MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

56C/56HC-Frame TEFC Motors – 3-phase – 0.33 to 3 hp

Features

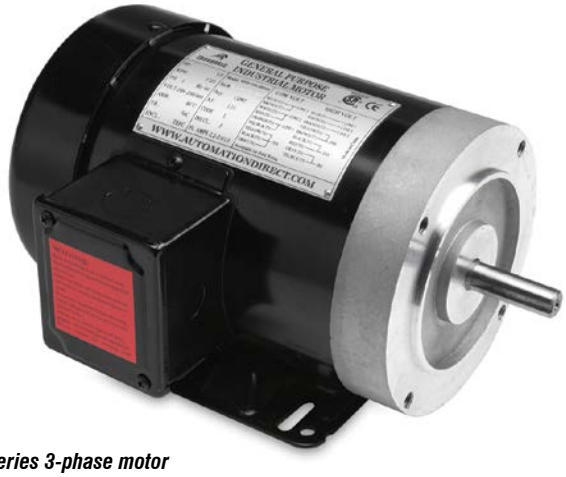
- Totally Enclosed Fan Cooled (TEFC) enclosure
- NEMA 56C or 56HC flange mount (56HC are suitable for 56, 143T, or 145T frame mounting dimensions)
- Rolled steel shell frame / cast aluminum end bell
- No mounting orientation restrictions
- Removable base / bolt-on/bolt-off mounting feet
- Steel fan cover
- Large easy-to-wire junction box with rubber gasket
- Heavy duty oversized ball bearings
- High tensile strength steel shaft
- Electrically reversible
- Inverter capable (3-phase only)
- NEMA design B
- Class F winding insulation
- Service Factor: 1.15 across-the-line (1.0 for 3-phase with AC drive)
- Two year warranty
- CCSAUS certified, CE

Accessories Available

- Junction boxes (replacement/spare)
- Fans (replacement/spare)
- Fan shrouds (replacement/spare)
- Motor bases (replacement/spare)
- Motor bases (replacement/spare)
- Adjustable mounting slide bases

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps



MTR Series 3-phase motor

MTRP Series 3-phase motor

MTR2 Series 3-phase motor

MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

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Motor Specifications – 3-phase MTR2 & MTRP Series Motors – 1800 & 3600 RPM										
Part Number	*Price*	*HP*	*Base RPM*	*Phase*	*Voltage*	*Housing*	*NEMA Frame*	*Service Factor*	*F.L. Amps @ 230V/460V*	*Approx Weight (lb)*
MTR2-P33-3BD18	$229.00	1/3	1800	3	230/460	TEFC rolled steel frame with cast aluminum end bell F1 conduit box location	56C flange mount (MTRP = 56HC)*	1.15	1.4 / 0.7	18
MTR2-P33-3BD36	$204.00		3600						1.3 / 0.65	18
MTR2-P50-3BD18	$244.00	1/2	1800						1.9 / 0.95	19
MTR2-P50-3BD36	$215.00		3600						1.7 / 0.85	19
MTR2-P75-3BD18	$264.00	3/4	1800						2.6 / 1.3	22
MTR2-P75-3BD36	$226.00		3600						2.4 / 1.2	21
MTRP-001-3BD18	$329.00	1	1800						3.2 / 1.6	35
MTRP-001-3BD36	$272.00		3600						3.0 / 1.50	23
MTRP-1P5-3BD18	$362.00	1-1/2	1800						4.5 / 2.25	43
MTRP-1P5-3BD36	$307.00		3600						4.0 / 2.0	31
MTRP-002-3BD18	$426.00	2	1800						6.0 / 3.0	49
MTRP-002-3BD36	$328.00		3600						5.2 / 2.6	33
MTRP-003-3BD36	$428.00	3	3600						7.4 / 3.7	39

Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product.
IronHorse Motors with product numbers ending in P are Premium Efficiency motors and meet or exceed all current efficiency guidelines.
***56HC motors are capable of 56C C-face mounting, and are also compatible with 56, 143T, and 145T foot mounting dimensions.**

MTR2 & MTRP Series Rolled-Steel AC Motors – 3-Phase

56C/56HC-Frame TEFC Motors – 3-phase – 0.33 to 3 hp – Performance Data

Performance Data – 3-phase MTR2 & MTRP Series Motors (460V data except as indicated) – 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 (%)	FL Power Factor	Rotor Inertia (lb·ft2)	Drawing Links
				CT	VT	No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break -down	CHP*	Safe				
MTR2-P33-3BD18	1/3	B	1725	431	172	1.10 / 0.55	1.4 / 0.7	7 / 3.5	1.03	2.93	3.77	2700	5400	67.0	0.65	0.0329	PDF
MTR2-P33-3BD36			3450	862	345	0.8 / 0.4	1.3 / 0.65	7.6 / 3.8	0.50	1.14	1.99	5400		60.0	0.75	0.0245	PDF
MTR2-P50-3BD18	1/2		1725	431	172	1.36 / 0.68	1.9 / 0.95	10 / 5	1.53	3.81	4.96	2700		70	0.69	0.038	PDF
MTR2-P50-3BD36			3450	862	345	1.0 / 0.5	1.7 / 0.85	10.8 / 5.4	0.74	1.81	2.96	5400		67.5	0.74	0.0277	PDF
MTR2-P75-3BD18	3/4		1725	431	172	1.60 / 0.80	2.6 / 1.3	12.2 / 6.6	2.31	5.41	7.17	2700		73.0	0.73	0.048	PDF
MTR2-P75-3BD36			3450	862	345	1.3 / 0.7	2.4 / 1.2	16 / 8	1.14	2.95	4.25	5400		71.5	0.78	0.031	PDF
MTRP-001-3BD18	1		1760	440	176	2.18 / 1.09	3.22 / 1.61	31 / 16	3	12.35	14.51	2700	2700	85.5	0.69	0.107	PDF
MTRP-001-3BD36			3500	875	350	1.52 / 0.76	3.00 / 1.50	22 / 11	1.51	3.98	4.93	5400	5400	77	0.83	0.034	PDF
MTRP-1P5-3BD18	1-1/2		1760	440	176	2.8 / 1.4	4.52 / 2.26	47 / 24	4.4	21.68	21.76	2700	2700	86.5	0.72	0.135	PDF
MTRP-1P5-3BD36			3500	875	350	1.8 / 0.9	3.96 / 1.98	38 / 19	2.21	7.94	9.03	5400	5400	84.0	0.85	0.048	PDF
MTRP-002-3BD18	2		1760	440	176	3.62 / 1.81	5.92 / 2.96	61 / 31	6.03	27.3	27.46	2700	2700	86.5	0.74	0.158	PDF
MTRP-002-3BD36			3500	875	350	2.28 / 1.14	5.22 / 2.61	53 / 27	3.02	12.23	12.8	5400	5400	85.5	0.86	0.056	PDF
MTRP-003-3BD36	3		3500	875	350	3.54 / 1.77	7.38 / 3.69	89 / 45	4.49	19.44	20.39	5400	5400	86.5	0.85	0.069	PDF

*** Maximum Constant HP RPM is for direct coupled loads.**

MTR2 / MTRP / MTRJ Series AC Motor Accessories – 3-Phase

56C-Frame TEFC Motors – 3-phase – 0.33 to 3 hp – Motor Accessories

Motor Base
MTAR-BASE-56

Fan
MTA2-FAN-56

Fan
MTA2-FAN-56-1

Fan Shroud
MTAR-SHROUD-56

MTR Series 3-phase Motor Spare/Replacement Parts*				
Part Number	*Price*	*Accessory Type*	*Applicable MTR Motor Number*	*MTR Motor HP : RPM*
MTAR-BASE-56	$15.00	Motor base	MTR-xxx-xBDxx	All
MTAR-SHROUD-56	$15.00	Fan shroud		

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

MTR2/MTRP/MTRJ Series 3-phase Motor Spare/ Replacement Parts				
Part Number	*Price*	*Accessory Type*	*Applicable MTRP Motor Number*	*MTRP Motor HP : RPM*
MTA2-BASE-56	$25.00	Motor base	MTR**P**-xxx-3BDxx MTR2-Pxx-3BDxx MTRJ-Xxx-3BDxx	All
MTA2-SHROUD-56	$25.00	Fan shroud		
MTA2-JBOX-56	$25.00	Junction box		
MTA2-FAN-56	$25.00	Fan	MTR2-Pxx-3BDxx MTRJ-Xxx-3BDxx	
MTA2-FAN-56-1 *	$16.00	Fan	MTR**P**-xxx-3BDxx MTRJP-Xxx-3BDxx	

*** This accessory is a spare/replacement component only for MTRP series IronHorse motors.**

IRONHORSE®
AUTOMATIONDIRECT

AC Motor Selection – IronHorse® General Purpose Motors

IronHorse® 3-Phase Motor Selection					
Motor Series	***MTR2/MTRP***	***MTRJ/MTRJP***	***MTDP***	***MTSP/MTSN***	***MTCP2***
Paint Color	***Black***	***Black***	***Blue***	***Stainless***	***Gray***
Main Characteristics	***General Purpose Rolled Steel***	***Jet Pump***	***Rolled Steel Open Drip Proof***	***Stainless Steel Premium Efficiency IP69K***	***Cast-Iron Hazardous Duty***
Electrical Characteristics					
Horsepower range	1/3 - 3	1/3 - 3	1 - 50	1 - 20	1 - 300(T) 1 - 30(TC)
Base speed	1800; 3600	3600	1800; 3600	1200; 1800; 3600	1200; 1800; 3600
Standard Voltage	208–230/460 VAC; 230/460 VAC	208–230/460 VAC; 230/460 VAC	208–230/460 VAC	208–230/460 VAC	208-230/460 VAC; 460 VAC
Phase / Base Frequency (Hz)	3-phase / 60 Hz				
Service Factor	1.15	1.15	1.15 (sine), 1.0 (drive)		1.25 (1-200) 1.15 (250-300) 1.0 (all w/ drive)
Design Code (NEMA)	B				
Insulation Class	Class F				
Insulation System	Dip and Bake	Dip and Bake Twice	VPI	Dip and Bake	Vacuum Impregnation
Duty Cycle	Continuous				
Thermal protection	None				
Hazard Classification	None			Class 1 / Div 2	
Mechanical Characteristics					
Frame size	56C or HC - 326T	56J	56C - 326T	56C - 256TC	143T/TC - 449T
Enclosure	ODP / TEFC	TEFC	ODP / TEFC	TEFC / TENV	TEFC
Enclosure Rating	IP43		IP23	IP69K	IP55
Frame material	Rolled steel		Rolled steel	304 Stainless steel	Cast iron
End bracket material	Aluminum	Aluminum	≤256 frame- Aluminum >256- Cast iron	304 Stainless steel	Cast iron
Junction box material	Steel	Steel	Steel	304 Stainless steel	Cast iron
Fan guard material	Steel	Steel	N/a	304 Stainless steel	Steel
Fan material	Polypropylene plastic	Plastic	N/a	Heat-Resistant Polyethelene	Plastic
Lead termination	Junction Box				
standard mounting	C-face with removable rigid base		Rigid base	C-face round body and C-face with rigid base	Rigid base, c-face with rigid base (1-100 hp)
Drive end shaft slinger	Yes	Yes	None	Yes	Yes
Bearings	Ball				1-300 hp - 2p, 1-75 hp - 4p & 6p: Ball 100-300 hp - 4p & 6p: Roller
Grease	Mobil Polyrex EM		NS7 ENS	Mobil Polyrex EM	
Standard junction box assembly position	F1				F1 (field convertible F2)
Performance Characteristics					
Constant Torque speed range	4:1	4:1	10:1	10:1	10:1
Variable Torque speed range	10:1	10:1	20:1	20:1	20:1
Constant Horsepower speed range	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Temperature rise	B				
Encoder provisions	None				
Other Characteristics					
Warranty*	2 years	2 years	2 years	1 year	2 years
Agency Approvals **	CSA, CE	CSA,CE	CSA	NEMA, CSA, UR, CE, BISCC	CSA, ISO9001, CE

*** See Terms and Conditions for motor warranty explanation.**
1) For warranty on IronHorse motors below 50hp, warranty service can be arranged through AutomationDirect.
2) For warranty on IronHorse motors 50hp 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.**