Getting Started

Table of Contents

Manual Overview 1–2
Overview of this Publication 1–2
Who Should Read This Manual 1–2
Technical Support 1–2
Special Symbols 1–2
Available Models 1–3
MTF2 Conveyor/Farm-Duty T-Frame Single-Phase Motors – Features and Specifications 1–3
MTR2 Rolled-Steel 56C/56HC-Frame Single-Phase Motors – Features and Specifications 1–4
MTRJ Centrifugal Jet Pump One-Phase Motors – Features and Specifications 1–6
MTDP Open Drip-Proof AC Three-Phase Motors – Features and Specifications. 1–7
MTR2 and MTRP Rolled-Steel 56C/56HC-Frame Three-Phase Motors – Features and Specifications . 1–10
MTRJ Centrifugal Jet Pump Three-Phase Motors – Features and Specifications 1–12
MTCP2 Premium-Efficiency Cast-Iron Three-Phase Motors – Features and Specifications 1–13
Receiving and Inspection 1–26
Unpacking 1–26
IronHorse® Part Number Explanation 1–26
Reshipping 1–27
Long Term Storage 1–27
Warranty 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 reseting 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							22.2 / 20.2	100
MTF2-7P5-1B18-215	7.5					215T		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·ft²)***
			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**	**NEMAFrame**	**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 bellF1 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				L	56HC		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 bellF1 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				L			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														
					Current			**Torque**						
Part Number	**HP***	**F.L. RPM***	**NEMA Design**	**F.L. Effic. %**	**Full Load Amps**	**Locked Rotor Amps**	**No Load Current**	**Full Load (lb·ft)**	**Locked Rotor**	**Breakdown**	**Pull Up**	**F.L. Power Factor**	**Moment of Inertia (lb·ft2)**
									% 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		L	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)**
	@ 60Hz (50Hz)								
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 3.1/2.8/1.4*	33.1
MTDP-1P5-3BD18	1 1/2	1800	208–230/460 VAC			NEMA 145T		4.6 / 4.2 / 2.1	34.2
MTDP-002-3BD18	2	1800	208–230/460 VAC			NEMA 145T		5.9 / 5.4 / 2.7	38.6
MTDP-003-3BD18	3	1800	208–230/460 VAC			NEMA 182T		7.9 / 7.6 / 3.8 8.7/7.8/3.9*	68.3
MTDP-005-3BD18	5	1800	208–230/460 VAC			NEMA 184T		13.6 / 12.4 / 6.2 13.7/12.4/6.2*	91.5
MTDP-7P5-3BD18	7 1/2	1800	208–230/460 VAC			NEMA 213T		20.7 / 18.8 / 9.4 21.7/19.6/9.8*	140.2
MTDP-010-3BD18	10	1800	208–230/460 VAC			NEMA 215T		28.3 / 25.6/12.8	156.0
MTDP-015-3BD18	15	1800	208–230/460 VAC			NEMA 254T		37.6 / 34.2 / 17.1 38.5/34.8/17.4*	214.9
MTDP-020-3BD18	20	1800	208–230/460 VAC			NEMA 256T		49.5 / 45.0 / 22.5 51.5/46.6/23.3*	260.1
MTDP-025-3BD18	25	1800	208–230/460 VAC			NEMA 284T		66.3 / 60.0 / 30.0	300.0
MTDP-030-3BD18	30	1800	208–230/460 VAC			NEMA 286T		79.4 / 71.8 / 35.9 77.6/70.2/35.1*	330.0
MTDP-040-3BD18	40	1800	208–230/460 VAC			NEMA 324T		105.6 / 95.8 / 47.9	440
MTDP-050-3BD18	50	1800	208–230/460 VAC			NEMA 326T		130.3 / 117.4 / 58.7 131.2/118.6/59.3*	470
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 8.2/7.4/3.7*	39.7
MTDP-005-3BD36	5	3600	208–230/460 VAC			NEMA 182T		12.3 / 11.8 / 5.9	64.9
MTDP-7P5-3BD36	7.5	3600	208–230/460 VAC			NEMA 184T		18.9 / 17.2 / 8.6 19.2/17.4/8.7*	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 / 27	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	142.71.2	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 ($lb \cdot ft^2$)
	@ 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 / 27	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 ($lb \cdot ft^2$)
	@ 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 Cast aluminum end bell F1 conduit box location	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					3.2 / 1.6	35
MTRP-1P5-3BD18	1-1/2							4.5 / 2.3	43
MTRP-002-3BD18	2							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 Cast aluminum end bell F1 conduit box location	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					3.0 / 1.50	23
MTRP-1P5-3BD36	1-1/2							4.0 / 2.0	31
MTRP-002-3BD36	2							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	2.2 / 1.1	3.2 / 1.6	31 / 16
MTRP-1P5-3BD18	1-1/2	1760	440	176		2700	2.8 / 1.4	4.5 / 2.3	47 / 24
MTRP-002-3BD18	2	1760	440	176		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·ft²)**
			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			1.52 / 0.76	3.00 / 1.50	22 / 11
MTRP-1P5-3BD36	1-1/2	3500	875	350			1.8 / 0.9	3.96 / 1.98	38 / 19
MTRP-002-3BD36	2	3500	875	350			2.28 / 1.14	5.22 / 2.61	53/27
MTRP-003-3BD36	3	3500	875	350			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·ft²)**
			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	85 dB(A)	30.5	PDF
MTRJP-002-3BD36J	2						5.22/2.61		33.4	PDF
MTRJP-003-3BD36J	3						7.38/3.69	88 dB(A)	38.8	PDF

Performance Data - 3-phase														
					Current			Torque						
Part Number	**HP***	**F.L. RPM***	**NEMA Design**	**F.L. Effic. %**	**Full Load Amps**	**Locked Rotor Amps**	**No Load Current**	**Full Load (lb·ft)**	**Locked Rotor**	**Breakdown**	**Pull Up**	**F.L. Power Factor**	**Moment of Inertia (lb·ft2)**
									% of F.L. Torque				
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	0.03100
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							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								
MTCP2-015-3BD18	15	254T					2		40.0-36.2 / 18.1	265
MTCP2-015-3BD18C		254TC								
MTCP2-020-3BD18	20	256T					4		52.4-47.4 / 23.7	304
MTCP2-020-3BD18C		256TC								
MTCP2-025-3BD18	25	284T					2		65.1-58.8 / 29.4	385
MTCP2-025-3BD18C		284TC								
MTCP2-030-3BD18	30	286T					4		78.1-70.6 / 35.3	430
MTCP2-030-3BD18C		286TC								
MTCP2-040-3BD18	40	324T					2		104-93.7 / 46.8	531
MTCP2-050-3BD18(2)	50	326T					4		127-115 / 57.6	578
MTCP2-060-3BD18(2)	60	364T				F1	2		158-142 / 71.2	769
MTCP2-075-3BD18(2)	75	365T					4		196-177 / 88.7	858
MTCP2-100-3BD18(2)	100	405T					4		252-228 / 114	1131
MTCP2-125-3BD18(2)	125	444T				F1 (F2)	2		323-292 / 146	1429
MTCP2-150-3BD18(2)	150	445T					4		386-349 / 175	1625
MTCP2-200-3BD18(2)	200	445/7T					4		506-458 / 229	2033
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				F1 (F2)	2		20.9-18.9 / 9.45	160
MTCP2-010-3BD36	10	215T					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:
- *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 ($lb \cdot ft^2$)**
				CT (10:1)	**VT (20:1)**	**CHP**	**Safe**			
MTCP2-001-3BD18(C)	1		1755	175.5	87.75		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	B	1770	177	88.5	2700	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	
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	80°C [176°F]
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 ($lb{\cdot}ft^2$)**	**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	
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 ($lb{\cdot}ft^2$)	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·ft²)**
				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	0.86	31.2
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	
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	80°C [176°F]
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)			Torque (lb·ft)			
		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 ($lb{\cdot}ft^2$)	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

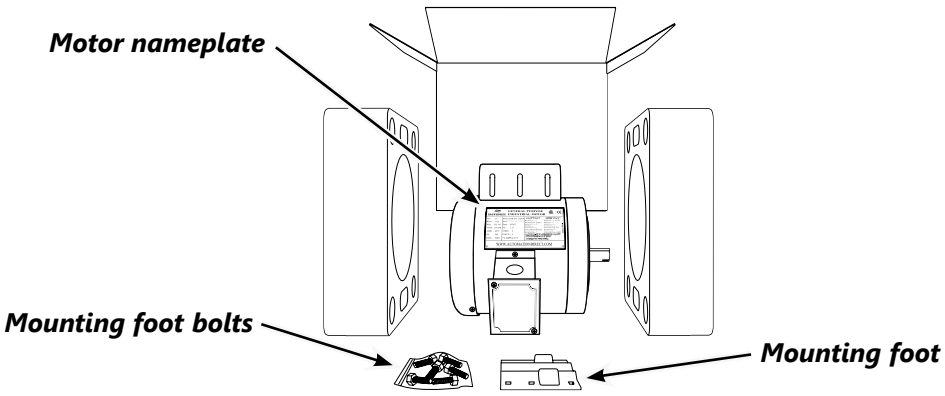
Performance Data @ 50Hz – Premium Efficiency T-Frame 3-Phase Motors – 3000 rpm – (400 Volt except as indicated)								
Part Number	**HP**	**NEMA Design**	**F.L. RPM**	**Minimum Speed (rpm)**		**Maximum Speed (rpm)**		
				Constant Torque (10:1)	**Variable Torque (20:1)**	**CHP**	**Safe**	
MTCP2-1P5-3BD36	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				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 ($lb{\cdot}ft^2$)**	**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

Additional Frame Size
- Blank: Standard Frame
- 14: 143/145 Frame
- 18: 182/184 Frame

Optional Identifier
- C: C-face cast-iron motor
- R: Round body (no mounting feet)

Nominal RPM
- 12: 1200 rpm
- 18: 1800 rpm
- 36: 3600 rpm

Voltage Class (multiple letters possible)
- A: 115 VAC
- B: 208-230 VAC
- C: 230 VAC
- D: 460 VAC
- L: 90 VDC
- M: 180 VDC

Phase
- 1: Single phase
- 3: Three phase

Rated Horsepower
- P: Decimal Point
- # left of P: Rated full hp
- # right of P: Rated fractional hp

Motor type
- A: Motor Accessory
- AP: Motor Accessory for Premium-efficiency motor
- C: AC EPAct motor with Cast-iron frame
- CP2: AC Premium-efficiency motor with Cast-iron frame
- DP: Open Drip Proof
- 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

IronHorse Motors Series Designation

Reshipping

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.