

# Sure-Flex Plus® Elastomeric Couplings

**F1**



- **30% Higher Rating**
- **Quick, Easy Installation**
- **Clean, Quiet Performance**
- **No Lubrication, No Maintenance**

# Table of Contents

## Sure-Flex Plus® Table of Contents

Selection Guide .....	3-7
Components .....	3
Sleeve Selection .....	4
Sleeve Dimensions .....	5
Load/Service Factor .....	6
Coupling Ratings .....	7
Type J BTS Couplings .....	9
Type S BTS Couplings .....	10-11
Type B QD Bushed Couplings .....	11
Type SC BTS Spacer Couplings .....	12-15
Type C Clamp Hub Couplings .....	16
Installation Instructions .....	17

## Sure-Flex Plus couplings are a TB Wood's original!



## New! Sure-Flex® PLUS+

For over 50 years, TB Wood's has led the coupling industry with the original TB Wood's Sure-Flex design. And we haven't stopped innovating: this industry favorite just got even better. Our new Sure-Flex Plus EPDM and Neoprene sleeves are best-in-class for coupling performance and value. Here's why:

### High Torque Rating

- **30% Increased Torque Rating**

Sure-Flex Plus sleeves provide longer service life in demanding applications, reducing required maintenance and associated replacement cost.

### Longer Life

- **Sure-Flex Plus Lasts Over 3X Longer than the Competition**

Extensive testing shows our sleeves outlast the imitators. More uptime means less costly downtime.

### Better Value

- **Save Money Using a Smaller Coupling**

Over 50% of common applications can now use a smaller coupling, lowering the cost of both coupling purchase and sleeve replacement.

### Interchangeable

- **Retrofits to Existing Flanges**

No need to replace the full coupling – the Sure-Flex Plus sleeve design is 100% compatible with the current industry standard created by TB Wood's over 50 years ago.

Sure-Flex Plus couplings utilize EPDM, Neoprene, Hytrel™ and Urethane flexible elastomer sleeves to transmit torque and accommodate shaft misalignment. Sure-Flex Plus couplings have exceptional torsional flexibility, with the 4-way flexing action absorbing virtually all types of shock, vibration, misalignment and end float. Sure-Flex Plus couplings are an excellent choice when low cost, high flexibility, low vibration and easy installation are important.

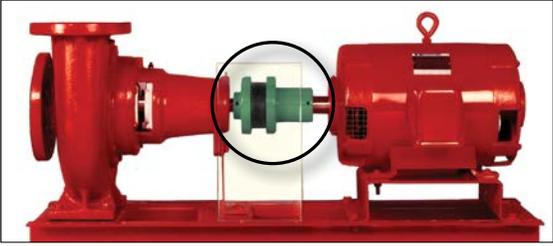
### Easy, Quick Installation

Sure-Flex Plus can be installed quickly and easily, thanks to its simple design with no bolts, gaskets, covers or seals. Alignment can be checked on the precision-machined flanges using only a straightedge and calipers. No special tools are needed for installation, alignment or removal.



### Features

- Up to 72,480 in.lbs.; 8.20 kNm
- Quick and easy installation
- Spacer, bushed hub, and clamping hub designs in stock
- Flexible design accommodates misalignment and protects equipment
- 7° to 21° torsional wind up
- Needs no lubrication, no maintenance



### 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. Couplings are not affected by abrasives, dirt or moisture, eliminating the need for lubrication or maintenance and providing clean, dependable, quiet performance.

### Applications

Sure-Flex Plus couplings can be found hard at work in many industries. These couplings are ideal for a wide variety of applications including:

- Pumps
- Fans/Blowers
- Compressors
- Mixers
- Electric Motors
- Conveyors



## Sure-Flex Plus 4-Way flexing action absorbs all types of shock, vibration and misalignment



### Torsional

Sure-Flex Plus coupling sleeves have an exceptional ability to absorb torsional shock and dampen torsional vibrations. The EPDM and Neoprene sleeves wind up approximately 21° torsionally at their rated torque. Hytrel sleeves will wind up about 7°.



### Angular

The unique design of the Sure-Flex Plus coupling's teeth allows for the absorption of angular misalignment without wear. Refer to page F1-18 for misalignment limits. Angular alignment can be achieved using only a scale and calipers.



### Parallel

Parallel misalignment is absorbed without wear or appreciable energy loss. 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 for parallel alignment.



### Axial

Sure-Flex Plus 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.

## Sure-Flex Plus SELECTION GUIDE

Use the Coupling Selector Program on [www.TBWoods.com/Select](http://www.TBWoods.com/Select)

Or follow these steps:

### Sure-Flex Plus 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, Split 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
6JS	6JES
9SC5011	9SC50-11
9SC50	9SC50
11SCH238	11SCH x 2-3/8
9SCHS118	9SCHS x 1-1/8
9H	9H

# Sure-Flex Plus® Sleeve

## Selection

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

**New! Sure-Flex Plus EPDM and Neoprene sleeves have a 30% higher torque capacity.**

	EPDM	Neoprene	Hytrel	Urethane
<b>CONSTRUCTIONS AVAILABLE</b>				
1 pc, unsplit	JE	JN	H	U
1 pc, split	JES	JNS	-	-
2 pc, E/N w/ring	E	N	HS	-
<b>TYPICAL USE</b>	General Purpose	Oil Resist Non-flame	General Purpose	Stiffness
<b>REL. RATING</b>	1X	1X	3X	3X
<b>WIND-UP ANGULAR</b>	21°	21°	7°	3°
<b>MISALIGN</b>	1°	1°	1/4°	1/4°
<b>TEMPERATURE</b>				
maximum	+275°F/+135°C	+200°F/+93°C	+250°F/+121°C	+200°F/+93°C
minimum	-30°F/-34°C	-0°F/-18°C	-65°F/-54°C	-80°F/-62°C

## SURE-FLEX PLUS SLEEVES

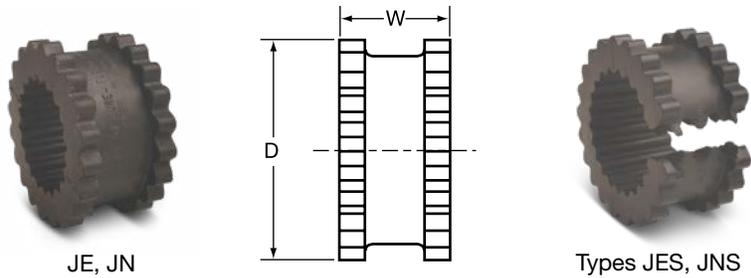
Part No.	Product Description
3J	3JE EPDM
4J	4JE EPDM
5J	5JE EPDM
6J	6JE EPDM
7J	7JE EPDM
8J	8JE EPDM
9J	9JE EPDM
10J	10JE EPDM
3JS	3JES EPDM Split
4JS	4JES EPDM Split
5JS	5JES EPDM Split
6JS	6JES EPDM Split
7JS	7JES EPDM Split
8JS	8JES EPDM Split
9JS	9JES EPDM Split
10JS	10JES EPDM Split
3JN	3JN Neoprene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

Part 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

Part 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

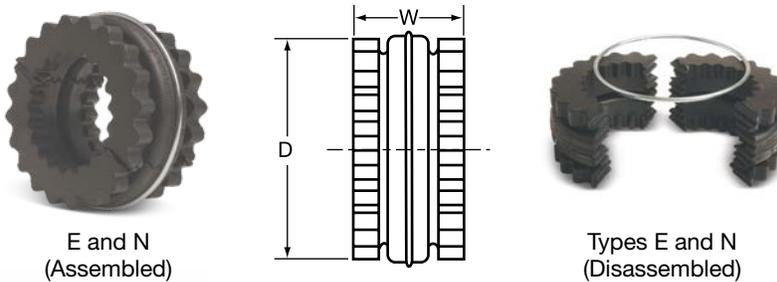
## Selection

Flexible sleeves for Wood's Sure-Flex Plus couplings are available in four materials (EPDM, Neoprene, Hytrell 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.



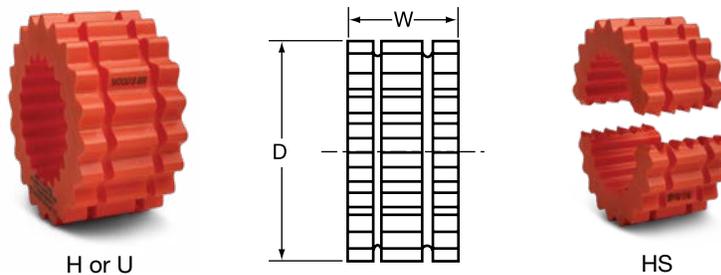
### JE-JES-JN-JNS

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 Plus flange within a given size.



### E-N

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.



### H-HS-U

H (Hytrell) 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.

## DIMENSIONS (in.)

Coupling Size	JE, JES, JN & JNS Sleeves EPDM & Neoprene			E and N Sleeves EPDM & Neoprene			H, U & HS Sleeves Hytrell & Urethane		
	D	W	Weight (lbs.)	D	W	Weight (lbs.)	D	W	Weight (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			

Sizes 13 and 14 Hytrell available with HS sleeves only.

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