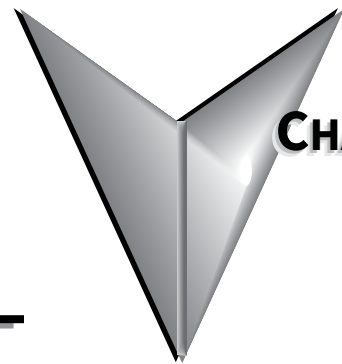


LEGACY MOTORS



CHAPTER

6

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LEGACY MOTORS



CHAPTER

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CHAPTER OVERVIEW

This chapter provides technical information for Ironhorse AC motors that have been retired by ADC. *These legacy models are no longer sold by AutomationDirect*, but are detailed in this chapter to keep motor data available during the motors' lifetime.

We also encourage you to visit our web site where you can find technical and non-technical information about our products and our company. Visit us at www.automationdirect.com.

MTCP SERIES MOTORS

MTCP FEATURES AND SPECIFICATIONS

Premium Efficiency Cast-Iron T-Frame



Premium Efficiency Cast-Iron TC-Frame



IronHorse cast-iron industrial-duty Premium Efficiency motors are available in T-frame housings in speeds of 1200, 1800, and 3600 rpm, and in TC-frame housings in speeds of 1800 rpm. Optional C-face kits are available for IronHorse T-frame Premium Efficiency motors. (Premium Efficiency C-face kits are NOT compatible with EPAct motors.) All models have a TEFC frame and full length mounting feet.



NOTE: For MTCP motors shipped with a shaft lock in place, remove the shaft lock after the motor is installed and before coupling and turning the shaft.

MTCP SPECIFICATIONS

MTCP SPECIFICATIONS – CAST-IRON T-FRAME AND TC-FRAME – 60Hz/1800RPM (50Hz/1500RPM)

| Motor Specifications Premium-Efficiency T & TC Frame Three-Phase Motors 60Hz/1800rpm (50Hz/1500rpm) | | | | | | | | | | |
|---|-------|------------|--|----------------|-------------------|--------------------------|---------------|----------------|-----------------------------------|---------------------|
| Part Number | HP(2) | NEMA Frame | Voltage @ 60Hz (50Hz) | Housing | Shaft Material | Conduit Box Location (1) | Holes / Foot | Service Factor | F.L. Amps @ 230V/460V (200V/400V) | Product Weight (lb) |
| MTCP-001-3BD18 | 1 | 143T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1(F2) | 1.15 (1.0) | | 3.22 / 1.61 (3.70 / 1.85) | 41 |
| MTCP-001-3BD18C | | 143TC | | | | | | | 45 | |
| MTCP-1P5-3BD18 | 1-1/2 | 145T | | | | | | | 4.64 / 2.32 (5.34 / 2.67) | 47 |
| MTCP-1P5-3BD18C | | 145TC | | | | | | | 50 | |
| MTCP-002-3BD18 | 2 | 145T | | | | | | | 6.00 / 3.00 (6.90 / 3.50) | 56 |
| MTCP-002-3BD18C | | 145TC | | | | | | | 60 | |
| MTCP-003-3BD18 | 3 | 182T | | | | | | | 8.05 / 4.02 (9.26 / 4.63) | 84 |
| MTCP-003-3BD18C | | 182TC | | | | | | | 92 | |
| MTCP-005-3BD18 | 5 | 184T | | | | | | | 13.4 / 6.71 (15.4 / 7.71) | 99 |
| MTCP-005-3BD18C | | 184TC | | | | | | | 107 | |
| MTCP-7P5-3BD18 | 7-1/2 | 213T | | | | | | | 18.7 / 9.34 (21.5 / 10.7) | 150 |
| MTCP-7P5-3BD18C | | 213TC | | | | | | | 154 | |
| MTCP-010-3BD18 | 10 | 215T | | | | | | | 24.9 / 12.5 (28.6 / 14.3) | 186 |
| MTCP-010-3BD18C | | 215TC | | | | | | | 190 | |
| MTCP-015-3BD18 | 15 | 254T | | | | | | | 35.8 / 17.9 (41.2 / 20.6) | 329 |
| MTCP-015-3BD18C | | 254TC | | | | | | | 325 | |
| MTCP-020-3BD18 | 20 | 256T | | | | | | | 47.9 / 24.0 (55.1 / 27.6) | 390 |
| MTCP-020-3BD18C | | 256TC | | | | | | | 370 | |
| MTCP-025-3BD18 | 25 | 284T | | | | | | | 59.6 / 29.8 (68.5 / 34.3) | 455 |
| MTCP-025-3BD18C | | 284TC | | | | | | | 467 | |
| MTCP-030-3BD18 | 30 | 286T | | | | | | | 70.0 / 35.0 (80.5 / 40.2) | 488 |
| MTCP-030-3BD18C | | 286TC | | | | | | | 497 | |
| MTCP-040-3BD18 | 40 | 324T | | | | | | | 94.8 / 47.4 (109 / 54.5) | 611 |
| MTCP-040-3BD18C | | 324TC | | | | | | | 626 | |
| MTCP-050-3BD18 (2) | 50 | 326T | | | | | | | 117 / 58.4 (134 / 67.2) | 690 |
| MTCP-050-3BD18C (2) | | 326TC | | | | | | | 706 | |
| MTCP-060-3BD18 (2) | 60 | 364T | | | | | | | 139 / 69.6 (160 / 80.1) | 851 |
| MTCP-060-3BD18C (2) | | 364TC | | | | | | | 864 | |
| MTCP-075-3BD18 (2) | 75 | 365T | | | | | | | 173 / 86.7 (199 / 99.7) | 948 |
| MTCP-075-3BD18C (2) | | 365TC | | | | | | | 961 | |
| MTCP-100-3BD18 (2) | 100 | 405T | 229 / 114 (263 / 132) | 1199 | | | | | | |
| MTCP-100-3BD18C (2) | | 405TC | 1236 | | | | | | | |
| MTCP-125-3BD18 (2) | 125 | 444T | 285 / 143 (328 / 164) | 1500 | | | | | | |
| MTCP-150-3BD18 (2) | 150 | 445T | 342 / 171 (414 / 207) | 1630 | | | | | | |
| MTCP-200-3BD18 (2) | 200 | 445/7T | 453 / 227 (521 / 261) | 2127 | | | | | | |

1) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).

2) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. See AutomationDirect Terms & Conditions for details.

**MTCP SPECIFICATIONS – CAST-IRON T-FRAME AND TC-FRAME
– 60Hz/1200&3600RPM (50Hz/1000&3000 RPM)**

| Motor Specifications Premium Efficiency T-Frame Three-Phase Motors 60Hz / 1200 & 3600 rpm (50Hz / 1000 & 3000 rpm) | | | | | | | | | | |
|--|-------|------------|--|----------------|-------------------|--------------------------|--------------|----------------|-----------------------------------|---------------------|
| Part Number | HP | NEMA Frame | Voltage @ 60Hz (50Hz) | Housing | Shaft Material | Conduit Box Location (1) | Holes / Foot | Service Factor | F.L. Amps @ 230V/460V (200V/400V) | Product Weight (lb) |
| 1200 rpm Base Speed @ 60Hz (1000 rpm Base Speed @ 50Hz) | | | | | | | | | | |
| MTCP-001-3BD12 | 1 | 145T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1(F2) | 4 | 1.15 (1.0) | 3.16 / 1.58 (3.63 / 1.82) | 60 |
| MTCP-1P5-3BD12 | 1-1/2 | 182T | | | | | 2 | | 4.46 / 2.23 (5.13 / 2.57) | 104 |
| MTCP-002-3BD12 | 2 | 184T | | | | | 4 | | 5.72 / 2.86 (6.58 / 3.29) | 110 |
| MTCP-003-3BD12 | 3 | 213T | | | | | 2 | | 8.48 / 4.24 (9.75 / 4.88) | 160 |
| MTCP-005-3BD12 | 5 | 215T | | | | | 4 | | 13.8 / 6.88 (15.8 / 7.91) | 180 |
| MTCP-7P5-3BD12 | 7-1/2 | 254T | | | | | 2 | | 20.9 / 10.4 (24.0 / 12.0) | 325 |
| MTCP-010-3BD12 | 10 | 256T | | | | | 4 | | 27.8 / 13.9 (32.0 / 16.0) | 325 |
| MTCP-015-3BD12 | 15 | 284T | | | | | 2 | | 40.3 / 20.2 (46.4 / 23.2) | 420 |
| MTCP-020-3BD12 | 20 | 286T | | | | | 4 | | 52.4 / 26.2 (60.2 / 30.1) | 470 |
| 3600 rpm Base Speed (3000 rpm Base Speed @ 50Hz) | | | | | | | | | | |
| MTCP-1P5-3BD36 | 1-1/2 | 143T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1(F2) | 2 | 1.15 (1.0) | 4.08 / 2.04 (4.69 / 2.35) | 44 |
| MTCP-002-3BD36 | 2 | 145T | | | | | 4 | | 5.40 / 2.70 (6.20 / 3.10) | 53 |
| MTCP-003-3BD36 | 3 | 182T | | | | | 2 | | 7.74 / 3.87 (8.90 / 4.45) | 79 |
| MTCP-005-3BD36 | 5 | 184T | | | | | 4 | | 12.6 / 6.30 (14.5 / 7.25) | 92 |
| MTCP-7P5-3BD36 | 7-1/2 | 213T | | | | | 2 | | 18.5 / 9.23 (21.2 / 10.6) | 140 |
| MTCP-010-3BD36 | 10 | 215T | | | | | 4 | | 24.4 / 12.2 (28.1 / 14.1) | 161 |
| MTCP-015-3BD36 | 15 | 254T | | | | | 2 | | 35.0 / 17.5 (40.3 / 20.1) | 278 |
| MTCP-020-3BD36 | 20 | 256T | | | | | 4 | | 46.4 / 23.2 (53.4 / 26.7) | 306 |
| 1) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram). | | | | | | | | | | |

MTCP MOTOR PERFORMANCE DATA

MTCP PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME – 60Hz/1800RPM

| Performance Data @ 60Hz Premium-Efficiency T & TC Frame Three-Phase Motors – 1800 rpm (460 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------------|------------------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb·ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque (4:1) | Variable Torque (10:1) | CHP(1) | Safe | | | | |
| MTCP-001-3BD18(C) | 1 | B | 1750 | 450 | 180 | 2700 | 5400 | 86.3 | 0.690 | 0.089 | 1.81 |
| MTCP-1P5-3BD18(C) | 1-1/2 | | 1750 | | | | | 87.3 | 0.726 | 0.11 | 2.80 |
| MTCP-002-3BD18(C) | 2 | | 1750 | | | | | 87.3 | 0.725 | 0.13 | 2.80 |
| MTCP-003-3BD18(C) | 3 | | 1750 | | | | | 90.3 | 0.786 | 0.28 | 1.60 |
| MTCP-005-3BD18(C) | 5 | | 1750 | | | | | 90.3 | 0.786 | 0.33 | 2.00 |
| MTCP-7P5-3BD18(C) | 7-1/2 | | 1760 | | | | | 91.8 | 0.825 | 1.814 | 1.54 |
| MTCP-010-3BD18(C) | 10 | | 1750 | | | | | 92.5 | 0.826 | 1.97 | 1.31 |
| MTCP-015-3BD18(C) | 15 | | 1750 | | | | | 92.5 | 0.890 | 3.33 | 1.22 |
| MTCP-020-3BD18(C) | 20 | | 1770 | | | | | 93.8 | 0.846 | 4.09 | 1.70 |
| MTCP-025-3BD18(C) | 25 | | 1770 | | | | | 93.6 | 0.860 | 7.01 | 1.67 |
| MTCP-030-3BD18(C) | 30 | | 1780 | | | | 93.7 | 0.846 | 8.3 | 1.10 | |
| MTCP-040-3BD18(C) | 40 | | 1780 | | | | 94.4 | 0.850 | 9 | 1.11 | |
| MTCP-050-3BD18(C) | 50 | | 1775 | | | | 94.5 | 0.855 | 14.1 | 0.78 | |
| MTCP-060-3BD18(C) | 60 | | 1788 | | | | 95.0 | 0.850 | 16.27 | 0.66 | |
| MTCP-075-3BD18(C) | 75 | | 1787 | | | | 95.4 | 0.850 | 18.8 | 0.69 | |
| MTCP-100-3BD18(C) | 100 | | 1790 | | | | 95.4 | 0.860 | 45.5 | 0.56 | |
| MTCP-125-3BD18 | 125 | | 1790 | | | | 95.4 | 0.860 | 65.1 | 0.56 | |
| MTCP-150-3BD18 | 150 | | 1790 | | | | 95.8 | 0.860 | 69.26 | 0.53 | |
| MTCP-200-3BD18 | 200 | | 1790 | | | | 96.3 | 0.860 | 84.0 | 0.52 | |

1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 230V/460V (Amps) | | | Torque (lb·ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|---------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-001-3BD18(C) | 1 | 2.3 / 1.1 | 3.2 / 1.6 | 30.0 / 15.0 | 3.0 | 9.0 | 11.4 | 20 seconds | 80°C [176°F] |
| MTCP-1P5-3BD18(C) | 1-1/2 | 3.1 / 1.6 | 4.6 / 2.3 | 40.0 / 20.0 | 4.5 | 9.0 | 14.0 | | |
| MTCP-002-3BD18(C) | 2 | 3.6 / 1.8 | 6.0 / 3.0 | 50.0 / 25.0 | 6.0 | 17.4 | 19.2 | | |
| MTCP-003-3BD18(C) | 3 | 4.1 / 2.1 | 8.1 / 4.0 | 64.0 / 32.0 | 9.0 | 20.7 | 25.2 | | |
| MTCP-005-3BD18(C) | 5 | 6.2 / 3.1 | 13.4 / 6.7 | 92.0 / 46.0 | 15.0 | 34.5 | 43.5 | | |
| MTCP-7P5-3BD18(C) | 7-1/2 | 8.4 / 4.2 | 18.7 / 9.3 | 127 / 63.5 | 22.4 | 44.8 | 69.4 | | |
| MTCP-010-3BD18(C) | 10 | 10.5 / 5.3 | 24.9 / 12.5 | 163 / 81.5 | 30.0 | 61.5 | 93.0 | | |
| MTCP-015-3BD18(C) | 15 | 15.4 / 7.7 | 35.8 / 17.9 | 232 / 116 | 45 | 92 | 126 | | |
| MTCP-020-3BD18(C) | 20 | 17.1 / 8.6 | 47.9 / 24.0 | 290 / 145 | 59.4 | 118.8 | 166.3 | | |
| MTCP-025-3BD18(C) | 25 | 24 / 12 | 59.6 / 29.8 | 365 / 182.5 | 74.2 | 155.8 | 185.5 | | |
| MTCP-030-3BD18(C) | 30 | 27 / 13.5 | 70.0 / 35.0 | 435 / 217.5 | 88.6 | 203.8 | 248.1 | | |
| MTCP-040-3BD18(C) | 40 | 29.6 / 14.8 | 94.8 / 47.4 | 580 / 290 | 118.1 | 248.0 | 271.6 | | |
| MTCP-050-3BD18(C) | 50 | 36.2 / 18.1 | 116.8 / 58.4 | 725 / 362.5 | 148 | 326 | 414 | | |
| MTCP-060-3BD18(C) | 60 | 45.6 / 22.8 | 139.3 / 69.6 | 870 / 435 | 179 | 376 | 519 | | |
| MTCP-075-3BD18(C) | 75 | 58.4 / 29.2 | 173.4 / 86.7 | 1085 / 542.5 | 221 | 464 | 619 | | |
| MTCP-100-3BD18(C) | 100 | 75 / 37.5 | 228.6 / 114.3 | 1450 / 725 | 293.2 | 645.0 | 703.7 | 20 seconds | |
| MTCP-125-3BD18 | 125 | 94.5 / 47.3 | 285.2 / 142.6 | 1816 / 908 | 367 | 624 | 918 | | |
| MTCP-150-3BD18 | 150 | 104.4 / 52.2 | 342 / 171 | 2170 / 1085 | 443 | 797 | 1108 | 18 seconds | |
| MTCP-200-3BD18 | 200 | 133.3 / 66.6 | 453.2 / 226.6 | 2900 / 1450 | 587 | 1174 | 1644 | | |

MTCP MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 60HZ/1200RPM

| Performance Data @ 60Hz – Premium Efficiency T-Frame 3-Phase Motors – 1200 rpm – (460 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------------|------------------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque (4:1) | Variable Torque (10:1) | CHP(1) | Safe | | | | |
| MTCP-001-3BD12 | 1 | B | 1162 | 300 | 120 | 1800 | 3600 | 82.5 | 0.72 | 0.33 | 3.14 |
| MTCP-1P5-3BD12 | 1-1/2 | | 87.5 | | | | | 0.72 | 0.36 | 1.85 | |
| MTCP-002-3BD12 | 2 | | 88.5 | | | | | 0.74 | 0.47 | 2.0 | |
| MTCP-003-3BD12 | 3 | | 89.5 | | | | | 0.74 | 0.50 | 1.65 | |
| MTCP-005-3BD12 | 5 | | 89.5 | | | | | 0.76 | 1.97 | 1.85 | |
| MTCP-7P5-3BD12 | 7-1/2 | | 91.1 | | | | | 0.74 | 2.74 | 1.51 | |
| MTCP-010-3BD12 | 10 | | 91.0 | | | | | 0.74 | 2.98 | 1.56 | |
| MTCP-015-3BD12 | 15 | | 91.7 | | | | | 0.76 | 5.49 | 1.16 | |
| MTCP-020-3BD12 | 20 | | 91.7 | | | | | 0.78 | 12.9 | 1.21 | |

1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|-------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-001-3BD12 | 1 | 2.5 / 1.25 | 3.2 / 1.6 | 30 / 15 | 4.5 | 10.8 | 14.4 | 20 seconds | 80°C [176°F] |
| MTCP-1P5-3BD12 | 1-1/2 | 3.2 / 1.6 | 4.5 / 2.2 | 40 / 20 | 6.68 | 15.36 | 21.38 | | |
| MTCP-002-3BD12 | 2 | 4.2 / 2.1 | 5.7 / 2.9 | 50.0 / 25.0 | 8.61 | 20.66 | 29.88 | | |
| MTCP-003-3BD12 | 3 | 6.4 / 3.2 | 8.5 / 4.2 | 68.0 / 34.0 | 13.36 | 29.39 | 40.08 | | |
| MTCP-005-3BD12 | 5 | 9.2 / 4.6 | 13.8 / 6.9 | 92.0 / 46.0 | 22.2 | 48.8 | 66.6 | | |
| MTCP-7P5-3BD12 | 7-1/2 | 12.0 / 6.0 | 20.9 / 10.4 | 127 / 63.5 | 33.4 | 76.8 | 116.9 | | |
| MTCP-010-3BD12 | 10 | 10.8 / 5.4 | 27.8 / 13.9 | 162 / 81 | 44.5 | 97.9 | 106.8 | | |
| MTCP-015-3BD12 | 15 | 18.0 / 9.0 | 40.3 / 20.2 | 232 / 116 | 60.23 | 132.51 | 174.67 | | |
| MTCP-020-3BD12 | 20 | 17.8 / 8.9 | 52.4 / 26.2 | 290 / 145 | 89.1 | 196.0 | 258.4 | | |

MTCP MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 60HZ/3600RPM

| Performance Data @ 60Hz – Premium Efficiency T-Frame 3-Phase Motors – 3600 rpm – (460 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------------|------------------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque (4:1) | Variable Torque (10:1) | CHP(1) | Safe | | | | |
| MTCP-1P5-3BD36 | 1-1/2 | B | 3570 | 900 | 360 | 5400 | 5400 | 85.5 | 0.83 | 0.08 | 2.00 |
| MTCP-002-3BD36 | 2 | | 3520 | | | | | 86.6 | 0.82 | 0.10 | 2.20 |
| MTCP-003-3BD36 | 3 | | 3520 | | | | | 87.0 | 0.85 | 0.20 | 1.60 |
| MTCP-005-3BD36 | 5 | | 3570 | | | | | 89.0 | 0.84 | 0.22 | 1.46 |
| MTCP-7P5-3BD36 | 7-1/2 | | 3520 | | | | | 89.7 | 0.85 | 0.50 | 1.67 |
| MTCP-010-3BD36 | 10 | | 3550 | | | | | 90.3 | 0.85 | 1.2 | 1.40 |
| MTCP-015-3BD36 | 15 | | 3550 | | | | | 91.2 | 0.85 | 1.86 | 1.11 |
| MTCP-020-3BD36 | 20 | | 3570 | | | | | 91.2 | 0.85 | 2.01 | 0.97 |

1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|-------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-1P5-3BD36 | 1-1/2 | 2.0 / 1.0 | 4.1 / 2.0 | 40.0 / 20.0 | 2.2 | 6.4 | 7.9 | 20 seconds | 80°C [176°F] |
| MTCP-002-3BD36 | 2 | 3.1 / 1.6 | 5.4 / 2.7 | 50.0 / 25.0 | 3.0 | 9.0 | 12.0 | | |
| MTCP-003-3BD36 | 3 | 3.9 / 2.0 | 7.7 / 3.9 | 64.0 / 32.0 | 4.48 | 12.54 | 17.02 | | |
| MTCP-005-3BD36 | 5 | 5.2 / 2.6 | 12.6 / 6.3 | 92.0 / 46.0 | 7.36 | 16.19 | 22.82 | | |
| MTCP-7P5-3BD36 | 7-1/2 | 6.7 / 3.3 | 18.5 / 9.2 | 127 / 63.5 | 11.2 | 28.0 | 34.7 | | |
| MTCP-010-3BD36 | 10 | 8.8 / 4.4 | 24.4 / 12.2 | 163 / 81.5 | 14.8 | 37.0 | 50.3 | | |
| MTCP-015-3BD36 | 15 | 12 / 6 | 35.0 / 17.5 | 232 / 116 | 22.2 | 46.6 | 64.4 | | |
| MTCP-020-3BD36 | 20 | 15 / 7.5 | 46.4 / 23.2 | 290 / 145 | 29.4 | 61.7 | 85.3 | | |

MTCP MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME – 50Hz/1500RPM

| Performance Data @ 50Hz Premium-Efficiency T & TC Frame Three-Phase Motors – 1500 rpm (400 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------|-----------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque | Variable Torque | CHP(1) | Safe | | | | |
| MTCP-001-3BD18(C) | 1 | B | 1453 | 450 | 180 | 2700 | 5400 | 86.3 | 0.690 | 0.089 | 1.81 |
| MTCP-1P5-3BD18(C) | 1.5 | | 1453 | | | | | 87.3 | 0.726 | 0.11 | 2.80 |
| MTCP-002-3BD18(C) | 2 | | 1453 | | | | | 87.3 | 0.725 | 0.13 | 2.80 |
| MTCP-003-3BD18(C) | 3 | | 1453 | | | | | 90.3 | 0.786 | 0.28 | 1.60 |
| MTCP-005-3BD18(C) | 5 | | 1453 | | | | | 90.3 | 0.786 | 0.33 | 2.00 |
| MTCP-7P5-3BD18(C) | 7-1/2 | | 1461 | | | | | 91.8 | 0.825 | 1.814 | 1.54 |
| MTCP-010-3BD18(C) | 10 | | 1453 | | | | | 92.5 | 0.826 | 1.97 | 1.31 |
| MTCP-015-3BD18(C) | 15 | | 1453 | | | | | 92.5 | 0.890 | 3.33 | 1.22 |
| MTCP-020-3BD18(C) | 20 | | 1469 | | | | | 93.8 | 0.846 | 4.09 | 1.70 |
| MTCP-025-3BD18(C) | 25 | | 1469 | | | | | 93.6 | 0.860 | 7.01 | 1.67 |
| MTCP-030-3BD18(C) | 30 | | 1477 | | | | 93.7 | 0.846 | 8.3 | 1.10 | |
| MTCP-040-3BD18(C) | 40 | | 1477 | | | | 94.4 | 0.850 | 9 | 1.11 | |
| MTCP-050-3BD18(C) | 50 | | 1473 | | | | 94.5 | 0.855 | 14.1 | 0.78 | |
| MTCP-060-3BD18(C) | 60 | | 1484 | | | | 95.0 | 0.850 | 16.27 | 0.66 | |
| MTCP-075-3BD18(C) | 75 | | 1483 | | | | 95.4 | 0.850 | 18.8 | 0.69 | |
| MTCP-100-3BD18(C) | 100 | | 1486 | | | | 95.4 | 0.860 | 45.5 | 0.56 | |
| MTCP-125-3BD18 | 125 | | 1486 | | | | 95.4 | 0.860 | 65.1 | 0.56 | |
| MTCP-150-3BD18 | 150 | | 1486 | | | | 95.8 | 0.860 | 69.26 | 0.53 | |
| MTCP-200-3BD18 | 200 | | 1486 | | | | 96.3 | 0.860 | 84.0 | 0.52 | |

1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 200V/400V (Amps) | | | Torque (lb-ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|--------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-001-3BD18(C) | 1 | 2.62 / 1.31 | 3.70 / 1.85 | 34.5 / 17.3 | 3.61 | 10.8 | 13.7 | 20 seconds | 80°C [176°F] |
| MTCP-1P5-3BD18(C) | 1-1/2 | 3.59 / 1.80 | 5.34 / 2.67 | 46.0 / 23.0 | 5.40 | 10.8 | 16.7 | | |
| MTCP-002-3BD18(C) | 2 | 4.10 / 2.10 | 6.90 / 3.50 | 57.5 / 28.8 | 7.20 | 20.9 | 23.0 | | |
| MTCP-003-3BD18(C) | 3 | 4.70 / 2.35 | 9.26 / 4.63 | 73.6 / 36.8 | 10.8 | 24.8 | 30.2 | | |
| MTCP-005-3BD18(C) | 5 | 7.13 / 3.57 | 15.42 / 7.71 | 106 / 52.9 | 18.1 | 41.6 | 52.5 | | |
| MTCP-7P5-3BD18(C) | 7-1/2 | 9.71 / 4.86 | 21.5 / 10.7 | 146 / 73.0 | 27.0 | 54.0 | 83.7 | | |
| MTCP-010-3BD18(C) | 10 | 12.1 / 6.06 | 28.6 / 14.3 | 187 / 93.7 | 36.1 | 74.0 | 112 | | |
| MTCP-015-3BD18(C) | 15 | 17.7 / 8.85 | 41.2 / 20.6 | 267 / 133 | 54.2 | 111 | 152 | | |
| MTCP-020-3BD18(C) | 20 | 19.7 / 9.84 | 55.1 / 27.6 | 334 / 167 | 71.5 | 143 | 200 | | |
| MTCP-025-3BD18(C) | 25 | 27.6 / 13.8 | 68.5 / 34.3 | 420 / 210 | 89.4 | 188 | 224 | | |
| MTCP-030-3BD18(C) | 30 | 31.1 / 15.5 | 80.5 / 40.2 | 500 / 250 | 107 | 246 | 300 | | |
| MTCP-040-3BD18(C) | 40 | 34.0 / 17.0 | 109 / 54.5 | 667 / 334 | 142 | 298 | 327 | | |
| MTCP-050-3BD18(C) | 50 | 41.6 / 20.8 | 134 / 67.2 | 834 / 417 | 178 | 392 | 498 | | |
| MTCP-060-3BD18(C) | 60 | 52.4 / 26.2 | 160 / 80.1 | 1001 / 500 | 212 | 445 | 615 | | |
| MTCP-075-3BD18(C) | 75 | 67.2 / 33.6 | 199 / 99.7 | 1248 / 624 | 266 | 559 | 745 | | |
| MTCP-100-3BD18(C) | 100 | 86.3 / 43.1 | 263 / 132 | 1668 / 834 | 353 | 777 | 847 | 20 seconds | |
| MTCP-125-3BD18 | 125 | 109 / 54.4 | 328 / 164 | 2088 / 1044 | 442 | 751 | 1105 | 18 seconds | |
| MTCP-150-3BD18 | 150 | 126 / 63.2 | 414 / 207 | 2627 / 1314 | 530 | 954 | 1325 | | |
| MTCP-200-3BD18 | 200 | 153 / 77 | 521 / 261 | 3335 / 1668 | 707 | 1414 | 1980 | | |

MTCP MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 50HZ/1000RPM

| Performance Data @ 50Hz – Premium Efficiency T-Frame 3-Phase Motors – 1000 rpm – (400 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------|-----------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque | Variable Torque | CHP(1) | Safe | | | | |
| MTCP-001-3BD12 | 1 | B | 964 | 300 | 120 | 1800 | 3600 | 82.5 | 0.72 | 0.33 | 3.14 |
| MTCP-1P5-3BD12 | 1-1/2 | | 87.5 | | | | | 0.72 | 0.36 | 1.85 | |
| MTCP-002-3BD12 | 2 | | 88.5 | | | | | 0.74 | 0.47 | 2.00 | |
| MTCP-003-3BD12 | 3 | | 89.5 | | | | | 0.74 | 0.50 | 1.65 | |
| MTCP-005-3BD12 | 5 | | 89.5 | | | | | 0.76 | 1.97 | 1.85 | |
| MTCP-7P5-3BD12 | 7-1/2 | | 91.1 | | | | | 0.74 | 2.74 | 1.51 | |
| MTCP-010-3BD12 | 10 | | 91.0 | | | | | 0.74 | 2.98 | 1.56 | |
| MTCP-015-3BD12 | 15 | | 91.7 | | | | | 0.76 | 5.49 | 1.16 | |
| MTCP-020-3BD12 | 20 | | 91.7 | | | | | 0.78 | 12.9 | 1.21 | |

1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 200V/400V (Amps) | | | Torque (lb-ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|-------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-001-3BD12 | 1 | 2.88 / 1.44 | 3.63 / 1.82 | 34.5 / 17.3 | 5.40 | 13.0 | 17.3 | 20 seconds | 80°C [176°F] |
| MTCP-1P5-3BD12 | 1-1/2 | 3.70 / 1.85 | 5.13 / 2.57 | 46.0 / 23.0 | 8.04 | 18.5 | 25.7 | | |
| MTCP-002-3BD12 | 2 | 4.83 / 2.42 | 6.58 / 3.29 | 57.5 / 28.8 | 10.7 | 25.7 | 37.1 | | |
| MTCP-003-3BD12 | 3 | 7.36 / 3.68 | 9.75 / 4.88 | 78.2 / 39.1 | 16.1 | 35.4 | 48.3 | | |
| MTCP-005-3BD12 | 5 | 10.6 / 5.29 | 15.8 / 7.91 | 106 / 52.9 | 26.8 | 59.0 | 80.4 | | |
| MTCP-7P5-3BD12 | 7-1/2 | 13.8 / 6.90 | 24.0 / 12.0 | 146 / 73.0 | 40.2 | 92.5 | 141 | | |
| MTCP-010-3BD12 | 10 | 12.4 / 6.21 | 32.0 / 16.0 | 186 / 93.2 | 53.6 | 118 | 129 | | |
| MTCP-015-3BD12 | 15 | 20.7 / 10.4 | 46.4 / 23.2 | 267 / 133 | 80.4 | 177 | 233 | | |
| MTCP-020-3BD12 | 20 | 20.4 / 10.2 | 60.2 / 30.1 | 334 / 167 | 107 | 235 | 310 | | |

MTCP MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 50HZ/3000RPM

| Performance Data @ 50Hz – Premium Efficiency T-Frame 3-Phase Motors – 3000 rpm – (400 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|-----------------|-----------------|---------|------|---------------------|-------------------|-------------------------------------|----------|
| Part Number | HP | NEMA Design | F.L. RPM | Speed (rpm) | | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| | | | | Minimum | | Maximum | | | | | |
| | | | | Constant Torque | Variable Torque | CHP(1) | Safe | | | | |
| MTCP-1P5-3BD36 | 1-1/2 | B | 2963 | 1800 | 720 | 5400 | 5400 | 85.5 | 0.83 | 0.08 | 2.00 |
| MTCP-002-3BD36 | 2 | | 2922 | | | | | 86.6 | 0.82 | 0.10 | 2.20 |
| MTCP-003-3BD36 | 3 | | 2922 | | | | | 87.0 | 0.85 | 0.20 | 1.60 |
| MTCP-005-3BD36 | 5 | | 2963 | | | | | 89.0 | 0.84 | 0.22 | 1.46 |
| MTCP-7P5-3BD36 | 7-1/2 | | 2922 | | | | | 89.7 | 0.85 | 0.50 | 1.67 |
| MTCP-010-3BD36 | 10 | | 2947 | | | | | 90.3 | 0.85 | 1.20 | 1.40 |
| MTCP-015-3BD36 | 15 | | 2947 | | | | | 91.2 | 0.85 | 1.86 | 1.11 |
| MTCP-020-3BD36 | 20 | | 2963 | | | | | 91.2 | 0.85 | 2.01 | 0.97 |

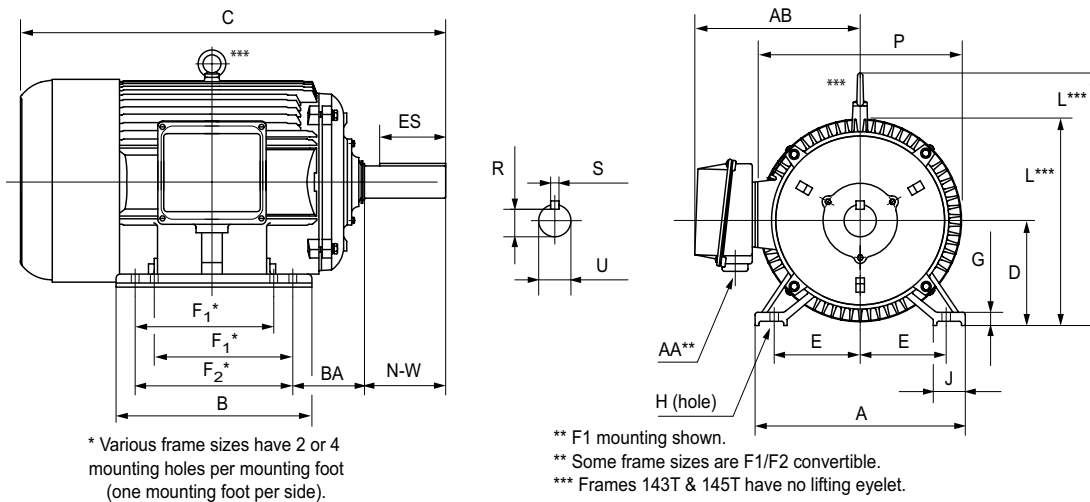
1) Maximum Constant HP RPM is for direct-coupled loads.

| Part Number (repeated) | HP | Current @ 200V/400V (Amps) | | | Torque (lb-ft) | | | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
|------------------------|-------|----------------------------|-------------|--------------|----------------|--------------|------------|---------------------------------------|------------------------------|
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down | | |
| MTCP-1P5-3BD36 | 1-1/2 | 2.30 / 1.20 | 4.69 / 2.35 | 46.0 / 23.0 | 2.66 | 7.71 | 9.58 | 20 seconds | 80°C [176°F] |
| MTCP-002-3BD36 | 2 | 3.60 / 1.80 | 6.20 / 3.10 | 57.5 / 28.8 | 3.60 | 10.8 | 14.4 | | |
| MTCP-003-3BD36 | 3 | 4.49 / 2.25 | 8.90 / 4.45 | 73.6 / 36.8 | 5.39 | 15.1 | 20.5 | | |
| MTCP-005-3BD36 | 5 | 5.98 / 2.99 | 14.5 / 7.25 | 106 / 46.0 | 8.88 | 19.5 | 27.5 | | |
| MTCP-7P5-3BD36 | 7-1/2 | 7.66 / 3.83 | 21.2 / 10.6 | 146 / 73.0 | 13.5 | 33.7 | 41.8 | | |
| MTCP-010-3BD36 | 10 | 10.1 / 5.04 | 28.1 / 14.1 | 188 / 93.8 | 17.8 | 44.5 | 60.5 | | |
| MTCP-015-3BD36 | 15 | 13.8 / 6.90 | 40.3 / 20.1 | 267 / 133 | 26.7 | 56.1 | 77.4 | | |
| MTCP-020-3BD36 | 20 | 17.3 / 8.63 | 53.4 / 26.7 | 334 / 167 | 35.4 | 74.4 | 103 | | |

MTCP MOTOR DIMENSIONS

(DIMENSIONS = INCHES)

MTCP PREMIUM-EFFICIENCY T-FRAME THREE-PHASE MOTOR DIMENSIONS



| Dimensions [inches, except as noted] | | | | | | | | | | | |
|--|-------|------------|------|----------|-------|------|------|-------|------|------|------|
| Premium-Efficiency Three-Phase T-Frame Motors – 1800 rpm | | | | | | | | | | | |
| Part Number | HP | NEMA Frame | A | AA** | AB | B | BA | C | D | E | ES |
| MTCP-001-3BD18 | 1 | 143T | 7 | 3/4"npt | 6.89 | 5.1 | 2.25 | 12.47 | 3.5 | 2.75 | 1.41 |
| MTCP-1P5-3BD18 | 1-1/2 | 145T | 7 | 3/4"npt | 6.89 | 6.1 | 2.25 | 13.47 | 3.5 | 2.75 | 1.41 |
| MTCP-002-3BD18 | 2 | | 7 | 3/4"npt | 6.89 | 6.1 | 2.25 | 13.47 | 3.5 | 2.75 | 1.41 |
| MTCP-003-3BD18 | 3 | 182T | 8.9 | 1" NPT | 7.45 | 6.3 | 2.75 | 15.11 | 4.5 | 3.75 | 1.78 |
| MTCP-005-3BD18 | 5 | 184T | 8.9 | 1" NPT | 7.45 | 7.1 | 2.75 | 16.12 | 4.5 | 3.75 | 1.78 |
| MTCP-7P5-3BD18 | 7-1/2 | 213T | 10.5 | 1" NPT | 8.63 | 7.5 | 3.5 | 18.89 | 5.25 | 4.25 | 2.41 |
| MTCP-010-3BD18 | 10 | 215T | 10.5 | 1" NPT | 8.63 | 9 | 3.5 | 20.49 | 5.25 | 4.25 | 2.41 |
| MTCP-015-3BD18 | 15 | 254T | 12.3 | 1.5" NPT | 12.0 | 10.3 | 4.25 | 23.29 | 6.25 | 5 | 2.91 |
| MTCP-020-3BD18 | 20 | 256T | 12.3 | 1.5" NPT | 12.0 | 12.4 | 4.25 | 25.06 | 6.25 | 5 | 2.91 |
| MTCP-025-3BD18 | 25 | 284T | 13.7 | 1.5" NPT | 13.7 | 12.2 | 4.75 | 26.63 | 7 | 5.5 | 3.28 |
| MTCP-030-3BD18 | 30 | 286T | 13.7 | 1.5" NPT | 13.7 | 13.7 | 4.75 | 28.18 | 7 | 5.5 | 3.28 |
| MTCP-040-3BD18 | 40 | 324T | 15.3 | 2"NPT | 15.3 | 12.6 | 5.25 | 29.95 | 8 | 6.25 | 3.91 |
| MTCP-050-3BD18 | 50 | 326T | 15.3 | 2"NPT | 15.3 | 14.0 | 5.25 | 31.24 | 8 | 6.25 | 3.91 |
| MTCP-060-3BD18 | 60 | 364T | 17.0 | 3"NPT | 17.31 | 14.6 | 5.88 | 32.58 | 9 | 7 | 4.28 |
| MTCP-075-3BD18 | 75 | 365T | 17.0 | 3"NPT | 17.31 | 15.6 | 5.88 | 34.11 | 9 | 7 | 4.28 |
| MTCP-100-3BD18 | 100 | 405T | 20 | 3"NPT | 18.07 | 17.8 | 6.62 | 38.35 | 10 | 8 | 5.65 |
| MTCP-125-3BD18 | 125 | 444T | 22 | 2x3"NPT | 19.07 | 18.5 | 7.5 | 42.52 | 11 | 9 | 6.91 |
| MTCP-150-3BD18 | 150 | 445T | 22 | 2x3"NPT | 19.07 | 20.5 | 7.5 | 44.5 | 11 | 9 | 6.91 |
| MTCP-200-3BD18 | 200 | 445/7T | 22 | 2x3"NPT | 19.07 | 24 | 7.5 | 48.03 | 11 | 9 | 6.91 |

* Various frame sizes have 2 or 4 mounting holes per mounting foot.

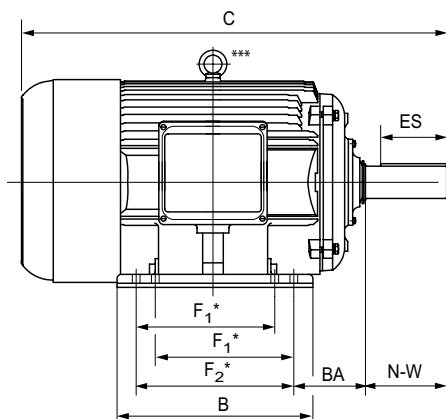
** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table. (F2 mounting = conduit entrance on right side facing shaft.)

*** Frame sizes 143T(C) and 145T(C) have no lifting eyelet.

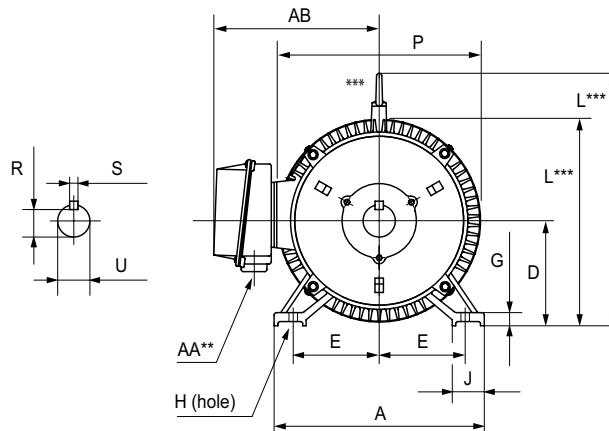
**** TABLE CONTINUED NEXT PAGE (for dimensions F₁-U) ****

MTCP MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTCP PREMIUM-EFFICIENCY T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).



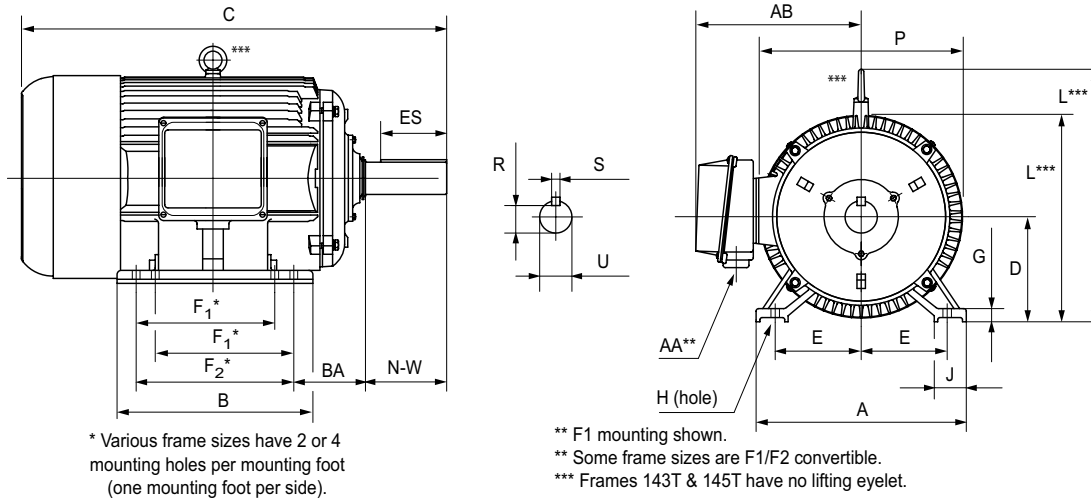
** F1 mounting shown.
 ** Some frame sizes are F1/F2 convertible.
 *** Frames 143T & 145T have no lifting eyelet.

| **** TABLE CONTINUED FROM PREVIOUS PAGE (for dimensions A–ES) **** | | | | | | | | | | | | |
|--|-------|------------------|------------------|------|------|------|------|-------|------|-------|-------|-------|
| Dimensions [inches, except as noted] | | | | | | | | | | | | |
| Premium-Efficiency Three-Phase T-Frame Motors – 1800 rpm | | | | | | | | | | | | |
| Part Number | HP | F ₁ * | F ₂ * | G | H | J | N-W | L | P | R | S | U |
| MTCP-001-3BD18 | 1 | n/a | 4 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-1P5-3BD18 | 1-1/2 | 4 | 5 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-002-3BD18 | 2 | 4 | 5 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-003-3BD18 | 3 | n/a | 4.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-005-3BD18 | 5 | 4.5 | 5.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-7P5-3BD18 | 7-1/2 | n/a | 5.5 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-010-3BD18 | 10 | 5.5 | 7 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-015-3BD18 | 15 | n/a | 8.25 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |
| MTCP-020-3BD18 | 20 | 8.25 | 10 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |
| MTCP-025-3BD18 | 25 | n/a | 9.5 | 0.98 | 0.53 | 2.68 | 4.62 | 16.50 | 16.0 | 1.591 | 0.5 | 1.875 |
| MTCP-030-3BD18 | 30 | 9.5 | 11 | 0.98 | 0.53 | 2.68 | 4.62 | 16.50 | 16.0 | 1.591 | 0.5 | 1.875 |
| MTCP-040-3BD18 | 40 | n/a | 10.5 | 0.98 | 0.66 | 2.76 | 5.25 | 18.25 | 17.5 | 1.845 | 0.5 | 2.125 |
| MTCP-050-3BD18 | 50 | 10.5 | 12 | 0.98 | 0.66 | 2.76 | 5.25 | 18.25 | 17.5 | 1.845 | 0.5 | 2.125 |
| MTCP-060-3BD18 | 60 | n/a | 11.25 | 1.10 | 0.66 | 3.15 | 5.88 | 21.0 | 19.1 | 2.021 | 0.625 | 2.375 |
| MTCP-075-3BD18 | 75 | 11.25 | 12.25 | 1.10 | 0.66 | 3.15 | 5.88 | 21.0 | 19.1 | 2.021 | 0.625 | 2.375 |
| MTCP-100-3BD18 | 100 | 12.25 | 13.75 | 1.18 | 0.81 | 3.15 | 7.25 | 23.46 | 21.4 | 2.45 | 0.75 | 2.875 |
| MTCP-125-3BD18 | 125 | n/a | 14.5 | 1.38 | 0.81 | 3.35 | 8.5 | 26.43 | 23.4 | 2.88 | 0.875 | 3.375 |
| MTCP-150-3BD18 | 150 | 14.5 | 16.5 | 1.38 | 0.81 | 3.35 | 8.5 | 26.43 | 23.4 | 2.88 | 0.875 | 3.375 |
| MTCP-200-3BD18 | 200 | 16.5 | 20 | 1.38 | 0.81 | 3.35 | 8.5 | 26.43 | 23.4 | 2.88 | 0.875 | 3.375 |

* Various frame sizes have 2 or 4 mounting holes per mounting foot.
 ** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table.
 (F2 mounting = conduit entrance on right side facing shaft.)
 *** Frame sizes 143T(C) and 145T(C) have no lifting eyelet.

MTCP MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

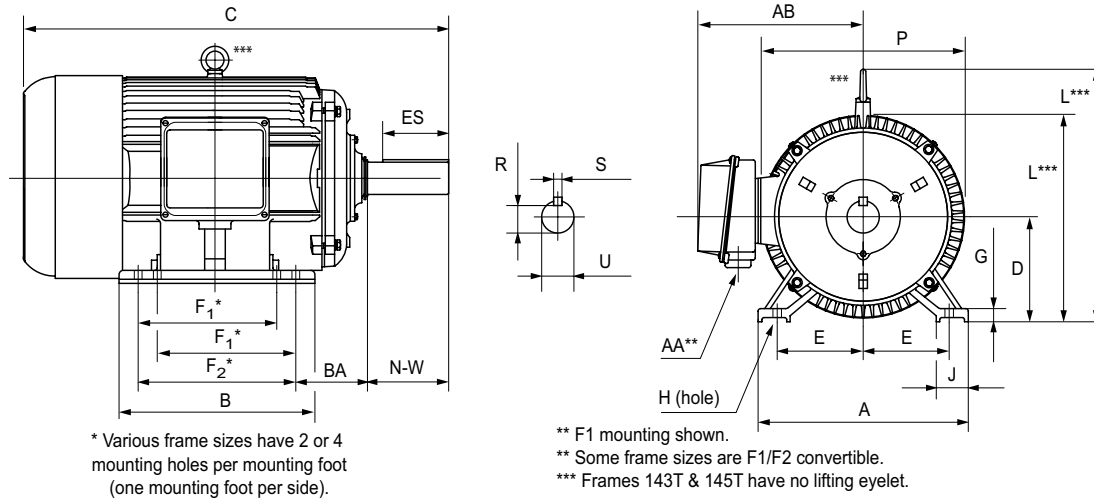
MTCP PREMIUM-EFFICIENCY T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



| Dimensions [inches, except as noted] | | | | | | | | | | | |
|--|-------|------------|------|----------|------|------|------|-------|------|------|------|
| Premium-Efficiency Three-Phase T-Frame Motors – 1200 & 3600 rpm | | | | | | | | | | | |
| Part Number | HP | NEMA Frame | A | AA** | AB | B | BA | C | D | E | ES |
| 1200 rpm Motors | | | | | | | | | | | |
| MTCP-001-3BD12 | 1 | 145T | 7 | 3/4" NPT | 6.89 | 6.1 | 2.25 | 13.47 | 3.5 | 2.75 | 1.41 |
| MTCP-1P5-3BD12 | 1-1/2 | 182T | 8.9 | 1" NPT | 7.45 | 6.3 | 2.75 | 15.11 | 4.5 | 3.75 | 1.78 |
| MTCP-002-3BD12 | 2 | 184T | 8.9 | 1" NPT | 7.45 | 7.1 | 2.75 | 16.12 | 4.5 | 3.75 | 1.78 |
| MTCP-003-3BD12 | 3 | 213T | 10.5 | 1" NPT | 8.63 | 7.5 | 3.5 | 18.89 | 5.25 | 4.25 | 2.41 |
| MTCP-005-3BD12 | 5 | 215T | 10.5 | 1" NPT | 8.63 | 9 | 3.5 | 20.49 | 5.25 | 4.25 | 2.41 |
| MTCP-7P5-3BD12 | 7-1/2 | 254T | 12.3 | 1.5" NPT | 12.0 | 10.3 | 4.25 | 23.29 | 6.25 | 5 | 2.91 |
| MTCP-010-3BD12 | 10 | 256T | 12.3 | 1.5" NPT | 12.0 | 12.4 | 4.25 | 25.06 | 6.25 | 5 | 2.91 |
| MTCP-015-3BD12 | 15 | 284T | 13.7 | 1.5" NPT | 13.7 | 12.2 | 4.75 | 26.63 | 7 | 5.5 | 3.28 |
| MTCP-020-3BD12 | 20 | 286T | 13.7 | 1.5" NPT | 13.7 | 13.7 | 4.75 | 28.18 | 7 | 5.5 | 3.28 |
| 3600 rpm Motors | | | | | | | | | | | |
| MTCP-1P5-3BD36 | 1-1/2 | 143T | 7 | 3/4" NPT | 6.89 | 5.1 | 2.25 | 12.47 | 3.5 | 2.75 | 1.41 |
| MTCP-002-3BD36 | 2 | 145T | 7 | 3/4" NPT | 6.89 | 6.1 | 2.25 | 13.47 | 3.5 | 2.75 | 1.41 |
| MTCP-003-3BD36 | 3 | 182T | 8.9 | 1" NPT | 7.45 | 6.3 | 2.75 | 15.11 | 4.5 | 3.75 | 1.78 |
| MTCP-005-3BD36 | 5 | 184T | 8.9 | 1" NPT | 7.45 | 7.1 | 2.75 | 16.12 | 4.5 | 3.75 | 1.78 |
| MTCP-7P5-3BD36 | 7-1/2 | 213T | 10.5 | 1" NPT | 8.63 | 7.5 | 3.5 | 18.89 | 5.25 | 4.25 | 2.41 |
| MTCP-010-3BD36 | 10 | 215T | 10.5 | 1" NPT | 8.63 | 9 | 3.5 | 20.49 | 5.25 | 4.25 | 2.41 |
| MTCP-015-3BD36 | 15 | 254T | 12.3 | 1.5" NPT | 12.0 | 10.3 | 4.25 | 23.29 | 6.25 | 5 | 2.91 |
| MTCP-020-3BD36 | 20 | 256T | 12.3 | 1.5" NPT | 12.0 | 12.4 | 4.25 | 25.06 | 6.25 | 5 | 2.91 |
| * Various frame sizes have 2 or 4 mounting holes per mounting foot. | | | | | | | | | | | |
| ** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table. (F2 mounting = conduit entrance on right side facing shaft.) | | | | | | | | | | | |
| *** Frame sizes 143T(C) and 145T(C) have no lifting eyelet. | | | | | | | | | | | |
| **** TABLE CONTINUED NEXT PAGE (for dimensions F1-U) **** | | | | | | | | | | | |

MTCP MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTCP PREMIUM-EFFICIENCY T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



**** TABLE CONTINUED FROM PREVIOUS PAGE (for dimensions A–ES) ****

| Dimensions [inches, except as noted] | | | | | | | | | | | | |
|---|-------|------------------|------------------|------|------|------|------|-------|------|-------|-------|-------|
| Premium-Efficiency Three-Phase T-Frame Motors – 1200 & 3600 rpm | | | | | | | | | | | | |
| Part Number | HP | F ₁ * | F ₂ * | G | H | J | N-W | L | P | R | S | U |
| 1200 rpm Motors | | | | | | | | | | | | |
| MTCP-001-3BD12 | 1 | 4 | 5 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-1P5-3BD12 | 1-1/2 | n/a | 4.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-002-3BD12 | 2 | 4.5 | 5.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-003-3BD12 | 3 | n/a | 5.5 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-005-3BD12 | 5 | 5.5 | 7 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-7P5-3BD12 | 7-1/2 | n/a | 8.25 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |
| MTCP-010-3BD12 | 10 | 8.25 | 10 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |
| MTCP-015-3BD12 | 15 | n/a | 9.5 | 0.98 | 0.53 | 2.68 | 4.62 | 16.50 | 16.0 | 1.591 | 0.5 | 1.875 |
| MTCP-020-3BD12 | 20 | 9.5 | 11 | 0.98 | 0.53 | 2.68 | 4.62 | 16.50 | 16.0 | 1.591 | 0.5 | 1.875 |
| 3600 rpm Motors | | | | | | | | | | | | |
| MTCP-1P5-3BD36 | 1-1/2 | n/a | 4 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-002-3BD36 | 2 | 4 | 5 | 0.47 | 0.34 | 1.45 | 2.25 | 6.90 | 7.2 | 0.771 | 0.188 | 0.875 |
| MTCP-003-3BD36 | 3 | n/a | 4.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-005-3BD36 | 5 | 4.5 | 5.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.39 | 9.0 | 0.986 | 0.25 | 1.125 |
| MTCP-7P5-3BD36 | 7-1/2 | n/a | 5.5 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-010-3BD36 | 10 | 5.5 | 7 | 0.78 | 0.41 | 2.36 | 3.38 | 12.26 | 10.8 | 1.201 | 0.312 | 1.375 |
| MTCP-015-3BD36 | 15 | n/a | 8.25 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |
| MTCP-020-3BD36 | 20 | 8.25 | 10 | 0.87 | 0.53 | 2.40 | 4 | 15.10 | 14.4 | 1.416 | 0.375 | 1.625 |

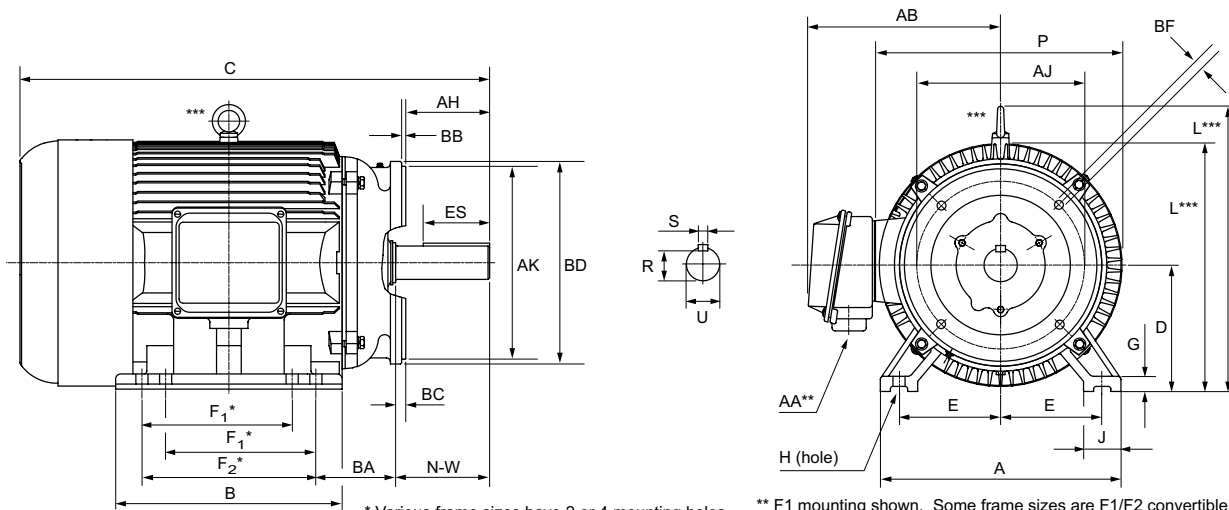
* Various frame sizes have 2 or 4 mounting holes per mounting foot.

** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table.
(F2 mounting = conduit entrance on right side facing shaft.)

*** Frame sizes 143T(C) and 145T(C) have no lifting eyelet.

MTCP MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTCP PREMIUM-EFFICIENCY TC-FRAME THREE-PHASE MOTOR DIMENSIONS



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).

** F1 mounting shown. Some frame sizes are F1/F2 convertible.

*** Frames 143TC and 145TC have no lifting eyelet.

| Dimensions [inches, except as noted] | | | | | | | | | | | | | | | |
|---|-------|---------------|------|----------|------|------|-------|------|------|------|------|------|-------|--------|------|
| Premium-Efficiency Three-Phase TC-Frame Motors – 1800 rpm | | | | | | | | | | | | | | | |
| Part # MTCP- xxx- 3BD18C | HP | NEMA Frame | A | AA** | AB | AH | AJ | AK | B | BA | BB | BC | BD | BF | C |
| -001- | 1 | 143TC | 7 | 3/4" NPT | 6.89 | 1.96 | 5.875 | 4.5 | 5.1 | 2.25 | 0.16 | 0.29 | 6.5 | 3/8-16 | 12.5 |
| -1P5- | 1-1/2 | 145TC | 7 | 3/4" NPT | 6.89 | 1.96 | 5.875 | 4.5 | 6 | 2.25 | 0.16 | 0.29 | 6.5 | 3/8-16 | 13.5 |
| -002- | 2 | | | | | | | | | | | | | | |
| -003- | 3 | 182TC | 8.9 | 1" NPT | 7.45 | 2.37 | 7.25 | 8.5 | 6.3 | 2.75 | 0.25 | 0.38 | 9 | 1/2-13 | 15.1 |
| -005- | 5 | 184TC | 8.9 | 1" NPT | 7.45 | 2.37 | 7.25 | 8.5 | 7.1 | 2.75 | 0.25 | 0.38 | 9 | 1/2-13 | 16.1 |
| -7P5- | 7-1/2 | 213TC | 10.5 | 1" NPT | 8.63 | 2.87 | 7.25 | 8.5 | 7.5 | 3.5 | 0.25 | 0.51 | 9 | 1/2-13 | 18.9 |
| -010- | 10 | 215TC | 10.5 | 1" NPT | 8.63 | 2.87 | 7.25 | 8.5 | 9 | 3.5 | 0.25 | 0.51 | 9 | 1/2-13 | 20.5 |
| -015- | 15 | 254TC | 12.3 | 1.5" NPT | 12.0 | 3.75 | 7.25 | 8.5 | 10.3 | 4.25 | 0.25 | 0.25 | 10 | 1/2-13 | 23.3 |
| -020- | 20 | 256TC | 12.3 | 1.5" NPT | 12.0 | 3.75 | 7.25 | 8.5 | 12.4 | 4.25 | 0.25 | 0.25 | 10 | 1/2-13 | 25.1 |
| -025- | 25 | 284TC | 13.7 | 1.5" NPT | 13.7 | 4.38 | 9 | 10.5 | 12.2 | 4.75 | 0.25 | 0.25 | 11.25 | 1/2-13 | 26.6 |
| -030- | 30 | 286TC | 13.7 | 1.5" NPT | 13.7 | 4.38 | 9 | 10.5 | 13.7 | 4.75 | 0.25 | 0.24 | 11.25 | 1/2-13 | 28.2 |
| -040- | 40 | 324TC | 15.3 | 2" NPT | 15.3 | 5 | 11 | 12.5 | 12.6 | 5.25 | 0.25 | 0.24 | 14 | 5/8-11 | 30.0 |
| -050- | 50 | 326TC | 15.3 | 2" NPT | 15.3 | 5 | 11 | 12.5 | 14.0 | 5.25 | 0.25 | 0.25 | 14 | 5/8-11 | 31.2 |
| -060- | 60 | 364TC | 17.0 | 3" NPT | 17.3 | 5.62 | 11 | 12.5 | 14.6 | 5.88 | 0.25 | 0.25 | 14 | 5/8-11 | 32.6 |
| -075- | 75 | 365TC | 17.0 | 3" NPT | 17.3 | 5.62 | 11 | 12.5 | 15.6 | 5.88 | 0.25 | 0.25 | 14 | 5/8-11 | 34.1 |
| -100- | 100 | 405TC | 20 | 3" NPT | 18.1 | 7 | 11 | 12.5 | 17.8 | 6.62 | 0.25 | 0.25 | 15.5 | 5/8-11 | 38.4 |

* Various frame sizes have 2 or 4 mounting holes per mounting foot.

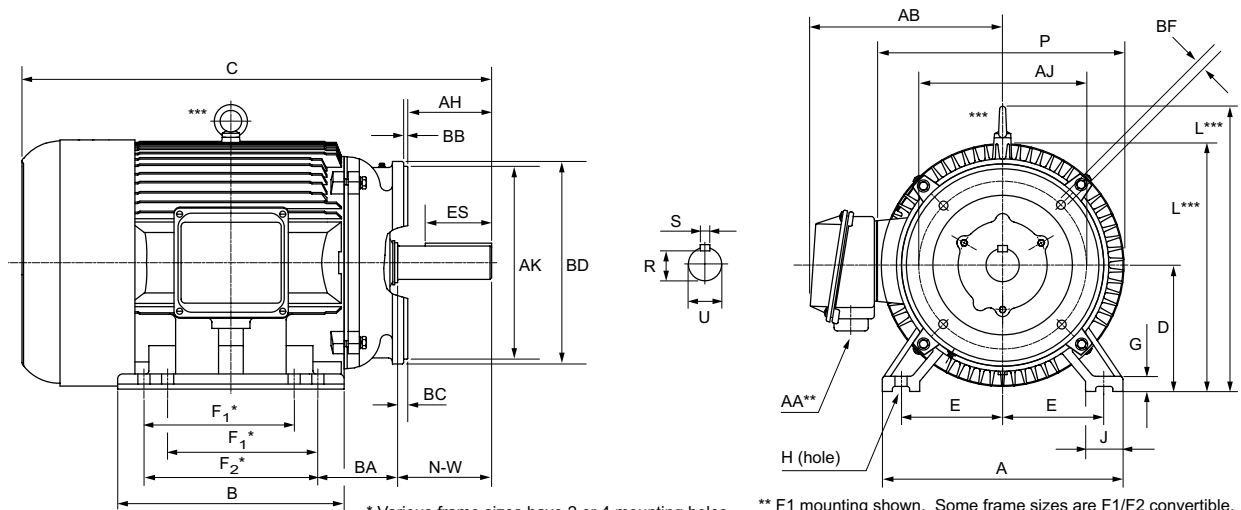
** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table.
(F2 mounting = conduit entrance on right side facing shaft.)

*** Frame sizes 143T(C) and 145T(C) have no lifting eyelet.

**** TABLE CONTINUED NEXT PAGE (for dimensions D-U) ****

MTCP MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTCP PREMIUM-EFFICIENCY TC-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).

** F1 mounting shown. Some frame sizes are F1/F2 convertible.

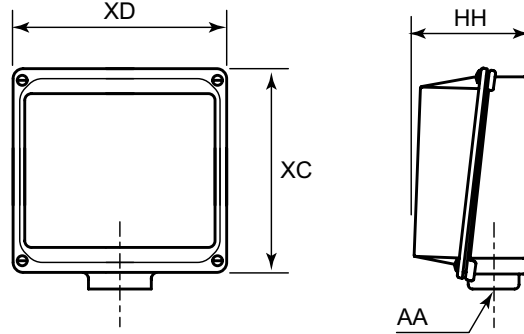
*** Frames 143TC and 145TC have no lifting eyelet.

**** TABLE CONTINUED FROM PREVIOUS PAGE (for dimensions A–C) ****

| Dimensions [inches, except as noted] | | | | | | | | | | | | | | | |
|---|-------|------|------|------|------------------|------------------|------|------|------|------|------|------|-------|-------|-------|
| Premium-Efficiency Three-Phase TC-Frame Motors – 1800 rpm | | | | | | | | | | | | | | | |
| Part # MTCP- xxx- 3BD18C | HP | D | E | ES | F ₁ * | F ₂ * | G | H | J | N-W | L | P | R | S | U |
| -001- | 1 | 3.5 | 2.75 | 1.41 | n/a | 4 | 0.47 | 0.34 | 1.45 | 2.25 | 6.9 | 7.2 | 0.771 | 0.188 | 0.875 |
| -1P5- | 1-1/2 | 3.5 | 2.75 | 1.41 | 4 | 5 | 0.47 | 0.34 | 1.45 | 2.25 | 6.9 | 7.2 | 0.771 | 0.188 | 0.875 |
| -002- | 2 | | | | | | | | | | | | | | |
| -003- | 3 | 4.5 | 3.75 | 1.78 | n/a | 4.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.4 | 9.0 | 0.986 | 0.25 | 1.125 |
| -005- | 5 | 4.5 | 3.75 | 1.78 | 4.5 | 5.5 | 0.52 | 0.41 | 1.97 | 2.75 | 10.4 | 9.0 | 0.986 | 0.25 | 1.125 |
| -7P5- | 7-1/2 | 5.25 | 4.25 | 2.41 | n/a | 5.5 | 0.78 | 0.41 | 2.36 | 3.38 | 12.3 | 10.8 | 1.201 | 0.312 | 1.375 |
| -010- | 10 | 5.25 | 4.25 | 2.41 | 5.5 | 7 | 0.78 | 0.41 | 2.36 | 3.38 | 12.3 | 10.8 | 1.201 | 0.312 | 1.375 |
| -015- | 15 | 6.25 | 5 | 2.91 | n/a | 8.25 | 0.87 | 0.53 | 2.40 | 4 | 15.1 | 14.4 | 1.416 | 0.375 | 1.625 |
| -020- | 20 | 6.25 | 5 | 2.91 | 8.25 | 10 | 0.87 | 0.53 | 2.40 | 4 | 15.1 | 14.4 | 1.416 | 0.375 | 1.625 |
| -025- | 25 | 7 | 5.5 | 3.28 | n/a | 9.5 | 0.98 | 0.53 | 2.68 | 4.62 | 16.5 | 16.0 | 1.591 | 0.5 | 1.875 |
| -030- | 30 | 7 | 5.5 | 3.28 | 9.5 | 11 | 0.98 | 0.53 | 2.68 | 4.62 | 16.5 | 16.0 | 1.591 | 0.5 | 1.875 |
| -040- | 40 | 8 | 6.25 | 3.91 | n/a | 10.5 | 0.98 | 0.66 | 2.76 | 5.25 | 18.3 | 17.5 | 1.854 | 0.5 | 2.125 |
| -050- | 50 | 8 | 6.25 | 3.91 | 10.5 | 12 | 0.98 | 0.66 | 2.76 | 5.25 | 18.3 | 17.5 | 1.845 | 0.5 | 2.125 |
| -060- | 60 | 9 | 7 | 4.28 | n/a | 11.25 | 1.10 | 0.66 | 3.15 | 5.88 | 21.0 | 19.1 | 2.021 | 0.625 | 2.375 |
| -075- | 75 | 9 | 7 | 4.28 | 11.25 | 12.25 | 1.10 | 0.66 | 3.15 | 5.88 | 21.0 | 19.1 | 2.021 | 0.625 | 2.375 |
| -100- | 100 | 10 | 8 | 5.65 | 12.25 | 13.75 | 1.18 | 0.81 | 3.15 | 7.25 | 23.5 | 21.4 | 2.45 | 0.75 | 2.875 |

* Various frame sizes have 2 or 4 mounting holes per mounting foot.
 ** AA dimension is conduit fitting size. F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table.
 (F2 mounting = conduit entrance on right side facing shaft.)
 *** Frame sizes 143T(C) and 145T(C) have no lifting eyelet.

MTCP JUNCTION BOX DIMENSIONS



| Junction Box Dimensions (in) | | | | |
|------------------------------|------------|-------------|------------|-------------------------|
| Frame Size * | XD (Width) | XC (Height) | HH (Depth) | AA (Conduit Hole (NPT)) |
| 143T | 11.3 | 4.5 | 2.3 | 3/4 |
| 145T | | 5.0 | 2.5 | 1 |
| 182T | | | | |
| 184T | | | | |
| 213T | | | | |
| 215T | | | | |
| 254T | | 7.3 | 3.3 | 1-1/2 |
| 256T | | | | |
| 284T | | | | |
| 286T | | 10.4 | 6.0 | |
| 324T | | 10.8 | 5.3 | 2 |
| 326T | | | | |
| 364T | | | | 3 |
| 365T | | | | |
| 405T | | | | |
| 444T | | 11.7 | 7.1 | 3 (2 openings) |
| 445T | | | | |
| 445/7T | | | | |
| 449T | | | | |

* TC-frame motors have the same junction boxes as the comparable T-frame motors.

MTCP DECIBEL LEVELS

The decibel (sound) level of an IronHorse® motor should be measured after initial startup, after 30 days, and after six months of use. Decibel levels should remain fairly consistent and can be an indication of misalignment and premature bearing wear. If the measured decibel level for your IronHorse model exceeds the value listed below by more than 10%, contact AutomationDirect or a local motor service technician found at www.easa.com.

| MTCP Average T-Frame Decibel Levels | | |
|--|-----------|-----------------------------------|
| Frame Size * | HP | Noise Level: Lw dB(A) @ 1m |
| | | MTCP |
| 143T | 1 | 70.0 |
| 145T | 1-1/2 | 70.0 |
| | 2 | 70.0 |
| 182T | 2 | – |
| 182T | 3 | 74.0 |
| 184T | 5 | 74.0 |
| 213T | 7-1/2 | 79.0 |
| 215T | 10 | 79.0 |
| 254T | 15 | 84.0 |
| 256T | 20 | 84.0 |
| 284T | 25 | 88.0 |
| 286T | 30 | 88.0 |
| 324T | 40 | 89.0 |
| 326T | 50 | 89.0 |
| 364T | 60 | 95.0 |
| 365T | 75 | 95.0 |
| 405T | 100 | 98.0 |
| 444T | 125 | 100 |
| 445T | 150 | 100 |
| 445/7T | 200 | 103 |
| 449T | 250 | 105.0 |
| | 300 | 105.0 |

* TC-frame motors have the same sound ratings as the comparable T-frame motors.

SPARE/REPLACEMENT PARTS FOR MTCP PREMIUM-EFFICIENCY THREE-PHASE MOTORS

IronHorse junction boxes, TEFC fans, and TEFC fan shrouds are available as direct replacement parts for MTCP motors.

These parts are field installable, and include installation instructions.



| MTCP Premium-Efficiency Three-Phase Motor Replacement Parts | | | | | |
|--|-------------------------------------|------------|--|---------------------|---------------------|
| Part Number (1) | Description (2)(3)(4) | Fits Frame | Fits PE Motor Number (1) | Motor HP | Product Weight (lb) |
| MTAP-FAN-140 | Replacement Fan | 143 & 145 | MTCP-001-3BD12 | 1 | 0.3 |
| MTAP-SHROUD-140 | Replacement Fan Shroud | | MTCP-001-3BD18(C) MTCP-1P5-3BD18(C) MTCP-1P5-3BD36 | 1 1-1/2 1-1/2 | 1.1 |
| MTAP-JBOX-140 | Replacement Junction Box | | MTCP-002-3BD18(C) MTCP-002-3BD36 | 2 2 | 2.6 |
| MTAP-FAN-180 | Replacement Fan | 182 & 184 | MTCP-1P5-3BD12 | 1-1/2 | 0.3 |
| MTAP-SHROUD-180 | Replacement Fan Shroud | | MTCP-002-3BD12 MTCP-003-3BD18(C) MTCP-003-3BD36 | 2 3 3 | 1.5 |
| MTAP-JBOX-180 | Replacement Junction Box | | MTCP-005-3BD18(C) MTCP-005-3BD36 | 5 5 | 3.1 |
| MTAP-FAN-210-2 | Replacement Fan (for 2-pole motors) | 213 & 215 | MTCP-7P5-3BD36 MTCP-010-3BD36 | 7-1/2 10 | 0.3 |
| MTAP-FAN-210 | Replacement Fan (4&6-pole) | | MTCP-003-3BD12 MTCP-005-3BD12 | 3 5 | 0.3 |
| MTAP-SHROUD-210 | Replacement Fan Shroud | | MTCP-7P5-3BD18(C) MTCP-010-3BD18(C) | 7-1/2 10 | 2.3 |
| MTAP-JBOX-210 | Replacement Junction Box | | | | 3.4 |
| 1) These MTAP replacement components fit only MTCP Premium-Efficiency motors; they will NOT fit MTC EPart motors. 2) Replacement Fans include fan, snap ring, and instructions. 3) Replacement Fan Shrouds include shroud, bolts w/washers, rubber plug, and instructions. 4) Replacement Junction Boxes include gasketed base & cover assembly, base gasket, base bolts, and instructions. | | | | | |
| *** TABLE CONTINUED NEXT PAGE *** | | | | | |

SPARE/REPLACEMENT PARTS FOR MTCP PREMIUM-EFFICIENCY 3-PHASE MOTORS (CONTINUED)

| *** TABLE CONTINUED FROM PREVIOUS PAGE *** | | | | | |
|---|-------------------------------------|------------|--|----------|---------------------|
| MTCP Premium-Efficiency Three-Phase Motor Replacement Parts | | | | | |
| Part Number (1) | Description (2)(3)(4) | Fits Frame | Fits PE Motor Number (1) | Motor HP | Product Weight (lb) |
| MTAP-FAN-250-2 | Replacement Fan (for 2-pole motors) | 254 & 256 | MTCP-015-3BD36 MTCP-020-3BD36 | 15 20 | 0.3 |
| MTAP-FAN-250 | Replacement Fan (4&6-pole) | | MTCP-7P5-3BD12 | 7-1/2 | 0.3 |
| MTAP-SHROUD-250 | Replacement Fan Shroud | | MTCP-010-3BD12 | 10 | 4.5 |
| MTAP-JBOX-250 | Replacement Junction Box | | MTCP-015-3BD18(C) MTCP-020-3BD18(C) | 15 20 | 7.0 |
| MTAP-FAN-280 | Replacement Fan | 284 & 286 | MTCP-015-3BD12 | 15 | 0.5 |
| MTAP-SHROUD-280 | Replacement Fan Shroud | | MTCP-020-3BD12 | 20 | 6.5 |
| MTAP-JBOX-280 | Replacement Junction Box | | MTCP-025-3BD18(C) MTCP-030-3BD18(C) | 25 30 | 7.0 |
| MTAP-FAN-320 | Replacement Fan | 324 & 326 | MTCP-040-3BD18(C) | 40 | 0.6 |
| MTAP-SHROUD-320 | Replacement Fan Shroud | | MTCP-050-3BD18(C) | 50 | 8.3 |
| MTAP-JBOX-320 | Replacement Junction Box | | | | 22.3 |
| MTAP-FAN-360 | Replacement Fan | 364 & 365 | MTCP-060-3BD18(C) | 60 | 0.6 |
| MTAP-SHROUD-360 | Replacement Fan Shroud | | MTCP-075-3BD18(C) | 75 | 9.0 |
| MTAP-JBOX-360 | Replacement Junction Box | | | | 22.3 |
| MTAP-FAN-400 | Replacement Fan | 405 | MTCP-100-3BD18(C) | 100 | 1.1 |
| MTAP-SHROUD-400 | Replacement Fan Shroud | | | | 15.8 |
| MTAP-JBOX-400 | Replacement Junction Box | | | | 30.0 |
| MTAP-FAN-440 | Replacement Fan | 444 & 447 | MTCP-125-3BD18 | 125 | 2.0 |
| MTAP-SHROUD-440 | Replacement Fan Shroud | | MTCP-150-3BD18 | 150 | 17.5 |
| MTAP-JBOX-440 | Replacement Junction Box | | MTCP-200-3BD18 | 200 | 40.0 |

1) These MTAP replacement components fit only MTCP Premium-Efficiency motors; they will NOT fit MTC EPart motors.
 2) Replacement Fans include fan, snap ring, and instructions.
 3) Replacement Fan Shrouds include shroud, bolts w/washers, rubber plug, and instructions.
 4) Replacement Junction Boxes include gasketed base & cover assembly, base gasket, base bolts, and instructions.

MTCP BEARING SIZE INFORMATION

All IronHorse® cast-iron motors use premium name-brand bearings (NSK, NTN, or SKF). Below is a bearing size chart listing the type of bearings used in each frame size of IronHorse MTCP motors. The bearing types are also listed on the motor nameplate.

| MTCP Bearing Size Chart | | |
|--------------------------------|--------------------------|-----------------------------------|
| Frame Size * | Drive End Bearing | Opposite Drive End Bearing |
| 143T | 6205-ZZ | 6205-ZZ |
| 145T | | |
| 182T | 6306-ZZ | 6306-ZZ |
| 184T | | |
| 213T | 6308-ZZ | 6306-ZZ |
| 215T | | |
| 254T | 6309 | 6308 |
| 256T | | |
| 284T | 6311 | 6309 |
| 286T | | |
| 324T | 6312 | 6312 |
| 326T | | |
| 364T | 6313 | 6312 |
| 365T | | |
| 404T | NU316 | - |
| 405T | | 6313 |
| 444T | NU318 | 6314 |
| 445T | | |
| 445/7T | NU319 | |
| 449T | NU320 | - |

* TC-frame motors have the same bearings as the comparable T-frame motors.

MTR SERIES MOTORS

MTR FEATURES AND SPECIFICATIONS (SINGLE-PHASE MOTORS)

IronHorse® single-phase 56C/56HC-frame* motors are available from 1/3 hp to 2 hp. All models have a TEFC rolled steel frame, cast aluminum end bell and removable mounting bases.

MTR ROLLED-STEEL 56C-FRAME 1-PHASE MOTOR SPECIFICATIONS

| Motor Specifications – Single-Phase 56C/56HC-Frame Motors (60Hz except as indicated) | | | | | | | | | |
|--|-------|----------|-------------|----------------|-------------|------------------|---|----------------------------|--------------------|
| Part Number | HP | Base RPM | Voltage | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @ 115V/230V 60Hz | Approx Weight (lb) |
| | | | | | | | | | |
| 1800 RPM | | | | | | | | | |
| MTR-P33-1AB18 | 1/3 | 1800 | 115/208-230 | 1.15 | N | 56C flange mount | IP43 TEFC rolled steel frame Cast AL end bell F1 conduit box location | 6.6 / 3.3 | 26 |
| MTR-P50-1AB18 | 1/2 | | | | | | | 8.8 / 4.4 | 28 |
| MTR-P75-1AB18 | 3/4 | | | | | | | 11.0 / 5.5 | 32 |
| MTR-001-1AB18 | 1 | | | | | | | 13.6 / 6.8 | 38 |
| MTR-1P5-1AB18 | 1-1/2 | | | | | | | 15.2 / 7.6 | 45 |
| 3600 RPM | | | | | | | | | |
| MTR-1P5-1AB36 | 1-1/2 | 3600 | 115/208-230 | 1.15 | N | 56C | IP43 TEFC rolled steel frame Cast AL end bell F1 conduit box location | 14.2 / 7.1 | 37 |

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



NOTE: *56HC are suitable for 56C C-face mounting or 56, 143T, or 145T frame foot mounting dimensions.

MTR ROLLED-STEEL 56C-FRAME 1-PHASE MOTOR PERFORMANCE DATA

| Performance Data – Single-Phase 56C/56HC-Frame Motors (230V / 60Hz data except as indicated) | | | | | | | | | | | |
|--|-------|----------|----------------------------|--------------|-----------|----------------|-----------|--------------|---------------------|-------------------|-------------------------------------|
| Part Number | HP | F.L. RPM | Current @ 115V/230V (Amps) | | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
| | | | @ 60Hz | 230V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | | | |
| 1800 RPM | | | | | | | | | | | |
| MTR-P33-1AB18 | 1/3 | 1725 | 2.2 | 6.6 / 3.3 | 31 / 18 | 1.02 | 3.06 | 2.81 | 56.0 | 0.62 | 0.075 |
| MTR-P50-1AB18 | 1/2 | | 2.93 | 8.8 / 4.4 | 37 / 21 | 1.52 | 4.56 | 4.18 | 57.0 | 0.63 | 0.080 |
| MTR-P75-1AB18 | 3/4 | | 3.67 | 11.0 / 5.5 | 55 / 32 | 2.29 | 6.30 | 5.73 | 65.0 | 0.65 | 0.095 |
| MTR-001-1AB18 | 1 | | 4.53 | 13.6 / 6.8 | 75 / 43 | 3.04 | 8.36 | 7.60 | 68.0 | 0.66 | 0.120 |
| MTR-1P5-1AB18 | 1-1/2 | | 5.07 | 15.2 / 7.6 | 120 / 65 | 4.57 | 11.43 | 10.28 | 71.0 | 0.75 | 0.142 |
| 3600 RPM | | | | | | | | | | | |
| MTR-1P5-1AB36 | 1-1/2 | 3450 | 3.0 | 14.2 / 7.1 | 116 / 58 | 2.2 | 7.5 | 5.4 | 72.0 | 0.9 | 0.03 |

MTR FEATURES AND SPECIFICATIONS (THREE-PHASE MOTORS)

IronHorse® rolled steel 56C/56HC-frame* three-phase motors are available from 1/3 hp to 3 hp. All models have a TEFC frame, cast aluminum end bell and removable mounting bases.

MTR ROLLED-STEEL 56C/56HC-FRAME 3-PHASE MOTOR SPECIFICATIONS – 1800 & 3600 RPM

| Motor Specifications – MTR 3-Phase 56C/56HC-Frame Motors – 1800 & 3600 rpm | | | | | | | | | |
|---|-------|-------------|-------------|----------------|-------------|-------------------------|---|-----------------------|--------------------|
| Part Number | HP | Base RPM | Voltage | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @ 230V/460V | Approx Weight (lb) |
| 1800 RPM | | | | | | | | | |
| MTR-P33-3BD18 | 1/3 | 1800 | 208-230/460 | 1.15 | B | 56C flange mount | TEFC rolled steel frame Cast aluminum end bell F1 conduit box location | 1.6 / 0.8 | 23 |
| MTR-P50-3BD18 | 1/2 | | | | | | | 2.0 / 1.0 | 24 |
| MTR-P75-3BD18 | 3/4 | | | | | | | 2.8 / 1.4 | 26 |
| MTR-001-3BD18 | 1 | | | | | | | 3.6 / 1.8 | 29 |
| MTR-1P5-3BD18 | 1-1/2 | | | | | | | 4.8 / 2.4 | 33 |
| MTR-002-3BD18 | 2 | | | | | | | 6.0 / 3.0 | 42 |
| 3600 RPM | | | | | | | | | |
| MTR-P33-3BD36 | 1/3 | 3600 | 208-230/460 | 1.15 | B | 56C flange mount | TEFC rolled steel frame Cast aluminum end bell F1 conduit box location | 1.6 / 0.8 | 23 |
| MTR-P50-3BD36 | 1/2 | | | | | | | 2.2 / 1.1 | 24 |
| MTR-P75-3BD36 | 3/4 | | | | | | | 2.9 / 1.5 | 26 |
| MTR-001-3BD36 | 1 | | | | | | | 3.6 / 1.8 | 28 |
| MTR-1P5-3BD36 | 1-1/2 | | | | | | | 4.6 / 2.3 | 34 |
| MTR-002-3BD36 | 2 | | | | | | | 6.0 / 3.0 | 43 |
| Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. | | | | | | | | | |



NOTE: *56HC are suitable for 56C C-face mounting or 56, 143T, or 145T frame foot mounting dimensions.

MTR ROLLED-STEEL 56C/56HC-FRAME THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

MTR MOTOR PERFORMANCE DATA – 1800 RPM

| Performance Data – MTR/MTR2 Three-Phase 56C/56HC-Frame Motors – 1800 rpm (460V data except as indicated) | | | | | | | | | |
|---|-------|----------|---------------------|--------------|---------------------|---------------------|----------------------------|-------------------------------------|--------------|
| Part Number | HP | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | | Current @ 230V/460V (Amps) | | |
| | | | CT | VT | CHP* | Safe | No Load | Full Load | Locked Rotor |
| MTR-P33-3BD18 | 1/3 | 1725 | 863 | 345 | 2700 | 5400 | 0.53 / 0.27 | 1.6 / 0.8 | 8 / 4 |
| MTR-P50-3BD18 | 1/2 | | | | | | 0.67 / 0.33 | 2.0 / 1.0 | 12 / 6 |
| MTR-P75-3BD18 | 3/4 | | | | | | 0.93 / 0.47 | 2.8 / 1.4 | 18 / 9 |
| MTR-001-3BD18 | 1 | | | | | | 1.2 / 0.6 | 3.6 / 1.8 | 24 / 12 |
| MTR-1P5-3BD18 | 1-1/2 | 1725 | 863 | 345 | 2700 | 5400 | 1.5 / 0.8 | 4.8 / 2.4 | 36 / 18 |
| MTR-002-3BD18 | 2 | 1725 | 863 | 345 | | 5400 | 2.0 / 1.0 | 6.0 / 3.0 | 48 / 24 |
| Part Number | HP | F.L. RPM | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | |
| | | | Full Load | Locked Rotor | Break-down | | | | |
| MTR-P33-3BD18 | 1/3 | n/a | 1.02 | 2.55 | 2.81 | n/a | 67.0 | 0.70 | 0.058 |
| MTR-P50-3BD18 | 1/2 | | 1.52 | 3.80 | 4.18 | | 69.0 | 0.72 | 0.068 |
| MTR-P75-3BD18 | 3/4 | | 2.29 | 5.73 | 6.30 | | 71.0 | 0.74 | 0.075 |
| MTR-001-3BD18 | 1 | | 3.02 | 7.55 | 8.31 | | 73.0 | 0.76 | 0.086 |
| MTR-1P5-3BD18 | 1-1/2 | | 4.57 | 10.28 | 11.43 | | 75.0 | 0.78 | 0.108 |
| MTR-002-3BD18 | 2 | | 6.09 | 13.70 | 15.23 | | 77.0 | 0.80 | 0.143 |

* Maximum Constant HP rpm is for direct-coupled loads.

MTR MOTOR PERFORMANCE DATA – 3600 RPM

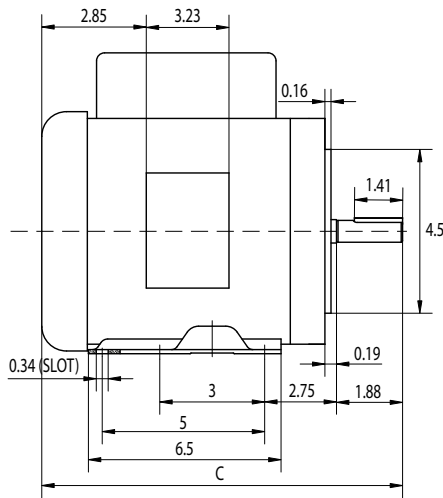
| Performance Data – Three-Phase 56C/56HC-Frame Motors – 3600 rpm (460V data except as indicated) | | | | | | | | | |
|--|-------|----------|---------------------|--------------|---------------------|---------------------|----------------------------|-------------------------------------|--------------|
| Part Number | HP | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | | Current @ 230V/460V (Amps) | | |
| | | | CT | VT | CHP* | Safe | No Load | Full Load | Locked Rotor |
| MTR-P33-3BD36 | 1/3 | 3450 | 1725 | 690 | 5400 | 5400 | 1.2 / 0.59 | 1.6 / 0.8 | 9 / 5 |
| MTR-P50-3BD36 | 1/2 | | | | | | 1.4 / 0.7 | 2.2 / 1.1 | 14 / 7 |
| MTR-P75-3BD36 | 3/4 | | | | | | 1.5 / 0.75 | 2.9 / 1.5 | 17 / 8.9 |
| MTR-001-3BD36 | 1 | 3450 | 1725 | 690 | 5400 | 5400 | 1.7 / 0.85 | 3.6 / 1.8 | 25 / 13 |
| MTR-1P5-3BD36 | 1-1/2 | 3450 | 1725 | 690 | | | 1.8 / 0.9 | 4.6 / 2.3 | 29 / 17 |
| MTR-002-3BD36 | 2 | 3450 | 1725 | 690 | 5400 | 5400 | 3.4 / 1.7 | 6.0 / 3.0 | 57 / 30 |
| MTRP-002-3BD36 | | 3500 | 875 | 350 | | | 2.28 / 1.14 | 5.22 / 2.61 | 53 / 27 |
| Part Number | HP | F.L. RPM | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | |
| | | | Full Load | Locked Rotor | Break-down | | | | |
| MTR-P33-3BD36 | 1/3 | n/a | 0.50 | 3.0 | 3.0 | n/a | 57.0 | 0.71 | 0.084 |
| MTR-P50-3BD36 | 1/2 | | 0.75 | 4.4 | 4.5 | | 62.0 | 0.71 | 0.095 |
| MTR-P75-3BD36 | 3/4 | | 1.13 | 6.0 | 5.8 | | 67.0 | 0.78 | 0.107 |
| MTR-001-3BD36 | 1 | | 1.50 | 7.9 | 7.1 | | 69.0 | 0.82 | 0.122 |
| MTR-1P5-3BD36 | 1-1/2 | | 2.25 | 11.2 | 8.4 | | 72.0 | 0.85 | 0.143 |
| MTR-002-3BD36 | 2 | | 3.06 | 18.9 | 13.4 | | 75.0 | 0.78 | 0.188 |

* Maximum Constant HP rpm is for direct-coupled loads.

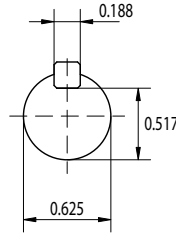
MTR MOTOR DIMENSIONS

(DIMENSIONS = INCHES)

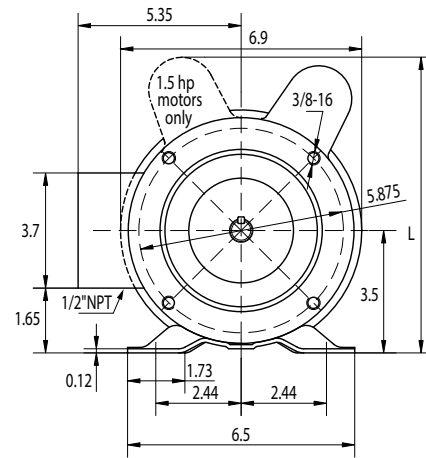
MTR 56C-FRAME SINGLE-PHASE ROLLED-STEEL MOTOR DIMENSIONS



C = 12.4 in; all except 1 & 1.5 hp motors
 C = 13 in; 1 hp (1800 rpm) & 1.5 hp (3600 rpm)
 C = 13.8 in; 1.5 hp (1800 rpm)

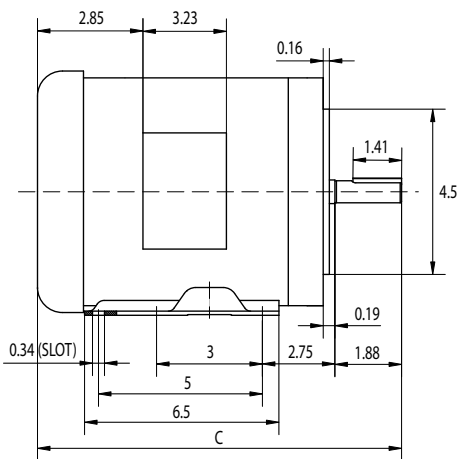


MTR-xxx-1ABxx IronHorse Motors
 (single-phase rolled steel)

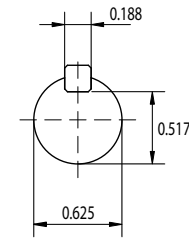


L = 8.19"; all except 1.5 hp motors
 L = 8.5"; 1.5 hp motors

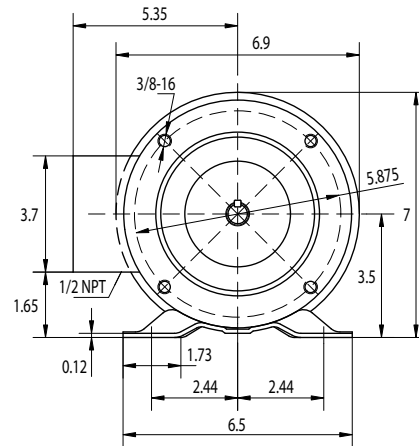
MTR 56C-FRAME THREE-PHASE ROLLED-STEEL MOTOR DIMENSIONS



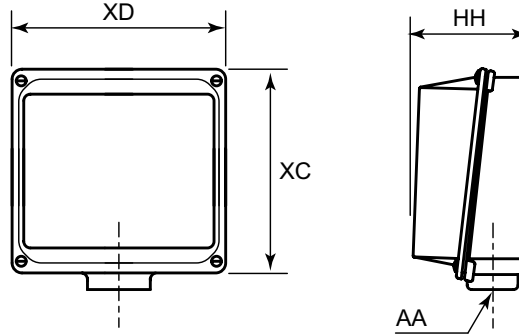
C = 12.2"; 0.33 to 1hp motors
 C = 12.6"; 1.5hp MTR-1P5-3BD18
 C = 12.2"; 1.5hp MTR-1P5-3BD36
 C = 13.8"; 2hp MTR-002-3BD18
 C = 12.4"; 2hp MTR-002-3BD36



MTR-xxx-3BDxx IronHorse Motors
 (3-phase rolled steel)



MTR JUNCTION BOX DIMENSIONS

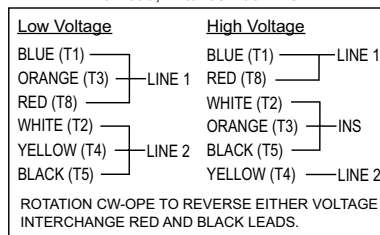


| Junction Box Dimensions (in) | | | | |
|------------------------------|------------|-------------|------------|-------------------------|
| Frame Size | XD (Width) | XC (Height) | HH (Depth) | AA (Conduit Hole) (NPT) |
| 56(H) C | 3.2 | 3.7 | 1.6 | 1/2 |

MTR TERMINAL AND WIRING DIAGRAMS

MTR GENERAL-PURPOSE MOTORS

1/3 hp – 1.5hp 1Ø MTR models
6-Lead, 115/208-230 VAC



MTR MOTORS DECIBEL LEVELS

The decibel (sound) level of an IronHorse® motor should be measured after initial startup, after 30 days, and after six months of use. Decibel levels should remain fairly consistent and can be an indication of misalignment and premature bearing wear. If the measured decibel level for your IronHorse model exceeds the value listed below by more than 10%, contact AutomationDirect or a local motor service technician found at www.easa.com.

| MTR Average T-Frame Decibel Levels | | | | | |
|------------------------------------|-------|----------|------|----------|------|
| Noise Level: Lw dB(A) @ 1m | | | | | |
| Frame Size | HP | 1800 RPM | | 3600 RPM | |
| | | 1Ø | 3Ø | 1Ø | 3Ø |
| 56(H)C | 1/3 | 65.0 | 65.0 | - | 75.0 |
| | 1/2 | | | | |
| | 3/4 | | | | |
| | 1 | | | | |
| | 1-1/2 | - | - | - | 80.0 |
| | 2 | | | | 70.0 |
| | 3 | | | | |

SPARE/REPLACEMENT PARTS FOR MTR SINGLE-PHASE MOTORS

| MTR Single-Phase Motor Spare/Replacement Parts (NOT for MTR2 Motors)* | | | | | | | | | |
|---|--------------------|------------------|----------------------|-------------------------------|-----------------------------|--------------------|----------------------------|---------------|--------------|
| Part Number | Accessory Type | Capacitance (μF) | Rated Voltage | Dimension Height x Ø (in[mm]) | Applicable MTR Motor Number | MTR Motor HP ; RPM | | | |
| MTA-CAP-01 | Start capacitor | 200 | 165 | 3.15 x 1.65 [80.0 x 41.9] | MTR-P33-1AB18 | 1/3 ; 1800 | | | |
| MTA-CAP-02 | | 250 | | | MTR-P50-1AB18 | 1/2 ; 1800 | | | |
| MTA-CAP-03 | | 300 | | | MTR-P75-1AB18 | 3/4 ; 1800 | | | |
| MTA-CAP-04 | | 250 | | | MTR-001-1AB18 | 1 ; 1800 | | | |
| MTA-CAP-08 | | 400 | | | MTR-1P5-1AB18 | 1-1/2 ; 1800 | | | |
| MTA-CAP-06 | | Run capacitor | | | 40 | 450 | 4.02 x 1.75 [102.1 x 44.5] | MTR-1P5-1AB18 | 1-1/2 ; 1800 |
| MTA-CAP-09 | 35 | | 4.0 x 1.8 [101 x 45] | MTR-1P5-1AB36 | 1-1/2 ; 3600 | | | | |
| MTA-CSW-01 | Centrifugal switch | | N/A | N/A | N/A | MTR-xxx-1AB18 | all 1800 rpm | | |
| MTA-CSW-02 | | MTR-1P5-1AB36 | | | | 3600 rpm | | | |
| MTAR-BASE-56 | Motor base | N/A | | | | N/A | N/A | MTR-xxx-1ABxx | All |
| MTAR-FAN-56 | Fan | | | | | | | | |
| MTAR-JBOX-56 | Junction box | | | | | | | | |
| MTAR-SHROUD-56 | Fan shroud | | | | | | | | |

* These accessories are spare/replacement components only for MTR series IronHorse motors. Accessories for MTR series motors are NOT compatible with MTR2 series motors.

| MTR Series Three-Phase Motor Spare/Replacement Parts* | | | |
|---|--------------|-----------------------------|--------------------|
| Part Number | Description | Applicable MTR Motor Number | MTR Motor HP : RPM |
| MTAR-BASE-56 | Motor base | MTR-xxx-xBDxx | All |
| MTAR-FAN-56 | Fan | | |
| MTAR-JBOX-56 | Junction box | | |
| MTAR-SHROUD-56 | Fan shroud | | |

* These accessories are spare/replacement components only for MTR series IronHorse motors.

MTR BEARING SIZE INFORMATION

All IronHorse® cast-iron motors use premium name-brand bearings (NSK, NTN, or SKF). Below is a bearing size chart listing the type of bearings used in each frame size of IronHorse MTR motors. The bearing types are also listed on the motor nameplate.

| MTR Bearing Size Chart | | |
|------------------------|-------------------|----------------------------|
| Frame Size | Drive End Bearing | Opposite Drive End Bearing |
| 56(H)C | 6203-ZZ or 6205 | 6203-ZZ |

MTSS SERIES MOTORS

MTSS FEATURES AND SPECIFICATIONS

Stainless-Steel 56C-Frame
Three-Phase Motor with
Round Body



Stainless-Steel 56C-Frame
Three-Phase Motor with
Rigid Base



IronHorse stainless steel 56C-frame three-phase motors are available from 1/3 hp to 2 hp. All models have TEFC frames and stainless steel end bells, and they are available with or without rigid mounting bases.

MTSS STAINLESS-STEEL 56C-FRAME 3-PHASE MOTOR SPECIFICATIONS – 1800 & 3600 RPM

| Motor Specifications – MTSS 3-Phase 56C-Frame Motors – 1800 & 3600 rpm | | | | | | | | | | | | | |
|--|-------|----------------|-----------------------|----------------|-------------|-------------------------|--|---------------------------|--------------------|------------------|--|-----------------|----|
| Part Number | HP | Base RPM | Voltage | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @ 208-230V/460V | Approx Weight (lb) | | | | |
| 1800 RPM | | | 208-230/460 – 3-phase | 1.15 | B | 56C flange mount | TEFC stainless steel frame with round body | 1800 RPM | | | | | |
| MTSS-P33-3BD18R | 1/3 | 1800 | | | | | | 1.5-1.4 / 0.7 | 27 | | | | |
| MTSS-P50-3BD18R | 1/2 | | | | | | | 1.55-1.5 / 0.75 | 27 | | | | |
| MTSS-P75-3BD18R | 3/4 | | | | | | | 2.6-2.4 / 1.2 | 29 | | | | |
| MTSS-001-3BD18R | 1 | | | | | | | 3.5-3.2 / 1.6 | 34 | | | | |
| MTSS-1P5-3BD18R | 1-1/2 | | | | | | | 4.6-4.2 / 2.1 | 36 | | | | |
| MTSS-002-3BD18R | 2 | | | | | | 6.6-6.0 / 3.0 | 43 | | | | | |
| | | 1800 | | | | | 208-230/460 – 3-phase | 1.15 | B | 56C flange mount | TEFC stainless steel frame with rigid base | 1800 RPM | |
| MTSS-P33-3BD18 | 1/3 | | | | | | | | | | | 1.5-1.4 / 0.7 | 28 |
| MTSS-P50-3BD18 | 1/2 | | | | | | | | | | | 1.55-1.5 / 0.75 | 28 |
| MTSS-P75-3BD18 | 3/4 | | | | | | | | | | | 2.6-2.4 / 1.2 | 30 |
| MTSS-001-3BD18 | 1 | | | | | | | | | | | 3.5-3.2 / 1.6 | 35 |
| MTSS-1P5-3BD18 | 1-1/2 | | | | | | | | | | | 4.6-4.2 / 2.1 | 36 |
| MTSS-002-3BD18 | 2 | | | | | | | | | | | 6.6-6.0 / 3.0 | 44 |
| 3600 RPM | | | 3600 | | | F1 conduit box location | | | | | | 3600 RPM | |
| MTSS-P50-3BD36 | 1/2 | 1.99-1.8 / 0.9 | | | | | 29 | | | | | | |
| MTSS-P75-3BD36 | 3/4 | 2.4-2.3 / 1.15 | | | | | 31 | | | | | | |
| MTSS-001-3BD36 | 1 | 3.3-3.0 / 1.5 | | | | | 31 | | | | | | |
| MTSS-1P5-3BD36 | 1-1/2 | 4.2-4.0 / 2.0 | | | | | 36 | | | | | | |
| MTSS-002-3BD36 | 2 | 5.0-4.8 / 2.4 | | | | | 43 | | | | | | |

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

MTSS STAINLESS-STEEL 56C-FRAME 3-PHASE MOTORS FEATURES & SPECS (CONTINUED)

MTSS MOTOR PERFORMANCE DATA – 1800 RPM

Performance Data
MTSS Three-Phase 56C-Frame Motors – 1800 rpm
 (460V data except as indicated)

| Part Number | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | | Current @ 460V (Amps) | |
|-------------------|----------|---------------------|----------|---------------------|------|-----------------------|--------------|
| | | CT (2:1) | VT (5:1) | CHP* | Safe | No Load | Locked Rotor |
| MTSS-P33-3BD18(R) | 1725 | 900 | 360 | 2250 | 4500 | 0.29 | 4.2 |
| MTSS-P50-3BD18(R) | 1725 | | | | | 0.30 | 4.6 |
| MTSS-P75-3BD18(R) | 1725 | | | | | 0.44 | 7.3 |
| MTSS-001-3BD18(R) | 1740 | | | | | 0.61 | 10.0 |
| MTSS-1P5-3BD18(R) | 1740 | | | | | 0.70 | 13.8 |
| MTSS-002-3BD18(R) | 1740 | | | | | 1.08 | 21.0 |

* Maximum Constant HP rpm is for direct-coupled loads.

| Part Number | HP | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
|-------------------|-------|----------------|--------------|------------|---------------------|-------------------|-------------------------------------|
| | | Full Load | Locked Rotor | Break-down | | | |
| MTSS-P33-3BD18(R) | 1/3 | 1.0 | 2.9 | 3.9 | 82.5 | 0.71 | 0.078 |
| MTSS-P50-3BD18(R) | 1/2 | 1.5 | 3.8 | 5.2 | 82.5 | 0.76 | 0.078 |
| MTSS-P75-3BD18(R) | 3/4 | 2.2 | 5.0 | 7.0 | 82.5 | 0.78 | 0.081 |
| MTSS-001-3BD18(R) | 1 | 3.0 | 7.2 | 9.9 | 84.0 | 0.78 | 0.090 |
| MTSS-1P5-3BD18(R) | 1-1/2 | 4.4 | 10.3 | 14.5 | 84.0 | 0.83 | 0.087 |
| MTSS-002-3BD18(R) | 2 | 5.9 | 13.9 | 18.9 | 84.0 | 0.83 | 0.101 |

MTSS MOTOR PERFORMANCE DATA – 3600 RPM

Performance Data
MTSS Three-Phase 56C-Frame Motors – 3600 rpm
 (460V data except as indicated)

| Part Number | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | | Current @ 460V (Amps) | |
|----------------|----------|---------------------|----------|---------------------|------|-----------------------|--------------|
| | | CT (2:1) | VT (5:1) | CHP* | Safe | No Load | Locked Rotor |
| MTSS-P50-3BD36 | 3460 | 1800 | 720 | 4500 | 4500 | 0.36 | 6.0 |
| MTSS-P75-3BD36 | 3470 | | | | | 0.43 | 7.6 |
| MTSS-001-3BD36 | 3470 | | | | | 0.58 | 10.0 |
| MTSS-1P5-3BD36 | 3480 | | | | | 0.70 | 15.0 |
| MTSS-002-3BD36 | 3480 | | | | | 0.85 | 18.0 |

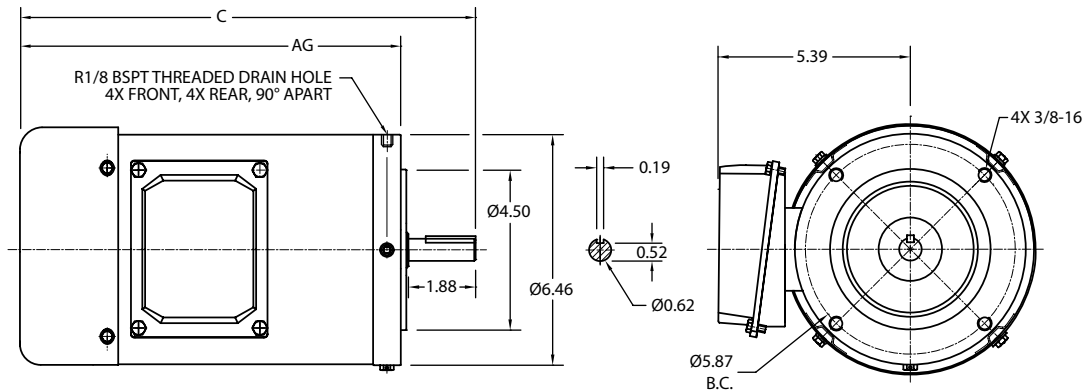
* Maximum Constant HP rpm is for direct-coupled loads.

| Part Number | HP | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
|----------------|-------|----------------|--------------|------------|---------------------|-------------------|-------------------------------------|
| | | Full Load | Locked Rotor | Break-down | | | |
| MTSS-P50-3BD36 | 1/2 | 0.7 | 1.9 | 2.5 | 77.0 | 0.88 | 0.077 |
| MTSS-P75-3BD36 | 3/4 | 1.1 | 2.7 | 3.3 | 73.0 | 0.84 | 0.100 |
| MTSS-001-3BD36 | 1 | 1.5 | 4.6 | 5.5 | 80.0 | 0.72 | 0.094 |
| MTSS-1P5-3BD36 | 1-1/2 | 2.3 | 6.6 | 9.0 | 84.0 | 0.74 | 0.098 |
| MTSS-002-3BD36 | 2 | 2.9 | 8.6 | 11.3 | 80.0 | 0.72 | 0.107 |

MTSS MOTOR DIMENSIONS

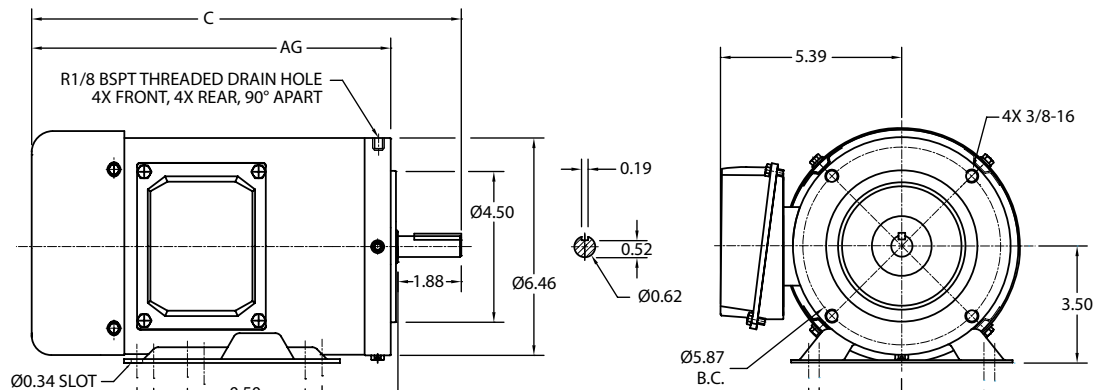
(DIMENSIONS = INCHES)

MTSS 56C-FRAME THREE-PHASE ROUND-BODY MOTOR DIMENSIONS



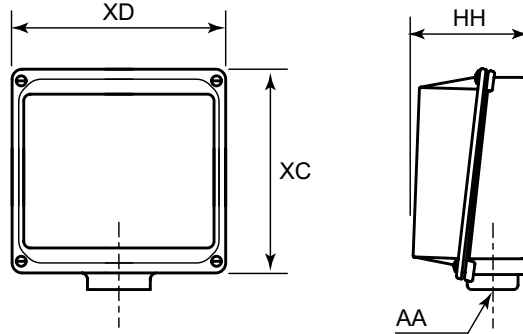
| AC MOTOR WITHOUT FEET | | |
|-----------------------|--------|---------|
| PART NUMBER | DIM. C | DIM. AG |
| MTSS-P33-3BD18R | 11.59 | 9.50 |
| MTSS-P50-3BD18R | 11.59 | 9.50 |
| MTSS-P75-3BD18R | 12.76 | 10.67 |
| MTSS-001-3BD18R | 12.76 | 10.67 |
| MTSS-1P5-3BD18R | 12.76 | 10.67 |
| MTSS-002-3BD18R | 12.76 | 10.48 |

MTSS 56C-FRAME THREE-PHASE RIGID-BASE MOTOR DIMENSIONS



| 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 |
| MTSS-001-3BDxx | 12.76 | 10.67 | 5.00 |
| MTSS-1P5-3BDxx | 12.76 | 10.67 | 5.00 |
| MTSS-002-3BDxx | 13.50 | 11.42 | 5.00 |

MTSS JUNCTION BOX DIMENSIONS



| Junction Box Dimensions (in) | | | | |
|--|------------|-------------|------------|-------------------------|
| Frame Size * | XD (Width) | XC (Height) | HH (Depth) | AA (Conduit Hole) (NPT) |
| 56 | 3.8 | 3.3 | 1.5 | 0.86* |
| * MTSS conduit holes are unthreaded through holes with cable glands installed. | | | | |

MTSS DECIBEL LEVELS

The decibel (sound) level of an IronHorse® motor should be measured after initial startup, after 30 days, and after six months of use. Decibel levels should remain fairly consistent and can be an indication of misalignment and premature bearing wear. If the measured decibel level for your IronHorse model exceeds the value listed below by more than 10%, contact AutomationDirect or a local motor service technician found at www.easa.com.

| MTSS Average T-Frame Decibel Levels | | |
|-------------------------------------|----|----------------------------|
| Frame Size | HP | Noise Level: Lw dB(A) @ 1m |
| | | MTSS |
| 56C | – | 65 |

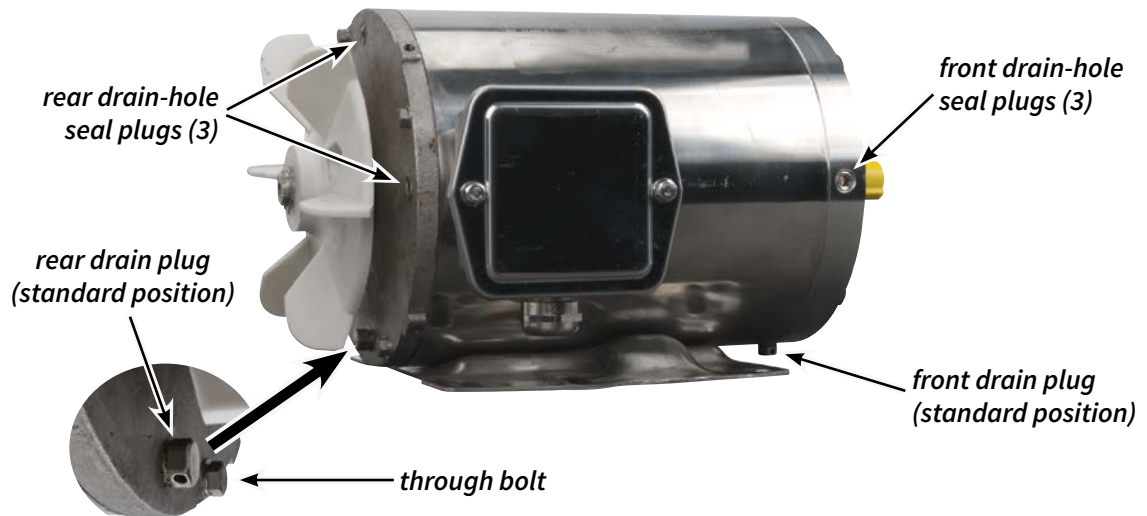
MTSS MOTOR MOUNTING

MTSS stainless-steel motors can be mounted in any orientation, horizontal or vertical, as long as the drain plugs are installed in the two lower locations.

The motors have four drain holes in the 12:00, 3:00, 6:00, and 9:00 positions of each end of the motor. The motors are shipped with two drain plugs installed in the front and rear 6:00 positions of the end bells, and drain-hole seal plugs installed in the other positions. This is the standard arrangement for the most ‘normal’ horizontal mounting orientation for a rigid-base motor.


When the motors are mounted in other orientations, switch drain plugs and seals so that there are two drain plugs on opposite sides of the bottom surface of the motor. For example, in a shaft-downward mounting orientation, install both drain plugs 180° apart in the front end bell. (Remove the fan shroud for access to the rear drain plugs and seals.)

Motor shown with fan cover removed



Some IronHorse motors include a shaft slinger (rubber washer) on the output shaft at the end bell. The shaft slinger provides an added layer of protection to the output shaft seal. We recommend leaving the slinger in place, but it can be removed if it poses an interference problem with C-Face-mounted gearboxes.

SPARE/REPLACEMENT PARTS FOR MTSS STAINLESS-STEEL THREE-PHASE MOTORS

| MTSS Stainless-Steel Three-Phase Motor Replacement Parts | | |
|---|--|---|
| Part Number | Description | Picture |
| MTAS-CG-M22 | 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. |  |

MTSS BEARING SIZE INFORMATION

All IronHorse® cast-iron motors use premium name-brand bearings (NSK, NTN, or SKF). Below is a bearing size chart listing the type of bearings used in each frame size of IronHorse MTSS motors. The bearing types are also listed on the motor nameplate.

| MTSS Bearing Size Chart | | |
|--------------------------------|--------------------------|-----------------------------------|
| Frame Size | Drive End Bearing | Opposite Drive End Bearing |
| 56C | 6203-ZZ or 6205 | 6205 |

MTC EPACT SERIES MOTORS

MTC FEATURES AND SPECIFICATIONS

EPAct Cast-Iron T-Frame

EPAct Cast-Iron TC-Frame



IronHorse 1800 rpm T-frame cast-iron industrial duty EPAct motors are available from 1–300 hp, and TC-frame motors are available from 1–100 hp. Optional C-face kits are available for IronHorse T-frame EPAct motors. (EPAct C-face kits are NOT compatible with Premium Efficiency motors.) All models have a TEFC frame and full length mounting feet.

MTC MOTOR SPECIFICATIONS – CAST-IRON T-FRAME AND TC-FRAME – 1800 RPM

| Motor Specifications – EPAct T & TC ⁽¹⁾ Frame Three-Phase Motors – 1800 rpm | | | | | | | | | | |
|--|-------------------|------------|-----------------------|----------------|----------------|--------------------------|--------------|----------------|-----------------------|---------------------|
| Part Number | HP ⁽³⁾ | NEMA Frame | Voltage | Housing | Shaft Material | Conduit Box Location (2) | Holes / Foot | Service Factor | F.L. Amps @ 230V/460V | Product Weight (lb) |
| MTC-001-3BD18 | 1 | 143T | 208-230/460 – 3-phase | TEFC cast iron | 1045 CS | F1(F2) | 2 | 1.15 | 3.0 / 1.5 | 58 |
| MTC-001-3BD18CK (1) | | 143TC | | | | | | | | 61 |
| MTC-1P5-3BD18 | 1-1/2 | 145T | | | | | 3 | | 4.2 / 2.1 | 60 |
| MTC-1P5-3BD18CK (1) | | 145TC | | | | | | | | 67 |
| MTC-002-3BD18 | 2 | 145T | | | | | 3 | | 5.4 / 2.7 | 70 |
| MTC-002-3BD18CK (1) | | 145TC | | | | | | | | 69 |
| MTC-003-3BD18 | 3 | 182T | | | | | 2 | | 7.72 / 3.86 | 90 |
| MTC-003-3BD18CK (1) | | 182TC | | | | | | | | 112 |
| MTC-005-3BD18 | 5 | 184T | | | | | 3 | | 11.8 / 5.9 | 110 |
| MTC-005-3BD18CK (1) | | 184TC | | | | | | | | 125 |
| MTC-7P5-3BD18 | 7-1/2 | 213T | | | | | 2 | | 18.6 / 9.3 | 160 |
| MTC-7P5-3BD18CK (1) | | 213TC | | | | | | | | 170 |

1) TC-frame motors are T-frame motors with applicable C-face accessory kits installed.
 2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2. (Refer to "Chapter 5: Reference" for further information regarding F1 and F2 mounting.)
 3) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. See AutomationDirect Terms & Conditions for details.

*** TABLE CONTINUED ON NEXT PAGE ***

MTC EPACK CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR SPECIFICATIONS – CAST-IRON T-FRAME AND TC-FRAME – 1800 RPM

***** Table Continued From Previous Page (for 1–7.5hp motors) *****

| Motor Specifications – EPACK T & TC ⁽¹⁾ Frame Three-Phase Motors – 1800 rpm | | | | | | | | | | |
|--|-------------------|------------|-----------------------|----------------|----------------|-------------------------------------|--------------|----------------|-----------------------|---------------------|
| Part Number | HP ⁽³⁾ | NEMA Frame | Voltage | Housing | Shaft Material | Conduit Box Location ⁽²⁾ | Holes / Foot | Service Factor | F.L. Amps @ 230V/460V | Product Weight (lb) |
| MTC-010-3BD18 | 10 | 215T | 208-230/460 – 3-phase | TEFC cast iron | 1045 CS | F1(F2) | 3 | 1.15 | 24.8 / 12.4 | 179 |
| MTC-010-3BD18CK (1) | | 215TC | | | | | | | | 198 |
| MTC-015-3BD18 | 15 | 254T | | | | F1(F2) | 2 | | 35.4 / 17.7 | 290 |
| MTC-015-3BD18CK (1) | | 254TC | | | | | | | | 310 |
| MTC-020-3BD18 | 20 | 256T | | | | F1(F2) | 3 | | 47.6 / 23.8 | 326 |
| MTC-020-3BD18CK (1) | | 256TC | | | | | | | | 360 |
| MTC-025-3BD18 | 25 | 284T | | | | F1 | 2 | | 56.4 / 28.2 | 400 |
| MTC-025-3BD18CK (1) | | 284TC | | | | | | | | 440 |
| MTC-030-3BD18 | 30 | 286T | | | | F1 | 3 | | 67.2 / 33.6 | 451 |
| MTC-030-3BD18CK (1) | | 286TC | | | | | | | | 470 |
| MTC-040-3BD18 | 40 | 324T | | | | F1 | 2 | | 93.0 / 46.5 | 589 |
| MTC-040-3BD18CK (1) | | 324TC | | | | | | | | 608 |
| MTC-050-3BD18 (3) | 50 | 326T | | | | F1 | 3 | | 114.6 / 57.3 | 640 |
| MTC-050-3BD18CK (1)(3) | | 326TC | | | | | | | | 652 |
| MTC-060-3BD18 (3) | 60 | 364T | | | | F1 | 2 | | 139.4 / 69.7 | 780 |
| MTC-060-3BD18CK (1)(3) | | 364TC | | | | | | | | 780 |
| MTC-075-3BD18 (3) | 75 | 365T | | | | F1 | 3 | | 172.8 / 86.4 | 870 |
| MTC-075-3BD18CK (1)(3) | | 365TC | | | | | | | | 837 |
| MTC-100-3BD18 (3) | 100 | 405T | F1 | 3 | 230 / 115 | 1350 | | | | |
| MTC-100-3BD18CK (1)(3) | | 405TC | | | | 1335 | | | | |
| MTC-125-3BD18 (3) | 125 | 444T | F1(F2) | 2 | 274 / 137 | 1500 | | | | |
| MTC-150-3BD18 (3) | 150 | 445T | F1(F2) | 3 | 326 / 163 | 1630 | | | | |
| MTC-200-3BD18 (3) | 200 | 445/7T | F1(F2) | 3 | 446 / 223 | 1858 | | | | |
| MTC-250-3D18 (3) | 250 | 449T | 460 | 4140 CS | F1 | 2 | – / 282 | 2508 | | |
| MTC-300-3D18 (3) | 300 | 449T | | | | | – / 334 | 2728 | | |

1) TC-frame motors are T-frame motors with applicable C-face accessory kits installed.
 2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2.
 (Refer to "Chapter 5: Reference" for further information regarding F1 and F2 mounting.)
 3) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. See AutomationDirect Terms & Conditions for details.

MTC EPACT CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR SPECIFICATIONS – CAST-IRON T-FRAME – 1200 & 3600 RPM

| Motor Specifications – EPAct T-Frame Three-Phase Motors – 1200 & 3600 rpm | | | | | | | | | | |
|--|--------|------------|------------------------|----------------|-------------------|--------------------------|--------------|----------------|-----------------------|---------------------|
| Part Number | HP (3) | NEMA Frame | Voltage | Housing | Shaft Material | Conduit Box Location (2) | Holes / Foot | Service Factor | F.L. Amps @ 230V/460V | Product Weight (lb) |
| 1200 rpm Base Speed | | | | | | | | | | |
| MTC-001-3BD12 | 1 | 145T | 208-230/460 3-phase | TEFC cast iron | 1045 carbon steel | F1(F2) | 4 | 1.15 | 3.2 / 1.6 | 62 |
| MTC-1P5-3BD12 | 1-1/2 | 182T | | | | | 2 | | 4.8 / 2.4 | 106 |
| MTC-002-3BD12 | 2 | 184T | | | | | 4 | | 6.1 / 3.1 | 119 |
| MTC-003-3BD12 | 3 | 213T | | | | | 2 | | 8.4 / 4.2 | 171 |
| MTC-005-3BD12 | 5 | 215T | | | | | 4 | | 13.6 / 6.8 | 189 |
| MTC-7P5-3BD12 | 7-1/2 | 254T | | | | | 2 | | 21.2 / 10.6 | 272 |
| MTC-010-3BD12 | 10 | 256T | | | | | 4 | | 28.0 / 14.0 | 307 |
| 3600 rpm Base Speed | | | | | | | | | | |
| MTC-1P5-3BD36 | 1-1/2 | 143T | 208-230/460 3-phase | TEFC cast iron | 1045 carbon steel | F1(F2) | 2 | 1.15 | 3.8 / 1.9 | 62 |
| MTC-002-3BD36 | 2 | 145T | | | | | 4 | | 5.0 / 2.5 | 66 |
| MTC-003-3BD36 | 3 | 182T | | | | | 2 | | 7.2 / 3.6 | 107 |
| MTC-005-3BD36 | 5 | 184T | | | | | 4 | | 11.3 / 5.7 | 112 |
| MTC-7P5-3BD36 | 7-1/2 | 213T | | | | | 2 | | 16.8 / 8.4 | 165 |
| MTC-010-3BD36 | 10 | 215T | | | | | 4 | | 22.4 / 11.2 | 185 |
| <p>2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2. (Refer to "Chapter 5: Reference" for further information regarding F1 and F2 mounting.)</p> <p>3) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. See AutomationDirect Terms & Conditions for details.</p> | | | | | | | | | | |

MTC EPACT CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME – 1800 RPM

| Performance Data – EPACT T & TC(1) Frame Three-Phase Motors – 1800 rpm (460 Volt except as indicated) | | | | | | | | | | | |
|--|-------|-------------|----------|---------------------|----------|---------------------|------|---------------------|-------------------|-------------------------------------|-------|
| Part Number | HP | NEMA Design | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | |
| | | | | CT (2:1) | VT (5:1) | CHP(2) | Safe | | | | |
| <i>MTC-001-3BD18(CK)</i> | 1 | B | 1760 | 900 | 360 | 2700 | 5400 | 82.5 | 0.71 | 0.068 | |
| <i>MTC-1P5-3BD18(CK)</i> | 1-1/2 | | 1755 | | | | 5400 | 84.0 | 0.74 | 0.083 | |
| <i>MTC-002-3BD18(CK)</i> | 2 | | 1750 | | | | 5400 | 84.0 | 0.77 | 0.09 | |
| <i>MTC-003-3BD18(CK)</i> | 3 | | 1750 | | | | 5400 | 87.5 | 0.81 | 0.22 | |
| <i>MTC-005-3BD18(CK)</i> | 5 | | 1750 | | | | 5400 | 87.5 | 0.84 | 0.285 | |
| <i>MTC-7P5-3BD18(CK)</i> | 7-1/2 | | 1760 | | | | 5400 | 89.5 | 0.81 | 0.602 | |
| <i>MTC-010-3BD18(CK)</i> | 10 | | A | | | | 1760 | 4200 | 89.5 | 0.83 | 0.742 |
| <i>MTC-015-3BD18(CK)</i> | 15 | 1770 | | | | | 4200 | 91.0 | 0.83 | 1.71 | |
| <i>MTC-020-3BD18(CK)</i> | 20 | 1770 | | | | | 4200 | 91.0 | 0.84 | 2.18 | |
| <i>MTC-025-3BD18(CK)</i> | 25 | 1775 | | | | | 4200 | 92.4 | 0.87 | 3.3 | |
| <i>MTC-030-3BD18(CK)</i> | 30 | 1775 | | | | | 4200 | 92.4 | 0.86 | 3.76 | |
| <i>MTC-040-3BD18(CK)</i> | 40 | 1775 | | | | | 3600 | 93.0 | 0.86 | 5.84 | |
| <i>MTC-050-3BD18(CK)</i> | 50 | 1775 | | | | | 3600 | 93.0 | 0.86 | 6.34 | |
| <i>MTC-060-3BD18(CK)</i> | 60 | B | | | | | 1785 | 3600 | 93.6 | 0.85 | 11.4 |
| <i>MTC-075-3BD18(CK)</i> | 75 | | | | | | 1785 | 3600 | 94.1 | 0.84 | 12.7 |
| <i>MTC-100-3BD18(CK)</i> | 100 | | | | | | 1785 | 2800 | 94.5 | 0.87 | 28.5 |
| <i>MTC-125-3BD18</i> | 125 | | | | | | 1785 | 2800 | 94.5 | 0.86 | 38.9 |
| <i>MTC-150-3BD18</i> | 150 | | | | | | 1785 | 2800 | 95.0 | 0.87 | 47.2 |
| <i>MTC-200-3BD18</i> | 200 | | | | | | 1785 | 2800 | 95.0 | 0.87 | 62.3 |
| <i>MTC-250-3D18</i> | 250 | | | | | | 1790 | 2800 | 95.9 | 0.87 | 86.0 |
| <i>MTC-300-3D18</i> | 300 | | 1790 | | | | 2800 | 95.7 | 0.88 | 105.0 | |

1) TC-frame motors (MTC-xxx-xxxxCK) are T-frame motors with applicable C-face accessory kits installed.
 2) Maximum Constant HP RPM is for direct-coupled loads.

*** TABLE CONTINUED NEXT PAGE ***

MTC EPACK CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME – 1800 RPM

| ***** Table Continued From Previous Page ***** | | | | | | | |
|--|-------|----------------------------|--------------|--------------|----------------|--------------|------------|
| Performance Data – EPACK T & TC ⁽¹⁾ Frame 3-Phase Motors – 1800 rpm (460 Volt except as indicated) | | | | | | | |
| Part Number | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTC-001-3BD18(CK) | 1 | 1.9 / 0.95 | 3.0 / 1.5 | 30.0 / 15.0 | 3.00 | 7.50 | 10.50 |
| MTC-1P5-3BD18(CK) | 1-1/2 | 2.44 / 1.22 | 4.2 / 2.1 | 40.0 / 20.0 | 4.41 | 10.58 | 14.11 |
| MTC-002-3BD18(CK) | 2 | 2.76 / 1.38 | 5.4 / 2.7 | 50.0 / 25.0 | 6.05 | 13.92 | 17.55 |
| MTC-003-3BD18(CK) | 3 | 3.74 / 1.87 | 7.72 / 3.86 | 64.0 / 32.0 | 9.07 | 25.40 | 29.93 |
| MTC-005-3BD18(CK) | 5 | 5.1 / 2.55 | 11.8 / 5.9 | 92.0 / 46.0 | 15.1 | 40.8 | 46.8 |
| MTC-7P5-3BD18(CK) | 7-1/2 | 8.98 / 4.49 | 18.6 / 9.3 | 127 / 63.5 | 22.0 | 44.0 | 72.6 |
| MTC-010-3BD18(CK) | 10 | 13.0 / 6.5 | 24.8 / 12.4 | 200 / 100 | 29.8 | 59.6 | 92.4 |
| MTC-015-3BD18(CK) | 15 | 15.6 / 7.8 | 35.4 / 17.7 | 280 / 140 | 44.5 | 89.0 | 124.6 |
| MTC-020-3BD18(CK) | 20 | 19.0 / 9.5 | 47.6 / 23.8 | 400 / 200 | 59.7 | 119.4 | 155.2 |
| MTC-025-3BD18(CK) | 25 | 24.0 / 12.0 | 56.4 / 28.2 | 440 / 220 | 73.9 | 152.2 | 206.9 |
| MTC-030-3BD18(CK) | 30 | 27.0 / 13.5 | 67.2 / 33.6 | 520 / 260 | 88.7 | 177.4 | 257.2 |
| MTC-040-3BD18(CK) | 40 | 35.0 / 17.5 | 93.0 / 46.5 | 720 / 360 | 118 | 248 | 355 |
| MTC-050-3BD18(CK) | 50 | 38.6 / 19.3 | 114.6 / 57.3 | 880 / 440 | 148 | 311 | 444 |
| MTC-060-3BD18(CK) | 60 | 48.0 / 24.0 | 139.4 / 69.7 | 870 / 435 | 179 | 322 | 483 |
| MTC-075-3BD18(CK) | 75 | 59.2 / 29.6 | 172.8 / 86.4 | 1086 / 543 | 221 | 398 | 530 |
| MTC-100-3BD18(CK) | 100 | 72.0 / 36.0 | 230 / 115 | 1450 / 725 | 296 | 592 | 858 |
| MTC-125-3BD18 | 125 | 82.0 / 41.0 | 274 / 137 | 1815 / 908 | 355 | 604 | 888 |
| MTC-150-3BD18 | 150 | 97.6 / 48.8 | 326 / 163 | 2170 / 1085 | 433 | 779 | 1083 |
| MTC-200-3BD18 | 200 | 140 / 70.0 | 446 / 223 | 2900 / 1450 | 590 | 1180 | 1652 |
| MTC-250-3D18 | 250 | - / 85.6 | - / 282 | - / 2017 | 728 | 1660 | 2402 |
| MTC-300-3D18 | 300 | - / 96.6 | - / 334 | - / 2351 | 864 | 1953 | 2817 |

1) TC-frame motors (MTC-xxx-xxxxCK) are T-frame motors with applicable C-face accessory kits installed.

*** TABLE CONTINUED NEXT PAGE ***

MTC EPACT CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME – 1800 RPM

| *** TABLE CONTINUED FROM PREVIOUS PAGE *** | | | | |
|---|-------|----------|---------------------------------------|------------------------------|
| Performance Data EPAct T & TC ⁽¹⁾ Frame Three-Phase Motors 1800 rpm – (460 Volt except as indicated) | | | | |
| Part Number | HP | Slip (%) | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
| MTC-001-3BD18(CK) | 1 | 2.22 | 20 seconds | 80° C (176°F) |
| MTC-1P5-3BD18(CK) | 1-1/2 | 2.50 | | |
| MTC-002-3BD18(CK) | 2 | 2.78 | | |
| MTC-003-3BD18(CK) | 3 | 2.78 | | |
| MTC-005-3BD18(CK) | 5 | 2.78 | | |
| MTC-7P5-3BD18(CK) | 7-1/2 | 2.22 | | |
| MTC-010-3BD18(CK) | 10 | 2.20 | 13 seconds | |
| MTC-015-3BD18(CK) | 15 | 1.67 | 20 seconds | |
| MTC-020-3BD18(CK) | 20 | 1.67 | | |
| MTC-025-3BD18(CK) | 25 | 1.38 | 16 seconds | |
| MTC-030-3BD18(CK) | 30 | 1.38 | 20 seconds | |
| MTC-040-3BD18(CK) | 40 | 1.39 | | |
| MTC-050-3BD18(CK) | 50 | 1.39 | | |
| MTC-060-3BD18(CK) | 60 | 0.83 | | |
| MTC-075-3BD18(CK) | 75 | 0.83 | | |
| MTC-100-3BD18(CK) | 100 | 0.83 | | |
| MTC-125-3BD18 | 125 | 0.83 | 15 seconds | |
| MTC-150-3BD18 | 150 | 0.83 | | |
| MTC-200-3BD18 | 200 | 0.83 | | |
| MTC-250-3D18 | 250 | 0.54 | 20 seconds | 85° C (185°F) |
| MTC-300-3D18 | 300 | 0.53 | | |

1) TC-frame motors (MTC-xxx-xxxxCK) are T-frame motors with applicable C-face accessory kits installed.

MTC EPACK CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 1200 RPM

| Performance Data – EPACK T-Frame Three-Phase Motors – 1200 rpm (460 Volt except as indicated) | | | | | | | |
|--|-------|------------------------------|-----------------------------|-----------------------|-----------------------|-------------------------------------|------------|
| Part Number | HP | NEMA Design | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (2:1) | Variable Torque (5:1) | CHP(2) | Safe |
| MTC-001-3BD12 | 1 | B | 1150 | 600 | 240 | 1800 | 3600 |
| MTC-1P5-3BD12 | 1-1/2 | | 1170 | | | | |
| MTC-002-3BD12 | 2 | | 1180 | | | | |
| MTC-003-3BD12 | 3 | | | | | | |
| MTC-005-3BD12 | 5 | | | | | | |
| MTC-7P5-3BD12 | 7-1/2 | | | | | | |
| MTC-010-3BD12 | 10 | A | | | | | |
| Part Number | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTC-001-3BD12 | 1 | 3.2 / 1.6 | 3.2 / 1.6 | 25.0 / 12.5 | 4.59 | 11.48 | 14.69 |
| MTC-1P5-3BD12 | 1-1/2 | 3.5 / 1.8 | 4.8 / 2.4 | 40.0 / 20.0 | 6.60 | 18.5 | 24.4 |
| MTC-002-3BD12 | 2 | 4.0 / 2.0 | 6.1 / 3.1 | 50.0 / 25.0 | 9.02 | 24.4 | 30.7 |
| MTC-003-3BD12 | 3 | 4.7 / 2.4 | 8.4 / 4.2 | 64.0 / 32.0 | 13.4 | 22.8 | 37.5 |
| MTC-005-3BD12 | 5 | 7.3 / 3.7 | 13.6 / 6.8 | 92.0 / 46.0 | 22.2 | 37.7 | 53.3 |
| MTC-7P5-3BD12 | 7-1/2 | 12.6 / 6.3 | 21.2 / 10.6 | 127 / 63.5 | 32.9 | 75.7 | 98.7 |
| MTC-010-3BD12 | 10 | 7.6 / 3.8 | 28.0 / 14.0 | 168 / 84.0 | 44.8 | 98.6 | 139 |
| Part Number | HP | Temperature Rise @ Full Load | Max Time Locked Rotor (Hot) | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| MTC-001-3BD12 | 1 | 80°C (176°F) | 20 seconds | 81.1 | 0.72 | 0.009 | 3.3 |
| MTC-1P5-3BD12 | 1-1/2 | | | 85.5 | 0.65 | 0.068 | 2.5 |
| MTC-002-3BD12 | 2 | | | 86.5 | 0.70 | 0.100 | 2.5 |
| MTC-003-3BD12 | 3 | | | 87.5 | 0.72 | 0.207 | 1.7 |
| MTC-005-3BD12 | 5 | | | 87.5 | 0.72 | 0.258 | 1.7 |
| MTC-7P5-3BD12 | 7-1/2 | | | 89.5 | 0.71 | 0.480 | 1.7 |
| MTC-010-3BD12 | 10 | | | 89.5 | 0.74 | 2.487 | 1.7 |

2) Maximum Constant HP RPM is for direct-coupled loads

MTC EPACK CAST-IRON 3-PHASE MOTORS FEATURES AND SPECS (CONTINUED)

MTC MOTOR PERFORMANCE DATA – CAST-IRON T-FRAME – 3600 RPM

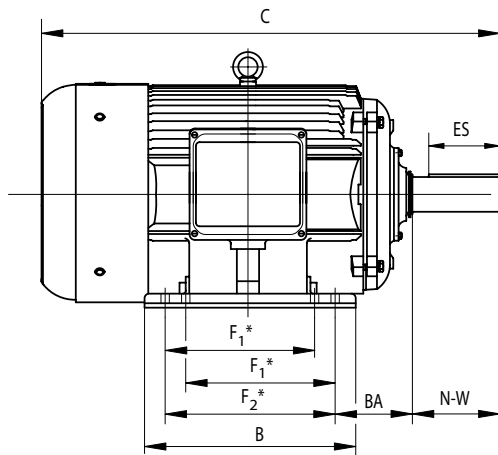
| Performance Data – EPACK T-Frame Three-Phase Motors – 3600 rpm (460 Volt except as indicated) | | | | | | | |
|--|-------|------------------------------|-----------------------------|-----------------------|-----------------------|-------------------------------------|------------|
| Part Number | HP | NEMA Design | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (2:1) | Variable Torque (5:1) | CHP(2) | Safe |
| MTC-1P5-3BD36 | 1-1/2 | B | 3480 | 1800 | 720 | 5400 | 5400 |
| MTC-002-3BD36 | 2 | | | | | | |
| MTC-003-3BD36 | 3 | | 3520 | | | | |
| MTC-005-3BD36 | 5 | | 3510 | | | | |
| MTC-7P5-3BD36 | 7-1/2 | | 3520 | | | | |
| MTC-010-3BD36 | 10 | | 3530 | | | | |
| Part Number | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTC-1P5-3BD36 | 1-1/2 | 1.4 / 0.7 | 3.8 / 1.9 | 40.0 / 20.0 | 2.23 | 4.01 | 5.58 |
| MTC-002-3BD36 | 2 | 1.5 / 0.8 | 5.0 / 2.5 | 50.0 / 25.0 | 3.03 | 6.06 | 8.18 |
| MTC-003-3BD36 | 3 | 2.8 / 1.4 | 7.2 / 3.6 | 64.0 / 32.0 | 4.50 | 10.4 | 16.2 |
| MTC-005-3BD36 | 5 | 4.0 / 2.0 | 11.3 / 5.7 | 92.0 / 46.0 | 7.46 | 15.7 | 26.5 |
| MTC-7P5-3BD36 | 7-1/2 | 5.0 / 2.5 | 16.8 / 8.4 | 127 / 63.5 | 11.0 | 22.0 | 36.3 |
| MTC-010-3BD36 | 10 | 5.7 / 2.8 | 22.4 / 11.2 | 162 / 81.0 | 15.0 | 33.0 | 49.5 |
| Part Number | HP | Temperature Rise @ Full Load | Max Time Locked Rotor (Hot) | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| MTC-1P5-3BD36 | 1-1/2 | 80°C (176°F) | 20 seconds | 82.5 | 0.86 | 0.009 | 3.3 |
| MTC-002-3BD36 | 2 | | | 84.0 | 0.87 | 0.010 | 3.3 |
| MTC-003-3BD36 | 3 | | | 85.5 | 0.86 | 0.034 | 2.2 |
| MTC-005-3BD36 | 5 | | | 87.5 | 0.88 | 0.040 | 2.5 |
| MTC-7P5-3BD36 | 7-1/2 | | | 88.5 | 0.89 | 0.258 | 2.2 |
| MTC-010-3BD36 | 10 | | | 89.5 | 0.89 | 0.109 | 1.9 |

2) Maximum Constant HP RPM is for direct-coupled loads

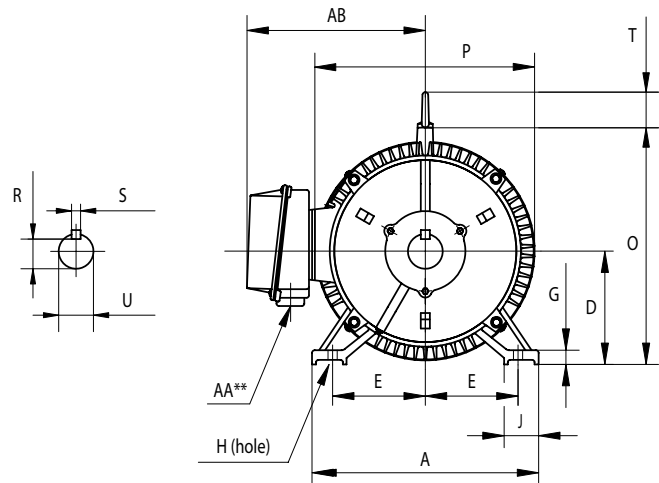
MTC MOTOR DIMENSIONS

(DIMENSIONS = INCHES)

MTC EPACT T-FRAME THREE-PHASE MOTOR DIMENSIONS



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).



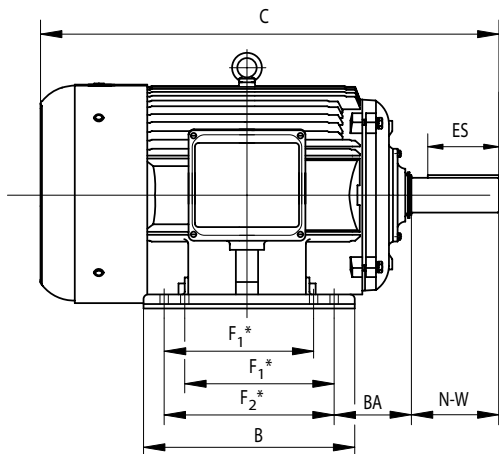
** F1 mounting shown.
** Some frame sizes are F1/F2 convertible.

| Dimensions [inches, except as noted] | | | | | | | | | | | |
|---|-------|------------|-------|----------|------|-------|------|-------|------|------|------|
| EPAct Three-phase T-Frame Motors – 1200, 1800, 3600 rpm | | | | | | | | | | | |
| Part Number | HP | NEMA Frame | A | AA** | AB | B | BA | C | D | E | ES |
| MTC-001-3BD12 | 1 | 145T | 7 | 3/4" npt | 6.89 | 6 | 2.25 | 13.58 | 3.5 | 2.75 | 1.41 |
| MTC-001-3BD18 | | 5 | | | | 12.57 | | | | | |
| MTC-1P5-3BD12 | 1-1/2 | 182T | 9 | 1" NPT | 7.45 | 6.5 | 2.75 | 15.11 | 4.5 | 3.75 | 1.78 |
| MTC-1P5-3BD18 | | 145T | 7 | 3/4" npt | 6.89 | 6 | 2.25 | 13.58 | 3.5 | 2.75 | 1.41 |
| MTC-1P5-3BD36 | | 5 | 12.57 | | | | | | | | |
| MTC-002-3BD12 | 2 | 184T | 9 | 1" NPT | 7.45 | 7.5 | 2.75 | 16.11 | 4.5 | 3.75 | 1.78 |
| MTC-002-3BD18 | | 145T | 7 | 3/4" npt | 6.89 | 6 | 2.25 | 13.58 | 3.5 | 2.75 | 1.41 |
| MTC-002-3BD36 | | | | | | | | | | | |
| MTC-003-3BD12 | 3 | 213T | 10.5 | 1" NPT | 8.63 | 7.5 | 3.5 | 18.89 | 5.25 | 4.25 | 2.41 |
| MTC-003-3BD18 | | 182T | 9 | 1" NPT | 7.45 | 6.5 | 2.75 | 15.11 | 4.5 | 3.75 | 1.78 |
| MTC-003-3BD36 | | | | | | | | | | | |
| MTC-005-3BD12 | 5 | 215T | 10.5 | 1" NPT | 8.63 | 9 | 3.5 | 20.49 | 5.25 | 4.25 | 2.41 |
| MTC-005-3BD18 | | 184T | 9 | 1" NPT | 7.45 | 7.5 | 2.75 | 16.11 | 4.5 | 3.75 | 1.78 |
| MTC-005-3BD36 | | | | | | | | | | | |
| MTC-7P5-3BD12 | 7-1/2 | 254T | 12.5 | 1.5" NPT | 11.2 | 10.8 | 4.25 | 23.29 | 6.25 | 5 | 2.91 |
| MTC-7P5-3BD18 | | 213T | 10.5 | 1" NPT | 8.63 | 7.5 | 3.5 | 18.89 | 5.25 | 4.25 | 2.41 |
| MTC-7P5-3BD36 | | | | | | | | | | | |
| MTC-010-3BD12 | 10 | 256T | 12.5 | 1.5" NPT | 11.2 | 12.5 | 4.25 | 25.06 | 6.25 | 5 | 2.91 |
| MTC-010-3BD18 | | 215T | 10.5 | 1" NPT | 8.63 | 9 | 3.5 | 20.49 | 5.25 | 4.25 | 2.41 |
| MTC-010-3BD36 | | | | | | | | | | | |

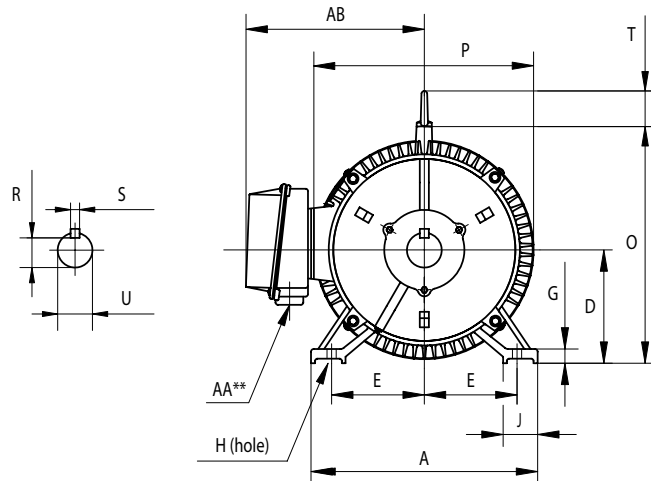
* Various frame sizes have 2 or 4 mounting holes per mounting foot.
** AA dimension is conduit fitting size.
F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table. (F2 mounting = conduit entrance on right side facing shaft.)
**** TABLE CONTINUED NEXT PAGE (for dimensions F1-U) ****

MTC MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTC EPACT T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).



** F1 mounting shown.
** Some frame sizes are F1/F2 convertible.

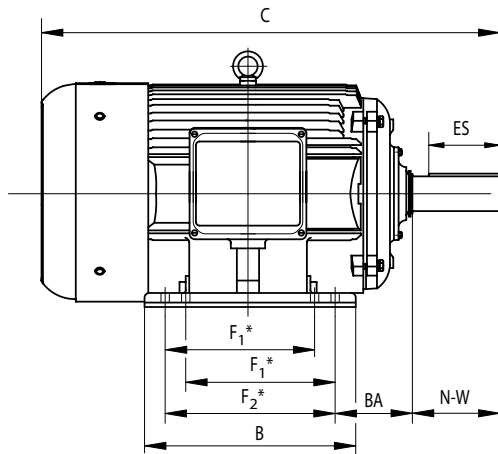
**** Table Continued Previous Page (for dimensions A–ES) ****

| Dimensions [inches, except as noted] | | | | | | | | | | | | |
|---|------------------|------------------|-------|------|------|------|-------|------|-------|-------|------|-------|
| EPACT Three-phase T-Frame Motors – 1200, 1800, 3600 rpm | | | | | | | | | | | | |
| Part Number | F ₁ * | F ₂ * | G | H | J | N-W | O | P | R | S | T | U |
| MTC-001-3BD12 | 4 | 5 | 0.512 | 0.34 | 1.45 | 2.25 | 7.08 | 7.16 | 0.771 | 0.188 | 0.88 | 0.875 |
| MTC-001-3BD18 | n/a | 4 | | | | | | | | | n/a | |
| MTC-1P5-3BD12 | n/a | 4.5 | 0.59 | 0.41 | 1.97 | 2.75 | 8.97 | 8.82 | 0.986 | 0.25 | 1.42 | 1.125 |
| MTC-1P5-3BD18 | 4 | 5 | 0.512 | 0.34 | 1.45 | 2.25 | 7.08 | 7.16 | 0.771 | 0.188 | n/a | 0.875 |
| MTC-1P5-3BD36 | n/a | 4 | | | | | | | | | | |
| MTC-002-3BD12 | 4.5 | 5.5 | 0.59 | 0.41 | 1.97 | 2.75 | 8.97 | 8.82 | 0.986 | 0.25 | 1.42 | 1.125 |
| MTC-002-3BD18 | 4 | 5 | 0.512 | 0.34 | 1.45 | 2.25 | 7.08 | 7.16 | 0.771 | 0.188 | n/a | 0.875 |
| MTC-002-3BD36 | | | | | | | | | | | 0.88 | |
| MTC-003-3BD12 | n/a | 5.5 | 0.709 | 0.41 | 2.36 | 3.38 | 10.53 | 10.4 | 1.201 | 0.312 | 1.73 | 1.375 |
| MTC-003-3BD18 | n/a | 4.5 | 0.59 | 0.41 | 1.97 | 2.75 | 8.97 | 8.82 | 0.986 | 0.25 | 1.42 | 1.125 |
| MTC-003-3BD36 | | | | | | | | | | | | |
| MTC-005-3BD12 | 5.5 | 7 | 0.709 | 0.41 | 2.36 | 3.38 | 10.53 | 10.4 | 1.201 | 0.312 | 1.73 | 1.375 |
| MTC-005-3BD18 | 4.5 | 5.5 | 0.59 | 0.41 | 1.97 | 2.75 | 8.97 | 8.82 | 0.986 | 0.25 | 1.42 | 1.125 |
| MTC-005-3BD36 | | | | | | | | | | | | |
| MTC-7P5-3BD12 | n/a | 8.25 | 0.787 | 0.53 | 2.76 | 4 | 12.89 | 12.6 | 1.416 | 0.375 | 2.05 | 1.625 |
| MTC-7P5-3BD18 | n/a | 5.5 | 0.709 | 0.41 | 2.36 | 3.38 | 10.53 | 10.4 | 1.201 | 0.312 | 1.73 | 1.375 |
| MTC-7P5-3BD36 | | | | | | | | | | | | |
| MTC-010-3BD12 | 8.25 | 10 | 0.787 | 0.53 | 2.76 | 4 | 12.89 | 12.6 | 1.416 | 0.375 | 2.05 | 1.625 |
| MTC-010-3BD18 | 5.5 | 7 | 0.709 | 0.41 | 2.36 | 3.38 | 10.53 | 10.4 | 1.201 | 0.312 | 1.73 | 1.375 |
| MTC-010-3BD36 | | | | | | | | | | | | |

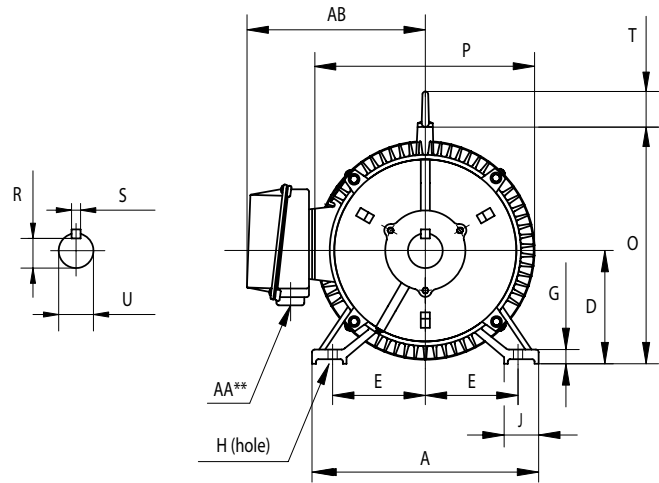
* Various frame sizes have 2 or 4 mounting holes per mounting foot.
** AA dimension is conduit fitting size.
F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table. (F2 mounting = conduit entrance on right side facing shaft.)

MTC MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTC EFACT T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).



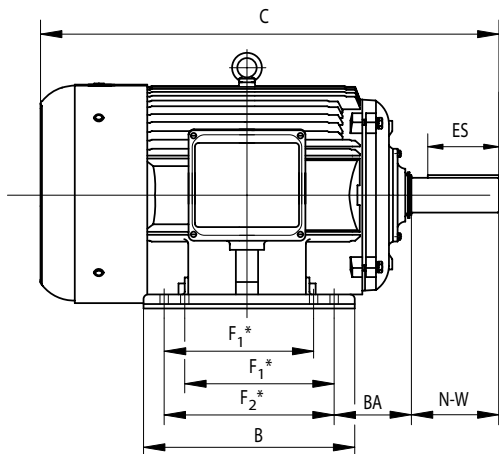
** F1 mounting shown.
** Some frame sizes are F1/F2 convertible.

| Dimensions [inches, except as noted] | | | | | | | | | | | |
|---|-----|------------|------|----------|-------|------|------|-------|------|------|------|
| EFACT Three-phase T-Frame Motors – 1800 rpm | | | | | | | | | | | |
| Part Number | HP | NEMA Frame | A | AA** | AB | B | BA | C | D | E | ES |
| MTC-015-3BD18 | 15 | 254T | 12.5 | 1.5" NPT | 11.2 | 10.8 | 4.25 | 23.29 | 6.25 | 5 | 2.91 |
| MTC-020-3BD18 | 20 | 256T | | | | 12.5 | | 25.06 | | | |
| MTC-025-3BD18 | 25 | 284T | 14 | 1.5" NPT | 12 | 12.5 | 4.75 | 26.64 | 7 | 5.5 | 3.28 |
| MTC-030-3BD18 | 30 | 286T | | | | 14 | | 28.18 | | | |
| MTC-040-3BD18 | 40 | 324T | 16 | 2" NPT | 13.4 | 14 | 5.25 | 29.95 | 8 | 6.25 | 3.91 |
| MTC-050-3BD18 | 50 | 326T | | | | 15.5 | | 31.24 | | | |
| MTC-060-3BD18 | 60 | 364T | 18 | 3" NPT | 15.7 | 15.2 | 5.88 | 32.68 | 9 | 7 | 4.28 |
| MTC-075-3BD18 | 75 | 365T | | | | 16.2 | | 34.11 | | | |
| MTC-100-3BD18 | 100 | 405T | 20 | 3" NPT | 18.31 | 17.8 | 6.62 | 38.35 | 10 | 8 | 5.65 |
| MTC-125-3BD18 | 125 | 444T | 22 | 2x3"NPT | 19.41 | 18.5 | 7.5 | 42.52 | 11 | 9 | 6.91 |
| MTC-150-3BD18 | 150 | 445T | | | | 20.5 | | 44.5 | | | |
| MTC-200-3BD18 | 200 | 445/7T | | | | 24 | | 48.03 | | | |
| MTC-250-3D18 | 250 | 449T | 22 | 2x3"NPT | 19.07 | 31 | 7.5 | 55.51 | 11 | 9 | 7.01 |
| MTC-300-3D18 | 300 | | | | | | | | | | |

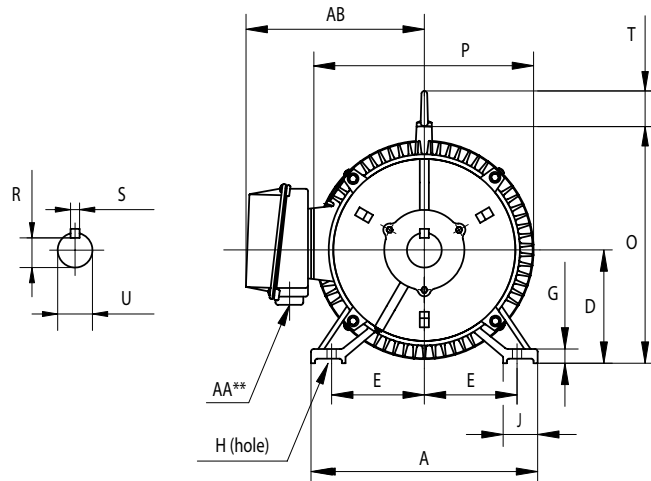
* Various frame sizes have 2 or 4 mounting holes per mounting foot.
** AA dimension is conduit fitting size.
F1 mounting shown; some frame sizes are F1/F2 convertible; refer to T-frame "Motor Specifications" table. (F2 mounting = conduit entrance on right side facing shaft.)
**** TABLE CONTINUED NEXT PAGE (for dimensions F1-U) ****

MTC MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTC EPACT T-FRAME THREE-PHASE MOTOR DIMENSIONS (CONTINUED)



* Various frame sizes have 2 or 4 mounting holes per mounting foot (one mounting foot per side).



** F1 mounting shown.
** Some frame sizes are F1/F2 convertible.

**** Table Continued Previous Page (for dimensions A–ES) ****

Dimensions [inches, except as noted]

EPAct Three-phase T-Frame Motors – 1800 rpm

| Part Number | F ₁ * | F ₂ * | G | H | J | N-W | O | P | R | S | T | U |
|----------------------|------------------|------------------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| MTC-015-3BD18 | n/a | 8.25 | 0.787 | 0.53 | 2.76 | 4 | 12.89 | 12.6 | 1.416 | 0.375 | 2.05 | 1.625 |
| MTC-020-3BD18 | 8.25 | 10 | | | | | | | | | | |
| MTC-025-3BD18 | n/a | 9.5 | 0.866 | 0.53 | 2.76 | 4.62 | 14.28 | 14.17 | 1.591 | 0.5 | 2.05 | 1.875 |
| MTC-030-3BD18 | 9.5 | 11 | | | | | | | | | | |
| MTC-040-3BD18 | n/a | 10.5 | 0.984 | 0.66 | 2.76 | 5.25 | 15.91 | 15.75 | 1.845 | 0.5 | 2.44 | 2.125 |
| MTC-050-3BD18 | 10.5 | 12 | | | | | | | | | | |
| MTC-060-3BD18 | n/a | 11.25 | 1.102 | 0.66 | 2.95 | 5.88 | 18.13 | 17.7 | 2.021 | 0.625 | 2.44 | 2.375 |
| MTC-075-3BD18 | 11.25 | 12.25 | | | | | | | | | | |
| MTC-100-3BD18 | 12.25 | 13.75 | 1.18 | 0.81 | 3.15 | 7.25 | 21.02 | 21.42 | 2.45 | 0.75 | 2.83 | 2.875 |
| MTC-125-3BD18 | n/a | 14.5 | | | | | | | | | | |
| MTC-150-3BD18 | 14.5 | 16.5 | 1.38 | 0.81 | 3.35 | 8.5 | 22.97 | 23.43 | 2.88 | 0.875 | 3.46 | 3.375 |
| MTC-200-3BD18 | 16.5 | 20 | | | | | | | | | | |
| MTC-250-3D18 | n/a | 25 | 1.575 | 0.81 | 3.35 | 8.5 | 23 | 24 | 2.88 | 0.875 | 4.25 | 3.375 |
| MTC-300-3D18 | | | | | | | | | | | | |

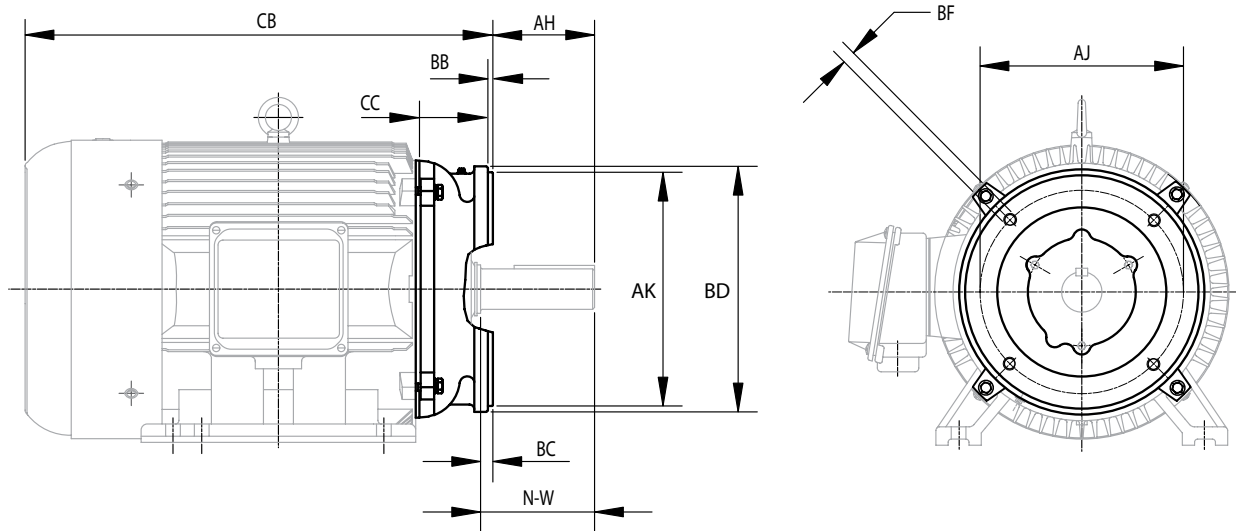
* Various frame sizes have 2 or 4 mounting holes per mounting foot.

** AA dimension is conduit fitting size.

F₁ mounting shown; some frame sizes are F₁/F₂ convertible; refer to T-frame "Motor Specifications" table. (F₂ mounting = conduit entrance on right side facing shaft.)

MTC MOTOR DIMENSIONS (CONTINUED) – (DIMENSIONS = INCHES)

MTC EFACT TC-FRAME THREE-PHASE MOTOR & C-FLANGE DIMENSIONS



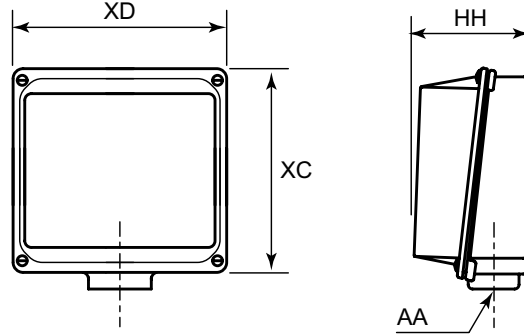
TC-frame motors are T-frame EFACT motors with C-flange accessory kits installed. For more information about the C-flange accessory kits, refer to Chapter 4: Accessories.

| Dimensions (inches) - EFACT T-Frame Motor C-Flange Kits | | | | | | | | | | | |
|---|--------|-------------------|----------------------|--------------------|------|-------------------|-------|--------|-------------------|------|--------------------|
| Part Number | Frame | AH ⁽²⁾ | AJ | AK | BB | BC ⁽²⁾ | BD | BF | CB ⁽²⁾ | CC | N-W ⁽²⁾ |
| MTA-CFACE-140TC⁽¹⁾ | 143T | 1.96 | 5.875 ⁽¹⁾ | 4.5 ⁽¹⁾ | 0.16 | 0.12 | 6.5 | 3/8-16 | 10.51 | 1.43 | 2.25 |
| | 145T | | | | | | | | 11.62 | | |
| MTA-CFACE-180TC | 182T | 2.62 | 7.25 | 8.5 | 0.25 | 0.12 | 9 | 1/2-13 | 12.49 | 1.17 | 2.75 |
| | 184T | | | | | | | | 13.49 | | |
| MTA-CFACE-210TC | 213T | 3.12 | 7.25 | 8.5 | 0.25 | 0.25 | 9 | 1/2-13 | 15.77 | 1.45 | 3.38 |
| | 215T | | | | | | | | 17.37 | | |
| MTA-CFACE-250TC | 254T | 3.75 | 7.25 | 8.5 | 0.25 | 0.25 | 10 | 1/2-13 | 19.54 | 2.89 | 4 |
| | 256T | | | | | | | | 21.31 | | |
| MTA-CFACE-280TC | 284T | 4.38 | 9 | 10.5 | 0.25 | 0.25 | 11.25 | 1/2-13 | 22.26 | 3.26 | 4.62 |
| | 286T | | | | | | | | 23.80 | | |
| MTA-CFACE-320TC | 324T | 5 | 11 | 12.5 | 0.25 | 0.25 | 14 | 5/8-11 | 24.95 | 3.67 | 5.25 |
| | 326T | | | | | | | | 26.24 | | |
| MTA-CFACE-360TC | 364T | 5.62 | 11 | 12.5 | 0.25 | 0.25 | 14 | 5/8-11 | 27.06 | 4.06 | 5.88 |
| | 365T | | | | | | | | 28.49 | | |
| MTA-CFACE-400TC | 405T | 7 | 11 | 12.5 | 0.25 | 0.25 | 15.5 | 5/8-11 | 31.35 | 4.33 | 7.25 |
| MTA-CFACE-444TC | 444T | 8.25 | 14 | 16 | 0.25 | 0.25 | 18 | 5/8-11 | 34.27 | 4.11 | 8.5 |
| | 445T | | | | | | | | 36.25 | | |
| MTA-CFACE-447TC | 445/7T | 8.25 | 14 | 16 | 0.25 | 0.25 | 18 | 5/8-11 | 39.78 | 4.11 | 8.5 |
| MTA-CFACE-449TC | 449T | 8.248 | 14 | 16 | 0.26 | 0.26 | 17.72 | 5/8-11 | 47.26 | 4.35 | 8.5 |

1) Mounting bolt holes for MTA-CFACE-140TC are located outside of the highest C-face flange surface (dimension AJ > AK).

2) Motor dependent dimensions apply only to IronHorse MTC-xxx-xxxxx(CK) motors.

MTC JUNCTION BOX DIMENSIONS



| Junction Box Dimensions (in) | | | | |
|------------------------------|------------|-------------|------------|-------------------------|
| Frame Size * | XD (Width) | XC (Height) | HH (Depth) | AA (Conduit Hole) (NPT) |
| 143T | 4.1 | 4.5 | 2.3 | 3/4 |
| 145T | | | | |
| 182T | | | | |
| 184T | 4.6 | 5.0 | 2.6 | 1 |
| 213T | | | | |
| 215T | | | | |
| 254T | 6.3 | 7.2 | 3.3 | 1-1/2 |
| 256T | | | | |
| 284T | | | | |
| 286T | | | | |
| 324T | 9 | 10.6 | 5.3 | 2 |
| 326T | | | | |
| 364T | | | | 3 |
| 365T | | | | |
| 405T | 9.8 | 11.7 | 7.1 | 3 (2 openings) |
| 444T | | | | |
| 445T | | | | |
| 445/7T | | | | |
| 449T | 11.3 | | | |

* TC-frame motors have the same junction boxes as the comparable T-frame motors.

MTC MOTORS DECIBEL LEVELS

The decibel (sound) level of an IronHorse® motor should be measured after initial startup, after 30 days, and after six months of use. Decibel levels should remain fairly consistent and can be an indication of misalignment and premature bearing wear. If the measured decibel level for your IronHorse model exceeds the value listed below by more than 10%, contact AutomationDirect or a local motor service technician found at www.easa.com.

| MTC Average T-Frame Decibel Levels | | |
|------------------------------------|-------|----------------------------|
| Frame Size * | HP | Noise Level: Lw dB(A) @ 1m |
| | | MTC |
| 143T | 1 | 64.0 |
| 145T | 1-1/2 | 68.0 |
| | 2 | 68.8 |
| 182T | 2 | – |
| 182T | 3 | 74.0 |
| 184T | 5 | 73.0 |
| 213T | 7-1/2 | 78.4 |
| 215T | 10 | 74.3 |
| 254T | 15 | 74.6 |
| 256T | 20 | 74.0 |
| 284T | 25 | 75.0 |
| 286T | 30 | 76.1 |
| 324T | 40 | 76.4 |
| 326T | 50 | 77.0 |
| 364T | 60 | 77.1 |
| 365T | 75 | 78.0 |
| 405T | 100 | 78.1 |
| 444T | 125 | 78.3 |
| 445T | 150 | 79.4 |
| 445/7T | 200 | 79.4 |
| 449T | 250 | 81.0 |
| | 300 | 81.4 |

* TC-frame motors have the same sound ratings as the comparable T-frame motors.

C-FLANGE KITS FOR MTC EPACT THREE-PHASE MOTORS

C-FLANGE KITS

Any IronHorse MTC EPAct T-frame cast-iron motor from 1–300hp can be converted to C-face mounting by using a cast iron C-flange kit. These kits are field installable and include the C-faces and mounting bolts.



MTA T-Frame C-Flange Kit

C-FLANGE DIMENSIONS

C-flange dimensions are shown in Chapter 2 (Mounting & Initial Startup) along with TC-frame motor dimensions.



Authorized EASA service centers are equipped with the necessary equipment to quickly and inexpensively install C-Face kits. Visit the EASA website at www.easa.com to find the nearest authorized service center. C-faces must be installed by an EASA motor shop in order to maintain the motor warranty.

C-FLANGE KITS FOR MTC EPACT THREE-PHASE MOTORS (CONTINUED)

| EPACT T-Frame Three-Phase Motor C-Flange Kits | | | | |
|--|-------------------|--|--------------------------------------|-----------------------------|
| Part Number (1) | Fits Frame | Fits Motor (1) | Motor HP | Shipping Weight (lb) |
| MTA-CFACE-140TC | 143T & 145T | MTC-001-3BD12 MTC-001-3BD18 MTC-1P5-3BD18 MTC-1P5-3BD36 MTC-002-3BD18 MTC-002-3BD36 | 1 1 1-1/2 1-1/2 2 2 | 6 |
| MTA-CFACE-180TC | 182T & 184T | MTC-1P5-3BD12 MTC-002-3BD12 MTC-003-3BD18 MTC-003-3BD36 MTC-003-3BD36 MTC-005-3BD36 | 1-1/2 2 3 3 5 5 | 12 |
| MTA-CFACE-210TC | 213T & 215T | MTC-003-3BD12 MTC-005-3BD12 MTC-7P5-3BD18 MTC-7P5-3BD36 MTC-010-3BD18 MTC-010-3BD36 | 3 5 7-1/2 7-1/2 10 10 | 12 |
| MTA-CFACE-250TC | 254T & 256T | MTC-7P5-3BD12 MTC-010-3BD12 MTC-015-3BD18 MTC-020-3BD18 | 7-1/2 10 15 20 | 24 |
| MTA-CFACE-280TC | 284T & 286T | MTC-25-3BD18 MTC-30-3BD18 | 25 30 | 30 |
| MTA-CFACE-320TC | 324T & 326T | MTC-40-3BD18 MTC-50-3BD18 | 40 50 | 48 |
| MTA-CFACE-360TC | 364T & 365T | MTC-60-3BD18 MTC-75-3BD18 | 60 75 | 50 |
| MTA-CFACE-400TC | 405T | MTC-100-3BD18 | 100 | 123 |
| MTA-CFACE-444TC | 444T & 445T | MTC-125-3BD18 MTC-150-3BD18 | 125 150 | 133 |
| MTA-CFACE-447TC | 445/7T | MTC-200-3BD18 | 200 | 133 |
| MTA-CFACE-449TC | 449T | MTC-250-3D18 MTC-300-3D18 | 250 300 | 147 |

1) MTA-CFACE C-flange kits will NOT fit MTCP2 Premium-Efficiency motors.



Authorized EASA service centers are equipped with the necessary equipment to quickly and inexpensively install C-Face kits. Visit the EASA website at www.easa.com to find the nearest authorized service center.

MTC MOTORS BEARING SIZE INFORMATION

All IronHorse® cast-iron motors use premium name-brand bearings (NSK, NTN, or SKF). Below is a bearing size chart listing the type of bearings used in each frame size of IronHorse MTC motors. The bearing types are also listed on the motor nameplate.

| MTC Motors Bearing Size Chart | | |
|--------------------------------------|--------------------------|-----------------------------------|
| Frame Size * | Drive End Bearing | Opposite Drive End Bearing |
| 143T | 6205-ZZ | 6205-ZZ |
| 145T | | |
| 182T | 6306-ZZ | 6206-ZZ |
| 184T | | |
| 213T | 6308-ZZ | 6308-ZZ |
| 215T | | |
| 254T | 6309 | 6209 |
| 256T | | |
| 284T | 6311 | 6309 |
| 286T | | |
| 324T | 6312 | 6311 |
| 326T | | |
| 364T | 6313 | 6312 |
| 365T | | |
| 404T | NU316 | 6313 |
| 405T | | |
| 444T | NU318 | |
| 445T | | |
| 445/7T | NU319 | |
| 449T | NU320 | 6320 |

** TC-frame motors have the same bearings as the comparable T-frame motors.*

MTF Farm-Duty T-Frame Single-Phase Motors – Features and Specifications



IronHorse® single-phase farm-duty motors are available from 2hp to 5hp. All models have a TEFC housing (steel frame with iron end bells) that is fully gasketed for use in dirty environments. All motors are NEMA L design.

All models include a class-10 manual-reset locked-rotor thermal protector (motor thermal overload protection must be provided separately).



WE RECOMMEND DISCONNECTING POWER TO THE MOTOR BEFORE RESETTING THE THERMAL PROTECTOR. DO NOT RESET MORE THAN TWICE IN SUCCESSION. THE MOTOR MUST COOL TO 40°C (104°F) BEFORE A THIRD RESET.

CAST-IRON T-FRAME 1-PHASE FARM-DUTY MOTOR SPECIFICATIONS

| Motor Specifications – Single-Phase Farm-Duty Motors (60Hz) | | | | | | | | | |
|---|----|----------|-------------|-------------------------------|-------------|------------|-----------|--------------------|--------------------|
| Part Number | HP | Base RPM | Voltage* | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @ 230VAC | Approx Weight (lb) |
| MTF-002-1C18-182 | 2 | 1800 | 230VAC ±10% | 1.15 @ 230VAC 1.0 @ 208VAC | L | 182T | TEFC IP55 | 8.5 | 74 |
| MTF-003-1C18 | 3 | | | | | 184T | | 12.9 | 85 |
| MTF-005-1C18 | 5 | | | | | 184T | | 21.2 | 105 |

* Operate on 230VAC +/- 10% (1.15 @ 230VAC; 1.0 S.F. @ 208V), single-phase power only.

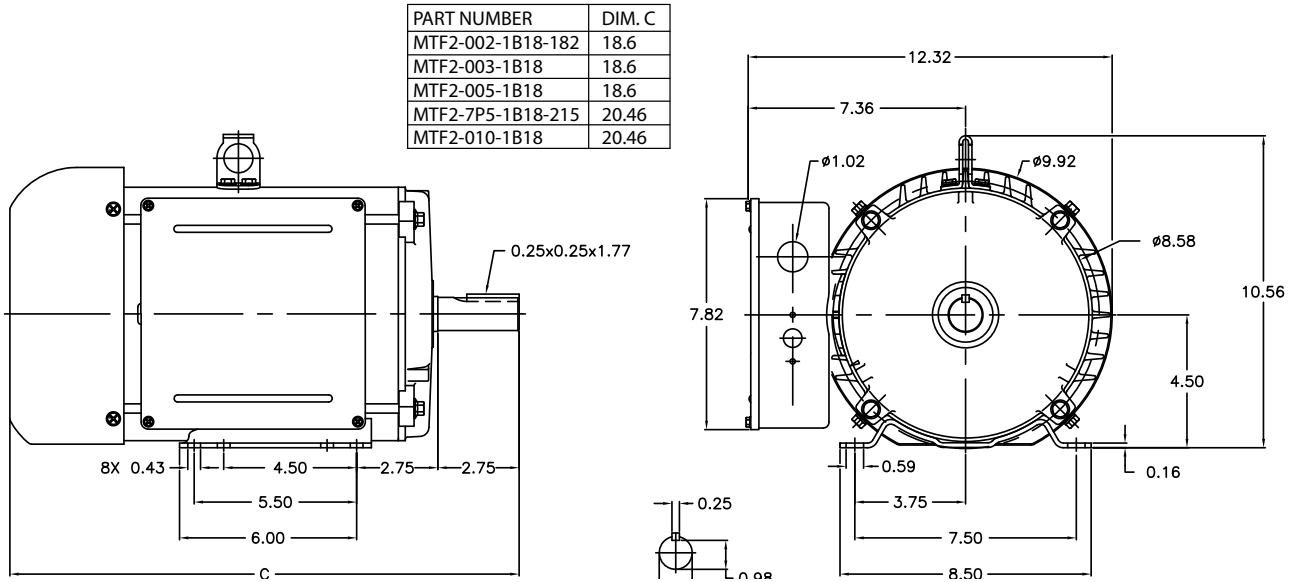
CAST-IRON T-FRAME 1-PHASE FARM-DUTY MOTOR PERFORMANCE DATA

| Performance Data – Single-Phase Farm-Duty Motors (60Hz) | | | | | | | | | | | |
|---|----|----------|-----------------------|-----------|--------------|----------------|--------------|------------|---------------------|-------------------|-------------------------------------|
| Part Number | HP | F.L. RPM | Current @ 230V (Amps) | | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
| | | | 230V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break down | | | |
| MTF-002-1C18-182 | 2 | 1725 | 2.7 | 8.5 | 70.0 | 6.04 | 20.54 | 15.10 | 82.5 | 0.92 | 0.35 |
| MTF-003-1C18 | 3 | | 3.9 | 12.9 | 95.0 | 9.11 | 32.80 | 23.69 | 81.5 | 0.93 | 0.60 |
| MTF-005-1C18 | 5 | | 6.6 | 21.2 | 160.0 | 15.30 | 58.14 | 36.72 | 81.0 | 0.90 | 0.81 |

MOTOR DIMENSIONS

(DIMENSIONS = INCHES)

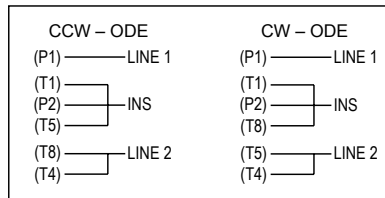
MTF T-FRAME SINGLE-PHASE FARM-DUTY MOTOR DIMENSIONS



TERMINAL AND WIRING DIAGRAMS

MTF FARM-DUTY MOTORS

2-5hp 1Ø Farm-Duty models ; 6-Lead, 230 VAC

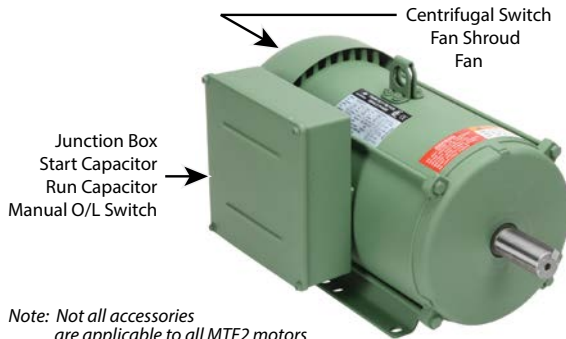


REPLACEMENT PARTS

CAPACITORS AND CENTRIFUGAL SWITCHES FOR IRONHORSE® SINGLE-PHASE MOTORS

Single phase motors use capacitors to provide starting torque when power is first applied to the motor. When the motor begins to turn, the start capacitor is no longer need and is taken out of the circuit by a centrifugal switch. In addition to the start capacitor, 1-1/2 hp and larger IronHorse single-phase motors have run capacitors to allow the motor to develop higher running torque and greater efficiency. Run capacitors also help improve the motor power factor.

MTF ACCESSORY LOCATIONS



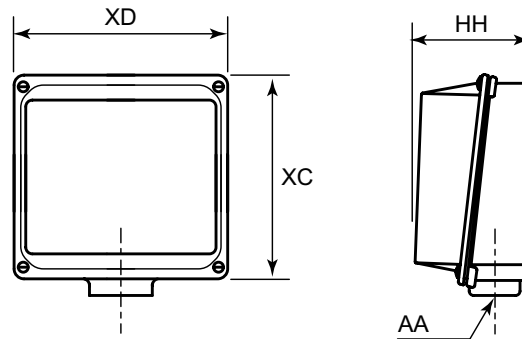
Note: Not all accessories are applicable to all MTF2 motors

SPARE/REPLACEMENT PARTS FOR MTF SINGLE-PHASE FARM-DUTY MOTORS

| MTF Single-Phase Motor Spare/Replacement Parts * | | | | | | |
|--|------------------------|------------------|---------------|-------------------------------|-------------------------|----------|
| Part Number | Accessory Type | Capacitance (µF) | Rated Voltage | Dimension Height x Ø (in[mm]) | Applicable Motor Number | Motor HP |
| MTA-CAP-16 | Start capacitor | 200 | 300 | 3.39 x 1.81 [86.1 x 46.0] | MTF-002-1C18-182 | 2 |
| MTA-CAP-17 | | 300 | | 3.39 x 1.81 [86.1 x 46.0] | MTF-003-1C18 | 3 |
| MTA-CAP-18 | | 500 | | 4.33 x 1.97 [110.0 x 50.0] | MTF-005-1C18 | 5 |
| MTA-CAP-19 | Run capacitor | 35 | 450 | 3.96 x 1.77 [100.6 x 45.0] | MTF-002-1C18-182 | 2 |
| MTA-CAP-20 | | 40 | | 3.96 x 1.97 [100.6 x 50.0] | MTF-003-1C18 | 3 |
| MTA-CAP-21 | | 50 | | 4.17 x 1.97 [106.0 x 50.0] | MTF-005-1C18 | 5 |
| MTA-CSW-05 | Centrifugal switch | n/a | 250 | | MTF-002-1C18-182 | 2 |
| MTA-CSW-06 | | | | | MTF-003-1C18 | 3 |
| MTA-CSW-07 | | | | | MTF-005-1C18 | 5 |
| MTA-MOL-1** | Manual overload switch | n/a | 250 | | MTF-002-1C18-182 | 2 |
| MTA-MOL-2** | | | | | MTF-003-1C18 | 3 |
| MTA-MOL-3** | | | | | MTF-005-1C18 | 5 |
| MTAF-JBOX-180 | Junction box | | | | MTF-xxx-1C18-xxx | all |
| MTAF-FAN-182 | Fan | n/a | n/a | | MTF-002-1C18-182 | 2 |
| MTAF-FAN-184 | | | | | MTF-003-1C18 | 3 |
| MTAF-FAN-184-2 | | | | | MTF-005-1C18 | 5 |
| MTAF-SHROUD-180 | Fan shroud | | | | MTF-xxx-1C18-xxx | all |

* These accessories are spare/replacement components only for IronHorse MTF series single-phase farm-duty motors.
 ** MTA-MOL-1 = JOEMEX TC4-0-E-1-44, V07-1; MTA-MOL-2 = JOEMEX TC4-0-E-1-44, V06-1;
 MTA-MOL-3 = JOEMEX TC4-0-E-1-40, V08-1

JUNCTION BOX DIMENSIONS



| Junction Box Dimensions (in) | | | | | |
|------------------------------|----------------|----------------|----------------|-------------------------|----------------|
| Frame Size * | XD (Width) | XC (Height) | HH (Depth) | AA (Conduit Hole) (NPT) | |
| 56 | n/a | n/a | n/a | 1/2 | |
| 143T | | | | 3/4 | |
| 145T | | | | 3/4 | |
| 182T | 7.8 | 7.8 | 2.7 | 1 | |
| 184T | | | | 1 | |
| 213T | n/a | n/a | n/a | 1-1/2 | |
| 215T | | | | | 2 |
| 254T | | | | | |
| 256T | | | | 3 (2 openings) | |
| 284T | | | | | 3 (2 openings) |
| 286T | | | | | |
| 324T | 3 (2 openings) | | | | |
| 326T | | 3 (2 openings) | | | |
| 364T | | | 3 (2 openings) | | |
| 365T | 3 (2 openings) | | | | |
| 405T | | 3 (2 openings) | | | |
| 444T | | | 3 (2 openings) | | |
| 445T | 3 (2 openings) | | | | |
| 445/7T | | 3 (2 openings) | | | |
| 449T | | | 3 (2 openings) | | |

* TC-frame motors have the same junction boxes as the comparable T-frame motors.