

Maximum Rating Tables

Size 818 • GR, NH, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 818

| Ratio | Input RPM | Output RPM | Input HP | Output HP | Output Torque (lb-in) | Left Hand Catalog No. | Right Hand Catalog No. | Double Extension Catalog No. | Hollow Output Catalog No.* |
|-------|-----------|------------|----------|-----------|-----------------------|-----------------------|------------------------|------------------------------|----------------------------|
| 5 | 2500 | 500 | 3.095 | 2.900 | 366 | _8180001 | _8180013 | _8180025 | _8180501.XX |
| | 1750 | 350 | 2.600 | 2.422 | 436 | | | | |
| | 1170 | 234 | 2.066 | 1.906 | 513 | | | | |
| 7.5 | 100 | 20 | 0.312 | 0.228 | 717 | _8180002 | _8180014 | _8180026 | _8180502.XX |
| | 2500 | 333 | 2.307 | 2.127 | 402 | | | | |
| | 1750 | 233 | 1.909 | 1.745 | 471 | | | | |
| 10 | 1170 | 156 | 1.473 | 1.328 | 537 | _8180003 | _8180015 | _8180027 | _8180503.XX |
| | 100 | 13 | 0.227 | 0.147 | 697 | | | | |
| | 2500 | 250 | 1.996 | 1.820 | 459 | | | | |
| 15 | 1750 | 175 | 1.625 | 1.466 | 528 | _8180004 | _8180016 | _8180028 | _8180504.XX |
| | 1170 | 117 | 1.239 | 1.099 | 592 | | | | |
| | 100 | 10 | 0.196 | 0.118 | 744 | | | | |
| 20 | 2500 | 166 | 1.485 | 1.301 | 492 | _8180005 | _8180017 | _8180029 | _8180505.XX |
| | 1750 | 116 | 1.224 | 1.058 | 571 | | | | |
| | 1170 | 78 | 0.945 | 0.799 | 645 | | | | |
| 25 | 100 | 6.7 | 0.165 | 0.087 | 823 | _8180006 | _8180018 | _8180030 | _8180506.XX |
| | 2500 | 125 | 1.283 | 1.093 | 551 | | | | |
| | 1750 | 87 | 1.046 | 0.875 | 630 | | | | |
| 30 | 1170 | 58 | 0.803 | 0.652 | 702 | _8180007 | _8180019 | _8180031 | _8180507.XX |
| | 100 | 5.0 | 0.150 | 0.069 | 872 | | | | |
| | 2500 | 100 | 1.088 | 0.900 | 567 | | | | |
| 40 | 1750 | 70 | 0.884 | 0.715 | 644 | _8180008 | _8180020 | _8180032 | _8180508.XX |
| | 1170 | 46 | 0.678 | 0.530 | 713 | | | | |
| | 100 | 4.0 | 0.135 | 0.055 | 874 | | | | |
| 50 | 2500 | 83 | 0.892 | 0.702 | 531 | _8180009 | _8180021 | _8180033 | _8180509.XX |
| | 1750 | 58 | 0.741 | 0.569 | 614 | | | | |
| | 1170 | 39 | 0.580 | 0.428 | 692 | | | | |
| 60 | 100 | 3.3 | 0.126 | 0.047 | 880 | _8180010 | _8180022 | _8180034 | _8180510.XX |
| | 2500 | 62 | 0.739 | 0.551 | 556 | | | | |
| | 1750 | 43 | 0.609 | 0.440 | 634 | | | | |
| 80 | 1170 | 29 | 0.476 | 0.328 | 706 | _8180011 | _8180023 | _8180035 | _8180511.XX |
| | 100 | 2.5 | 0.113 | 0.035 | 874 | | | | |
| | 2500 | 50 | 0.625 | 0.444 | 559 | | | | |
| 100 | 1750 | 35 | 0.515 | 0.352 | 634 | _8180012 | _8180024 | _8180036 | _8180512.XX |
| | 1170 | 23 | 0.404 | 0.260 | 701 | | | | |
| | 100 | 2.0 | 0.103 | 0.027 | 857 | | | | |
| 100 | 2500 | 41 | 0.542 | 0.363 | 550 | _8180012 | _8180024 | _8180036 | _8180512.XX |
| | 1750 | 29 | 0.449 | 0.288 | 623 | | | | |
| | 1170 | 19 | 0.354 | 0.213 | 689 | | | | |
| 100 | 100 | 1.7 | 0.097 | 0.022 | 842 | _8180011 | _8180023 | _8180035 | _8180511.XX |
| | 2500 | 31 | 0.247 | 0.156 | 314 | | | | |
| | 1750 | 21 | 0.208 | 0.124 | 356 | | | | |
| 100 | 1170 | 14 | 0.164 | 0.091 | 392 | _8180012 | _8180024 | _8180036 | _8180512.XX |
| | 100 | 1.3 | 0.023 | 0.009 | 470 | | | | |
| | 2500 | 25 | 0.167 | 0.097 | 245 | | | | |
| 100 | 1750 | 17 | 0.141 | 0.077 | 277 | _8180012 | _8180024 | _8180036 | _8180512.XX |
| | 1170 | 11 | 0.111 | 0.057 | 304 | | | | |
| | 100 | 1.0 | 0.016 | 0.006 | 362 | | | | |

How To Build a Part Number For Size GR818, NH818 & EL818

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B818-5-L
GR8180001



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Ratio Multipliers

Accessories and
Additional Capabilities

| NEMA C Input Flange ▲ | Style BM | | | Style HM | Style BMQ | | | Style HMQ | Ratio |
|------------------------|-------------------------------|-------------------------------|-------------------------------|--|-------------------------------|-------------------------------|-------------------------------|--|-------|
| | Left Hand Catalog No. | Right Hand Catalog No. | Double Extension Catalog No. | Hollow Output Catalog No.* | Left Hand Catalog No. | Right Hand Catalog No. | Double Extension Catalog No. | Hollow Output Catalog No.* | |
| 56C 143-5TC | 8180037 8180073 | 8180049 8180085 | 8180061 8180097 | 8180513.XX 8180525.XX | 8180109 8180145 | 8180121 8180157 | 8180133 8180169 | 8180537.XX 8180549.XX | 5 |
| 56C 143-5TC | 8180038 8180074 | 8180050 8180086 | 8180062 8180098 | 8180514.XX 8180526.XX | 8180110 8180146 | 8180122 8180158 | 8180134 8180170 | 8180538.XX 8180550.XX | 7.5 |
| 56C 143-5TC | 8180039 8180075 | 8180051 8180087 | 8180063 8180099 | 8180515.XX 8180527.XX | 8180111 8180147 | 8180123 8180159 | 8180135 8180171 | 8180539.XX 8180551.XX | 10 |
| 56C 143-5TC | 8180040 8180076 | 8180052 8180088 | 8180064 8180100 | 8180516.XX 8180528.XX | 8180112 8180148 | 8180124 8180160 | 8180136 8180172 | 8180540.XX 8180552.XX | 15 |
| 56C 143-5TC | 8180041 8180077 | 8180053 8180089 | 8180065 8180101 | 8180517.XX 8180529.XX | 8180113 8180149 | 8180125 8180161 | 8180137 8180173 | 8180541.XX 8180553.XX | 20 |
| 56C 143-5TC | 8180042 8180078 | 8180054 8180090 | 8180066 8180102 | 8180518.XX 8180530.XX | 8180114 8180150 | 8180126 8180162 | 8180138 8180174 | 8180542.XX 8180554.XX | 25 |
| 56C 143-5TC | 8180043 8180079 | 8180055 8180091 | 8180067 8180103 | 8180519.XX 8180531.XX | 8180115 8180151 | 8180127 8180163 | 8180139 8180175 | 8180543.XX 8180555.XX | 30 |
| 48CZ 56C 143-5TC | 8180188 8180044 8180080 | 8180200 8180056 8180092 | 8180212 8180068 8180104 | 8180568.XX 8180520.XX 8180532.XX | 8180224 8180116 8180152 | 8180236 8180128 8180164 | 8180248 8180140 8180176 | 8180580.XX 8180544.XX 8180556.XX | 40 |
| 48CZ 56C 143-5TC | 8180189 8180045 8180081 | 8180201 8180057 8180093 | 8180213 8180069 8180105 | 8180569.XX 8180521.XX 8180533.XX | 8180225 8180117 8180153 | 8180237 8180129 8180165 | 8180249 8180141 8180177 | 8180581.XX 8180545.XX 8180557.XX | 50 |
| 48CZ 56C 143-5TC | 8180190 8180046 8180082 | 8180202 8180058 8180094 | 8180214 8180070 8180106 | 8180570.XX 8180522.XX 8180534.XX | 8180226 8180118 8180154 | 8180238 8180130 8180166 | 8180250 8180142 8180178 | 8180582.XX 8180546.XX 8180558.XX | 60 |
| 48CZ 56C | 8180191 8180047 | 8180203 8180059 | 8180215 8180071 | 8180571.XX 8180523.XX | 8180227 8180119 | 8180239 8180131 | 8180251 8180143 | 8180583.XX 8180547.XX | 80 |
| 48CZ 56C | 8180192 8180048 | 8180204 8180060 | 8180216 8180072 | 8180572.XX 8180524.XX | 8180228 8180120 | 8180240 8180132 | 8180252 8180144 | 8180584.XX 8180548.XX | 100 |

For input/ output shaft overhung load and thrust load ratings, refer to pages 419-422.

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

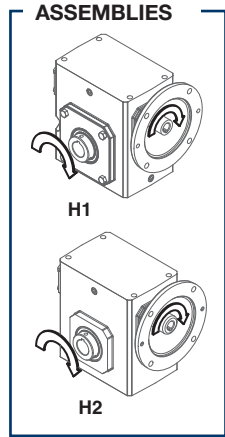
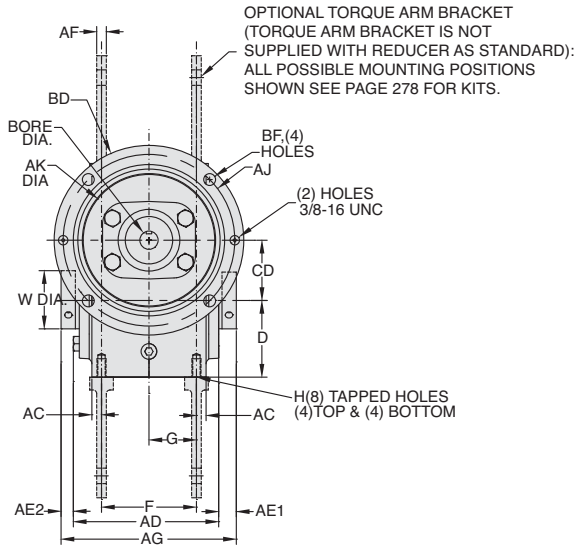
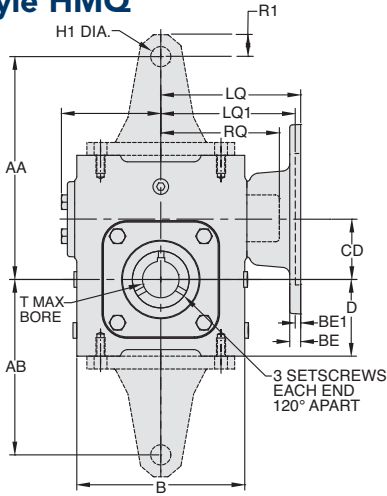
Available bore codes

| Fraction Size | 5/8" | 11/16" | 3/4" | 7/8" | 1" |
|------------------|-------|--------|-------|-------|-------|
| Decimal Size | 0.625 | 0.688 | 0.750 | 0.875 | 1.000 |
| Output Bore Code | 10 | 11 | 12 | 14 | 16 |

ELECTRA-GEAR EL Series Dimensions

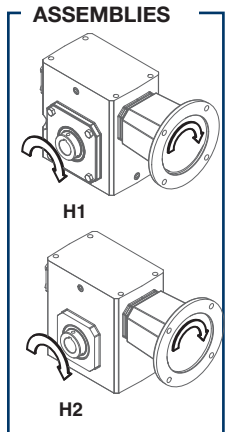
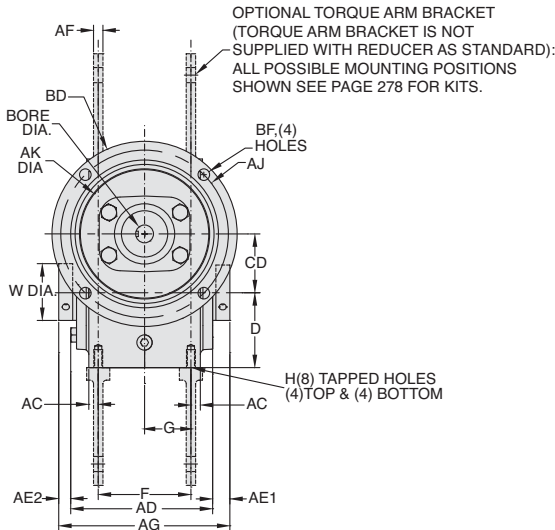
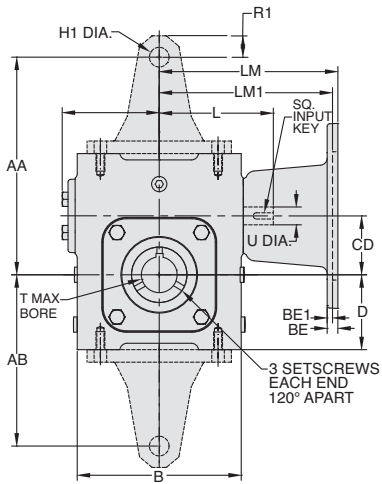
Styles: HMQ, HM, H

Style HMQ



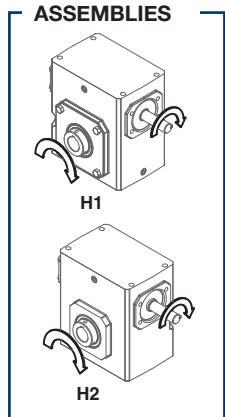
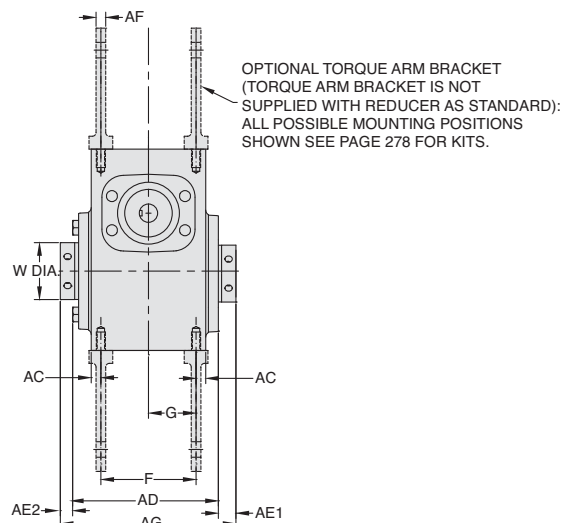
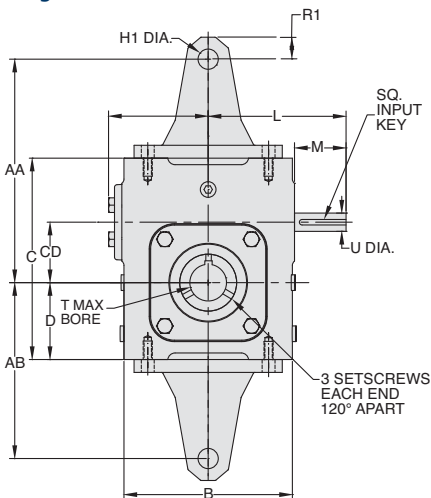
H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

Style HM



H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

Style H



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

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Ratio Multipliers

Accessories and
Additional Capabilities

STYLE HMQ, HM, H DIMENSIONS (Inches)

| Size | AA | AB | AC | AD | AE1 | AE2 | AF | AG | B | C | CD | D | F | G | H1 | I | L | M | R1 | V | T MAX* +0.000 -0.0025 | U +0.000 -0.0015 | Input Key (Style H only)※ | Input Key (Style HM only)※ | Output Key |
|-------|-------|-------|------|-------|------|------|------|-------|-------|-------|------|------|------|------|------|------|-------|------|------|------|-----------------------------|------------------------|------------------------------|-------------------------------|-------------|
| EL813 | -- | -- | 0.41 | 3.89 | 0.58 | 0.26 | -- | 4.75 | 3.80 | 4.66 | 1.33 | 1.72 | 2.00 | 1.00 | -- | 2.40 | 3.82 | 1.87 | - | 1.00 | 0.625 | 0.500 | 1/8 x 1.00 | -- | 3/16 x 1.50 |
| EL818 | 6.25 | 5.00 | 0.28 | 4.72 | 0.49 | 0.29 | 0.69 | 5.50 | 4.83 | 5.86 | 1.75 | 2.31 | 2.95 | 1.48 | 0.53 | 3.03 | 4.35 | 1.78 | 0.66 | 1.44 | 1.000 | 0.625 | 3/16 x 1.38 | 3/16 x .500 | 1/4 x 3.00 |
| EL821 | 7.63 | 6.00 | 0.33 | 4.98 | 0.60 | 0.42 | 0.69 | 6.00 | 5.75 | 6.88 | 2.06 | 2.63 | 3.25 | 1.63 | 0.53 | 3.40 | 4.71 | 1.76 | 0.75 | 1.94 | 1.500* | 0.625 | 3/16 X 1.38 | 3/16 x .500 | 3/8 x 3.00 |
| EL824 | 7.81 | 5.87 | 0.59 | 5.17 | 1.02 | 0.81 | 0.69 | 6.00 | 5.86 | 6.94 | 2.38 | 2.50 | 2.88 | 1.44 | 0.53 | 3.61 | 5.51 | 2.45 | 0.75 | 1.94 | 1.500* | 0.750 | 3/16 X 1.63 | 3/16 x .500 | 3/8 x 3.00 |
| EL826 | 8.50 | 7.00 | 0.73 | 6.00 | 0.60 | 0.40 | 0.69 | 7.00 | 7.17 | 8.00 | 2.63 | 3.25 | 3.37 | 1.69 | 0.53 | 4.17 | 6.07 | 2.45 | 0.75 | 1.94 | 1.500* | 0.750 | 3/16 x 1.63 | 3/16 x .500 | 3/8 x 3.00 |
| EL830 | 9.94 | 8.00 | 0.56 | 6.52 | 0.60 | 0.38 | 0.69 | 7.50 | 8.11 | 8.94 | 3.00 | 3.50 | 4.13 | 2.07 | 0.53 | 4.81 | 6.56 | 2.31 | 0.81 | 2.75 | 2.188 | 0.875 | 3/16 x 1.63 | 3/16 x .500 | 1/2 x 3.00 |
| EL832 | 12.50 | 10.00 | 0.56 | 6.52 | 0.60 | 0.38 | 0.69 | 7.50 | 8.11 | 10.50 | 3.25 | 4.00 | 4.13 | 2.07 | 0.53 | 5.00 | 6.75 | 2.31 | 0.88 | 2.75 | 2.188 | 0.875 | 3/16 x 1.63 | 3/16 x .500 | 1/2 x 3.00 |
| EL842 | 14.69 | 12.00 | 1.19 | 7.52 | 0.63 | 0.35 | 0.69 | 8.50 | 9.63 | 11.69 | 4.25 | 4.50 | 3.75 | 1.88 | 0.53 | 6.15 | 9.57 | 3.47 | 0.88 | 2.75 | 2.188 | 1.250 | 1/4 x 2.50 | 1/4 x 2.50 | 3/8 x 3.00 |
| EL852 | 17.75 | 14.00 | 0.97 | 8.84 | 0.97 | 0.69 | 0.81 | 10.50 | 11.50 | 12.25 | 5.25 | 4.25 | 5.25 | 2.63 | 0.66 | 7.55 | 10.88 | 3.38 | 1.13 | 4.26 | 3.438 | 1.250 | 1/4 X 3.00 | 1/4 x 3.00 | 7/8 x 4.00 |
| EL860 | 20.25 | 16.00 | 0.81 | 11.00 | 0.81 | 0.81 | 0.81 | 10.38 | 13.50 | 14.25 | 6.00 | 5.00 | 5.38 | 2.89 | 0.66 | 7.88 | 10.99 | 3.00 | 1.13 | 3.74 | 3.438 | 1.500 | 3/8 x 3.00 | 3/8 x 2.75 | 7/8 x 4.00 |

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

| Size | LM 56C/140TC | LM1 180TC / 210TC | L1 56C/140TC / 180TC / 210TC | LQ 56C/140TC | LQ1 180TC / 210TC | RQ 56C/140TC / 180TC / 210TC |
|-------|-----------------|----------------------|---------------------------------|-----------------|----------------------|---------------------------------|
| EL813 | 6.07 | -- | 3.82 | -- | 3.79 | -- |
| EL818 | 5.89 | -- | 3.64 | -- | 4.42 | -- |
| EL821 | 6.26 | -- | 4.00 | -- | 4.79 | -- |
| EL824 | 6.48 | 7.30 | 4.29 | 4.29 | 4.77 | 4.09 |
| EL826 | 7.04 | 7.86 | 4.88 | 4.88 | 5.33 | 4.82 |
| EL830 | 7.67 | 8.31 | 5.38 | 5.38 | 5.97 | 5.32 |
| EL832 | 7.86 | 8.50 | 5.56 | 5.56 | 6.16 | 5.51 |
| EL842 | 11.25 | 12.53 | 9.57 | 9.57 | 6.45 | 6.04 |
| EL852 | 12.65 | 13.93 | 10.88 | 10.88 | 7.85 | 7.35 |
| EL860 | -- | 11.94 | 10.99 | 10.99 | -- | -- |

NEMA DIMENSIONS (Inches)

| Frame | AJ | AK | BD | BE | BE1 | Bore Dia. | Keyway | BF |
|-------|------|------|------|------|------|-----------|-------------|------|
| 56C | 5.88 | 4.50 | 6.50 | 0.38 | N/A | .625 | 3/16 X 3/32 | 0.41 |
| 140TC | 5.88 | 4.50 | 6.50 | 0.38 | N/A | .875 | 3/16 X 3/32 | 0.41 |
| 180TC | 7.25 | 8.50 | 9.00 | N/A | 0.50 | 1.125 | 1/4 X 1/8 | 0.53 |
| 210TC | 7.25 | 8.50 | 9.00 | N/A | 0.50 | 1.375 | 5/16 X 5/32 | 0.53 |

- Max bore dimensions shown. For additional bores available, refer to page 20.
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

Note: Torque arm bracket available separately. Refer to page 278 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/bottom of reducer.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 52 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

| Original Style | New Style |
|----------------|--------------|
| MHSC | HMQ |
| MHC | HM |
| MH | H |
| MH + "KV" Kit | H + "KV" Kit |

Convert Style H to motorized coupling input using kits shown on page 278.