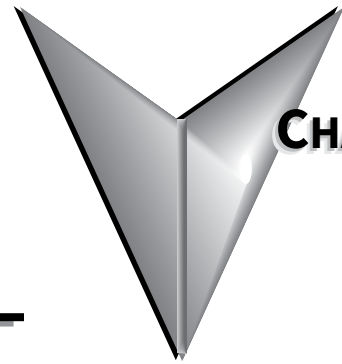


GETTING STARTED



CHAPTER

1

TABLE OF CONTENTS

| | |
|---|------|
| <i>Manual Overview</i> | 1-2 |
| <i>Overview of this Publication</i> | 1-2 |
| <i>Who Should Read This Manual</i> | 1-2 |
| <i>Technical Support</i> | 1-2 |
| <i>Special Symbols</i> | 1-2 |
| <i>Available Models</i> | 1-3 |
| <i>MTF2 Conveyor/Farm-Duty T-Frame Single-Phase Motors – Features and Specifications</i> | 1-3 |
| <i>MTR2 Rolled-Steel 56C/56HC-Frame Single-Phase Motors – Features and Specifications</i> | 1-4 |
| <i>MTRJ Centrifugal Jet Pump One-Phase Motors – Features and Specifications</i> | 1-6 |
| <i>MTDP Open Drip-Proof AC Three-Phase Motors – Features and Specifications</i> | 1-7 |
| <i>MTR2 and MTRP Rolled-Steel 56C/56HC-Frame Three-Phase Motors – Features and Specifications</i> .1-10 | |
| <i>MTRJ Centrifugal Jet Pump Three-Phase Motors – Features and Specifications</i> | 1-12 |
| <i>MTCP2 Premium-Efficiency Cast-Iron Three-Phase Motors – Features and Specifications</i> | 1-13 |
| <i>Receiving and Inspection</i> | 1-26 |
| <i>Unpacking</i> | 1-26 |
| <i>IronHorse® Part Number Explanation</i> | 1-26 |
| <i>Reshipping</i> | 1-27 |
| <i>Long Term Storage</i> | 1-27 |
| <i>Warranty</i> | 1-27 |

MANUAL OVERVIEW

OVERVIEW OF THIS PUBLICATION

The IronHorse® General Purpose AC Motor User Manual describes the installation, maintenance and use of all IronHorse General Purpose Motors.

WHO SHOULD READ THIS MANUAL

This manual contains important information for those who will install, maintain, use and/or resell any of the IronHorse motors.

TECHNICAL SUPPORT

By Telephone: **770-844-4200** (Mon.-Fri., 9:00 a.m.-6:00 p.m. E.T.)

On the Web: **support.automationdirect.com**

Our technical support group is glad to work with you in answering your questions. If you cannot find the solution to your particular application, or, if for any reason you need additional technical assistance, please call technical support at 770-844-4200. We are available weekdays from 9:00 a.m. to 6:00 p.m. Eastern Time.

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**.

SPECIAL SYMBOLS



NOTE: When you see the “notepad” icon in the left-hand margin, the paragraph to its immediate right will be a special note.



WARNING: WHEN YOU SEE THE “EXCLAMATION MARK” ICON IN THE LEFT-HAND MARGIN, THE PARAGRAPH TO ITS IMMEDIATE RIGHT WILL BE A WARNING. THIS INFORMATION COULD PREVENT INJURY, LOSS OF PROPERTY, OR EVEN DEATH (IN EXTREME CASES).

AVAILABLE MODELS

This manual covers Ironhorse series AC motor models:

- MTR, MTR2, MTRP, MTRJ** - Black TEFC motors
- MTF2** - Green TEFC Farm Duty motors
- MTDP** - Blue ODP (Open Drip Proof) motors
- MTSS** - Stainless Steel IP56 TEFC motors
- MTCP2** - Gray Cast Iron TEFC motors



NOTE: For the MTSP MTSN Stainless Steel IP69K series, see [the technical specifications pages](#). These are not included in this manual.

MTF2 CONVEYOR/FARM-DUTY T-FRAME SINGLE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



IronHorse® single-phase farm-duty motor available ratings are 2hp to 10hp. All models have a TEFC housing (steel frame with iron end bells) that is fully gasketed for use in dirty environments. Motors are NEMA H, J, K and 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 @208/230VAC | Approx Weight (lb) |
| MTF2-002-1B18-182 | 2 | 1800 | 208 / 230VAC ±10% | 1.15 @ 230VAC 1.0 @ 208VAC | L | 182T | TEFC IP55 | 9.3 / 8.5 | 67 |
| MTF2-003-1B18 | 3 | | | | | 184T | | 13.5 / 12.5 | 76 |
| MTF2-005-1B18 | 5 | | | | | 215T | | 22.2 / 20.2 | 100 |
| MTF2-7P5-1B18-215 | 7.5 | | | | | 31.5 / 28.7 | | 134 | |
| MTF2-010-1B18 | 10 | | | | | 45.2 / 38.8 | | 149 | |

* 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 | | | |
| MTF2-002-1B18-182 | 2 | 1764 | 3.0 | 8.5 | 78.6 | 6.01 | 21.8 | 22.1 | 84.0 | 0.92 | 0.27 |
| MTF2-003-1B18 | 3 | 1769 | 4.2 | 12.5 | 89.2 | 8.76 | 24.9 | 24.3 | 84.4 | 0.91 | 0.34 |
| MTF2-005-1B18 | 5 | 1769 | 6.3 | 20.2 | 170.7 | 14.7 | 57.2 | 57.3 | 86.4 | 0.92 | 0.49 |
| MTF2-7P5-1B18-215 | 7.5 | 1767 | 8.2 | 28.7 | 238.5 | 21.91 | 82.8 | 82.1 | 86.6 | 0.96 | 0.74 |
| MTF2-010-1B18 | 10 | 1765 | 11.79 | 38.8 | 365.8 | 29.93 | 119.6 | 122.6 | 87.5 | 0.96 | 0.85 |

MTR2 ROLLED-STEEL 56C/56HC-FRAME SINGLE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



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

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

| Motor Specifications – Single-Phase 56C/56HC-Frame Motors | | | | | | | | | |
|---|--------|----------|---------|----------------|-------------|------------------|---|---------------------------|--------------------|
| Part Number | HP | Base RPM | Voltage | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @115V/230V 60Hz | Approx Weight (lb) |
| | @ 60Hz | | | | | | | | |
| 1800 RPM | | | | | | | | | |
| MTR2-P33-1AB18 | 1/3 | 1800 | 115/230 | 1.15 | N | 56C flange mount | IP43 TEFCrolled steel frame Cast AL end bell F1 conduit box location | 5.2 / 2.6 | 22 |
| MTR2-P50-1AB18 | 1/2 | | | | | | | 7.2 / 3.6 | 25 |
| MTR2-P75-1AB18 | 3/4 | | | | | | | 10.0 / 5.0 | 29 |
| MTR2-001-1AB18 | 1 | | | | 13.0 / 6.5 | 36 | | | |
| MTR2-1P5-1AB18 | 1-1/2 | | | | 14.5 / 7.3 | 37 | | | |
| MTR2-002-1AB18 | 2 | | | | 19.6 / 9.8 | 44 | | | |
| 3600 RPM | | | | | | | | | |
| MTR2-P33-1AB36 | 1/3 | 3600 | 115/230 | 1.15 | N | 56C | IP43 TEFCrolled steel frame Cast AL end bell F1 conduit box location | 5.4 / 2.7 | 21 |
| MTR2-P50-1AB36 | 1/2 | | | | | | | 6.5 / 3.3 | 23 |
| MTR2-P75-1AB36 | 3/4 | | | | | | | 9.2 / 4.6 | 27 |
| MTR2-001-1AB36 | 1 | | | | 11.5 / 5.8 | 30 | | | |
| MTR2-1P5-1AB36 | 1-1/2 | | | | 13.0 / 6.5 | 31 | | | |
| MTR2-002-1AB36 | 2 | | | | 17.0 / 8.5 | 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.

MTR2 ROLLED-STEEL 56C/56HC-FRAME SINGLE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

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

| Performance Data – Single-Phase 56C/56HC-Frame Motors | | | | | | | | | | | |
|---|-------|--------------|----------------------------|--------------|-----------|----------------|------------|-------|---------------------|-------------------|-------------------------------------|
| 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 | Break down | | | | |
| 1800 RPM | | | | | | | | | | | |
| MTR2-P33-1AB18 | 1/3 | 1725 | 2.05 | 5.2 / 2.6 | 33 / 16 | 1.01 | 3.54 | 2.57 | 63.0 | 0.58 | 0.048 |
| MTR2-P50-1AB18 | 1/2 | | 2.74 | 7.2 / 3.6 | 44 / 21 | 1.49 | 5.09 | 3.54 | 64.5 | 0.68 | 0.059 |
| MTR2-P75-1AB18 | 3/4 | | 3.14 | 10.0 / 5.0 | 62 / 30 | 2.26 | 7.06 | 5.16 | 67.0 | 0.71 | 0.074 |
| MTR2-001-1AB18 | 1 | | 4.39 | 13.0 / 6.5 | 80 / 40 | 3.03 | 9.30 | 8.23 | 70.0 | 0.69 | 0.095 |
| MTR2-1P5-1AB18 | 1-1/2 | | 5.23 | 14.5 / 7.3 | 110 / 55 | 4.46 | 8.70 | 10.45 | 77.0 | 0.84 | 0.095 |
| MTR2-002-1AB18 | 2 | | 8.07 | 19.6 / 9.8 | 152 / 76 | 6.06 | 12.17 | 13.81 | 79.0 | 0.82 | 0.121 |
| 3600 RPM | | | | | | | | | | | |
| MTR2-P33-1AB36 | 1/3 | 3450 | 2.14 | 5.4 / 2.7 | 37 / 19 | 0.50 | 2.18 | 1.96 | 59.5 | 0.72 | 0.031 |
| MTR2-P50-1AB36 | 1/2 | | 2.23 | 6.5 / 3.3 | 47 / 23 | 0.74 | 2.59 | 2.42 | 63.0 | 0.74 | 0.034 |
| MTR2-P75-1AB36 | 3/4 | | 2.82 | 9.2 / 4.6 | 66 / 33 | 1.12 | 4.62 | 3.44 | 66.5 | 0.78 | 0.041 |
| MTR2-001-1AB36 | 1 | | 3.04 | 11.5 / 5.8 | 82 / 41 | 1.50 | 4.48 | 3.83 | 69.5 | 0.80 | 0.047 |
| MTR2-1P5-1AB36 | 1-1/2 | | 3.90 | 13.0 / 6.5 | 109 / 55 | 2.21 | 3.22 | 5.08 | 77.0 | 0.94 | 0.047 |
| MTR2-002-1AB36 | 2 | | 4.51 | 17.0 / 8.5 | 131 / 65 | 3.02 | 4.45 | 6.82 | 79.5 | 0.94 | 0.060 |

MTRJ CENTRIFUGAL JET PUMP ONE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



IronHorse® MTRJ Jet Pump motors range in size from 1/3 - 2 HP at 3600 RPM. All models come in a 56J frame size in a Totally Enclosed Fan Cooled (TEFC) Enclosure with IP43 protection.

SPECIFICATIONS - CENTRIFUGAL JET PUMP AC ONE-PHASE MOTOR

| Motor Specifications – 1-phase | | | | | | | | | | |
|---|-------|------------|-------------|-------|------------|-----------------|------------|------------------|-------------|---------------------|
| Part Number | HP* | Base RPM * | Volts* | Encl. | NEMA Frame | Service Factor* | F.L. Amps* | Sound Power (dB) | Weight (lb) | Drawing Links |
| Removable Rigid Base With C-face | | | | | | | | | | |
| MTRJ-P33-1AB36J | 1/3 | 3600 | 115/230 VAC | TEFC | NEMA 56J | 1.15 | 5.0/2.5 | 80 dB(A) | 19.4 | PDF |
| MTRJ-P50-1AB36J | 1/2 | | | | | | 6.6/ 3.3 | | 21 | PDF |
| MTRJ-P75-1AB36J | 3/4 | | | | | | 9.0 / 4.5 | | 25.5 | PDF |
| MTRJ-001-1AB36J | 1 | | | | | | 11.4/5.7 | | 28.3 | PDF |
| MTRJ-1P5-1AB36J | 1 1/2 | | | | | | 13.0 / 6.5 | 85 dB(A) | 30.7 | PDF |
| MTRJ-002-1AB36J | 2 | | | | | | 17.2 / 8.6 | | 36.6 | PDF |

| Performance Data - 1-phase | | | | | | | | | | | | | | |
|--|-------|-----------|-------------|---------------|----------------|-------------------|-----------------|-------------------|--------------|-----------|-------------------|---|---------|------------------|
| Part Number | HP* | F.L. RPM* | NEMA Design | F.L. Effic. % | Current | | | Torque | | | F.L. Power Factor | Moment of Inertia (lb-ft ²) | | |
| | | | | | Full Load Amps | Locked Rotor Amps | No Load Current | Full Load (lb-ft) | Locked Rotor | Breakdown | | | Pull Up | |
| | | | | | | | | | | | | | | % of F.L. Torque |
| Removable Rigid Base With C-face - 3600 RPM | | | | | | | | | | | | | | |
| MTRJ-P33-1AB36J | 1/3 | 3450 | N | 55.0 | 5.0/2.5 | 19.51 | 2.64 | 0.51 | 145 | 250 | 95 | 85.00 | 0.02450 | |
| MTRJ-P50-1AB36J | 1/2 | | | 59.5 | 6.6/ 3.3 | 25.22 | 3.19 | 0.76 | 130 | 265 | 90 | | 0.02770 | |
| MTRJ-P75-1AB36J | 3/4 | | | 66.0 | 9.0 / 4.5 | 47.22 | 4.95 | 1.12 | | 220 | 100 | | 81.00 | 0.03820 |
| MTRJ-001-1AB36J | 1 | | | 70.0 | 11.4/5.7 | 61.78 | 5.97 | 1.53 | 125 | 225 | 75 | | 82.00 | 0.04580 |
| MTRJ-1P5-1AB36J | 1 1/2 | | | 78.5 | 13.0 / 6.5 | 82.74 | 8.34 | 2.25 | 115 | 220 | 110 | | 94.00 | 0.04720 |
| MTRJ-002-1AB36J | 2 | | | 80.0 | 17.2 / 8.6 | 116.2 | 8.64 | 3.06 | 140 | 205 | 95 | | 95.00 | 0.06020 |

MTDP OPEN DRIP-PROOF AC THREE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



IronHorse® MTDP, open drip-proof motors range in size from 1hp to 50hp at 1800 rpm and 3hp, 5hp, and 7.5 hp at 3600 rpm. Frame sizes are available from 143T to 326T. All models have a rolled steel frame; frames sizes up to 256T have cast aluminum end bells, while frame sizes of 284T or larger have cast iron end bells. All frame sizes have a fixed base. 15 - 50 horsepower models made after June 2023 have 12 motor leads for high-voltage, Wye/Delta starting.

SPECIFICATIONS – OPEN DRIP-PROOF AC THREE-PHASE MOTOR

| Motor Specifications – MTDP Open Drip-Proof Three-Phase Motors (60Hz except as indicated) | | | | | | | | | |
|---|-------|----------|-----------------|--------------------------|-------------|------------|-------------|--------------------------------|--------------------|
| Part Number | HP | Base RPM | Voltage | Service Factor | NEMA Design | NEMA Frame | Housing | F.L. Amps @ 208/230V/460V 60Hz | Approx Weight (lb) |
| | | | | | | | | | |
| 1800 RPM | | | | | | | | | |
| MTDP-001-3BD18 | 1 | 1800 | 208–230/460 VAC | 1.15 (sine), 1.0 (drive) | BB | NEMA 143T | ODP IP23ODP | 2.9 / 2.6 / 1.3 | 33.1 |
| MTDP-1P5-3BD18 | 1 1/2 | 1800 | 208–230/460 VAC | | | NEMA 145T | | 3.1/2.8/1.4* | |
| MTDP-002-3BD18 | 2 | 1800 | 208–230/460 VAC | | | NEMA 145T | | 4.6 / 4.2 / 2.1 | 34.2 |
| MTDP-003-3BD18 | 3 | 1800 | 208–230/460 VAC | | | NEMA 182T | | 5.9 / 5.4 / 2.7 | 38.6 |
| MTDP-005-3BD18 | 5 | 1800 | 208–230/460 VAC | | | NEMA 184T | | 7.9 / 7.6 / 3.8 | 68.3 |
| MTDP-7P5-3BD18 | 7 1/2 | 1800 | 208–230/460 VAC | | | NEMA 213T | | 8.7/7.8/3.9* | |
| MTDP-010-3BD18 | 10 | 1800 | 208–230/460 VAC | | | NEMA 215T | | 13.6 / 12.4 / 6.2 | 91.5 |
| MTDP-015-3BD18 | 15 | 1800 | 208–230/460 VAC | | | NEMA 254T | | 13.7/12.4/6.2* | |
| MTDP-020-3BD18 | 20 | 1800 | 208–230/460 VAC | | | NEMA 256T | | 20.7 / 18.8 / 9.4 | 140.2 |
| MTDP-025-3BD18 | 25 | 1800 | 208–230/460 VAC | | | NEMA 284T | | 21.7/19.6/9.8* | |
| MTDP-030-3BD18 | 30 | 1800 | 208–230/460 VAC | | | NEMA 286T | | 28.3 / 25.6/12.8 | 156.0 |
| MTDP-040-3BD18 | 40 | 1800 | 208–230/460 VAC | | | NEMA 324T | | 37.6 / 34.2 / 17.1 | 214.9 |
| MTDP-050-3BD18 | 50 | 1800 | 208–230/460 VAC | | | NEMA 326T | | 38.5/34.8/17.4* | |
| 3600 RPM | | | | | | | | | |
| MTDP-003-3BD36 | 3 | 3600 | 208–230/460 VAC | 1.15 (sine), 1.0 (drive) | B | NEMA 145T | ODP IP23 | 7.9 / 7.2 / 3.6 | 39.7 |
| MTDP-005-3BD36 | 5 | 3600 | 208–230/460 VAC | | | NEMA 182T | | 8.2/7.4/3.7* | |
| MTDP-7P5-3BD36 | 7.5 | 3600 | 208–230/460 VAC | | | NEMA 184T | | 12.3 / 11.8 / 5.9 | 64.9 |
| | | | | | | | | | 78.1 |

*These specifications apply to motors manufactured after September 2020
 Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.

MTDP ROLLED-STEEL THREE-PHASE DRIP-PROOF MOTORS FEATURES AND SPECIFICATIONS

PERFORMANCE DATA (FOR MOTORS MANUFACTURED AFTER SEPTEMBER 2020)

| Performance Data – MTDP Rolled Steel Three-Phase Drip-Proof Motors (230V / 60Hz data except as indicated) | | | | | | | | | | | |
|--|------------------|-------------------------|---------------------------|--------------|---------------|-----------------|---------------|--------|---------------------|-------------------|-------------------------------------|
| Part Number | HP | F.L. RPM | Current @ 230/460V (Amps) | | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
| | @ 60Hz (50Hz) | 230/ 460V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break down | | | | |
| 1800 RPM | | | | | | | | | | | |
| MTDP-001-3BD18 | 1 | 1742 | 1.40/0.70 | 2.8/1.4 | 21.18/10.59 | 3.03 | 9.51 | 10.03 | 85.5 | 0.81 | 0.09 |
| MTDP-1P5-3BD18 | 1.5 | 1747 | 2.44 / 1.22 | 4.2 / 2.1 | 34.52 / 17.26 | 4.44 | 15.63 | 16.56 | 88.5 | 0.76 | 0.09 |
| MTDP-002-3BD18 | 2 | 1744 | 2.96 / 1.48 | 5.4 / 2.7 | 47.24 / 23.62 | 6.06 | 21.15 | 23.45 | 86.5 | 0.79 | 0.10 |
| MTDP-003-3BD18 | 3 | 1753 | 3.74/1.87 | 7.8/3.9 | 63.64/31.82 | 8.80 | 30.36 | 31.68 | 89.5 | 0.8 | 0.36 |
| MTDP-005-3BD18 | 5 | 1745 | 4.46 / 2.23 | 12.4 / 6.2 | 93.34/46.67 | 14.90 | 40.83 | 46.04 | 89.5 | 0.84 | 0.48 |
| MTDP-7P5-3BD18 | 7.5 | 1758 | 10.56/5.28 | 19.6/9.8 | 118.62/59.31 | 22.02 | 78.39 | 81.03 | 91 | 0.78 | 0.95 |
| MTDP-010-3BD18 | 10 | 1753 | 10.24 / 5.12 | 24.4 / 12.2 | 160.8 / 80.4 | 30.14 | 97.35 | 100.67 | 91.7 | 0.81 | 1.16 |
| MTDP-015-3BD18 | 15 | 1774 | 11.4/5.7 | 34.8/17.4 | 235.6/117.8 | 43.6 | 113.36 | 120.30 | 93 | 0.85 | 2.03 |
| MTDP-020-3BD18 | 20 | 1769 | 13.96/6.98 | 46.6/23.3 | 303.4/151.7 | 59.67 | 154.54 | 178.40 | 93 | 0.86 | 2.44 |
| MTDP-025-3BD18 | 25 | 1775 | 24.6 / 12.3 | 30.0 / 15.0 | 380 / 190 | 72.30 | 175.69 | 184.37 | 93.6 | 0.83 | 3.25 |
| MTDP-030-3BD18 | 30 | 1775 | 24.8/12.4 | 70.2/35.1 | 433/216.5 | 87.47 | 252.79 | 291.28 | 94.1 | 0.84 | 3.69 |
| MTDP-040-3BD18 | 40 | 1778 | 36.8 / 18.4 | 95.8 / 47.9 | 630 / 315 | 118.10 | 419.26 | 457.05 | 94.1 | 0.84 | 7.35 |
| MTDP-050-3BD18 | 50 | 1781 | 46.2/23.1 | 118.6/59.3 | 771/385.5 | 146.7 | 476.78 | 517.85 | 94.5 | 0.83 | 8.99 |
| MTDP-003-3BD36 | 3 | 3441 | 3.02/1.51 | 7.4/3.7 | 63.26/31.63 | 4.5 | 18.09 | 22.28 | 85.5 | 0.86 | 0.07 |
| MTDP-005-3BD36 | 5 | 3509 | 3.64 / 1.82 | 11.8 / 5.9 | 94.02 / 47.01 | 7.43 | 25.26 | 26.15 | 86.5 | 0.89 | 0.15 |
| MTDP-7P5-3BD36 | 7.5 | 3499 | 4.86/2.43 | 17.36/8.68 | 132.26/66.13 | 11.02 | 33.17 | 41.99 | 88.5 | 0.89 | 0.20 |

| Performance Data – MTDP Rolled Steel Three-Phase Drip-Proof Motors (190/380V / 50Hz data) | | | | | | | | | | | |
|--|-----------|---------------------|----------------------------|--------------|--------------|-----------------|---------------|--------|---------------------|-------------------|-------------------------------------|
| 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) |
| | @ 50Hz | 190/380V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break down | | | | |
| 1500 RPM | | | | | | | | | | | |
| MTDP-001-3BD18 | 1 | 1449 | 1.32/0.66 | 3.2/1.6 | 20.4/10.2 | 3.65 | 8.21 | 10.13 | 84.3 | 0.82 | 0.09 |
| MTDP-1P5-3BD18 | 1.5 | 1450 | 2.44/1.22 | 4.8/2.4 | 32.6/16.3 | 5.35 | 15.69 | 16.63 | 85.7 | 0.78 | 0.09 |
| MTDP-002-3BD18 | 2 | 1448 | 2.96/1.48 | 6.4/3.2 | 44.6/22.3 | 7.31 | 21.26 | 23.57 | 85.7 | 0.81 | 0.1 |
| MTDP-003-3BD18 | 3 | 1437 | 3.7/1.85 | 9.4/4.7 | 59.8/29.9 | 10.8 | 28.87 | 30.11 | 88.7 | 0.84 | 0.36 |
| MTDP-005-3BD18 | 5 | 1445 | 4.4/2.2 | 14.9/7.5 | 87.0/43.5 | 18 | 51.77 | 58.37 | 88.7 | 0.87 | 0.45 |
| MTDP-7P5-3BD18 | 7.5 | 1445 | 8.2/4.1 | 23.6/11.8 | 112/56 | 26.8 | 72.9 | 117.14 | 90.2 | 0.84 | 0.95 |
| MTDP-010-3BD18 | 10 | 1455 | 10.24/5.12 | 29.4/14.7 | 152.2/76.1 | 36.4 | 97.99 | 101.3 | 91.2 | 0.87 | 1.16 |
| MTDP-015-3BD18 | 15 | 1455 | 10.0/5.0 | 41.8/20.9 | 221.8/110.9 | 53.3 | 92 | 113.96 | 92.4 | 0.87 | 2.03 |
| MTDP-020-3BD18 | 20 | 1455 | 13.8/6.9 | 56.0/28.0 | 285.2/142.6 | 72.7 | 142.72 | 235.91 | 92.4 | 0.87 | 2.44 |
| MTDP-025-3BD18 | 25 | 1455 | 24.6/12.3 | 72.0/36.0 | 359.6/179.8 | 88.3 | 178.81 | 187.64 | 93.2 | 0.84 | 3.25 |
| MTDP-030-3BD18 | 30 | 1455 | 23.8/11.9 | 84.2/42.1 | 406.2/203.1 | 106.6 | 221.94 | 232.6 | 93.7 | 0.85 | 3.69 |
| MTDP-040-3BD18 | 40 | 1460 | 36.8/18.4 | 115.0/57.5 | 596/298 | 142.5 | 421.66 | 459.56 | 93.8 | 0.86 | 7.35 |
| MTDP-050-3BD18 | 50 | 1460 | 44.6/22.3 | 142.7/71.2 | 710.6/355.3 | 178.6 | 407.92 | 442.75 | 94.1 | 0.85 | 8.99 |
| MTDP-003-3BD36 | 3 | 2850 | 2.82/1.41 | 8.8/4.4 | 47.0/23.5 | 5.44 | 17.71 | 21.83 | 84.1 | 0.89 | 0.07 |
| MTDP-005-3BD36 | 5 | 2919 | 3.64/1.82 | 13.6/6.8 | 91.8/45.9 | 8.99 | 25.47 | 26.37 | 85.6 | 0.89 | 0.15 |
| MTDP-7P5-3BD36 | 7.5 | 2870 | 4.6/2.3 | 21.0/10.5 | 128.2/64.1 | 13.37 | 32.52 | 41.11 | 87.7 | 0.9 | 0.2 |

PERFORMANCE DATA (FOR MOTORS MANUFACTURED PRIOR TO SEPTEMBER 2020)

| Performance Data – MTDP Rolled Steel Three-Phase Drip-Proof Motors (230V / 60Hz data except as indicated) | | | | | | | | | | | |
|--|------------------|-------------------------|---------------------------|--------------|----------------|-----------------|---------------|--------|---------------------|-------------------|-------------------------------------|
| Part Number | HP | F.L. RPM | Current @ 230/460V (Amps) | | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
| | @ 60Hz (50Hz) | 230/ 460V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break down | | | | |
| 1800 RPM | | | | | | | | | | | |
| MTDP-001-3BD18 | 1 | 1745 | 1.32 / 0.66 | 2.6 / 1.3 | 21.46 / 10.73 | 3.03 | 8.18 | 10.09 | 85.5 | 0.81 | 0.09 |
| MTDP-1P5-3BD18 | 1.5 | 1747 | 2.44 / 1.22 | 4.2 / 2.1 | 34.52 / 17.26 | 4.44 | 15.63 | 16.56 | 88.5 | 0.76 | 0.09 |
| MTDP-002-3BD18 | 2 | 1744 | 2.96 / 1.48 | 5.4 / 2.7 | 47.24 / 23.62 | 6.06 | 21.15 | 23.45 | 86.5 | 0.79 | 0.10 |
| MTDP-003-3BD18 | 3 | 1759 | 3.38 / 1.69 | 7.6 / 3.8 | 69.90 / 34.95 | 8.80 | 32.12 | 37.58 | 89.5 | 0.82 | 0.36 |
| MTDP-005-3BD18 | 5 | 1749 | 4.46 / 2.23 | 12.4 / 6.2 | 105.76 / 52.88 | 14.90 | 50.21 | 57.07 | 89.5 | 0.83 | 0.48 |
| MTDP-7P5-3BD18 | 7.5 | 1763 | 9.52 / 4.76 | 18.8 / 9.4 | 141.26 / 70.63 | 21.98 | 101.11 | 87.04 | 91.0 | 0.81 | 0.95 |
| MTDP-010-3BD18 | 10 | 1753 | 10.24 / 5.12 | 24.4 / 12.2 | 160.8 / 80.4 | 30.14 | 97.35 | 100.67 | 91.7 | 0.81 | 1.16 |
| MTDP-015-3BD18 | 15 | 1776 | 10.2 / 5.1 | 34.2 / 17.1 | 261.8 / 130.9 | 43.63 | 101.22 | 128.27 | 93.0 | 0.87 | 2.03 |
| MTDP-020-3BD18 | 20 | 1765 | 11.06 / 5.53 | 45.0 / 22.5 | 325.2 / 162.6 | 59.84 | 175.93 | 166.36 | 93.0 | 0.90 | 2.44 |
| MTDP-025-3BD18 | 25 | 1775 | 24.6 / 12.3 | 30.0 / 15.0 | 380 / 190 | 72.30 | 175.69 | 184.37 | 93.6 | 0.83 | 3.25 |
| MTDP-030-3BD18 | 30 | 1780 | 31.4 / 15.7 | 71.8 / 35.9 | 499.6 / 249.8 | 86.67 | 240.94 | 276.48 | 94.1 | 0.82 | 3.69 |
| MTDP-040-3BD18 | 40 | 1778 | 36.8 / 18.4 | 95.8 / 47.9 | 630 / 315 | 118.10 | 419.26 | 457.05 | 94.1 | 0.84 | 7.35 |
| MTDP-050-3BD18 | 50 | 1776 | 46.0 / 23.0 | 117.6 / 58.8 | 818 / 409 | 145.20 | 512.56 | 441.41 | 94.5 | 0.84 | 8.99 |
| MTDP-003-3BD36 | 3 | 3439 | 2.82 / 1.41 | 7.2 / 3.6 | 68.62 / 34.31 | 4.51 | 17.27 | 18.67 | 85.5 | 0.87 | 0.07 |
| MTDP-005-3BD36 | 5 | 3509 | 3.64 / 1.82 | 11.8 / 5.9 | 94.02 / 47.01 | 7.43 | 25.26 | 26.15 | 86.5 | 0.89 | 0.15 |
| MTDP-7P5-3BD36 | 7.5 | 3502 | 4.6 / 2.3 | 17.2 / 8.6 | 135.06 / 67.53 | 11.06 | 33.73 | 38.38 | 88.5 | 0.90 | 0.20 |

| Performance Data – MTDP Rolled Steel Three-Phase Drip-Proof Motors (190/380V / 50Hz data) | | | | | | | | | | | |
|--|-----------|---------------------|----------------------------|--------------|---------------|-----------------|---------------|--------|---------------------|-------------------|-------------------------------------|
| 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) |
| | @ 50Hz | 190/380V No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break down | | | | |
| 1500 RPM | | | | | | | | | | | |
| MTDP-001-3BD18 | 1 | 1449 | 1.32 / 0.66 | 3.2 / 1.6 | 20.4 / 10.2 | 3.65 | 8.21 | 10.11 | 84.30 | 0.82 | 0.09 |
| MTDP-1P5-3BD18 | 1.5 | 1450 | 2.44 / 1.22 | 4.8 / 2.4 | 32.6 / 16.3 | 5.35 | 15.68 | 16.64 | 85.70 | 0.78 | 0.09 |
| MTDP-002-3BD18 | 2 | 1448 | 2.96 / 1.48 | 6.4 / 3.2 | 44.6 / 22.3 | 7.31 | 21.27 | 23.54 | 85.70 | 0.81 | 0.10 |
| MTDP-003-3BD18 | 3 | 1460 | 3.38 / 1.69 | 8.6 / 4.3 | 66.2 / 33.1 | 10.6 | 32.25 | 37.74 | 88.70 | 0.84 | 0.36 |
| MTDP-005-3BD18 | 5 | 1452 | 4.46 / 2.23 | 14.4 / 7.2 | 100.0 / 50.0 | 18.0 | 50.58 | 57.60 | 88.70 | 0.85 | 0.48 |
| MTDP-7P5-3BD18 | 7.5 | 1464 | 8.52 / 4.76 | 21.6 / 10.8 | 133.8 / 66.9 | 26.5 | 101.50 | 87.45 | 90.50 | 0.83 | 0.95 |
| MTDP-010-3BD18 | 10 | 1455 | 10.24 / 5.12 | 29.4 / 14.7 | 152.2 / 76.1 | 36.4 | 97.92 | 101.19 | 91.20 | 0.87 | 1.16 |
| MTDP-015-3BD18 | 15 | 1475 | 10.2 / 5.1 | 39.4 / 19.7 | 247.5 / 123.9 | 52.6 | 101.52 | 128.87 | 92.60 | 0.88 | 2.03 |
| MTDP-020-3BD18 | 20 | 1465 | 11.6 / 5.53 | 51.8 / 25.9 | 307.6 / 153.8 | 72.2 | 176.89 | 167.50 | 92.50 | 0.91 | 2.44 |
| MTDP-025-3BD18 | 25 | 1455 | 24.6 / 12.3 | 72.0 / 36.0 | 359.6 / 179.8 | 88.3 | 178.37 | 187.20 | 93.20 | 0.84 | 3.25 |
| MTDP-030-3BD18 | 30 | 1457 | 31.4 / 15.7 | 86.2 / 43.1 | 472.6 / 236.3 | 104.5 | 242.44 | 277.97 | 93.80 | 0.85 | 3.69 |
| MTDP-040-3BD18 | 40 | 1460 | 36.8 / 18.4 | 115.0 / 57.5 | 596 / 298 | 142.5 | 421.80 | 458.85 | 93.80 | 0.86 | 7.35 |
| MTDP-050-3BD18 | 50 | 1460 | 46.0 / 23.0 | 142.4 / 71.2 | 773.8 / 386.9 | 175.2 | 515.09 | 443.26 | 94.30 | 0.85 | 8.99 |
| MTDP-003-3BD36 | 3 | 2860 | 2.82/1.41 | 8.6/4.3 | 67.0/33.5 | 5.45 | 17.44 | 18.80 | 84.30 | 0.88 | 0.07 |
| MTDP-005-3BD36 | 5 | 2919 | 3.64/1.82 | 13.6/6.8 | 91.8/45.9 | 8.99 | 25.44 | 26.34 | 85.60 | 0.89 | 0.15 |
| MTDP-7P5-3BD36 | 7.5 | 2913 | 4.6/2.3 | 20.0/10.0 | 131.8/65.9 | 13.37 | 33.96 | 38.64 | 87.60 | 0.91 | 0.20 |

MTR2 AND MTRP ROLLED-STEEL 56C/56HC-FRAME THREE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



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

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

| Motor Specifications – MTR/MTR2 & MTRP 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 | | | | | | | | | |
| MTR2-P33-3BD18 | 1/3 | 1800 | 230/460 | 1.15 | B | 56C flange mount (MTRP = 56HC) | TEFC rolled steel frame | 1.4 / 0.7 | 18 |
| MTR2-P50-3BD18 | 1/2 | | | | | | 1.9 / 0.95 | 19 | |
| MTR2-P75-3BD18 | 3/4 | | | | | | 2.6 / 1.3 | 22 | |
| MTRP-001-3BD18 | 1 | | 208-230/460 | | | | Cast aluminum end bell | 3.2 / 1.6 | 35 |
| MTRP-1P5-3BD18 | 1-1/2 | | | | | | 4.5 / 2.3 | 43 | |
| MTRP-002-3BD18 | 2 | | | | | | F1 conduit box location | 6.0 / 3.0 | 49 |
| 3600 RPM | | | | | | | | | |
| MTR2-P33-3BD36 | 1/3 | 3600 | 230/460 | 1.15 | B | 56C flange mount (MTRP = 56HC) | TEFC rolled steel frame | 1.3 / 0.65 | 18 |
| MTR2-P50-3BD36 | 1/2 | | | | | | 1.7 / 0.85 | 19 | |
| MTR2-P75-3BD36 | 3/4 | | | | | | 2.4 / 1.2 | 21 | |
| MTRP-001-3BD36 | 1 | | 208-230/460 | | | | Cast aluminum end bell | 3.0 / 1.50 | 23 |
| MTRP-1P5-3BD36 | 1-1/2 | | | | | | 4.0 / 2.0 | 31 | |
| MTRP-002-3BD36 | 2 | | | | | | F1 conduit box location | 5.2 / 2.6 | 33 |
| MTRP-003-3BD36 | 3 | 7.4 / 3.7 | 39 | | | | | | |

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.

MTR2 AND MTRP ROLLED-STEEL 56C/56HC-FRAME THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

PERFORMANCE DATA – ROLLED-STEEL 56C/56HC-FRAME 3-PHASE MOTOR – 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 |
| MTR2-P33-3BD18 | 1/3 | 1725 | 431 | 172 | 2700 | 5400 | 1.10 / 0.55 | 1.4 / 0.7 | 7 / 3.5 |
| MTR2-P50-3BD18 | 1/2 | | | | | | 1.36 / 0.68 | 1.9 / 0.95 | 10 / 5 |
| MTR2-P75-3BD18 | 3/4 | | | | | | 1.60 / 0.80 | 2.6 / 1.3 | 12.2 / 6.6 |
| MTRP-001-3BD18 | 1 | 1760 | 440 | 176 | 2700 | 2700 | 2.2 / 1.1 | 3.2 / 1.6 | 31 / 16 |
| MTRP-1P5-3BD18 | 1-1/2 | 1760 | 440 | 176 | 2700 | 2700 | 2.8 / 1.4 | 4.5 / 2.3 | 47 / 24 |
| MTRP-002-3BD18 | 2 | 1760 | 440 | 176 | 2700 | 2700 | 3.6 / 1.8 | 6.0 / 3.0 | 61 / 31 |
| Part Number | HP | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | |
| | | | Full Load | Locked Rotor | Break -down | | | | |
| MTR2-P33-3BD18 | 1/3 | N/A | 1.03 | 2.93 | 3.77 | N/A | 67.0 | 0.65 | 0.0329 |
| MTR2-P50-3BD18 | 1/2 | | 1.53 | 3.81 | 4.96 | | 70.0 | 0.69 | 0.038 |
| MTR2-P75-3BD18 | 3/4 | | 2.31 | 5.41 | 7.17 | | 73.0 | 0.73 | 0.048 |
| MTRP-001-3BD18 | 1 | | 3 | 12.35 | 14.51 | | 85.0 | 0.69 | 0.107 |
| MTRP-1P5-3BD18 | 1-1/2 | | 4.4 | 21.68 | 21.76 | | 86.5 | 0.72 | 0.135 |
| MTRP-002-3BD18 | 2 | | 6.03 | 27.3 | 27.46 | | 86.5 | 0.74 | 0.158 |

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

PERFORMANCE DATA – ROLLED-STEEL 56C/56HC-FRAME 3-PHASE MOTOR – 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 |
| MTR2-P33-3BD36 | 1/3 | 3450 | 862 | 345 | 5400 | 5400 | 0.8 / 0.4 | 1.3 / 0.65 | 7.6 / 3.8 |
| MTR2-P50-3BD36 | 1/2 | | | | | | 1.0 / 0.5 | 1.7 / 0.85 | 10.8 / 5.4 |
| MTR2-P75-3BD36 | 3/4 | | | | | | 1.3 / 0.7 | 2.4 / 1.2 | 16 / 8 |
| MTRP-001-3BD36 | 1 | 3500 | 875 | 350 | 5400 | 5400 | 1.52 / 0.76 | 3.00 / 1.50 | 22 / 11 |
| MTRP-1P5-3BD36 | 1-1/2 | 3500 | 875 | 350 | 5400 | 5400 | 1.8 / 0.9 | 3.96 / 1.98 | 38 / 19 |
| MTRP-002-3BD36 | 2 | 3500 | 875 | 350 | 5400 | 5400 | 2.28 / 1.14 | 5.22 / 2.61 | 53 / 27 |
| MTRP-003-3BD36 | 3 | 3500 | 875 | 350 | 5400 | 5400 | 3.54 / 1.77 | 7.38 / 3.69 | 89 / 45 |
| Part Number | HP | | Torque (lb-ft) | | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | |
| | | | Full Load | Locked Rotor | Break -down | | | | |
| MTR2-P33-3BD36 | 1/3 | N/A | 0.50 | 1.14 | 1.99 | N/A | 60.0 | 0.75 | 0.0245 |
| MTR2-P50-3BD36 | 1/2 | | 0.74 | 1.81 | 2.96 | | 67.5 | 0.74 | 0.0277 |
| MTR2-P75-3BD36 | 3/4 | | 1.14 | 2.95 | 4.25 | | 71.5 | 0.78 | 0.031 |
| MTRP-001-3BD36 | 1 | | 1.51 | 3.98 | 4.93 | | 77 | 0.83 | 0.034 |
| MTRP-1P5-3BD36 | 1-1/2 | | 2.21 | 7.94 | 9.03 | | 84.0 | 0.85 | 0.048 |
| MTRP-002-3BD36 | 2 | | 3.02 | 12.23 | 12.8 | | 85.5 | 0.86 | 0.056 |
| MTRP-003-3BD36 | 3 | 4.49 | 19.44 | 20.39 | 86.5 | 0.85 | 0.069 | | |

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

MTRJ CENTRIFUGAL JET PUMP THREE-PHASE MOTORS – FEATURES AND SPECIFICATIONS



IronHorse® MTRJ Jet Pump motors range in size from 1/3 - 3 HP at 3600 RPM. All models come in a 56J frame size in a Totally Enclosed Fan Cooled (TEFC) Enclosure with IP43 protection.

SPECIFICATIONS - CENTRIFUGAL JET PUMP AC ONE-PHASE MOTOR

| Motor Specifications – 3-phase | | | | | | | | | | |
|--|-------|----------|---------------------------|-------|------------|----------------|------------|------------------|---------------------|---------------------|
| Part Number | HP | Base RPM | Volts | Encl. | NEMA Frame | Service Factor | F.L. Amps | Sound Power (dB) | Weight (lb) | Drawing Links |
| Removable Rigid Base With C-face - 3600 RPM | | | | | | | | | | |
| MTRJ-P33-3BD36J | 1/3 | 3600 | 230/460 VAC (190/380) | TEFC | NEMA 56J | 1.15 | 1.3 / 0.65 | 80 dB(A) | 18 | PDF |
| MTRJ-P50-3BD36J | 1/2 | | | | | | 1.7 / 0.85 | | 19 | PDF |
| MTRJ-P75-3BD36J | 3/4 | | | | | | 2.4 / 1.2 | | 21.6 | PDF |
| MTRJP-001-3BD36J | 1 | | 208–230/460 VAC (190/380) | | | | 3.00/1.50 | 22.9 | PDF | |
| MTRJP-1P5-3BD36J | 1 1/2 | | | | | | 3.96/1.98 | 30.5 | PDF | |
| MTRJP-002-3BD36J | 2 | | | | | | 5.22/2.61 | 33.4 | PDF | |
| MTRJP-003-3BD36J | 3 | | | | | | 7.38/3.69 | 38.8 | PDF | |

| Performance Data - 3-phase | | | | | | | | | | | | | |
|--|-----------|-------------|-------------|---------------|----------------|-------------------|-----------------|-------------------|--------------|-----------|---------|-------------------|---|
| Part Number | HP* | F.L. RPM* | NEMA Design | F.L. Effic. % | Current | | | Torque | | | | F.L. Power Factor | Moment of Inertia (lb-ft ²) |
| | | | | | Full Load Amps | Locked Rotor Amps | No Load Current | Full Load (lb-ft) | Locked Rotor | Breakdown | Pull Up | | |
| | | | | | | | | | | | | | |
| Removable Rigid Base With C-face - 3600 RPM | | | | | | | | | | | | | |
| MTRJ-P33-3BD36J | 1/3 (1/4) | 3450 (2850) | B | 62.0 | 1.3 / 0.65 | 3.63 | 0.44 | 0.51 | 180 | 355 | 215 | 79.00 | 0.02450 |
| MTRJ-P50-3BD36J | 1/2 (1/3) | | | 66.0 | 1.7 / 0.85 | 3.85 | 0.43 | 0.76 | 150 | 255 | 155 | 86.00 | |
| MTRJ-P75-3BD36J | 3/4 (1/2) | | | 74.0 | 2.4 / 1.2 | 8.27 | 0.69 | 1.12 | 230 | 380 | 275 | 81.00 | |
| MTRJP-001-3BD36J | 1 (3/4) | 3500 (2915) | | 77.0 | 3.00/1.50 | 11.37 | 0.78 | 1.51 | 255 | 325 | 220 | 83.00 | 0.03420 |
| MTRJP-1P5-3BD36J | 1 1/2 (1) | | | 84.0 | 3.96/1.98 | 25.1 | 1.08 | 2.21 | 495 | 600 | 485 | 82.00 | 0.04730 |
| MTRJP-002-3BD36J | 2 (1) | | | 85.5 | 5.22/2.61 | 27.38 | 1.12 | 3.02 | 385 | 415 | 315 | 85.00 | 0.05610 |
| MTRJP-003-3BD36J | 3 (2) | | | 86.5 | 7.38/3.69 | 44.55 | 1.77 | 4.50 | 430 | 450 | 300 | | 0.06910 |

*@ 60Hz (@ 50Hz)

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS – 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 at speeds of 1200, 1800, and 3600 rpm, and in TC-frame housings at 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 MTCP2 motors shipped with a shaft lock in place, remove the shaft lock after the motor is installed and before coupling and turning the shaft.

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

| Motor Specifications Premium-Efficiency T & TC Frame Three-Phase Motors 60Hz / 1800 rpm (50Hz / 1500 rpm) | | | | | | | | | | |
|---|-------------------|------------|--|----------------|-------------------|--------------------------|------------------|-----------------------------|---------------------------|---------------------|
| Part Number | HP ⁽²⁾ | NEMA Frame | Voltage @ 60Hz (50Hz) | Housing | Shaft Material | Conduit Box Location (1) | Holes / Foot | Service Factor (3) (@ 50Hz) | F.L. Amps @ 208-230V/460V | Product Weight (lb) |
| MTCP2-001-3BD18 | 1 | 143T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1 (F2) | 2 | 1.25 (1.0) | 3.61-3.27 / 1.63 | 41 |
| MTCP2-001-3BD18C | | 143TC | | | | | | | | |
| MTCP2-1P5-3BD18 | 1-1/2 | 145T | | | | | 4 | | 4.92-4.45 / 2.22 | 56 |
| MTCP2-1P5-3BD18C | | 145TC | | | | | | | | |
| MTCP2-002-3BD18 | 2 | 145T | | | | | 2 | | 6.56-5.93 / 2.97 | 58.5 |
| MTCP2-002-3BD18C | | 145TC | | | | | | | | |
| MTCP2-003-3BD18 | 3 | 182T | | | | 2 | 9.01-8.16 / 4.08 | | 86 | |
| MTCP2-003-3BD18C | | 182TC | | | | | | | | |
| MTCP2-005-3BD18 | 5 | 184T | | | | F1 | 4 | | 13.9-12.6 / 6.3 | 104 |
| MTCP2-005-3BD18C | | 184TC | | | | | | | | |
| MTCP2-7P5-3BD18 | 7-1/2 | 213T | | | | F1 (F2) | 2 | | 20.4-18.5 / 9.23 | 172 |
| MTCP2-7P5-3BD18C | | 213TC | | | | | | | | |

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.

3) The service factor changes from 1.25 to 1.0 under the following conditions:

- When running the motor at 208VAC @ 60Hz
- When running the motor at 200/400VAC @ 50Hz
- When used with a VFD

***** Table Continued Next Page (for 10–300 hp motors) *****

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

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

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

| Motor Specifications Premium-Efficiency T & TC Frame Three-Phase Motors 60Hz / 1800 rpm (50Hz / 1500 rpm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------|------------|--|-------------------|-------------------|--------------------------|----------------|----------------------------|---------------------------|---------------------|----------------|---------------|-------------------|------------|----------------|---------------|-------------------|------------|----------------|---------------|-------------------|------------|----------------|---------------|-------------------|------------|---------|---------------|-----------------|------|
| Part Number | HP (2) | NEMA Frame | Voltage @ 60Hz (50Hz) | Housing | Shaft Material | Conduit Box Location (1) | Holes / Foot | Service Factor (4) (@50Hz) | F.L. Amps @ 208-230V/460V | Product Weight (lb) | | | | | | | | | | | | | | | | | | | | |
| MTCP2-010-3BD18 | 10 | 215T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1 (F2) | 4 | 1.25 (1.0) | 26.9-24.3 / 12.2 | 193 | | | | | | | | | | | | | | | | | | | | |
| MTCP2-010-3BD18C | | 215TC | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| MTCP2-015-3BD18 | 15 | 254T | | | | | TEFC cast iron | | 1045 carbon steel | F1 (F2) | 2 | 1.25 (1.0) | 40.0-36.2 / 18.1 | 265 | | | | | | | | | | | | | | | | |
| MTCP2-015-3BD18C | | 254TC | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | |
| MTCP2-020-3BD18 | 20 | 256T | | | | | | | | | TEFC cast iron | | 1045 carbon steel | F1 (F2) | 4 | 1.25 (1.0) | 52.4-47.4 / 23.7 | 304 | | | | | | | | | | | | |
| MTCP2-020-3BD18C | | 256TC | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| MTCP2-025-3BD18 | 25 | 284T | | | | | | | | | | | | | TEFC cast iron | | 1045 carbon steel | F1 (F2) | 2 | 1.25 (1.0) | 65.1-58.8 / 29.4 | 385 | | | | | | | | |
| MTCP2-025-3BD18C | | 284TC | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | |
| MTCP2-030-3BD18 | 30 | 286T | | | | | | | | | | | | | | | | | TEFC cast iron | | 1045 carbon steel | F1 (F2) | 4 | 1.25 (1.0) | 78.1-70.6 / 35.3 | 430 | | | | |
| MTCP2-030-3BD18C | | 286TC | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| MTCP2-040-3BD18 | 40 | 324T | | | | | | | | | | | | | | | | | | | | | TEFC cast iron | | 1045 carbon steel | F1 (F2) | 2 | 1.25 (1.0) | 104-93.7 / 46.8 | 531 |
| MTCP2-050-3BD18(2) | 50 | 326T | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| MTCP2-060-3BD18(2) | 60 | 364T | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 158-142 / 71.2 | 769 |
| MTCP2-075-3BD18(2) | 75 | 365T | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| MTCP2-100-3BD18(2) | 100 | 405T | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 252-228 / 114 | 1131 |
| MTCP2-125-3BD18(2) | 125 | 444T | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| MTCP2-150-3BD18(2) | 150 | 445T | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 323-292 / 146 | 1429 |
| MTCP2-200-3BD18(2) | 200 | 445/7T | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MTCP2-250-3D18(2) | 250 | 449T | 460V | 4140 carbon steel | F1 | 2 | | 1.15 | | | | | | | | | | | | | | | | | | | 280 (3) | | 2508 | |
| MTCP2-300-3D18(2) | 300 | 449T | | | | 2 | 336 (3) | | 2728 | | | | | | | | | | | | | | | | | | | | | |

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.
 3) F.L. Amps @460V only.
 4) The service factor changes from 1.25 to 1.0 under the following conditions:
 • When running the motor at 208VAC @ 60Hz
 • When running the motor at 200/400VAC @ 50Hz
 • When used with a VFD

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

**SPECIFICATIONS – CAST-IRON T-FRAME AND TC-FRAME MOTOR
– 60Hz / 1200 & 3600 RPM (50Hz / 1500 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 (2) (@50Hz) | F.L. Amps @ 208-230V/460V | Product Weight (lb) | |
| 1200 rpm Base Speed @ 60Hz (1000 rpm Base Speed @ 50Hz) | | | | | | | | | | | |
| MTCP2-001-3BD12 | 1 | 145T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1 (F2) | 4 | 1.25 (1.0) | 3.86-3.49 / 1.75 | 53 | |
| MTCP2-1P5-3BD12 | 1-1/2 | 182T | | | | | 2 | | 5.22-4.72 / 2.36 | 91.5 | |
| MTCP2-002-3BD12 | 2 | 184T | | | | | 4 | | 6.59-5.96 / 2.98 | 100 | |
| MTCP2-003-3BD12 | 3 | 213T | | | | | 2 | | 9.92-8.97 / 4.48 | 166 | |
| MTCP2-005-3BD12 | 5 | 215T | | | | | 4 | | 16.1-14.5 / 7.27 | 179 | |
| MTCP2-7P5-3BD12 | 7-1/2 | 254T | | | | | 2 | | 20.8-18.8 / 9.41 | 247 | |
| MTCP2-010-3BD12 | 10 | 256T | | | | | 4 | | 27.8-25.1 / 12.5 | 258 | |
| MTCP2-015-3BD12 | 15 | 284T | | | | | 2 | | 42.9-38.8 / 19.4 | 366 | |
| MTCP2-020-3BD12 | 20 | 286T | | | | | 4 | | 56.5-51.1 / 25.5 | 419 | |
| 3600 rpm Base Speed (3000 rpm Base Speed @ 50Hz) | | | | | | | | | | | |
| MTCP2-1P5-3BD36 | 1-1/2 | 143T | 208-230/460 – 3-phase (200/400 – 3-phase) | TEFC cast iron | 1045 carbon steel | F1 (F2) | 2 | 1.25 (1.0) | 4.62-4.18 / 2.09 | 45.2 | |
| MTCP2-002-3BD36 | 2 | 145T | | | | | 4 | | 6.05-5.48 / 2.74 | 50.7 | |
| MTCP2-003-3BD36 | 3 | 182T | | | | | F1 | | 2 | 6.45-7.64 / 3.82 | 80.5 |
| MTCP2-005-3BD36 | 5 | 184T | | | | | | | 4 | 13.3-12.0 / 6.01 | 96 |
| MTCP2-7P5-3BD36 | 7-1/2 | 213T | | | | | 2 | | 20.9-18.9 / 9.45 | 160 | |
| MTCP2-010-3BD36 | 10 | 215T | | | | | F1 (F2) | | 4 | 27.0-24.4 / 12.2 | 180 |
| MTCP2-015-3BD36 | 15 | 254T | | | | | | | 2 | 38.8-35.1 / 17.5 | 261 |
| MTCP2-020-3BD36 | 20 | 256T | | | | | | | 4 | 51.1-46.2 / 23.1 | 297 |
| 1) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram). 2) The service factor changes from 1.25 to 1.0 under the following conditions: <ul style="list-style-type: none"> • When running the motor at 208VAC @ 60Hz • When running the motor at 200/400VAC @ 50Hz • When used with a VFD | | | | | | | | | | | |

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

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

| 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 | Minimum Speed (rpm) | | Maximum Speed (rpm) | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb·ft ²) |
| | | | | CT (10:1) | VT (20:1) | CHP | Safe | | | |
| MTCP2-001-3BD18(C) | 1 | B | 1755 | 175.5 | 87.75 | 2700 | 3600 | 85.5 | 0.67 | 0.089 |
| MTCP2-1P5-3BD18(C) | 1-1/2 | | 1755 | 175.5 | 87.75 | | 3600 | 86.5 | 0.73 | 0.105 |
| MTCP2-002-3BD18(C) | 2 | | 1755 | 175.5 | 87.75 | | 3600 | 86.5 | 0.73 | 0.116 |
| MTCP2-003-3BD18(C) | 3 | | 1755 | 175.5 | 87.75 | | 3600 | 89.5 | 0.77 | 0.23 |
| MTCP2-005-3BD18(C) | 5 | | 1755 | 175.5 | 87.75 | | 3600 | 89.5 | 0.83 | 0.326 |
| MTCP2-7P5-3BD18(C) | 7-1/2 | | 1760 | 176 | 88 | | 3600 | 91.7 | 0.83 | 0.689 |
| MTCP2-010-3BD18(C) | 10 | | 1760 | 176 | 88 | | 3600 | 91.7 | 0.84 | 0.814 |
| MTCP2-015-3BD18(C) | 15 | | 1765 | 176.5 | 88.25 | | 3600 | 92.4 | 0.84 | 1.89 |
| MTCP2-020-3BD18(C) | 20 | | 1765 | 176.5 | 88.25 | | 3600 | 93 | 0.85 | 2.33 |
| MTCP2-025-3BD18(C) | 25 | | 1770 | 177 | 88.5 | | 2700 | 93.6 | 0.85 | 3.36 |
| MTCP2-030-3BD18(C) | 30 | | 1770 | 177 | 88.5 | | 2700 | 93.6 | 0.85 | 3.83 |
| MTCP2-040-3BD18 | 40 | | 1775 | 177.5 | 88.75 | | 2700 | 94.1 | 0.85 | 6.11 |
| MTCP2-050-3BD18 | 50 | | 1775 | 177.5 | 88.75 | | 2700 | 94.5 | 0.86 | 6.89 |
| MTCP2-060-3BD18 | 60 | | 1780 | 178 | 89 | | 2700 | 95 | 0.83 | 14.7 |
| MTCP2-075-3BD18 | 75 | | 1780 | 178 | 89 | | 2700 | 95.4 | 0.83 | 17.5 |
| MTCP2-100-3BD18 | 100 | | 1785 | 178.5 | 89.25 | | 2700 | 95.4 | 0.86 | 31.2 |
| MTCP2-125-3BD18 | 125 | | 1790 | 179 | 89.5 | | 2700 | 95.4 | 0.84 | 40.1 |
| MTCP2-150-3BD18 | 150 | | 1790 | 179 | 89.5 | | 2700 | 95.8 | 0.84 | 48.5 |
| MTCP2-200-3BD18 | 200 | | 1790 | 179 | 89.5 | | 2250 | 96.2 | 0.85 | 64.3 |
| MTCP2-250-3D18 | 250 | | 1790 | 179 | 89.5 | | 2250 | 96.2 | 0.87 | 78.8 |
| MTCP2-300-3D18 | 300 | 1790 | 179 | 89.5 | 2250 | 96.2 | 0.87 | 94.1 | | |

*** TABLE CONTINUED NEXT PAGE ***

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME MOTOR – 60HZ / 1800 RPM (CONTINUED)

***** Table Continued From Previous Page *****

| Performance Data @ 60Hz Premium-Efficiency T & TC Frame Three-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 |
| MTCP2-001-3BD18(C) | 1 | 2.2/1.1 | 3.27/1.63 | 30/15 | 2.99 | 8.37 | 11.96 |
| MTCP2-1P5-3BD18(C) | 1-1/2 | 2.9/1.45 | 4.45/2.22 | 40/20 | 4.49 | 12.57 | 17.51 |
| MTCP2-002-3BD18(C) | 2 | 3.9/1.95 | 5.93/2.97 | 50/25 | 5.98 | 16.15 | 20.93 |
| MTCP2-003-3BD18(C) | 3 | 4.6/2.3 | 8.16/4.08 | 64/32 | 9 | 19.80 | 28.80 |
| MTCP2-005-3BD18(C) | 5 | 5.4/2.7 | 12.6/6.3 | 92/46 | 15 | 30.00 | 42.00 |
| MTCP2-7P5-3BD18(C) | 7-1/2 | 8.0/4.0 | 18.5/9.23 | 127/63.5 | 22.3 | 41.26 | 60.21 |
| MTCP2-010-3BD18(C) | 10 | 9.8/4.9 | 24.3/12.2 | 162/81 | 29.7 | 51.98 | 77.22 |
| MTCP2-015-3BD18(C) | 15 | 15/7.5 | 36.2/18.1 | 232/116 | 44.6 | 84.74 | 120.42 |
| MTCP2-020-3BD18(C) | 20 | 18/9 | 47.4/23.7 | 290/145 | 59.5 | 107.10 | 148.75 |
| MTCP2-025-3BD18(C) | 25 | 21.2/10.6 | 58.8/29.4 | 365/182.5 | 74.2 | 111.30 | 178.08 |
| MTCP2-030-3BD18(C) | 30 | 24/12 | 70.6/35.3 | 435/217.5 | 89 | 133.50 | 213.60 |
| MTCP2-040-3BD18 | 40 | 34/17 | 93.7/46.8 | 580/290 | 118 | 188.80 | 306.80 |
| MTCP2-050-3BD18 | 50 | 41/20.5 | 115/57.6 | 725/362.5 | 148 | 236.80 | 384.80 |
| MTCP2-060-3BD18 | 60 | 56/28 | 142/71.2 | 870/435 | 177 | 362.85 | 442.50 |
| MTCP2-075-3BD18 | 75 | 74/37 | 177/88.7 | 1085/542.5 | 221 | 397.80 | 508.30 |
| MTCP2-100-3BD18 | 100 | 70/35 | 228/114 | 1450/725 | 294 | 470.40 | 735.00 |
| MTCP2-125-3BD18 | 125 | 104/52 | 292/146 | 1815/907 | 367 | 587.20 | 880.80 |
| MTCP2-150-3BD18 | 150 | 113/56.5 | 349/175 | 2170/1085 | 440 | 704.00 | 1056.00 |
| MTCP2-200-3BD18 | 200 | 144/72 | 458/229 | 2900/1450 | 587 | 997.90 | 1467.50 |
| MTCP2-250-3D18 ¹⁾ | 250 | 91.9 ⁽¹⁾ | 280 ⁽¹⁾ | 1825 ⁽¹⁾ | 773 | 1546.00 | 2009.80 |
| MTCP2-300-3D18 ¹⁾ | 300 | 103 ⁽¹⁾ | 336 ⁽¹⁾ | 2200 ⁽¹⁾ | 880 | 1760.00 | 2200.00 |

1) Current @460V (Amps) only.

*** TABLE CONTINUED NEXT PAGE ***

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME MOTOR – 60Hz / 1800 RPM (CONTINUED)

***** Table Continued From Previous Page *****

| Performance Data @ 60Hz Premium-Efficiency T & TC Frame Three-Phase Motors 1800 rpm – (460 Volt except as indicated) | | | | |
|--|-------|----------|---|------------------------------|
| Part Number | HP | Slip (%) | Max Time @ Locked Rotor Current (hot) (seconds) | Temperature Rise @ Full Load |
| MTCP2-001-3BD18(C) | 1 | 2.5 | 12 | 80°C [176°F] |
| MTCP2-1P5-3BD18(C) | 1-1/2 | 2.5 | 10 | |
| MTCP2-002-3BD18(C) | 2 | 2.5 | 12 | |
| MTCP2-003-3BD18(C) | 3 | 2.5 | 12 | |
| MTCP2-005-3BD18(C) | 5 | 2.5 | 10 | |
| MTCP2-7P5-3BD18(C) | 7-1/2 | 1.94 | 14 | |
| MTCP2-010-3BD18(C) | 10 | 1.94 | 12 | |
| MTCP2-015-3BD18(C) | 15 | 1.94 | 13 | |
| MTCP2-020-3BD18(C) | 20 | 1.94 | 12 | |
| MTCP2-025-3BD18(C) | 25 | 1.67 | 16 | |
| MTCP2-030-3BD18(C) | 30 | 1.67 | 14 | |
| MTCP2-040-3BD18 | 40 | 1.40 | 12 | |
| MTCP2-050-3BD18 | 50 | 1.40 | 7 | |
| MTCP2-060-3BD18 | 60 | 1.10 | 16 | |
| MTCP2-075-3BD18 | 75 | 1.10 | 12 | |
| MTCP2-100-3BD18 | 100 | 0.83 | 10 | |
| MTCP2-125-3BD18 | 125 | 0.55 | 11 | |
| MTCP2-150-3BD18 | 150 | 0.55 | 12 | |
| MTCP2-200-3BD18 | 200 | 0.55 | 10 | |
| MTCP2-250-3D18 | 250 | 0.56 | 12 | |
| MTCP2-300-3D18 | 300 | 0.56 | 14 | |

MTCP2 PREMIUM-EFFICIENCY THREE-PHASE MOTORS FEATURES & SPECS (CONTINUED)

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

| 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 | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (10:1) | Variable Torque (20:1) | CHP | Safe |
| MTCP2-001-3BD12 | 1 | B | 1160 | 116 | 58 | 1800 | 2400 |
| MTCP2-1P5-3BD12 | 1-1/2 | | 1180 | 118 | 59 | | |
| MTCP2-002-3BD12 | 2 | | 1175 | 118 | 59 | | |
| MTCP2-003-3BD12 | 3 | | 1175 | 117.5 | 58.75 | | |
| MTCP2-005-3BD12 | 5 | | 1175 | 117.5 | 58.75 | | |
| MTCP2-7P5-3BD12 | 7-1/2 | | 1175 | 117.5 | 58.75 | | |
| MTCP2-010-3BD12 | 10 | | 1175 | 117.5 | 58.75 | | |
| MTCP2-015-3BD12 | 15 | | 1185 | 118.5 | 59.25 | | |
| MTCP2-020-3BD12 | 20 | | 1185 | 118.5 | 59.25 | | |
| Part Number | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTCP2-001-3BD12 | 1 | 2.3/1.5 | 3.49/1.75 | 30/15 | 4.53 | 8.15 | 12.00 |
| MTCP2-1P5-3BD12 | 1-1/2 | 3.1/1.55 | 4.72/2.36 | 40/20 | 6.67 | 16.68 | 24.01 |
| MTCP2-002-3BD12 | 2 | 3.7/1.85 | 5.96/2.98 | 50/25 | 8.9 | 20.47 | 29.37 |
| MTCP2-003-3BD12 | 3 | 5/2.5 | 8.97/4.48 | 64/32 | 13.3 | 20.62 | 31.92 |
| MTCP2-005-3BD12 | 5 | 7.1/3.55 | 14.5/7.27 | 92/46 | 22.2 | 35.52 | 53.28 |
| MTCP2-7P5-3BD12 | 7-1/2 | 8.4/4.2 | 18.8/9.41 | 127/63.5 | 33.5 | 60.30 | 93.80 |
| MTCP2-010-3BD12 | 10 | 11.6/5.8 | 25.1/12.5 | 162/81 | 44.7 | 80.46 | 125.16 |
| MTCP2-015-3BD12 | 15 | 17/8.5 | 38.8/19.4 | 232/116 | 66.5 | 96.43 | 152.95 |
| MTCP2-020-3BD12 | 20 | 49.2/24.6 | 51.1.2/25.5 | 290/145 | 88.6 | 124.04 | 194.92 |
| Part Number | HP | Temperature Rise @ Full Load | Max Time Locked Rotor (Hot) (seconds) | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| MTCP2-001-3BD12 | 1 | 80°C [176°F] | 18 | 82.5 | 0.65 | 0.118 | 3.3 |
| MTCP2-1P5-3BD12 | 1-1/2 | | 8 | 86.8 | 0.68 | 0.401 | 1.67 |
| MTCP2-002-3BD12 | 2 | | 8 | 88.5 | 0.71 | 0.462 | 1.67 |
| MTCP2-003-3BD12 | 3 | | 26 | 89.5 | 0.7 | 0.646 | 1.67 |
| MTCP2-005-3BD12 | 5 | | 22 | 89.5 | 0.72 | 0.946 | 1.67 |
| MTCP2-7P5-3BD12 | 7-1/2 | | 22 | 91 | 0.82 | 2.03 | 2.08 |
| MTCP2-010-3BD12 | 10 | | 12 | 91 | 0.82 | 2.27 | 2.10 |
| MTCP2-015-3BD12 | 15 | | 10 | 91.7 | 0.79 | 4.09 | 1.25 |
| MTCP2-020-3BD12 | 20 | | 8 | 91.7 | 0.80 | 5 | 1.25 |

MTCP2 PREMIUM-EFFICIENCY THREE-PHASE MOTORS FEATURES & SPECS (CONTINUED)

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

| 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 | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (10:1) | Variable Torque (20:1) | CHP | Safe |
| MTCP2-1P5-3BD36 | 1-1/2 | B | 3490 | 348.5 | 174.25 | 5400 | 7200 |
| MTCP2-002-3BD36 | 2 | | 3495 | 349 | 174.5 | | |
| MTCP2-003-3BD36 | 3 | | 3490 | 350.5 | 175.25 | | |
| MTCP2-005-3BD36 | 5 | | 3490 | 350.5 | 175.25 | | |
| MTCP2-7P5-3BD36 | 7-1/2 | | 3505 | 350.5 | 175.25 | 5400 | 5400 |
| MTCP2-010-3BD36 | 10 | | 3500 | 350 | 175 | | |
| MTCP2-015-3BD36 | 15 | | 3540 | 354.5 | 177.25 | | |
| MTCP2-020-3BD36 | 20 | | 3540 | 354 | 177 | | |
| Part Number | HP | Current @ 230V/460V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTCP2-1P5-3BD36 | 1-1/2 | 2.1/1.05 | 4.18/2.09 | 40/20 | 2.26 | 4.97 | 7.01 |
| MTCP2-002-3BD36 | 2 | 2.5/1.25 | 5.48/2.74 | 50/25 | 3.01 | 6.92 | 9.63 |
| MTCP2-003-3BD36 | 3 | 3.52/1.7 | 7.64/3.82 | 64/32 | 4.49 | 9.43 | 15.72 |
| MTCP2-005-3BD36 | 5 | 3.1/1.55 | 12.0/6.01 | 92/46 | 7.49 | 16.48 | 26.22 |
| MTCP2-7P5-3BD36 | 7-1/2 | 6.4/3.2 | 18.9/9.45 | 127/63.5 | 11.2 | 17.92 | 33.60 |
| MTCP2-010-3BD36 | 10 | 7.3/3.7 | 24.4/12.2 | 162/81 | 14.9 | 22.35 | 41.72 |
| MTCP2-015-3BD36 | 15 | 9.8/4.9 | 35.1/17.5 | 232/116 | 22.2 | 37.74 | 55.50 |
| MTCP2-020-3BD36 | 20 | 46.2/23.1 | 46.2/23.1 | 290/145 | 29.7 | 47.52 | 68.31 |
| Part Number | HP | Temperature Rise @ Full Load | Max Time Locked Rotor (Hot) (seconds) | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) | Slip (%) |
| MTCP2-1P5-3BD36 | 1-1/2 | 80°C [176°F] | 8 | 84 | 0.80 | 0.043 | 3.2 |
| MTCP2-002-3BD36 | 2 | | 6 | 85.5 | 0.80 | 0.05 | 3.05 |
| MTCP2-003-3BD36 | 3 | | 8 | 86.5 | 0.85 | 0.133 | 2.64 |
| MTCP2-005-3BD36 | 5 | | 7 | 88.5 | 0.88 | 0.178 | 2.64 |
| MTCP2-7P5-3BD36 | 7-1/2 | | 26 | 89.5 | 0.83 | 11.2 | 2.36 |
| MTCP2-010-3BD36 | 10 | | 20 | 90.2 | 0.85 | 0.369 | 2.22 |
| MTCP2-015-3BD36 | 15 | | 15 | 91 | 0.88 | 1.06 | 1.53 |
| MTCP2-020-3BD36 | 20 | | 12 | 91 | 0.89 | 1.26 | 1.66 |

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

PERFORMANCE DATA – CAST-IRON T-FRAME AND TC-FRAME MOTOR – 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 | Minimum Speed (rpm) | | Maximum Speed (rpm) | | F.L. Efficiency (%) | F.L. Power Factor | Rotor Inertia (lb-ft ²) |
| | | | | CT (10:1) | VT (20:1) | CHP | Safe | | | |
| MTCP2-001-3BD18(C) | 1 | B | 1450 | 146 | 73 | 2700 | 3600 | 79.6 | 0.67 | 0.089 |
| MTCP2-1P5-3BD18(C) | 1-1/2 | | 1450 | | | | 3600 | 81.4 | 0.73 | 0.105 |
| MTCP2-002-3BD18(C) | 2 | | 1450 | | | | 3600 | 82.8 | 0.73 | 0.116 |
| MTCP2-003-3BD18(C) | 3 | | 1450 | | | | 3600 | 84.3 | 0.77 | 0.23 |
| MTCP2-005-3BD18(C) | 5 | | 1450 | | | | 3600 | 86.6 | 0.83 | 0.326 |
| MTCP2-7P5-3BD18(C) | 7-1/2 | | 1455 | 146.5 | 73.25 | | 3600 | 87.7 | 0.83 | 0.689 |
| MTCP2-010-3BD18(C) | 10 | | 1455 | | | | 3600 | 88.7 | 0.84 | 0.814 |
| MTCP2-015-3BD18(C) | 15 | | 1460 | 147 | 73.5 | | 3600 | 89.8 | 0.84 | 1.89 |
| MTCP2-020-3BD18(C) | 20 | | 1460 | | | | 3600 | 90.6 | 0.85 | 2.33 |
| MTCP2-025-3BD18(C) | 25 | | 1465 | 147.5 | 73.75 | | 2700 | 91.2 | 0.85 | 3.36 |
| MTCP2-030-3BD18(C) | 30 | | 1465 | | | | 2700 | 91.6 | 0.85 | 3.83 |
| MTCP2-040-3BD18 | 40 | | 1475 | 148 | 74 | | 2700 | 92.3 | 0.85 | 6.11 |
| MTCP2-050-3BD18 | 50 | | 1475 | | | | 2700 | 92.7 | 0.86 | 6.89 |
| MTCP2-060-3BD18 | 60 | | 1480 | | | | 2700 | 93.1 | 0.83 | 14.7 |
| MTCP2-075-3BD18 | 75 | | 1480 | | | | 2700 | 93.5 | 0.83 | 17.5 |
| MTCP2-100-3BD18 | 100 | | 1485 | | | | 148.5 | 74.25 | 2700 | 94.0 |
| MTCP2-125-3BD18 | 125 | | 1490 | 149 | 74.5 | | 2700 | 94.2 | 0.84 | 40.1 |
| MTCP2-150-3BD18 | 150 | | 1490 | | | | 2700 | 94.5 | 0.84 | 48.5 |
| MTCP2-200-3BD18 | 200 | | 1490 | | | | 2250 | 94.9 | 0.85 | 64.3 |
| MTCP2-250-3D18 | 250 | | n/a | | | | | | | |
| MTCP2-300-3D18 | 300 | n/a | | | | | | | | |

*** TABLE CONTINUED NEXT PAGE ***

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

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

***** Table Continued From Previous Page *****

| Performance Data @ 50Hz Premium-Efficiency T & TC Frame Three-Phase Motors – 1500 rpm (400 Volt except as indicated) | | | | | | | |
|--|-------|----------------------------|-----------|--------------|----------------|--------------|-------------|
| Part Number | HP | Current @ 200V/400V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break -down |
| MTCP2-001-3BD18(C) | 1 | 2.54/1.27 | 4.04/2.02 | 26.3/13.1 | 2.99 | 9.41 | 12.7 |
| MTCP2-1P5-3BD18(C) | 1-1/2 | 3.10/1.55 | 5.44/2.72 | 31.6/15.8 | 4.49 | 13.0 | 17.4 |
| MTCP2-002-3BD18(C) | 2 | 4.24/2.12 | 7.13/3.56 | 43.9/21.9 | 5.98 | 16.7 | 22.4 |
| MTCP2-003-3BD18(C) | 3 | 5.56/2.78 | 9.95/4.98 | 61.6/30.8 | 9 | 20.6 | 30.4 |
| MTCP2-005-3BD18(C) | 5 | 5.86/2.93 | 15.0/7.49 | 89.6/44.8 | 15 | 31.7 | 48.0 |
| MTCP2-7P5-3BD18(C) | 7-1/2 | 8.40/4.2 | 22.2/11.1 | 127/63.4 | 22.3 | 40.6 | 64.9 |
| MTCP2-010-3BD18(C) | 10 | 10.6/5.3 | 28.9/14.5 | 172/85.9 | 29.7 | 54.1 | 93.8 |
| MTCP2-015-3BD18(C) | 15 | 17.0/8.5 | 42.8/21.4 | 225/112 | 44.6 | 80.9 | 119 |
| MTCP2-020-3BD18(C) | 20 | 19.0/9.5 | 55.9/28.0 | 289/144 | 59.5 | 108 | 158 |
| MTCP2-025-3BD18(C) | 25 | 24.0/12 | 69.5/34.7 | 370/185 | 74.2 | 130 | 197 |
| MTCP2-030-3BD18(C) | 30 | 30.0/15 | 83.0/41.5 | 467/233 | 89 | 156 | 237 |
| MTCP2-040-3BD18 | 40 | 39.0/19.5 | 110/54.9 | 612/306 | 118 | 221 | 313 |
| MTCP2-050-3BD18 | 50 | 46.0/23 | 135/67.5 | 757/378 | 148 | 276 | 409 |
| MTCP2-060-3BD18 | 60 | 55.0/27.5 | 167/83.6 | 1044/522 | 177 | 362 | 490 |
| MTCP2-075-3BD18 | 75 | 68.0/34 | 208/104 | 1082/541 | 221 | 452 | 612 |
| MTCP2-100-3BD18 | 100 | 76.0/38 | 266/133 | 1534/767 | 294 | 530 | 778 |
| MTCP2-125-3BD18 | 125 | 110/55 | 340/170 | 1699/850 | 367 | 573 | 881 |
| MTCP2-150-3BD18 | 150 | 126/63 | 407/203 | 2107/1054 | 440 | 687 | 1110 |
| MTCP2-200-3BD18 | 200 | 160/80 | 534/267 | 2834/1417 | 587 | 916 | 1480 |
| MTCP2-250-3D18 | 250 | n/a | | | | | |
| MTCP2-300-3D18 | 300 | n/a | | | | | |

*** TABLE CONTINUED NEXT PAGE ***

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES AND SPECIFICATIONS (CONTINUED)

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

| ***** Table Continued From Previous Page ***** | | | | |
|--|-------|----------|---------------------------------------|------------------------------|
| Performance Data @ 50Hz Premium-Efficiency T & TC Frame Three-Phase Motors 1500 rpm – (400 Volt except as indicated) | | | | |
| Part Number | HP | Slip (%) | Max Time @ Locked Rotor Current (hot) | Temperature Rise @ Full Load |
| MTCP2-001-3BD18(C) | 1 | 2.5 | 12 | 80°C [176°F] |
| MTCP2-1P5-3BD18(C) | 1-1/2 | 2.5 | 10 | |
| MTCP2-002-3BD18(C) | 2 | 2.5 | 12 | |
| MTCP2-003-3BD18(C) | 3 | 2.5 | 12 | |
| MTCP2-005-3BD18(C) | 5 | 2.5 | 10 | |
| MTCP2-7P5-3BD18(C) | 7-1/2 | 1.94 | 14 | |
| MTCP2-010-3BD18(C) | 10 | 1.94 | 12 | |
| MTCP2-015-3BD18(C) | 15 | 1.94 | 13 | |
| MTCP2-020-3BD18(C) | 20 | 1.94 | 12 | |
| MTCP2-025-3BD18(C) | 25 | 1.67 | 16 | |
| MTCP2-030-3BD18(C) | 30 | 1.67 | 14 | |
| MTCP2-040-3BD18 | 40 | 1.40 | 12 | |
| MTCP2-050-3BD18 | 50 | 1.40 | 7 | |
| MTCP2-060-3BD18 | 60 | 1.10 | 16 | |
| MTCP2-075-3BD18 | 75 | 1.10 | 12 | |
| MTCP2-100-3BD18 | 100 | 0.83 | 10 | |
| MTCP2-125-3BD18 | 125 | 0.55 | 11 | |
| MTCP2-150-3BD18 | 150 | 0.55 | 12 | |
| MTCP2-200-3BD18 | 200 | 0.55 | 10 | |
| MTCP2-250-3D18 | 250 | n/a | | |
| MTCP2-300-3D18 | 300 | n/a | | |

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES & SPECS (CONTINUED)

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

| 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 | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (10:1) | Variable Torque (20:1) | CHP | Safe |
| MTCP2-001-3BD12 | 1 | B | 955 | 96.5 | 48.25 | 1800 | 2400 |
| MTCP2-1P5-3BD12 | 1-1/2 | | 970 | 98 | 49 | | |
| MTCP2-002-3BD12 | 2 | | 970 | | | | |
| MTCP2-003-3BD12 | 3 | | 970 | | | | |
| MTCP2-005-3BD12 | 5 | | 970 | | | | |
| MTCP2-7P5-3BD12 | 7-1/2 | | 970 | 97.5 | 48.25 | | |
| MTCP2-010-3BD12 | 10 | | 970 | | | | |
| MTCP2-015-3BD12 | 15 | | 980 | 98.5 | 49.25 | | |
| MTCP2-020-3BD12 | 20 | | 980 | | | | |
| Part Number | HP | | Current @ 200V/400V (Amps) | | | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTCP2-001-3BD12 | 1 | 2.76/1.38 | 4.37/2.18 | 18/9.13 | 4.53 | 9.90 | 13.2 |
| MTCP2-1P5-3BD12 | 1-1/2 | 3.34/1.67 | 6.08/3.04 | 32/16.2 | 6.67 | 14.6 | 22.7 |
| MTCP2-002-3BD12 | 2 | 3.80/1.9 | 7.60/3.80 | 39/19.5 | 8.9 | 18.4 | 28.1 |
| MTCP2-003-3BD12 | 3 | 5.50/2.75 | 11.3/5.64 | 54/27.1 | 13.3 | 24.4 | 37.3 |
| MTCP2-005-3BD12 | 5 | 7.60/3.8 | 17.7/8.84 | 79/39.4 | 22.2 | 39.2 | 59.5 |
| MTCP2-7P5-3BD12 | 7-1/2 | 9.00/4.5 | 22.9/11.5 | 106/53.2 | 33.5 | 58.9 | 97.4 |
| MTCP2-010-3BD12 | 10 | 12.8/6.4 | 30.11/15.1 | 158/79.1 | 44.7 | 81.2 | 130 |
| MTCP2-015-3BD12 | 15 | 20.0/10 | 46.1/23.7 | 231/116 | 66.5 | 113 | 169 |
| MTCP2-020-3BD12 | 20 | 25.0/12.5 | 60.0/30.0 | 292/146 | 88.6 | 139 | 204 |
| 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 (%) |
| MTCP2-001-3BD12 | 1 | 80°C [176°F] | 18 | 75.9 | 0.65 | 0.118 | 3.3 |
| MTCP2-1P5-3BD12 | 1-1/2 | | 8 | 78.1 | 0.68 | 0.401 | 1.67 |
| MTCP2-002-3BD12 | 2 | | 8 | 79.8 | 0.71 | 0.462 | 1.67 |
| MTCP2-003-3BD12 | 3 | | 26 | 81.8 | 0.70 | 0.646 | 1.67 |
| MTCP2-005-3BD12 | 5 | | 22 | 84.6 | 0.72 | 0.946 | 1.67 |
| MTCP2-7P5-3BD12 | 7-1/2 | | 22 | 86.0 | 0.82 | 2.03 | 2.08 |
| MTCP2-010-3BD12 | 10 | | 12 | 87.2 | 0.82 | 2.27 | 2.10 |
| MTCP2-015-3BD12 | 15 | | 10 | 88.7 | 0.79 | 4.09 | 1.25 |
| MTCP2-020-3BD12 | 20 | | 8 | 89.7 | 0.80 | 5 | 1.25 |

MTCP2 PREMIUM-EFFICIENCY CAST-IRON THREE-PHASE MOTORS FEATURES & SPECS (CONTINUED)

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

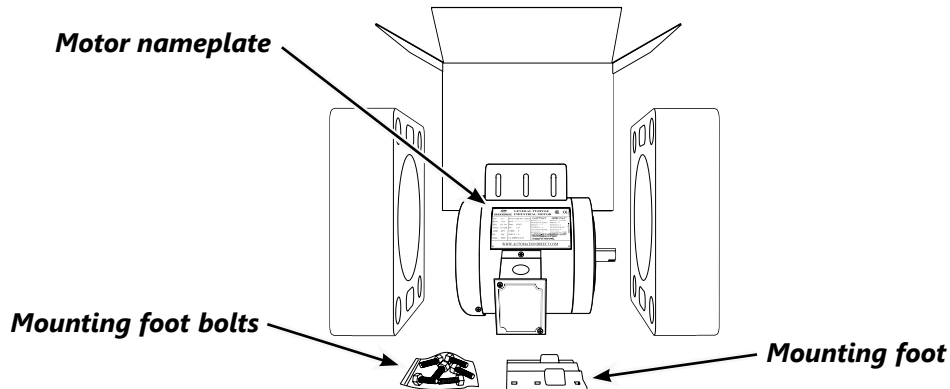
| Performance Data @ 50Hz – Premium Efficiency T-Frame 3-Phase Motors – 3000 rpm – (400 Volt except as indicated) | | | | | | | |
|--|-------|------------------------------|-----------------------------|------------------------|------------------------|-------------------------------------|------------|
| Part Number | HP | NEMA Design | F.L. RPM | Minimum Speed (rpm) | | Maximum Speed (rpm) | |
| | | | | Constant Torque (10:1) | Variable Torque (20:1) | CHP | Safe |
| MTCP2-1P5-3BD36 | 1-1/2 | B | 2875 | 290 | 145 | 5400 | 7200 |
| MTCP2-002-3BD36 | 2 | | 2880 | 290.5 | 145.25 | | |
| MTCP2-003-3BD36 | 3 | | 2885 | 292 | 146 | | |
| MTCP2-005-3BD36 | 5 | | 2885 | | | | |
| MTCP2-7P5-3BD36 | 7-1/2 | | 2900 | 2900 | 291.5 | 145.75 | 5400 |
| MTCP2-010-3BD36 | 10 | | 2900 | 291.5 | 145.75 | | |
| MTCP2-015-3BD36 | 15 | | 2935 | 295.5 | 147.75 | | |
| MTCP2-020-3BD36 | 20 | | 2935 | 295 | 147.5 | | |
| Part Number | HP | Current @ 200V/400V (Amps) | | | Torque (lb-ft) | | |
| | | No Load | Full Load | Locked Rotor | Full Load | Locked Rotor | Break-down |
| MTCP2-1P5-3BD36 | 1-1/2 | 3.46/1.73 | 5.07/2.54 | 44.1/22.1 | 2.26 | 7.29 | 10.21 |
| MTCP2-002-3BD36 | 2 | 3.46/1.73 | 6.62/3.31 | 44.1/22.1 | 3.01 | 7.29 | 10.21 |
| MTCP2-003-3BD36 | 3 | 3.90/1.95 | 9.14/4.57 | 50.5/25.3 | 4.49 | 9.28 | 14.7 |
| MTCP2-005-3BD36 | 5 | 4.70/2.35 | 14.3/7.13 | 87.7/43.9 | 7.49 | 16.4 | 24.6 |
| MTCP2-7P5-3BD36 | 7-1/2 | 7.40/3.7 | 22.4/11.2 | 127/63.5 | 11.2 | 19.7 | 33.9 |
| MTCP2-010-3BD36 | 10 | 9.20/4.6 | 28.8/14.4 | 151/75.5 | 14.9 | 26.3 | 45.3 |
| MTCP2-015-3BD36 | 15 | 10.2/5.1 | 41.1/20.5 | 201/101 | 22.2 | 34.9 | 53.7 |
| MTCP2-020-3BD36 | 20 | 12.0/6 | 53.6/26.8 | 280/140 | 29.7 | 46.5 | 71.6 |
| 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 (%) |
| MTCP2-1P5-3BD36 | 1-1/2 | 80°C [176°F] | 8 | 81.3 | 0.80 | 0.043 | 3.2 |
| MTCP2-002-3BD36 | 2 | | 6 | 81.3 | 0.80 | 0.05 | 3.05 |
| MTCP2-003-3BD36 | 3 | | 8 | 83.2 | 0.85 | 0.133 | 2.64 |
| MTCP2-005-3BD36 | 5 | | 7 | 85.8 | 0.88 | 0.178 | 2.64 |
| MTCP2-7P5-3BD36 | 7-1/2 | | 26 | 87.0 | 0.83 | 11.2 | 2.36 |
| MTCP2-010-3BD36 | 10 | | 20 | 88.1 | 0.85 | 0.369 | 2.22 |
| MTCP2-015-3BD36 | 15 | | 15 | 89.4 | 0.88 | 1.06 | 1.53 |
| MTCP2-020-3BD36 | 20 | | 12 | 90.3 | 0.89 | 1.26 | 1.66 |

RECEIVING AND INSPECTION

UNPACKING

After receiving an IronHorse motor, please check for the following:

- Open the motor packaging and inspect for damage during shipment.
- Make sure the part number indicated on the motor nameplate corresponds with the part number on your order.
- For all 56C and 56HC framed motors, make sure that the shipment contains the motor, the removable mounting foot and mounting foot bolts.
- Read the enclosed Product Advisory.



IRONHORSE® PART NUMBER EXPLANATION

MT CP - 7P5 - 3 BD 18 C - 14

| | |
|---|---|
| <p>■ Additional Frame Size Blank: Standard Frame 14: 143/145 Frame 18: 182/184 Frame</p> <p>■ Optional Identifier C: C-face cast-iron motor R: Round body (no mounting feet)</p> <p>■ Nominal RPM 12: 1200 rpm 18: 1800 rpm 36: 3600 rpm</p> <p>■ Voltage Class (multiple letters possible) A: 115 VAC D: 460 VAC B: 208-230 VAC L: 90 VDC C: 230 VAC M: 180 VDC</p> <p>■ Phase 1: Single phase 3: Three phase</p> <p>■ Rated Horsepower P: Decimal Point # left of P: Rated full hp # right of P: Rated fractional hp</p> <p>■ Motor type A: Motor Accessory AP: Premium-efficiency motor C: AC EPAct motor with Cast-iron frame CP2: AC Premium-efficiency motor with Cast-iron frame DP: Open Drip Proof</p> <p>■ IronHorse Motors Series Designation</p> | <p>F(2): Farm Duty R(2): AC Motor w Rolled-steel frame RP: AC Premium-efficiency motor with Rolled-steel frame PM: DC Permanent Magnet RJ(P): Jet Pump SS: AC Motor w Stainless-steel frame SP: AC Motor IP69K SS TEFC SN: AC Motor IP69K SS TENV</p> |
|---|---|

RESHIPING

If an IronHorse motor needs to be reshipped from the initial shipping point, the following procedures should be followed to protect the motor from damage.

- 1) If the original packaging is to be used for reshipment, inspect the packaging for previous shipping damage and repackage if necessary. Take care to protect the motor body, fan cover and shaft.
- 2) It is a good idea to bolt the motor to a platform that fits securely in the bottom of the shipping crate or box. This helps prevent the motor from shifting during transport and thus protects the bearings from damage.
- 3) A shaft lock device should be installed on motors from 100 to 300 hp prior to shipment. The shaft lock helps prevent bearing damage.
- 4) Motors should only be lifted by the the eyebolt(s) provided on the motor. When lifting motors with more than one eyebolt, use every bolt provided.

LONG TERM STORAGE

The following preventative measures should be taken when storing IronHorse motors for a long period of time.

- 1) Store motors in a controlled temperature, dry atmosphere free of excess dirt, dust and airborne particles.
- 2) Rotate the motor shaft every sixty days to prevent hardening of the bearing grease.
- 3) Warehoused motors should have the bearing grease purged and replaced every six months. Use only Mobil POLYREX® EM Polyurea grease. For MTCP2 motors, use SKF, LGHP2 grease. For MTF2 and MTDP motors, use Multemp, SRL grease or equivalent.

WARRANTY

- *IronHorse MTSS stainless steel motors carry a one year warranty from the date of invoice.*
- *All other IronHorse motors (except MTSS) carry a two year warranty from the date of invoice.*

For motors 40hp and smaller, valid warranty claims will be resolved by product replacement. Motors 50hp and larger must be evaluated by an authorized Electrical Apparatus Service Association (EASA) service center. Valid warranty claims will be resolved by repair or replacement at the discretion of AutomationDirect. See AutomationDirect Terms and Conditions in our current catalog or online at <http://www.automationdirect.com/static/specs/adpolicy.pdf> for complete details.

Authorized EASA service centers are available nationwide. Visit the EASA website at www.easa.com to find the nearest authorized service center. These shops may also be able to assist with non-warranty service.