4	9-1/4	3-1/2	0.37	
	50	12-13/16	8-1/2	7/8	10-1/2	4	0.46	
	55	14-3/8	9	1	11-3/4	4-1/2	0.54	
	60	15-15/16	9-15/16	1-1/8	13	5	0.59	
	70	18-8	11-1/8	1-5/16	14-3/4	5-5/8	0.78	
	75	19-3/4	12	1-7/16	16	6-1/8	0.80	
	80	21-7/16	13-1/8	1-9/16	17-3/8	6-5/8	0.81	
	85	22-7/8	14	1-3/4	18-1/2	7-1/8	0.87	
	92	24-7/8	15	1-7/8	20	7-5/8	1.00	

Engineering Standards Form-Flex® Couplings

INDUSTRY STANDARDS REFERENCED

AGMA 9002-A86—BORES AND KEYWAYS FOR FLEXIBLE COUPLINGS

AGMA 9000-C90—FLEXIBLE COUPLINGS – POTENTIAL UNBALANCED CLASSIFICATION

AGMA 514.02—LOAD CLASSIFICATION AND SERVICE FACTORS FOR FLEXIBLE COUPLINGS

API610—CENTRIFUGAL PUMPS FOR GENERAL REFINERY SERVICE, 7th Edition—BF and BP series meet the requirements of API610, 7th Edition when supplied with interference fit bores. Other coupling series can be altered to comply with API610.

NEMA MG1-14.37 AND MG1-21.81—All Form-Flex metal disc couplings meet these standards without limited end float devices

Certain tables and data in this catalog were extracted from the reference AGMA standards with the permission of the publisher, the American Gear Manufacturers Associations, 1901 North Meyer Drive, Arlington, VA 22209.

MATERIAL CLASSES APPLICABLE TO 4 AND 6 BOLT DESIGNS

CLASS A— Mild steel hubs and spacer, alloy steel hardware, 300 series stainless steel flex discs.

CLASS B— Zinc plated mild steel hubs and spacer, alloy steel hardware, 300 series stainless steel flex discs.

CLASS C— Zinc plated mild steel hubs and spacer, 300 series stainless steel hardware and flex discs.

CLASS E— All 300 series stainless steel construction.

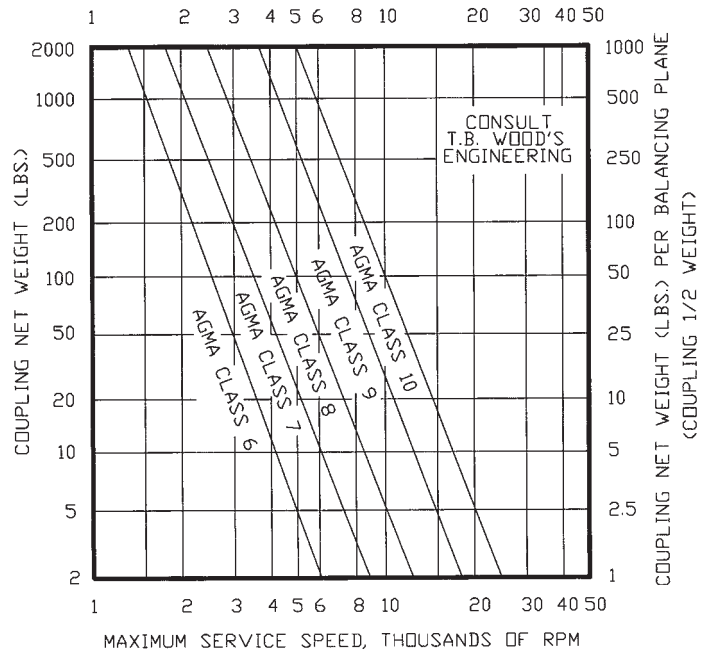
DYNAMIC BALANCING RECOMMENDATIONS

Use this graph to determine the appropriate balance class based on coupling weight and operating speed. The balance classes listed on the graph are for equipment with average sensitivity to coupling unbalance. The user should determine how sensitive the equipment train is to coupling unbalance. Use one balance class higher if your system has higher than average sensitivity to unbalance. Use one balance class lower if your system has lower than average sensitivity to unbalance. Use this guide to check your coupling selection against the recommended balance class for your operating conditions.

The following factors should be considered when determining a machine's sensitivity to coupling unbalance.

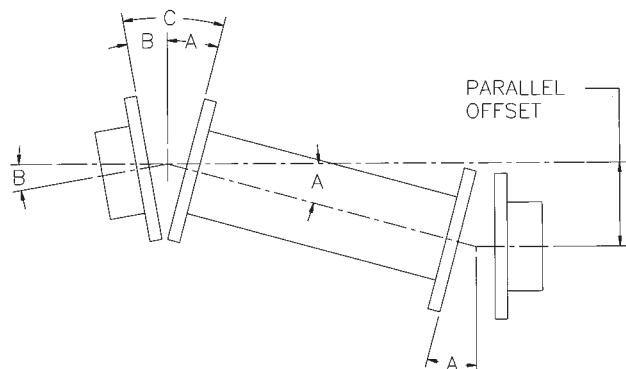
- 1) Shaft End Deflection: Machines having flexible shaft extensions are relatively sensitive to coupling unbalance.
- 2) Bearing Load Due to Coupling Weight Relative to Total Bearing Load: Machines having lightly loaded bearings, bearings that are primarily loaded by the weight of the coupling or other overhung weight are relatively sensitive to coupling unbalance.
- 3) Bearing, Bearing Support and Foundation Flexibility: Machines or systems with flexible foundations for supports for the rotating elements are relatively sensitive to coupling unbalance.
- 4) System Natural Frequencies: Machines operating at or near natural frequencies are sensitive to coupling unbalance.
- 5) Machine Separation: System having widely separated machines are relatively sensitive to coupling unbalance.
- 6) Shaft Extension Relative to Bearing Span: Machines having a short bearing span relative to their shaft extensions are sensitive to static unbalance.

BALANCE CLASS SELECTION CHART



HOW FORM-FLEX COUPLINGS ACCOMMODATE MISALIGNMENT

Double flexing metal disc couplings may be used to accommodate angular, parallel and axial misalignment. Single flexing couplings may only be used to accommodate angular and axial misalignment. A metal disc type coupling uses a double hinge effect through two flexible discs and the spacer to compensate for parallel offset misalignment between shafts. Parallel misalignment imposes the same angular deflection (A) on each flex disc. Angular misalignment of either connected shaft, (B), creates additional angular deflections which are added to the angular offset due to parallel misalignment. The total misalignment angle, (C), at the flex disc is equal to the angular offset due to parallel misalignment (A) plus the angular offset due to angular misalignment (B). The maximum misalignment angle (C) should never exceed the rated misalignment capacity of the coupling type being used. Machinery equipment changes in actual operation and over the life of the equipment. We recommend that the machinery misalignment be set as close to zero as possible when a coupling is installed. We recommend keeping the measured misalignment below 25% of the rated misalignment capacity of the coupling type used when the machinery is installed and aligned. The remaining coupling misalignment capacity will then be available to accommodate additional misalignment caused by foundation shifts, vibrations, thermal growth or other causes.



Engineering Standards Form-Flex® Couplings

PRODUCT FEATURES AND OPTIONS

FEATURE	AR, AK, AP AX, AY	BH, BP, BY DP*	BF	BA, DA*	A5, A7	B5	HFTH	HH, HSH, FSH
STANDARD BORE FIT	CLEARANCE	INTERFERENCE			CLEARANCE	INTERFERENCE		
SET SCREWS	STANDARD	OPTIONAL			STANDARD	OPTIONAL		
PULLER HOLES	OPTIONAL	STANDARD			OPTIONAL	STANDARD	OPTIONAL	
STANDARD FLEX DISCS	300 SERIES STAINLESS STEEL*						ALLOY STEEL	
BALANCE CLASS	AGMA 7	AGMA 8	AGMA 9	AGMA 7	N/A		N/A	
DYNAMIC BALANCE	OPTIONAL				PER TBW COMMERCIAL STANDARD			N/A

*Alloy steel flex disc is standard for DA and DP series. Stainless steel is optional.

STANDARD BORE TOLERANCES

INCH SIZE	SIZE	KEYWAY SIZE	BORE TOLERANCE	
			CLEARANCE FIT	INTERFERENCE FIT
1/2	12	1/8 X 1/16	.500/.501	...
5/8	58	3/16 X 3/32	.625/.626	...
3/4	34	3/16 X 3/32	.750/.751	.7490/.7495
7/8	78	3/16 X 3/32	.875/.876	.8740/.8745
15/16	1516	1/4 X 1/8	.9375/.9385	.9365/.9370
1	1	1/4 X 1/8	1.000/1.001	.9990/.9995
1-1/8	118	1/4 X 1/8	1.125/1.126	1.1240/1.1245
1-3/16	1316	1/4 X 1/8	1.1875/1.1885	1.1865/1.1870
1-1/4	114	1/4 X 1/8	1.250/1.251	1.2490/1.2495
1-3/8	138	5/16 X 5/32	1.375/1.376	1.3740/1.3745
1-7/16	1716	3/8 X 3/16	1.4375/1.4385	1.4365/1.4370
1-1/2	112	3/8 X 3/16	1.500/1.501	1.4990/1.4995
1-5/8	158	3/8 X 3/16	1.625/1.626	1.623/1.624
1-3/4	134	3/8 X 3/16	1.750/1.751	1.748/1.749
1-7/8	178	1/2 X 1/4	1.875/1.876	1.873/1.874
1-15/16	11516	1/2 X 1/4	1.9375/1.9385	1.9355/1.9365
2	2	1/2 X 1/4	2.000/2.001	1.998/1.999
2-1/8	218	1/2 X 1/4	2.1250/2.1265	2.123/2.124
2-1/4	214	1/2 X 1/4	2.2500/2.2515	2.248/2.249
2-3/8	238	5/8 X 5/16	2.3750/2.3765	2.373/2.374
2-7/16	2716	5/8 X 5/16	2.4375/2.4390	2.4355/2.4365
2-1/2	212	5/8 X 5/16	2.5000/2.5015	2.498/2.499
2-5/8	258	5/8 X 5/16	2.6250/2.6265	2.623/2.624
2-3/4	234	5/8 X 5/16	2.7500/2.7515	2.748/2.749
2-7/8	278	3/4 X 3/8	2.8750/2.8765	2.873/2.874
2-15/16	21516	3/4 X 3/8	2.9375/2.9390	2.9355/2.9365
3	3	3/4 X 3/8	3.000/3.0015	2.998/2.999
3-1/4	314	3/4 X 3/8	3.2500/3.2515	3.2470/3.2485
3-3/8	338	7/8 X 7/16	3.3750/3.3765	3.3720/3.3735
3-1/2	312	7/8 X 7/16	3.5000/3.5015	3.4970/3.4985
3-5/8	358	7/8 X 7/16	3.6250/3.6265	3.6220/3.6235
3-3/4	334	7/8 X 7/16	3.7500/3.7515	3.7470/3.7485
4	4	1 X 1/2	4.0000/4.0015	3.9970/3.9985
4-1/4	414	1 X 1/2	4.2500/4.2515	4.2465/4.2480
4-1/2	412	1 X 1/2	4.5000/4.5015	4.4965/4.4980
4-3/4	434	1-1/4 X 5/8	4.7500/4.7515	4.7465/4.7480
5	5	1-1/4 X 5/8	...	4.9965/4.9980
5-1/4	514	1-1/4 X 5/8	...	5.2460/5.2475
5-1/2	512	1-1/4 X 5/8	...	5.4960/5.4975
5-3/4	534	1-1/2 X 3/4	...	5.7460/5.7475

METRIC SIZE	SIZE CODE	KEYWAY SIZE	BORE TOLERANCE CLEARANCE FIT
6	6MM	2 X 1	.236/.237
8	8MM	2 X 1	.315/.316
10	10MM	3 X 1.4	.394/.395
12	12MM	4 X 1.8	.4725/.4735
13	13MM	5 X 2.3	.512/.513
14	14MM	5 X 2.3	.551/.552
15	15MM	5 X 2.3	.591/.592
16	16MM	5 X 2.3	.630/.631
18	18MM	6 X 2.8	.709/.710
20	20MM	6 X 2.8	.7875/.7885
22	22MM	6 X 2.8	.866/.867
24	24MM	8 X 3.3	.945/.946
25	25MM	8 X 3.3	.984/.985
28	28MM	8 X 3.3	1.1025/1.1035
30	30MM	8 X 3.3	1.181/1.182
32	32MM	10 X 3.3	1.260/1.261
35	35MM	10 X 3.3	1.378/1.379
38	38MM	10 X 3.3	1.496/1.497
40	40MM	12 X 3.3	1.575/1.576
45	45MM	14 X 3.8	1.772/1.773
48	48MM	14 X 3.8	1.890/1.891
50	50MM	14 X 3.8	1.969/1.970
55	55MM	16 X 4.3	2.1655/2.1670
60	60MM	18 X 4.4	2.3620/2.3635
65	65MM	18 X 4.4	2.5590/2.5605
70	70MM	20 X 4.9	2.7560/2.7575
75	75MM	20 X 4.9	2.9530/2.9545
80	80MM	22 X 5.4	3.1500/3.1515
85	85MM	22 X 5.4	3.3465/3.3480
90	90MM	25 X 5.4	3.5435/3.5450
95	95MM	25 X 5.4	3.7400/3.7415
100	100MM	28 X 6.4	3.9370/3.9385
110	110MM	28 X 6.4	4.3310/4.3325

BORE TOLERANCES IN INCHES
KEYWAY SIZES IN MM

KEYWAY TOLERANCES

WIDTH	ENGLISH	+ .002" / -0.000"
	METRIC	+ .001" / -0.000"
HEIGHT AT SIDE OF KW	BORE ≤ 3.375"	+ .015" / -0.000"
	BORE > 3.375"	+ .020" / -0.000"

SPECIFYING TAPERED BORES

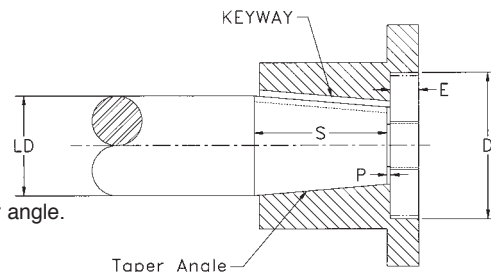
Please provide the following information for taper bore hubs:

- Drawing of HUB showing bore and keyway details.
OR
- Drawing of shaft showing:
 - (LD) Large diameter, specify with tolerance.
 - (S) Length of taper, measure parallel to shaft centerline.
 - (T) Taper angle. Specify as degrees, taper per foot or a percentage.
 - (P) Desired pull-up of hub on shaft.
 - (D) Counterbore diameter as required.
 - (E) Counterbore depth as required.

Keyway or shaft keyseat dimensions. Specify width, depth and keyway taper angle.

-AND OPTIONALLY-

- Drawing or sketch of equipment layout in order to determine correct spacer length.

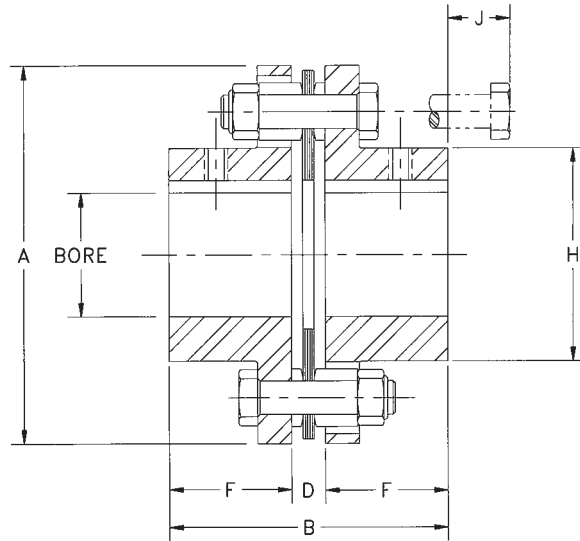


Single Flex - 4 Bolt Single Flexing Coupling

AR Series

(FORMERLY AJ SERIES)

The AR series coupling accommodates angular and axial misalignment only. Single couplings may be used in pairs to support a clutch, brake or other power transmission component in a floating shaft arrangement, or to support a component that is supported by a self-aligning bearing. The AR coupling consists of two hubs and one set of standard hardware, including stainless steel flex discs.



RATED MISALIGNMENT: 1.0 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ OVERSIZE	05-45
QD BUSHING MOUNT	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

COUPLING CONSISTS OF:
 2 - HUBS - EXAMPLE- AJ35A X 1-3/8
 1 - FLEX ASSEMBLY - EXAMPLE- A35RKA
 THIS COUPLING IS SOLD AS COMPONENTS

MATERIAL CLASSES		FLEX ASSY PART #
CLASS	SIZE	
A	05-45	AxxRKA
B	05-45	AxxRKA
C	15-45	AxxRKE
E	15-45	AxxRKE
SEE PAGE F5-4		xx = SIZE

SIZE	DIMENSIONS IN INCHES*								FREE END FLOAT +/- INCH
	MAX BORE		A	B	D DBSE	F	H	J	
	AJ	AZ							
05	0.87	1.13	2.65	2.24	0.24	1.00	1.30	0.54	0.015
10	1.25	1.63	3.19	2.27	0.27	1.00	1.80	0.59	0.020
15	1.37	1.88	3.65	2.58	0.32	1.13	2.00	0.88	0.021
20	1.62	2.13	4.08	2.98	0.34	1.32	2.40	0.79	0.027
25	2.00	2.38	4.95	3.69	0.45	1.62	2.80	1.00	0.030
30	2.38	2.88	5.63	4.23	0.47	1.88	3.30	1.14	0.032
35	2.88	3.75	6.63	5.05	0.55	2.25	4.15	0.97	0.042
40	3.25	4.00	7.64	5.60	0.60	2.50	4.65	1.30	0.050

* Dimensions shown are for AJ hubs unless otherwise specified.

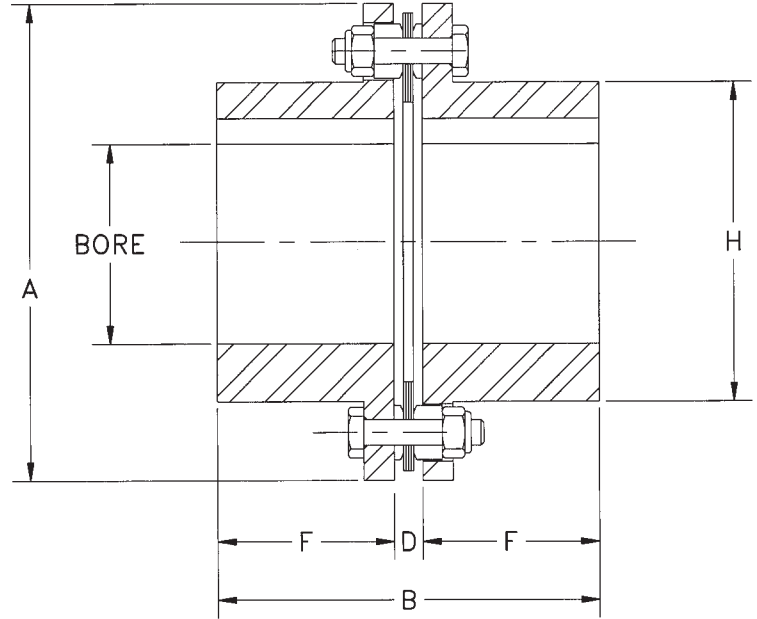
SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 7 MAX RPM	MAX RADIAL LOAD (lbs.)	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)
05	0.48	300	600	8,500	34	1.24	0.96	0.28
10	1.27	800	1,600	7,500	56	1.96	2.35	0.84
15	2.50	1,575	3,150	6,700	125	2.98	4.62	1.47
20	3.49	2,200	4,400	6,200	183	4.07	7.48	2.11
25	6.03	3,800	7,600	5,500	275	7.01	20.4	3.62
30	11.00	6,930	13,860	5,000	400	10.8	41.5	5.91
35	18.00	11,340	22,680	4,400	600	17.2	88.3	11.0
40	29.00	18,270	36,540	4,000	850	25.6	178.	17.0

Note:
 1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

Single Flex - 6 Bolt Single Flexing Coupling

BH Series

The BH series coupling accommodates angular and axial misalignment only. Single couplings may be used in pairs to support a clutch, brake or other power transmission component in a floating shaft arrangement, or to support a component that is supported by a self-aligning bearing. The BH coupling consists of two hubs and one set of standard hardware, including stainless steel flex discs.



RATED MISALIGNMENT: 0.7 DEG/DISC

HUB TYPES	SIZES
BH	33-78
SEE PAGE F5-9	

SIZE	DIMENSIONS IN INCHES					
	MAX BORE	A	B	D DBSE	F	H
33	2.25	4.69	3.79	0.29	1.75	3.14
38	3.00	5.87	4.84	0.34	2.25	4.13
43	3.25	6.70	5.47	0.47	2.50	4.63
48	3.75	7.50	6.00	0.50	2.75	5.40
53	3.88	7.87	6.28	0.52	2.88	5.65
58	4.25	9.00	7.06	0.56	3.25	6.22
63	4.88	10.00	7.36	0.60	3.38	7.14
68	5.00	10.75	8.35	0.85	3.75	7.33

MATERIAL CLASSES		FLEX ASSY PART #
CLASS	SIZE	
A	33-78	BOxxRKA
B	33-78	BOxxRKA
C	38-63	BOxxRKE
E	MTO 38-63	BOxxRKE
SEE PAGE F5-4		xx = SIZE

COUPLING CONSISTS OF:
 2 – HUBS – EXAMPLE- BH48Ax3”
 1 – FLEX ASSEMBLY – EXAMPLE- BO48RKA
 THIS COUPLING IS SOLD AS COMPONENTS

SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 8 MAX RPM	MAX RADIAL LOAD (lbs.)	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)	FREE END FLOAT +/- inch
	1.0 S.F								
33	4.84	3,050	6,100	8,400	150	5.76	14.5	4.57	0.03
38	10.08	6,350	12,500	7,500	240	11.4	46.6	9.41	0.04
43	19.84	12,500	25,000	6,800	420	17.3	91.7	17.8	0.05
48	26.98	17,000	34,000	6,500	655	25.2	171	25.5	0.06
53	38.10	24,000	48,000	6,000	720	29.8	226	29.8	0.06
58	53.97	34,000	68,000	5,500	930	45.4	443	50.0	0.06
63	76.19	48,000	96,000	5,200	1,125	58.4	715	76.6	0.07
68	114.29	72,000	144,000	4,800	1,530	73.4	984	96.7	0.07

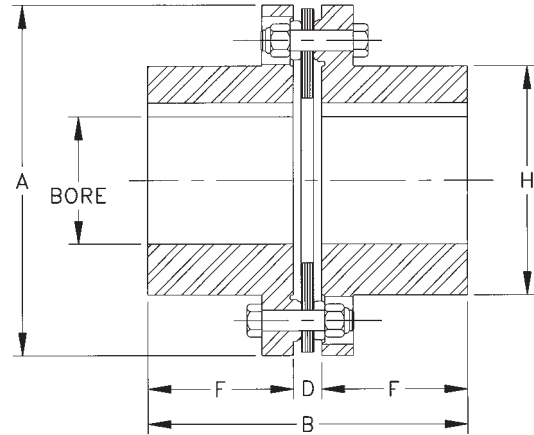
Note:

1) Weight, WR² and Torsional Stiffness values are shown for BH hubs at maximum bore size.

Single Flex - 8 Bolt Single Coupling

HH Series

The HH series is designed for high torque, low speed applications. Hubs are cast iron. Steel is optional. Flex discs are high strength alloy steel. Stainless steel flex discs are optional. Dynamic balancing for higher speed operation is not recommended. Single plane balancing of individual hubs is available.



SIZE	DIMENSIONS IN INCHES						
	MAX BORE		A (2)	B	D DBSE	F	H
	IRON	STEEL					
22	2.25	—	6.00	5.43	0.43	2.50	3.87
26	2.62	—	6.87	6.29	0.53	2.88	4.50
31	3.12	3.63	8.12	7.38	0.62	3.38	5.50
35	3.62	4.00	9.12	8.16	0.66	3.75	6.12
37	3.75	4.50	10.06	8.81	0.81	4.00	6.50
42	4.25	4.75	11.00	9.31	0.81	4.25	7.00
45	4.50	5.13	11.87	9.87	0.87	4.50	7.43
50	5.12	5.50	13.43	11.06	1.06	5.00	9.50
55	5.62	6.25	15.00	12.25	1.25	5.50	9.50
60	6.50	7.12	16.75	13.84	1.34	6.25	10.50
70	7.00	7.87	18.93	15.50	1.50	7.00	11.75
75	7.75	8.75	20.62	16.05	1.55	7.25	13.00
80	8.00	9.12	22.37	17.06	1.56	7.75	13.75
85	8.50	9.62	23.75	18.12	1.62	8.25	14.50
92	10.00	11.00	25.75	19.75	1.75	9.00	15.87
105	10.50	12.00	29.25	22.75	1.75	10.50	20.00
160	16.00	17.00	33.50	26.25	2.25	12.00	24.00

RATED MISALIGNMENT: 0.5 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
C.I.	26-160
STL	31-160
SEE PAGE F5-9	

ORDERING: HH Series couplings are sold as complete assemblies. Please specify hub type, bore sizes, and flex disc materials. A coupling will be configured to meet your specification.

SIZE	HP PER 100 RPM 1.0S.F	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 8 MAX RPM	MAX RADIAL LOAD (lbs.)	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)	FREE END FLOAT +/- inch
22	15.08	9,500	14,250	3,800	338	17	62	12.7	0.018
26	25.40	16,000	24,000	3,300	570	26	129	22.1	0.022
31	38.10	24,000	36,000	2,800	700	43	304	36.4	0.026
35	69.84	44,000	66,000	2,600	930	61	557	52.8	0.028
37	95.24	60,000	90,000	2,500	1,170	77	820	69.6	0.031
42	115.87	73,000	109,500	2,400	1,300	95	1,250	84	0.034
45	157.14	99,000	148,500	2,250	1,700	115	1,810	106	0.036
50	203.17	128,000	192,000	2,000	2,250	163	3,290	147	0.041
55	300.00	189,000	283,500	1,800	3,200	228	5,570	243	0.046
60	414.29	261,000	391,500	1,600	4,000	328	10,300	349	0.051
70	658.73	415,000	622,500	1,400	6,100	451	18,200	482	0.058
75	846.03	533,000	799,500	1,300	6,900	588	27,400	682	0.062
80	1,087.30	685,000	1,027,500	1,200	7,500	732	42,100	779	0.068
85	1,315.87	829,000	1,243,500	1,100	8,700	840	54,700	911	0.070
92	1,650.79	1,040,000	1,560,000	1,000	11,100	1,160	89,400	1220	0.078
105	1,984.13	1,250,000	1,875,000	1,000	8,460	1,780	160,000	3200	0.085
160	3,174.60	2,000,000	3,000,000	900	11,300	2,310	325,000	5140	0.125

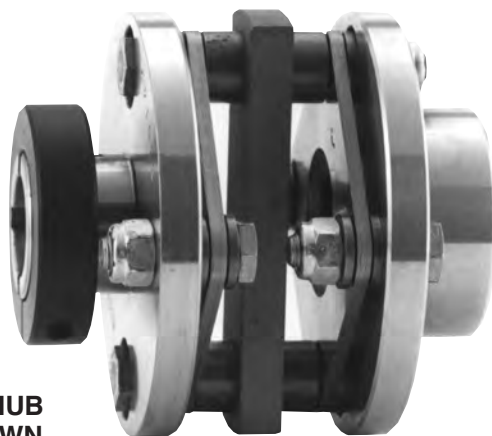
Note:
 1) Weight, WR² and Torsional Stiffness values are shown for cast iron hubs at maximum bore size.
 2) Hub flange O.D. may vary with steel hubs.

Close Couple - 4 Bolt Close Coupled Coupling

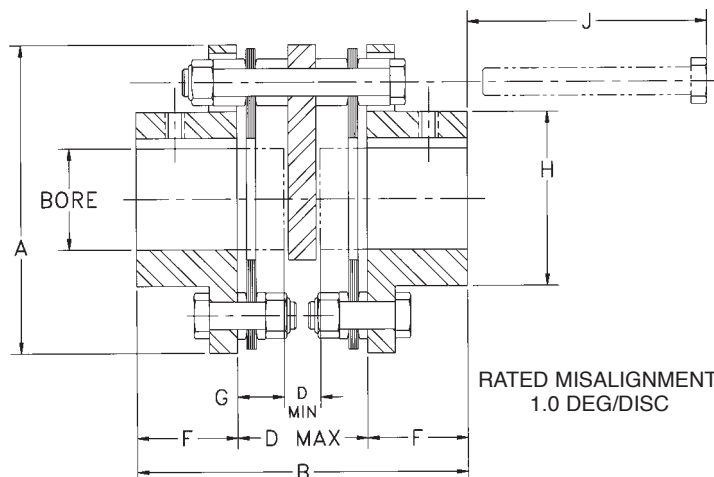
(GENERAL USE)

AX Series

The AX series close coupling is made up of two hubs, a steel spacer block, two stainless flex discs and AX hardware. A special bolting arrangement supports the spacer between the flex discs. The AX is an economical design that is well suited to many general purpose applications. The AX accommodates close shaft separations when it is installed with the shafts extending through the flex discs into the center of the coupling. The shaft diameter must be less than the flex disc I.D. listed in the dimensional table.



AD HUB SHOWN



RATED MISALIGNMENT:
1.0 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ - OVERSIZE	05-45
QD BUSHING MOUNT	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

COUPLING CONSISTS OF:
2 - HUBS - EXAMPLE- AJ20A x 1-1/2"
1 - SPACER ASSEMBLY - EXAMPLE- AX20SAA
THIS COUPLING IS SOLD AS COMPONENTS

MATERIAL CLASSES		SPACER ASSEMBLY
CLASS	SIZE	PART #
A	05-45	AXxxSAA
B	05-45	AXxxSAB
C	N/A	N/A
E	N/A	N/A
SEE PAGE F5-4		xx = SIZE

SIZE	DIMENSIONS IN INCHES*										
	MAX BORE		A	B	DBSE		F	G	H	J	DISC I.D.**
	AJ	AZ			Dmin	Dmax					
05	0.87	1.13	2.65	3.34	0.38	1.34	1.00	0.48	1.30	1.68	1.00
10	1.25	1.63	3.19	3.40	0.44	1.40	1.00	0.48	1.30	1.79	1.17
15	1.37	1.88	3.65	3.80	0.63	1.54	1.13	0.44	2.00	1.85	1.28
20	1.62	2.13	4.08	4.22	0.63	1.58	1.32	0.48	2.40	1.66	1.65
25	2.00	2.38	4.95	5.36	0.75	2.12	1.62	0.69	2.80	2.39	1.78
30	2.38	2.88	5.63	6.30	1.00	2.54	1.88	0.77	3.30	3.18	2.01
35	2.88	3.75	6.63	7.17	1.13	2.67	2.25	0.77	4.15	2.81	2.71
40	3.25	4.00	7.64	8.30	1.13	3.30	2.50	1.08	4.65	4.03	3.00

* Dimensions shown are for AJ hubs unless otherwise specified.

** Shaft I.D. must be less than disc I.D. in order to extend shafts into coupling to meet Dmin dimension.

SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 7 MAX RPM	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)	FREE END FLOAT +/- inch
	1.0 S.F							
05	0.48	300	450	8,500	1.63	1.26	0.04	0.030
10	1.27	800	1,200	7,500	2.48	2.90	0.06	0.040
15	2.50	1,575	2,363	6,700	3.84	5.80	0.21	0.042
20	3.49	2,200	3,300	6,200	5.10	9.16	0.25	0.055
25	6.03	3,800	5,700	5,500	9.13	26.1	0.56	0.060
30	11.00	6,930	10,395	5,000	13.8	51.7	0.79	0.065
35	18.00	11,340	17,010	4,400	21.1	108	1.48	0.085
40	29.00	18,270	27,405	4,000	32.0	222	1.68	0.100

Note:

1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

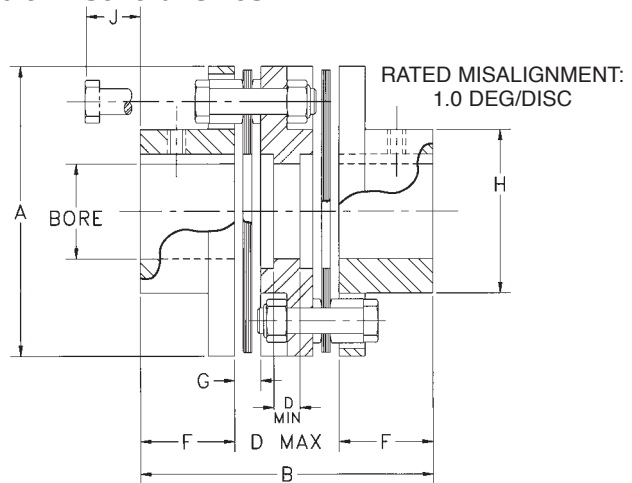
Close Couple - 4 Bolt Close Coupled Coupling

AA Series

(GENERAL USE – SHORTER BOLT REMOVAL)

The AA series close coupling is made up of two hubs, a cast iron block type spacer and two sets of standard hardware. Stainless steel flex discs are standard. The AA accommodates close shaft separations when it is installed with the shafts extending through the flex discs into the center of the coupling. The shaft diameter must be less than the flex disc I.D. listed in the dimensional table. This coupling is recommended when the bolt removal length (J) makes the AX coupling impractical.

Special machined steel block spacers are also available in several sizes.



HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ - OVERSIZE	05-45
QD BUSHING MOUNT	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

COUPLING CONSISTS OF:
 2 – HUBS – EXAMPLE- AJ35A x 2”
 1 – SPACER ASSEMBLY – EXAMPLE- AA35SAA
 THIS COUPLING IS SOLD AS COMPONENTS

MATERIAL CLASSES		SPACER ASSEMBLY
CLASS	SIZE	PART #
A	05-45	AAxxSAA
B	05-45	AAxxSAB
C	15-45	AAxxSAC
E	N/A	N/A
SEE PAGE F5-4		xx = SIZE

SIZE	DIMENSIONS IN INCHES*										
	MAX BORE		A	B	DBSE		F	G	H	J	DISC I.D.**
	AJ	AZ			Dmin	Dmax					
05	0.87	1.13	2.65	3.23	0.25	1.23	1.00	0.24	1.30	0.54	1.00
10	1.25	1.63	3.19	3.73	0.25	1.73	1.00	0.27	1.80	0.56	1.17
15	1.37	1.88	3.65	3.82	0.31	1.56	1.13	0.32	2.00	0.88	1.28
20	1.62	2.13	4.08	4.38	0.41	1.74	1.32	0.34	2.40	0.79	1.65
25	2.00	2.38	4.95	5.26	0.41	2.02	1.62	0.45	2.80	1.00	1.78
30	2.38	2.88	5.63	6.24	0.56	2.48	1.88	0.47	3.30	1.14	2.01
35	2.88	3.75	6.63	6.91	0.66	2.41	2.25	0.55	4.15	0.97	2.71
40	3.25	4.00	7.64	7.70	0.75	2.70	2.50	0.60	4.65	1.30	3.00

* Dimensions shown are for AJ hubs unless otherwise specified.

** Shaft I.D. must be less than disc I.D. in order to extend shafts into coupling to meet Dmin dimension.

SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	MAX RPM	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)	FREE END FLOAT +/- inch
	1.0 S.F.							
05	0.48	300	450	3,600	1.76	1.40	0.06	0.030
10	1.27	800	1,200	3,500	2.77	3.35	0.10	0.040
15	2.50	1,575	2,363	3,450	4.24	6.66	0.26	0.042
20	3.49	2,200	3,300	3,350	5.48	10.2	0.25	0.055
25	6.03	3,800	5,700	3,200	9.81	29.4	0.62	0.060
30	11.00	6,930	10,395	3,000	15.0	59	0.94	0.065
35	18.00	11,340	17,010	2,800	22.4	121	1.44	0.085
40	29.00	18,270	27,405	2,650	34.3	250	2.43	0.100

Notes:

1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

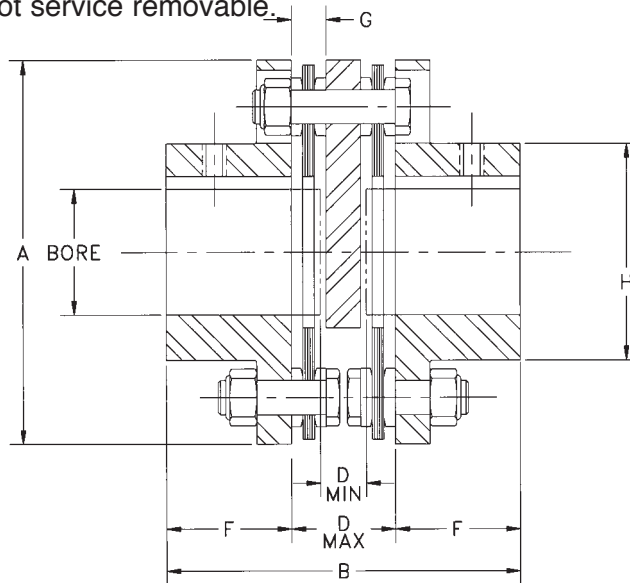
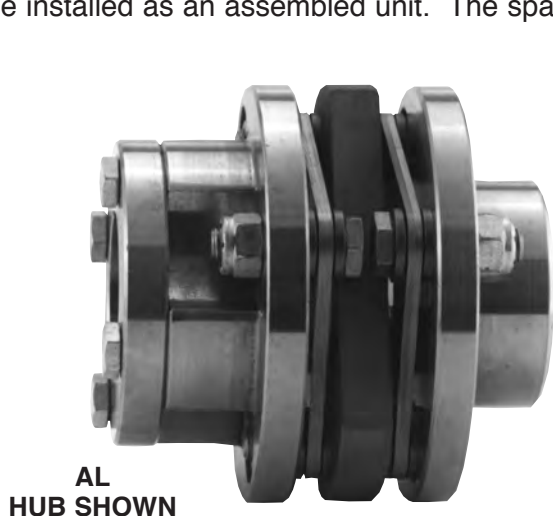
2) Max RPM shown based on cast iron spacer material.

Close Couple - 4 Bolt Close Coupled Coupling

AY Series

(POSITIONING APPLICATIONS)

The AY series is specifically designed for positioning applications where a servo or stepper drive is C flange mounted and connects to a ball screw. The AY accommodates the small amounts of angular and parallel misalignment with an absolute minimum size package, zero backlash and high Torsional Stiffness. The AY is made up of two hubs, a steel spacer block, two stainless flex discs and AY hardware. The coupling must be installed as an assembled unit. The spacer is not service removable.



RATED MISALIGNMENT: 1.0 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-25
AZ - OVERSIZE	05-25
QD BUSHING MOUNT	15-25
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

COUPLING CONSISTS OF:
 2 – HUBS – EXAMPLE- AJ20A x 1-1/2”
 1 – SPACER ASSEMBLY – EXAMPLE- AY20SAA
 THIS COUPLING IS SOLD AS COMPONENTS

MATERIAL CLASSES		SPACER ASSEMBLY
CLASS	SIZE	PART #
A	05-25	AYxxSAA
B	05-25	AYxxSAB
C	N/A	N/A
E	N/A	N/A
SEE PAGE F5-4		xx = SIZE

SIZE	DIMENSIONS IN INCHES*									
	MAX BORE		A	B	DBSE		F	G	H	DISC I.D.**
	AJ	AZ			Dmin	Dmax				
05	0.87	1.13	2.65	2.85	0.49	0.85	1.00	0.24	1.30	1.00
10	1.25	1.63	3.19	2.91	0.50	0.91	1.00	0.27	1.80	1.17
15	1.37	1.88	3.65	3.33	0.56	1.07	1.13	0.32	2.00	1.28
20	1.62	2.13	4.08	3.76	0.56	1.12	1.32	0.34	2.40	1.65
25	2.00	2.38	4.95	4.77	0.87	1.53	1.62	0.45	2.80	1.78

* Dimensions shown are for AJ hubs unless otherwise specified.

** Shaft I.D. must be less than disc I.D. in order to extend shafts into coupling to meet Dmin dimension.

SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 7 MAX RPM	WEIGHT (lbs.)	WR ² (lb. in. ²) (lb. in./rad)	TQ/RAD X10 ⁶	FREE END FLOAT +/- inch
05	0.48	300	600	8,500	1.64	1.24	0.13	0.030
10	1.27	800	1,600	7,500	2.68	3.08	0.35	0.040
15	2.50	1,575	3,150	6,700	4.23	6.41	0.64	0.042
20	3.49	2,200	4,400	6,200	5.49	9.92	0.83	0.055
25	6.03	3,800	7,600	5,500	9.78	27.6	1.56	0.060

Note:

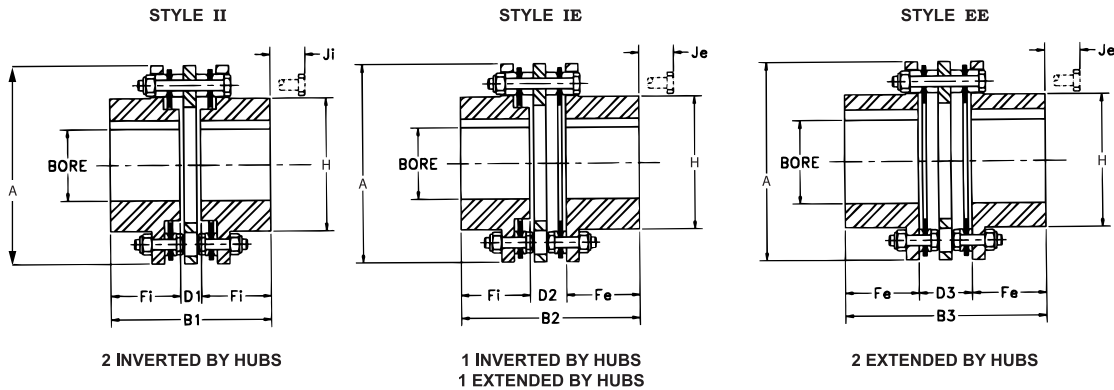
1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

Close Couple - Bolt Close Coupled Coupling

BY Series

The BY series close coupling is a low cost replacement for gear or elastomeric couplings. It is ideal for use in low to moderate speed applications with motor or turbine drivers. The BY is an economical alternative to Axial Split spacer designs. The BY accommodates close shaft spacings by allowing the connected shafts to extend through the flex discs and spacer without restriction. The spacer is not service removable if the shaft gap is less than the D1 dimension shown. For shorter shaft spacings, the flex discs may still be replaced by removing the coupling bolts and shuttling the spacer from side to side.

Inverted (BY) and Extended (BH) hubs are available to allow varying shaft diameters and spacing.



COUPLING CONSISTS OF:
 2 – HUBS – EXAMPLE- BY43A x 2-1/2”
 1 – SPACER ASSEMBLY – EXAMPLE- BY43SAA
 THIS COUPLING IS SOLD AS COMPONENTS

RATED MISALIGNMENT: 0.5 DEG/DISC

SIZE	DIMENSIONS IN INCHES														
	MAX BORE		A	B1	B2	B3	C	DBSE			Fi	Fe	H	Ji	Je
	BY inv	BH ext						D1	D2	D3					
33	2.00	2.25	4.69	4.13	4.530	4.93	1.350	0.43	0.930	1.43	1.85	1.75	3.14	1.46	1.06
38	2.63	3.00	5.87	4.45	5.260	6.07	1.440	0.57	1.070	1.57	1.94	2.25	4.13	1.61	0.80
43	2.88	3.25	6.70	5.41	6.265	7.12	1.645	0.81	1.465	2.12	2.30	2.50	4.63	2.51	1.60
48	3.25	3.75	7.50	5.64	6.630	7.62	1.760	0.76	1.440	2.12	2.44	2.75	5.40	2.34	1.35
53	3.63	3.88	7.87	6.77	7.600	8.43	2.050	1.01	1.840	2.67	2.88	2.88	5.65	2.93	2.10
58	4.00	4.25	9.00	7.60	8.700	9.80	2.150	1.20	2.250	3.30	3.20	3.25	6.22	4.40	3.30
63	4.50	4.88	10.00	8.40	9.230	10.06	2.550	1.20	2.250	3.30	3.60	3.38	7.14	4.00	3.17
68	4.75	5.00	10.75	9.20	10.450	11.70	2.500	1.60	2.900	4.20	3.80	3.75	7.33	5.28	4.03

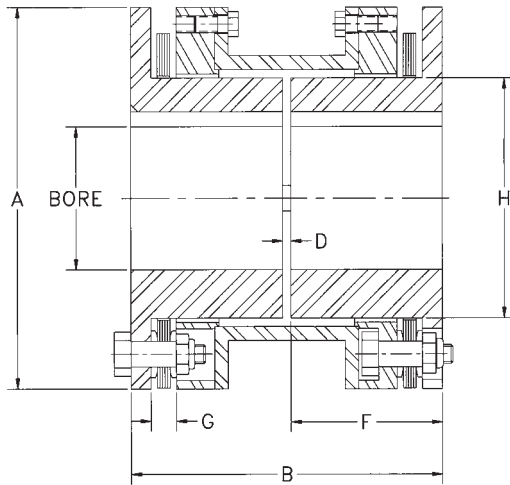
SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 8 MAX RPM	WEIGHT (lbs.)	WR ² (lb. in. ²)	TQ/RAD X10 ⁶ (lb. in./rad)	FREE END FLOAT +/- inch
	1.0 S.F.							
33	4.84	3,050	4,575	8,400	8.06	22.3	0.94	0.060
38	10.08	6,350	9,525	7,500	13.9	65.1	2.98	0.084
43	19.84	12,500	18,750	6,800	23.2	144	4.99	0.090
48	26.98	17,000	25,500	6,500	31.1	241	5.42	0.108
53	38.10	24,000	36,000	6,000	40.3	345	9.10	0.108
58	53.97	34,000	51,000	5,500	65.4	734	15.4	0.118
63	76.19	48,000	72,000	5,200	82.8	1150	25.8	0.140
68	114.29	72,000	108,000	4,800	106	1760	37.4	0.144

MATERIAL CLASSES		SPACER ASSEMBLY
CLASS	SIZE	PART #
A	33-68	BYxxSAA
B	33-68	BYxxSAB
C	N/A	N/A
E	N/A	N/A
SEE PAGE F5-4		xx = SIZE

Close Couple - Axial Split Spacer Coupling

BA Series - 6 Bolt Design
DA Series - 8 Bolt Design

Axial split spacer couplings are an ideal replacement for lubricated gear or grid couplings. Close shaft separations are met without requirements for extending shafts through hubs. The split spacer removes radially to allow removal of connected equipment. Flex discs may be replaced without disturbing the connected equipment. The axial split series features all steel construction. Stainless steel flex discs are standard for the BA series. Both stainless and high strength alloy steel flex disc options are available with the DA series.



RATED MISALIGNMENT: 0.7 DEG/DISC

SIZE	DIMENSIONS IN INCHES						
	MAX BORE	A	B	D DBSE	F	G	H
BA33	1.75	4.69	3.88	0.12	1.88	0.33	2.71
BA38	2.50	5.87	4.38	0.12	2.13	0.40	3.55
BA43	2.63	6.70	5.00	0.12	2.44	0.48	3.91
DA31	3.38	7.81	5.87	0.19	2.84	0.44	5.22
DA35	3.75	8.69	6.81	0.25	3.28	0.54	5.71
DA37	4.19	9.69	7.37	0.25	3.56	0.69	6.18
DA42	4.50	10.50	8.19	0.25	3.97	0.69	6.70
DA45	4.75	11.31	9.31	0.31	4.50	0.75	7.20
DA50	5.00	12.88	9.75	0.31	4.72	0.96	7.93
DA55	5.50	14.44	11.00	0.38	5.31	1.04	8.95
DA60	6.00	16.00	12.38	0.38	6.00	1.10	9.89
DA70	7.00	18.25	14.38	0.38	7.00	1.40	11.08

ORDERING: BA and DA Series couplings are sold as components. Please specify hub bore sizes and specify flex disc materials for DA series couplings.

SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	MAX RPM		WEIGHT (lbs.)	WR ² (lb. in. ²)	FREE END FLOAT +/- inch
	1.0 S.F			UNBALANCED	BALANCED			
BA33	6.29	3,965	7,930	4,200	7,000	10.7	29.2	0.060
BA38	13.10	8,255	16,510	3,800	6,300	18.1	81.7	0.084
BA43	25.79	16,250	32,500	3,700	6,000	30.2	158	0.090
DA31	38.10	24,000	48,000	3,000	5,000	45.5	372	0.052
DA35	54.13	34,100	68,200	2,800	4,500	63.4	627	0.056
DA37	81.11	51,100	102,200	2,500	4,000	87	1,110	0.062
DA42	114.76	72,300	144,600	2,300	3,700	114	1,670	0.067
DA45	130.48	82,200	164,400	2,200	3,400	152	2,550	0.072
DA50	196.83	124,000	248,000	2,000	3,300	215	4,610	0.082
DA55	300.00	189,000	378,000	1,900	2,800	317	8,550	0.092
DA60	390.48	246,000	492,000	1,800	2,500	450	14,900	0.102
DA70	549.21	346,000	692,000	1,700	2,500	664	28,800	0.115

Note:
 1) Weights and WR² values shown are at maximum bore size.

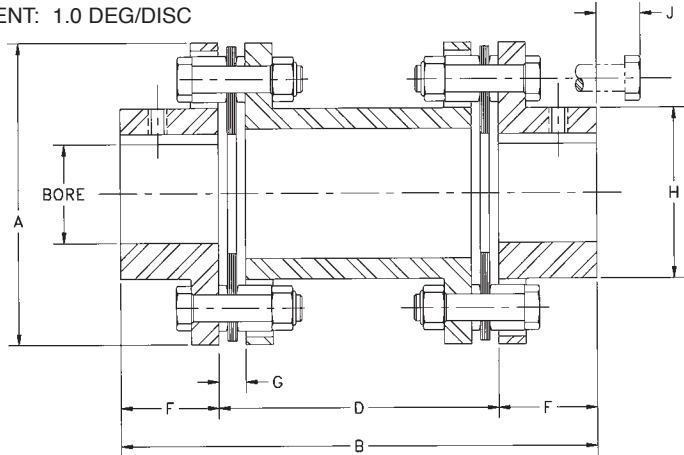
Spacer - 4 Bolt Coupling

AK Series Stock Length AP Series Custom Length

The AK and AP series couplings are standard design spacer couplings. They are made up of two hubs, a one-piece machined spool spacer and two sets of flex discs with standard hardware, including stainless steel flex discs. The AK is the stocked minimum length spacer. The AP is made-to-order to any custom spacer length. AP series pricing is standard for any spacer length up to 9 inches.



RATED MISALIGNMENT: 1.0 DEG/DISC



For type AP, specify the D (DBSE) dimension in 1/100th inches.
Example: AP10A350 specifies AP10 class A 3.50" DBSE.

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ - OVERSIZE	05-45
QD BUSHING MT.	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

COUPLING CONSISTS OF:
2 – HUBS – EXAMPLE- AJ25A x 1-3/4"
1 – SPACER ASSEMBLY – EXAMPLE- AK25SAA
THIS COUPLING IS SOLD AS COMPONENTS

MATERIAL CLASSES		SPACER ASSEMBLY PART #	
CLASS	SIZE	AK	AP
A	05-45	AKxxSAA	APxxAddd
B	05-45	AKxxSAB	APxxBddd
C	15-45	AKxxSAC	APxxCddd
E	MTO 15-45	AKxxSAE	APxxEddd
SEE PAGE F5-4		xx = SIZE	ddd=DBSE

SIZE	DIMENSIONS IN INCHES*										FREE END FLOAT +/- inch
	MAX BORE		A	Bmin (AK)	Dmin (AK)	F	G	H	J		
	AJ	AZ									
05	0.87	1.13	2.65	3.72	1.72	1.00	0.24	1.30	0.54	0.030	
10	1.25	1.63	3.19	4.06	2.06	1.00	0.27	1.80	0.56	0.040	
15	1.37	1.88	3.65	4.67	2.41	1.13	0.32	2.00	0.88	0.042	
20	1.62	2.13	4.08	5.02	2.38	1.32	0.34	2.40	0.79	0.055	
25	2.00	2.38	4.95	6.16	2.92	1.62	0.45	2.80	1.00	0.060	
30	2.38	2.88	5.63	7.57	3.81	1.88	0.47	3.30	1.14	0.065	
35	2.88	3.75	6.63	8.81	4.31	2.25	0.55	4.15	0.97	0.085	
40	3.25	4.00	7.64	9.88	4.88	2.50	0.60	4.65	1.30	0.100	

* Dimensions shown are for AJ hubs unless otherwise specified.

SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE LB*IN (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 7 MAX RPM	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS 10° (lb. in./rad)	
					AT MIN D	ADD PER in. OF D	AT MIN D	ADD PER in. OF D	K factor	Y factor
05	0.48	300	600	8,500	2.32	0.14	1.87	0.05	0.15	2.00
10	1.27	800	1,600	7,500	3.62	0.22	4.48	0.11	0.43	4.64
15	2.50	1,575	3,150	6,700	5.44	0.26	8.86	0.19	0.74	7.51
20	3.49	2,200	4,400	6,200	6.96	0.32	13.8	0.34	1.08	13.8
25	6.03	3,800	7,600	5,500	12.7	0.41	38.8	0.62	1.74	25.1
30	11.00	6,930	13,860	5,000	19.0	0.46	77.7	0.92	2.89	37.4
35	18.00	11,340	22,680	4,400	27.6	0.63	156	2.29	5.34	93
40	29.00	18,270	36,540	4,000	42.1	0.76	322	3.55	8.21	144

Notes:

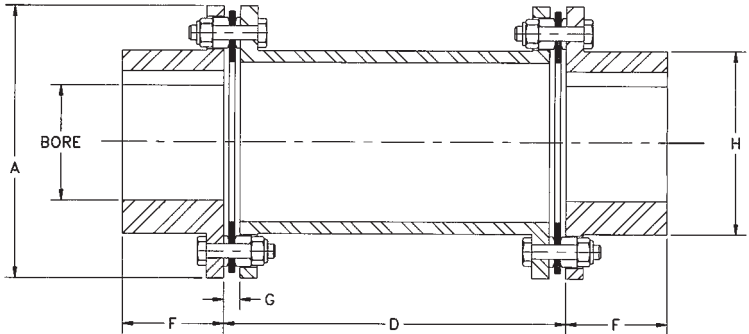
1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

2) To calculate Torsional Stiffness for a given spacer length, let L = D - Dmin, Torsional Stiffness = 1/[(1/K) + (L/Y)]

Spacer - 6 Bolt Coupling

BP Series Spacer

The BP series coupling is a standard design spacer coupling using the 6 bolt disc design. The coupling is made up of two hubs, a one-piece machined spool spacer and two sets of flex discs with standard hardware, including stainless steel flex discs. The BP is made-to-order to any custom spacer length. BP series pricing is standard for any spacer length up to 9 inches.



RATED MISALIGNMENT: 0.7 DEG/DISC

HUB TYPES	SIZES
BH	33-78
SEE PAGE F5-9	

COUPLING CONSISTS OF:
 2 – HUBS – EXAMPLE- BH33Ax2”
 1 – SPACER ASSEMBLY – EXAMPLE-
 BP33A500 (5”DBSE)
 THIS COUPLING IS SOLD AS COMPONENTS

Specify the D (DBSE) dimension in 1/100th inches.
 Example: BP33A350 specifies BP33 class A 3.50”
 DBSE. Specify each hub bore size as required.

SIZE	DIMENSIONS IN INCHES						FREE END FLOAT +/- inch
	MAX BORE	A	Dmin	F	G	H	
33	2.25	4.69	2.09	1.75	0.285	3.14	0.060
38	3.00	5.87	2.37	2.25	0.335	4.13	0.084
43	3.25	6.70	2.95	2.50	0.465	4.63	0.090
48	3.75	7.50	3.00	2.75	0.495	5.40	0.108
53	3.88	7.87	3.91	2.88	0.520	5.65	0.108
58	4.25	9.00	4.80	3.25	0.555	6.22	0.118
63	4.88	10.00	4.88	3.38	0.600	7.14	0.140
68	5.00	10.75	6.20	3.75	0.849	7.33	0.144

MATERIAL CLASSES		SPACER ASSEMBLY PART #
CLASS	SIZE	
A	33-73	BPxxAddd
B	33-78	BPxxBddd
C	38-63	BPxxCddd
E	N/A	N/A
SEE PAGE F5-4		ddd = DBSE

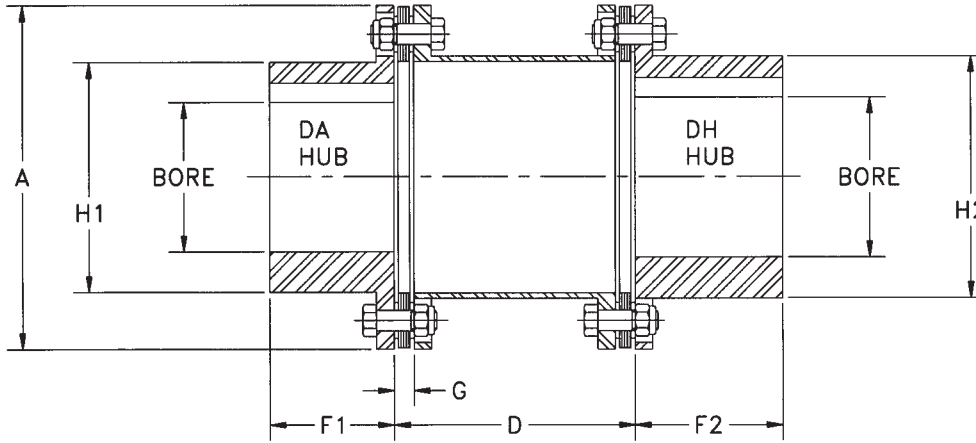
SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE LB*IN (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 8 MAX RPM	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS x10 ⁶ (lb. in./rad)	
					AT MIN D	ADD PER in. OF D	AT MIN D	ADD PER in. OF D	K factor	Y factor
33	4.84	3,050	6,100	8,400	8.49	0.47	23.3	0.91	2.42	37.1
38	10.08	6,350	12,700	7,500	15.9	0.63	71.8	2.24	4.93	90.8
43	19.84	12,500	25,000	6,800	24.3	0.74	143	3.59	9.40	146.
48	26.98	17,000	34,000	6,500	33.2	0.87	248	5.79	13.2	235.
53	38.10	24,000	48,000	6,000	41.7	0.93	354	6.93	15.1	281.
58	53.97	34,000	68,000	5,500	65.1	0.98	707	8.14	23.7	330.
63	76.19	48,000	96,000	5,200	80.5	1.14	1,100	13.0	34.9	528.
68	114.29	72,000	144,000	4,800	104	1.17	1,560	14.7	44.0	597.

Notes:
 1) Weight, WR² and Torsional Stiffness values are shown for BH hubs at maximum bore size.
 2) To calculate Torsional Stiffness for a given spacer length, let L = D - Dmin, Torsional Stiffness = 1/[(1/K) + (L/Y)]

Spacer - 8 Bolt Coupling

DP Series Spacer

The DP series coupling is a fully machined spacer coupling using the 8 bolt disc design used for high torque applications at higher speeds. The coupling is made up of two hubs, a one-piece machined spool spacer and two sets of flex discs and hardware. The DP is made-to-order to any customer spacer length. Both stainless and high strength alloy flex disc materials are available.



**MEETS API 610
9TH EDITION
WITH OPTIONAL
BALANCING**

RATED MISALIGNMENT: 0.5 DEG/DISC

SPECIFY BORES & DBSE
THIS COUPLING IS SOLD AS AN ASSEMBLY.

SIZE	DIMENSIONS IN INCHES									FREE END FLOAT +/- inch
	MAX BORE		A	Dmin DBSE	F1 DA	F2 DH	G	H1 DA	H2 DH	
	DA	DH								
DP31	3.38	3.63	7.81	4.38	2.84	3.37	0.44	5.22	5.50	0.052
DP35	3.75	4.00	8.69	4.75	3.28	3.75	0.54	5.71	5.88	0.056
DP37	4.00	4.50	9.69	5.00	3.56	4.00	0.69	6.18	6.50	0.062
DP42	4.50	4.75	10.50	5.13	3.97	4.25	0.69	6.70	7.00	0.067
DP45	4.75	5.13	11.31	5.25	4.50	4.50	0.75	7.20	7.44	0.072
DP50	5.00	5.38	12.88	7.25	4.72	5.00	0.96	7.93	8.38	0.082
DP55	5.50	6.00	14.44	7.62	5.31	5.50	1.04	8.95	9.44	0.092
DP60	6.00	6.50	16.00	8.13	6.00	6.00	1.10	9.89	10.25	0.102
DP70	7.00	7.50	18.25	9.25	7.00	7.00	1.40	11.06	11.75	0.115

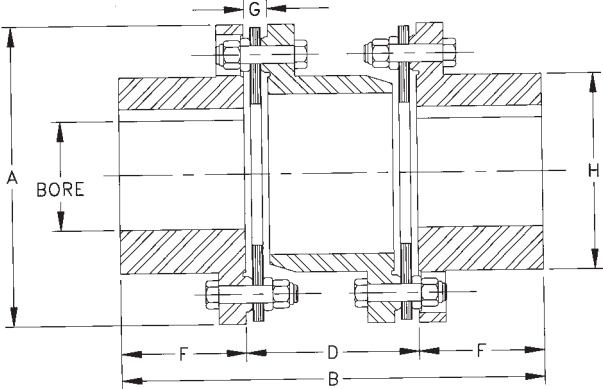
SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE LB*IN (lb. in.)	PEAK O/L TORQUE (lb. in.)	AGMA 8 MAX RPM	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS x10 ⁶ (lb. in./rad)	
					AT MIN D	ADD PER in. OF D	AT MIN D	ADD PER in. OF D	K factor	Y factor
DP35	76.12	48,000	96,000	5,700	54.5	0.97	525	8.16	26.7	318
DP37	107.84	68,000	136,000	5,400	69.3	1.05	839	10.7	34.7	417
DP42	146.69	92,500	185,000	5,100	91.4	1.54	1,270	18.2	47.2	711
DP45	157.00	99,000	198,000	4,800	118	1.66	1,910	23.4	61.0	912
DP50	260.08	164,000	328,000	4,300	175	2.28	3,560	38.3	78.7	1,490
DP55	396.47	250,000	510,000	4,100	260	3.03	6,690	63.2	133	2,470
DP60	586.77	370,000	740,000	3,600	367	4.01	11,600	101	187	3,950
DP70	840.51	530,000	1,060,000	3,300	559	5.46	23,500	172	285	6,690

Notes:
 1) Weight, WR² and Torsional Stiffness values are shown for DA hubs at maximum bore size.
 2) To calculate Torsional Stiffness for a given spacer length, let L = D - Dmin, Torsional Stiffness = 1/[(1/K) + (L/Y)]

Spacer - 8 Bolt Coupling

HSH Series Spacer

The HSH series is designed for high torque, low speed applications. Hubs are cast iron. Steel is optional. Spacers are cast grey or ductile iron. Flex discs are high strength alloy steel. Stainless steel flex discs are optional. Dynamic balancing for higher speed operation is not recommended. Single plane balancing of hubs and spacers is available.



SIZE	DIMENSIONS IN INCHES							
	MAX BORE		A (2)	B	D DBSE	F	G	H
	IRON	STEEL						
22	2.25	—	6.00	8.00	3.00	2.50	0.43	3.87
26	2.62	—	6.87	9.50	3.50	2.88	0.55	4.50
31	3.12	3.63	8.12	10.87	4.12	3.37	0.62	5.50
35	3.62	4.00	9.12	12.06	4.56	3.75	0.66	6.12
37	3.75	4.50	10.06	13.12	5.12	4.00	0.81	6.50
42	4.25	4.75	11.00	13.93	5.43	4.25	0.81	7.00
45	4.50	5.13	11.87	14.75	5.75	4.50	0.87	7.43
50	5.12	5.50	13.43	16.81	6.81	5.00	1.06	9.50
55	5.62	6.25	15.00	18.68	7.68	5.50	1.25	9.50
60	6.50	7.12	16.75	20.93	8.43	6.25	1.34	10.50
70	7.00	7.87	18.93	23.62	9.62	7.00	1.50	11.75
75	7.75	8.75	20.62	25.00	10.50	7.25	1.53	13.00
80	8.00	9.12	22.37	26.87	11.37	7.75	1.56	13.75
85	8.50	9.62	23.75	28.62	12.12	8.25	1.62	14.50
92	10.00	11.00	25.75	31.00	13.00	9.00	1.75	15.87
105	10.50	12.00	29.25	34.25	13.25	10.50	1.75	20.00
160	16.00	17.00	33.50	40.25	16.25	12.00	2.25	24.00

ORDERING: HSH
 Series couplings are sold as complete assemblies. Please specify hub type, bore sizes, and flex disc materials. A coupling will be configured to meet your specifications.

RATED MISALIGNMENT: 0.3 DEG/DISC

HUB TYPES	SIZES
C.I.	22-160
STL	31-160
SEE PAGE F5-9	

SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	MAX RPM	WEIGHT (lbs.) (1)	WR ² (lb. in. ²) (1)	TQ/RAD X10 ⁶ (1) (lb. in./rad)	FREE END FLOAT +/- inch
	1.0S.F							
22	15.08	9,500	14,250	3,800	22	80	1.5	0.036
26	25.40	16,000	24,000	3,300	33	161	2.3	0.044
31	38.10	24,000	36,000	2,800	56	401	2.9	0.052
35	69.84	44,000	66,000	2,600	81	750	6.5	0.056
37	95.24	60,000	90,000	2,500	103	1,130	9.9	0.062
42	115.90	73,000	109,500	2,400	133	1,740	6.9	0.067
45	157.10	99,000	148,500	2,250	161	2,510	14.8	0.072
50	203.20	128,000	192,000	2,000	223	4,580	44.3	0.082
55	300.00	189,000	283,500	1,800	302	7,480	54.2	0.092
60	414.30	261,000	391,500	1,600	435	13,800	80.1	0.102
70	658.70	415,000	622,500	1,400	640	25,900	144	0.115
75	846.00	533,000	799,500	1,300	839	38,600	148	0.125
80	1,087.00	685,000	1,027,500	1,200	1,070	59,800	205	0.136
85	1,316.00	829,000	1,243,500	1,100	1,240	79,400	204	0.140
92	1,651.00	1,040,000	1,560,000	1,000	1,710	131,000	384	0.156
105	1,984.00	1,250,000	1,875,000	1,000	C/F	C/F	C/F	0.170
160	3,175.00	2,000,000	3,000,000	900	C/F	C/F	C/F	0.250

Notes:
 1) Weight, WR² and Torsional Stiffness values are shown for cast iron hubs at maximum bore size.
 2) Hub flange diameter may vary with steel hubs.

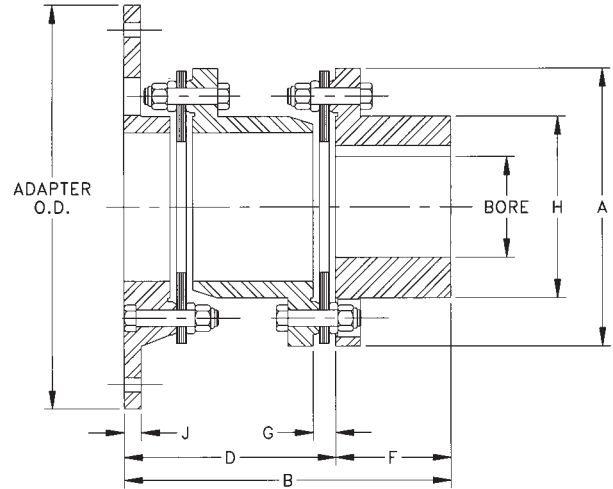
Spacer - 8 Bolt Coupling

FSH Series Flywheel Mount

The FSH series is designed for high torque, low speed applications. Hubs are cast iron. Steel is optional. Adapter plates and spacers are cast grey or ductile iron. Flex discs are high strength alloy steel. Stainless flex discs are optional. Dynamic balancing for higher speed operation is not recommended. Single plane balancing of flywheel adapters, hubs and spacers is available.

HUB TYPES	SIZES
C.I.	31-105
STL.	31-105
SEE PAGE F5-9	

ORDERING: FSH Series couplings are sold as complete assemblies. Please specify hub type, bore sizes, and flex disc materials. A coupling will be configured to meet your specifications.



RATED MISALIGNMENT: 0.3 DEG/DISC

STANDARD ADAPTER SIZES							
SIZE	OD	SAE BOLTING			HD BOLTING		
		BC	HOLE QTY	HOLE SIZE	BC	HOLE QTY	HOLE SIZE
10	10.375	9.625	6	13/32	9.500	8	15/32
12	12.375	11.625	8	13/32	11.500	8	17/32
14	13.875	13.125	8	13/32	12.500	8	21/32
18	18.375	17.250	8	17/32	16.750	8	25/32
20	20.375	19.250	8	17/32	18.500	8	29/32
22	22.500	21.375	6	21/32	20.500	8	1-1/32
26	26.500	25.250	12	21/32	24.500	12	1-1/32
28	28.875	27.250	12	25/32	26.875	12	1-1/32

SIZE	DIMENSIONS IN INCHES									AVAILABLE ADAPTER SIZES									
	MAX BORE		A(3)	B	D DBSE	F	G	H	J	X = STOCK SIZE				0 = MTO					
	IRON	STEEL								10	12	14	18	20	22	26	28		
31	3.12	3.63	8.12	8.68	5.31	3.37	0.62	5.50	0.50	O	O	X	X	O	O				
35	3.62	4.00	9.12	9.62	5.87	3.75	0.66	6.12	0.50	O	O	X	X	O	X				
37	3.75	4.50	10.06	10.62	6.62	4.00	0.81	6.50	0.56			O	O	O	O				
42	4.25	4.75	11.00	11.37	7.12	4.25	0.81	7.00	0.63			O	X	O	X	X	X		
45	4.50	5.13	11.87	12.00	7.50	4.50	0.87	7.43	0.69			O	X	O	X	X	X		
50	5.12	5.50	13.43	13.75	8.75	5.00	1.06	8.37	0.75				X	O	X	X	X		
55	5.62	6.25	15.00	15.38	9.87	5.50	1.25	9.50	0.88				X	O	X	X	X		
60	6.50	7.12	16.75	17.12	10.87	6.25	1.34	10.50	1.00				X	O	X	X	X		
70	7.00	7.87	18.93	19.43	12.43	7.00	1.50	11.75	1.00						X	X	X		
75	7.75	8.75	20.62	20.75	13.50	7.25	1.53	13.00	1.13						O	O	X		
80	8.00	9.12	22.37	22.50	14.75	7.75	1.56	13.75	1.25						O	O	X		
85	8.50	9.62	23.75	23.93	15.68	8.25	1.62	14.50	1.25								X		
92	10.00	11.00	25.75	26.25	17.25	9.00	1.75	15.87	1.38								X		
105	10.50	12.00	29.25	27.77	17.27	10.50	1.75	20.00	1.75								X		

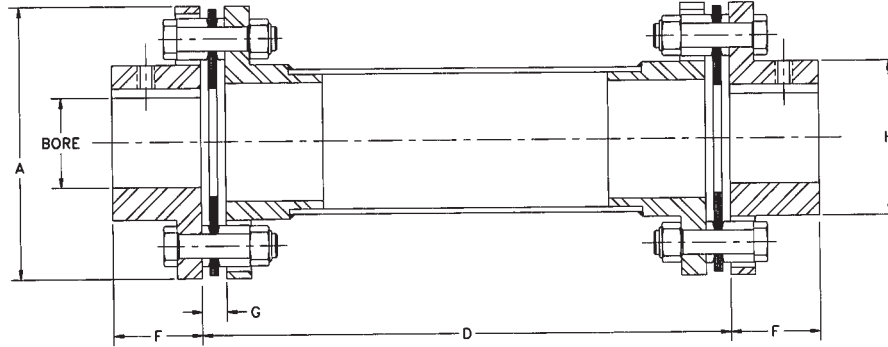
SIZE	HP PER 100 RPM	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	MAX RPM (2)	WEIGHT (lbs.) (1)	WR ² (lb. in. ²) (1)	TQ/RAD X10 ⁶ (1) (lb. in./rad)	FREE END FLOAT +/- inch
	1.0S.F							
31	38.10	24,000	36,000	2,800	48	442	2.95	0.052
35	69.84	44,000	66,000	2,600	64	661	6.69	0.056
37	95.24	60,000	90,000	2,500	87	1,170	10.3	0.062
42	115.9	73,000	109,500	2,400	115	1,860	7.03	0.067
45	157.1	99,000	148,500	2,250	138	2,500	15.4	0.072
50	203.2	128,000	192,000	2,000	202	5,550	48.8	0.082
55	300.0	189,000	283,500	1,800	263	8,000	58.6	0.092
60	414.3	261,000	391,500	1,600	359	12,700	86.5	0.102
70	658.7	415,000	622,500	1,400	559	26,200	161	0.115
75	846.0	533,000	799,500	1,300	766	43,600	160	0.125
80	1087	685,000	1,027,500	1,200	930	60,100	225	0.136
85	1316	829,000	1,243,500	1,100	1,110	83,000	222	0.140
92	1651	1,040,000	1,560,000	1,000	1,460	124,000	433	0.156
105	1984	1,250,000	1,875,000	1,000	C/F	C/F	C/F	0.170

- Notes:
 1) Weight, WR² and Torsional Stiffness values are shown for cast iron hubs at maximum bore size and minimum available adapter O.D.
 2) Max RPM listed is for smallest adapter size. Consult factory for speed ratings by adapter size.
 3) Hub flange diameter may vary with steel hubs.

Floating Shaft - 4 Bolt Coupling

A5 Series Floating Shaft

The A5 series is used for spacer lengths that are longer than can be spanned economically with spacer couplings. The A5 series has a welded tubular spacer assembly along with two hubs and standard hardware, including stainless steel flex discs. The A5 is Made to Order to any custom spacer length. A5 series standard pricing is listed for D dimensions up to 36" and for D dimensions from 36" to maximum D at 1800 RPM.



RATED MISALIGNMENT: 1.0 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ - OVERSIZE	05-45
QD BUSHING MOUNT	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

ORDERING: A5 Series couplings are sold as complete assemblies. Please specify hub types and bore sizes, DBSE (D) dimension, speed for dynamic balancing, and material class. A coupling will be configured to meet your specifications.

ORDERING TYPE A6 FOR VERTICAL APPLICATIONS LONGER THAN 30" DBSE. A THRUST BUTTON WILL BE ADDED ON THE LOWER END OF THE SPACER TO SUPPORT THE WEIGHT OF THE SPACER

MATERIAL CLASSES	
CLASS	SIZE
A	05-45
B	05-45
C	15-45
E	15-45
SEE PAGE F5-4	

SIZE	DIMENSIONS IN INCHES*							MAX DBSE (D INCHES) FOR RPM SHOWN					
	MAX BORE		A	Dmin	F	G	H						
	AJ	AZ						1800	1500	1200	900	750	600
05	0.87	1.13	2.65	4.00	1.00	0.24	1.30	51	56	62	71	78	87
10	1.25	1.63	3.19	4.00	1.00	0.27	1.80	62	69	76	88	96	107
15	1.37	1.88	3.65	5.00	1.13	0.32	2.00	64	71	79	91	99	111
20	1.62	2.13	4.08	5.00	1.32	0.34	2.40	73	81	90	103	113	126
25	2.00	2.38	4.95	5.00	1.62	0.45	2.80	79	87	97	112	122	137
30	2.38	2.88	5.63	6.00	1.88	0.47	3.30	85	94	102	120	132	147
35	2.88	3.75	6.63	7.00	2.25	0.55	4.15	97	107	119	137	150	168
40	3.25	4.00	7.64	7.00	2.50	0.60	4.65	103	113	126	146	160	178

* Dimensions shown are for AJ hubs unless otherwise specified.

SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS 10 ⁶ (lb. in./rad)		FREE END FLOAT +/- inch
				AT D = 20"	ADD PER in. OF D	AT D = 20"	ADD PER in. OF D	K factor	Y factor	
				05	0.48	300	600	4.37	0.11		2.38	0.03	0.04	1.12	0.030
10	1.27	800	1,600	5.64	0.10	5.88	0.07	0.11	2.81	0.040
15	2.50	1,575	3,150	7.48	0.10	10.3	0.07	0.13	2.81	0.042
20	3.49	2,200	4,400	11.5	0.21	18.3	0.22	0.35	8.77	0.055
25	6.03	3,800	7,600	17.0	0.20	45.0	0.29	0.52	12.0	0.060
30	11.00	6,930	13,860	25.7	0.29	90.6	0.56	0.98	22.7	0.065
35	18.00	11,340	22,680	34.8	0.40	180	1.32	1.99	53.9	0.085
40	29.00	18,270	36,540	49.9	0.46	356	1.95	3.14	79.3	0.100

Notes:

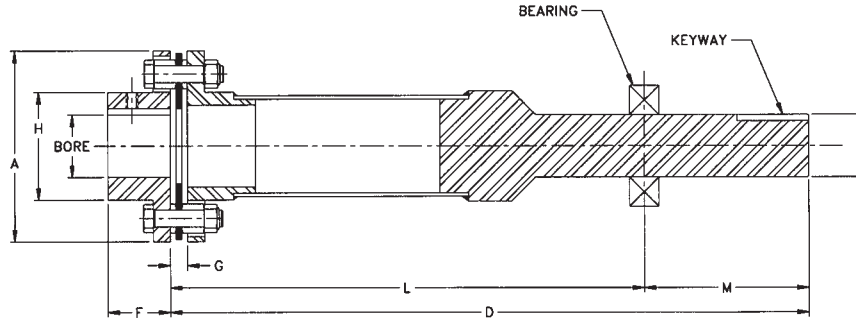
1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

2) To calculate Torsional Stiffness for a given spacer length, let L = D - 20", Torsional Stiffness = 1/[(1/K) + (L/Y)]

Floating Shaft - 4 Bolt Coupling

A7 Series Semi-Floating Shaft

The A7 coupling is a single flexing coupling designed for use in widely spaced three bearing systems. The shaft end of the coupling must be supported by a self-aligning bearing. A full floating coupling may be used in combination with the semi-floating coupling to span longer distances, or a V-Belt drive or other component may be mounted to the shaft end. This A7 is made-to-order to any custom spacer length. A7 series standard pricing is listed at D dimensions up to 36 inches and D dimensions between 36 inches and max L at 1800 RPM motor speed.



RATED MISALIGNMENT: 1.0 DEG/DISC

HUB OPTIONS	
HUB TYPE	SIZE
AJ - STANDARD	05-45
AZ - OVERSIZE	05-45
QD BUSHING MOUNT	15-40
AC/AD CLAMP	05-25
AL LOCK ELEMENT	05-25
SEE PAGE F5-8	

ORDERING: A7 Series couplings are sold as complete assemblies. Please specify hub types and bore sizes, DBSE (D) dimension, speed for dynamic balancing, and material class. A coupling will be configured to meet your specifications.

MATERIAL CLASSES	
CLASS	SIZE
A	10-45
B	05-45
C	15-45
E	15-45
SEE PAGE F5-4	

SIZE	DIMENSIONS IN INCHES*											MAX DBSE (D INCHES) FOR RPM SHOWN				
	MAX BORE		A	Dmin	F	G	H	K	L	M	KEYWAY SIZE	1800	1500	1200	900	600
	AJ	AZ														
10	1.25	1.63	3.19	20	1.00	0.27	1.80	1.25	16.50	3.50	.25 x .12	62	69	76	88	107
15	1.37	1.88	3.65	20	1.13	0.32	2.00	1.25	16.06	3.94	.25 x .12	64	71	79	91	111
20	1.62	2.13	4.08	20	1.32	0.34	2.40	1.50	15.75	4.25	.37 x .18	73	81	90	103	126
25	2.00	2.38	4.95	20	1.62	0.45	2.80	1.75	15.25	4.75	.37 x .18	79	87	97	112	137
30	2.38	2.88	5.63	20	1.88	0.47	3.30	2.00	14.50	5.50	.50 x .25	85	94	102	120	147
35	2.88	3.75	6.63	20	2.25	0.55	4.15	2.50	13.25	6.75	.62 x .31	97	107	119	137	168
40	3.25	4.00	7.64	20	2.50	0.60	4.65	3.00	12.75	7.25	.75 x .37	103	113	126	146	178

* Dimensions shown are for AJ hubs unless otherwise specified.

SIZE	HP PER 100 RPM 1.0 S.F.	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	MAX RADIAL LOAD-(lbs.)	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS 10° (lb. in./rad)		FREE END FLOAT +/- inch
					AT D = 20"	ADD/ (in.) OF D	AT MIN D = 20"	ADD/ (in.) OF D	K factor	Y factor	
10	1.27	800	1,600	34	5.37	0.10	3.30	0.07	0.26	2.81	0.020
15	2.50	1,575	3,150	56	6.65	0.10	5.72	0.07	0.28	2.81	0.021
20	3.49	2,200	4,400	125	11.0	0.21	11.0	0.22	0.56	8.77	0.027
25	6.03	3,800	7,600	183	14.7	0.20	24.9	0.29	0.91	12.0	0.030
30	11.00	6,930	13,860	275	19.7	0.29	52.4	0.56	1.52	22.7	0.032
35	18.00	11,340	22,680	400	34.7	0.40	106	1.32	3.03	53.9	0.042
40	29.00	18,270	36,540	600	51.6	0.46	211	1.95	5.26	79.3	0.050

Notes:

1) Weight, WR² and Torsional Stiffness values are shown for AJ hubs at maximum bore size.

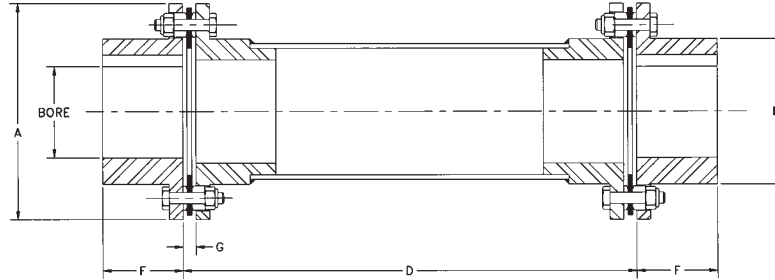
2) To calculate Torsional Stiffness for a given spacer length, let L = D - 20", Torsional Stiffness = 1/[(1/K) + (L/Y)]

Floating Shaft - 6 Bolt Coupling

B5 Series Floating Shaft

The B5 series is used for spacer lengths that are longer than can be spanned economically with standard spacer couplings. The B5 has a welded tubular spacer assembly along with two hubs and standard hardware, including stainless steel flex discs. The B5 is made-to-order to any custom spacer length. B5 series standard pricing is listed at D dimensions up to 36 inches and D dimensions between 36 inches and max D at 1800 RPM motor speed.

Consult factory for vertical modifications and semi-floating designs.



HUB TYPES	SIZES
BH	33-78
SEE PAGE F5-9	

RATED MISALIGNMENT: 0.7 DEG/DISC

MATERIAL CLASSES	
CLASS	SIZE
A	33-78
B	33-78
C	38-63
E	N/A
SEE PAGE F5-4	

ORDERING: B5 Series couplings are sold as complete assemblies. Please specify hub types and bore sizes, DBSE (D) dimension, speed for dynamic balancing, and material class. A coupling will be configured to meet your specifications.

SIZE	DIMENSIONS IN INCHES*						MAX DBSE (D INCHES) FOR RPM SHOWN					
	MAX BORE	A	Dmin	F	G	H	1800	1500	1200	900	750	600
33	2.25	4.69	4.25	1.75	0.285	3.14	79	87	97	112	122	137
38	3.00	5.87	6.00	2.25	0.335	4.13	97	107	119	137	150	168
43	3.25	6.70	7.00	2.50	0.465	4.63	103	113	126	146	160	178
48	3.75	7.50	7.50	2.75	0.495	5.40	113	125	139	160	175	196
53	3.88	7.87	7.50	2.88	0.520	5.65	113	125	139	160	175	196
58	4.25	9.00	7.50	3.25	0.555	6.22	123	136	151	170	186	208
63	4.88	10.00	7.50	3.38	0.600	7.14	123	136	151	170	186	208
68	5.00	10.75	8.00	3.75	0.849	7.33	130	142	159	183	201	225

SIZE	HP PER 100 RPM 1.0 S.F.	RATED TORQUE LB*IN (in. lbs.)	PEAK O/L TORQUE (in. lbs.)	WEIGHT (lbs.)		WR ² -(lb. in. ²)		TORS. STIFFNESS x10 ⁶ (in. lbs./rad)		FREE END FLOAT +/- inch
				AT D = 20"	ADD PER in. OF D	AT D = 20"	ADD PER in. OF D	K factor	Y factor	
				33	4.84	3,050	6,100	14.4	0.20		32.7	0.29	0.48	12.0	0.060
38	10.08	6,350	12,700	29.1	0.39	113	1.28	1.77	51.9	0.084
43	19.84	12,500	25,000	41.0	0.44	210	1.88	2.89	76.4	0.090
48	26.98	17,000	34,000	60.0	0.52	402	3.10	4.57	126	0.108
53	38.10	24,000	48,000	67.4	0.52	494	3.10	5.52	126	0.108
58	53.97	34,000	68,000	85.5	0.63	874	5.43	8.44	220	0.118
63	76.19	48,000	96,000	108	0.63	1340	5.43	9.52	220	0.140
68	114.29	72,000	144,000	140	1.15	1940	13.37	19.9	543	0.144

Notes:

1) Weight, WR² and Torsional Stiffness values are shown for BH hubs at maximum bore size.

2) To calculate Torsional Stiffness for a given spacer length, let L = D - 20", Torsional Stiffness = 1/[(1/K) + (L/Y)]

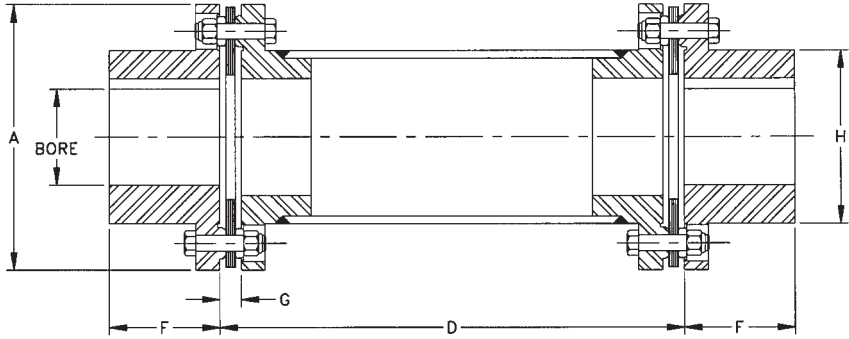
Floating Shaft - 8 Bolt Coupling

HFTH Floating Shaft

The HFTH series is designed for heavy duty applications that cannot use the A5 or B5 series. These include high torque and engine driven applications. The HFTH uses a welded tubular spacer assembly. Flex discs are high strength alloy steel. Stainless steel flex discs are optional. Dynamic balancing of the spacer assembly is included. The HFTH is made-to-order to any custom spacer length. Large tube designs are also available.

Consult factory for vertical modifications, and semi-floating designs or flywheel mounting.

ORDERING: HFTH Series couplings are sold as complete assemblies. Please specify hub speed for dynamic balancing. A coupling will be configured to meet your specification.



HUB TYPES	SIZES
STL.	35-160
SEE PAGE F5-9	

RATED MISALIGNMENT: 0.5 DEG/DISC

SIZE	DIMENSIONS IN INCHES*						MAX DBSE (D INCHES) FOR RPM SHOWN					
	MAX BORE STEEL	A	Dmin	F	G	H	1800	1500	1200	900	750	600
							CONSULT TB WOOD'S					
35	4.00	9.12	10.0	3.75	0.66	6.12	114	124	139	161	176	197
37	4.50	10.06	10.0	4.00	0.81	6.50	121	132	148	172	187	210
42	4.75	11.00	10.0	4.25	0.81	7.00	128	140	157	182	198	222
45	5.13	11.87	10.0	4.50	0.87	7.43	130	143	160	185	201	226
50	5.50	13.43	10.0	5.00	1.06	8.37	139	153	171	197	215	242
55	6.25	15.00	10.0	5.50	1.25	9.50	145	159	178	206	224	252
60	7.12	16.75	15.0	6.25	1.34	10.50	153	168	188	217	237	266
70	7.87	18.93	15.0	7.00	1.50	11.75	161	176	197	228	250	279
75	8.75	20.62	15.0	7.25	1.55	13.00	172	189	211	244	267	299
80	9.12	22.37	15.0	7.75	1.56	13.75	182	199	222	257	282	315
85	9.62	25.75	20.0	8.25	1.62	14.50	CONSULT TB WOOD'S					
92	11.00	25.75	20.0	9.00	1.75	15.87						
105	12.00	29.25	20.0	10.50	1.75	20.00						
160	17.00	33.50	20.0	12.00	2.25	24.00						

SIZE	HP PER 100 RPM 1.0 S.F	RATED TORQUE (lb. in.)	PEAK O/L TORQUE (lb. in.)	WEIGHT (lbs.) (1)		WR ² -(lb. in. ²) (1)		TORS. STIFFNESS (1) x10 ⁶ (lb. in./rad) (2)		FREE END FLOAT +/- inch	
				AT D = 20"	ADD PER in. OF D	AT D = 20"	ADD PER in. OF D	K factor	Y factor		
				35	76.12	48,000	96,000	111	0.81		1,040	5	9	190	0.056
37	107.8	68,000	136,000	120	0.97	1,406	8.2	15	333	.062	
42	146.7	92,500	185,000	186	1.14	2,520	13	21	537	0.067	
45	157.0	99,000	198,000	201	1.14	3,370	13	23	537	0.072	
50	260.1	164,000	328,000	311	1.31	6,430	20	38	810	0.082	
55	396.5	250,000	500,000	374	1.95	10,100	37	67	1,510	0.092	
60	586.8	370,000	740,000	556	3.21	18,600	75	110	3,020	0.102	
70	840.5	530,000	1,060,000	769	3.21	33,000	75	134	3,020	0.115	
75	1142	720,000	1,440,000	948	4.13	49,000	158	252	6,430	0.125	
80	1507	950,000	1,900,000	1260	4.13	78,900	158	265	6,430	0.136	
85	1903	1,200,000	2,400,000	CONSULT TB WOOD'S							0.140
92	2062	1,300,000	2,600,000								0.166
105	2855	1,800,000	3,600,000								0.170
160	3806	2,400,000	4,800,000								0.250

Notes:

1) Weight, WR² and Torsional Stiffness values are shown for BH hubs at maximum bore size.

2) To calculate Torsional Stiffness for a given spacer length, let L = D - 20", Torsional Stiffness = 1/[(1/K) + (L/Y)]

True Tube™ Composite Torque Tubes

Dimensions



True-Tube composite tubes are high-strength, lightweight torque tubes for long span drive shafts. These tubes are filament wound carbon or glass fiber construction in an oven cured epoxy matrix. True-Tube composites offer the following advantages over steel tubing.

LONGER SPANS

TrueTube composite tubes have a higher stiffness to weight ratio than steel tubing. That increases the critical speed of the tubing and allows longer spans without center bearings.

LIGHT WEIGHT

TrueTube drive shafts weigh up to 80% less than equivalent steel driveshafts. That means better balance and reduced vibration. Bearing life may be improved by minimizing overhung weight.

DESIGN FLEXIBILITY

TrueTube composite tubes may be custom designed to meet your requirements for Torsional Stiffness, critical speed or torque capacity. With TrueTube, a designer can tune torsional or lateral critical speeds out of a machine system.

All TrueTube products include an ultraviolet barrier that is wound into the structure of the tube before it is cured. This UV barrier eliminates the need for paints or other protective coatings and results in a smooth, durable finish that other composite tubes don't offer. TrueTube products are cured in an enclosed oven to assure consistent strength and quality. Design data is shown below for standard series tubes. Standard series tubes are designed for maximum length at moderate torques. High torque designs are also available.

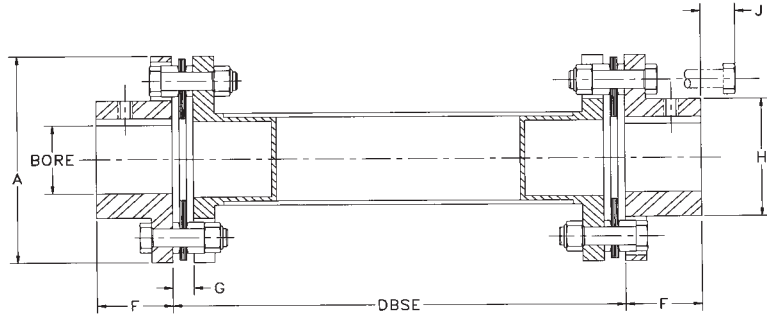
MODEL NUMBER	TUBE I.D. INCHES	TUBE O.D. INCHES	SLEEVE O.D. INCHES	RATED TORQUE LB*IN	TUBE WEIGHT (lb./in.)	TORSIONAL STIFFNESS x10 ⁶ LB*IN/RAD	MAX DBSE – INCHES				MAX TUBE LENGTH INCHES	
							2000 RPM	1800 RPM	1500 RPM	1000 RPM		
SERIES SL – ALL CARBON CONSTRUCTION												
SL2.0	2.00	2.30	2.40	6,500	0.05	1.26	90	95	104	127	82	
SL3.0	3.00	3.25	3.50	12,000	0.08	3.61	110	116	127	155	128	
SL4.0	4.00	4.23	4.50	22,000	0.11	8.60	127	134	147	180	145	
SL6.0	6.00	6.25	6.63	42,000	0.20	34.4	152	160	175	214	177	
SL8.0	8.00	8.25	8.63	63,000	0.24	80.2	180	190	208	255	192	
SL10.0	10.00	10.25	10.75	80,000	0.32	155	199	210	230	281	232	
SL12.0	12.00	12.25	12.75	100,000	0.38	258	215	227	249	304	232	
SERIES SS – CARBON/GLASS CONSTRUCTION												
SS2.0	2.00	2.30	2.40	5,500	0.06	0.97	79	83	91	111	82	
SS3.0	3.00	3.25	3.50	10,500	0.08	2.86	97	102	112	137	128	
SS4.0	4.00	4.23	4.50	22,000	0.12	7.28	112	118	129	158	145	
SS6.0	6.00	6.25	6.63	42,000	0.20	26.4	135	142	155	190	177	
SS8.0	8.00	8.25	8.63	58,000	0.28	57.3	151	160	176	216	192	
SS10.0	10.00	10.25	10.75	73,000	0.34	115	173	183	200	245	232	
SS12.0	12.00	12.25	12.75	88,000	0.42	206	189	199	218	267	232	
SERIES LS – ALL GLASS CONSTRUCTION												
LS2.0	2.00	2.30	2.40	5,000	0.07	0.75	66	70	77	94	82	
LS3.0	3.00	3.25	3.50	10,000	0.09	2.06	80	84	92	113	128	
LS4.0	4.00	4.23	4.50	18,000	0.14	5.04	93	98	107	131	145	
LS6.0	6.00	6.25	6.63	39,000	0.23	18.9	110	116	127	155	177	
LS8.0	8.00	8.25	8.63	51,000	0.30	43.0	128	135	148	181	192	
LS10.0	10.00	10.25	10.75	64,000	0.37	86.0	142	150	164	201	232	
LS12.0	12.00	12.25	12.75	77,000	0.46	149	155	163	178	218	232	

- Notes: 1) Torque ratings are at 100% humidity and 200 Deg. F.
 2) Max RPM values shown are calculated at 75% of first critical speed
 3) Torsional stiffness shown is per inch of tube length. Actual stiffness = torsional stiffness/tube length (in.)

Form-Flex® Composite Floating Shaft Couplings

Dimensions

Form-Flex flexible couplings may be mated to TrueTube composite tubes for use as long floating shaft couplings. All types and most sizes of Form-Flex couplings can be mated to TrueTube composites. Common combinations are shown below.



COUPLING TYPE	RATED TORQUE LB IN	HP PER 100 RPM	COUPLING PRODUCT NO.	MAXIMUM DBSE-INCHES			DIMENSIONS IN INCHES						
				MAX	1800 RPM	1500 RPM	MAXIMUM BORE		A	F	G	H	J
							STD HUB	AZ HUB					
A520	2,200	3.49	A520-CS2G	83	70	77	1.625	2.125	4.08	1.32	0.34	2.40	2.30
			A520-CS2R	83	83	83*							2.30
A525	3,800	6.03	A525-CS2G	83	70	77	2.000	2.375	4.95	1.62	0.45	2.80	2.30
			A525-CS2R	83	83	83*							2.30
A530	6,930	11.00	A530-CS3R	128	102	112	2.375	2.875	5.63	1.88	0.47	3.30	3.25
			A530-CS3B	128	116	127							3.25
A535	11,340	18.00	A535-CS4R	146	118	129	2.875	3.750	6.63	2.25	0.55	4.15	4.25
			A535-CS4B	146	134	146*							4.25
			A535-CS6R	179	142	155							6.30
			A535-CS6B	179	160	175							6.30
			A535-CS8R	196	175	191							8.31
			A535-CS8B	196	190	207*							8.31
A540	18,270	29.00	A540-CS4R	146	118	129	3.250	4.000	7.63	2.50	0.60	4.65	4.25
			A540-CS4B	146	134	146*							4.25
B558	34,000	54.00	B558-CS6R	179	142	155	3.75	-	9.00	2.75	0.56	5.43	6.30
			B558-CS6B	179	160	175							6.30
			B558-CS6X	182	165	181							6.30
			B558-CS8R	196	175	191							8.31
			B558-CS8B	196	190	207							8.31
			B558-CS10R**	236	206	224							10.31
			B558-CS10B**	236	210	230							10.31

QUICK SELECTION GUIDE FOR COOLING TOWER APPLICATIONS

1800 RPM		COUPLING MODEL	1500 RPM	
DBSE	MAX HP		MAX HP	DBSE
70"	30	A520-CS2G	25	77"
	50	HD4-CS2G***	42	
	50	A525-CS2G	42	
83"	30	A525-CS2R	25	83**
	50	HD4-CS2R***	42	
	50	A525-CS2R	42	
102"	100	A530-CS3R	83	112"
116"	100	A530-CS3B	83	127"
118"	150	A535-CS4R	125	129"
	250	A540-CS4R	208	
134"	150	A535-CS4B	125	146**
	250	A540-CS4B	208	
142"	150	A535-CS6R	125	155"
	400	B558-CS6R	333	
160"	150	A535-CS6B	125	175"
	400	B558-CS6B	333	
165"	400	B558-CS6X	333	181"
175"	150	A535-CS8R	125	191"
	400	B558-CS8R	333	
190"	150	A535-CS8B	125	207"
	400	B558-CS8B	333	
206"	400	B558-CS10R	333	224"
210"	400	B558-CS10B	333	230"
227"	400	B558-CS12B	333	236**

All selections use a 2.0 service factor.

COMPOSITE TUBE CONSTRUCTION

MODEL CODE	TUBE MATERIAL OF CONSTRUCTION
G	GLASS
R	CARBON/GLASS HYBRID
B	STANDARD CARBON
X,Z	HIGH MODULUS CARBON

The model code is the last letter in the coupling model number.
The number xx in the tube model number CSxxB denotes the nominal tube ID.

MATERIAL CLASS	MATERIAL USED		
	HUB	HARDWARE	SPACER FLANGES
A	STEEL	STEEL	COMPOSITE OR STEEL
B	STEEL	STEEL, ZINC PLT	COMPOSITE OR
	ZINC PLT	304SS	ZINC PLATED STEEL
E	304SS	304SS	COMPOSITE OR 304SS

Metal spacer flanges used if composite is not available.

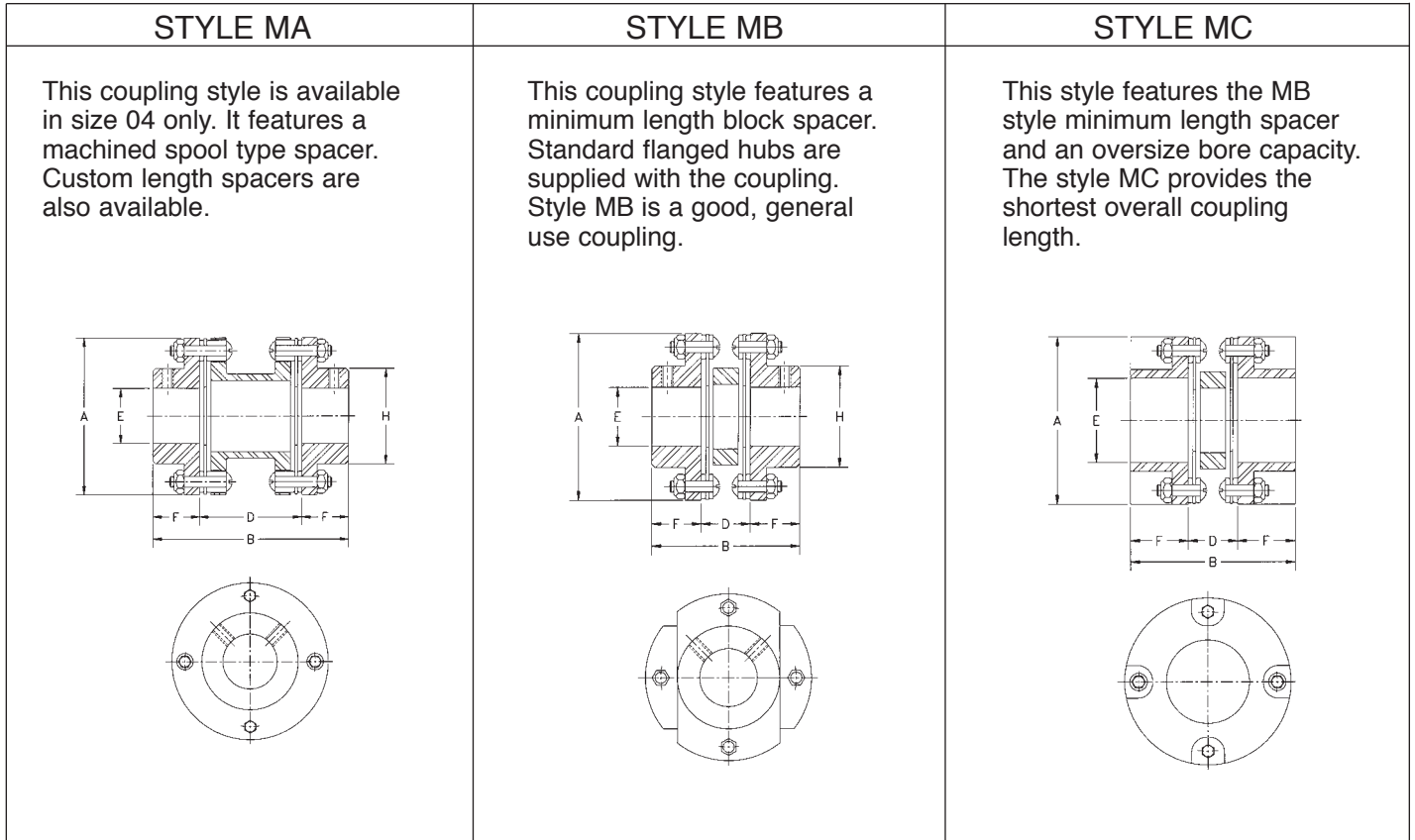
Notes:

- * Length is restricted by available mandrels for winding composite tubes. Consult factory for longer lengths.
- ** Tube diameter is larger than coupling "A" diameter. Consult factory for coupling drawing.
- ***HD4-CS couplings are an all composite, high misalignment coupling.

M Series - 4 Bolt Micro Couplings

Dimensions

Form-Flex M series microcouplings are a more compact and lighter design than traditional A Series couplings. They are free from backlash and their high Torsional Stiffness makes them ideally suited for small servo and tachometer drives. Aluminum hub construction meets low inertia requirements while the bolted assembly provides superior life when compared to riveted types.



DIMENSIONS IN INCHES									RATED TORQUE (in. lbs.)	PEAK O/L TORQUE (in. lbs.)	WR ² OZ. (in. ²)	TORSIONAL STIFFNESS (in. lbs./rad)	RATED MISALIGNMENT deg/disc	FREE END FLOAT (in.)
STYLE	SIZE	MAX BORE	A	B	D DBSE	F	H	STD SET SCREW SIZE						
MA	04	0.79	2.24	2.93	1.36	0.79	1.22	M6X1.0	87	174	6.11	64.7X10 ³	1.5	0.60
MB	02	0.38	1.26	1.39	0.45	0.47	0.71	M4X0.7	17	34	0.29	2.9X10 ³	1.5	0.40
	03	0.63	1.65	1.80	0.54	0.63	1.02	M4X0.7	35	70	1.33	14.9X10 ³	1.5	0.50
	04	0.79	2.24	2.38	0.81	0.79	1.22	M6X1.0	87	174	4.99	64.7X10 ³	1.5	0.60
MC	01	0.38	1.02	1.08	0.45	0.32	—	M3X0.5	9	18	0.17	2.4X10 ³	1.5	0.25
	02	0.59	1.26	1.53	0.45	0.32	—	M4X0.7	17	34	0.35	2.9X10 ³	1.5	0.40
	03	0.79	1.65	1.53	0.54	0.50	—	M4X0.7	35	70	1.34	14.9X10 ³	1.5	0.50

Note: Style MB04 coupling hubs will have round flanges as shown for type MA.

Individual Parts & Kits

Repair kits consist of flex discs and all the necessary installation hardware. SINGLE REPAIR KITS have one set of flex discs and all required hardware. Two single repair kits are required for a double flexing coupling. DOUBLE REPAIR KITS have two sets of flex discs and all required hardware. HARDWARE KITS have all the components of a repair kit except the flex discs. FLEX DISCS are also sold individually.

A SERIES (4 BOLT) COUPLING PARTS

KIT TYPE	REPAIR		HARDWARE		REPAIR	HDWR	REPAIR	HDWR	FLEX
SGL/DBL	SINGLE				DOUBLE		DOUBLE		DISC
USED ON	AA, AK, AP, AR, A5, A7				AX		AY		ALL
MAT'L CLASS	A,B	C,E	A,B	C,E	A,B	A,B	A,B	A,B	ALL
05	A05RKA	...	A05HKA	...	AX05RKA	AX05HKA	AY05RKA	AY05HKA	A0054101
10	A10RKA	...	A10HKA	...	AX10RKA	AX10HKA	AY10RKA	AY10HKA	A0104101
15	A15RKA	A15RKE	A10HKA	A15HKE	AX15RKA	AX15HKA	AY15RKA	AY15HKA	A0154101
20	A20RKA	A20RKE	A20HKA	A20HKE	AX20RKA	AX20HKA	AY20RKA	AY20HKA	A0204101
25	A25RKA	A25RKE	A25HKA	A25HKE	AX25RKA	AX25HKA	AY25RKA	AY25HKA	A0254101
30	A30RKA	A30RKE	A30HKA	A30HKE	AX30RKA	AX30HKA	...	...	A0304101
35	A35RKA	A35RKE	A35HKA	A35HKE	AX35RKA	AX35HKA	...	...	A0354101
40	A40RKA	A40RKE	A10HKA	A15HKE	AX40RKA	AX40HKA	...	...	A0404101
45	A45RKA	A45RKE	A45HKA	A45HKE	AX45RKA	AX45HKA	...	...	A0454101

B SERIES (6 BOLT) COUPLING PARTS (EXCEPT BA)

KIT TYPE	REPAIR		HARDWARE		REPAIR	HDWR	REPAIR	HDWR	FLEX
SGL/DBL	SINGLE				SINGLE		DOUBLE		DISC
USED ON	BH, BP, B5				BF		BY		ALL
MAT'L CLASS	A,B	C	A,B	C	A,B	A,B	A,B	A,B	ALL
15	...	...	...	...	BF15RKA	BF15HKA	...	...	A0154101
20	...	...	...	...	BF20RKA	BF20HKA	...	...	A0204101
33	B033RKA	...	B033HKA	...	BF33RKA	BF33HKA	BY33RKA	BY33HKA	B0334101
38	B038RKA	B038RKE	B038HKA	B038HKE	BF38RKA	BF38HKA	BY38RKA	BY38HKA	B0384101
43	B043RKA	B043RKE	B043HKA	B043HKE	BF43RKA	BF43HKA	BY43RKA	BY43HKA	B0434101
48	B048RKA	B048RKE	B048HKA	B048HKE	BF48RKA	BF48HKA	BY48RKA	BY48HKA	B0484101
53	B053RKA	B053RKE	B053HKA	B053HKE	BF53RKA	BF53HKA	BY53RKA	BY53HKA	B0534101
58	B058RKA	B058RKE	B058HKA	B058HKE	BF58RKA	BF58HKA	BY58RKA	BY58HKA	B0584101
63	B063RKA	B063RKE	B063HKA	B063HKE	BF63RKA	BF63HKA	BY63RKA	BY63HKA	B0634101
68	B068RKA	...	B068HKA	...	BF68RKA	BF68HKA	BY68RKA	BY68HKA	B0684101
73	...	...	...	...	BF73RKA	...	...	...	...
78	...	...	...	...	BF78RKA	...	...	...	...

8 BOLT COUPLING PARTS (EXCEPT DA AND DP)

CPLG SIZE	HH, HSH, FSH, HFTH							
	DOUBLE REPAIR KIT		SINGLE HDWR KIT	FLEX DISC		BOLT	WASHER	NUT
	STD DISC	SS DISC		STD	SS			
22	D22-DF	D22-DF-SS	D22-BNW	D22-5	D22-5-SS	D22-6H	D22-7	D22-6N
26	D26-DF	D26-DF-SS	D26-BNW	D26-5	D26-5-SS	D26-6H	D26-7	D26-6N
31	D31-DF	D31-DF-SS	D31-BNW	D31-5	D31-5-SS	D31-6H	D31-7	D31-6N
35	D35-DF	D35-DF-SS	D35-BNW	D35-5	D35-5-SS	D35-6H	D35-7	D35-6N
37	D37-DF	D37-DF-SS	D37-BNW	D37-5	D37-5-SS	D37-6H	D37-7	D37-6N
42	D42-DF4*	D42-DF4-SS*	D42-BNW4*	D42-5	D42-5-SS	D42-6H4*	D42-7	D42-6N
45	D45-DF4*	D45-DF4-SS*	D45-BNW4*	D45-5	D45-5-SS	D45-6H4*	D45-7	D45-6N
50	D50-DF4*	D50-DF4-SS*	D50-BNW4*	D50-5	D50-5-SS	D50-6H4*	D50-7	D50-6N
55	D55-DF4*	D55-DF4-SS*	D55-BNW4*	D55-5	D55-5-SS	D55-6H4*	D55-7	D55-6N
60	D60-DF4*	D60-DF4-SS*	D60-BNW4*	D60-5	D60-5-SS	D60-6H4*	D60-7	D60-6N
70	D70-DF	D70-DF-SS	D70-BNW	D70-5	D70-5-SS	D70-6H	D70-7	D70-6N
75	D75-DF4*	D75-DF4-SS*	D75-BNW4*	D75-5	D75-5-SS	D75-6H4*	D75-74*	D75-6N4*
80	D80-DF4*	D80-DF4-SS*	D80-BNW4*	D80-5	D80-5-SS	D80-6H4*	D80-7	D80-6N
85	D85-DF	D85-DF-SS	D85-BNW	D85-5	D85-5-SS	D85-6H	D85-7	D85-6N
92	D92-DF	D92-DF-SS	D92-BNW	D92-5	D92-5-SS	D92-6H	D92-7	D92-6N

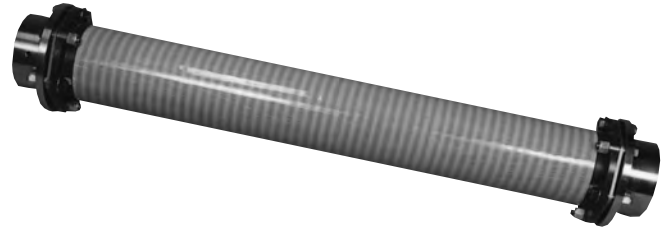
* Items marked have new style bolts. Bolt head hex may not fit FSH type flywheel adapters manufactured in 1994 or earlier. To receive old style bolts, delete the "4" from these part numbers.

Cooling Tower Couplings



The traditional A5 design features all metal construction. It can be ordered to meet any custom spacer length. A wide variety of materials and finishes is available.

Designed specifically as a connection for cooling tower applications and other drives requiring long shaft spans. Form-Flex couplings with TrueTube composite tubing weigh less than half of its steel counterpart and can span shaft separations of up to 240 inches. They are easy to handle, install and maintain. TrueTube composites are extremely corrosion resistant and are custom designed to provide the optimum combination of torsional strength and lateral stiffness for cooling tower drive applications. TB Wood's proprietary composite flange design transmits torque reliably from the metal outboard hubs to the composite flange and into the TrueTube composite tube.



HD elastomeric couplings and TrueTube composites are combined into a high misalignment, all composite coupling. These couplings are easy to install and align. Their high misalignment capacity makes them ideal for smaller, wood framed and fiberglass towers.

Rigid Couplings

Ribbed Type Compression Couplings are recommended for emergency and regular service on heavily loaded shafts.

These couplings are bored true to shaft size, and the halves are separated during boring operation to allow for clamping when halves are drawn together. Bolt heads and nuts are protected by flanges. End flanges are faced square with bore, and outer diameters are turned.

To facilitate the use of V-belt drives, sufficient space may be left between shaft ends when mounting the coupling to permit easy replacement of belts.



**RIBBED
COMPRESSION
NO. 257**

F7

Product No.	Shaft Size	Max. RPM	Approx. Diam.	Length	BOLTS			Weight Lbs.
					No.	Size	Wrench ⁽¹⁾ Torque ft.-lb.	
2571316	1-3/16	4630	4-1/8	5-3/8	6	3/8	19	11
257114	1-1/4	4630	4-1/8	5-3/8	6	3/8	19	11
2571716	1-7/16	4070	4-11/16	6-1/8	6	1/2	45	18
257112	1-1/2	4070	4-11/16	6-1/8	6	1/2	45	18
25711116	1-11/16	3820	5	6-3/4	6	1/2	45	20
257134	1-3/4	3820	5	6-3/4	6	1/2	45	20
25711516	1-15/16	3250	5-7/8	8	6	5/8	93	34
2572	2	3250	5-7/8	8	6	5/8	93	33
2572316	2-3/16	3050	6-1/4	8-3/4	6	5/8	93	38
257214	2-1/4	3050	6-1/4	8-3/4	6	5/8	93	38
2572716	2-7/16	2680	7-1/8	9-5/8	6	3/4	150	57
257212	2-1/2	2680	7-1/8	9-5/8	6	3/4	150	54
25721116	2-11/16	2610	7-5/16	10-5/8	6	3/4	150	62
25721516	2-15/16	2210	8-5/8	11-5/8	8	3/4	150	95
2573	3	2210	8-5/8	11-5/8	8	3/4	150	95
2573316	3-3/16	2100	9-1/16	12-3/4	8	3/4	150	126
2573716	3-7/16	1920	9-15/16	13-5/8	8	7/8	202	157
257312	3-1/2	1920	9-15/16	13-5/8	8	7/8	202	157
25731516	3-15/16	1830	10-7/16	14-5/8	8	7/8	202	171
2574716	4-7/16	1600	11-7/8	16-1/2	8	1	300	273
25741516	4-15/16	1390	13-11/16	18-1/8	8	1-1/8	474	395

NOTE: Capacity of Coupling exceeds capacity of shaft based on 6000 PSI Shaft Stress.

(1) Do not lubricate CAP Screws. Other shaft sizes available on a MTO Basis.

Coupling may require balancing to reduce vibration when operating within these speeds.

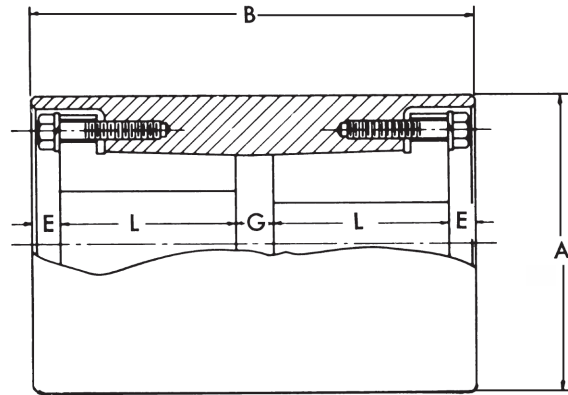
Rigid Couplings

Dimensions

This coupling is designed to provide a simple method of rigidly connecting two pieces of shafting. The standard Sure-Grip tapered bushing is used, one on each shaft, to securely clamp the two shafts together. The precision tapered fit lines up the two shafts. No press or shrink fits are necessary.



SURE-GRIP RIGID NO. 44



Product No.	Max. RPM	Maximum Bore		Bushing †	DIMENSIONS					Weight Including Bushings
		Light (1) Loads	Heavy (2) Loads		A	B	E	G	L	
44SD	6200	1-13/16	1-7/16	SD	4	4-5/8	3/8	1/4	1-13/16	11
44SF	4500	2-3/8	1-7/8	SF	5-1/2	5-1/4	1/2	1/4	2	22
44E	3600	2-15/16	2-1/4	E	6-7/8	6-3/4	5/8	1/4	2-5/8	54
44J	3000	3-13/16	3	J	8-1/4	11	3/4	1/2	4-1/2	122
44M	2450	4-3/4	3-11/16	M*	10	16	1	1/2	6-3/4	270

† Dimensions for Sure-Grip bushings are given on page A1—3.

* Bushing M is not stocked with drilled holes for the above type mounting and will be made-to-order.

(1) Max Shaft Stress < 8500 psi.

(2) Max Shaft Stress < 4000 psi.

$$\text{Axial Thrust Capacity} = \frac{\text{Bushing Torque Capacity}}{\text{Radius of Shaft}}$$

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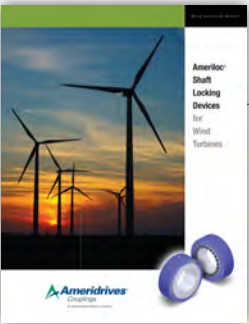
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P-1939-BB



P-1940-BB



P-1967-AC



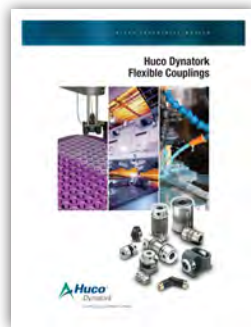
P-1791-TBW



P-1919-TBW



P-1902-AP



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Huco Dynatork

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