

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

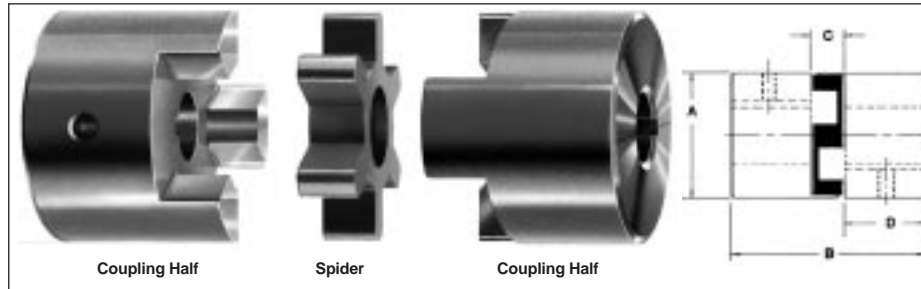
| Catalog Number | Torque Rating Lb. — In. | | Buna-N Horsepower Capacity at Various RPM | | | | | Max. Bore | (Each) Weight |
|----------------|----------------------------|---------|--|------|------|------|-------|-----------------|---------------|
| | Buna-N | Hytrel® | 100 | 300 | 1200 | 1800 | 3600 | | |
| 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.

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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 | 3/8 | 1 1/16 | 9/32 | 1 1/4 | 1/8 | 3/8 | .07 |
| ML or MS050 | 1 1/16 | 1 7/32 | 1/2 | 5/8 | 1/4 | 3/8 | .13 |
| ML or MS070 | 1 1/8 | 2 | 1/2 | 3/4 | 1/4 | 3/8 | .25 |
| ML or MS075 | 1 1/4 | 2 1/8 | 1/2 | 1 1/8 | 1/4 | 7/8 | .44 |
| ML or MS090 | 2 1/8 | 2 1/2 | 1/2 | 1 3/8 | 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 13/32 | 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 1/2 | 1/2 | 1 3/8 | 1.47 |
| ML or MS110 | 3 1/8 | 4 1/4 | 7/8 | 1 11/16 | 1/2 | 1 3/8 | 3.20 |
| ML or MS150 | 3 3/4 | 4 1/2 | 1 | 1 3/4 | 5/8 | 1 3/4 | 4.50 |
| ML or MS190 | 4 1/2 | 4 3/4 | 1 | 1 15/16 | 3/4 | 2 1/4 | 8.25 |
| ML or MS225 | 5 | 5 3/4 | 1 | 2 3/16 | 3/4 | 2 3/4 | 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 | 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