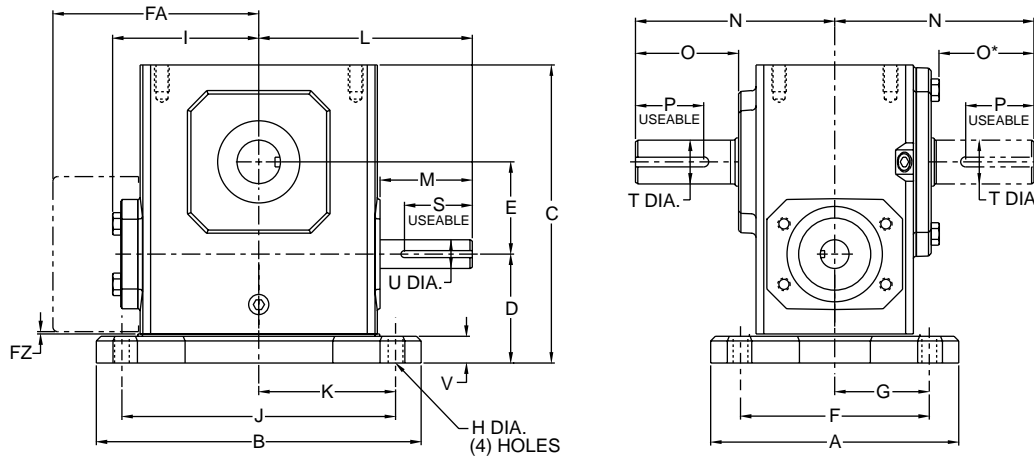


# Single Reduction

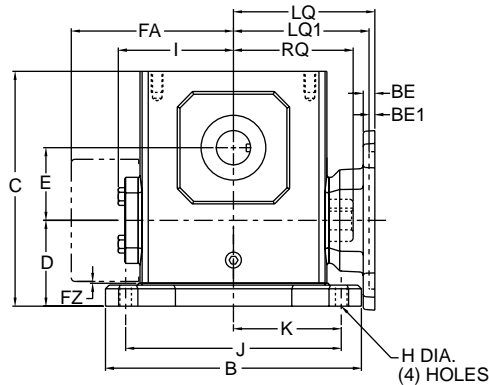
## Worm Gear Dimensions

### Style U

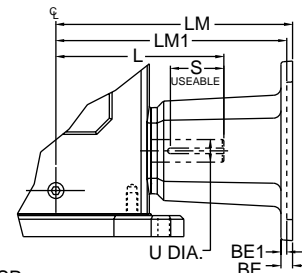
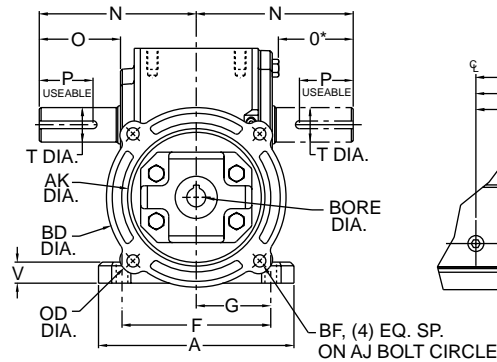


### Styles UMQ & UM

STYLE UMQ  
(NEMA AND IEC B5 METRIC MOTORS)

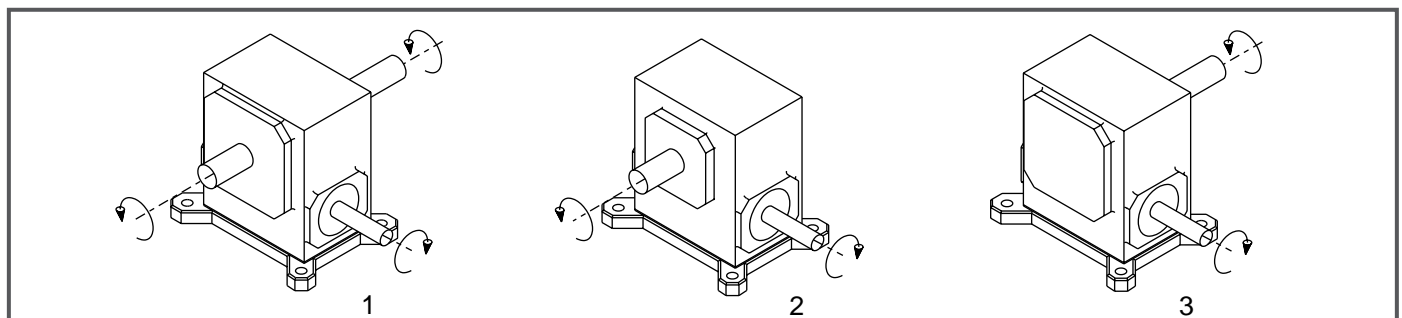


STYLE UM  
(NEMA MOTORS ONLY)



Note: Motor flange may extend below base. Spacers between housing and base available on request.

### Assemblies



Note: The input shaft may be rotated in either direction. Units are for mounting as shown. Contact factory for other mountings or assembly position options. Assembly positions also apply to motor flange units ("MQ" and "M").

**GROVE GEAR**

Davis Industries, Inc. Phone & Fax: 800-577-0559 E-mail: sales@davis-ohio.com

# Single Reduction

## Styles U, UMQ, UM

| UNIT  | A     | B     | C     | D    | E      | F     | FA    | FZ  | G    | H    | I    | J     | K    | L     | M    | N     | O    | O*   | P**         |
|-------|-------|-------|-------|------|--------|-------|-------|-----|------|------|------|-------|------|-------|------|-------|------|------|-------------|
| 213   | 5.38  | 5.37  | 5.19  | 2.14 | 1.333  | 3.31  | N/A   | N/A | 2.19 | .34  | 2.61 | 4.37  | 2.19 | 3.82  | 1.76 | 4.00  | 2.16 | 1.94 | 3/16 x 1.50 |
| 215   | 5.56  | 6.50  | 5.97  | 2.52 | 1.540  | 4.31  | N/A   | N/A | 2.16 | .41  | 3.14 | 5.25  | 2.63 | 4.35  | 1.76 | 4.31  | 2.11 | 1.90 | 3/16 x 1.50 |
| 218   | 5.75  | 6.99  | 6.44  | 2.63 | 1.750  | 4.50  | N/A   | N/A | 2.25 | .41  | 3.24 | 5.75  | 2.88 | 4.45  | 1.76 | 4.31  | 2.05 | 1.84 | 3/16 x 1.38 |
| 220   | 6.00  | 7.69  | 7.09  | 2.75 | 2.063  | 4.69  | N/A   | N/A | 2.34 | .47  | 3.61 | 6.38  | 3.19 | 4.82  | 1.76 | 4.68  | 2.29 | 2.08 | 1/4 x 1.44  |
| 224   | 6.19  | 8.37  | 7.69  | 2.81 | 2.375  | 4.88  | N/A   | N/A | 2.44 | .69  | 3.77 | 7.06  | 3.53 | 5.51  | 2.38 | 5.14  | 2.66 | 2.44 | 1/4 x 1.75  |
| 226   | 6.50  | 9.25  | 8.75  | 3.19 | 2.625  | 5.25  | N/A   | N/A | 2.63 | .53  | 4.34 | 8.00  | 4.00 | 6.07  | 2.38 | 5.63  | 2.73 | 2.52 | 1/4 x 2.00  |
| 230   | 7.50  | 10.00 | 9.63  | 3.38 | 3.000  | 5.88  | N/A   | N/A | 2.94 | .53  | 4.84 | 8.44  | 4.22 | 6.57  | 2.38 | 6.75  | 3.60 | 3.36 | 1/4 X 2.25  |
| 232   | 7.75  | 11.12 | 10.25 | 3.50 | 3.250  | 6.13  | N/A   | N/A | 3.06 | .53  | 5.02 | 9.50  | 4.75 | 6.76  | 2.38 | 7.06  | 3.66 | 3.42 | 3/8 X 2.62  |
| 242   | 9.75  | 13.24 | 12.38 | 3.69 | 4.250  | 7.63  | N/A   | N/A | 3.81 | .66  | 6.10 | 11.12 | 5.56 | 9.57  | 3.47 | 8.12  | 4.50 | 4.21 | 1/2 X 3.06  |
| 252   | 10.50 | 16.24 | 15.13 | 4.76 | 5.250  | 8.38  | N/A   | N/A | 4.19 | .78  | 7.50 | 14.12 | 7.06 | 10.88 | 3.38 | 9.06  | 4.78 | 4.53 | 1/2 x 3.50  |
| 2600  | 12.00 | 18.99 | 17.75 | 5.25 | 6.000  | 9.50  | 11.13 | .33 | 4.75 | .91  | N/A  | 16.49 | 8.25 | 11.78 | 3.41 | 10.00 | 4.65 | 4.65 | 5/8 x 4.00  |
| 2700  | 13.38 | 15.38 | 20.33 | 5.74 | 7.000  | 11.25 | 11.37 | .35 | 5.63 | 1.13 | N/A  | 13.00 | 6.50 | 11.50 | 2.97 | 11.76 | 5.65 | 5.65 | 5/8 x 4.00  |
| 2800  | 13.50 | 17.37 | 22.61 | 5.75 | 8.000  | 11.50 | 12.52 | .57 | 5.75 | 1.13 | N/A  | 14.75 | 7.38 | 12.50 | 2.84 | 12.25 | 5.98 | 5.98 | 3/4 x 4.50  |
| 21000 | 16.88 | 21.24 | 27.12 | 6.76 | 10.000 | 14.00 | 14.69 | .51 | 7.00 | 1.44 | N/A  | 17.00 | 8.50 | 15.50 | 3.76 | 14.75 | 6.80 | 6.80 | 7/8 x 5.00  |

| UNIT  | S**         | T Dia. | U Dia. | V    |
|-------|-------------|--------|--------|------|
| 213   | 1/8 x 1.44  | .625   | .500   | .53  |
| 215   | 3/16 x 1.50 | .750   | .625   | .59  |
| 218   | 3/16 x 1.50 | .875   | .625   | .69  |
| 220   | 3/16 x 1.50 | 1.000  | .625   | .72  |
| 224   | 3/16 x 1.75 | 1.125  | .750   | .75  |
| 226   | 3/16 x 1.75 | 1.250  | .750   | .75  |
| 230   | 3/16 x 1.75 | 1.250  | .875   | .75  |
| 232   | 3/16 x 1.75 | 1.500  | .875   | .88  |
| 242   | 1/4 x 2.88  | 1.875  | 1.250  | 1.00 |
| 252   | 1/4 x 3.00  | 2.000  | 1.250  | 1.13 |
| 2600  | 3/8 x 3.00  | 2.500  | 1.500  | 1.25 |
| 2700  | 3/8 x 2.87  | 2.750  | 1.625  | 1.42 |
| 2800  | 1/2 x 2.81  | 3.000  | 1.875  | 1.65 |
| 21000 | 1/2 x 3.69  | 3.750  | 2.250  | 1.65 |

\*applies to double output shaft

\*\*keyway width by length

\*\*\*Holes rotated 45° from positions shown on size 2600 "M" style "C" face with motor flange sizes 180TC-250TC.

Note: All dimensions listed are for reference only. Contact factory for certified dimensions.

**⚠ 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.

## NEMA Motor Data

### NEMA Motor Mounting Dimensions

| Frame | AJ   | AK   | BD   | OD   | BE  | BE1 | BORE  | KWY.**      | BF*** |
|-------|------|------|------|------|-----|-----|-------|-------------|-------|
| 48CZ  | 3.75 | 3.00 | 3.88 | 4.36 | .38 | N/A | .500  | 1/8 x 1/16  | .28   |
| 56C   | 5.88 | 4.50 | 5.88 | 6.64 | .38 | N/A | .625  | 3/16 x 3/32 | .41   |
| 140TC | 5.88 | 4.50 | 5.88 | 6.64 | .38 | N/A | .875  | 3/16 x 3/32 | .41   |
| 180TC | 7.25 | 8.50 | 9.00 | N/A  | N/A | .50 | 1.125 | 1/4 x 1/8   | .53   |
| 210TC | 7.25 | 8.50 | 9.00 | N/A  | N/A | .50 | 1.375 | 5/16 x 5/32 | .53   |
| 250TC | 7.25 | 8.50 | 9.00 | N/A  | N/A | .50 | 1.625 | 3/8 x 3/16  | .53   |

\*\*keyway width by depth

### NEMA Motor Flange Face Locations

| UNIT | 48CZ |      |      | 56C/140TC |       |       | 180TC |      |      | 210TC |      |      | 250TC |      |      |
|------|------|------|------|-----------|-------|-------|-------|------|------|-------|------|------|-------|------|------|
|      | LM   | RQ   | LQ   | LM        | RQ    | LQ    | LM1   | RQ   | LQ1  | LM1   | RQ   | LQ1  | LM1   | RQ   | LQ1  |
| 213  | 5.63 | 3.09 | 3.46 | 6.07      | 3.09  | 3.46  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  |
| 215  | 6.16 | 3.62 | 3.99 | 6.60      | 3.62  | 3.99  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  |
| 218  | 6.26 | 3.59 | 4.09 | 6.70      | 3.59  | 4.09  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  |
| 220  | 6.63 | 4.06 | 4.46 | 7.07      | 4.06  | 4.46  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  | N/A   | N/A  | N/A  |
| 224  | N/A  | N/A  | N/A  | 7.76      | 4.09  | 4.63  | 8.76  | 4.56 | 5.06 | 8.76  | N/A  | N/A  | N/A   | N/A  | N/A  |
| 226  | N/A  | N/A  | N/A  | 8.32      | 4.82  | 5.19  | 9.32  | 5.13 | 5.62 | 9.32  | N/A  | N/A  | N/A   | N/A  | N/A  |
| 230  | N/A  | N/A  | N/A  | 8.82      | 5.32  | 5.69  | 9.82  | 5.63 | 6.12 | 9.82  | 6.06 | 6.56 | N/A   | N/A  | N/A  |
| 232  | N/A  | N/A  | N/A  | 9.01      | 5.51  | 5.88  | 10.01 | 5.81 | 6.31 | 10.01 | 6.25 | 6.75 | N/A   | N/A  | N/A  |
| 242  | N/A  | N/A  | N/A  | 11.81     | 6.04  | 6.45  | 12.90 | 6.68 | 7.21 | 12.90 | 6.68 | 7.21 | 13.46 | 7.24 | 7.77 |
| 252  | N/A  | N/A  | N/A  | 13.21     | 7.35  | 7.85  | 14.30 | 7.98 | 8.61 | 14.30 | 7.98 | 8.61 | 14.86 | 8.54 | 9.17 |
| 2600 | N/A  | N/A  | N/A  | N/A       | 10.01 | 10.45 | 15.88 | 8.69 | 9.33 | 15.88 | 8.69 | 9.33 | 16.50 | 8.69 | 9.94 |
| 2700 | N/A  | N/A  | N/A  | N/A       | N/A   | N/A   | 15.50 | N/A  | N/A  | 15.50 | N/A  | N/A  | 15.50 | N/A  | N/A  |
| 2800 | N/A  | N/A  | N/A  | N/A       | N/A   | N/A   | N/A   | N/A  | N/A  | 16.58 | N/A  | N/A  | 16.58 | N/A  | N/A  |

## Metric Motor Data

### IEC B5 & B3/B5 Metric Motor Flange Face Locations

| UNIT | D63D |      | D71D |      | D80D |      | D90D |      | D100LD<br>D112MD |      | D132D |      |
|------|------|------|------|------|------|------|------|------|------------------|------|-------|------|
|      | LQ   | RQ   | LQ   | RQ   | LQ   | RQ   | LQ   | RQ   | LQ               | RQ   | LQ    | RQ   |
| 213  | 2.62 | 2.45 | 2.65 | 2.47 | 2.89 | 2.71 | N/A  | N/A  | N/A              | N/A  | N/A   | N/A  |
| 215  | 3.15 | 2.98 | 3.18 | 3.00 | 3.42 | 3.24 | N/A  | N/A  | N/A              | N/A  | N/A   | N/A  |
| 218  | 3.25 | 2.95 | 3.28 | 2.97 | 3.52 | 3.21 | N/A  | N/A  | N/A              | N/A  | N/A   | N/A  |
| 220  | 3.62 | 3.43 | 3.65 | 3.44 | 3.89 | 3.68 | N/A  | N/A  | N/A              | N/A  | N/A   | N/A  |
| 224  | N/A  | N/A  | 3.72 | 3.46 | 4.34 | 3.71 | N/A  | N/A  | N/A              | N/A  | N/A   | N/A  |
| 226  | N/A  | N/A  | 4.28 | 4.09 | 4.90 | 4.72 | 4.90 | 4.72 | 5.30             | 5.07 | N/A   | N/A  |
| 230  | N/A  | N/A  | 4.78 | 4.59 | 5.41 | 5.22 | 5.41 | 5.22 | 5.80             | 5.57 | N/A   | N/A  |
| 232  | N/A  | N/A  | 4.97 | 4.78 | 5.59 | 5.41 | 5.59 | 5.41 | 5.99             | 5.76 | N/A   | N/A  |
| 242  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | 6.38             | 6.16 | 6.39  | 6.14 |
| 252  | N/A  | N/A  | N/A  | N/A  | N/A  | N/A  | 7.78 | 7.46 | 7.78             | 7.45 | 8.57  | 8.24 |

Note: Metric motor flanges are available in quill-style (UMQ) only.

### IEC B5 & B3/B5 Metric Motor Mounting Dimensions

(All dimensions given in millimeters)

| Frame   | AJ  | AK  | BD  | OD  | BE | BORE | KWY.**  | BF TAP     |
|---------|-----|-----|-----|-----|----|------|---------|------------|
| D63D    | 115 | 95  | 117 | 131 | 10 | 11   | 4 x 2   | M8 x 1.25  |
| D71D    | 130 | 110 | 132 | 146 | 11 | 14   | 5 x 2.5 | M8 x 1.25  |
| D80D    | 165 | 130 | 165 | 184 | 15 | 19   | 6 x 3   | M10 x 1.50 |
| D90D    | 165 | 130 | 165 | 184 | 15 | 24   | 8 x 3.5 | M10 x 1.50 |
| D100LD* | 215 | 180 | 216 | 237 | 18 | 28   | 8 x 3.5 | M12 x 1.75 |
| D132D   | 265 | 230 | 267 | 290 | 18 | 38   | 10 x 4  | M12 x 1.75 |

\*also applies to D112MD

\*\*keyway width by depth