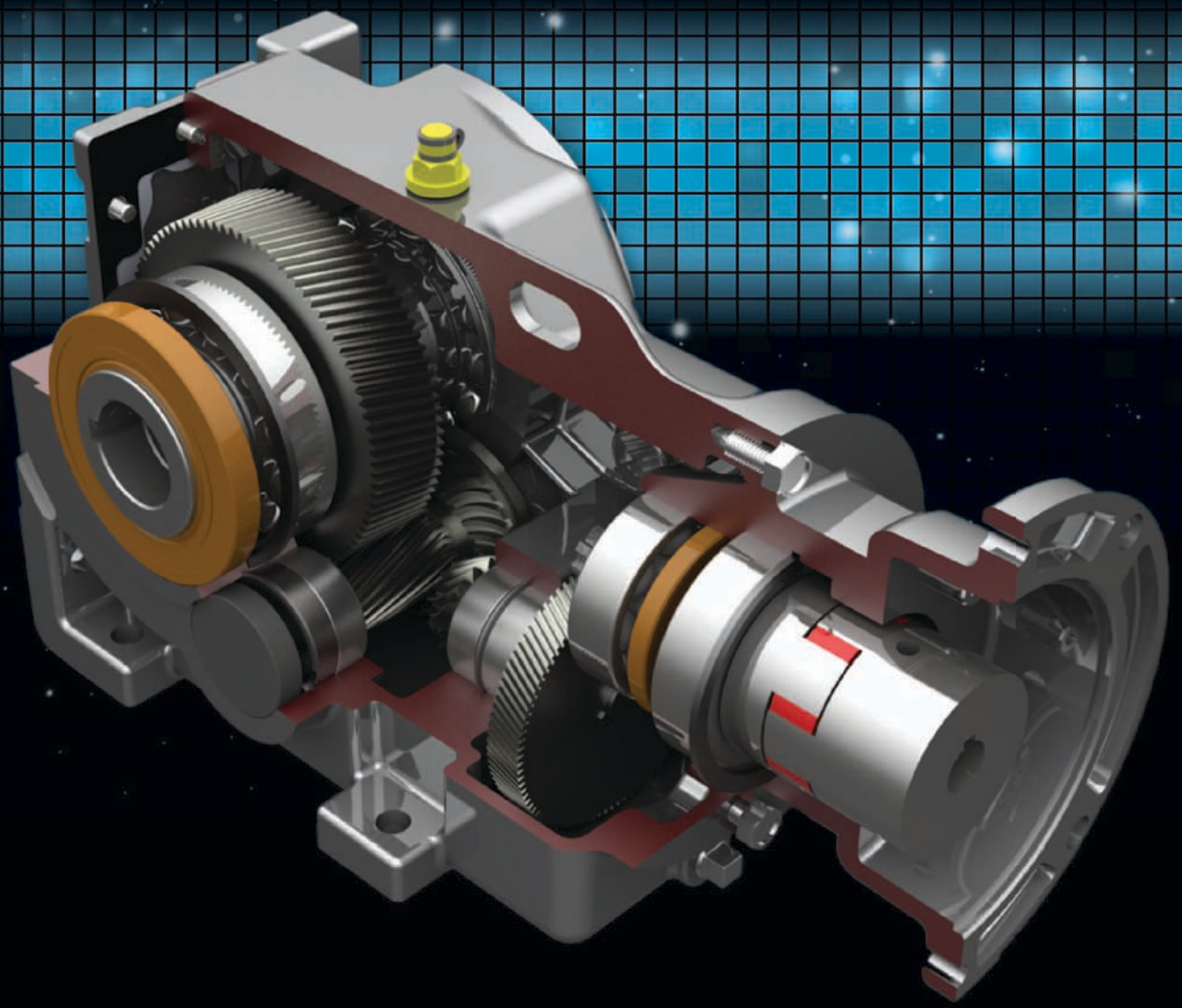
STERLING
ELECTRIC, INC.

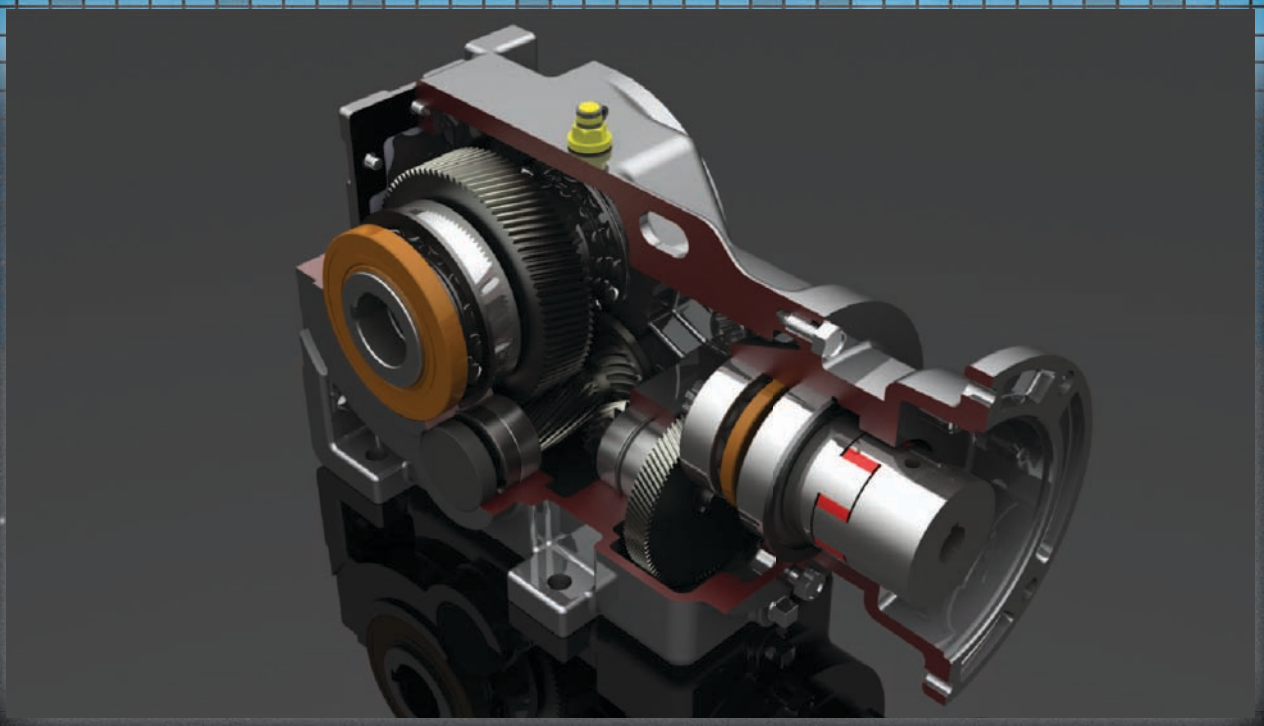


# 2000HG HELICAL BEVEL REDUCERS

STERLING
ELECTRIC, INC.

**Sterling Electric's 2000 Series Helical Bevel Reducers provides the optimum in efficiency for applications that require angular mounting positions. Our overall efficiency of 96% provides excellent input to output torque and overall energy efficiency when used with today's Premium Efficient Electric Motors.**

**Industry is faced with many challenges when selecting an efficient drive train and our 2000 Series Helical Bevel product provides the ultimate solution for smooth quiet operation with optimum efficiency.**



- Rugged Cast Iron Housing for Severe Duty Applications
- Smooth Body Construction for ease of cleaning in Washdown Applications
- ALL Stainless Steel 303/304 Investment Cast Housing available
- Solid Input Shaft or C-Face Coupled Style Inputs
- AGMA Class 11 Helical Gearing
- Oversize Ball Bearings for Excellent Load Rating
- Hollow Output Shaft
- Solid Output Shaft
- All Hollow Output Shafts are 303/304 Stainless Steel Material, as Standard
- Viton® Oil Seals, as Standard
- Bronze material Spring Loaded Pop-up Breather, as Standard
- All Models provided with proper lubrication level based on customer specified mounting position
- All Washdown Models provided with USDA H1 Food Grade Lubrication

# 2000HG HELICAL BEVEL RATING TABLES

| Nominal Ratio | Input RPM | Nominal Output RPM | K043 | | | | K063 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Exact Ratio | Max Input Hp | In-Lbs Output Torque | Max NEMA Frame | Exact Ratio | Max Input Hp | In-Lbs Output Torque | Max NEMA Frame |
| 11.0 | 3500 | 318 | 10.763 | 11.32 | 2100 | 180TC | 11.127 | 23.40 | 4490 | 210TC |
| | 1750 | 159 | | 6.59 | 2450 | | | 13.98 | 5370 | |
| | 1160 | 105 | | 4.74 | 2650 | | | 10.01 | 5800 | |
| | 875 | 80 | | 3.78 | 2810 | | | 7.93 | 6090 | |
| 12.0 | 3500 | 292 | 11.857 | 10.82 | 2210 | 180TC | 12.471 | 21.09 | 4530 | 210TC |
| | 1750 | 146 | | 6.24 | 2550 | | | 12.46 | 5350 | |
| | 1160 | 97 | | 4.46 | 2750 | | | 8.88 | 5750 | |
| | 875 | 73 | | 3.55 | 2900 | | | 7.02 | 6030 | |
| 14.0 | 3500 | 250 | 13.731 | 9.85 | 2320 | 180TC | 13.999 | 20.05 | 4820 | 210TC |
| | 1750 | 125 | | 5.62 | 2650 | | | 11.71 | 5630 | |
| | 1160 | 83 | | 4.00 | 2850 | | | 8.31 | 6030 | |
| | 875 | 63 | | 3.17 | 2990 | | | 6.55 | 6300 | |
| 16.0 | 3500 | 219 | 15.957 | 8.55 | 2340 | 180TC | 15.750 | 19.06 | 5140 | 210TC |
| | 1750 | 109 | | 4.83 | 2640 | | | 11.01 | 5940 | |
| | 1160 | 73 | | 3.43 | 2830 | | | 7.78 | 6330 | |
| | 875 | 55 | | 2.71 | 2960 | | | 6.11 | 6600 | |
| 18.0 | 3500 | 194 | 17.689 | 8.14 | 2460 | 180TC | 17.778 | 17.04 | 5170 | 210TC |
| | 1750 | 97 | | 4.56 | 2760 | | | 9.73 | 5910 | |
| | 1160 | 64 | | 3.22 | 2940 | | | 6.85 | 6270 | |
| | 875 | 49 | | 2.54 | 3070 | | | 5.37 | 6510 | |
| 20.0 | 3500 | 175 | 19.667 | 7.86 | 2640 | 180TC | 20.153 | 15.43 | 5300 | 210TC |
| | 1750 | 88 | | 4.36 | 2930 | | | 8.72 | 5990 | |
| | 1160 | 58 | | 3.06 | 3100 | | | 6.11 | 6320 | |
| | 875 | 44 | | 2.41 | 3230 | | | 4.77 | 6550 | |
| 22.0 | 3500 | 159 | 21.950 | 7.26 | 2720 | 180TC | 21.977 | 14.55 | 5430 | 210TC |
| | 1750 | 80 | | 3.99 | 2990 | | | 8.13 | 6070 | |
| | 1160 | 53 | | 2.79 | 3150 | | | 5.67 | 6380 | |
| | 875 | 40 | | 2.19 | 3270 | | | 4.42 | 6600 | |
| 25.0 | 3500 | 140 | 24.614 | 7.02 | 2940 | 180TC | 25.168 | 13.18 | 5620 | 210TC |
| | 1750 | 70 | | 3.83 | 3200 | | | 7.29 | 6210 | |
| | 1160 | 46 | | 2.66 | 3360 | | | 5.06 | 6500 | |
| | 875 | 35 | | 2.08 | 3480 | | | 3.93 | 6700 | |
| 28.0 | 3500 | 125 | 27.762 | 6.44 | 3030 | 180TC | 27.675 | 11.65 | 5450 | 210TC |
| | 1750 | 63 | | 3.48 | 3280 | | | 6.38 | 5960 | |
| | 1160 | 41 | | 2.41 | 3420 | | | 4.40 | 6210 | |
| | 875 | 31 | | 1.88 | 3530 | | | 3.41 | 6380 | |
| 32.0 | 3500 | 109 | 31.539 | 5.86 | 3130 | 180TC | 32.188 | 10.41 | 5640 | 210TC |
| | 1750 | 55 | | 3.14 | 3350 | | | 5.64 | 6110 | |
| | 1160 | 36 | | 2.16 | 3480 | | | 3.87 | 6340 | |
| | 875 | 27 | | 1.68 | 3580 | | | 2.99 | 6490 | |
| 40.0 | 3500 | 88 | 38.872 | 4.90 | 3220 | 180TC | 40.212 | 8.80 | 5940 | 210TC |
| | 1750 | 44 | | 2.60 | 3410 | | | 4.72 | 6370 | |
| | 1160 | 29 | | 1.78 | 3530 | | | 3.23 | 6570 | |
| | 875 | 22 | | 1.38 | 3620 | | | 2.49 | 6720 | |
| 50.0 | 3500 | 70 | 49.347 | 3.91 | 3250 | 180TC | 48.569 | 7.61 | 6190 | 210TC |
| | 1750 | 35 | | 2.06 | 3420 | | | 4.04 | 6570 | |
| | 1160 | 23 | | 1.40 | 3520 | | | 2.75 | 6750 | |
| | 875 | 18 | | 1.08 | 3600 | | | 2.11 | 6870 | |
| 60.0 | 3500 | 58 | 59.241 | 3.45 | 3440 | 180TC | 60.270 | 6.47 | 6510 | 210TC |
| | 1750 | 29 | | 1.80 | 3590 | | | 3.40 | 6840 | |
| | 1160 | 19 | | 1.22 | 3680 | | | 2.30 | 6990 | |
| | 875 | 15 | | 0.94 | 3740 | | | 1.76 | 7100 | |
| 71.0 | 3500 | 49 | 73.091 | 2.85 | 3490 | 180TC | 71.071 | 5.71 | 6750 | 210TC |
| | 1750 | 25 | | 1.47 | 3610 | | | 2.97 | 7020 | |
| | 1160 | 16 | | 0.99 | 3680 | | | 2.00 | 7150 | |
| | 875 | 12 | | 0.76 | 3730 | | | 1.53 | 7240 | |
| 80.0 | 3500 | 44 | 82.325 | 2.55 | 3520 | 180TC | 77.821 | 5.10 | 6590 | 210TC |
| | 1750 | 22 | | 1.31 | 3600 | | | 2.62 | 6780 | |
| | 1160 | 15 | | 0.88 | 3660 | | | 1.76 | 6870 | |
| | 875 | 11 | | 0.67 | 3700 | | | 1.34 | 6930 | |
| 100.0 | 3500 | 35 | 94.118 | 2.25 | 3530 | 140TC | 95.734 | 4.13 | 6550 | 180TC |
| | 1750 | 18 | | 1.14 | 3590 | | | 2.11 | 6680 | |
| | 1160 | 12 | | 0.76 | 3630 | | | 1.41 | 6730 | |
| | 875 | 9 | | 0.58 | 3650 | | | 1.07 | 6770 | |
| 112.0 | 3500 | 31 | 105.688 | 2.02 | 3560 | 140TC | 106.301 | 3.84 | 6740 | 180TC |
| | 1750 | 16 | | 1.02 | 3590 | | | 1.94 | 6810 | |
| | 1160 | 10 | | 0.68 | 3600 | | | 1.29 | 6830 | |
| | 875 | 8 | | 0.51 | 3620 | | | 0.98 | 6850 | |
| 125.0 | 3500 | 28 | 120.150 | 1.79 | 3570 | 140TC | 119.216 | 3.42 | 6720 | 180TC |
| | 1750 | 14 | | 0.89 | 3570 | | | 1.71 | 6720 | |
| | 1160 | 9 | | 0.59 | 3570 | | | 1.13 | 6710 | |
| | 875 | 7 | | 0.45 | 3570 | | | 0.85 | 6710 | |

# STANDARD CAST IRON CONSTRUCTION LIST PRICES

| Model Prefix Frame Size | Solid Input Solid Output | Solid Input Hollow Output | C-Face Input Solid Output | C-Face Input Hollow Output | B5 Flange Adder | Banjo Torque Arm |
|---|---|---|---|---|---|---|
| K0403* | $ 1277 | $ 1374 | $ 1420 | $ 1518 | $ 93 | $ 90 |
| K0603** | $ 1569 | $ 1677 | $ 1711 | $ 1819 | $ 112 | $ 104 |

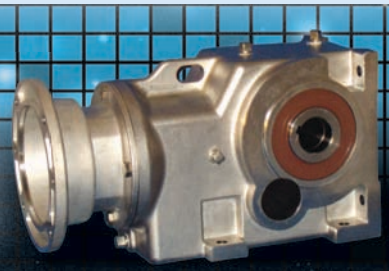
**Sterli-Seal ® Washdown Construction List Prices (USDA White Epoxy Coating)**

| Model Prefix Frame Size | Solid Input Solid Output | Solid Input Hollow Output | C-Face Input Solid Output | C-Face Input Hollow Output | B5 Flange Adder | Banjo Torque Arm |
|---|---|---|---|---|---|---|
| SK0403* | $ 1404 | $ 1511 | $ 1562 | $ 1670 | $ 102 | $ 98 |
| SK0603** | $ 1726 | $ 1845 | $ 1882 | $ 2001 | $ 123 | $ 114 |

**Sterli-Seal ® Washdown Construction List Prices (USDA Steel Plus CE Epoxy Coating)**

| Model Prefix Frame Size | Solid Input Solid Output | Solid Input Hollow Output | C-Face Input Solid Output | C-Face Input Hollow Output | B5 Flange Adder | Banjo Torque Arm |
|---|---|---|---|---|---|---|
| SWK0403* | $ 1455 | $ 1566 | $ 1619 | $ 1731 | $ 106 | $ 103 |
| SWK0603** | $ 1789 | $ 1912 | $ 1951 | $ 2074 | $ 128 | $ 118 |

# STERLI-SEAL® WASHDOWN ALL STAINLESS STEEL CONSTRUCTION LIST PRICES



| Model Prefix Frame Size | Solid Input Solid Output | Solid Input Hollow Output | C-Face Input Solid Output | C-Face Input Hollow Output | B5 Flange Adder | Banjo Torque Arm |
|---|---|---|---|---|---|---|
| SSK0403* | $ 2873 | $ 3092 | $ 3195 | $ 3426 | $ 210 | $ 202 |
| SSK0603** | $ 4158 | $ 4444 | $ 4534 | $ 4824 | $ 298 | $ 276 |

| SS Prefix | K04 Unit Size | 3 No. of Red. | HC Style | 011 Nominal Ratio | 56 Motor Input | A* Output Bore (inches) | 1 Mntg Pos. |
|---|---|---|---|---|---|---|---|
| None-Standard Cast Iron Construction | 04 | 3 | HC-Coupling Style Input Hollow Shaft Output | e.g. 011 =11.1 | 00-Solid Shaft Input | A-1.0000 | See |
| S-Cast Iron Washdown Duty w/ USDA White Epoxy Coating | 06 | 4 | HR-Solid Shaft Input Hollow Shaft Output | e.g. 125=125:1 | 56-NEMA 56C | B-1.1250 | Diagram |
| SW-Cast Iron Washdown Duty w/ USDA Steel Plus CE Epoxy Coating | 07 | | AC-Coupling Style Input Solid Shaft Output | | 14-NEMA 143/145TC | C-1.1875 | |
| SS-All Stainless Steel Construction Washdown Duty | | | AR-Solid Shaft Input Solid Shaft Output | | 18-NEMA 182/184TC | D-1.2500 | |
| | | | FHC-Coupling Style Input Hollow Shaft Output w/ B5 Flange | | 21-NEMA 213/215TC | E-1.3750 | |
| | | | FHR-Solid Shaft Input Hollow Shaft Output w/ B5 Flange | | 25-NEMA 254/256TC | F-1.4375 | |
| | | | FC-Coupling Style Input Solid Shaft Output w/ B5 Flange | | | G-1.5000 | |
| | | | FR-Solid Shaft Input Solid Shaft Output w/ B5 Flange | | | H-1.6250 | |
| | | | | | | J-1.6875 | |
| | | | | | | K-1.7500 | |
| | | | | | | L-1.8750 | |
| | | | | | | M-1.9375 | |
| | | | | | | N-2.0000 | |
| | | | | | | P-2.1875 | |
| | | | | | | R-2.2500 | |

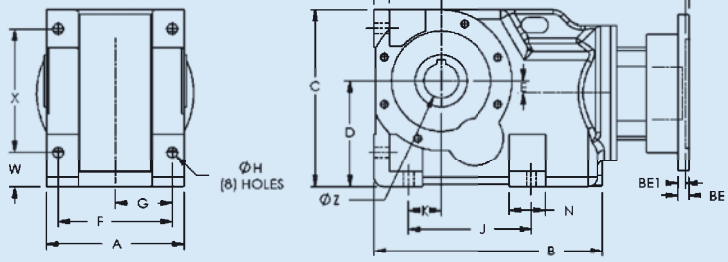
**PART NUMBER CODE – K-SERIES HELICAL BEVEL**

*See table below for available bores and keyway dimensions in inches per unit size.

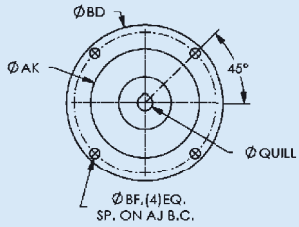
| Fract. Size | Decimal Equiv. | Kwy Width x Depth | K0403 | K0603 | K0703 | Bore Code |
|---|---|---|---|---|---|---|
| 1 | 1.0000 | 1/4 x 1/8 | X | | | A |
| 1-1/8 | 1.1250 | 1/4 x 1/8 | X | | | B |
| 1-3/16 | 1.1875 | 1/4 x 1/8 | X | | | C |
| 1-1/4 | 1.2500 | 1/4 x 1/8 | X | | | D |
| 1-3/8 | 1.3750 | 5/16 x 5/32 | X | X | | E |
| 1-7/16 | 1.4375 | 3/8 x 3/16 | X | X | | F |
| 1-1/2 | 1.5000 | 3/8 x 3/16 | | X | | G |
| 1-5/8 | 1.6250 | 3/8 x 3/16 | | X | X | H |
| 1-11/16 | 1.6875 | 3/8 x 3/16 | | X | X | J |
| 1-3/4 | 1.7500 | 3/8 x 3/16 | | X | X | K |
| 1-7/8 | 1.8750 | 1/2 x 1/4 | | X | X | L |
| 1-15/16 | 1.9375 | 1/2 x 1/4 | | X | X | M |
| 2 | 2.0000 | 1/2 x 1/4 | | X | X | N |
| 2-3/16 | 2.1875 | 1/2 x 1/4 | | | X | P |
| 2-1/4 | 2.2500 | 1/2 x 1/4 | | | X | R |

# K SERIES TRIPLE REDUCTION

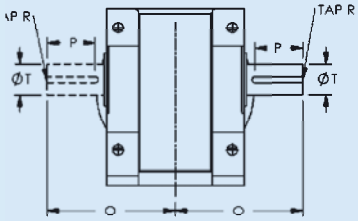
HC STYLE HOLLOW SHAFT OUTPUT



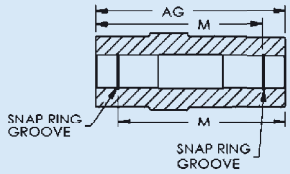

INPUT



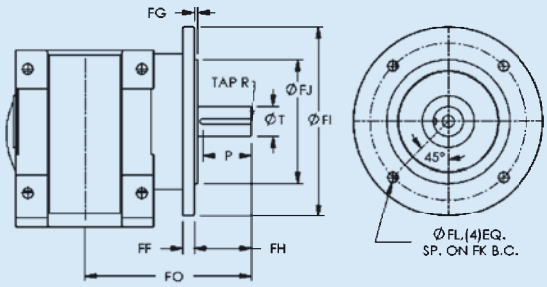

AC STYLE SOLID SHAFT OUTPUT



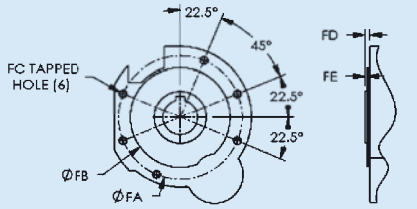

HOLLOW SHAFT DETAILS




B5 BOLT-ON FLANGE OUTPUT




OUTPUT MOUNTING




NOTE: SSK0403 & SSK0603 DO NOT HAVE TAPPED HOLES STANDARD. TAPPED HOLES CAN BE ADDED AS AN OPTION. CONSULT SALES REPRESENTATIVE OR FACTORY FOR DETAILS.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | M | N | O | P** Useable | R TAP | T | V | W | X | Z-max | AG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K0403 | 5.71 | 9.49 | 7.36 | 4.41 | 0.51 | 4.72 | 2.36 | 0.43 | 2.79 | 5.12 | 1.37 | 5.19 | 1.50 | 5.31 | 1/4 x 2.00 | 1/2 UNF x 1.13 DP | 1.250 | 0.63 | 1.46 | 5.12 | 1.438 | 5.91 |
| SSK0403 | 5.71 | 9.49 | 7.36 | 4.41 | 0.51 | 4.72 | 2.36 | 0.43 | 2.79 | 5.12 | 1.37 | 5.19 | 1.50 | 5.31 | 1/4 x 2.00 | 1/2 UNF x 1.13 DP | 1.250 | 0.63 | 1.46 | 5.12 | 1.438 | 5.91 |
| K0603 | 6.73 | 11.98 | 9.06 | 5.51 | 0.54 | 5.51 | 2.76 | 0.53 | 3.54 | 4.72 | 1.18 | 6.14 | 1.97 | 6.73 | 3/8 x 2.38 | 5/8 UNF x 1.5 DP | 1.625 | 0.82 | 1.77 | 6.30 | 2.000 | 7.09 |
| SSK0603 | 6.73 | 10.57 | 8.82 | 5.51 | 0.54 | 5.51 | 2.76 | 0.53 | 3.54 | 4.72 | 1.18 | 6.14 | 1.97 | 6.73 | 3/8 x 2.38 | 5/8 UNF x 1.5 DP | 1.625 | 0.82 | 1.77 | 6.30 | 2.000 | 7.09 |

** Keyway width by length

## NEMA Motor C-Face Flange Locations

| SIZE | 56C/140TC | 180TC | 210TC |
|---|---|---|---|
| | LQ | LQ1 | LQ1 |
| K0403 | 10.29 | 10.53 | N/A |
| SSK0403 | 10.29 | 10.53 | N/A |
| K0603 | 12.05 | 12.29 | 12.29 |
| SSK0603 | 11.99 | 12.23 | 12.23 |

## Output Face & B5 Mounting

| SIZE | FA | FB | FC | FC↧ | FD | FE | FF | FG | FH | FI | FJ | FK | FL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K0403 | 5.12 | 4.13 | M8 | 0.46 | 0.20 | 0.10 | 0.47 | 0.14 | 2.36 | 7.87 | 5.12 | 6.50 | 0.35 |
| SSK0403 | 5.12 | 4.13 | SEE NOTE | | 0.20 | 0.10 | 0.47 | 0.14 | 2.36 | 7.87 | 5.12 | 6.50 | 0.35 |
| K0603 | 5.91 | 5.12 | M10 | 0.58 | 0.26 | 0.12 | 0.63 | 0.16 | 3.15 | 9.84 | 7.09 | 8.46 | 0.55 |
| SSK0603 | 5.91 | 5.12 | SEE NOTE | | 0.26 | 0.12 | 0.63 | 0.16 | 3.15 | 9.84 | 7.09 | 8.46 | 0.55 |

## NEMA Motor C-Face Mounting Dimensions

| FRAME | AJ | AK | BD | BE | BE1 | BF | QUILL | QUILL KEYWAY[1] |
|---|---|---|---|---|---|---|---|---|
| 56C | 5.88 | 4.50 | 6.50 | 0.38 | N/A | 0.41 | 0.625 | 3/16 x 3/32 |
| 140TC | 5.88 | 4.50 | 6.50 | 0.38 | N/A | 0.41 | 0.875 | 3/16 x 3/32 |
| 180TC | 7.25 | 8.50 | 9.00 | N/A | .50 | 0.53 | 1.125 | 1/4 x 1/8 |
| 210TC | 7.25 | 8.50 | 9.00 | N/A | .50 | 0.53 | 1.375 | 5/16 x 5/32 |

Notes: 1-Keyway width by depth
2-Dimensions in inches

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January 2012