

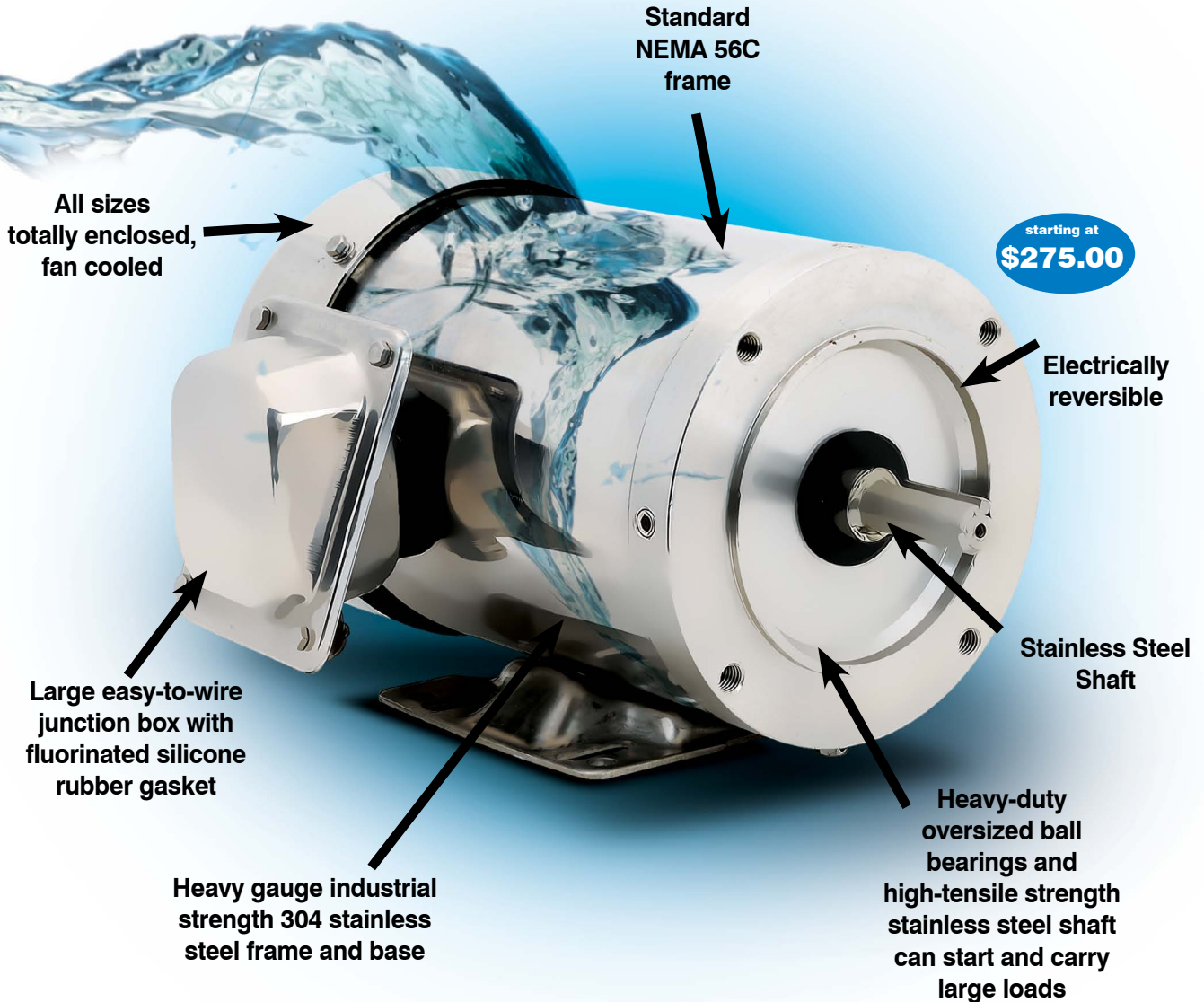
IronHorse is ready for washdowns and harsh environments!



IRONHORSE
AUTOMATIONDIRECT

IP56 environmental rating

MTSS Stainless Steel 56C Frame Motors 0.33 to 0.75 hp

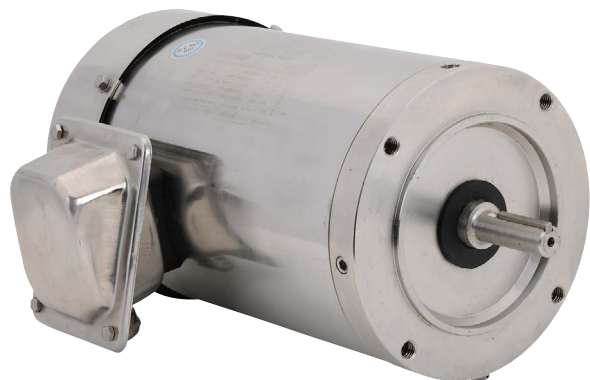


Three-phase - 208-230/460 Volt, 56C Frame - TEFC Enclosure, 1800 & 3600 RPM

- 0.33 to 0.75 hp
- Electrically reversible
- Round body motors (no base) also available
- Heavy gauge stainless steel shaft, frame and base
- Available with or without mounting feet
- Includes pre-installed IP66 cord grip

IronHorse[®] MTSS Stainless-Steel Three-Phase General-Purpose AC Motors

MTSS Stainless Steel TEFC Motors – Three Phase – 0.33 to 0.75 hp



MTSS-xxx-3BDxxR
3-Phase Stainless Steel 56C Frame without Feet

Features

- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA 56C flange mount
- 304 stainless steel shell frame
- Stainless steel shaft
- Large easy-to-wire junction box with fluorinated silicone rubber gasket
- Nickel-plated brass cable gland included
- IP56 environmental rating
- Available with or without mounting feet
- Heavy-duty permanently-sealed oversized ball bearings
- Nameplate information with wiring diagram etched into frame
- Electrically reversible
- NEMA design B
- Class F winding insulation
- Service Factor: 1.15 across-the-line (1.0 with AC drive)
- One year warranty
- cCSA_{us} certified

Accessories & Spare Parts Available

- Nickel-plated brass cable gland (spare/replacement)



MTSS-xxx-3BDxx
3-Phase Stainless Steel 56C Frame with Feet

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps
- Inverter capable
- Washdown environments



MTAS-CG-M22
Spare/Replacement Nickel-plated Brass Cable Gland

IronHorse® MTSS Stainless-Steel Three-Phase General-Purpose AC Motors

56C Frame Stainless Steel TEFC Motors – Three Phase – 0.33 to 0.75 hp

| Motor Specifications – 3-phase 56C Frame Stainless Steel Motors – 1800 & 3600 RPM | | | | | | | | | | |
|---|----------|-----|-------------------------|-------|-------------|---------------------------------------|------------------|----------------|---------------------------|--------------------|
| Part Number | Price | HP | Base RPM | Phase | Voltage | Housing | NEMA Frame | Service Factor | F.L. Amps @ 208-230V/460V | Approx Weight (lb) |
| MTSS-P33-3BD18R | \$275.00 | 1/3 | 1800 | 3 | 208-230/460 | TEFC | 56C flange mount | 1.15 | 1.5-1.4 / 0.7 | 27 |
| MTSS-P50-3BD18R | \$279.00 | 1/2 | | | | stainless steel frame with round body | | | 1.55-1.5 / 0.75 | 27 |
| MTSS-P75-3BD18R | \$288.00 | 3/4 | F1 conduit box location | | | 2.6-2.4 / 1.2 | | | 29 | |
| MTSS-P33-3BD18 | \$289.00 | 1/3 | 1800 | | | TEFC | | | 1.5-1.4 / 0.7 | 28 |
| MTSS-P50-3BD18 | \$294.00 | 1/2 | 1800 | | | stainless steel frame with rigid base | | | 1.55-1.5 / 0.75 | 28 |
| MTSS-P50-3BD36 | \$287.00 | | 3600 | | | 1.99-1.8 / 0.9 | | | 29 | |
| MTSS-P75-3BD18 | \$303.00 | 3/4 | 1800 | | | F1 conduit box location | | | 2.6-2.4 / 1.2 | 30 |
| MTSS-P75-3BD36 | \$292.00 | | 3600 | | | | | | 2.4-2.3 / 1.15 | 31 |

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

| Motor Accessory (Optional) – 3-phase 56C Frame Stainless Steel Motors – 1800 & 3600 RPM | | | |
|---|---------|---|--------------------|
| Part Number | Price | Description | Approx Weight (lb) |
| MTAS-CG-M22 | \$27.00 | Cable gland; M22 x 1.5 mm thread; (1) silicone rubber gasket accommodates a cable diameter range of 0.393 to 0.512 in (10 to 13 mm); IP66 protection level; nickel-plated brass housing. This is a SPARE part for IronHorse MTSS motors - one cable gland is pre-installed on each MTSS motor. | 0.2 |

| Performance Data – 3-phase 56C Frame Stainless Steel Motors (460V data except as indicated) – 1800 & 3600 RPM | | | | | | | | | | | | | | | |
|---|-----|-------------|--------|---------------------|----------|-----------------------|--------------|----------------|--------------|------------|---------------------|------|-------------------|-----------------|-------------------------------------|
| Part Number | HP | NEMA Design | FL RPM | Minimum Speed (rpm) | | Current @ 460V (Amps) | | Torque (lb-ft) | | | Maximum Speed (rpm) | | FL Efficiency (%) | FL Power Factor | Rotor Inertia (lb-ft ²) |
| | | | | CT (2:1) | VT (5:1) | No Load | Locked Rotor | Full Load | Locked Rotor | Break-down | CHP* | Safe | | | |
| MTSS-P33-3BD18(R) | 1/3 | B | 1725 | 900 | 360 | 0.29 | 4.2 | 1.0 | 2.9 | 3.9 | 2250 | 4500 | 82.5 | 0.71 | 0.078 |
| MTSS-P50-3BD18(R) | 1/2 | | 1725 | 900 | 360 | 0.30 | 4.6 | 1.5 | 3.8 | 5.2 | 2250 | | 82.5 | 0.76 | 0.078 |
| MTSS-P50-3BD36 | | | 3460 | 1800 | 720 | 0.36 | 6.0 | 0.7 | 1.9 | 2.5 | 4500 | | 77.0 | 0.88 | 0.077 |
| MTSS-P75-3BD18(R) | 3/4 | | 1725 | 900 | 360 | 0.44 | 7.3 | 2.2 | 5.0 | 7.0 | 2250 | | 82.5 | 0.78 | 0.081 |
| MTSS-P75-3BD36 | | | 3470 | 1800 | 720 | 0.43 | 7.6 | 1.1 | 2.7 | 3.3 | 4500 | | 73.0 | 0.84 | 0.100 |

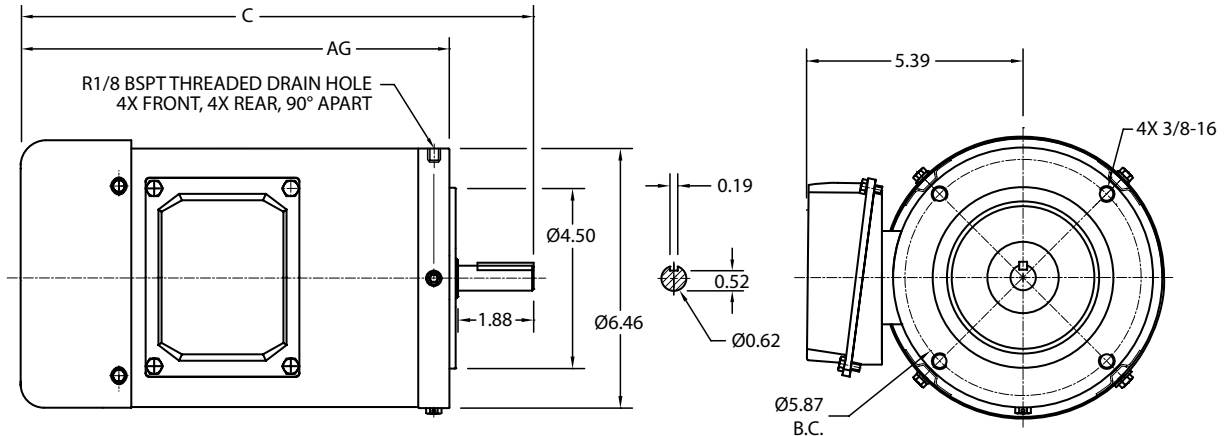
* Maximum Coupled HP speed is for direct-coupled loads.

IronHorse[®] MTSS Stainless-Steel Three-Phase General-Purpose AC Motors

56C Frame Stainless Steel TEFC Motors – Three-Phase – Dimensions

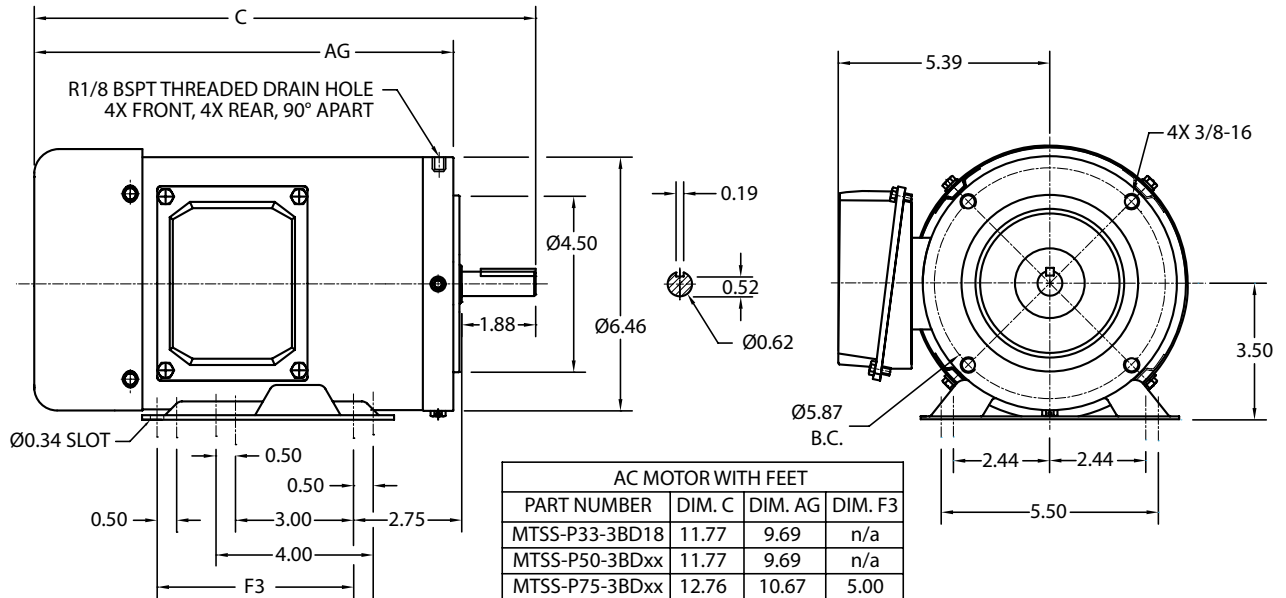
Dimensions = inches

MTSS-xxx-xxxxR 3-Phase Stainless Steel 56C Frame Round-body Motors



| AC MOTOR WITHOUT FEET | | |
|-----------------------|--------|---------|
| PART NUMBER | DIM. C | DIM. AG |
| MTSS-P33-3BD18R | 11.59 | 9.50 |
| MTSS-P50-3BD18R | 11.59 | 9.50 |
| MTSS-P75-3BD18R | 12.76 | 10.67 |

MTSS-xxx-xxxx 3-Phase Stainless Steel 56C Frame Rigid-base Motors



| AC MOTOR WITH FEET | | | |
|--------------------|--------|---------|---------|
| PART NUMBER | DIM. C | DIM. AG | DIM. F3 |
| MTSS-P33-3BD18 | 11.77 | 9.69 | n/a |
| MTSS-P50-3BDxx | 11.77 | 9.69 | n/a |
| MTSS-P75-3BDxx | 12.76 | 10.67 | 5.00 |

AC Motor Selection – IronHorse® General Purpose Motors

| IronHorse® General Purpose Motor Selection | | | | | |
|--|----------------------------------|-----------------------------------|------------------------------------|--|---|
| Characteristics | 1-Phase | | 3-Phase | | |
| | 56C/56HC Frame Rolled Steel*** | T Frame Farm Duty | 56C/56HC Frame Rolled Steel*** | 56C Frame Stainless Steel | Cast Iron T & TC Frames |
| Electrical Characteristics | | | | | |
| Horsepower range | 1/3 – 2 | 2 – 5 | 1/3 – 3 | 1/3 – 3/4 | PE: 1–200(T); 1–100(TC) EPAct: 250–300(T) |
| Base speed (# Poles) | 1800 (4), 3600 (2) | 1800 (4) | 1800 (4), 3600 (2) | | 1200(6), 1800 (4), 3600(2) |
| Standard Voltage | 115/208-230, 115/230 | 230 | 208-230/460 | | 208-230/460 (250 & 300 hp 460V only) |
| Phase / Base Frequency (Hz) | 1 / 60 | | 3 / 60 | | |
| Service Factor | 1.15 | | 1.15 (line) ; 1.0 (drive) | | |
| Design Code (NEMA) | L, N | L | B | | |
| Insulation Class | F | | | | |
| Insulation System | dip & bake twice | VPI, then bake, then dip and bake | dip & bake | double dip & bake | EPAct: double dip & bake PE: VPI |
| Duty Cycle | continuous | | | | |
| Thermal protection | none | yes | none | | |
| Mechanical Characteristics | | | | | |
| Frame size (mounting) | 56C or 56HC | 182T – 184T | 56C or 56HC | | 143T/TC – 405TC/449T |
| Enclosure | TEFC | | | | |
| Frame material | rolled steel | | 304 stainless steel | | cast iron |
| End bracket material | aluminum | cast iron | aluminum | 304 stainless steel | cast iron |
| Junction box material | steel | | 304 stainless steel | | cast iron |
| Fan guard material | steel | steel | steel | 304 stainless steel | steel |
| Fan material | polypropylene plastic | plastic | plastic | heat-resistant polyethylene | plastic (143T/TC - 445/7T) aluminum (449T) |
| Lead termination | junction box | | | | |
| Standard mounting | C-Face with Removable Rigid Base | Rigid Base | C-Face with Removable Rigid Base | C-Face with Rigid Base C-Face with Round Body | Rigid Base (C-Flange kit available EPAct) C-Face with Rigid Base (1-100 hp) |
| Drive end shaft slinger | yes | | | | |
| Paint | black | green | black | n/a | EPAct: epoxy primer / synthetic alkyd enamel PE: polyurethane enamel |
| Bearings | ball | | | | 1-75 hp: ball 100-300 hp: roller |
| Grease | Mobil Polyrex EM | | Korschun lithium-based | | Mobil Polyrex EM |
| Standard junction box assembly position | F1 | | | | F1 (some sizes reversible to F2) |
| Performance Characteristics | | | | | |
| Constant Torque speed range | n/a | n/a | 2:1 (MTR, MTSS); 4:1 (MTRP, MTR2) | | 2:1 (EPAct) 4:1 (Premium Efficiency) |
| Variable Torque speed range | n/a | n/a | 5:1 (MTR, MTSS); 10:1 (MTRP, MTR2) | | 5:1 (EPAct) 10:1 (Premium Efficiency) |
| Constant Horsepower speed range | n/a | n/a | 1.5:1 | | 1.5:1 |
| Temperature rise | F | B | | | |
| Encoder provisions | none | | | | |
| Other Characteristics | | | | | |
| Warranty* | 2 years | | 1 year | | 2 years |
| Agency Approvals ** | CE, cCSA _{US} | | cCSA _{US} | | CE, cCSA _{US} |
| * See Terms and Conditions for motor warranty explanation. 1) For warranty on IronHorse motors below 50 hp, warranty service can be arranged through AutomationDirect. 2) For warranty on IronHorse motors 50 hp and above, motors must be inspected by a local EASA motor repair or service center; (see AutomationDirect Terms & Conditions). ** To obtain the most current agency approval information, see the Agency Approval Checklist on the specific part number's web page. *** 56HC motors are capable of 56C C-face mounting, and are also compatible with 56, 143T, and 145T foot mounting dimensions. | | | | | |