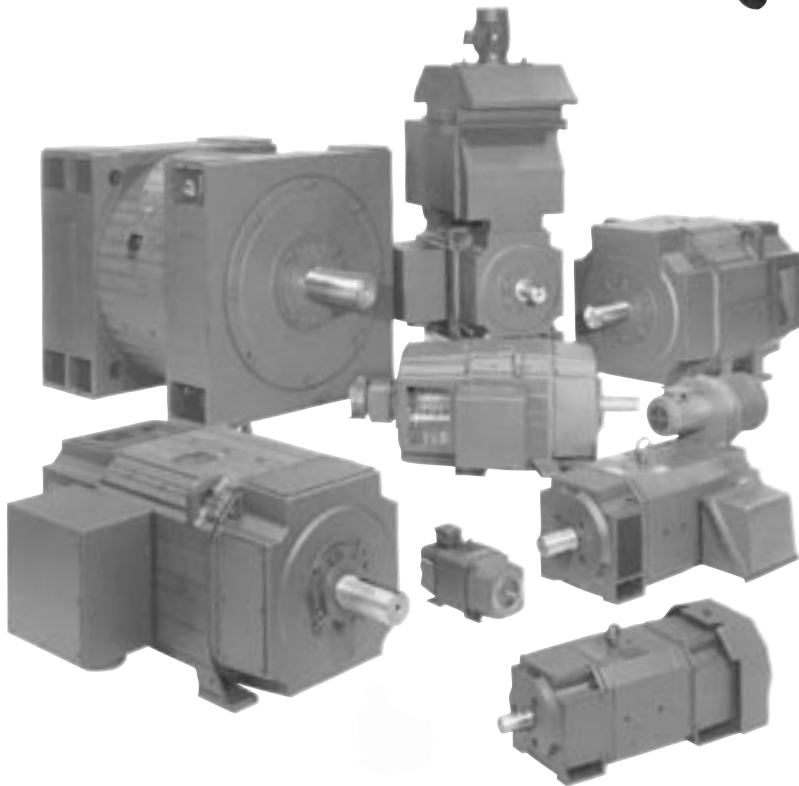
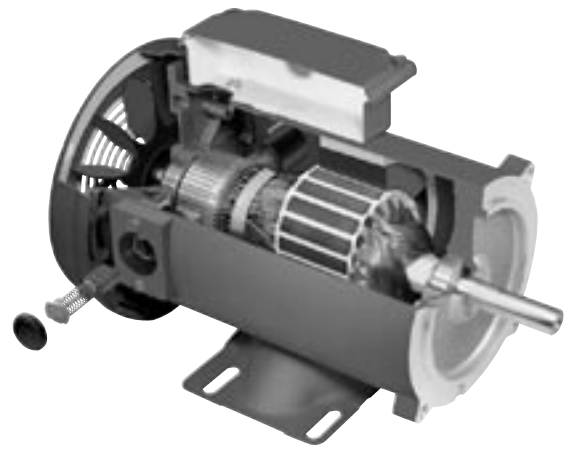


Small and Medium DC Motors



For additional product information, go to www.reliance.com

RPM XL SMALL DC MOTORS

INTRODUCTION

After more than ninety years of DC motor design experience in the variable speed marketplace, Reliance Electric continues its leadership position in DC motor technology with the RPM XL - a small DC product line incorporating state-of-the-art design technology. This design results in a high quality industrial duty product with more customer value and benefits than ever before.

STANDARD FEATURES

- **TEFC enclosure:** Permanent magnet totally enclosed fan cooled designs have been optimized for power matched performance. Cooler operating temperatures than TENV result in longer motor life and provide constant torque over a 20:1 speed range with a free wheeling diode.
- **NEMA 56 C-Face mounting** is standard on stock ratings.
- **Tach provisions easily obtained** from stock kits with C-face fan covers. (Not available on explosion proof)
- **Class F non-hygroscopic insulation system** is standard for long motor life
- **New cartridge brush holders** with brass inserts and stainless steel springs provide easy access to brushes and assure constant pressure for long brush life. Disassembly is not required for brush inspection.
- **Oversize brushes and commutator** assure long brush life.
- **Permanently lubricated double-shielded ball bearings** prevent dirt entry and guard against grease loss. Washdown motors use double-sealed bearings as standard.
- **Frames are heavy duty rolled steel**, available with or without welded base.
- **Oversized top mounted conduit box** with F1/F2 conduit connection and permanently marked leads simplify connections and installation. (F1 lead outlet standard on explosion-proof)
- **U/L component recognition and CSA approval are standard** (U/L file E 54825 and CSA file LR 40567)
- **Metric hardware and brushes (nonexplosion-proof)**
- **Paint** is Reliance Electric blue-green high grade epoxy air dry enamel with non-toxic trust inhibitors.

RPM XL SMALL DC MOTORS

1/8 - 2 HP



TEFC

WASHDOWN

EXPLOSION-PROOF

Product Overview

RPM XL Small DC Motors

AVAILABLE FEATURES

Mounting: C-Face Foot Mounted, C-Face Footless

Enclosure Type: TEFC, TENV, FCXP, Washdown

Field Winding: Permanent Magnet, Wound

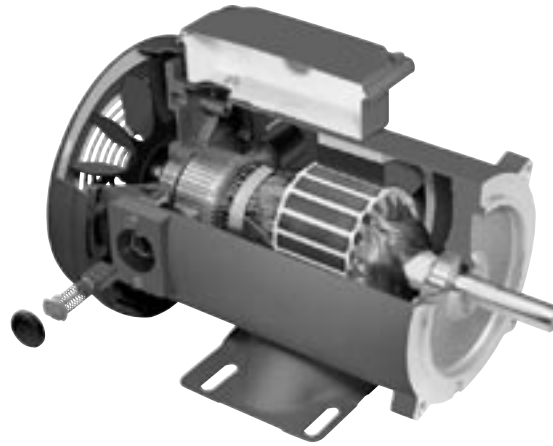
Horsepower Range: 1/8 - 2

CONSTRUCTION FEATURES

Bearing System: Permanently lubricated double shielded
Double sealed (washdown)

Conduit Mounting: Top mounted (F1/F2)

Limited warranty: 18 months



Totally Enclosed RPM XL Small DC

40°C Ambient • Class F • IP53

Description

RPM XL Small DC motors are designed for reliability and long life in all variable speed applications.

Features

- Permanent magnet TEFC designs have been optimized for power matched performance. Cooler operating temperatures than TENV result in longer motor life and provide constant torque over a 20:1 speed range with a free wheeling diode
- Tach provisions easily obtained from stock kits with
- C-face fan covers. Not available on explosion-proof.
- Double-shielded ball bearings
- Heavy duty rolled steel frames
- Cartridge brush holders with brass inserts and stainless steel springs provide easy access to brushes and assure constant pressure for long brush life. Disassembly is NOT required for brush inspection
- Oversized top mounted conduit box with F1/F2 conduit connection. F1 lead outlet standard on explosion-proof.

C-Face Foot Mounted 1/4 - 2 HP

| HP | SPD RPM Base | Voltage | | Frames | Enclosure | Model Number | List Price | Price Symbol | Norm. Stock | Notes | Dimension Sheets |
|-----|--------------|---------|---------|------------|-----------|-----------------|------------|--------------|-------------|-------|------------------|
| | | Arm. | Fld. | | | | | | | | |
| 1/4 | 1750 | 90 | PM | SE56C | TEFC | T56S1001 | \$342 | RMO30 | Yes | | 616050-1 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2001 | 476 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S1100 | 680 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S2100 | 759 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 90 | 50/100 | HB56HC | FCXP | T56H1460 | 1,290 | RMO30 | Yes | 1 | 600702-23 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S1016 | 1,075 | RMO30 | Yes | 44 | 616050-10 |
| | 1750 | 90 | PM | SE56C | TENV | T56S1019 | 365 | RMO30 | Yes | 8, 90 | 616049-2 |
| 1/3 | 1750 | 90 | PM | SE56C | TEFC | T56S1003 | 362 | RMO30 | Yes | | 616050-1 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2003 | 500 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S1101 | 690 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S2101 | 769 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 90 | 50/100 | HB56HC | FCXP | T56H1461 | 1,395 | RMO30 | Yes | 1 | 600702-23 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S1017 | 1,140 | RMO30 | Yes | 44 | 616050-10 |
| | 1750 | 90 | PM | ME56C | TENV | T56S1020 | 419 | RMO30 | Yes | 8, 90 | 616049-2 |
| 1/2 | 2500 | 90 | PM | SE56C | TEFC | T56S1006 | 362 | RMO30 | Yes | | 616050-1 |
| | 2500 | 90 | PM | SE56C | TEFC | T56S2006 | 495 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | PM | ME56C | TEFC | T56S1005 | 404 | RMO30 | Yes | | 616050-1 |
| | 1750 | 90 | PM | ME56C | TEFC | T56S2005 | 547 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 180 | PM | LE56C | TEFC | T56S1027 | 404 | RMO30 | Yes | | 616050-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S1102 | 715 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | 50/100 | SG56HC | TEFC | T56S2102 | 794 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 90 | 50/100 | HJ56HC | FCXP | T56H1462 | 1,675 | RMO30 | Yes | 1 | 600702-23 |
| | 1750 | 90 | PM | LE56C | TENV | T56S1021 | 495 | RMO30 | Yes | 8, 90 | 616049-2 |
| | 1750 | 180 | PM | SF56HC | TENV | T56S1022 | 1,035 | RMO30 | Yes | 8, 90 | 616053-2 |
| 3/4 | 1750 | 90 | PM | LE56C | TEFC | T56S1009 | 491 | RMO30 | Yes | | 616050-1 |
| | 1750 | 90 | PM | LE56C | TEFC | T56S2009 | 649 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 180 | PM | SF56HC | TEFC | T56S1029 | 491 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | 50/100 | MG56HC | TEFC | T56S1103 | 780 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | 50/100 | MG56HC | TEFC | T56S2103 | 859 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 90 | 50/100 | HJ56HC | FCXP | T56H3209 | 2,195 | RMO30 | Yes | 1 | 600702-23 |
| | 1750 | 90 | PM | SF56HC | TENV | T56S1023 | 671 | RMO30 | Yes | 8, 90 | 616053-2 |
| | 1750 | 180 | PM | MF56HC | TENV | T56S1024 | 1,080 | RMO30 | Yes | 8, 90 | 616053-2 |
| 1 | 1750 | 90 | PM | MF56HC | TEFC | T56S1011 | 599 | RMO30 | Yes | | 616052-1 |
| | 1750 | 90 | PM | MF56HC | TEFC | T56S2011 | 774 | RMO30 | Yes | 90 | 616052-1 |
| | 2500 | 180 | PM | SF56HC | TEFC | T56S1012 | 491 | RMO30 | Yes | | 616052-1 |
| | 2500 | 180 | PM | SF56HC | TEFC | T56S2012 | 774 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 180 | PM | MF56HC | TEFC | T56S1013 | 599 | RMO30 | Yes | | 616052-1 |
| | 1750 | 180 | PM | MF56HC | TEFC | T56S2013 | 774 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 180 | 100/200 | LG56HC | TEFC | T56S1104 | 1,010 | RMO30 | Yes | | 616052-1 |
| | 1750 | 180 | 100/200 | LG56HC | TEFC | T56S2104 | 1,089 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 180 | 100/200 | HE56HC | FCXP | T56H1464 | 2,260 | RMO30 | Yes | | 600702-31 |
| | 1750 | 90 | PM | LF56HCZ(A) | TENV | T56S1025 | 945 | RMO30 | Yes | 8, 90 | 616053-2 |
| | 1750 | 180 | PM | LF56HCZ(A) | TENV | T56S1026 | 1,080 | RMO30 | Yes | 8, 90 | 616053-2 |
| 1.5 | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S1014 | 1,137 | RMO30 | Yes | | 616052-1 |
| | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S2014 | 1,399 | RMO30 | Yes | 90 | 616052-1 |
| 2 | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S1015 | 1,357 | RMO30 | Yes | | 616052-1 |
| | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S2015 | 1,655 | RMO30 | Yes | 90 | 616052-1 |

(A) 140TC C-Face

For pricing information or to place orders, go to www.PTplace.com

Totally Enclosed RPM XL Small DC

40°C Ambient • Class F • IP53

C-Face Footless 1/4-2 HP

| HP | SPD RPM Base | Voltage | | Frames | Enclosure | Model Number | List Price | Price Symbol | Norm. Stock | Notes | Dimension Sheets |
|-----|-----------------|---------|------|-----------|-----------|-----------------|---------------|-----------------|----------------|----------|---------------------|
| | | Arm. | Fld. | | | | | | | | |
| 1/4 | 1750 | 90 | PM | SE56C | TEFC | T56S1000 | \$342 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2000 | 471 | RMO30 | Yes | | 616050-1 |
| 1/3 | 1750 | 90 | PM | SE56C | TEFC | T56S1002 | 362 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2002 | 495 | RMO30 | Yes | | 616050-1 |
| 1/2 | 1750 | 90 | PM | ME56C | TEFC | T56S1004 | 404 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | PM | ME56C | TEFC | T56S2004 | 542 | RMO30 | Yes | | 616050-1 |
| | 1750 | 180 | PM | LE56C | TEFC | T56S1007 | 404 | RMO30 | Yes | 616050-1 | |
| | 1750 | 180 | PM | LE56C | TEFC | T56S2007 | 547 | RMO30 | Yes | 90 | 616052-1 |
| | 2500 | 90 | PM | SE56C | TEFC | T56S1028 | 362 | RMO30 | Yes | 616052-1 | |
| 3/4 | 1750 | 90 | PM | LE56C | TEFC | T56S1008 | 491 | RMO30 | Yes | 90 | 616050-1 |
| | 1750 | 90 | PM | LE56C | TEFC | T56S2008 | 648 | RMO30 | Yes | | 616050-1 |
| | 1750 | 180 | PM | SF56C | TEFC | T56S1010 | 491 | RMO30 | Yes | 616052-1 | |
| | 1750 | 180 | PM | SF56C | TEFC | T56S2010 | 674 | RMO30 | Yes | 90 | 616052-1 |
| 1 | 1750 | 90 | PM | MF56C | TEFC | T56S1018 | 599 | RMO30 | Yes | 90 | 616052-1 |
| | 1750 | 90 | PM | MF56C | TEFC | T56S2018 | 769 | RMO30 | Yes | | 616052-1 |
| | 1750 | 180 | PM | MF56C | TEFC | T56S1030 | 599 | RMO30 | Yes | 616052-1 | |
| | 1750 | 180 | PM | SF56C | TEFC | T56S1031 | 491 | RMO30 | Yes | 616052-1 | |
| 1.5 | 1750 | 180 | PM | LF56CZ(A) | TEFC | T56S1032 | 1,137 | RMO30 | Yes | 616052-1 | |
| 2 | 1750 | 180 | PM | LF56CZ(A) | TEFC | T56S1033 | 1,357 | RMO30 | Yes | 616052-1 | |

(A) 140TC C-Face

For additional product information, go to www.reliance.com

Totally Enclosed RPM XL Small Permanent Magnet DC Washdown

40°C Ambient • Class F • IP55

Description

RPM XL Small DC Washdown motors are designed for reliability in severe applications where the motor is in a wet and/or dirty environment.

Features

- 20:1 constant torque with free wheeling diode
- For operating from full wave single-phase rectified power (Type K)
- Stainless steel shaft
- USDA approved white epoxy paint
- Four drain plugs in each end
- Double lip seals on shaft
- Double sealed bearings
- Permanent magnet fields
- Cast iron end shields
- Easy access to brushes

C-Face Foot Mounted 1/4 - 2 HP

| HP | SPD RPM Base | Voltage | | Frames | Enclosure | Model Number | List Price | Price Symbol | Norm. Stock | Notes | Dimension Sheets |
|-----|--------------|---------|------|------------|-----------|--------------|------------|--------------|-------------|-------|------------------|
| | | Arm. | Fld. | | | | | | | | |
| 1/4 | 1750 | 90 | PM | SE56C | TEFC | T56S1700 | \$444 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2700 | 594 | RMO30 | Yes | 90 | 616050-51 |
| 1/3 | 1750 | 90 | PM | SE56C | TEFC | T56S1701 | 470 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2701 | 624 | RMO30 | Yes | 90 | 616050-51 |
| 1/2 | 1750 | 90 | PM | ME56C | TEFC | T56S1702 | 527 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | ME56C | TEFC | T56S2702 | 691 | RMO30 | Yes | 90 | 616050-51 |
| | 1750 | 180 | PM | LE56C | TEFC | T56S1703 | 527 | RMO32 | Yes | | 616050-51 |
| | 1750 | 180 | PM | LE56C | TEFC | T56S2703 | 754 | RMO30 | Yes | 90 | 616050-51 |
| 3/4 | 1750 | 90 | PM | LE56C | TEFC | T56S1704 | 638 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | LE56C | TEFC | T56S2704 | 819 | RMO30 | Yes | 90 | 616050-51 |
| | 1750 | 180 | PM | SF56HC | TEFC | T56S1705 | 638 | RMO32 | Yes | | 616052-51 |
| | 1750 | 180 | PM | SF56HC | TEFC | T56S2705 | 854 | RMO30 | Yes | 90 | 616052-51 |
| 1 | 1750 | 90 | PM | MF56HC | TEFC | T56S1706 | 779 | RMO32 | Yes | | 616052-51 |
| | 1750 | 90 | PM | MF56HC | TEFC | T56S2706 | 984 | RMO30 | Yes | 90 | 616052-51 |
| | 1750 | 180 | PM | MF56HC | TEFC | T56S1707 | 779 | RMO32 | Yes | | 616052-51 |
| | 1750 | 180 | PM | MF56HC | TEFC | T56S2707 | 984 | RMO30 | Yes | 90 | 616052-51 |
| 1.5 | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S1708 | 1,534 | RMO32 | Yes | | 616052-51 |
| | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S2708 | 1,868 | RMO30 | Yes | 90 | 616052-51 |
| 2 | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S1709 | 1,831 | RMO32 | Yes | | 616052-51 |
| | 1750 | 180 | PM | LF56HCZ(A) | TEFC | T56S2709 | 2,204 | RMO30 | Yes | 90 | 616052-51 |

C-Face Footless 1/4 - 1 HP

| HP | SPD RPM Base | Voltage | | Frames | Enclosure | Model Number | List Price | Price Symbol | Norm. Stock | Notes | Dimension Sheets |
|-----|--------------|---------|------|--------|-----------|--------------|------------|--------------|-------------|-------|------------------|
| | | Arm. | Fld. | | | | | | | | |
| 1/4 | 1750 | 90 | PM | SE56C | TEFC | T56S1710 | \$444 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | SE56C | TEFC | T56S2710 | 589 | RMO30 | Yes | 90 | 616050-51 |
| 3/4 | 1750 | 90 | PM | LE56C | TEFC | T56S1711 | 638 | RMO32 | Yes | | 616050-51 |
| | 1750 | 90 | PM | LE56C | TEFC | T56S2711 | 814 | RMO30 | Yes | 90 | 616050-51 |
| 1 | 1750 | 90 | PM | MF56C | TEFC | T56S1712 | 779 | RMO32 | Yes | | 616052-51 |
| | 1750 | 90 | PM | MF56C | TEFC | T56S2712 | 979 | RMO30 | Yes | 90 | 616052-51 |

(A) 140TC C-Face

Stock Accessories

RPM XL Small DC Frames SE56 - LG56HCZ

TACHOMETER MOUNTING KITS - CUSTOMER MOUNTED - TACH NOT INCLUDED

| Enclosure | Tachometer Type | Ordering Number | List Price | Discount Symbol |
|------------|----------------------|-----------------|------------|-----------------|
| TEFC | RE-007 / RE-020 | 422969-1A | \$150 | RGKIT |
| TEFC | 5PY&RPY444 | 422969-4A | 380 | RGKIT |
| TEFC | BC42, BC46 | 422969-7A | 380 | RGKIT |
| TEFC | M45E1000 (RE045) (2) | 417708-79 | 160 | RGKIT |
| Washdown** | RE-007/RE-020 | 422969-1B | 206 | RGKIT |
| Washdown** | 5PY, RPY444 | 422969-4B | 430 | RGKIT |
| Washdown** | BC42, BC46 | 422969-7B | 430 | RGKIT |
| TENV | M45E1000 (RE045) (2) | 417708-78 | 150 | RGKIT |

TACHOMETER - CUSTOMER MOUNTED - MOUNTING KITS NOT INCLUDED

| Tachometer Type | Description Volts / 1000 RPM | Ordering Number | List Price | Discount Symbol |
|----------------------|---------------------------------|-----------------|------------|-----------------|
| RE-007 | DC-7V | 417708-43 | \$540 | RGKIT |
| RE-020 | DC-20.8 | 417708-44 | 540 | RGKIT |
| RPY444 | DC-50V | 417708-45 | 830 | RGKIT |
| RPY444 | DC-100V | 417708-46 | 830 | RGKIT |
| RE-050(1)* | AC-50V(56C) | 417708-47 | 780 | RGKIT |
| RE-050(1)* | AC-50V(140TC) | 417708-48 | 780 | RGKIT |
| M45E1000 (RE045) (2) | AC-45V | 607980-84A | 350 | RGKIT |

*Washdown Duty

** for use with Washdown Duty DC motors Only

(1) Double C-Face tach. Mounting kit not required for drive end mounting.

(2) M45E1000 replaces RE045

For factory mounting of tachometer provisions and/or tachs to stock DC motors, see DCFast Modification page.

DCFast

The DCFast program replaces the “stock motor modifications” program. DCFast modifications will be shipped in 4 weeks or less from the Gainesville Motor Plant.

HOW TO PRICE DCFast BASIC MOTOR MODIFICATIONS

1. Determine model number and list price of the stock motor you wish to modify
2. Determine total list price for the modification you require from below
3. Multiply list price (basic + modifications) by the RMO31 (Use production quantity 5+ multiplier for any quantity)

| Modification | List Price Adders 56 Frame DC |
|---|----------------------------------|
| ALTITUDE/AMBIENT - See NAMEPLATES | |
| BALANCE - 0.0010 inch, peak-to-peak | \$30 |
| BRAKES | |
| Double C-face to C-face motor output shaft (not applicable to XP) | |
| - 3 ft. - lbs | 370 |
| - 6 ft. - lbs | 410 |
| - 10 ft. lbs | 480 |
| -15 ft. lbs | 560 |
| INSULATION - Addition of tropical, anti-fungus treatment to windings for FJ | 60 |
| LEADS - Conversion to extra length leads with standard material | 20 Per Ft. |
| NAMEPLATES - | |
| • Re-nameplating or re-rating for altitude, ambient, service factor | 30 |
| • Addition of second nameplate for customer data | 30 |
| SLINGER - Addition of rubber V-ring slinger on shaft extension | 30 |
| SPECIAL PAINT COLOR - Reliance Approved Formula | 95 |
| TACH PROVISIONS - Includes stub shaft, adapter & coupling for the following only. Not applicable to XP | |
| • RE020, RE007, M45E1000 (RE045) (2) | 150 |
| • RPY444, 5PY, BC42 OR BC46 | 264 |
| TACHOMETERS - Tachometers mounted on model number D-C motors | |
| TACHOMETERS | |
| • RE007 | 740 |
| • RE020- #602473-1A | 740 |
| • M45E1000 (RE045) (2) | 740 |
| • RE050 #607980-25 | 740 |
| • RPY444 | 1,520 |
| • 5PY #R59E1050 or R59E1100 | 3,037 |
| ENCODERS | |
| Hollow Shaft Type | 1,500 |
| • BEI HS35 1024,2048PPR, single output. Available on TEFC & Washdown Motors only | |
| RESOLVERS | |
| • 800123-2R Resolver | 2,455 |
| • 800123-2S Resolver | 2,741 |
| TEST - Perform routine test and provide routine test report (per motor tested) | 50 |

Non-shaded Areas - 2 Weeks Delivery

Shaded Areas - 4 Week Delivery

(2) M45E1000 replaces RE045