

Premium efficiency motors for energy conservation

IronHorse® Premium Efficiency AC electric motors meet the requirements of the Energy Independence and Security Act of 2007. The MTCP Series gives you a low cost of entry so you get a quicker payback on your investment. All our Ironhorse motors are in stock and ready for same-day shipment; if your order is over \$49, you get free shipping too!

Cast Iron T Frame Motors 1 to 300 hp

TC Frame up to 100 hp

Premium efficiency, ^CCSA_{US} certified, ISO9001, CE Mark, Standards of Excellence

All cast iron frame ribbed design for maximum cooling



IRONHORSE
AUTOMATIONDIRECT

Class F winding insulation

NSK/SKF/NTN brand premium quality ball or roller bearings

Standard NEMA T frame up to 300 hp (C-flange kit optional)

TC frame models (C-face) available up to 100 hp



All ratings totally enclosed fan cooled

Steel fan cover

Cast iron junction box with rubber gasket and rubber dust curtain

Solid (full frame length) cast iron mounting feet

starting at

Three-phase - 208-230/460 Volt, T Frame - TEFC Enclosure, 1200,1800, 3600 RPM

- Premium Efficiency
- Premium grade quality
- All cast iron frames
- Drive-end ball bearings or roller bearings are available on all large horsepower motors
- Electrically reversible
- C-flange kits for C-face mounting are available
- C-face models available

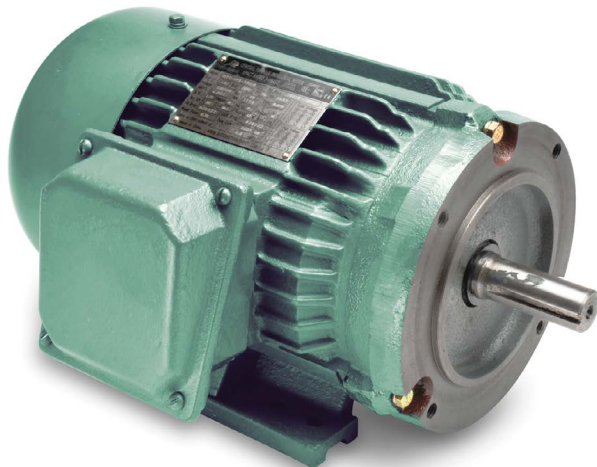
IronHorse[®] MTC & MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – 1 to 200 hp⁽⁴⁾

TC-Frame (C-Face) TEFC Motors – Three-Phase Industrial Duty – 1 to 100 hp



**Premium Efficiency
Three-Phase Cast Iron T-Frame**



**Premium Efficiency
Three-Phase Cast Iron TC-Frame**

Features

- Available in 1200, 1800, & 3600 rpm
- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA TC-frame (C-face) and T-frame motors
- Cast iron frame with ribbed design for maximum cooling
- Solid full frame length cast iron mounting feet
- Steel fan cover
- Cast iron junction box with rubber gasket and rubber dust cover
- NSK/NTN/SKF brand premium quality ball or roller bearings
- Maintenance free bearings (10 hp and below)
- V-ring shaft seals on drive end and on opposite drive end
- Electrically reversible
- Class F winding insulation
- Service Factor: 1.15 (1.0 with AC drive)
- Meets or exceeds Premium Efficiency standards
- Class I, Div 2 hazardous locations
- Inverter ratings: 10:1 (variable torque); 4:1 (constant torque)
- Two year warranty
- cCSA_{us} certified, ISO9001, CE

Accessories & Spare Parts Available

- STABLE motor slide bases for adjustable mounting
- C-flange kits (for converting T-frame motors to TC-frame)
- Replacement junction boxes
- Replacement fans
- Replacement fan shrouds

Applications

- Fans
- Conveyors
- Pumps
- Material Handling
- Metal Processing
- Textile Processing
- Test Stands

IronHorse® MTC & MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – 1–200 hp – 1800 rpm

TC-Frame (C-Face) TEFC Motors – 3-Phase Industrial Duty – 1–100 hp – 1800 rpm

Motor Specifications – Premium-Efficiency T & TC Frame Three-Phase Motors – 1800 rpm													
Part Number ⁽¹⁾	Price	HP ⁽²⁾	Base RPM	Phase	Voltage	Housing	NEMA Frame	Mounting ⁽³⁾	Holes / Foot	Service Factor	F.L. Amps @230V/460V	Approx Product Weight (lb) ⁽⁴⁾	
MTCP-001-3BD18		1	1800	3	208-230/460	TEFC	143T	F1(F2)	2	1.15	3.22 / 1.61	41	
MTCP-001-3BD18C	143TC						45						
MTCP-1P5-3BD18		1.5					145T				4	4.64 / 2.32	47
MTCP-1P5-3BD18C	145TC						50						
MTCP-002-3BD18		2					145T				4	6.00 / 3.00	56
MTCP-002-3BD18C	145TC						60						
MTCP-003-3BD18		3					182T				2	8.05 / 4.02	84
MTCP-003-3BD18C	182TC						92						
MTCP-005-3BD18		5					184T				4	13.4 / 6.71	99
MTCP-005-3BD18C	184TC						107						
MTCP-7P5-3BD18		7.5					213T				2	18.7 / 9.34	150
MTCP-7P5-3BD18C	213TC						154						
MTCP-010-3BD18		10					215T				4	24.9 / 12.5	186
MTCP-010-3BD18C	215TC						190						
MTCP-015-3BD18		15					254T				2	35.8 / 17.9	329
MTCP-015-3BD18C	254TC						325						
MTCP-020-3BD18		20					256T				4	47.9 / 24.0	390
MTCP-020-3BD18C	256TC						370						
MTCP-025-3BD18		25					284T				2	59.6 / 29.8	455
MTCP-025-3BD18C	284TC						467						
MTCP-030-3BD18		30	286T	4	70.0 / 35.0	488							
MTCP-030-3BD18C	286TC		497										
MTCP-040-3BD18		40	324T	2	94.8 / 47.4	611							
MTCP-040-3BD18C	324TC		626										
MTCP-050-3BD18		50	326T	4	117 / 58.4	690							
MTCP-050-3BD18C	326TC		706										
MTCP-060-3BD18		60	364T	2	139 / 69.6	851							
MTCP-060-3BD18C	364TC		864										
MTCP-075-3BD18		75	365T	4	173 / 86.7	948							
MTCP-075-3BD18C	365TC		961										
MTCP-100-3BD18		100	405T	4	229 / 114	1199							
MTCP-100-3BD18C	405TC		1236										
MTCP-125-3BD18		125	444T	2	285 / 143	1500							
MTCP-150-3BD18		150	445T	4	342 / 171	1630							
MTCP-200-3BD18		200	445/7T			2127							
MTC-250-3D18		250	1800	3	460	TEFC	449T	F1	2	1.15	- / 282	2508	
MTC-300-3D18		300									- / 334	2728	

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
 2) For warranty on motors 50 hp and above, motors must be inspected by an EASA motor repair or service center. Premium Efficiency standards not applicable for MTC motors over 200 hp.
 3) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).
 4) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

IronHorse® MTC & MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – 1–20 hp – 1200 & 3600 rpm

Motor Specifications – Premium-Efficiency T-Frame Three-Phase Motors – 1200 rpm												
Part Number ⁽¹⁾	Price	HP	Base RPM	Phase	Voltage	Housing	NEMA Frame	Mounting ⁽²⁾	Holes / Foot	Service Factor	F.L. Amps @230V/460V	Approx Product Weight (lb) ⁽³⁾
MTCP-001-3BD12		1	1200	3	208-230/460	TEFC cast iron	145T	F1(F2)	4	1.15	3.2 / 1.6	60
MTCP-1P5-3BD12		1.5					182T		2		4.5 / 2.2	104
MTCP-002-3BD12		2					184T		4		5.7 / 2.9	110
MTCP-003-3BD12		3					213T		2		8.5 / 4.2	160
MTCP-005-3BD12		5					215T		4		13.8 / 6.9	180
MTCP-7P5-3BD12		7.5					254T		2		20.9 / 10.4	325
MTCP-010-3BD12		10					256T		4		27.8 / 13.9	325
MTCP-015-3BD12		15					284T		2		40.3 / 20.2	420
MTCP-020-3BD12		20					286T		4		52.4 / 26.2	470

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
 2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).
 3) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

Motor Specifications – Premium-Efficiency T-Frame Three-Phase Motors – 3600 rpm												
Part Number ⁽¹⁾	Price	HP	Base RPM	Phase	Voltage	Housing	NEMA Frame	Mounting ⁽²⁾	Holes / Foot	Service Factor	F.L. Amps @230V/460V	Approx Product Weight (lb) ⁽³⁾
MTCP-1P5-3BD36		1.5	3600	3	208-230/460	TEFC cast iron	143T	F1(F2)	2	1.15	4.08 / 2.04	44
MTCP-002-3BD36		2					145T		4		5.4 / 2.7	53
MTCP-003-3BD36		3					182T		2		7.74 / 3.87	79
MTCP-005-3BD36		5					184T		4		12.6 / 6.3	92
MTCP-7P5-3BD36		7.5					213T		2		18.46 / 9.23	140
MTCP-010-3BD36		10					215T		4		24.4 / 12.2	161
MTCP-015-3BD36		15					254T		2		35.0 / 17.5	278
MTCP-020-3BD36		20					256T		4		46.4 / 23.2	306

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
 2) F1(F2) indicates F1 conduit box mounting location, field convertible to F2 (as shown on dimensional diagram).
 3) Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.

IronHorse® MTC & MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – 1–200 hp⁽²⁾

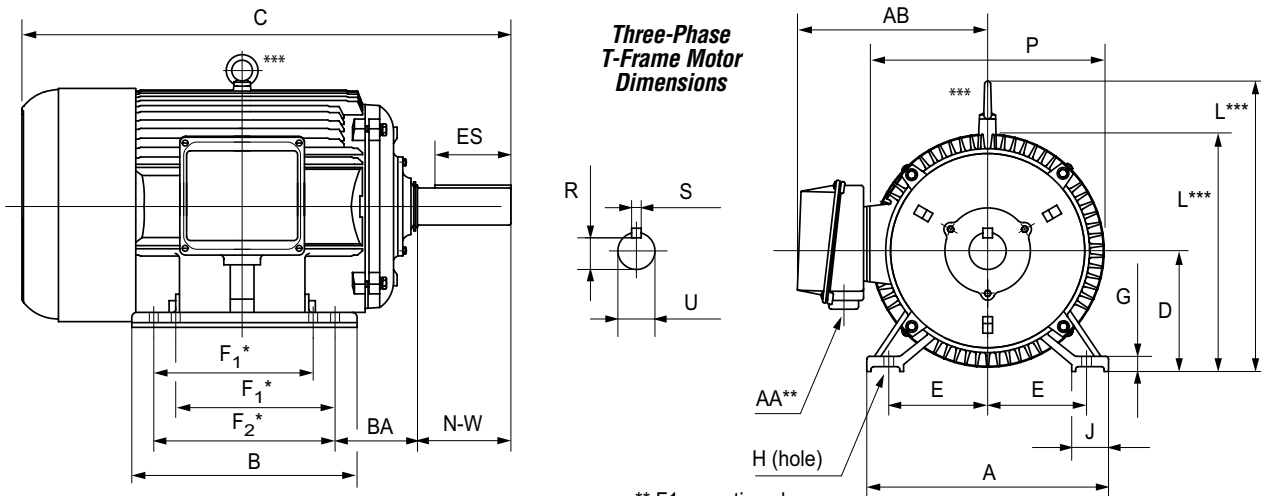
TC-Frame (C-Face) TEFC Motors – Three-Phase Industrial Duty – 1–100 hp

Performance Data – T & TC Frame Three-Phase MTCP Motors (460 Volt except as indicated) – 1200, 1800, 3600 rpm																					
Part Number	HP	NEMA Design	FL RPM	Minimum Speed (rpm)		Current @ 230V/460V (Amps)			Torque (lb-ft)			Maximum Speed (rpm)		FL Efficiency (%)	F.L. Power Factor	Rotor Inertia (lb-ft ²)					
				CT	VT	No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break-down	CHP ⁽¹⁾	Safe								
MTCP-001-3BD12	1	B	1162	300	120	2.5 / 1.25	3.2 / 1.6	30 / 15	4.5	10.8	14.4	1800	3600	82.5	0.72	0.33					
MTCP-001-3BD18(C)			1750	450	180	2.28 / 1.14	3.22 / 1.61	30.0 / 15.0	3.00	9.00	11.4	2700	5400	86.3	0.690	0.089					
MTCP-1P5-3BD12	1.5	B	1180	300	120	3.2 / 1.6	4.5 / 2.2	40 / 20	6.68	15.36	21.38	1800	3600	87.5	0.72	0.36					
MTCP-1P5-3BD18(C)			1750	450	180	3.12 / 1.56	4.64 / 2.32	40.0 / 20.0	4.5	9.0	14.0	2700	5400	87.3	0.726	0.11					
MTCP-1P5-3BD36			3570	900	360	2.0 / 1.0	4.08 / 2.04	40.0 / 20.0	2.2	6.4	7.9	5400	5400	85.5	0.828	0.078					
MTCP-002-3BD12	2	B	1180	300	120	4.2 / 2.1	5.7 / 2.9	50.0 / 25.0	8.61	20.66	29.88	1800	3600	88.5	0.74	0.47					
MTCP-002-3BD18(C)			1750	450	180	3.6 / 1.8	6.0 / 3.0	50.0 / 25.0	6.0	17.4	19.2	2700	5400	87.3	0.725	0.13					
MTCP-002-3BD36			3520	900	360	3.14 / 1.57	5.4 / 2.7	50.0 / 25.0	3.0	9.0	12.0	5400	5400	86.6	0.821	0.098					
MTCP-003-3BD12	3	B	1180	300	120	6.4 / 3.2	8.5 / 4.2	68.0 / 34.0	13.36	29.39	40.08	1800	3600	89.5	0.74	0.50					
MTCP-003-3BD18(C)			1750	450	180	4.1 / 2.05	8.05 / 4.02	64.0 / 32.0	9.0	20.7	25.2	2700	5400	90.3	0.786	0.28					
MTCP-003-3BD36			3520	900	360	3.9 / 1.95	7.74 / 3.87	64.0 / 32.0	4.48	12.54	17.02	5400	5400	87.0	0.845	0.195					
MTCP-005-3BD12	5	B	1180	300	120	9.2 / 4.6	13.8 / 6.9	92 / 46	22.2	48.8	66.6	1800	3600	89.5	0.76	1.97					
MTCP-005-3BD18(C)			1750	450	180	6.2 / 3.1	13.41 / 6.71	92.0 / 46.0	15.0	34.5	43.5	2700	5400	90.3	0.786	0.33					
MTCP-005-3BD36			3570	900	360	5.2 / 2.6	12.6 / 6.3	92.0 / 46.0	7.36	16.19	22.82	5400	5400	89.0	0.841	0.22					
MTCP-7P5-3BD12	7.5	B	1180	300	120	12.0 / 6.0	20.9 / 10.4	127 / 63.5	33.4	76.8	116.9	1800	3600	91.1	0.74	2.74					
MTCP-7P5-3BD18(C)			1760	450	180	8.44 / 4.22	18.68 / 9.34	127 / 63.5	22.4	44.8	69.4	2700	5400	91.8	0.825	1.814					
MTCP-7P5-3BD36			3520	900	360	6.66 / 3.33	18.46 / 9.23	127 / 63.5	11.2	28.0	34.7	5400	5400	89.7	0.851	0.501					
MTCP-010-3BD12	10	B	1180	300	120	10.8 / 5.4	27.8 / 13.9	162 / 81	44.5	97.9	106.8	1800	3600	91.0	0.74	2.98					
MTCP-010-3BD18(C)			1750	450	180	10.54 / 5.27	24.9 / 12.45	163 / 81.5	30.0	61.5	93.0	2700	4200	92.5	0.826	1.97					
MTCP-010-3BD36			3550	900	360	8.76 / 4.38	24.4 / 12.2	163 / 81.5	14.8	37.0	50.3	5400	5400	90.3	0.851	1.2					
MTCP-015-3BD12	15	B	1180	300	120	18.0 / 9.0	40.3 / 20.2	232 / 116	60.23	132.51	174.67	1800	3600	91.7	0.76	5.49					
MTCP-015-3BD18(C)			1750	450	180	15.4 / 7.7	35.8 / 17.9	232 / 116	45	92	126	2700	4200	92.5	0.890	3.33					
MTCP-015-3BD36			3550	900	360	12 / 6	35.0 / 17.5	232 / 116	22.2	46.6	64.4	5400	5400	91.2	0.852	1.86					
MTCP-020-3BD12	20	B	1180	300	120	17.8 / 8.9	52.4 / 26.2	290 / 145	89.1	196.0	258.4	1800	3600	91.7	0.78	12.9					
MTCP-020-3BD18(C)			1770	450	180	17.11 / 8.56	47.94 / 23.97	290 / 145	59.4	118.8	166.3	2700	4200	93.8	0.846	4.09					
MTCP-020-3BD36			3570	900	360	15 / 7.5	46.4 / 23.2	290 / 145	29.4	61.7	85.3	5400	5400	91.2	0.851	2.01					
MTCP-025-3BD18(C)	25	B	1770	450	180	24 / 12	59.6 / 29.8	365 / 182.5	74.2	155.8	185.5	2700	4200	93.6	0.860	7.01					
MTCP-030-3BD18(C)	30		27 / 13.5			69.96 / 34.98	435 / 217.5	88.6	203.8	248.1	93.7			0.846	8.3						
MTCP-040-3BD18(C)	40		29.6 / 14.8			94.76 / 47.38	580 / 290	118.1	248.0	271.6	94.4			0.850	9						
MTCP-050-3BD18(C)	50		36.2 / 18.1			116.8 / 58.4	725 / 362.5	148	326	414	94.5			0.855	14.1						
MTCP-060-3BD18(C)	60		45.6 / 22.8			139.3 / 69.6	870 / 435	179	376	519	95.0			0.850	16.27						
MTCP-075-3BD18(C)	75		58.4 / 29.2			173.4 / 86.7	1085 / 542.5	221	464	619	95.4			0.850	18.8						
MTCP-100-3BD18(C)	100		75 / 37.5			228.6 / 114.3	1450 / 725	293.2	645.0	703.7	95.4			0.860	45.5						
MTCP-125-3BD18	125		94.54 / 47.27			285.2 / 142.6	1816 / 908	367	624	918	95.4			0.860	65.1						
MTCP-150-3BD18	150		104.4 / 52.2			342 / 171	2170 / 1085	443	797	1108	95.8			0.860	69.26						
MTCP-200-3BD18	200		133.26 / 66.63			453.2 / 226.6	2900 / 1450	587	1174	1644	96.3			0.860	84.0						
MTC-250-3D18 ⁽²⁾	250		B			1790	900	360	- / 85.6	- / 282	- / 1980			728	1660	2402	2700	4200	95.9	0.87	86.000
MTC-300-3D18 ⁽²⁾	300					- / 96.6	- / 334	- / 2351	864	1953	2817			95.7	0.88	105.000					

1) Maximum Constant HP RPM is for direct coupled loads.
 2) Premium Efficiency standards not applicable for MTC motors over 200 hp⁽²⁾.

IronHorse® MTC & MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – 1 to 200 hp⁽¹⁾



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

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

Dimensions [inches, except as noted] – Premium-Efficiency T-Frame Three-Phase Motors – 1800 rpm

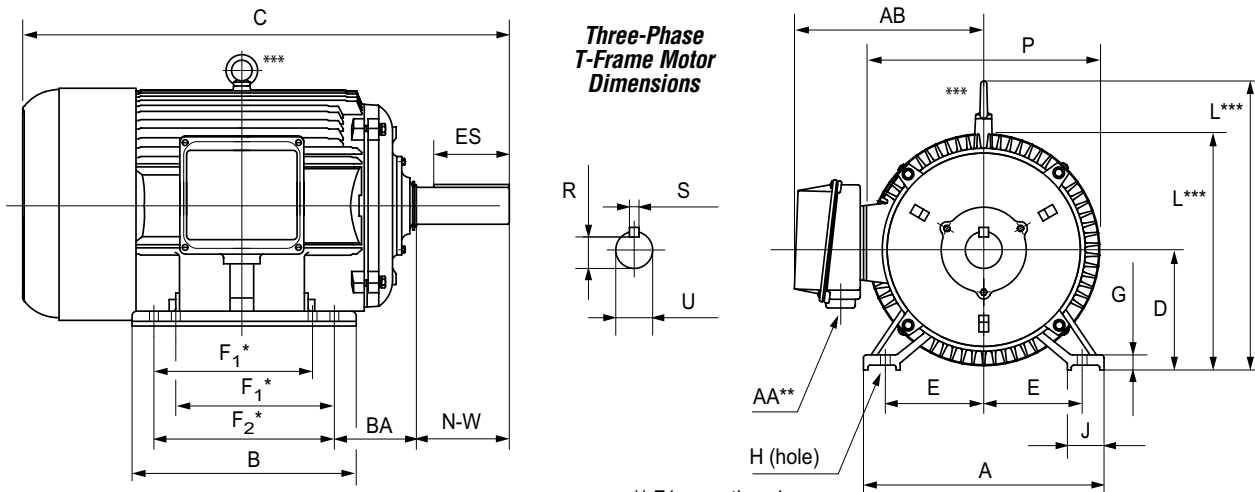
Part Number	HP	NEMA Frame	A	AA**	AB	B	BA	C	D	E	ES	F ₁ *	F ₂ *	G	H	J	N-W	L	P	R	S	U
1800 rpm Motors																						
MTCP-001-3BD18	1	143T	7	3/4"NPT	6.89	5.1	2.25	12.47	3.5	2.75	1.41	n/a	4	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-1P5-3BD18	1.5	145T	7	3/4"NPT	6.89	6.1	2.25	13.47	3.5	2.75	1.41	4	5	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-002-3BD18	2		7	3/4"NPT	6.89	6.1	2.25	13.47	3.5	2.75	1.41	4	5	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-003-3BD18	3	182T	8.9	1" NPT	7.45	6.3	2.75	15.11	4.5	3.75	1.78	n/a	4.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-005-3BD18	5	184T	8.9	1" NPT	7.45	7.1	2.75	16.12	4.5	3.75	1.78	4.5	5.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-7P5-3BD18	7.5	213T	10.5	1" NPT	8.63	7.5	3.5	18.89	5.25	4.25	2.41	n/a	5.5	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-010-3BD18	10	215T	10.5	1" NPT	8.63	9	3.5	20.49	5.25	4.25	2.41	5.5	7	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-015-3BD18	15	254T	12.3	1.5" NPT	12.0	10.3	4.25	23.29	6.25	5	2.91	n/a	8.25	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625
MTCP-020-3BD18	20	256T	12.3	1.5" NPT	12.0	12.4	4.25	25.06	6.25	5	2.91	8.25	10	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625
MTCP-025-3BD18	25	284T	13.7	1.5" NPT	13.7	12.2	4.75	26.63	7	5.5	3.28	n/a	9.5	0.98	0.53	2.68	4.62	16.50	16.0	1.591	0.5	1.875
MTCP-030-3BD18	30	286T	13.7	1.5" NPT	13.7	13.7	4.75	28.18	7	5.5	3.28	9.5	11	0.98	0.53	2.68	4.62	16.50	16.0	1.591	0.5	1.875
MTCP-040-3BD18	40	324T	15.3	2"NPT	14.6	12.6	5.25	29.95	8	6.25	3.91	n/a	10.5	0.98	0.66	2.76	5.25	18.25	17.8	1.845	0.5	2.125
MTCP-050-3BD18	50	326T	15.3	2"NPT	14.6	14.0	5.25	31.24	8	6.25	3.91	10.5	12	0.98	0.66	2.76	5.25	18.25	17.8	1.845	0.5	2.125
MTCP-060-3BD18	60	364T	17.0	3"NPT	17.6	14.6	5.88	32.58	9	7	4.28	n/a	11.25	1.10	0.66	3.15	5.88	21.0	19.4	2.021	0.625	2.375
MTCP-075-3BD18	75	365T	17.0	3"NPT	17.6	15.6	5.88	34.11	9	7	4.28	11.25	12.25	1.10	0.66	3.15	5.88	21.0	19.4	2.021	0.625	2.375
MTCP-100-3BD18	100	405T	20	3"NPT	18.1	17.8	6.62	38.35	10	8	5.65	12.25	13.75	1.18	0.81	3.15	7.25	23.46	21.4	2.45	0.75	2.875
MTCP-125-3BD18	125	444T	22	2x3"NPT	19.1	18.5	7.5	42.52	11	9	6.91	n/a	14.5	1.38	0.81	3.35	8.5	26.43	23.4	2.88	0.875	3.375
MTCP-150-3BD18	150	445T	22	2x3"NPT	19.1	20.5	7.5	44.5	11	9	6.91	14.5	16.5	1.38	0.81	3.35	8.5	26.43	23.4	2.88	0.875	3.375
MTCP-200-3BD18	200	445/7T	22	2x3"NPT	19.1	24	7.5	48.03	11	9	6.91	16.5	20	1.38	0.81	3.35	8.5	26.43	23.4	2.88	0.875	3.375
MTC-250-3D18⁽¹⁾	250	449T	22	2x3"NPT	19.1	31	7.5	55.51	11	9	7.01	n/a	25	1.575	0.81	3.35	8.5	27.25	24	2.88	0.875	3.375
MTC-300-3D18⁽¹⁾	300																					

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

1) Premium Efficiency standards not applicable for MTC motors over 200 hp⁽¹⁾.

IronHorse[®] MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

T-Frame TEFC Motors – Three-Phase Industrial Duty – Dimensions



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

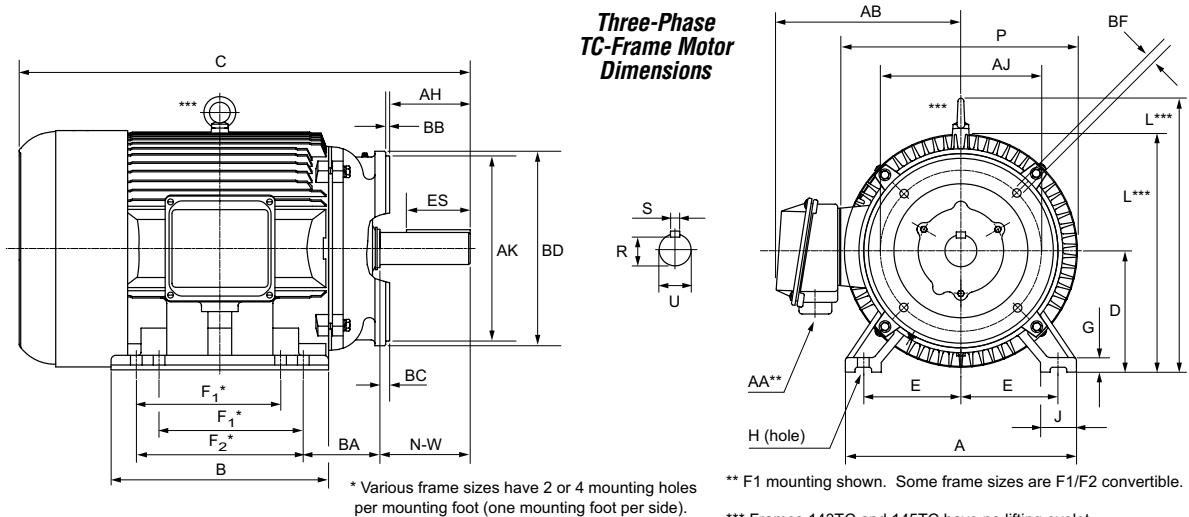
** F1 mounting shown.
 ** Some frame sizes are F1/F2 convertible.
 *** Frames 143T & 145T have no lifting eyelet.

Dimensions [inches, except as noted] – Premium-Efficiency T-Frame Three-Phase Motors – 1200 & 3600 rpm																						
Part Number	HP	NEMA Frame	A	AA**	AB	B	BA	C	D	E	ES	F ₁ *	F ₂ *	G	H	J	N-W	L	P	R	S	U
1200 rpm Motors																						
MTCP-001-3BD12	1	145T	7	3/4" NPT	6.89	6.1	2.25	13.47	3.5	2.75	1.41	4	5	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-1P5-3BD12	1-1/2	182T	8.9	1" NPT	7.45	6.3	2.75	15.11	4.5	3.75	1.78	n/a	4.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-002-3BD12	2	184T	8.9	1" NPT	7.45	7.1	2.75	16.12	4.5	3.75	1.78	4.5	5.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-003-3BD12	3	213T	10.5	1" NPT	8.63	7.5	3.5	18.89	5.25	4.25	2.41	n/a	5.5	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-005-3BD12	5	215T	10.5	1" NPT	8.63	9	3.5	20.49	5.25	4.25	2.41	5.5	7	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-7P5-3BD12	7-1/2	254T	12.3	1.5" NPT	12.0	10.3	4.25	23.29	6.25	5	2.91	n/a	8.25	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625
MTCP-010-3BD12	10	256T	12.3	1.5" NPT	12.0	12.4	4.25	25.06	6.25	5	2.91	8.25	10	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625
MTCP-015-3BD12	15	284T	13.7	1.5" NPT	13.7	12.2	4.75	26.63	7	5.5	3.28	n/a	9.5	0.98	0.53	2.68	4.62	16.50	16.0	1.591	0.5	1.875
MTCP-020-3BD12	20	286T	13.7	1.5" NPT	13.7	13.7	4.75	28.18	7	5.5	3.28	9.5	11	0.98	0.53	2.68	4.62	16.50	16.0	1.591	0.5	1.875
3600 rpm Motors																						
MTCP-1P5-3BD36	1-1/2	143T	7	3/4" NPT	6.89	5.1	2.25	12.47	3.5	2.75	1.41	n/a	4	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-002-3BD36	2	145T	7	3/4" NPT	6.89	6.1	2.25	13.47	3.5	2.75	1.41	4	5	0.47	0.34	1.45	2.25	6.90	7.2	0.771	0.188	0.875
MTCP-003-3BD36	3	182T	8.9	1" NPT	7.45	6.3	2.75	15.11	4.5	3.75	1.78	n/a	4.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-005-3BD36	5	184T	8.9	1" NPT	7.45	7.1	2.75	16.12	4.5	3.75	1.78	4.5	5.5	0.52	0.41	1.97	2.75	10.39	9.0	0.986	0.25	1.125
MTCP-7P5-3BD36	7-1/2	213T	10.5	1" NPT	8.63	7.5	3.5	18.89	5.25	4.25	2.41	n/a	5.5	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-010-3BD36	10	215T	10.5	1" NPT	8.63	9	3.5	20.49	5.25	4.25	2.41	5.5	7	0.78	0.41	2.36	3.38	12.26	10.8	1.201	0.312	1.375
MTCP-015-3BD36	15	254T	12.3	1.5" NPT	12.0	10.3	4.25	23.29	6.25	5	2.91	n/a	8.25	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625
MTCP-020-3BD36	20	256T	12.3	1.5" NPT	12.0	12.4	4.25	25.06	6.25	5	2.91	8.25	10	0.87	0.53	2.40	4	15.10	14.4	1.416	0.375	1.625

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

IronHorse® MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

TC-Frame TEFC Motors – Three-Phase Industrial Duty – Dimensions



Dimensions [inches, except as noted] – Premium-Efficiency TC-Frame Three-Phase Motors – 1800 rpm

Part # MTCP-xxx 3BD18C	HP	NEMA Frame	A	AA**	AB	AH	AJ	AK	B	BA	BB	BC	BD	BF	C	D	E	ES	F ₁ *	F ₂ *	G	H	J	N-W	L	P	R	S	U
-001-	1	143TC	7	3/4"NPT	6.89	1.96	5.875	4.5	5.1	2.25	0.16	0.29	6.5	3/8-16	12.5	3.5	2.75	1.41	n/a	4	0.47	0.34	1.45	2.25	6.9	7.2	0.771	0.188	0.875
-1P5-	1.5	145TC	7	3/4"NPT	6.89	1.96	5.875	4.5	6	2.25	0.16	0.29	6.5	3/8-16	13.5	3.5	2.75	1.41	4	5	0.47	0.34	1.45	2.25	6.9	7.2	0.771	0.188	0.875
-002-	2																												
-003-	3	182TC	8.9	1" NPT	7.45	2.37	7.25	8.5	6.3	2.75	0.25	0.38	9	1/2-13	15.1	4.5	3.75	1.78	n/a	4.5	0.52	0.41	1.97	2.75	10.4	9.0	0.986	0.25	1.125
-005-	5	184TC	8.9	1" NPT	7.45	2.37	7.25	8.5	7.1	2.75	0.25	0.38	9	1/2-13	16.1	4.5	3.75	1.78	4.5	5.5	0.52	0.41	1.97	2.75	10.4	9.0	0.986	0.25	1.125
-7P5-	7.5	213TC	10.5	1" NPT	8.63	2.87	7.25	8.5	7.5	3.5	0.25	0.51	9	1/2-13	18.9	5.25	4.25	2.41	n/a	5.5	0.78	0.41	2.36	3.38	12.3	10.8	1.201	0.312	1.375
-010-	10	215TC	10.5	1" NPT	8.63	2.87	7.25	8.5	9	3.5	0.25	0.51	9	1/2-13	20.5	5.25	4.25	2.41	5.5	7	0.78	0.41	2.36	3.38	12.3	10.8	1.201	0.312	1.375
-015-	15	254TC	12.3	1.5"NPT	12.0	3.75	7.25	8.5	10.3	4.25	0.25	0.25	10	1/2-13	23.3	6.25	5	2.91	n/a	8.25	0.87	0.53	2.40	4	15.1	14.4	1.416	0.375	1.625
-020-	20	256TC	12.3	1.5"NPT	12.0	3.75	7.25	8.5	12.4	4.25	0.25	0.25	10	1/2-13	25.1	6.25	5	2.91	8.25	10	0.87	0.53	2.40	4	15.1	14.4	1.416	0.375	1.625
-025-	25	284TC	13.7	1.5"NPT	13.7	4.38	9	10.5	12.2	4.75	0.25	0.25	11.25	1/2-13	26.6	7	5.5	3.28	n/a	9.5	0.98	0.53	2.68	4.62	16.5	16.0	1.591	0.5	1.875
-030-	30	286TC	13.7	1.5"NPT	13.7	4.38	9	10.5	13.7	4.75	0.24	0.24	11.25	1/2-13	28.2	7	5.5	3.28	9.5	11	0.98	0.53	2.68	4.62	16.5	16.0	1.591	0.5	1.875
-040-	40	324TC	15.3	2" NPT	14.6	5	11	12.5	12.6	5.25	0.24	0.24	14	5/8-11	30.0	8	6.25	3.91	n/a	10.5	0.98	0.66	2.76	5.25	18.3	17.8	1.845	0.5	2.125
-050-	50	326TC	15.3	2" NPT	14.6	5	11	12.5	14.0	5.25	0.25	0.25	14	5/8-11	31.2	8	6.25	3.91	10.5	12	0.98	0.66	2.76	5.25	18.3	17.8	1.845	0.5	2.125
-060-	60	364TC	17.0	3" NPT	17.5	5.62	11	12.5	14.6	5.88	0.25	0.25	14	5/8-11	32.6	9	7	4.28	n/a	11.25	1.10	0.66	3.15	5.88	21.0	19.4	2.021	0.625	2.375
-075-	75	365TC	17.0	3" NPT	17.5	5.62	11	12.5	15.6	5.88	0.25	0.25	14	5/8-11	34.1	9	7	4.28	11.25	12.25	1.10	0.66	3.15	5.88	21.0	19.4	2.021	0.625	2.375
-100-	100	405TC	20	3" NPT	18.1	7	11	12.5	17.8	6.62	0.25	0.25	15.5	5/8-11	38.4	10	8	5.65	12.25	13.75	1.18	0.81	3.15	7.25	23.5	21.4	2.45	0.75	2.875

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

Dimensions [inches] - EPAct 449T-Frame Three-Phase Motor with C-Flange Kit Installed											
C-Flange Part Number	Motor Part Number	Frame Type	AH*	AJ	AK	BB	BC*	BD	BF	CC	N-W*
MTA-CFACE-449TC	MTC-250-3D18	449T	8.248	14	16	0.26	0.26	17.72	5/8-11	4.35	8.5
	MTC-300-3D18										

* Motor dependent dimensions apply only to IronHorse MTC-xxx-3D18 motors. Refer to appropriate T-frame diagram for motor dimensions.

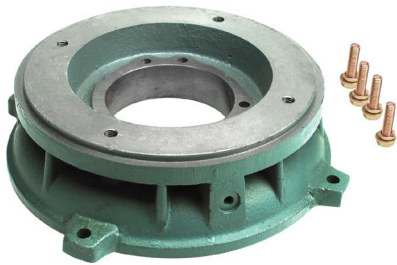
IronHorse® MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

Premium Efficiency TEFC T-Frame Three-Phase Motor C-Flange Kits – 1 to 200 hp

We stock Premium Efficiency NEMA cast iron T-frame motors from 1–200 hp, and TC-frame motors from 1–100 hp.

We also offer IronHorse cast iron C-flange kits which can be used for C-face mounting of our 1–200 hp IronHorse MTCP Premium Efficiency cast iron T-frame motors.

The kits are field installable and include the C-faces and bolts.



MTCP Premium-Efficiency T-frame Three-Phase Motor C-Flange Kits					
Part Number (1)	Price	Fits Frame	Fits Motor Number (2)	Motor HP	Product Weight (lb) (3)
MTAP-CFACE-140TC		143T & 145T	MTCP-001-3BD12 MTCP-001-3BD18 MTCP-1P5-3BD18 MTCP-1P5-3BD36 MTCP-002-3BD18 MTCP-002-3BD36	1 1 1-1/2 1-1/2 2 2	6.8
MTAP-CFACE-180TC		182T & 184T	MTCP-1P5-3BD12 MTCP-002-3BD12 MTCP-003-3BD18 MTCP-003-3BD36 MTCP-005-3BD18 MTCP-005-3BD36	1-1/2 2 3 3 5 5	14.3
MTAP-CFACE-210TC		213T & 215T	MTCP-003-3BD12 MTCP-005-3BD12 MTCP-7P5-3BD18 MTCP-7P5-3BD36 MTCP-010-3BD18 MTCP-010-3BD36	3 5 7-1/2 7-1/2 10 10	13.8
MTAP-CFACE-250TC		254T & 256T	MTCP-7P5-3BD12 MTCP-010-3BD12 MTCP-015-3BD18 MTCP-015-3BD36 MTCP-020-3BD18 MTCP-020-3BD36	7-1/2 10 15 15 20 20	40.1
MTAP-CFACE-280TC		284T & 286T	MTCP-015-3BD12 MTCP-020-3BD12 MTCP-025-3BD18 MTCP-030-3BD18	15 20 25 30	44.0
MTAP-CFACE-320TC		324T & 326T	MTCP-040-3BD18 MTCP-050-3BD18	40 50	61.7
MTAP-CFACE-360TC		364T & 365T	MTCP-060-3BD18 MTCP-075-3BD18	60 75	70.5
MTAP-CFACE-400TC		405T	MTCP-100-3BD18	100	136.6
MTAP-CFACE-444TC		444T & 445T	MTCP-125-3BD18 MTCP-150-3BD18	125 150	143.2
MTAP-CFACE-447TC		445/7T	MTCP-200-3BD18	200	144.4

1) Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
 2) MTAP-CFACE C-flange kits will NOT fit MTC EPAct motors.
 3) Certain heavy and oversized items can be shipped only via LTL.
 Check our web site for current shipping method constraints by part number.

IronHorse® MTCP Premium-Efficiency Cast-Iron Three-Phase AC Motors

Premium Efficiency TEFC Three-Phase Motor Replacement Parts – 1 to 200 hp

We stock MTCP Premium Efficiency NEMA cast iron T-frame motors from 1–200 hp, and TC-frame motors from 1–100 hp.

We also offer IronHorse junction boxes, TEFC fans, and TEFC fan shrouds as direct replacement parts for these MTCP motors.

These replacement parts are field installable. Instructions included.



MTCP Premium-Efficiency Three-Phase Motor Replacement Parts						
Part Number ⁽¹⁾	Price	Description ⁽²⁾⁽³⁾⁽⁴⁾	Fits Frame	Fits PE Motor Number ⁽¹⁾	Motor HP	Product Wt. (lb)
MTAP-FAN-140		Replacement Fan	143 & 145	MTCP-001-3BD12	1	0.3
MTAP-SHROUD-140		Replacement Fan Shroud		MTCP-001-3BD18(C)	1	1.1
MTAP-JBOX-140		Replacement Junction Box		MTCP-1P5-3BD18(C)	1-1/2	
				MTCP-1P5-3BD36	1-1/2	2.6
				MTCP-002-3BD18(C)	2	
				MTCP-002-3BD36	2	
MTAP-FAN-180		Replacement Fan	182 & 184	MTCP-1P5-3BD12	1-1/2	0.3
MTAP-SHROUD-180		Replacement Fan Shroud		MTCP-002-3BD12	2	1.5
MTAP-JBOX-180		Replacement Junction Box		MTCP-003-3BD18(C)	3	
				MTCP-003-3BD36	3	3.1
				MTCP-005-3BD18(C)	5	
				MTCP-005-3BD36	5	
MTAP-FAN-210-2		Replacement Fan (for 2-pole motors)	213 & 215	MTCP-7P5-3BD36	7-1/2	0.3
MTAP-FAN-210		Replacement Fan (4&6-pole)		MTCP-010-3BD36	10	
MTAP-SHROUD-210		Replacement Fan Shroud		MTCP-003-3BD12	3	0.3
MTAP-JBOX-210		Replacement Junction Box		MTCP-005-3BD12	5	2.3
				MTCP-7P5-3BD18(C)	7-1/2	
				MTCP-010-3BD18(C)	10	3.4
MTAP-FAN-250-2		Replacement Fan (for 2-pole motors)	254 & 256	MTCP-015-3BD36	15	0.3
MTAP-FAN-250		Replacement Fan (4&6-pole)		MTCP-020-3BD36	20	
MTAP-SHROUD-250		Replacement Fan Shroud		MTCP-7P5-3BD12	7-1/2	0.3
MTAP-JBOX-250		Replacement Junction Box		MTCP-010-3BD12	10	4.5
				MTCP-015-3BD18(C)	15	
				MTCP-020-3BD18(C)	20	7.0
MTAP-FAN-280		Replacement Fan	284 & 286	MTCP-015-3BD12	15	0.5
MTAP-SHROUD-280		Replacement Fan Shroud		MTCP-020-3BD12	20	6.5
MTAP-JBOX-280		Replacement Junction Box		MTCP-025-3BD18(C)	25	
				MTCP-030-3BD18(C)	30	7.0
MTAP-FAN-320		Replacement Fan	324 & 326	MTCP-040-3BD18(C)	40	0.6
MTAP-SHROUD-320		Replacement Fan Shroud		MTCP-050-3BD18(C)	50	8.3
MTAP-JBOX-320		Replacement Junction Box				
MTAP-FAN-360		Replacement Fan	364 & 365	MTCP-060-3BD18(C)	60	0.6
MTAP-SHROUD-360		Replacement Fan Shroud		MTCP-075-3BD18(C)	75	9.0
MTAP-JBOX-360		Replacement Junction Box				
MTAP-FAN-400		Replacement Fan	405	MTCP-100-3BD18(C)	100	1.1
MTAP-SHROUD-400		Replacement Fan Shroud				
MTAP-JBOX-400		Replacement Junction Box				30.0
MTAP-FAN-440		Replacement Fan	444	MTCP-125-3BD18	125	2.0
MTAP-SHROUD-440		Replacement Fan Shroud	445 & 447	MTCP-150-3BD18	150	17.5
MTAP-JBOX-440		Replacement Junction Box		MTCP-200-3BD18	200	

1) These MTAP replacement components fit only MTCP Premium Efficiency motors; they will NOT fit MTC EFAct motors.

2) Replacement Fans include fan and snap ring.

3) Replacement Fan Shrouds include shroud, bolts w/washers, and rubber plug.

4) Replacement Junction Boxes include gasketed base & cover assembly, base gasket, and base bolts.

AC Motor Selection – IronHorse® General Purpose Motors

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