

## **MULTI-V FUL-GRIP SHEAVES AND BUSHINGS**

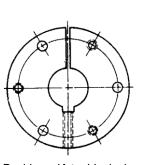


### FUL-GRIP (QD) BUSHINGS FUL-GRIP (QD) SHEAVES STANDARD MULTI-V SHEAVES SPECIAL MADE-TO-ORDER SHEAVES

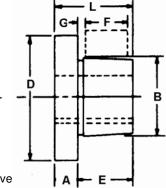
Industry puts Maurey sheaves on more drives every year simply because it pays to do so. Machined from close-grained, grey iron castings and statically balanced to MPTA standards, these sheaves will stand up to hard service and provide smooth, quiet-running, belt-saving performance. However, please note that cast iron sheaves cannot exceed 6500 feet per a minute rim speed. Also, special or dynamic balancing should be considered when rim speeds exceed 5000 feet per a minute. Maurey sheaves are available in stock sizes for B, C, D section belts. Maurey also offers special made-to-order items for B, C, D section belts as well. The Ful-Grip bushing system is Maurey's answer to the need for sheaves that are installed, removed, and interchanged with the ultimate in ease and speed. With tapered bores to slip easily over flanged and detachable bushings, tapered to match the rims, Ful-Grips are the adaptablility champions. Installation instructions in this section show how easily Ful-Grips make it possible to retain the bushing and change the sheave to suit speed,or retain the sheave and change the bushing to fit a different shaft size.











Bushings JA to J Inclusive

NOTE: JA & SH bushings have no set screw over keyseat

### FUL-GRIP BUSHING DIMENSIONS

								Bolt	Сар
Bushing	Dimensions in Inches					Circle	Screws		
	Α	В	D	E	F	G	L		Required
JA	5/16	1.375	2	11/16	5/8	1/8	1	1-21/32	3 - #10 x 1
SH	3/8	1.871	2-11/16	7/8	13/16	1/8	1-1/4	2-1/4	3 - 1/4 x 1-3/8
SDS	7/16	2.1875	3-3/16	7/8	3/4	1/8	1-5/16	2-11/16	3 - 1/4 x 1-3/8
SD	7/16	2.1875	3-3/16	1-3/8	1-1/4	1/8	1-13/16	2-11/16	3 - 1/4 x 2
SK	1/2	2.8125	3-7/8	1-3/8	1-1/4	1/8	1-7/8	3-5/16	3 - 5/16 x 2
SF	1/2	3.125	4-5/8	1-1/2	1-1/4	1/8	2	3-7/8	3 - 3/8 x 2
E	3/4	3.834	6	1-7/8	1-5/8	1/8	2-5/8	5	3 - 1/2 x 2-3/4
F	13/16	4.4375	6-5/8	2-13/16	2-1/2	3/16	3-5/8	5-5/8	3 - 9/16 x 3-1/2
J	1	5.1484	7-1/4	3-1/2	3-3/16	3/16	4-1/2	6-1/4	3 - 5/8 x 4-1/2
М	1-1/4	6.500	9	5-1/2	5-3/16	3/16	6-3/4	7-7/8	4 - 3/4 x 6-3/4
Ν	1-1/2	7.000	10	6-5/8	6-1/4	1/4	8-1/8	8-1/2	4 - 7/8 x 8
Р	1-3/4	8.250	11-3/4	7-5/8	7-1/4	1/4	9-3/8	10	4 - 1 x 9-1/2

Certain bores in "Ful-Grip" bushings are of such a size that standard depth keyseats cannot be furnished. When a shallow keyseat is required, a rectangular key of the proper dimension is furnished with the bushing. The table to the right lists some keyseat specifications for all bushing bores. For more detail on specific bores and their corresponding keyseats please refer to the tables on the next pages.

		Stock Bor	e Range		
Bushing	Minimum Maximum			Weight	
	Standard	Standard	Shallow	No	Lbs.
	Keyseat	Keyseat	Keyseat	Keyseat	
JA	1/2	1	1-3/16	1-1/4	.8
SH	1/2	1-3/8	1-5/8	1-11/16	1.0
SDS	1/2	1-11/16	1-15/16	2	1.2
SD	1/2	1-11/16	1-15/16	2	1.5
SK	1/2	2-1/8	2-1/2	2-5/8	2.0
SF	1/2	2-1/4	2-3/4	2-15/16	3.5
E	7/8	2-3/4	3-7/16	3-1/2	9.0
F	1	3-1/4	3-15/16	*	14.0
J	1-7/16	3-3/4	4-7/16	*	22.0
м	2	4-11/16	5-1/2	*	51.0
Ν	2-1/2	5	5-7/8	*	66.0
Р	2-15/16	5-11/16	7/8	*	122.0

\* Please Consult Maurey's Engineering Department

# **Maurey** ful-grip bushings bore and keyseat dimensions

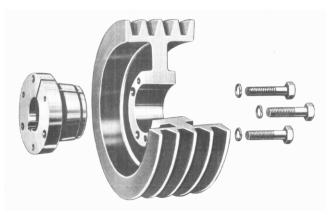
<b>JA BUSHINGS</b>				
BORE SIZES	KEY SEAT			
1/2, 9/16	1/8 X 1/16			
5/8, 11/16, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1	1/4 X 1/8			
1-1/16, 1-1/8, 1-3/16	1/4 X 1/16			
1-1/4,	NONE			
SH BUSHIN	GS			
BORE SIZES KEY SEAT				
1/2, 9/16	1/8 X 1/16			
5/8, 11/16, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1, 1-1/16, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 1/16			
1-11/16,	NONE			
SDS BUSHI	NGS			
BORE SIZES	KEY SEAT			
1/2, 9/16	1/8 X 1/16			
5/8, 11/16, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1, 1-1/16, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16			
1-11/16,	3/8 X 3/16			
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			
2	NONE			
SD BUSHING	âS			
BORE SIZES	KEY SEAT			
1/2, 9/16	1/8 X 1/16			
5/8, 11/16, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1, 1-1/16, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16			
1-11/16,	3/8 X 3/16			
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			
2	NONE			

SK BUSHINGS				
BORE SIZES	KEY SEAT			
1/2, 9/16	1/8 X 1/16			
5/8, 11/16, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1, 1-1/16, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16			
1-11/16, 1-3/4	3/8 X 3/16			
1-13/16, 1-7/8, 1-15/16	1/2 X 1/4			
2, 2-1/16, 2-1/8	1/2 X 1/4			
2-3/16, 2-1/4	1/2 X 1/8			
2-5/16, 2-3/8, 2-7/16, 2-1/2	5/8 X 1/16			
2-9/16, 2-5/8	NONE			
SF BUSHIN	GS			
BORE SIZES	KEY SEAT			
1/2,	1/8 X 1/16			
5/8, 3/4, 13/16, 7/8	3/16 X 3/32			
15/16, 1, 1-1/16, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16			
1-11/16, 1-3/4	3/8 X 3/16			
1-13/16, 1-7/8, 1-15/16	1/2 X 1/4			
2, 2-1/16, 2-1/8, 2-3/16, 2-1/4				
	5/8 X 3/16			
	5/8 X 1/16			
2-7/8	3/4 X 1/16			
2-15/16	3/4 X 1/32			
E BUSHING	S			
BORE SIZES	KEY SEAT			
7/8	3/16 X 3/32			
15/16, 1, 1-1/8	1/4 X 1/8			
1-3/16, 1-1/4	1/4 X 1/8			
1-5/16, 1-3/8	5/16 X 5/32			
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16			
1-11/16, 1-3/4	3/8 X 3/16			
1-13/16, 1-7/8, 1-15/16	1/2 X 1/4			
2, 2-1/16, 2-1/8, 2-3/16, 2-1/4	1/2 X 1/4			
2-5/16, 2-3/8, 2-7/16, 2-1/2	5/8 X 5/16			
2-9/16, 2-5/8, 2-11/16, 2-3/4	5/8 X 5/16			
2-13/16, 2-7/8, 2-15/16, 3	3/4 X 1/8			
3-1/8, 3-3/16, 3-1/4	3/4 X 1/8			
3-5/16, 3-3/8, 3-7/16, 3-1/2	7/8 X 1/16			

## **Maurey** ful-grip bushings bore and keyseat dimensions

F BUSHINGS					
BORE SIZES	KEY SEAT				
1, 1-1/8, 1-3/16, 1-1/4	1/4 X 1/8				
1-3/8	5/16 X 5/32				
1-7/16, 1-1/2, 1-9/16, 1-5/8	3/8 X 3/16				
1-3/4	3/8 X 3/16				
1-7/8, 1-15/16	1/2 X 1/4				
2, 2-1/16, 2-1/8, 2-1/4	1/2 X 1/4				
2-5/16, 2-3/8, 2-7/16, 2-1/2	5/8 X 5/16				
2-9/16, 2-5/8, 2-11/16, 2-3/4	5/8 X 5/16				
2-13/16, 2-7/8, 2-15/16, 3	3/4 X 3/8				
3-1/8, 3-3/16, 3-1/4	3/4 X 3/8				
3-5/16, 3-3/8, 3-7/16, 3-1/2	7/8 X 3/16				
3-5/8, 3-11/16, 3-3/4	7/8 X 3/16				
3-7/8, 3-15/16	1 X 1/8				
4	NONE				
J BUSHING	S				
BORE SIZES	KEY SEAT				
1-7/16, 1-1/2, 1-9/16	3/8 X 3/16				
1-11/16, 1-3/4	3/8 X 3/16				
1-7/8, 1-15/16, 2, 2-1/8, 2-1/4	1/2 X 1/4				
2-5/16, 2-3/8, 2-7/16, 2-1/2	5/8 X 5/16				
2-5/8, 2-11/16, 2-3/4	5/8 X 5/16				
2-7/8, 2-15/16, 3	3/4 X 3/8				
3-1/8, 3-3/16, 3-1/4	3/4 X 3/8				
3-5/16, 3-3/8, 3-7/16, 3-1/2	7/8 X 7/16				
3-5/8, 3-11/16, 3-3/4	7/8 X 7/16				
3-13/16,	1 X 1/2				
3-7/8, 3-15/16	1 X 3/8				
4, 4-1/8, 4-3/16, 4-1/4, 4-3/8	1 X 1/8				
4-7/16, 4-1/2	1 X 1/8				
M BUSHING	S				
BORE SIZES	KEY SEAT				
1-15/16, 2, 2-3/16, 2-1/4	1/2 X 1/4				
2-3/8, 2-7/16, 2-1/2	5/8 X 5/16				
2-5/8, 2-11/16, 2-3/4	5/8 X 5/16				
2-7/8, 2-15/16, 3	3/4 X 3/8				
3-1/8, 3-3/16, 3-1/4	3/4 X 3/8				
3-3/8, 3-7/16, 3-1/2	7/8 X 7/16				
3-5/8, 3-11/16, 3-3/4	7/8 X 7/16				
3-7/8, 3-15/16, 4	1 X 1/2				
4-1/8, 4-3/16, 4-1/4, 4-3/8	1 X 1/2				
4-7/16, 4-1/2	1 X 1/2				
4-11/16	1-1/4 X 5/8				
4-3/4, 4-7/8, 4-15/16, 5	1-1/4 X 1/4				
5-3/16, 5-1/4, 5-7/16, 5-1/2	1-1/4 X 1/4				

N BUSHINGS			
BORE SIZES	KEY SEAT		
2-15/16, 3	3/4 X 3/8		
3-3/8, 3-7/16, 3-1/2	7/8 X 7/16		
3-5/8, 3-3/4	7/8 X 7/16		
3-7/8, 3-15/16, 4, 4-3/16	1 X 1/2		
4-1/4, 4-3/8, 4-7/16, 4-1/2	1 X 1/2		
4-5/8, 4-3/4, 4-7/8, 4-15/16	1-1/4 X 5/8		
5	1-1/4 X 5/8		
5-3/16, 5-7/16, 5-1/2,	1-1/4 X 1/4		
5-7/8,	1-1/2 X 1/4		
5-15/16,	1-1/2 X 1/8		
P BUSHING	S		
BORE SIZES	KEYSEAT		
2-15/16, 3-1/4	3/4 X 3/8		
3-7/16, 3-1/2, 3-5/8, 3-3/4	7/8 X 7/16		
3-7/8, 3-15/16, 4, 4-1/4	1 X 1/2		
4-3/8, 4-7/16, 4-1/2	1 X 1/2		
4-5/8, 4-11/16, 4-3/4, 4-7/8,	1-1/4 X 5/8		
4-15/16, 5, 5-3/16, 5-1/4,	1-1/4 X 5/8		
5-5/16, 5-3/8, 5-7/16, 5-1/2	1-1/4 X 5/8		
5-3/4,	1-1/2 X 3/4		
5-7/8, 5-15/16, 6, 6-1/16	1-1/2 X 1/4		
6-1/4, 6-7/16, 6-1/2	1-1/2 X 1/4		
6-3/4, 7	1-3/4 X 1/8		



## **Maurey** ful-grip bushings bore and keyseat dimensions

## **METRIC STOCK BORE INFORMATION**

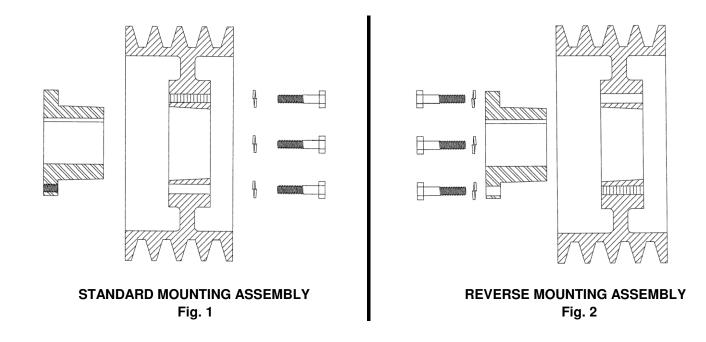
<b>JA BUSHINGS</b>				
BORE (MM)	KEYWAY			
12	NONE			
15, 17	5 X 5			
19, 20, 22	6 X 6			
24	8 X 6			
28	8 X 5			
SH BUS	HINGS			
BORE (MM)	KEYWAY			
19	6 X 6			
24, 25, 28, 30	8 X 7			
32, 35	10 X 8			
SDS BUSHINGS				
BORE (MM)	KEYWAY			
24, 25, 28,	8 X 7			
30, 32	8 X 7			
35, 38	10 X 8			
40, 42	12 X 8			
	_			
40, 42	HINGS KEYWAY			
40, 42 <b>SD BUS</b> <b>BORE (MM)</b> 24, 25, 28, 30	HINGS KEYWAY 8 X 7			
40, 42 SD BUS BORE (MM)	HINGS KEYWAY			

SK BUSHINGS			
BORE (MM)	KEYWAY		
24, 25, 28, 30	8 X 7		
32, 35, 38	10 X 8		
40, 42	12 X 8		
45, 48, 50	14 X 9		
55	16 X 10		
SF BUSH	INGS		
BORE (MM)	KEYWAY		
28, 30	8 X 7		
32, 35, 38	10 X 8		
40, 42	12 X 8		
45, 48, 50	14 X 9		
55	16 X 10		
60	18 X 11		
65	18 X 8 *		
E BUSH	INGS		
BORE (MM)	KEYWAY		
35, 38	10 X 8		
40, 42	12 X 8		
45, 48, 50	14 X 9		
55	16 X 10		
60, 65	18 X 11		
70, 75	20 X 12		
80	22 X 11		

F BUSHINGS			
BORE (MM)	KEYWAY		
45, 48, 50	14 X 9		
55	16 X 10		
60, 65	18 X 11		
70, 75	20 X 12		
80, 85	22 X 14		
90	25 X 14		
J BUSH	IINGS		
BORE (MM)	KEYWAY		
50	14 X 9		
55	16 X 10		
60, 65	18 X 11		
70, 75	20 X 12		
80, 85	22 X 14		
90, 95	25 X 14		
100	28 X 16		
M BUS	HINGS		
BORE (MM)	KEYWAY		
80	22 X 14		
90	25 X 14		
100	28 X 16		
120	32 X 18		

#### \*- SHALLOW KEYSTOCK REQUIRED

The "Keyway" dimensions shown refer to the dimensions of the keystock not the keyway. The keyway is manufactured to accommodate this keystock size. This nomenclature is in accordance with metric standards.



### **INSTALLATION AND REMOVAL OF QD SHEAVES**

#### INSTALLATION

- 1. Make sure the bore of the sheave and the tapered cone surface of the bushing are free of all the foreign substances such as paint, dirt, lubricants, etc. <u>Do not use</u> <u>lubricants on installation.</u>
- Assemble bushings and sheave as shown above in Figures 1 and 2, whichever applies. With cap screws loosely inserted, the bushing remains fully expanded to assume a sliding fit on the shaft. Note: When installing bushings M thru S, locate the extra holes in the hub as far as possible from the bushing's saw cut in order to reduce the possibility of bushing flange breakage. CAUTION: <u>Do</u> not use lubricants on screw threads or tapered surfaces
- With key on shaft, slide sheave assembly to its desired position with cap screw heads on outside. (Exception: Some shaft lengths may require the sheaves to be reversed with the cap screw heads to the inside - see Figure 2.)
- 4. Line up the sheave assembly and tighten cap screws evenly and progressively to the torque value listed in the table. Never allow the sheave to be drawn in contact with the bushing flange. There should be a gap of 1/8" to 1/4" between the sheave hub and the bushing flange. If the gap is closed, the shaft is seriously undersize.
- 5. Tighten the set screw to hold the key securely on the shaft during operation.

CAUTION: When mounting a "FUL-GRIP" bushing, the tightening force of the screws is multiplied may times by the wedging action of the tapered surface. This action compresses the bushing for a snug fit on the shaft. If extreme screw tightening forceor lubricants are applied in mounting the "FUL-GRIP" bushing, bursting pressures will be created in the hub of the mounted sheave which may cause it to crack.

Refer to the recommended torque ratings

#### REMOVAL

- 1. Loosen and remove cap screws.
- Insert cap screws in tapered removal holes and starting with bolt farthest from sawnut on bushing, tighten evenly and progressively until sheave is loose on bushing. If sheaves in Figure 2 are installed with cap screw heads next to motor, loosen cap screws and use a wedge between the bushing and the sheave.
- 3. Remove sheave and bushing

CAUTION: Excessive or unequal pressure on the jack screws can break the bushing flange

	Wrench	Wrench	Wrench
Bushing	Torque	Length	Pull
	(InLbs)	(Inches)	(Pounds)
JA	60	4	15
SH	108	4	27
SDS	108	4	27
SDS	108	4	27
SK	180	6	30
SF	360	6	60
E	720	12	60
F	900	12	75
J	1620	12	135
М	2700	15	180
Ν	3600	15	240
Р	5400	18	300