Getting Started

In This Chapter...

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

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

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

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

We recommend disconnecting power to the motor before 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.

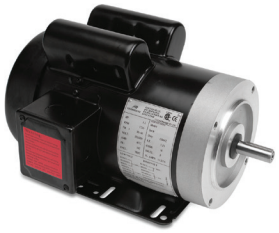
Cast-Iron T-Frame 1-Phase Farm-Duty Motor Specifications

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

Cast-Iron T-Frame 1-Phase Farm-Duty Motor Performance Data

Performance Data – Single-Phase Farm-Duty Motors (60Hz)											
Part Number	HP	F.L. RPM	Current @ 230V (Amps)			Torque (lb·ft)			F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft²)
			230V No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break down			
MTF-002-1C18-182	2	1725	2.7	8.5	70.0	6.04	20.54	15.10	82.5	0.92	0.35
MTF-003-1C18	3		3.9	12.9	95.0	9.11	32.80	23.69	81.5	0.93	0.60
MTF-005-1C18	5		6.6	21.2	160.0	15.30	58.14	36.72	81.0	0.90	0.81

MTR/MTR2 Rolled-Steel 56C/56HC-Frame Single-Phase Motors – Features and Specifications



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

Rolled-Steel 56C-Frame 1-Phase Motor Specifications

Motor Specifications – Single-Phase 56C/56HC-Frame Motors (60Hz except as indicated)									
Part Number	*HP*	*Base RPM*	*Voltage*	*Service Factor*	*NEMA Design*	*NEMA Frame*	*Housing*	*F.L. Amps @ 115V/230V 60Hz (110/220V 50Hz)*	*Approx Weight (lb)*
	@ 60Hz (50Hz)								
1800 RPM									
MTR-P33-1AB18	1/3	1800	115/208-230	1.15	N	56C flange mount	IP43 TEFC rolled steel frame cast AL end bell F1 conduit box location	6.6 / 3.3	26
MTR-P50-1AB18	1/2							8.8 / 4.4	28
MTR-P75-1AB18	3/4							11.0 / 5.5	32
MTR-001-1AB18	1							13.6 / 6.8	38
MTR-1P5-1AB18	1-1/2							15.2 / 7.6	45
MTR2-1P5-1AB18	1-1/2 (1)	1800 (1500)	115/230 (110/220)	1.15 (1)	L	56HC		14.5 / 7.3 (14.0 / 7.0)	37
MTR2-002-1AB18	2 (1-1/2)							19.6 / 9.8 (23.4 / 11.7)	44
3600 RPM									
MTR2-P33-1AB36	1/3 (1/4)	3600 (3000)	115/230 (110/220)	1.15 (1)	N	56C	IP43 TEFC rolled steel frame cast AL end bell F1 conduit box location	5.4 / 2.7 (5.4 / 2.7)	21
MTR2-P50-1AB36	1/2 (1/3)							6.5 / 3.3 (6.4 / 3.2)	23
MTR2-P75-1AB36	3/4 (1/2)							9.2 / 4.6 (9.2 / 4.6)	27
MTR2-001-1AB36	1 (3/4)							11.5 / 5.8 (10.2 / 5.1)	30
MTR-1P5-1AB36	1-1/2	3600	115/208-230	1.15	N			14.2 / 7.1	37
MTR2-1P5-1AB36	1-1/2 (1)	3600 (3000)	115/230 (110/220)	1.15 (1)	L			13.0 / 6.5 (11.4 / 5.7)	31
MTR2-002-1AB36	2 (1-1/2)							17.0 / 8.5 (14.6 / 7.3)	37
Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.									

NOTE: *56HC ARE SUITABLE FOR 56C C-FACE MOUNTING OR 56, 143T, OR 145T FRAME FOOT MOUNTING DIMENSIONS.

MTR(2) Rolled-Steel 56C/56HC-Frame Single-Phase Motors Features and Specifications (continued)

Rolled-Steel 56C-Frame 1-Phase Motor Performance Data

Performance Data – Single-Phase 56C/56HC-Frame Motors (230V / 60Hz data except as indicated)											
Part Number	HP @ 60Hz (50Hz)	F.L. RPM	Current @ 115V/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			
1800 RPM											
MTR-P33-1AB18	1/3	1725	2.2	6.6 / 3.3	31 / 18	1.02	3.06	2.81	56.0	0.62	0.075
MTR-P50-1AB18	1/2		2.93	8.8 / 4.4	37 / 21	1.52	4.56	4.18	57.0	0.63	0.080
MTR-P75-1AB18	3/4		3.67	11.0 / 5.5	55 / 32	2.29	6.30	5.73	65.0	0.65	0.095
MTR-001-1AB18	1		4.53	13.6 / 6.8	75 / 43	3.04	8.36	7.60	68.0	0.66	0.120
MTR-1P5-1AB18	1-1/2		5.07	15.2 / 7.6	120 / 65	4.57	11.43	10.28	71.0	0.75	0.142
MTR2-1P5-1AB18	1-1/2 (1)	1725 (1425)	5.23	14.5 / 7.3	110 / 55	4.46	8.70	10.45	77.0	0.84	0.095
MTR2-002-1AB18	2 (1-1/2)		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 (1/4)	3450 (2850)	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 (1/3)		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 (1/2)		2.82	9.2 / 4.6	66 / 33	1.12	4.62	3.44	66.5	0.78	0.041
MTR2-001-1AB36	1 (3/4)		3.04	11.5 / 5.8	82 / 41	1.50	4.48	3.83	69.5	0.80	0.047
MTR-1P5-1AB36	1-1/2	3450	3.0	14.2 / 7.1	116 / 58	2.2	7.5	5.4	72.0	0.9	0.03
MTR2-1P5-1AB36	1-1/2 (1)	3450 (2850)	3.90	13.0 / 6.5	109 / 55	2.21	3.22	5.08	77.0	0.94	0.047
MTR2-002-1AB36	2 (1-1/2)		4.51	17.0 / 8.5	131 / 65	3.02	4.45	6.82	79.5	0.94	0.060

MTR and MTRP Rolled-Steel 56C/56HC-Frame Three-Phase Motors Features and Specifications

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

Rolled-Steel 56C/56HC-Frame 3-Phase Motor Specifications – 1800 & 3600 rpm

Motor Specifications – MTR/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			208-230/460 – 3-phase	1.15	B	56C flange mount (MTRP = 56HC)	TEFC rolled steel frame cast aluminum end bell F1 conduit box location	1800 RPM	
MTR-P33-3BD18	1/3	1800						1.6 / 0.8	23
MTR-P50-3BD18	1/2							2.0 / 1.0	24
MTR-P75-3BD18	3/4							2.8 / 1.4	26
MTR-001-3BD18	1							3.6 / 1.8	29
MTRP-001-3BD18								3.2 / 1.6	35
MTR-1P5-3BD18	1-1/2							4.8 / 2.4	33
MTRP-1P5-3BD18								4.5 / 2.3	43
MTR-002-3BD18	2							6.0 / 3.0	42
MTRP-002-3BD18								6.0 / 3.0	49
3600 RPM								3600 RPM	
MTR-P33-3BD36	1/3	3600						1.6 / 0.8	23
MTR-P50-3BD36	1/2							2.2 / 1.1	24
MTR-P75-3BD36	3/4							2.9 / 1.5	26
MTR-001-3BD36	1							3.6 / 1.8	28
MTRP-001-3BD36								3.0 / 1.50	23
MTR-1P5-3BD36	1-1/2							4.6 / 2.3	34
MTRP-1P5-3BD36								4.0 / 2.0	31
MTR-002-3BD36	2							6.0 / 3.0	43
MTRP-002-3BD36								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 56, 143T, or 145T frame foot mounting dimensions.

MTR and MTRP Rolled-Steel 56C/56HC-Frame Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – 1800 rpm

Performance Data – MTR 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 (4:1)	VT (10:1)	CHP*	Safe	No Load	Full Load	Locked Rotor
MTR-P33-3BD18	1/3	1725	863	345	2700	5400	0.53 / 0.27	1.6 / 0.8	8 / 4
MTR-P50-3BD18	1/2						0.67 / 0.33	2.0 / 1.0	12 / 6
MTR-P75-3BD18	3/4						0.93 / 0.47	2.8 / 1.4	18 / 9
MTR-001-3BD18	1						1.2 / 0.6	3.6 / 1.8	24 / 12
MTRP-001-3BD18		1760	440	176		2700	2.2 / 1.1	3.2 / 1.6	31 / 16
MTR-1P5-3BD18	1-1/2	1725	863	345		5400	1.5 / 0.8	4.8 / 2.4	36 / 18
MTRP-1P5-3BD18		1760	440	176		2700	2.8 / 1.4	4.5 / 2.3	47 / 24
MTR-002-3BD18	2	1725	863	345		5400	2.0 / 1.0	6.0 / 3.0	48 / 24
MTRP-002-3BD18		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 ($lb \cdot ft^2$)
			Full Load	Locked Rotor	Break -down				
MTR-P33-3BD18	1/3	n/a	1.02	2.55	2.81	n/a	67.0	0.70	0.058
MTR-P50-3BD18	1/2		1.52	3.80	4.18		69.0	0.72	0.068
MTR-P75-3BD18	3/4		2.29	5.73	6.30		71.0	0.74	0.075
MTR-001-3BD18	1		3.02	7.55	8.31		73.0	0.76	0.086
MTRP-001-3BD18			3	12.35	14.51		85.0	0.69	0.107
MTR-1P5-3BD18	1-1/2		4.57	10.28	11.43		75.0	0.78	0.108
MTRP-1P5-3BD18			4.4	21.68	21.76		86.5	0.72	0.135
MTR-002-3BD18	2		6.09	13.70	15.23		77.0	0.80	0.143
MTRP-002-3BD18			6.03	27.3	27.46		86.5	0.74	0.158

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

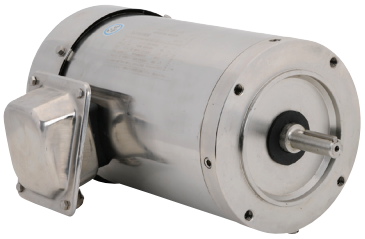
MOTOR PERFORMANCE DATA – 3600 RPM

Performance Data – Three-Phase 56C/56HC-Frame Motors – 3600 rpm (460V data except as indicated)									
Part Number	HP	F.L. RPM	Minimum Speed (rpm)		Maximum Speed (rpm)		Current @ 230V/460V (Amps)		
			CT (4:1)	VT (10:1)	CHP*	Safe	No Load	Full Load	Locked Rotor
MTR-P33-3BD36	1/3	3450	1725	690	5400	5400	1.2 / 0.59	1.6 / 0.8	9 / 5
MTR-P50-3BD36	1/2	3450	1725	690			1.4 / 0.7	2.2 / 1.1	14 / 7
MTR-P75-3BD36	3/4	3450	1725	690			1.5 / 0.75	2.9 / 1.5	17 / 8.9
MTR-001-3BD36	1	3450	1725	690			1.7 / 0.85	3.6 / 1.8	25 / 13
MTRP-001-3BD36		3500	875	350			1.52 / 0.76	3.00 / 1.50	22 / 11
MTR-1P5-3BD36	1-1/2	3450	1725	690			1.8 / 0.9	4.6 / 2.3	29 / 17
MTRP-1P5-3BD36		3500	875	350			1.8 / 0.9	3.96 / 1.98	38 / 19
MTR-002-3BD36	2	3450	1725	690			3.4 / 1.7	6.0 / 3.0	57 / 30
MTRP-002-3BD36		3500	875	350			2.28 / 1.14	5.22 / 2.61	53/27
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 ($lb \cdot ft^2$)
			Full Load	Locked Rotor	Break -down				
MTR-P33-3BD36	1/3	n/a	0.50	3.0	3.0	n/a	57.0	0.71	0.084
MTR-P50-3BD36	1/2		0.75	4.4	4.5		62.0	0.71	0.095
MTR-P75-3BD36	3/4		1.13	6.0	5.8		67.0	0.78	0.107
MTR-001-3BD36	1		1.50	7.9	7.1		69.0	0.82	0.122
MTRP-001-3BD36			1.51	3.98	4.93		77	0.83	0.034
MTR-1P5-3BD36	1-1/2		2.25	11.2	8.4		72.0	0.85	0.143
MTRP-1P5-3BD36			2.21	7.94	9.03		84.0	0.85	0.048
MTR-002-3BD36	2		3.06	18.9	13.4		75.0	0.78	0.188
MTRP-002-3BD36			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.*

MTSS Stainless-Steel 56C-Frame Three-Phase Motors Features and Specifications

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



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

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

Stainless-Steel 56C-Frame 3-Phase Motor Specifications – 1800 & 3600 rpm

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

MTSS Stainless-Steel 56C-Frame 3-Phase Motors Features & Specs (continued)

Motor Performance Data – 1800 rpm

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

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

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

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

Motor Performance Data – 3600 rpm

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

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

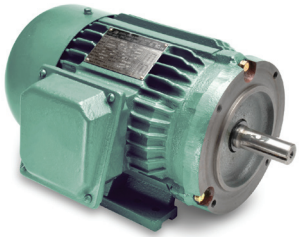
** Maximum Constant HP rpm is for direct-coupled loads.*

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

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications

Premium Effiency Cast-Iron T-Frame

Premium Effiency Cast-Iron TC-Frame



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

Motor Specifications – Cast-Iron T-frame and TC-frame – 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**	**F.L. Amps @ 230V/460V (200V/400V)**	**Product Weight (lb)**
MTCP-001-3BD18	1	143T	208-230/460 – 3-phase (200/400 – 3-phase)	TEFC cast iron	1045 carbon steel	F1(F2)	2	1.15 (1.0)	3.22 / 1.61 (3.70 / 1.85)	41
MTCP-001-3BD18C		143TC								45
MTCP-1P5-3BD18	1-1/2	145T					4		4.64 / 2.32 (5.34 / 2.67)	47
MTCP-1P5-3BD18C		145TC								50
MTCP-002-3BD18	2	145T					4		6.00 / 3.00 (6.90 / 3.50)	56
MTCP-002-3BD18C		145TC								60
MTCP-003-3BD18	3	182T					2		8.05 / 4.02 (9.26 / 4.63)	84
MTCP-003-3BD18C		182TC								92
MTCP-005-3BD18	5	184T					4		13.4 / 6.71 (15.4 / 7.71)	99
MTCP-005-3BD18C		184TC								107
MTCP-7P5-3BD18	7-1/2	213T					2		18.7 / 9.34 (21.5 / 10.7)	150
MTCP-7P5-3BD18C		213TC								154

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.*

***** Table Continued Next Page (for 10–200 hp motors) *****

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Specifications – Cast-Iron T-frame and TC-frame – 60Hz / 1800 rpm (50Hz / 1500 rpm) (continued)

***** 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	F.L. Amps @ 230V/460V (200V/400V)	Product Weight (lb)
MTCP-010-3BD18	10	215T	208-230/460 – 3-phase (200/400 – 3-phase)	TEFC cast iron	1045 carbon steel	F1(F2)	4	1.15 (1.0)	24.9 / 12.5 (28.6 / 14.3)	186
MTCP-010-3BD18C		215TC								190
MTCP-015-3BD18	15	254T					2		35.8 / 17.9 (41.2 / 20.6)	329
MTCP-015-3BD18C		254TC								325
MTCP-020-3BD18	20	256T					4		47.9 / 24.0 (55.1 / 27.6)	390
MTCP-020-3BD18C		256TC								370
MTCP-025-3BD18	25	284T					2		59.6 / 29.8 (68.5 / 34.3)	455
MTCP-025-3BD18C		284TC								467
MTCP-030-3BD18	30	286T					4		70.0 / 35.0 (80.5 / 40.2)	488
MTCP-030-3BD18C		286TC								497
MTCP-040-3BD18	40	324T					2		94.8 / 47.4 (109 / 54.5)	611
MTCP-040-3BD18C		324TC								626
MTCP-050-3BD18 (2)	50	326T					4		117 / 58.4 (134 / 67.2)	690
MTCP-050-3BD18C (2)		326TC								706
MTCP-060-3BD18 (2)	60	364T					2		139 / 69.6 (160 / 80.1)	851
MTCP-060-3BD18C (2)		364TC								864
MTCP-075-3BD18 (2)	75	365T					4		173 / 86.7 (199 / 99.7)	948
MTCP-075-3BD18C (2)		365TC								961
MTCP-100-3BD18 (2)	100	405T					4		229 / 114 (263 / 132)	1199
MTCP-100-3BD18C (2)		405TC								1236
MTCP-125-3BD18 (2)	125	444T					2		285 / 143 (328 / 164)	1500
MTCP-150-3BD18 (2)	150	445T					4		342 / 171 (414 / 207)	1630
MTCP-200-3BD18 (2)	200	445/7T					4		453 / 227 (521 / 261)	2127

1) *F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).*
2) *For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. See AutomationDirect Terms & Conditions for details.*

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Specifications –
Cast-Iron T-frame and TC-frame – 60Hz / 1800 rpm (50Hz / 1500 rpm) (continued)

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

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

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 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·ft²)
				CT (4:1)	VT (10:1)	CHP(1)	Safe			
MTCP-001-3BD18(C)	1	B	1750	450	180	2700	5400	86.3	0.690	0.089
MTCP-1P5-3BD18(C)	1-1/2		1750					87.3	0.726	0.11
MTCP-002-3BD18(C)	2		1750					87.3	0.725	0.13
MTCP-003-3BD18(C)	3		1750					90.3	0.786	0.28
MTCP-005-3BD18(C)	5		1750					90.3	0.786	0.33
MTCP-7P5-3BD18(C)	7-1/2		1760					91.8	0.825	1.814
MTCP-010-3BD18(C)	10		1750				4200	92.5	0.826	1.97
MTCP-015-3BD18(C)	15		1750					92.5	0.890	3.33
MTCP-020-3BD18(C)	20		1770					93.8	0.846	4.09
MTCP-025-3BD18(C)	25		1770					93.6	0.860	7.01
MTCP-030-3BD18(C)	30		1780					93.7	0.846	8.3
MTCP-040-3BD18(C)	40		1780					94.4	0.850	9
MTCP-050-3BD18(C)	50		1775					94.5	0.855	14.1
MTCP-060-3BD18(C)	60		1788					95.0	0.850	16.27
MTCP-075-3BD18(C)	75		1787					95.4	0.850	18.8
MTCP-100-3BD18(C)	100		1790					95.4	0.860	45.5
MTCP-125-3BD18	125		1790					95.4	0.860	65.1
MTCP-150-3BD18	150		1790					95.8	0.860	69.26
MTCP-200-3BD18	200		1790					96.3	0.860	84.0
1) Maximum Constant HP RPM is for direct-coupled loads.										
**** TABLE CONTINUED NEXT PAGE ****										

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 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
MTCP-001-3BD18(C)	1	2.3 / 1.1	3.2 / 1.6	30.0 / 15.0	3.0	9.0	11.4
MTCP-1P5-3BD18(C)	1-1/2	3.1 / 1.6	4.6 / 2.3	40.0 / 20.0	4.5	9.0	14.0
MTCP-002-3BD18(C)	2	3.6 / 1.8	6.0 / 3.0	50.0 / 25.0	6.0	17.4	19.2
MTCP-003-3BD18(C)	3	4.1 / 2.1	8.1 / 4.0	64.0 / 32.0	9.0	20.7	25.2
MTCP-005-3BD18(C)	5	6.2 / 3.1	13.4 / 6.7	92.0 / 46.0	15.0	34.5	43.5
MTCP-7P5-3BD18(C)	7-1/2	8.4 / 4.2	18.7 / 9.3	127 / 63.5	22.4	44.8	69.4
MTCP-010-3BD18(C)	10	10.5 / 5.3	24.9 / 12.5	163 / 81.5	30.0	61.5	93.0
MTCP-015-3BD18(C)	15	15.4 / 7.7	35.8 / 17.9	232 / 116	45	92	126
MTCP-020-3BD18(C)	20	17.1 / 8.6	47.9 / 24.0	290 / 145	59.4	118.8	166.3
MTCP-025-3BD18(C)	25	24 / 12	59.6 / 29.8	365 / 182.5	74.2	155.8	185.5
MTCP-030-3BD18(C)	30	27 / 13.5	70.0 / 35.0	435 / 217.5	88.6	203.8	248.1
MTCP-040-3BD18(C)	40	29.6 / 14.8	94.8 / 47.4	580 / 290	118.1	248.0	271.6
MTCP-050-3BD18(C)	50	36.2 / 18.1	116.8 / 58.4	725 / 362.5	148	326	414
MTCP-060-3BD18(C)	60	45.6 / 22.8	139.3 / 69.6	870 / 435	179	376	519
MTCP-075-3BD18(C)	75	58.4 / 29.2	173.4 / 86.7	1085 / 542.5	221	464	619
MTCP-100-3BD18(C)	100	75 / 37.5	228.6 / 114.3	1450 / 725	293.2	645.0	703.7
MTCP-125-3BD18	125	94.5 / 47.3	285.2 / 142.6	1816 / 908	367	624	918
MTCP-150-3BD18	150	104.4 / 52.2	342 / 171	2170 / 1085	443	797	1108
MTCP-200-3BD18	200	133.3 / 66.6	453.2 / 226.6	2900 / 1450	587	1174	1644

*** TABLE CONTINUED NEXT PAGE ***

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 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)***	***Temperature Rise @ Full Load***
MTCP-001-3BD18(C)	1	1.81	20 seconds	80°C [176°F]
MTCP-1P5-3BD18(C)	1-1/2	2.80		
MTCP-002-3BD18(C)	2	2.80		
MTCP-003-3BD18(C)	3	1.60		
MTCP-005-3BD18(C)	5	2.00		
MTCP-7P5-3BD18(C)	7-1/2	1.54		
MTCP-010-3BD18(C)	10	1.31		
MTCP-015-3BD18(C)	15	1.22		
MTCP-020-3BD18(C)	20	1.70		
MTCP-025-3BD18(C)	25	1.67		
MTCP-030-3BD18(C)	30	1.10		
MTCP-040-3BD18(C)	40	1.11		
MTCP-050-3BD18(C)	50	0.78		
MTCP-060-3BD18(C)	60	0.66		
MTCP-075-3BD18(C)	75	0.69	13 seconds	
MTCP-100-3BD18(C)	100	0.56	20 seconds	
MTCP-125-3BD18	125	0.56		
MTCP-150-3BD18	150	0.53	18 seconds	
MTCP-200-3BD18	200	0.52		

MTCP Premium-Efficiency Three-Phase Motors Features & Specs (continued)
Motor Performance Data – Cast-Iron T-frame – 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 (4:1)	Variable Torque (10:1)	CHP(2)	Safe	
MTCP-001-3BD12	1	B	1162	300	120	1800	3600	
MTCP-1P5-3BD12	1-1/2		1180					
MTCP-002-3BD12	2							
MTCP-003-3BD12	3							
MTCP-005-3BD12	5							
MTCP-7P5-3BD12	7-1/2							
MTCP-010-3BD12	10							
MTCP-015-3BD12	15							
MTCP-020-3BD12	20							
Part Number	HP	Current @ 230V/460V (Amps)			Torque (lb·ft)			
		No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	
MTCP-001-3BD12	1	2.5 / 1.25	3.2 / 1.6	30 / 15	4.5	10.8	14.4	
MTCP-1P5-3BD12	1-1/2	3.2 / 1.6	4.5 / 2.2	40 / 20	6.68	15.36	21.38	
MTCP-002-3BD12	2	4.2 / 2.1	5.7 / 2.9	50.0 / 25.0	8.61	20.66	29.88	
MTCP-003-3BD12	3	6.4 / 3.2	8.5 / 4.2	68.0 / 34.0	13.36	29.39	40.08	
MTCP-005-3BD12	5	9.2 / 4.6	13.8 / 6.9	92.0 / 46.0	22.2	48.8	66.6	
MTCP-7P5-3BD12	7-1/2	12.0 / 6.0	20.9 / 10.4	127 / 63.5	33.4	76.8	116.9	
MTCP-010-3BD12	10	10.8 / 5.4	27.8 / 13.9	162 / 81	44.5	97.9	106.8	
MTCP-015-3BD12	15	18.0 / 9.0	40.3 / 20.2	232 / 116	60.23	132.51	174.67	
MTCP-020-3BD12	20	17.8 / 8.9	52.4 / 26.2	290 / 145	89.1	196.0	258.4	
Part Number	HP	Tempera-ture Rise @ Full Load	Max Time Locked Rotor (Hot)	F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft²)	Slip (%)	
MTCP-001-3BD12	1	80°C [176°F]	20 seconds	82.5	0.72	0.33	3.14	
MTCP-1P5-3BD12	1-1/2			87.5	0.72	0.36	1.85	
MTCP-002-3BD12	2			88.5	0.74	0.47	2.0	
MTCP-003-3BD12	3			89.5	0.74	0.50	1.65	
MTCP-005-3BD12	5			89.5	0.76	1.97	1.85	
MTCP-7P5-3BD12	7-1/2			91.1	0.74	2.74	1.51	
MTCP-010-3BD12	10			91.0	0.74	2.98	1.56	
MTCP-015-3BD12	15			91.7	0.76	5.49	1.16	
MTCP-020-3BD12	20			91.7	0.78	12.9	1.21	
2) Maximum Constant HP RPM is for direct-coupled loads.								

MTCP Premium-Efficiency Three-Phase Motors Features & Specs (continued)

Motor Performance Data – Cast-Iron T-frame – 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 (4:1)	Variable Torque (10:1)	CHP(2)	Safe	
MTCP-1P5-3BD36	1-1/2	B	3570	900	360	5400	5400	
MTCP-002-3BD36	2		3520					
MTCP-003-3BD36	3		3520					
MTCP-005-3BD36	5		3570					
MTCP-7P5-3BD36	7-1/2		3520					
MTCP-010-3BD36	10		3550					
MTCP-015-3BD36	15		3550					
MTCP-020-3BD36	20		3570					
Part Number	HP	Current @ 230V/460V (Amps)			Torque (lb·ft)			
		No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	
MTCP-1P5-3BD36	1-1/2	2.0 / 1.0	4.1 / 2.0	40.0 / 20.0	2.2	6.4	7.9	
MTCP-002-3BD36	2	3.1 / 1.6	5.4 / 2.7	50.0 / 25.0	3.0	9.0	12.0	
MTCP-003-3BD36	3	3.9 / 2.0	7.7 / 3.9	64.0 / 32.0	4.48	12.54	17.02	
MTCP-005-3BD36	5	5.2 / 2.6	12.6 / 6.3	92.0 / 46.0	7.36	16.19	22.82	
MTCP-7P5-3BD36	7-1/2	6.7 / 3.3	18.5 / 9.2	127 / 63.5	11.2	28.0	34.7	
MTCP-010-3BD36	10	8.8 / 4.4	24.4 / 12.2	163 / 81.5	14.8	37.0	50.3	
MTCP-015-3BD36	15	12 / 6	35.0 / 17.5	232 / 116	22.2	46.6	64.4	
MTCP-020-3BD36	20	15 / 7.5	46.4 / 23.2	290 / 145	29.4	61.7	85.3	
Part Number	HP	Temper-ature Rise @ Full Load	Max Time Locked Rotor (Hot)	F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft²)	Slip (%)	
MTCP-1P5-3BD36	1-1/2	80°C [176°F]	20 seconds	85.5	0.83	0.08	2.00	
MTCP-002-3BD36	2			86.6	0.82	0.10	2.20	
MTCP-003-3BD36	3			87.0	0.85	0.20	1.60	
MTCP-005-3BD36	5			89.0	0.84	0.22	1.46	
MTCP-7P5-3BD36	7-1/2			89.7	0.85	0.50	1.67	
MTCP-010-3BD36	10			90.3	0.85	1.2	1.40	
MTCP-015-3BD36	15			91.2	0.85	1.86	1.11	
MTCP-020-3BD36	20			91.2	0.85	2.01	0.97	
2) Maximum Constant HP RPM is for direct-coupled loads								

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 50Hz / 1500rpm

Performance Data @ 50Hz Premium-Efficiency T & TC Frame Three-Phase Motors – 1500 rpm (400 Volt except as indicated)										
Part Number	HP	NEMA Design	F.L. RPM	Minimum Speed (rpm)		Maximum Speed (rpm)		F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft2)
				CT	VT	CHP(1)	Safe			
MTCP-001-3BD18(C)	1	B	1453	450	180	2700	5400	86.3	0.690	0.089
MTCP-1P5-3BD18(C)	1.5		1453					87.3	0.726	0.11
MTCP-002-3BD18(C)	2		1453					87.3	0.725	0.13
MTCP-003-3BD18(C)	3		1453					90.3	0.786	0.28
MTCP-005-3BD18(C)	5		1453					90.3	0.786	0.33
MTCP-7P5-3BD18(C)	7-1/2		1461					91.8	0.825	1.814
MTCP-010-3BD18(C)	10		1453				4200	92.5	0.826	1.97
MTCP-015-3BD18(C)	15		1453					92.5	0.890	3.33
MTCP-020-3BD18(C)	20		1469					93.8	0.846	4.09
MTCP-025-3BD18(C)	25		1469					93.6	0.860	7.01
MTCP-030-3BD18(C)	30		1477					93.7	0.846	8.3
MTCP-040-3BD18(C)	40		1477					94.4	0.850	9
MTCP-050-3BD18(C)	50		1473					94.5	0.855	14.1
MTCP-060-3BD18(C)	60		1484					95.0	0.850	16.27
MTCP-075-3BD18(C)	75		1483					95.4	0.850	18.8
MTCP-100-3BD18(C)	100		1486					95.4	0.860	45.5
MTCP-125-3BD18	125		1486					95.4	0.860	65.1
MTCP-150-3BD18	150		1486					95.8	0.860	69.26
MTCP-200-3BD18	200		1486					96.3	0.860	84.0
1) Maximum Constant HP RPM is for direct-coupled loads.										
**** TABLE CONTINUED NEXT PAGE ****										

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 50Hz / 1500rpm

***** 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
MTCP-001-3BD18(C)	1	2.62 / 1.31	3.70 / 1.85	34.5 / 17.3	3.61	10.8	13.7
MTCP-1P5-3BD18(C)	1-1/2	3.59 / 1.80	5.34 / 2.67	46.0 / 23.0	5.40	10.8	16.7
MTCP-002-3BD18(C)	2	4.10 / 2.10	6.90 / 3.50	57.5 / 28.8	7.20	20.9	23.0
MTCP-003-3BD18(C)	3	4.70 / 2.35	9.26 / 4.63	73.6 / 36.8	10.8	24.8	30.2
MTCP-005-3BD18(C)	5	7.13 / 3.57	15.42 / 7.71	106 / 52.9	18.1	41.6	52.5
MTCP-7P5-3BD18(C)	7-1/2	9.71 / 4.86	21.5 / 10.7	146 / 73.0	27.0	54.0	83.7
MTCP-010-3BD18(C)	10	12.1 / 6.06	28.6 / 14.3	187 / 93.7	36.1	74.0	112
MTCP-015-3BD18(C)	15	17.7 / 8.85	41.2 / 20.6	267 / 133	54.2	111	152
MTCP-020-3BD18(C)	20	19.7 / 9.84	55.1 / 27.6	334 / 167	71.5	143	200
MTCP-025-3BD18(C)	25	27.6 / 13.8	68.5 / 34.3	420 / 210	89.4	188	224
MTCP-030-3BD18(C)	30	31.1 / 15.5	80.5 / 40.2	500 / 250	107	246	300
MTCP-040-3BD18(C)	40	34.0 / 17.0	109 / 54.5	667 / 334	142	298	327
MTCP-050-3BD18(C)	50	41.6 / 20.8	134 / 67.2	834 / 417	178	392	498
MTCP-060-3BD18(C)	60	52.4 / 26.2	160 / 80.1	1001 / 500	212	445	615
MTCP-075-3BD18(C)	75	67.2 / 33.6	199 / 99.7	1248 / 624	266	559	745
MTCP-100-3BD18(C)	100	86.3 / 43.1	263 / 132	1668 / 834	353	777	847
MTCP-125-3BD18	125	109 / 54.4	328 / 164	2088 / 1044	442	751	1105
MTCP-150-3BD18	150	126 / 63.2	414 / 207	2627 / 1314	530	954	1325
MTCP-200-3BD18	200	153 / 77	521 / 261	3335 / 1668	707	1414	1980

*** TABLE CONTINUED NEXT PAGE ***

MTCP Premium-Efficiency Cast-Iron Three-Phase Motors Features and Specifications (continued)

Motor Performance Data – Cast-Iron T-frame and TC-frame – 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***
MTCP-001-3BD18(C)	1	1.81	20 seconds	80°C [176°F]
MTCP-1P5-3BD18(C)	1-1/2	2.80		
MTCP-002-3BD18(C)	2	2.80		
MTCP-003-3BD18(C)	3	1.60		
MTCP-005-3BD18(C)	5	2.00		
MTCP-7P5-3BD18(C)	7-1/2	1.54		
MTCP-010-3BD18(C)	10	1.31		
MTCP-015-3BD18(C)	15	1.22		
MTCP-020-3BD18(C)	20	1.70		
MTCP-025-3BD18(C)	25	1.67		
MTCP-030-3BD18(C)	30	1.10		
MTCP-040-3BD18(C)	40	1.11		
MTCP-050-3BD18(C)	50	0.78		
MTCP-060-3BD18(C)	60	0.66		
MTCP-075-3BD18(C)	75	0.69	13 seconds	
MTCP-100-3BD18(C)	100	0.56	20 seconds	
MTCP-125-3BD18	125	0.56		
MTCP-150-3BD18	150	0.53	18 seconds	
MTCP-200-3BD18	200	0.52		

MTCP Premium-Efficiency Three-Phase Motors Features & Specs (continued)
Motor Performance Data – Cast-Iron T-frame – 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	Variable Torque	CHP(2)	Safe	
MTCP-001-3BD12	1	B	964	300	120	1800	3600	
MTCP-1P5-3BD12	1-1/2		979					
MTCP-002-3BD12	2							
MTCP-003-3BD12	3							
MTCP-005-3BD12	5							
MTCP-7P5-3BD12	7-1/2							
MTCP-010-3BD12	10							
MTCP-015-3BD12	15							
MTCP-020-3BD12	20							

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

Part Number	HP	Temperature Rise @ Full Load	Max Time Locked Rotor (Hot)	F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft²)	Slip (%)
MTCP-001-3BD12	1	80°C [176°F]	20 seconds	82.5	0.72	0.33	3.14
MTCP-1P5-3BD12	1-1/2			87.5	0.72	0.36	1.85
MTCP-002-3BD12	2			88.5	0.74	0.47	2.00
MTCP-003-3BD12	3			89.5	0.74	0.50	1.65
MTCP-005-3BD12	5			89.5	0.76	1.97	1.85
MTCP-7P5-3BD12	7-1/2			91.1	0.74	2.74	1.51
MTCP-010-3BD12	10			91.0	0.74	2.98	1.56
MTCP-015-3BD12	15			91.7	0.76	5.49	1.16
MTCP-020-3BD12	20			91.7	0.78	12.9	1.21

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

MTCP Premium-Efficiency Three-Phase Motors Features & Specs (continued)

Motor Performance Data – Cast-Iron T-frame – 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	Variable Torque	CHP(2)	Safe	
MTCP-1P5-3BD36	1-1/2	B	2963	1800	720	5400	5400	
MTCP-002-3BD36	2		2922					
MTCP-003-3BD36	3		2922					
MTCP-005-3BD36	5		2963					
MTCP-7P5-3BD36	7-1/2		2922					
MTCP-010-3BD36	10		2947					
MTCP-015-3BD36	15		2947					
MTCP-020-3BD36	20		2963					
Part Number	HP	Current @ 200V/400V (Amps)			Torque (lb·ft)			
		No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	
MTCP-1P5-3BD36	1-1/2	2.30 / 1.20	4.69 / 2.35	46.0 / 23.0	2.66	7.71	9.58	
MTCP-002-3BD36	2	3.60 / 1.80	6.20 / 3.10	57.5 / 28.8	3.60	10.8	14.4	
MTCP-003-3BD36	3	4.49 / 2.25	8.90 / 4.45	73.6 / 36.8	5.39	15.1	20.5	
MTCP-005-3BD36	5	5.98 / 2.99	14.5 / 7.25	106 / 46.0	8.88	19.5	27.5	
MTCP-7P5-3BD36	7-1/2	7.66 / 3.83	21.2 / 10.6	146 / 73.0	13.5	33.7	41.8	
MTCP-010-3BD36	10	10.1 / 5.04	28.1 / 14.1	188 / 93.8	17.8	44.5	60.5	
MTCP-015-3BD36	15	13.8 / 6.90	40.3 / 20.1	267 / 133	26.7	56.1	77.4	
MTCP-020-3BD36	20	17.3 / 8.63	53.4 / 26.7	334 / 167	35.4	74.4	103	
Part Number	HP	Temperature Rise @ Full Load	Max Time Locked Rotor (Hot)	F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft²)	Slip (%)	
MTCP-1P5-3BD36	1-1/2	80°C [176°F]	20 seconds	85.5	0.83	0.08	2.00	
MTCP-002-3BD36	2			86.6	0.82	0.10	2.20	
MTCP-003-3BD36	3			87.0	0.85	0.20	1.60	
MTCP-005-3BD36	5			89.0	0.84	0.22	1.46	
MTCP-7P5-3BD36	7-1/2			89.7	0.85	0.50	1.67	
MTCP-010-3BD36	10			90.3	0.85	1.20	1.40	
MTCP-015-3BD36	15			91.2	0.85	1.86	1.11	
MTCP-020-3BD36	20			91.2	0.85	2.01	0.97	
2) Maximum Constant HP RPM is for direct-coupled loads								

MTC EPAct Cast-Iron Three-Phase Motors Features and Specifications

EPAct Cast-Iron T-Frame

EPAct Cast-Iron TC-Frame

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

Motor Specifications – Cast-Iron T-frame and TC-frame – 1800 rpm

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

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

*** TABLE CONTINUED ON NEXT PAGE ***

MTC EPAct Cast-Iron 3-Phase Motors Features and Specs (continued)

Motor Specifications – Cast-Iron T-frame and TC-frame – 1800 rpm

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

Motor Specifications – EPAct T & TC(1) Frame Three-Phase Motors – 1800 rpm

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

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

MTC EPAct Cast-Iron 3-Phase Motors Features and Specs (continued)

Motor Specifications – Cast-Iron T-frame – 1200 & 3600 rpm

Motor Specifications – EPAct T-Frame Three-Phase Motors – 1200 & 3600 rpm										
Part Number	HP (3)	NEMA Frame	Voltage	Housing	Shaft Material	Conduit Box Location (2)	Holes / Foot	Service Factor	F.L. Amps @ 230V/460V	Product Weight (lb)
1200 rpm Base Speed										
MTC-001-3BD12	1	145T	208-230/460 3-phase	TEFC cast iron	1045 carbon steel	F1(F2)	4	1.15	3.2 / 1.6	62
MTC-1P5-3BD12	1-1/2	182T					2		4.8 / 2.4	106
MTC-002-3BD12	2	184T					4		6.1 / 3.1	119
MTC-003-3BD12	3	213T					2		8.4 / 4.2	171
MTC-005-3BD12	5	215T					4		13.6 / 6.8	189
MTC-7P5-3BD12	7-1/2	254T					2		21.2 / 10.6	272
MTC-010-3BD12	10	256T					4		28.0 / 14.0	307
3600 rpm Base Speed										
MTC-1P5-3BD36	1-1/2	143T	208-230/460 3-phase	TEFC cast iron	1045 carbon steel	F1(F2)	2	1.15	3.8 / 1.9	62
MTC-002-3BD36	2	145T					4		5.0 / 2.5	66
MTC-003-3BD36	3	182T					2		7.2 / 3.6	107
MTC-005-3BD36	5	184T					4		11.3 / 5.7	112
MTC-7P5-3BD36	7-1/2	213T					2		16.8 / 8.4	165
MTC-010-3BD36	10	215T					4		22.4 / 11.2	185

2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2. (Refer to "Chapter 5: Reference" for further information regarding F1 and F2 mounting.)

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

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

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

Performance Data – EPAct T & TC(1) Frame Three-Phase Motors – 1800 rpm (460 Volt except as indicated)										
Part Number	HP	NEMA Design	F.L. RPM	Minimum Speed (rpm)		Maximum Speed (rpm)		F.L. Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb·ft2)
				CT (2:1)	VT (5:1)	CHP(2)	Safe			
MTC-001-3BD18(CK)	1	B	1760	900	360	2700	5400	82.5	0.71	0.068
MTC-1P5-3BD18(CK)	1-1/2		1755				5400	84.0	0.74	0.083
MTC-002-3BD18(CK)	2		1750				5400	84.0	0.77	0.09
MTC-003-3BD18(CK)	3		1750				5400	87.5	0.81	0.22
MTC-005-3BD18(CK)	5		1750				5400	87.5	0.84	0.285
MTC-7P5-3BD18(CK)	7-1/2		1760				5400	89.5	0.81	0.602
MTC-010-3BD18(CK)	10	A	1760				4200	89.5	0.83	0.742
MTC-015-3BD18(CK)	15		1770				4200	91.0	0.83	1.71
MTC-020-3BD18(CK)	20		1770				4200	91.0	0.84	2.18
MTC-025-3BD18(CK)	25		1775				4200	92.4	0.87	3.3
MTC-030-3BD18(CK)	30		1775				4200	92.4	0.86	3.76
MTC-040-3BD18(CK)	40		1775				3600	93.0	0.86	5.84
MTC-050-3BD18(CK)	50		1775				3600	93.0	0.86	6.34
MTC-060-3BD18(CK)	60	B	1785				3600	93.6	0.85	11.4
MTC-075-3BD18(CK)	75		1785				3600	94.1	0.84	12.7
MTC-100-3BD18(CK)	100		1785				2800	94.5	0.87	28.5
MTC-125-3BD18	125		1785				2800	94.5	0.86	38.9
MTC-150-3BD18	150		1785				2800	95.0	0.87	47.2
MTC-200-3BD18	200		1785				2800	95.0	0.87	62.3
MTC-250-3D18	250		1790				2800	95.9	0.87	86.0
MTC-300-3D18	300		1790				2800	95.7	0.88	105.0

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

**** TABLE CONTINUED NEXT PAGE ****

MTC EPAct Cast-Iron 3-Phase Motors Features and Specs (continued)

Motor Performance Data – Cast-Iron T-Frame and TC-frame – 1800 rpm

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

Performance Data – EPAct T & TC(1) Frame 3-Phase Motors – 1800 rpm (460 Volt except as indicated)

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

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

*** TABLE CONTINUED NEXT PAGE ***

MTC EPAct Cast-Iron 3-Phase Motors Features and Specs (continued)

Motor Performance Data – Cast-Iron T-Frame and TC-frame – 1800 rpm

*** TABLE CONTINUED FROM PREVIOUS PAGE ***

Performance Data
EPAct T & TC(1) Frame Three-Phase Motors
1800 rpm – (460 Volt except as indicated)

Part Number	HP	Slip (%)	Max Time @ Locked Rotor Current (hot)	Temperature Rise @ Full Load
MTC-001-3BD18(CK)	1	2.22	20 seconds	80° C (176°F)
MTC-1P5-3BD18(CK)	1-1/2	2.50		
MTC-002-3BD18(CK)	2	2.78		
MTC-003-3BD18(CK)	3	2.78		
MTC-005-3BD18(CK)	5	2.78		
MTC-7P5-3BD18(CK)	7-1/2	2.22		
MTC-010-3BD18(CK)	10	2.20	13 seconds	
MTC-015-3BD18(CK)	15	1.67	20 seconds	
MTC-020-3BD18(CK)	20	1.67		
MTC-025-3BD18(CK)	25	1.38	16 seconds	
MTC-030-3BD18(CK)	30	1.38	20 seconds	
MTC-040-3BD18(CK)	40	1.39		
MTC-050-3BD18(CK)	50	1.39		
MTC-060-3BD18(CK)	60	0.83		
MTC-075-3BD18(CK)	75	0.83		
MTC-100-3BD18(CK)	100	0.83	15 seconds	
MTC-125-3BD18	125	0.83		
MTC-150-3BD18	150	0.83		
MTC-200-3BD18	200	0.83		
MTC-250-3D18	250	0.54	20 seconds	85° C (185°F)
MTC-300-3D18	300	0.53		

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

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

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

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

MTC EPAct Cast-Iron 3-Phase Motors Features and Specs (continued)

Motor Performance Data – Cast-Iron T-Frame – 3600 rpm

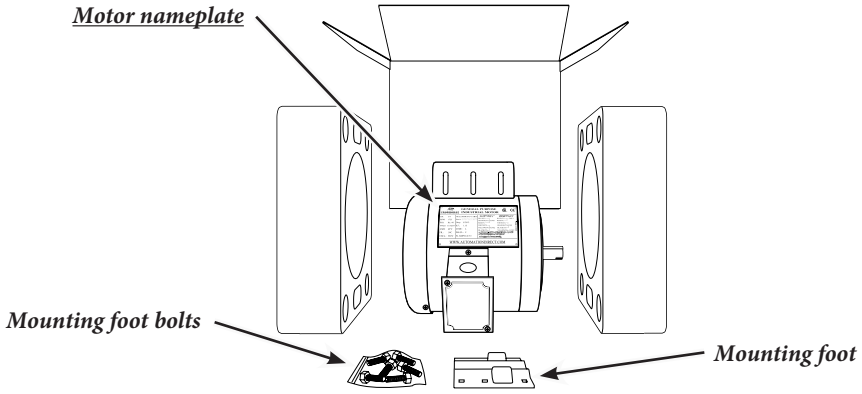
Performance Data – EPAct T-Frame Three-Phase Motors – 3600 rpm (460 Volt except as indicated)								
Part Number	HP	NEMA Design	F.L. RPM	Minimum Speed (rpm)		Maximum Speed (rpm)		
				Constant Torque (2:1)	Variable Torque (5:1)	CHP(2)	Safe	
MTC-1P5-3BD36	1-1/2	B	3480	1800	720	5400	5400	
MTC-002-3BD36	2							
MTC-003-3BD36	3		3520					
MTC-005-3BD36	5		3510					
MTC-7P5-3BD36	7-1/2		3520					
MTC-010-3BD36	10		3530					
Part Number	HP	Current @ 230V/460V (Amps)				Torque (lb·ft)		
		No Load	Full Load	Locked Rotor		Full Load	Locked Rotor	Break-down
MTC-1P5-3BD36	1-1/2	1.4 / 0.7	3.8 / 1.9	40.0 / 20.0		2.23	4.01	5.58
MTC-002-3BD36	2	1.5 / 0.8	5.0 / 2.5	50.0 / 25.0		3.03	6.06	8.18
MTC-003-3BD36	3	2.8 / 1.4	7.2 / 3.6	64.0 / 32.0		4.50	10.4	16.2
MTC-005-3BD36	5	4.0 / 2.0	11.3 / 5.7	92.0 / 46.0		7.46	15.7	26.5
MTC-7P5-3BD36	7-1/2	5.0 / 2.5	16.8 / 8.4	127 / 63.5		11.0	22.0	36.3
MTC-010-3BD36	10	5.7 / 2.8	22.4 / 11.2	162 / 81.0		15.0	33.0	49.5
Part Number	HP	Tempera-ture Rise @ Full Load	Max Time Locked Rotor (Hot)	F.L. Efficiency (%)		F.L. Power Factor	Rotor Inertia (lb·ft²)	Slip (%)
MTC-1P5-3BD36	1-1/2	80°C (176°F)	20 seconds	82.5		0.86	0.009	3.3
MTC-002-3BD36	2			84.0		0.87	0.010	3.3
MTC-003-3BD36	3			85.5		0.86	0.034	2.2
MTC-005-3BD36	5			87.5		0.88	0.040	2.5
MTC-7P5-3BD36	7-1/2			88.5		0.89	0.258	2.2
MTC-010-3BD36	10			89.5		0.89	0.109	1.9
2) Maximum Constant HP RPM is for direct-coupled loads								

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

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
- CP: AC Premium-efficiency motor with Cast-iron frame
- F: Farm Duty
- R(2): AC Motor w Rolled-steel frame
- RP: AC Premium-efficiency motor with Rolled-steel frame
- PM: DC Permanent Magnet
- SS: AC Motor w Stainless-steel frame

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.

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 40 hp and smaller, valid warranty claims will be resolved by product replacement. Motors 50 hp 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.

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