

Coupling Selection Example

A coupling is required to drive a pulp grinder from a 1750 RPM, 20HP, 256TC motor approximately 16 hours per day. Motor shaft is 1 1/8" diameter with a 3/8" key and grinder shaft is 1 1/8" diameter with a 1/2" key.

A. Determine the Service Factor

Note from Table No. 1 below that a pulp grinder is considered a "Class U" load but since it is to operate 16 hours per day, it must be classed as "H" and the service factor is 2 (see Table No. 1)

B. Determine the Design Horsepower

Multiplying the motor horsepower (20) by the service factors (2), a coupling rated at 40 or more horsepower is required.

C. Select the Coupling

From Table No. 2, page 18-606, note that a L-150 coupling with a urethane insert is satisfactory.

D. Check Stock Bores to make sure Coupling size selected will accept required shafts

From Table No. 1, page 17-606, 1 1/8" diameter with a 3/8" key and 1 1/8" diameter with a 1/2" key are stock bore sizes.

E. Order Coupling Components

- (1) L150 x 1 1/8" Hub (Part No. L150-1625-375)
- (1) L150 x 1 1/8" Hub (Part No. L150-1875-500)
- (1) L150 Urethane Insert (Part No. L150-U)

Table No. 1

Class E Even Load	Class U Uneven Load	Class H Heavy Shock Load
Agitators for liquids	Beaters	Boat propellers
Blowers, centrifugal	Compressors, centrifugal	Compressors, reciprocating
Conveyor, belt or chain smoothly loaded	Conveyors, pulsating load	Crushers
Cranes	Elevators, pulsating load	Feeders, reciprocating
Elevator smoothly loaded	Grinders, pulp	Machines, reversing or impact loads
Fans, centrifugal	Hoists	Mills, hammer
Generators	Kilns and dryers	Oil Well Pumping Units
Line Shafts, even load	Line shafts uneven load	Presses
Machines, uniform load non-reversing	Machines, pulsating load, non-reversing	Pumps, simplex or duplex, reciprocating
Pumps, centrifugal	Mills, ball, blooming, pebble, tube	Refuse hogs
Screens, uniformly fed	Pumps, reciprocating	
Worm Gear speed reducers		

Table No. 2 *For 16 to 24 hrs. per day service use service factor for next higher class loading

Class	Characteristics of Driven Unit	Source of Power		
		Electric Motor or Steam Turbine	Steam Engine or Gasoline Engine (4) or more Cylinders	Diesel or Gas Engine
E	Even load - 8 hours per day service* non reversing - low torque starting	1	1 1/2	2
U	Uneven Load - 8 hours per day service* Moderate shock or torsional loads No reversing (most common type of service)	1 1/2	2	2 1/2
H	Heavy Shock Load - 8 hours per day service* High peak torsional loads, reversing under load Full load starting	2	2 1/2	3

Note: For even load, stand-by, seasonal or infrequent service the normal service rating of the coupling will determine its proper selection.

Specifications subject to change without notice

Insert Selection

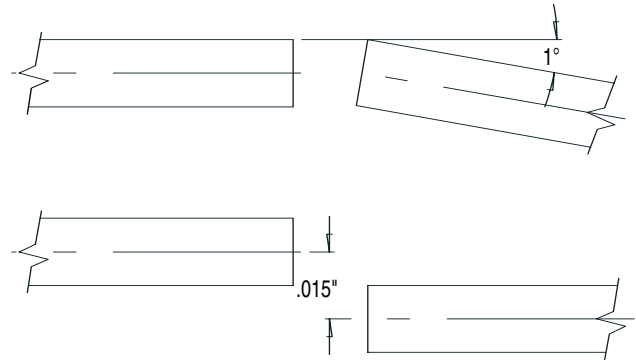
Type L Jaw Couplings are designed for applications in the light-to-medium duty range, with capacities and performance characteristics depending on the type of insert used. For maximum versatility in selection, four different insert materials are available to suit most applications. For proper selection refer to Table No. 2 below and Table No. 2 on page 16-606 and to the following:

Buna-N: This is the standard flexible insert material in Type L Jaw Couplings, serving the majority of applications. The material is an oil resistant rubber compound with excellent flexibility and shock absorption; temperature range -40°F to +212°F.

Urethane: The urethane insert offers approximately 50% greater torque capacity than standard Buna-N, and in addition provides good chemical resistance. The temperature range is -30°F to +160°F.

Hytrel: This tough flexible plastic material provides still greater torque capacity, approximately three times that of a standard Buna-N and superior temperature resistance with a range of -60°F to +250°F. Oil and chemical resistance are excellent.

Bronze: This insert is intended exclusively for high torque, low speed applications, up to 250 RPM only. Capacities are three times those of the standard Buna-N. The material offers excellent resistance to oils, chemicals and extreme temperatures (-40°F to +450°F).



TYPE L JAW COUPLINGS PERMIT ANGULAR MISALIGNMENT UP TO 1° AND PARALLEL MISALIGNMENT UP TO .015".

Misalignment Capability Simplified Installation and Maintenance

Since power is transmitted between the two halves of the Type L Jaw Coupling by the resilient insert, it is not necessary to have perfect alignment between the shafts. The elastomeric insert design permits angular misalignment up to 1° (1/2° for Hytrel and Bronze) and parallel misalignment up to .015", greatly simplifying installation in all types of industrial applications. Maintenance is minimal; the insert can be visually inspected and never needs lubrication. The coupling can continue to transmit power even if the elastomer insert becomes severely damaged or destroyed—minimizing downtime and increasing reliability.

Table No. 2

Material	Flexibility	Shock Absorption	Oil Resistance	Chemical Resistance	Temperature Range (°F)	Angular Misalignment	Parallel Misalignment
Buna-N	Excellent	Excellent	Good	—	-40° to 212°	1°	.015"
Urethane	Good	Good	Good	Good	-30° to 160°	1°	.015"
Hytrel	Fair	Fair	Excellent	Excellent	-60° to 250°	1/2°	.015"
Bronze	—	—	Excellent	Excellent	-40° to 450°	1/2°	.010"

"L" Jaw Type Couplings

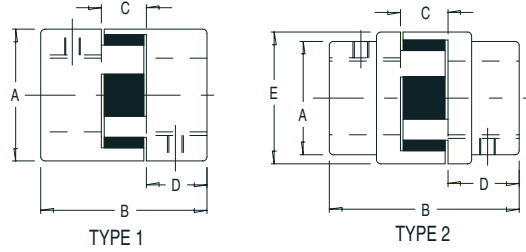


Table No. 1

"L" Jaw Type Coupling Dimensional Information

Coupling Size	Coupling Hubs						Inserts							
	Type	A	B	C	D	E	WT-LBS.		Buna-N Part No.	Urethane Part No.	HytreL Part No.	WT. LBS.	Bronze Part No.	WT LBS.
L035	1	5/8	1 1/16	3/2	1/4	-	.01	.01	L035N*	-	-	.01	-	-
L050	1	1 3/16	1 7/16	1 1/2	5/8	-	.29	.24	L050N*	-	L050H+	.01	L050B	.07
L070	1	1 7/16	2	1 1/2	3/4	-	.59	.54	L070N+	L070U+	L070H+	.03	L070B	.13
L075	1	1 3/4	2 1/8	1 1/2	13/16	-	1.00	.86	L075N+	L075U*	L075H*	.03	L075B	.13
L090	2	1 11/16	2 1/8	1 1/2	13/16	2 3/4	1.48	1.32	L090/095N*	L090/095U*	L090/095H*	.03	L090/095B	.29
L095	2	1 11/16	2 1/2	1 1/2	1	2 3/4	1.75	1.52	L090/095N*	L090/095U*	L090/095H*	.03	L090/095B	.29
L099	2	2	2 1/8	1 1/2	1 1/16	2 11/16	2.50	2.17	L099/100N+	L099/100U*	L099/100H+	.07	L099/100B	.45
L100	2	2 1/4	3 1/8	1 3/4	1 1/8	2 11/16	3.42	2.92	L099/100N+	L099/100U*	L099/100H+	.07	L099/100B	.45
L110	2	3	4 1/4	1 7/8	1 11/16	3 1/16	6.45	5.61	L110N+	L110U+	L110H*	.13	L110B	.69
L150	2	3 5/8	4 1/2	1	1 1/4	3 3/4	8.95	7.73	L150N+	L150U+	L150H+	.24	L150B	1.10
L190	2	4	5 1/4	1	2 1/8	4 1/2	8.83	7.04	L190N+	L190U+	L190H+	.28	L190B	1.64
L225	2	4 1/4	6	1	2 1/2	5	12.28	9.60	L225N+	L225U+	L225H+	.37	L225B	2.24

*Solid Center +Open Center

Table No. 2 "L" Jaw Type Coupling Performance Data

Insert Material	Coupling Size	Maximum Bore	Maximum* RPM	Torque IN-LBS.	Horsepower at Indicated speeds (RPM)			
					100	1200	1800	3600
BUNA-N	L035	3/8	31,000	3.52	.0056	.067	.10	.20
	L050	5/8	18,000	25.8	.041	.490	.74	1.48
	L070	3/4	14,000	44.1	.07	.840	1.26	2.52
	L075	7/8	11,000	88.2	.14	1.68	2.52	5.04
	L090	1	9,000	145	.23	2.76	4.14	8.28
	L095	1 1/8	9,000	189	.30	3.60	5.40	10.8
	L099	1 1/16	7,000	315	.50	6.00	9.00	18.0
	L100	1 1/8	7,000	416	.66	7.92	11.90	23.8
	L110	1 1/8	5,000	788	1.25	15.0	22.50	45.0
	L150	1 1/8	5,000	1260	2.00	24.0	36.00	72.0
	L190	2 1/8	5,000	1702	2.70	32.4	48.60	97.2
	L225	2 3/8	4,200	2332	3.70	44.4	66.60	133.2
Urethane	L070	3/4	14,000	66.2	.105	1.26	1.89	3.78
	L075	7/8	11,000	132	.210	2.52	3.78	7.56
	L090	1	9,000	217	.345	4.14	6.21	12.4
	L095	1 1/8	9,000	284	.450	5.40	8.10	16.2
	L099	1 1/16	7,000	473	.750	9.00	13.5	27.0
	L100	1 1/8	7,000	624	.990	11.9	17.8	35.6
	L110	1 1/8	5,000	1182	1.875	22.5	33.8	67.5
	L150	1 1/8	5,000	1891	3.00	36.0	54.0	108.0
	L190	2 1/8	5,000	2553	4.05	48.6	72.9	145.8
	L225	2 3/8	4,200	3498	5.55	66.6	99.9	199.8
HytreL and Bronze	L050	5/8	18,000*	50.4	.08	.96	1.44	2.88
	L070	3/4	14,000*	133	.18	2.16	3.24	6.48
	L075	7/8	11,000*	227	.36	4.32	6.48	13.0
	L090	1	9,000*	391	.62	7.44	11.2	22.3
	L095	1 1/8	9,000*	567	.90	10.8	16.2	32.4
	L099	1 1/16	7,000*	788	1.25	15.0	22.5	45.0
	L100	1 1/8	7,000*	1134	1.80	21.6	32.4	64.8
	L110	1 1/8	5,000*	2269	3.60	43.2	64.8	129.6
	L150	1 1/8	5,000*	3706	5.88	70.6	105.8	211.7
	L190	2 1/8	5,000*	4683	7.43	89.2	133.7	267.5
L225	2 3/8	4,200*	6303	10.0	120.0	180.0	360.0	

Note: couplings with bronze inserts limited to 250RPM

Specifications subject to change without notice

"L" Jaw Type Couplings



Standard Inch Bore Jaw Couplings

Bore	Keyway	L035	L050	L070	L075	L090	L095	L099	L100	L110	L150	L190	L225
1/8"	No KW	L035-0125-000											
3/16"	No KW	L035-0187-000											
1/4"	No KW/No SS		L050-0250-NS	L070-0250-NS	L075-0250-NS	L090-0250-NS							
1/4"	No KW		L050-0250-000	L070-0250-000	L075-0250-000	L090-0250-000							
1/4"	1/8" x 1/16"				L075-0250-125								
5/16"	No KW	L035-0312-000	L050-0312-000	L070-0312-000	L075-0312-000								
3/8"	No KW	L035-0375-000	L050-0375-000	L070-0375-000	L075-0375-000	L090-0375-000							
3/8"	3/32" x 3/64"			L070-0375-093	L075-0375-093	L090-0375-093							
3/8"	1/8" x 1/16"			L070-0375-125	L075-0375-125	L090-0375-125							
7/16"	No KW/No SS					L095-0437-NS							
7/16"	No KW			L070-0437-000	L075-0437-000	L090-0437-000	L095-0437-000	L099-0437-000	L100-0437-000				
7/16"	3/32" x 3/64"			L070-0437-093	L075-0437-093	L090-0437-093	L095-0437-093	L099-0437-093	L100-0437-093				
7/16"	1/8" x 1/16"			L070-0437-125	L075-0437-125	L090-0437-125	L095-0437-125	L099-0437-125	L100-0437-125				
1/2"	No KW/No SS					L075-0500-NS							
1/2"	No KW		L050-0500-000	L070-0500-000	L075-0500-000	L090-0500-000	L095-0500-000	L099-0500-000	L100-0500-000				
1/2"	1/8" x 1/16"		L050-0500-125	L070-0500-125	L075-0500-125	L090-0500-125	L095-0500-125	L099-0500-125	L100-0500-125				
3/8"	No KW		L050-0563-000		L075-0563-000	L090-0563-000	L095-0563-000	L099-0563-000	L100-0563-000				
3/8"	1/8" x 1/16"		L050-0563-125	L070-0563-125	L075-0563-125	L090-0563-125	L095-0563-125	L099-0563-125	L100-0563-125				
3/8"	No KW/No SS								L100-0625-NS	L110-0625-NS	L150-0625-NS	L190-0625-NS	L225-0625-NS
3/8"	No KW		L050-0625-000	L070-0625-000					L100-0625-156	L110-0625-000	L150-0625-000		
3/8"	5/32" x 3/64"			L070-0625-156	L075-0625-156	L090-0625-156	L095-0625-156	L099-0625-156	L100-0625-156	L110-0625-156	L150-0625-156		
3/8"	3/16" x 3/32"			L070-0625-187	L075-0625-187	L090-0625-187	L095-0625-187	L099-0625-187	L100-0625-187	L110-0625-187	L150-0625-187		
1/16"	3/16" x 3/32"			L070-0687-187	L075-0687-187	L090-0687-187	L095-0687-187	L099-0687-187	L100-0687-187	L110-0687-187	L150-0687-187		
3/4"	No KW											L190-0750-000	L225-0750-000
3/4"	1/8" x 1/16"				L075-0750-125	L090-0750-125	L095-0750-125	L099-0750-125	L100-0750-125	L110-0750-125	L150-0750-125	L190-0750-125	
3/4"	3/16" x 3/32"			L070-0750-187	L075-0750-187	L090-0750-187	L095-0750-187	L099-0750-187	L100-0750-187	L110-0750-187	L150-0750-187	L190-0750-187	L225-0750-187
13/16"	3/16" x 3/32"				L075-0812-187	L090-0812-187	L095-0812-187	L099-0812-187	L100-0812-187	L110-0812-187	L150-0812-187	L190-0812-187	L225-0812-187
7/8"	3/16" x 3/32"				L075-0875-187	L090-0875-187	L095-0875-187	L099-0875-187	L100-0875-187	L110-0875-187	L150-0875-187	L190-0875-187	L225-0875-187
7/8"	1/4" x 1/8"					L090-0875-250	L095-0875-250	L099-0875-250	L100-0875-250	L110-0875-250	L150-0875-250	L190-0875-250	L225-0875-250
15/16"	1/4" x 1/8"					L095-0937-250	L099-0937-250	L100-0937-250	L110-0937-250	L150-0937-250	L190-0937-250	L225-0937-250	
1	3/16" x 3/32"					L090-1000-187	L095-1000-187	L099-1000-187	L100-1000-187	L110-1000-187	L150-1000-187	L190-1000-187	L225-1000-187
1	1/4" x 1/8"					L090-1000-250	L095-1000-250	L099-1000-250	L100-1000-250	L110-1000-250	L150-1000-250	L190-1000-250	L225-1000-250
1 1/16"	1/4" x 1/8"					L095-1063-250	L099-1063-250	L100-1063-250	L110-1063-250	L150-1063-250	L190-1063-250	L225-1063-250	
1 1/8"	1/4" x 1/8"					L095-1125-250	L099-1125-250	L100-1125-250	L110-1125-250	L150-1125-250	L190-1125-250	L225-1125-250	
1 3/16"	1/4" x 1/8"							L099-1187-250	L100-1187-250	L110-1187-250	L150-1187-250	L190-1187-250	L225-1187-250
1 1/4"	1/4" x 1/8"								L100-1250-250	L110-1250-250	L150-1250-250	L190-1250-250	L225-1250-250
1 1/4"	3/16" x 3/32"								L100-1250-312	L110-1250-312	L150-1250-312	L190-1250-312	L225-1250-312
1 1/16"	3/16" x 3/32"								L100-1312-312	L110-1312-312	L150-1312-312	L190-1312-312	L225-1312-312
1 3/8"	5/16" x 5/32"								L100-1375-312	L110-1375-312	L150-1375-312	L190-1375-312	L225-1375-312
1 3/8"	3/8" x 3/16"								L110-1375-375	L150-1375-375	L190-1375-375	L225-1375-375	
1 1/2"	3/8" x 3/16"								L110-1437-375	L150-1437-375	L190-1437-375	L225-1437-375	
1 1/2"	5/16" x 5/32"								L110-1500-312	L150-1500-312	L190-1500-312	L225-1500-312	
1 1/2"	3/8" x 3/16"								L110-1500-375	L150-1500-375	L190-1500-375	L225-1500-375	
1 1/16"	3/8" x 3/16"								L110-1563-375	L150-1563-375	L190-1563-375	L225-1563-375	
1 1/8"	3/8" x 3/16"								L110-1625-375	L150-1625-375	L190-1625-375	L225-1625-375	
1 1/4"	3/8" x 3/16"								L150-1687-375	L190-1687-375	L225-1687-375		
1 3/4"	3/8" x 3/16"								L150-1750-375	L190-1750-375	L225-1750-375		
1 3/4"	7/16" x 7/32"								L150-1750-437	L190-1750-437	L225-1750-437		
1 13/16"	1/2" x 1/4"											L190-1812-500	
1 7/8"	1/2" x 1/4"										L150-1875-500	L190-1875-500	L225-1875-500
1 5/8"	1/2" x 1/4"											L190-1937-500	L225-1937-500
2"	1/2" x 1/4"											L190-2000-500	L225-2000-500
2 1/16"	1/2" x 1/4"											L190-2063-500	
2 1/8"	1/2" x 1/4"											L190-2125-500	L225-2125-500
2 3/16"	1/2" x 1/4"												L225-2187-500
2 1/4"	1/2" x 1/4"												L225-2250-500
2 3/8"	5/8" x 5/16"												L225-2375-625

Additional inch sizes available- consult factory



Specifications subject to change without notice

Trilex Fluid Power • (PHONE) 905-545-2038 • (FAX) 905-545-0528
email: wbisson@trilexfluidpower.com • web: www.trilexfluidpower.com

Standard Metric Bore Jaw Couplings

Bore	Keyway	L070	L075	L090	L095	L099	L100	L110	L150	L190	L225
4mm	No KW										
5mm	No KW										
6mm	No KW										
7mm	No KW										
8mm	No KW										
9mm	3 x 1.4										
10mm	No KW										
10mm	3 x 1.4										
11mm	4 x 1.8										
12mm	No KW										
12mm	4 x 1.8										
14mm	No KW										
14mm	5 x 2.3		L075-M014-05		L095-M014-05		L100-M014-05				
15mm	No KW						L100-M015-00				
15mm	5 x 2.3		L075-M015-05	L090-M015-05	L095-M015-05		L100-M015-05				
16mm	5 x 2.3	L070-M016-05	L075-M016-05		L095-M016-05	L099-M016-05	L100-M016-05				
17mm	5 x 2.3						L100-M017-05				
18mm	6 x 2.8					L099-M018-06	L100-M018-06	L110-M018-06			
19mm	No KW										
19mm	6 x 2.8	L070-M019-06	L075-M019-06		L095-M019-06	L099-M019-06					
20mm	6 x 2.8				L095-M020-06	L099-M020-06	L100-M020-06	L110-M020-06			
22mm	6 x 2.8										
24mm	8 x 3.3			L090-M024-08		L099-M024-08	L100-M024-08	L110-M024-08			
25mm	8 x 3.3			L090-M025-08			L100-M025-08	L110-M025-08	L150-M025-08		
28mm	No KW										
28mm	8 x 3.3				L095-M028-08	L099-M028-08	L100-M028-08	L110-M028-08			
30mm	8 x 3.3										
32mm	No KW										
32mm	10 x 3.3						L100-M032-10	L110-M032-10			L225-M032-10
35mm	No KW										
35mm	10 x 3.3						L100-M035-10				
38mm	10 x 3.3							L110-M038-10	L150-M038-10		
40mm	12 x 3.3								L150-M040-12	L190-M040-12	L225-M040-12
42mm	12 x 3.3							L110-M042-12	L150-M042-12		
45mm	14 x 3.8										
48mm	No KW										
48mm	14 x 3.8								L150-M048-14	L190-M048-14	
50mm	No KW										
50mm	14 x 3.8										
55mm	No KW										
55mm	16 x 4.3										L225-M055-16
60mm	No KW										
60mm	18 x 4.4										L225-M060-18
65mm	No KW										
65mm	18 x 4.4										L225-M065-18
70mm	20 x 4.9										

Additional metric sizes available- consult factory

Standard Spline Bore Jaw Couplings

Number Teeth	Pitch	SAE	Shaft Major Dia.	L090	L095	L099	L100	L110	L150	L190	L225
9	16/32	A	.625	L090-0916	L095-0916	L099-0916	L100-0916				
13	16/32	B	.875	L090-1316	L095-1316	L099-1316	L100-1316	L110-1316	L-150-1316	L190-1316	
13	16/32	D, E	1.750					L110-1308	L-150-1308	L190-1308	L225-1308
14	12/24	C	1.250					L110-1412	L-150-1412	L190-1412	L225-1412
15	16/32	BB	1.000			L099-1516	L100-1516	L110-1516	L-150-1516	L190-1516	L225-1516

Additional spline size available - Consult factory. All splines are SAE 30° pressure angle, flat root, side fit

Specifications subject to change without notice