maurey Couplings

HI-Q COUPLINGS

STYLE 1

STYLE 2

HI-FLEX COUPLINGS

Fixed Bore Sleeve Couplings

Rigid Bushed Sleeve Couplings

Hi-Q® Flexible Couplings

to enable full power transmission while compensating for

No abrasive wear: *Hi-Q Design prevents metal-to-metal contact.*

Greater flexibility: *Buna-N and Urethane spider compression units compensate for minor angular and center line misalignments.*

True alignment: *Parts are accurately machined to insure perfect alignment of end pieces from bores to O.D.'s….. rust resistant*

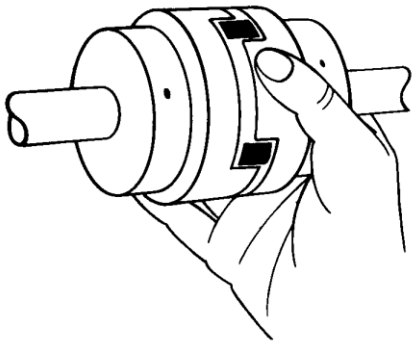
Standardized for interchangeability

Wide temperature range: *Buna-N has an ambient temperature range from -20F to 180F…….Urethane from -80F to 180F*

STYLE 2, FIXED BORE
Machined Cast Iron, for larger horsepower

STYLE 1, FIXED BORE
Sintered Metal, for smaller Horsepower

Fast Installation…. No need to adjust ends and spider for proper spacing



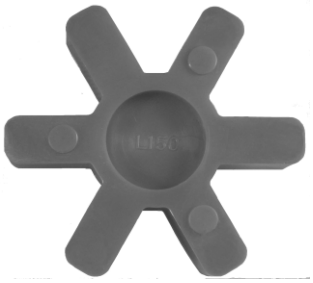
1. Mount both coupling halves, including keys if any, on their respective shafts.
2. Insert flexible spider and bring coupling halves together. Space pads on coupling halves provide the correct spacing.
3. Check alignment between the two halves using a steel straight edge across the top of both coupling halves.

HI-Q MISALIGNMENT CAPABILITY

Torque Range (In.-Lb)	Max. Angular Offset Degrees		Max. Parallel Offset Inches	
Up to 4,600	1		.015	

Hi-Q® Couplings
Finished Bore

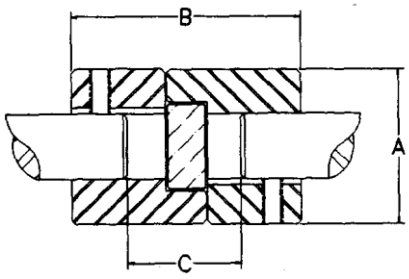
"SPIDER"
COMPRESSION UNIT

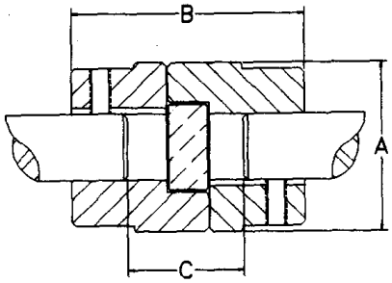


STYLE 1

Buna, Polyurethane & Hytrel

STYLE 2





End Piece (2 REQ) Part Number	Style	Max Bore	Dimensions (Inches)				Approx End Piece Weight Lbs	Rubber Spider Part Number	Rubber Spider Weight Lbs	Poly-Urethane Spider Part Number	Poly-Urethane Spider Weight Lbs	Hytrel Spider Part Number	Hytrel Spider Weight Lbs
			A	B	C								
					Min	Max							
L050	1	5/8	1-5/64	1-23/32	7/16	27/32	0.14	**L050-N**	0.013	**L050-U**	0.010	**L050-H**	0.010
L070	1	3/4	1-3/8	2	7/16	3/4	0.29	**L070-N**	0.019	**L070-U**	0.013	**L070-H**	0.013
L075	1	7/8	1-3/4	2-1/8	7/16	7/8	0.43	**L075-N**	0.031	**L075-U**	0.025	**L075-H**	0.025
L090	1	1	2-1/8	2-5/32	7/16	7/8	0.77	**L090-95-N**	0.038	**L090-95-U**	0.031	**L090-95-H**	0.031
L095	1	1-1/8	2-1/8	2-17/32	7/16	1-1/16	0.94	**L090-95-N**	0.038	**L090-95-U**	0.031	**L090-95-H**	0.031
L099	1	1-3/16	2-9/16	2-7/8	5/8	1-5/32	1.46	**L099-100-N**	0.069	**L099-100-U**	0.063	**L099-100-H**	0.063
L100	1	1-3/8	2-9/16	3-1/2	5/8	1-7/8	1.64	**L099-100-N**	0.069	**L099-100-U**	0.063	**L099-100-H**	0.063
L110	1	1-3/4	3-5/16	4-9/32	3/4	2	4.05	**L110-N**	0.131	**L110-U**	0.131	**L110-H**	0.119
L150	1	1-7/8	3-3/4	4-1/2	7/8	2-1/2	5.46	**L150-N**	0.206	**L150-U-O**	0.169	**L150-H**	0.181
L190	2	2-1/8	4-1/2	5-1/4	15/16	2-1/2	8.03	**L190-N**	0.313	**L190-U**	0.256	**L190-H**	0.250
L225	2	2-5/8	5	6-1/8	15/16	2-1/2	10.8	**L225-N**	0.381	**L225-U**	0.350	**L225-H**	0.325

Part Number	STOCK BORES (INCHES) MARKED "X"																											
	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	15/16	1	1-1/8	1-3/16	1-1/4	1-3/8	1-7/16	1-1/2	1-5/8	1-11/16	1-3/4	1-7/8	1-15/16	2	2-1/8	2-3/16	2-1/4	2-3/8	2-5/8
L050	X*	X*	X*	X*	X*		X*																					
L070	X*	X*	X*	X*	X**	X*	X	X																				
L075			X*	X*	X**	X**	X	X	X																			
L090				X*	X**		X	X	X		X																	
L095					X**	X**	X	X	X		X	X																
L099					X**		X	X	X		X	X	X															
L100					X**		X	X	X	X	X	X	X	X	X													
L110							X	X	X		X	X	X	X	X	X	X	X	X	X								
L150								X	X		X	X	X	X	X	X	X	X	X	X	X							
L190								X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X				
L225								X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

***DENOTES NO KEYWAY** ****DENOTES STOCKED WITH AND WITHOUT KEYWAY, MUST SPECIFY WHEN ORDERING**

Coupling Applications and Service Factors

TABLE 1 ● SERVICE FACTORS

APPLICATION (See Footnote)	Service Factor *
AGITATORS	
Paddle, Propeller, Screw	1.0
BLOWERS	
Centrifugal, Vane	1.0
Lobe	1.5
BREWING & DISTILLING	
Bottling Machinery,	
Brew Kettle, Mash Tub	1.0
Scale Hopper	1.5
CAR DUMPERS	2.5
CAR PULLERS	1.5
CLAY WORKING MACHINES	1.5
COMPRESSORS	
Centrifugal	1.0
Lobe Rotary	2.0
Reciprocating**	3.0
CONVEYORS	
Assembly, Belt, Screw	1.0
Reciprocating	2.5
CRANES AND HOIST	
Main, Reversing, Skip	
Trolley, Bridge, Slope	2.0
CRUSHERS	
Ore and Stone	3.0
DREDGES	
Conveyors, Pumps, Stackers	1.5
Cutter Head, Jig Pump	
Screen Drives	2.0
ELEVATORS	
Bucket, Freight, Passenger	2.0
FANS	
Centrifugal, Light	1.0
Propeller (Indoor)	1.5
Large (Mine Etc.)	
Cooling Tower	2.0
FOOD INDUSTRY	
Cereal Cooker	1.0
Beet Slicer, Dough Mixer	
Meat Grinder	1.5
GENERATORS	
Even Load	1.0
Hoist or Railway Service	1.5
Welder Load	2.0
HAMMERMILLS	2.0
KILN	2.0
LAUNDRY MACHINES	
Tumbler, Washer	2.0
LINE SHAFTS	1.5
LUMBER INDUSTRY	
Band Circular Resaw, Planer	
Rolls (Non-Reversing),	
Slab Conveyor, Sorting Table	1.5
MACHINE TOOLS	
Auxillary and Traverse	1.0
Main Drive	
Punch Press, Planer	2.0
METALFORMING MACHINES	2.0
MILLS (ROTARY TYPE)	
Dryer, Cooler	
Tumbling Barrel	1.5
Ball Pebble Rod, Tube	2.5
MIXERS	
Concrete (Continuous)	
Muller	1.5
OIL INDUSTRY	
Chiller	1.0
Paraffin Filter Press	1.5
Oil Well Pumping	2.0
PAPER MILLS	
Agitator, Bleacher Felt Stretcher	1.0
Beater, Pulper Couch Cylinder,	
Dryer, Rotary Pump, Winder	1.5
Calender, Jordan Press,	
Pulp Grinder	
Reciprocating Pump	2.0
Barking Drum Chipper	3.0
PARAFFIN FILTER PRESS	1.5
PRINTING PRESS	1.5
PROPELLER (MARINE)	1.5
PULLERS	2.5
PULVERIZERS	
Hammermill - Light Duty Roller	1.5
Hammermill - Heavy Duty Hog	2.0
PUMPS	
Centrifugal	1.0
Descaling Gear Type	1.5
Oil Well	2.0
PUMPS RECIPROCATING	
1 Cylinder - Single Acting	2.5
1 Cylinder - Double Acting	2.0
2 Cylinder - Single Acting	2.0
2 Cylinder - Double Acting	1.5
3 Cylinders or More	1.5
RUBBER INDUSTRY	
Tuber and Strainer	1.5
Calender, Warming Mill	2.0
Banbury, Mixing Mill	
Sheeter, Tire Buliding	
Machine, Washer	2.5
SCREENS	
Air Washing and Water	1.0
Coal and Sand (Rotary)	1.5
Vibrating	2.5
SHOVEL	2.0
SHREDDER	1.5
STEEL INDUSTRY *	
Cold Mills	
Coiler (Up or Down)	1.5
Strip, Temper	2.0
Hot Mills	
Coiler Edger Drive	1.5
Feed Roll, Roughing Mill	
Delivery, Sheet, Strip	3.0
Rod Mill	2.5
Soaking Pit Cover Drive	3.0
STEERING GEAR	1.0
STOKER	1.0
TEXTILE MILLS	
Batcher, Drying. Mangel,	
Napper, Soaper	1.0
Calender, Card, Dry Can,	
Spinner Tenter Frame	1.5
WINDLASS	2.0
WOODWORKING MACHINERY	1.0

● The service factors listed are intended only as a general guide and 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 and stopping is frequent as on some "inching" drives and on some reversing drives or where power source is an internal combustion engine with less than four cylinders - consult factory. Where torsional vibrations occur as in, for example, internal combustion engine or reciprocating compressor or pump applications, check the coupling size for the possible development of damaging large amplitude vibrations

* These factors are based on motor HP at base speed. Where these factors do not produce a 10 factor on the peak torque of the motor, they should be increased accordingly.

** Add 0.5 factor if without flywheel

Coupling Selection

Step 1 - Determine the required HP per 100 RPM

$$\text{HP/100 rpm @ 1.0 service factor} = \frac{\text{Motor or other HP} \times 100 \text{ rpm}}{\text{Motor or other Coupling RPM}}$$

Example: 25 HP electric motor 1750 RPM, Service factor 1.00

Step 2 - Refer to Table 2 - Select a figure equal to or greater than 1.43 obtained in step 1. From Table 2, the L110 Urethane Hi-Q coupling or 60SH Hi-Flex coupling will meet the HP requirements. However the max bore in both cases is 1-5/8". A 25 HP electric motor has a 284T frame with a shaft diameter of 1-7/8". Therefore choose either:

L150 (Rubber) Hi-Q Coupling or 80SDS Hi-Flex Coupling

If angular, parallel misalignment and end float are not critcical and the Hi-Q coupling meets the other requirments of the drive, the Hi-Q coupling is recommended from the standpoint of economics.

Refering back to Table 2 and using 1.43HP/100 RPM we can select the coupling required at various service factors

Service Factor	Coupling
1.5	L150P Hi-Q or 80SDS Hi-Flex
2.0	L150P Hi-Q or 80SDS Hi-Flex
2.5	L190P Hi-Q or 80SDS Hi-Flex
3.0	L190P Hi-Q or 80SDS Hi-Flex

Step 3 - Coupling selection other than electric motor**.**
Example: 55 HP Gasoline engine 1500 RPM, Service Factor 1.5

$$\text{HP/100 rpm} = \frac{55\text{HP} \times 100 \text{ rpm}}{1500 \text{ RPM}} = 3.67 \text{ HP/100 RPM}$$

Refer to Table 2, calculate 1.5 service factor and choose the following:

L225 (Urethane) Hi-Q coupling or 80SDS Hi-Flex Coupling

However if the engine shaft or driven shaft are not within the bore range of the couplings choosen use the next larger QD bushing and coupling.

TABLE 2

HI-Q COUPLING RATING AND SELECTION GUIDE

Coupling Size	Stock Bores Fixed Bores		Max RPM	RUBBER HP PER 100 RPM			URETHANE HP PER 100 RPM			HYTREL HP PER 100 RPM		
	Min.	Max.		1.0 SF	2.0 SF	3.0 SF	1.0 SF	2.0 SF	3.0 SF	1.0 SF	2.0 SF	3.0 SF
L050	1/4	5/8		0.04	0.02	0.01	0.06	0.03	0.02	0.08	0.04	0.03
L070	1/4	3/4		0.06	0.03	0.02	0.10	0.05	0.03	0.18	0.09	0.06
L075	3/8	7/8		0.12	0.06	0.04	0.21	0.11	0.07	0.36	0.18	0.12
L090	7/16	1		0.20	0.10	0.07	0.34	0.17	0.11	0.64	0.32	0.21
L095	1/2	1-1/8	4500	0.28	0.14	0.09	0.46	0.23	0.15	0.89	0.45	0.30
L099	1/2	1-3/16	4000	0.50	0.25	0.17	0.76	0.38	0.25	1.26	0.63	0.42
L100	1/2	1-3/8	4000	0.60	0.30	0.20	1.00	0.50	0.33	1.80	0.90	0.60
L110	5/8	1-3/4	3600	1.30	0.65	0.43	1.90	0.95	0.63	3.60	1.80	1.20
L150	3/4	1-7/8	3100	2.00	1.00	0.67	3.00	1.50	1.00	5.88	2.94	1.96
L190	3/4	2-1/8	2800	2.70	1.35	0.90	4.10	2.05	1.37	7.43	3.72	2.48
L225	3/4	2-5/8	2600	3.70	1.85	1.23	5.60	2.80	1.87	9.88	4.94	3.29

HI-FLEX COUPLING RATING AND SELECTION GUIDE

Coupling Size	QD Stock Bores		Max RPM	HP PER 100 RPM SERVICE FACTOR					Torque* @ 1.0 S.F. (LB.-IN.)	Average Static Torsional Stiffness Coefficient (K)		Approx. WR^2 (LB.-FT^2)
	Min.	Max.		1.0	1.5	2.0	2.5	3.0		LB.-IN/DEG	LB.-IN/RAD.	
50JA	1/2	1-3/16	4500	1.43	.95	.72	.57	.48	900	224	12850	.08
60SH	1/2	1-5/8	4000	2.86	1.91	1.43	1.14	.95	1800	414	23700	.24
70SH	1/2	1-5/8	3600	3.49	2.33	1.75	1.40	1.16	2200	544	31200	.45
80SDS	1/2	1-15/16	3100	5.71	3.81	2.86	2.28	1.90	3600	876	50200	.88
90SK	1/2	2-1/2	2800	6.90	4.60	3.45	2.76	2.30	4350	1088	62400	1.60
100SF	1/2	2-3/4	2600	8.33	5.55	4.17	3.33	2.78	5250	1530	87700	2.90
110SF	1/2	2-3/4	2300	12.30	8.20	6.15	4.92	4.10	7750	2420	138700	4.30
120E	7/8	3-7/16	2100	19.90	13.27	9.95	7.96	6.63	12540	4014	217000	6.70
140E	7/8	3-7/16	1840	43.78	29.19	21.89	17.51	14.59	27590	8296	476000	19.50

* Allowable torque for non-varying running loads. Starting requirements or other service conditions may require the use of a service factor.