

## Parts List and Engineering Data

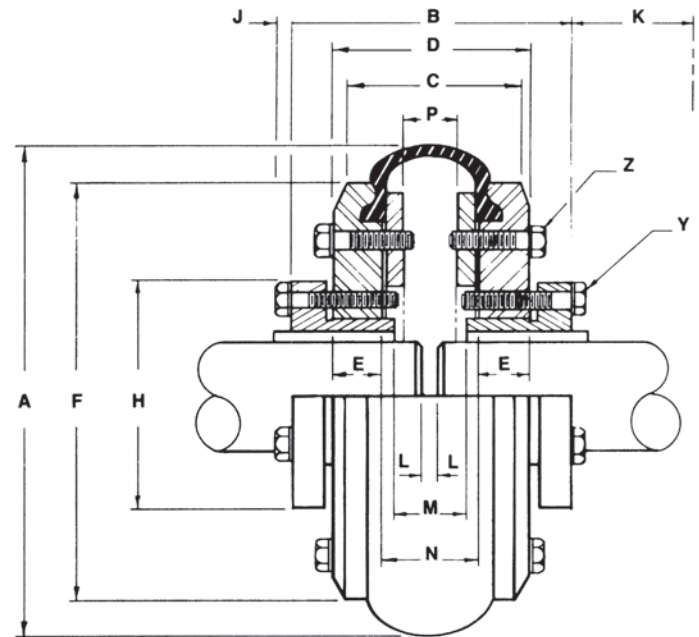
Coupling Size	QD Bushing (2 Required Per Coupling)*	Max Bore	Steel Flange Assembly (2 Required Per Coupling)		Rubber Element (1 Required Per Coupling)		Max RPM	Horsepower @ 100 RPM (1.0 Factor)	Torque (1.0 Service Factor)		Average Static Torsional Stiffness Coefficient (K)		Approx. WR** (LB - Ft <sup>2</sup> )
			Flange No.	Weight Each	Element No.	Weight			LB - In	LB - Ft	LB - In/DEG	LB - In/RAD	
5	JA	1	F5JA	3.0	E5	.6	4500	1.03	649	54.1	244	12,850	.08
6	JA	1	F6JA	4.0	E6	.9	4000	1.80	1134	94.5	414	23,700	.22
7	SH	1 3/8	F7SH	7.0	E7	1.3	3600	3.12	1966	163.8	544	31,200	.40
8	SDS	1 11/16	F8SDS	8.0	E8	1.7	3100	4.68	2950	245.8	876	50,200	.70
9	SK	2 1/8	F9SK	13.0	E9	2.0	2800	6.90	4349	362.4	1088	62,400	1.33
10	SF	2 1/4	F10SF	17.0	E10	2.0	2600	8.33	5250	437.5	1530	87,700	2.10
11	SF	2 1/4	F11SF	18.0	E11	3.0	2300	9.92	6252	521.0	2420	138,700	2.90
12	E	2 7/8	F12E	31.0	E12	3.8	2100	14.40	9076	756.3	4014	217,000	5.80

\* See page B5 for QD bushing bore sizes and dimensions.

\*\* Coupling plus QD bushing.

Weight in pounds.

Rubber tire element also available in Neoprene.



## Dimensions

Coupling Size	A	B	C	D	E	F	H	J	K*	M	N	P	Y		Z Clamp Ring Bolts		Torque In lb
													B.C. Dia.	B.C. Dia.	No. and Size***	Cap screws	
5	5.250	3.438	2.167	2.563	0.625	4.000	2.000	0.156	1.250	1.438	1.313	0.375	1.660	2.438	(5) 1/4 - 20 × 1 1/8	125	
6	6.500	3.563	2.188	2.688	0.625	4.938	2.000	0.156	1.250	1.563	1.438	0.500	1.660	3.313	(5) 5/16 - 18 × 1 1/8	200	
7	7.375	4.313	2.688	3.188	0.813	5.625	2.688	0.219	1.625	1.688	1.563	0.750	2.250	3.875	(5) 5/16 - 18 × 1 1/4	300	
8	8.375	4.438	2.813	3.313	0.813	6.500	3.188	0.219	1.625	1.813	1.688	0.875	2.688	4.625	(6) 5/16 - 18 × 1 1/2	300	
9	9.250	5.188	3.438	3.938	1.167	7.375	3.875	0.281	2.250	1.438	1.813	0.875	3.313	5.250	(6) 3/8 - 16 × 1 3/4	400	
10	10.000	5.813	3.563	4.167	1.167	8.313	4.625	0.313	2.750	1.563	1.563	1.000	3.875	6.000	(6) 3/8 - 16 × 1 3/4	400	
11	11.000	5.625	3.125	3.875	1.167	9.000	4.625	0.313	2.750	1.375	1.375	0.938	3.875	6.500	(6) 3/8 - 16 × 1 3/4	400	
12	12.375	7.250	4.000	4.750	1.375	10.167	6.000	0.438	3.250	1.250	1.250	0.750	5.000	7.250	(6) 1/2 - 13 × 2 1/4	900	

Shaft ends are normally M or N apart; they may project beyond the bushings. In this case allow space for end float and misalignment.

\* Clearance required to remove bushing using pull-up capscrews as jackscrews.

\*\* Grade 8.

Dimensions in inches.

**Other Sizes Available as Made-to-Order**

# Martin-Flex® Couplings



Martin Flex® flexible couplings smoothly transmit power while compensating for shaft misalignment to 4°, parallel misalignment to .125 and end float to .313. The two piece flange design provides quick and easy installation and the elastomeric element absorbs shock and torsional vibration through a wide temperature range.

## Selection Procedure

1. Select the proper service factor from Chart 1.
2. Determine **Design Horsepower** by multiplying the **Service Factor** and the **Drive Horsepower**.
3. Locate the intercept of **Shaft Speed** and **Design Horsepower** from Chart 2.
4. Order per coupling: (2) bushings, (2) flange assemblies, (1) flexible tire element.

## Chart 1 Service Factors

Application	Factor	Application	Factor	Application	Factor	Application	Factor
<b>AGITATORS</b>		Cutter Head Drive, Jog Drive	2.5	<b>METAL FORMING MACHINES</b>		<b>PROPELLER (MARINE)</b>	1.5
Paddle or Propeller (Vert. or Horiz.), Screw	1.0	Pump, Screen Drive, Stacker, Utility Winch	1.5	Draw Bench Carriage, Main Drive, Extruder, Wire Drawing, Flattening Machine	2.0	<b>PULVERIZERS</b>	
<b>BREWING AND DISTILLING</b>		<b>DYNAMOMETER</b>	1.0			Hammermill — Light Duty	1.5
Bottling Machinery, Brew Kettle, Cooker (Cont Duty), Mash Tub	1.0	<b>ELEVATORS</b>		<b>MILLS (ROTARY TYPE)</b>		Hammermill — Heavy Duty	2.0
Scale Hopper — Frequent Starting Peaks	1.5	Bucket, Freight	2.0	Ball or Pebble Direct or on LS Shaft Gear Reducer	2.5	Hog	2.0
<b>CAN FILLING MACHINE</b>	1.0	<b>EXCITER</b>	1.0	on HS Shaft Gear Reducer	2.0	Roller	1.5
<b>CAR DUMPER</b>	1.5	<b>FANS</b>		Dryer and Cooler	1.5	<b>PUMPS</b>	
<b>CAR PULLER</b>	1.5	Centrifugal	1.0	Rod or Tube Direct or on LS Shaft Gear Reducer	2.5	Centrifugal	1.0
<b>CLARIFIER</b>	1.0	Cooling Tower	2.0	on HS Shaft Gear Reducer	2.0	Descaling, Gear Type	1.5
<b>CLASSIFIER</b>	1.0	Large (Mine, etc.)	1.5	on LS Shaft Gear Reducer	2.5	Oil Well Pumping (not over 150% peak torque)	2.0
<b>CLAY-WORKING MACHINES</b>		Light	1.0	on HS Shaft Gear Reducer	2.0	Rotary — other than gear	1.5
Brick Press, Briquette Machine, Clay Working Machine, Pug Mill	1.5	Propeller (indoor)	1.5	Tumbling Barrel	1.5	<b>Reciprocating —</b>	
<b>COMPRESSORS</b>		<b>FOOD INDUSTRY</b>		<b>MIXERS</b>		1 cyl. — single acting	2.5
Lobe, Rotary	2.0	Beet Slicer	1.5	Concrete (Continuous or Intermittent), Muller- Simpson type	1.5	1 cyl. — double acting	2.0
Reciprocating** —		Cereal Cooker	1.0	<b>OIL INDUSTRY</b>		2 cyl. — single acting	2.0
1 cyl. — single acting	3.5	Dough Mixer, Meat Grinder	1.5	Chiller	1.0	2 cyl. — double acting	1.5
1 cyl. — double acting	3.0	<b>GENERATORS</b>		Oil Well Pumping (not over 150% peak torque)	2.0	3 cyl. — or more	1.5
2 cyl. — single acting	3.0	Even Load	1.0	Paraffin Filter Press	1.5	<b>RUBBER INDUSTRY</b>	
2 cyl. — double acting	2.5	Hoist or Railway Service	1.5	<b>PAPER MILLS</b>		<b>BANBURY MIXER</b>	2.5
3 cyl. or more — single acting	2.5	Welder Load	2.0	Agitator	1.0	Calender	2.0
3 cyl. or more — double acting	2.0	<b>GRIZZLY</b>	2.0	Barking Drum	2.5	Cracker, Mixing Mill, Plasticator	2.5
<b>CONVEYORS</b>		<b>KILN</b>	2.0	Beater and Pulper	1.5	Refiner, Sheeter, Tire Building Machine	2.0
Apron, Assembly, Belt, Chain, Flight, Oven	1.0	<b>LAUNDRY MACHINES</b>		Bleacher	1.0	Tire and Tube Press Opener (Based on Peak Torque)	1.0
Reciprocating	2.5	Tumbler, Washer	2.0	Calender	2.0	Tuber and Strainer	1.5
Screw	1.0	<b>LINE SHAFTS</b>		Chipper	3.0	Warming Mill	2.0
<b>CRANES AND HOISTS</b>		Driving Processing Machinery	1.0	Couch, Cylinder, Dryer	1.5	Washer	2.5
Main Hoist — Medium Duty	1.5	Light	1.0	Felt Stretcher	1.0	<b>SCREENS</b>	
Main Hoist — Heavy Duty	2.0	<b>LUMBER INDUSTRY</b>		Fourdrinier	1.5		
Skip Hoist, Travel Motion, Trolley Motion, Slope	1.5	Band Resaw, Circular Resaw	1.5	Jordan	2.0		
<b>CRUSHERS</b>		Edger, Head Rig, Hog, Log Haul	2.0	Press	2.0		
Cane	2.0	Planer	1.5	Pulp Grinder	2.0		
Gyratory	2.5	Rolls Non-Reversing	1.5	Stock Chest	1.5		
<b>DREDGES</b>		Rolls Reversing	2.0	Stock Pump Reciprocating	2.0		
Cable Reel, Conveyor	1.5	Sawdust Conveyor	1.0	Rotary	1.5		
		Slab Conveyor, Sorting Table	1.5	Suction Roll	2.0		
		<b>MACHINE TOOLS</b>		Winder	1.5		
		Auxiliary	1.0	<b>PARAFFIN FILTER PRESS</b>	1.5		
		Main Drive, Notching Press, Planer (Reversing), Plate	1.5	<b>PRINTING PRESS</b>	1.5		
		Planer, Punch Press	1.5				
		Traverse	1.0				

The service factors listed are intended only as a general guide for smooth power sources such as electric motors and steam turbines. Add 0.5 to factor for somewhat rougher power sources such as internal combustion engines of four or more cylinders, steam engines and water turbines. Where substantial shock occurs or starting or stopping is frequent as on some inching drives and on some reversing drives or where the power source is an internal combustion engine with less than four cylinders — consult factory. Where torsional vibrations occur as in, for example, internal combustion engines or reciprocating compressors or pump applications, check the coupling for possible development of damaging large amplitude vibrations.

\*\* Add 0.5 to factor if without flywheel.

## Chart 2 Size Selection

