

Martin Sprocket & Gear, Inc.

QD 退拔式 錐套



INTERNATIONAL
CATALOGUE
2001-I

Stock QD Bushings

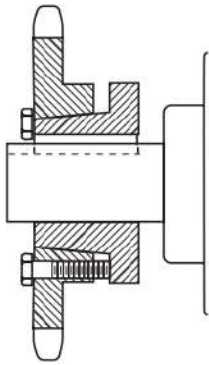


Martin MOUNTING PROCEDURE – QD BUSHINGS

IMPORTANT – BE SURE TAPERED CONE SURFACES OF QD BUSHING AND INSIDE OF SHEAVE OR SPROCKET HUB ARE DRY AND FREE OF ALL FOREIGN SUBSTANCES SUCH AS PAINT, GREASE, OR DIRT.

STANDARD Mounting Assembly FOR QD SHEAVES AND SPROCKETS

MOUNTING

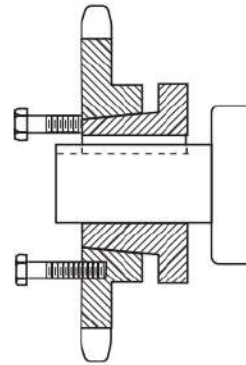


1. Be sure the tapered cone surfaces of the bushing and the inside of the driven product are clean and free of anti-seize lubricants.
2. Slide QD bushing on shaft, flange end first. Assemble key.
3. Position QD bushing on shaft. Tighten set screw over key "hand tight" with standard Allen wrench only. Do not use excessive force.
4. Slide large end of sheave or sprocket taper bore into position over cone aligning drilled bolt holes in sheave or sprocket with tapped holes in flange of bushing. Assemble pull-up bolts and lock washers.

NOTE: Install M thru S bushings in the hub so that the two extra holes in the hub are located as far as possible from the bushing's saw cut.

5. Tighten pull-up bolts alternately and evenly to tightness indicated in torque table on back. Do not use extensions on wrench handles. There should be a gap between the face of the sheave or sprocket hub and the flange of the QD bushing to insure a satisfactory cone grip and press fit. CAUTION: THIS GAP MUST NOT BE CLOSED.

DISMOUNTING



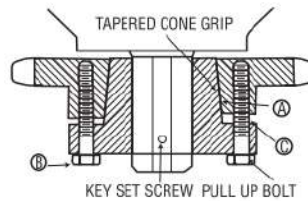
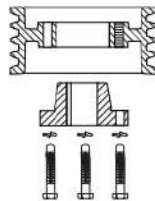
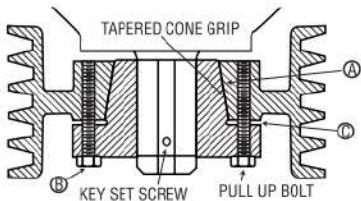
1. Remove pull-up bolts and screw them into TAPPED holes in sheave or sprocket and against flange of QD bushing to break cone grip.
2. Loosen set screw and slide QD bushing from shaft.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions given above must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. All rotating power transmission products when used in a drive are potentially dangerous and must be guarded by the user as required by applicable laws, regulations, standards, and good safety practice. (Refer to ANSI Standard B15.1.)

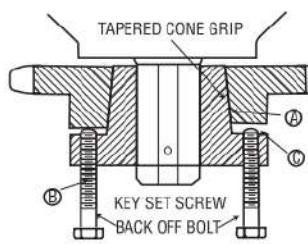
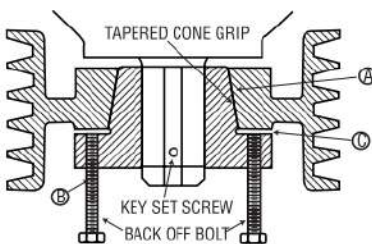
REVERSE Mounting Assembly

FOR QD SHEAVES AND SPROCKETS USING JA, SH, SD, SDS, SK, SF, E, F, & J BUSHINGS

These bushings, as well as the sprockets and sheaves for them, are each drilled with six holes (three drilled and three tapped) to allow pull-up bolts to be inserted from either side. This enables variations of mounting characteristics to suit a particular installation.



1. Be sure the tapered cone surfaces of the bushing and the inside of the driven product are clean and free of anti-seize lubricants.
2. Assemble sheave or sprocket with bolts inserted (But not tightened) through DRILLED holes in bushing flange into TAPPED holes in sheave, sprocket, or other *Martin* QD part.
3. With key in shaft keyseat, slide assembly into approximate position on shaft with flange end of bushing away from bearing.
4. Position QD bushing on shaft by tightening set screw over key "hand tight" with standard Allen wrench only. Do not use excessive force.
5. Tighten pull-up bolts alternately and evenly to tightness indicated in torque table below. Do not use extensions on wrench handles. There should be a gap between the face of the sheave or sprocket hub and the flange of the QD bushing to insure a satisfactory cone grip and press fit. CAUTION: THIS GAP MUST NOT BE CLOSED.



1. Remove pull-up bolts and screw them into TAPPED holes in bushing flange and against hub of sheave or sprocket to break cone grip.
2. Loosen set screw in bushing flange and slide QD bushing from shaft.

CAUTION

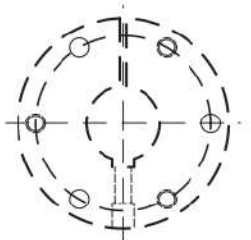
WARNING: USE OF ANTI-SEIZE LUBRICANT ON TAPERED CONE SURFACES OR ON BOLT THREADS WHEN MOUNTING MAY RESULT IN DAMAGE TO SHEAVES AND SPROCKETS. THIS VOIDS ALL MANUFACTURER'S WARRANTIES.

BOLT TORQUE TABLE

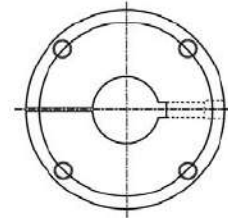
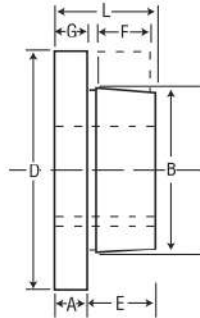
QD Bushing Size	Size of Cap Screw	Wrench Torque in. / lbs.
JA	10 - 24	60
SH, SDS, SD	1/4 - 20	108
SK	5/16 - 18	180
SF	3/8 - 16	360
E	1/2 - 13	720
F	9/16 - 12	900
J	5/8 - 11	1620
M	3/4 - 10	2700
N	7/8 - 9	3600
P	1 - 8	5400
W	1-1/8 - 7	7200
S	1-1/4 - 7	9000

★F = Length of Mating Bore

★★G = Gap Between QD Bushing and Mating Hub



Bushings
"JA" to "J" Inclusive



Bushings
"M" to "S" Inclusive

QD Bushings — Steel

Bushing	Dimensions (Inches)								Cap Bolt Circle	Screws Required	Stock Bore Range			Average Weight (Approx.)
	A	B	D	E	F	G	L	Maximum						
								Minimum			Standard Keyway	Shallow Keyway		
SF-STL	3/8	3.125	4%	1 1/2	1 1/4	1/8	2 1/8	3%	3 1/2 x 2	1/2	2 1/8	2 1/8	3.0	
E-STL	1/2	3.834	6	1 1/2	1 1/2	1/8	2 1/4	5	3 1/2 x 2 1/2	1/2	2 1/4	3 1/2	10.0	
F-STL	3/4	4.437	6%	2 1/8	2 1/2	3/16	3%	5%	3 3/4 x 3 1/4	1	3 3/4	4	11.5	
J-STL	1	5.148	7 1/4	3 1/2	3 3/8	3/16	4 1/2	6 1/4	3 1/2 x 4 1/2	1 1/8	3 3/4	4 1/2	18.0	
M-STL	1 1/4	6.500	9	5 1/2	5 3/8	3/16	6%	7%	4 1/2 x 6%	2	4 1/2	5 1/2	37.0	
N-STL	1 1/2	7.000	10	6%	6%	7/16	8%	8 1/2	4 1/2 x 8 1/2	2 1/2	5%	5%	57.0	

Bushing	Bores	Keyway
SF-STL	2 1/8 - 2 3/8	3/8 x 3/8
	2 1/2 - 2 3/4	3/8 x 1/2
	2 5/8 - 2 7/8	3/8 x 5/8
E-STL	3 - 3 1/8	STD.
	3 1/4 - 3 3/4	3/8 x 3/4
	3 5/8 - 3 7/8	3/8 x 7/8
F-STL	4 - 4 1/8	STD.
	4 1/4 - 4 3/4	3/8 x 3/4
	4 1/2 - 4 3/4	1 x 1/4
J-STL	5 - 5 1/8	NONE
	5 1/4 - 5 3/4	1 x 1/4
M-STL	6 - 6 1/8	STD.
	6 1/4 - 6 3/4	1 x 1/4
N-STL	7 - 7 1/8	STD.
	7 1/4 - 7 3/4	1 1/2 x 1/4

Shallow Key Dimension — Standard			
Key Seat	Key	Keyway	Key
1/4 x 1/2	1/4 x 3/8	3/8 x 1/2	1/4 x 1/2
1/4 x 5/8	1/4 x 3/4	3/8 x 5/8	1/4 x 3/4
1/2 x 1/2	1/2 x 3/4	3/8 x 3/4	1/2 x 3/4
1/2 x 3/4	1/2 x 1	1/2 x 3/4	1/2 x 3/4
3/4 x 1/2	3/4 x 3/4	1/2 x 3/4	1/2 x 3/4
3/4 x 3/4	3/4 x 1	1 1/2 x 1/4	1 1/2 x 1/4
1 x 1/2	1 x 3/4	1 1/2 x 1/4	1 1/2 x 1/4
1 x 3/4	1 x 1	1 1/2 x 1/4	1 1/2 x 1/4
1 1/4 x 1/2	1 1/4 x 3/4	1 1/2 x 1/4	1 1/2 x 1/4
1 1/4 x 3/4	1 1/4 x 1	2 x 1/4	2 x 1

Standard Keyway and Key Dimension		
Bores	Keyway	Key
3/8	3/8 x 3/8	3/8 x 3/8
1/2 - 1 1/8	1/4 x 1/4	1/4 x 1/4
1 1/8 - 1 1/4	3/8 x 3/8	3/8 x 3/8
1 1/4 - 1 1/2	3/8 x 3/4	3/8 x 3/4
1 1/2 - 2	1/2 x 1/4	1/2 x 1/4
2 - 2 1/8	3/8 x 3/8	3/8 x 3/8
2 1/8 - 3 1/4	3/8 x 3/4	3/8 x 3/4
3 1/8 - 3 3/4	1/4 x 1/4	1/4 x 1/4
3 3/8 - 4 1/4	1 x 1/4	1 x 1
4 1/8 - 5 1/8	1 1/2 x 1/4	1 1/2 x 1/4
5 1/8 - 6 1/2	1 1/2 x 3/4	1 1/2 x 1/2
6 1/8 - 7 1/2	1 1/2 x 3/4	1 1/2 x 1/2
7 1/8 - 9	2 x 3/4	2 1/2 x 1/2
9 1/8 - 11	2 1/2 x 3/4	---
11 1/8 - 13	3 x 1	---

Shallow Key Dimension — Steel			
Key Seat	Key	Keyway	Key
1/4 x 1/2	1/4 x 3/8	3/8 x 1/2	1/4 x 1/2
1/4 x 5/8	1/4 x 3/4	3/8 x 5/8	1/4 x 3/4
1/2 x 1/2	1/2 x 3/4	3/8 x 3/4	1/2 x 3/4
3/4 x 1/2	3/4 x 3/4	1/2 x 3/4	1/2 x 3/4
3/4 x 3/4	3/4 x 1	1 1/2 x 1/4	1 1/2 x 1/4
1 x 1/2	1 x 3/4	1 1/2 x 1/4	1 1/2 x 1/4
1 x 3/4	1 x 1	1 1/2 x 1/4	1 1/2 x 1/4
1 1/4 x 1/2	1 1/4 x 3/4	1 1/2 x 1/4	1 1/2 x 1/4
1 1/4 x 3/4	1 1/4 x 1	1 1/2 x 1/4	1 1/2 x 1/4
1 1/2 x 1/2	1 1/2 x 3/4	1 1/2 x 1/4	1 1/2 x 1/4
1 1/2 x 3/4	1 1/2 x 1	2 x 1/4	2 x 1

Bushing	Plain Bores Not Split
SH-STL	1/2
SD-STL	1/2
SK-STL	1/2
SF-STL	1 1/8
E-STL	1/4 - 1 1/8
F-STL	1 - 2 1/8 - 2 3/8
J-STL	1 1/8 - 2 1/8
M-STL	2 - 2 1/8
N-STL	2 1/8 - 4 1/8

Reborable QD bushings made of Stainless Steel are available in many sizes. Non stock sizes are available on MTO basis.

Standard QD Bushings



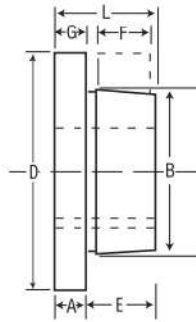
Bushing	Dimensions (Inches)								Cap Screws Required	Stock Bore Range			Set Screw Size	Average Weight (Approx.)
	A	B	D	E	F	G	L	Bolt Circle		Maximum				
										Minimum	Standard Keyway	Shallow Keyway		
JA	3/4	1.375	2	1/2	3/8	1/4	1 1/4	1.665	3-10 x 1	3/8	1	1 1/4	10-24	.9
SH	7/8	1.871	2 1/8	3/4	5/8	1/2	1 1/2	2 1/4	3-11 x 1 1/2	1/2	1 1/2	1 1/2	1/4	1
SDS	1/2	2.187	3 3/8	3/4	3/4	1/2	1 3/4	2 1/8	3-11 x 1 3/4	1/2	1 1/2	2	1/4	1
SD	1/2	2.187	3 3/8	1 1/8	1 1/4	1/2	1 3/8	2 1/8	3-11 x 1 1/4	1/2	1 1/2	1 1/2	1/4	1.5
SK	3/4	2.812	3 3/4	1 1/4	1 1/4	1/2	1 3/4	3 3/8	3-7 x 2	1/2	2 1/2	2 1/2	3/8	2
SF	3/4	3.125	4 1/4	1 1/2	1 1/4	1/2	2 1/4	3 3/4	3-7 x 2	1/2	2 1/2	2 1/2	3/8	3
E	3/4	3.834	6	1 1/4	1 1/4	1/2	2 1/2	5	3-7 x 2 1/2	3/4	2 1/2	3 1/2	3/8	10
F	7/8	4.437	6 1/2	2 1/8	2 1/2	3/4	3 3/8	5 1/2	3-7 x 3 3/8	1	3 1/2	3 1/2	1/2	11.5
J	1	5.148	7 1/4	3 1/4	3 3/8	3/4	4 1/4	6 1/2	3-7 x 4 1/2	1 1/2	3 1/2	4 1/2	1/2	18
M	1 1/4	6.500	9	5 1/2	5 3/8	3/4	6 3/4	7 1/2	4-7 x 6 1/2	1 1/2	4 1/2	5 1/2	3/4	37
N	1 1/2	7.000	10 1/4	6 1/4	6 1/2	1	8 1/4	8 1/2	4-7 x 8 1/2	2 1/2	5 1/2	6	3/4	57
P	1 3/4	8.250	11 1/4	7 1/4	7 1/4	1	9 1/4	10	4-1 x 9 1/2	2 1/2	5 1/2	7	1	120
W	2	10.437	15	9 1/4	9	1 1/4	11 1/4	12 1/4	4-1 1/4 x 11 1/2	4	7 1/2	8 1/2	1	250
S	3 1/4	12.125	17 1/4	12 1/2	12	1 1/2	15 1/4	15	5-1 1/4 x 15 1/2	6	8 1/2	10	1 1/4	400

Inch Bore

Bushing	Bores	Keyway
JA	3/4 - 3/8 1/2 - 1 1 1/4 - 1 1/2 1 3/8 1 1/2	NO K.W. STD. 1/4 x 1/8 1/4 x 1/8 NO K.W.
SH	1/2 - 1 1/2 1 1/8 - 1 1/2 1 1/8 - 1 1/2 1 1/8	STD. 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 NO K.W.
SDS	1/2 - 1 1/8 1 1/2 1 1/8 1 1/4 - 1 1/8 2	STD. 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 NO K.W.
SD	1/2 - 1 1/8 1 1/2 1 1/8 1 1/4 1 1/8 2	STD. 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 NO K.W.
SK	1/2 - 2 1/2 2 1/8 - 2 1/4 2 1/8 - 2 1/4 2 1/8 - 2 1/4	STD. 3/8 x 3/8 3/8 x 3/8 NO K.W.
SF	1/2 - 2 1/2 2 1/8 - 2 1/4 2 1/8 - 2 1/4 2 1/8 - 2 1/4 2 1/8	STD. 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8
E	3/4 - 2 1/2 2 1/8 - 3 1/4 3 1/8 - 3 1/2 3 1/8	STD. 3/8 x 3/8 3/8 x 3/8 3/8 x 3/8
F	1 - 3 3/8 3 1/4 - 3 3/4 3 1/4 - 3 3/8 4	STD. 3/8 x 3/8 1 x 1/2 NONE
J	1 1/4 - 3 1/2 3 3/8 - 4 1/2	STD. 1 x 1/2
M	2 - 4 1/4 4 1/8 - 5 1/2	STD. 1 1/4 x 1/2
N	2 1/8 - 5 5 1/8 - 5 1/2 5 3/8 - 6	STD. 1 1/4 x 1/2 1 1/2 x 1/2
P	2 1/8 - 5 1/2 6 - 6 1/2 6 3/8 - 7	STD. 1 1/2 x 1/2 1 1/4 x 1/2
W	4 - 7 1/2 7 3/8 - 8 1/2	STD. 2 x 1/2

Millimeter Bore

Bushing	Bore MM	Key* WXT
SH	24, 25 28, 30 32, 35	8x7 10x8
SDS	24, 25 28, 30 32, 35 38 40, 42	8x7 10x8 12x8
SD	24, 25 28, 30 32, 35 38 40, 42	8x7 10x8 12x8
SK	24, 25 28, 30 32, 35 38 40, 42 48, 50 55	8x7 10x8 12x8 14x9 16x10
SF	28, 30 32, 35 38 40, 42 48, 50 55 60	8x7 10x8 12x8 14x9 16x10 18x11
E	35, 38 40, 42 48, 50 55 60, 65 70, 75	10x8 12x8 14x9 16x10 18x11 20x12
F	48, 50 55 60, 65 70, 75 80, 85 90	14x9 16x10 18x11 20x12 22x14 25x14
J	50 55 60, 65 70, 75 80, 85 90, 95 100	14x9 16x10 18x11 20x12 22x14 25x14 28x16

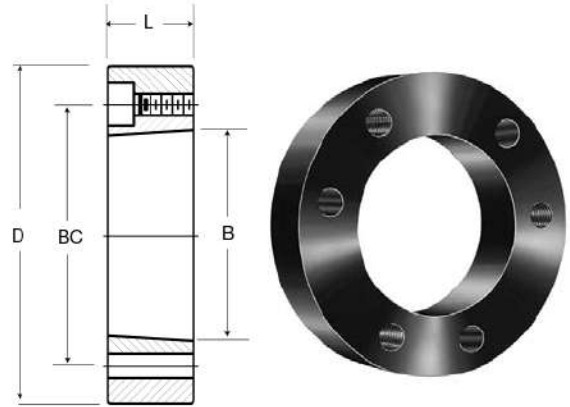
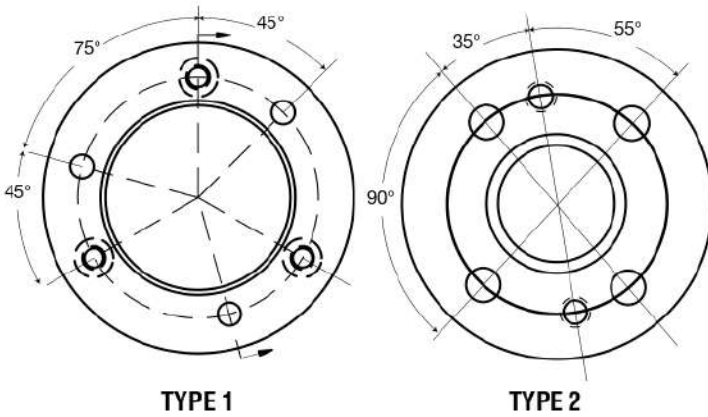


★Important — The metric system does not refer to keyseat or keyway dimensions as does the English system; instead dimensions are given for the key itself which is rectangular in shape, not square as in the English system.

NOTE: .03937"=1mm
Ex—24 mm = 0.94488"

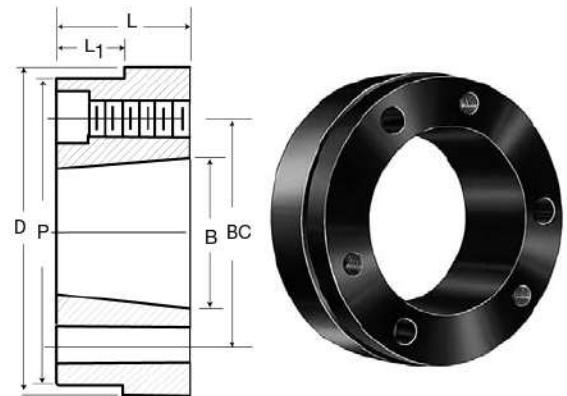
TO ORDER:
SH 24 mm

Keystock provided for nonstandard keyways.



Martin QD weld-on hubs are suitable for use in many applications, such as welding to plate steel sprockets.

Weld-on hubs are made of steel, drilled tapped and taper bored for QD bushings



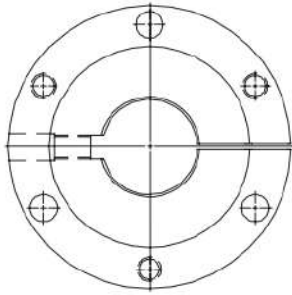
WELD-ON HUB TYPE QD

QD Weld-On Hubs

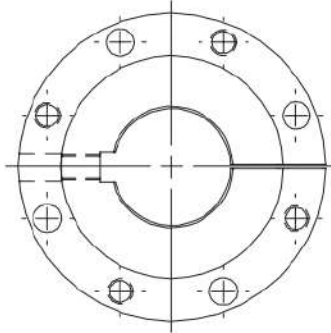
Catalog Number	Dimensions — Inches						Type Drilling	Weight Pounds	Mounting
	D★	L	B	P	L ₁	BC			
JA-A	2.250	5/8	1.375	2.125	5/8	1 1/2	1	.4	STD or Reverse Mount
SH-A	3.000	3/4	1.871	—	—	2 1/4	1	1	
SDS-A	3.500	3/4	2.188	—	—	2 1/8	1	1 1/4	
SK-A	4.375	1 1/4	2.813	—	—	3 3/8	1	3	
SF-A	5.000	1 1/4	3.125	—	—	3 3/4	1	4	↓
E-A	6.250	1 3/4	3.832	—	—	5	1	9	
F-A	7.000	2 1/2	4.437	—	—	5 1/2	1	16	
J-A	7.750	3 3/8	5.140	—	—	6 1/4	1	22.5	
M-A	9.500	5 3/8	6.494	9.250	3 3/8	7 1/2	2	50	STD Mount Only
N-A	10.500	6 1/4	6.990	10.250	4 1/2	8 1/2	2	75	
P-A	13.000	7 1/4	8.240	—	—	10	2	155	
W-A	15.500	9	10.437	—	—	12 1/4	2	300	
S-A	19.500	12	12.125	18.75	7.5	15	2	558	

★Tolerance of D Dimension
JA-A Thru J-A = (+.000-.002)
M-A Thru S-A = (+.000-.003)

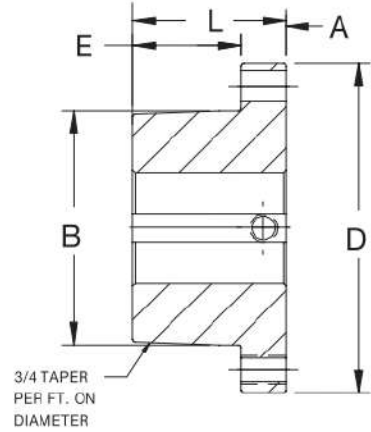
QD Short Bushings



Bushings:
JS



Bushings:
MS TO WS inclusive



Inch Bore

Bushing	Bores	Keyway	Weight
JS	2 ¹ / ₁₆	3/8 x 3/16	19
	2 ³ / ₁₆	3/8 x 3/8	17
	3 ¹ / ₁₆	3/8 x 3/16	15
	3 ¹ / ₂	3/8 x 3/16	15
	3 ³ / ₁₆	1 x 1/8	13
MS	4 ¹ / ₁₆	1 x 1/8	10
	3 ³ / ₁₆	1/2 x 3/16	38
	3 ¹ / ₂	1/2 x 3/16	37
	3 ¹ / ₁₆	1 x 1/8	34
	4 ¹ / ₁₆	1 x 1/8	30
NS	4 ¹ / ₁₆	1 1/4 x 1/4	26
	5 ¹ / ₁₆	1 1/4 x 1/4	21
	5 ¹ / ₂	1 1/4 x 1/4	20
	3 ³ / ₁₆	1 x 1/8	54
	4 ¹ / ₁₆	1 x 1/8	49
PS	4 ¹ / ₁₆	1 1/4 x 3/8	43
	5 ¹ / ₁₆	1 1/4 x 1/4	38
	5 ¹ / ₂	1 1/4 x 1/4	37
	5 ¹ / ₁₆	1 1/4 x 1/4	31
	6	1 1/4 x 1/4	30
WS	4 ¹ / ₁₆	1 1/4 x 3/8	76
	5 ¹ / ₁₆	1 1/4 x 3/8	70
	5 ¹ / ₁₆	1 1/4 x 3/8	62
	6	1 1/4 x 1/4	62
	6 ¹ / ₁₆	1 1/4 x 1/4	55
WS	6 ¹ / ₂	1 1/4 x 1/4	54
	6 ³ / ₁₆	1 1/4 x 1/4	47
	7	1 1/4 x 1/4	45
	5 ¹ / ₁₆	1 1/4 x 3/8	154
	5 ³ / ₁₆	1 1/4 x 3/8	145
	6	1 1/4 x 3/8	144
	6 ¹ / ₁₆	1 1/4 x 3/8	136
	6 ¹ / ₂	1 1/4 x 3/8	135
	6 ¹ / ₁₆	1 1/4 x 3/8	126
	7	1 1/4 x 3/8	125
7 ¹ / ₂	1 1/4 x 3/8	114	
7 ¹ / ₁₆	2 x 1/4	106	
8	2 x 1/4	105	
8 ¹ / ₁₆	2 x 1/4	94	
8 ¹ / ₂	2 x 1/4	93	



Martin QD Short Bushings are suitable for use in belt conveyor applications wherever the short hubs of a conveyor pulley require the QD Short Bushing style.

Dimensions

Bushing	Dimensions (Inches)						Cap Screws Required	Set Screw Size
	A	B	D	E	L	Belt Circle		
JS	1.00	5.1484	7.25	2.38	3.38	6.25	3/8 x 2 1/2 (3)	3/8
MS	1.19	6.5000	9.00	3.62	4.81	7.88	3/8 x 3 (4)	3/8
NS	1.50	7.0000	10.00	4.50	6.00	8.50	3/8 x 3 1/2 (4)	3/8
PS	1.50	8.2500	11.75	5.00	6.50	10.00	1 x 4 (4)	3/8
WS	1.75	10.4370	15.00	5.50	7.25	12.75	1 1/4 x 5 (4)	1

All dimensions are in inches, weight in pounds.

