

Jaw Coupling Selection Procedure

- Determine Service Factor by Matching Driven Unit with Prime Mover in Service Factor Guide.
- Multiply Service Factor by Driven Unit or Motor H.P. to Obtain Adjusted H.P.
- Select Flexible Coupling with Horsepower Capacity Equal to or Greater than Adjusted H.P.

Service Factor Guide	Prime Mover		
	Electric Motor or Steam Turbine	Gasoline or Diesel Engine, 6 or More Cyl.	Gasoline or Diesel Engine, Less Than 6 Cyl.
Driven Unit (Machinery) Light: Uniform or steady load never exceeding horsepower rating, infrequent starting. Agitators, Blowers, Conveyors, Evaporators, Fans, Generators, Centrifugal Pumps, Stokers	1.0	1.5	2.0
Moderate: Heavy inertia, moderate shock, frequent starting; peak loads do not exceed 125 per cent average horsepower. Uneven load. Beaters, Rotary Pumps and Compressors, Cranes, Elevators, Mine and Propeller Fans, Generators, Pulp Grinders, Hoists, Kilns, Machine Tools, Mixers, Gear Pumps, Woodworking Machines	1.5	2.0	2.5
Heavy: Heavy shock conditions or frequent reversing. Peak loads do not exceed 150 per cent average horsepower. Uneven load. Reciprocating Pumps and Compressors, Crushers, Freight and Passenger Elevators, Mills (Hammer, Ball, Rolling, Turf, Flour), Vibrating Screens, Winches, Wire Drawing Machines, Punches, Shears	2.0	2.5	3.0



Bore Tolerances:
 $\frac{1}{2} - 1 \frac{3}{4} + .001 - .000$
 $1 \frac{13}{16} - 2 \frac{5}{8} + .0015 - .0000$

Martin ML (Universal Series) — Torque and Horsepower Ratings

Catalog Number	Torque Rating Lb. — In.		Buna-N Horsepower Capacity at Various RPM					Max. Bore	(Each) Weight
	Buna-N	Hytrel®	100	300	1200	1800	3600		
ML035	3.5	—	.006	.02	.07	.10	.20	$\frac{3}{8}$	.07
ML050	31.5	94.5	.05	.15	.60	.9	1.8	$\frac{5}{8}$	.13
ML070	42	126	.07	.21	.84	1.2	2.5	$\frac{3}{4}$	.25
ML075	81	242	.13	.39	1.56	2.3	4.7	$\frac{7}{8}$	.44
ML090	140	420	.22	.66	2.64	4.0	7.9	1 $\frac{1}{8}$	.69
ML095	189	567	.30	.90	3.6	5.4	10.8	1 $\frac{1}{8}$	.84
ML099	290	870	.46	1.4	5.5	8.3	16.6	1 $\frac{3}{8}$	1.19
ML100	416	1248	.66	2.0	7.9	11.9	23.8	1 $\frac{3}{8}$	1.47
ML110	756	2268	1.2	3.6	14.4	21.6	43.2	1 $\frac{5}{8}$	3.20
ML150	1197	3591	1.9	5.7	22.8	34.2	68.4	1 $\frac{7}{8}$	4.50
ML190	1512	4536	2.4	7.2	28.8	43.2	86.4	2 $\frac{1}{8}$	8.25
ML225	2268	6804	3.6	10.8	43.2	64.8	129.6	2 $\frac{5}{8}$	12.00

NOTE: Above H.P. capacities are for Buna-N rubber spider and service factor of one. When Hytrel spider is used multiply capacities by three.

Martin MS (Super Series) — Torque and Horsepower Ratings

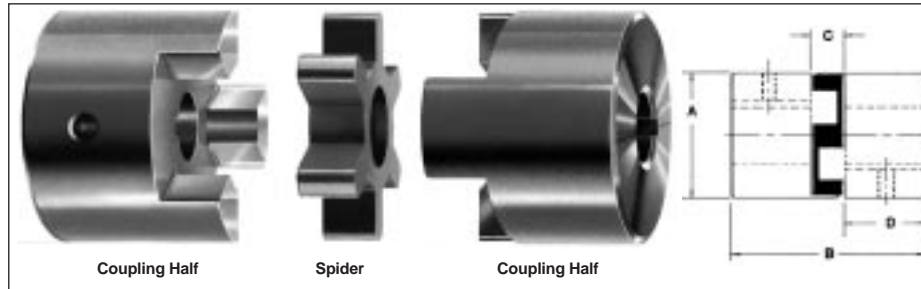
Catalog Number	Torque Rating Lb. — In.		Buna-N Horsepower Capacity at Various RPM					Max. Bore	(Each) Weight
	Buna-N	Hytrel®	100	300	1200	1800	3600		
MS050	37.3	112	.06	.18	.71	1.0	2.1	$\frac{3}{8}$	.13
MS070	59.4	178	.09	.28	1.1	1.7	3.4	$\frac{3}{4}$	.25
MS075	157	471	.25	.75	3.0	4.5	8.9	$\frac{7}{8}$	.44
MS090	241	723	.38	1.1	4.6	6.9	13.7	1 $\frac{1}{8}$	.69
MS095	241	723	.38	1.1	4.6	6.9	13.7	1 $\frac{1}{8}$	.84
MS099	512	1536	.81	2.4	9.7	14.6	29.2	1 $\frac{1}{8}$	1.19
MS100	512	1536	.81	2.4	9.7	14.6	29.2	1 $\frac{1}{8}$	1.47
MS110	1014	3042	1.6	4.8	19.3	28.9	57.8	1 $\frac{1}{8}$	3.20
MS150	1630	4890	2.6	7.7	31.0	46.5	93.0	1 $\frac{1}{8}$	4.50
MS190	2450	7350	3.9	11.6	46.6	69.9	139.7	2 $\frac{1}{8}$	8.25
MS225	2920	8760	4.6	13.9	55.5	83.2	166.5	2 $\frac{5}{8}$	12.00

NOTE: Above H.P. capacities are for Buna-N rubber spider and service factor of one. When Hytrel spider is used multiply capacities by three.

Misalignment Capacities: Angular up to 1°, Parallel up to .015 inches.

Hytrel is a registered trademark of E.I. DuPont & Co.

Stock Jaw Couplings



Dimensions

Catalog Number	Hub Dia. A	Overall Length B	Distance Betw. Flanges C	Length Thru Bore D	Bore		Weight Lbs.
					Min.	Max.	
ML035	5/8	1 13/16	9/32	1 17/64	1/8	3/8	.07
ML or MS050	1 1/16	1 29/32	19/32	5/8	1/4	5/8	.13
ML or MS070	1 1/8	2	1/2	3/4	1/4	3/4	.25
ML or MS075	1 1/4	2 1/8	1/2	13/16	1/4	7/8	.44
ML or MS090	2 1/8	2 1/2	1/2	1 13/16	1/4	1 1/8	.69
ML or MS095	2 1/4	2 1/2	1/2	1	7/16	1 1/8	.84
ML or MS099	2 17/32	2 1/8	3/4	1 1/16	1/2	1 3/8	1.19
ML or MS100	2 1/2	3 1/2	3/4	1 1/8	1/2	1 3/8	1.47
ML or MS110	3 1/16	4 1/4	7/8	1 11/16	1/2	1 1/8	3.20
ML or MS150	3 1/4	4 1/2	1	1 3/4	5/8	1 1/8	4.50
ML or MS190	4 1/2	4 7/8	1	1 15/16	3/4	2 1/8	8.25
ML or MS225	5	5 5/8	1	2 1/16	3/4	2 1/8	12.00

Bore sizes are standard in 1/16" increments from minimum to maximum bore range and have keyway and set screw except as shown below:

- 1/8 through 3/8 Bore — No KW — No SS
- #050 — 7/16 through 5/8 Bore — No KW — 1-SS
- #070, 075, 090, 095 — 7/16 and 1/2 Bore — No KW — 1-SS
- #099, 100, 110 — 1/2 Bore — No KW — No SS
- #150 — 5/8 Bore — No KW — No SS
- #190, 225 — 3/4 Bore — No KW — No SS

NOTE: In each coupling size a min. plain bore is available that can be used to make special bores such as spline, hex, metric, or other shapes or sizes.

For Standard Keyway sizes see *Martin* Catalog, page E-138 and E-139.

Coupling Selection Chart for 60 Hz Nema Motor Frames Based on Buna-N (Rubber) Spider ★†

Shaft Diameter	Nema Frame	Coupling Size	Max. Horsepower Rating @ RPM					
			1140		1725		3450	
			MS	ML	MS	ML	MS	ML
3/8	42	050	1/2	1/2	1	3/4	2	1 1/2
1/2	48	050	1/2	1/2	1	3/4	2	1 1/2
5/8	56,56 H	050	1/2	1/2	1	3/4	2	1 1/2
3/4	66	070	1	3/4	1 1/2	1	3	2
7/8	56HZ, 143T, 145T 182, 184	075	2	1	3	2	7 1/2	3
		090	3	2	5	3	10	7 1/2
1 1/8	182T, 184T, 213 215	095	3	3	5	5	10	10
		099	7 1/2	5	10	7 1/2	25	15
1 1/4	213T, 215T, 245U, 256U	100	7 1/2	7 1/2	10	10	25	20
1 1/2	254T, 256T, 248U, 286U	110	15	10	25	20	50	40
1 3/4	284T, 286T, 324U, 326U, 326TS	150	30	20	40	30	75	60
2 1/8	324T, 326T, 364U, 365U	190	40	25	60	40	125	75
2 1/4	364T, 365T	225	50	40	75	60	150	100

NOTE: Coupling Sizes are based on the rated torque, max. bore and a have a service factor of 1.0.

* When Using Hytrel or Bronze spider multiply above horsepower ratings by 3.

† When using Urethane spider multiply above horsepower ratings by 1.5.

Spiders — Buna-N (Rubber) and Hytrel

Catalog Number		Accommodates Coupling	Net Weight Lbs.	
Buna-N	Hytrel		Buna-N	Hytrel
SRL035	SHL035	ML035	.009	.009
SRL050	SHL050	M 050 — MS 050	.013	.013
SRL070	SHL070	ML070 — MS 070	.017	.017
SRL075	SHL075	ML075 — MS 075	.03	.03
SRL090	SHL090	ML or MS090-095	.04	.04
SRL099	SHL099	ML or MS099-100	.07	.07
SRL110	SHL110	ML110 — MS110	.14	.14
SRL150	SHL150	M150 — MS150	.21	.21
SRL190	SHL190	ML190 — MS190	.27	.27
SRL225	SHL225	ML225 — MS225	.41	.41

Urethane spiders available. Please consult factory.

Spiders — Urethane† and Bronze★

Catalog Number		Accommodates Coupling	Net Weight Lbs.	
Urethane	Bronze★		Urethane	Bronze
SUL035		ML 035	.009	
SUL050		ML050 — MS050	.013	
SUL070		ML070 — MS070	.017	
SUL075		ML075 — MS075	.03	
SUL090		ML or MS 090-095	.04	
SU 099		ML or MS 099-100	.07	
SUL110		ML110 — MS110	.14	
SUL150		ML150 — MS150	.21	
SUL190		ML190 — MS190	.27	
SUL225		ML225 — MS225	.41	

★ Bronze spiders available as Made to Order.



Metric Bore Sizes Available
Consult Factory