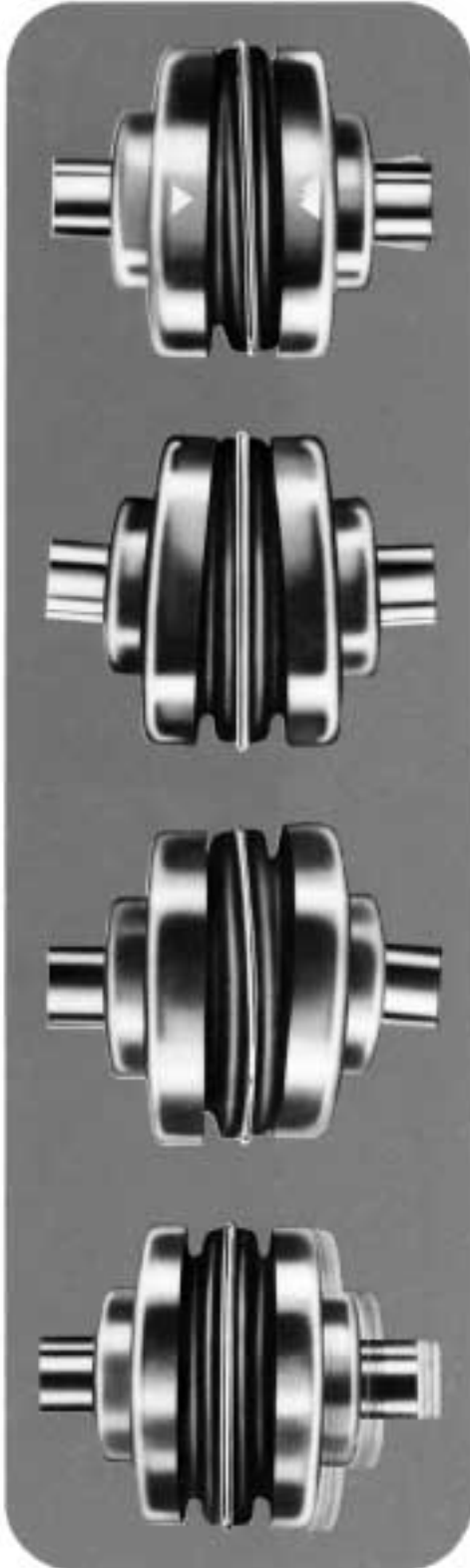


4-WAY FLEXING ACTION absorbs all types of shock, vibration and misalignment



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


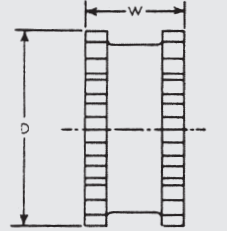


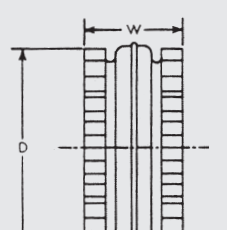

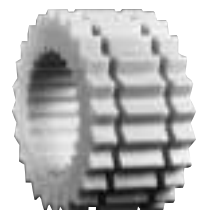
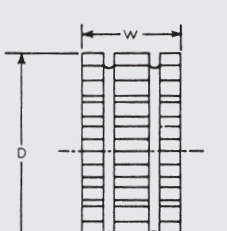

Product No.	Product Description
4	4E EPDM
5	5E EPDM
6	6E EPDM
7	7E EPDM
8	8E EPDM
9	9E EPDM
10	10E EPDM
11	11E EPDM
12	12E EPDM
13	13E EPDM
14	14E EPDM
16	16E EPDM
4N	4N Neoprene
5N	5N Neoprene
6N	6N Neoprene
7N	7N Neoprene
8N	8N Neoprene
9N	9N Neoprene
10N	10N Neoprene
11N	11N Neoprene
12N	12N Neoprene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

SURE-FLEX SLEEVE 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.

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

SURE-FLEX COUPLING SIZE SELECTION (continued)



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.

