IRONHORSE®

IronHorse MTS Washdown 3-phase Motors

Features

- 1/3-20 HP, 3600 and 1800 RPM
- 1/2-5 HP, 1200 RPM
- 208-230/460 volt, 60 Hz
- Fan Cooled (TEFC) or Non Ventilated (TENV) Enclosure
- IP69K Protection
- 1.15 SF
- Class F Insulation with Class B Temperature Rise
- C-Face with Rigid Base and Round Body (Footless)
- Premium Efficiency (EISA Compliant)
- NEMA Design B
- Continuous Duty
- 304 Stainless Steel Frame, End Bracket, Junction Box, and Hardware
- Stainless Steel Shaft and Key
- F1 Junction Box Location
- Horizontal or Vertical Mounting
- Lip Seal on DE and ODE
- Round Welded Junction Box with Epoxy Potted Leads
- Double Sealed Bearings Pre-Packed with Mobil Polyrex EM Grease
- Inverter Duty – 10:1 Constant Torque (CT) / 20:1 Variable Torque (VT)
- Class 1 Division 2 Groups A, B, C, D – Temperature Code T2B
- Ambient -20°C to +40°C, Altitude up to 3300 Feet Above Sea Level (FASL)
- Bi-directional Rotation
- Bakery Equipment Assessment Group (BEAG) certified (Previously BISSC)
- In Accordance with NEMA, CSA, UR, and CE



MTSP-P33-3BD18



MTSP-P33-3BD18R

Applications

Ideal for use in food and chemical processing plants, pharmaceutical applications, and other environments where corrosion-resistant, watertight motors are required.

Motor Specifications – 3-phase

Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links
Rigid Base With C-face - 1800 RPM											
MTSN-P33-3BD18		1/3 (1/4)	1800 (1500)	208–230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.5-1.4/0.7 (1.5-1.4/0.7)	58 dB(A)	28	PDF
MTSP-P33-3BD18					TEFC			1.4-1.2/0.6 (1.4-1.2/0.6)	60 dB(A)		PDF
MTSN-P50-3BD18		1/2 (1/3)			TENV			1.8-1.6/0.8 (1.8-1.6/0.8)	58 dB(A)	30	PDF
MTSP-P50-3BD18					TEFC				60 dB(A)		PDF
MTSN-P75-3BD18		3/4 (1/2)			TENV			2.6-2.4/1.2 (2.6-2.4/1.2)	58 dB(A)	33	PDF
MTSP-P75-3BD18					TEFC			2.5-2.4/1.2 (2.5-2.4/1.2)	60 dB(A)		PDF
MTSN-001-3BD18		1 (3/4)			TENV			3.3-3.1/1.55 (3.3-3.1/1.55)	59 dB(A)	42	PDF
MTSP-001-3BD18					TEFC			3.1-2.8/1.45 (3.1-2.8/1.45)	61 dB(A)	36	PDF
MTSN-1P5-3BD18		1 1/2 (1)			TENV			4.8-4.4/2.2 (4.8-4.4/2.2)	60 dB(A)	51	PDF
MTSN-1P5-3BD18-14						145TC					PDF
MTSP-1P5-3BD18					TEFC	56C		4.1-4.0/2.0 (4.1-4.0/2.0)	61 dB(A)	42	PDF
MTSP-1P5-3BD18-14						145TC					PDF
MTSN-002-3BD18		2 (1 1/2)			TENV	56C		6-5.4/2.7 (6-5.4/2.7)	60 dB(A)	65	PDF
MTSN-002-3BD18-14						145TC					PDF
MTSP-002-3BD18					TEFC	56C		6.2-6.0/3.0 (6.2-6.0/3.0)	61 dB(A)	51	PDF
MTSP-002-3BD18-14						145TC					PDF
MTSP-003-3BD18-18		3 (2)			TEFC	182TC		8.8-8.2/4.1 (8.8-8.2/4.1)	64 dB(A)	65	PDF
MTSP-005-3BD18		5 (3)				184TC		13-12.5/6.25 (13-12.5/6.25)		100	PDF
MTSP-7P5-3BD18		7 1/2 (5)				213TC		20-18.6/9.3 (20-18.6/9.3)	69 dB(A)	180	PDF
MTSP-010-3BD18		10 (7 1/2)				215TC		26-24.4/12.2 (26-24.4/12.2)		210	PDF
MTSP-015-3BD18		15 (10)				254TC		40-37/18.5 (40-37/18.5)		370	PDF
MTSP-020-3BD18		20 (15)				256TC		53-49/24.5 (53-49/24.5)		436	PDF

*@ 60Hz (@ 50Hz)

IRONHORSE®

IronHorse MTS Washdown 3-phase Motors

Motor Specifications – 3-phase											
Part Number	*Price*	*HP**	*Base RPM **	*Volts**	*Encl.*	*NEMA Frame*	*Service Factor**	*F.L. Amps**	*Sound Power (dB)*	*Weight (lb)*	*Drawing Links*
Rigid Base With C-face - 1200 RPM											
MTSP-P50-3BD12		1/2 (1/3)	1200 (1000)	208–230/460 VAC (190/380)	TEFC	56C	1.15 (1.15)	1.9-1.8/0.9 (1.9-1.8/0.9)	55 dB(A)	30	PDF
MTSP-P75-3BD12		3/4 (1/2)						3.8-3.7/1.85 (3.8-3.7/1.85)		35	PDF
MTSP-001-3BD12		1 (3/4)				145TC		4.2-4.0/2.0 (4.2-4.0/2.0)		42	PDF
MTSP-1P5-3BD12		1 1/2 (1)				182TC		5.3-4.9/2.45 (5.3-4.9/2.45)	57 dB(A)	82	PDF
MTSP-002-3BD12		2 (1 1/2)				184TC		6.6-6.1/3.05 (6.6-6.1/3.05)		98	PDF
MTSP-003-3BD12		3 (2)				213TC		10-9.2/4.6 (10-9.2/4.6)	61 dB(A)	170	PDF
MTSP-005-3BD12		5 (3)				215TC		15-14.0/7.0 (15-14.0/7.0)		200	PDF
Rigid Base With C-face - 3600 RPM											
MTSN-P33-3BD36		1/3 (1/4)	3600 (3000)	208–230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.2-1.1/0.55 (1.2-1.1/0.55)	73 dB(A)	26	PDF
MTSP-P33-3BD36					TEFC				75 dB(A)		PDF
MTSN-P50-3BD36		1/2 (1/3)			TENV			1.6-1.5/0.75 (1.6-1.5/0.75)	73 dB(A)	29	PDF
MTSP-P50-3BD36					TEFC				75 dB(A)		PDF
MTSN-P75-3BD36		3/4 (1/2)			TENV			2.3-2.2/1.1 (2.3-2.2/1.1)	73 dB(A)	33	PDF
MTSP-P75-3BD36					TEFC				75 dB(A)		PDF
MTSN-001-3BD36		1 (3/4)			TENV			3-2.8/1.4 (3-2.8/1.4)	74 dB(A)	39	PDF
MTSP-001-3BD36					TEFC			2.9-2.8/1.4 (2.9-2.8/1.4)	76 dB(A)	35	PDF
MTSN-1P5-3BD36		1 1/2 (1)			TENV			4-3.7/1.85 (4-3.7/1.85)	74 dB(A)	46	PDF
MTSN-1P5-3BD36-14						143TC					PDF
MTSP-1P5-3BD36					TEFC	56C		4.2-4.0/2.0 (4.2-4.0/2.0)	76 dB(A)	39	PDF
MTSP-1P5-3BD36-14						143TC					PDF
MTSN-002-3BD36		2 (1 1/2)			TENV	56C		5.5-5/2.5 (5.5-5/2.5)	75 dB(A)	60	PDF
MTSN-002-3BD36-14						145TC					PDF
MTSP-002-3BD36					TEFC	56C		4.9-4.8/2.4 (4.9-4.8/2.4)	76 dB(A)	46	PDF
MTSP-002-3BD36-14						145TC					PDF
MTSN-003-3BD36-18		3 (2)			TENV	182TC		8-7.2/3.6 (8-7.2/3.6)		95	PDF
MTSP-003-3BD36-18					TEFC			8.8-8.1/4.05 (8.8-8.1/4.05)	78 dB(A)	81	PDF
MTSP-005-3BD36		5 (3)				184TC		12.6-12.2/6.1 (12.6-12.2/6.1)		95	PDF

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

Performance Data - 3-phase

Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque				F.L. Power Factor	Moment of Inertia (lb·ft2)
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb·ft)	Locked Rotor	Breakdown	Pull Up		
									% of F.L. Torque				
Rigid Base With C-face - 1800 RPM													
MTSN-P33-3BD18	1/3 (1/4)	1760 (1455)	B	74.0	1.5-1.4/0.7	6.5	1-1.1/0.55	1.00	300	400	300	62.00	0.062
MTSP-P33-3BD18		1745 (1455)			1.4-1.2/0.6		1.23/0.65		285	300	250	71.00	
MTSN-P50-3BD18	1/2 (1/3)	1745 (1450)		78.5	1.8-1.6/0.8	10	1.2-1.3/0.65	1.50				70.00	0.069
MTSP-P50-3BD18							1.44-1.30/0.65					71.00	
MTSN-P75-3BD18	3/4 (1/2)	1755 (1460)		81.5	2.6-2.4/1.2	12.5	1.65-1.8/0.9	2.20		320		69.00	0.084
MTSP-P75-3BD18		1745 (1455)			2.5-2.4/1.2		2.10-1.90/0.95			300		71.00	
MTSN-001-3BD18	1 (3/4)	1755 (1460)		85.5	3.3-3.1/1.55	15	1.8-2/1	3.00	300	400	290	74.00	0.138
MTSP-001-3BD18		1750 (1460)			3.1-2.8/1.45		2.76-2.50/1.25		285	300	250	75.00	0.1
MTSN-1P5-3BD18	1 1/2 (1)	1755 (1460)		86.5	4.8-4.4/2.2	20	2.55-2.8/1.4	4.40	300	400		74.00	0.184
MTSN-1P5-3BD18-14													
MTSP-1P5-3BD18		1750 (1460)			4.1-4.0/2.0		3.32-3.00/1.50		285	300		75.00	0.138
MTSP-1P5-3BD18-14													
MTSN-002-3BD18	2 (1 1/2)	1750 (1455)			6-5.4/2.7	25	2.9-3.2/1.6	5.90	300	400		79.00	0.25
MTSN-002-3BD18-14													
MTSP-002-3BD18					6.2-6.0/3.0		3.87-3.50/1.75		285	300		78.00	0.184
MTSP-002-3BD18-14													
MTSP-003-3BD18-18	3 (2)	1750 (1470)		89.5	8.8-8.2/4.1	32	3.6-4/2	8.80	270	310	240	80.00	0.253
MTSP-005-3BD18	5 (3)	1765 (1465)			13-12.5/6.25	46	6.63-6.00/3.00	14.70	225	280	220	85.00	0.5
MTSP-7P5-3BD18	7 1/2 (5)	1755 (1470)		91.7	20-18.6/9.3	63.5	9.95-9.00/4.50	22.00		270	210	83.00	0.927
MTSP-010-3BD18	10 (7 1/2)	1760 (1470)			26-24.4/12.2	81	12.16-11.00/5.50	29.30	200	265	190		1.16
MTSP-015-3BD18	15 (10)	1765 (1470)		92.4	40-37/18.5	116	x-14.4/7.2	44.00		260		85.00	1.8
MTSP-020-3BD18	20 (15)			93.0	53-49/24.5	145	x-17.1/8.57	58.60		250	170		2.4
Rigid Base With C-face - 1200 RPM													
MTSP-P50-3BD12	1/2 (1/3)	1155 (970)	B	75.5	1.9-1.8/0.9	10	x-1.8 / 0.9	2.20	255	270	220	63.00	0.088
MTSP-P75-3BD12	3/4 (1/2)	1155 (960)		81.5	3.8-3.7/1.85	12.5	x-1.7/.0.85	3.30		280		65.00	0.103
MTSP-001-3BD12	1 (3/4)	1165 (960)		82.5	4.2-4.0/2.0	15	x-2.5/1.25	4.40				68.00	0.143
MTSP-1P5-3BD12	1 1/2 (1)	1170 (980)		87.5	5.3-4.9/2.45	20	x-3.24/1.62	6.60		270		70.00	0.416
MTSP-002-3BD12	2 (1 1/2)	1175 (980)		88.5	6.6-6.1/3.05	25	x-4.2/2.1	8.80				71.00	0.61
MTSP-003-3BD12	3 (2)			89.5	10-9.2/4.6	32	x-6.4/3.2	13.20	250	280	210	74.00	1.055
MTSP-005-3BD12	5 (3)				15-14.0/7.0	46	x-9.2/4.6	22.10	225	270		78.00	1.356

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

Performance Data - 3-phase

Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque				F.L. Power Factor	Moment of Inertia (lb·ft2)
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb·ft)	Locked Rotor	Breakdown	Pull Up		
									% of F.L. Torque				
Rigid Base With C-face - 3600 RPM													
MTSN-P33-3BD36	1/3 (1/4)	3500 (2890)	B	72.0	1.2-1.1/0.55	6.5	0.72-0.8/0.4	0.50	290	320	250	78.00	0.027
MTSP-P33-3BD36							1.06/0.53		285	300		85.00	
MTSN-P50-3BD36	1/2 (1/3)	3490 (2900)		74.0	1.6-1.5/0.75	10	0.9-0.95/0.475	0.70				83.00	0.036
MTSP-P50-3BD36		3460 (2900)					1.06-0.96/0.48					87.00	
MTSN-P75-3BD36	3/4 (1/2)	3500 (2890)		77.0	2.3-2.2/1.1	12.5	1-1.1/0.55	1.10				83.00	0.05
MTSP-P75-3BD36							1.22-1.10/0.55					88.00	
MTSN-001-3BD36	1 (3/4)	3530 (2915)		80.0	3-2.8/1.4	15	1.4-1.5/0.75	1.50	320	430	300	83.00	0.072
MTSP-001-3BD36		3470 (2890)		77.0	2.9-2.8/1.4		1.55-1.40/0.70		285	300	250	90.00	0.054
MTSN-1P5-3BD36	1 1/2 (1)	3525 (2910)		84.0	4-3.7/1.85	20	1.3-1.4/0.7	2.30				89.00	0.094
MTSN-1P5-3BD36-14													
MTSP-1P5-3BD36		3480 (2900)			4.2-4.0/2.0		1.77-1.60/0.80					91.00	0.072
MTSP-1P5-3BD36-14													
MTSN-002-3BD36	2 (1 1/2)	3520 (2915)		85.5	5.5-5/2.5	25	1.8-2/1	2.90				90.00	0.13
MTSN-002-3BD36-14													
MTSP-002-3BD36		3480 (2900)			4.9-4.8/2.4		1.92-1.74/0.87					91.00	0.094
MTSP-002-3BD36-14													
MTSN-003-3BD36-18	3 (2)	3535 (2925)		86.5	8-7.2/3.6	32	2.35-2.6/1.3	4.40	230	290	200	89.00	0.26
MTSP-003-3BD36-18		3510 (2910)			8.8-8.1/4.05		4.87-4.40/2.20		270		240	85.00	0.145
MTSP-005-3BD36	5 (3)	3525 (2930)		88.5	12.6-12.2/6.1	46		7.30	225	280	220	91.00	0.26

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

Motor Specifications – 3-phase

Part Number	Price	HP*	Base RPM *	Volts*	Encl.	NEMA Frame	Service Factor*	F.L. Amps*	Sound Power (dB)	Weight (lb)	Drawing Links
C-face - 1800 RPM											
MTSN-P33-3BD18R		1/3 (1/4)	1800 (1500)	208–230/460 VAC (190/380)	TENV	56C	1.15 (1.15)	1.5-1.4/0.7 (1.5-1.4/0.7)	58 dB(A)	28	PDF
MTSP-P33-3BD18R					TEFC			1.4-1.2/0.6 (1.4-1.2/0.6)	60 dB(A)	27	PDF
MTSN-P50-3BD18R		1/2 (1/3)			TENV			1.8-1.6/0.8 (1.8-1.6/0.8)	58 dB(A)	30	PDF
MTSP-P50-3BD18R					TEFC				60 dB(A)	29	PDF
MTSN-P75-3BD18R		3/4 (1/2)			TENV			2.6-2.4/1.2 (2.6-2.4/1.2)	58 dB(A)	33	PDF
MTSP-P75-3BD18R					TEFC			2.5-2.4/1.2 (2.5-2.4/1.2)	60 dB(A)	32	PDF
MTSN-001-3BD18R		1 (3/4)			TENV			3.3-3.1/1.55 (3.3-3.1/1.55)	59 dB(A)	42	PDF
MTSP-001-3BD18R					TEFC			3.1-2.8/1.45 (3.1-2.8/1.45)	61 dB(A)	35	PDF
MTSN-1P5-3BD18R		1 1/2 (1)			TENV			4.8-4.4/2.2 (4.8-4.4/2.2)	60 dB(A)	51	PDF
MTSN-1P5-3BD18R-14						145TC					PDF
MTSP-1P5-3BD18R					TEFC	56C		4.1-4.0/2.0 (4.1-4.0/2.0)	61 dB(A)	41	PDF
MTSP-1P5-3BD18R-14						145TC					PDF
MTSN-002-3BD18R		2 (1 1/2)			TENV	56C		6-5.4/2.7 (6-5.4/2.7)	60 dB(A)	65	PDF
MTSP-002-3BD18R					TEFC	56C		6.2-6.0/3.0 (6.2-6.0/3.0)	61 dB(A)	50	PDF
MTSP-002-3BD18R-14						145TC					PDF
C-face - 3600 RPM											
MTSP-P33-3BD36R		1/3 (1/4)	3600 (3000)	208–230/460 VAC (190/380)	TEFC	56C	1.15 (1.15)	1.2-1.1/0.55 (1.2-1.1/0.55)	75 dB(A)	25	PDF
MTSP-P50-3BD36R		1/2 (1/3)						1.6-1.5/0.75 (1.6-1.5/0.75)		28	PDF
MTSP-001-3BD36R		1 (3/4)						2.9-2.8/1.4 (2.9-2.8/1.4)	76 dB(A)	34	PDF
MTSP-1P5-3BD36R		1 1/2 (1)						4.2-4.0/2.0 (4.2-4.0/2.0)		38	PDF
MTSP-1P5-3BD36R-14						143TC					PDF
MTSP-002-3BD36R		2 (1 1/2)				56C		4.9-4.8/2.4 (4.9-4.8/2.4)		45	PDF

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

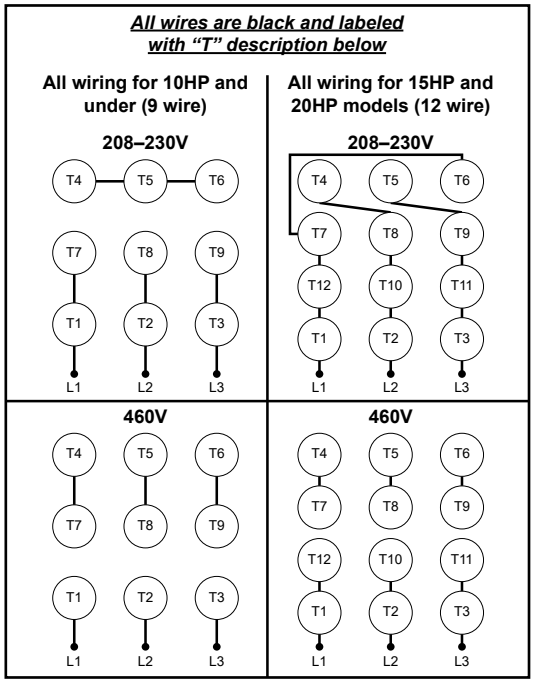
Performance Data - 3-phase

Part Number	HP*	F.L. RPM*	NEMA Design	F.L. Effic. %	Current			Torque				F.L. Power Factor	Moment of Inertia (lb·ft2)
					Full Load Amps	Locked Rotor Amps	No Load Current	Full Load (lb·ft)	Locked Rotor	Breakdown	Pull Up		
									% of F.L. Torque				
C-face - 1800 RPM													
MTSN-P33-3BD18R	1/3 (1/4)	1760 (1455)	B	74.0	1.5-1.4/0.7	6.5	1-1.1/0.55	1.00	300	400	300	62.00	0.062
MTSP-P33-3BD18R		1745 (1455)		82.5	1.4-1.2/0.6	8	x-0.78/0.39		285	300	250	71.00	
MTSN-P50-3BD18R	1/2 (1/3)	1745 (1450)		78.5	1.8-1.6/0.8	10	1.2-1.3/0.65	1.50				70.00	0.069
MTSP-P50-3BD18R				82.5			1.44-1.30/0.65					78.00	
MTSN-P75-3BD18R	3/4 (1/2)	1755 (1460)		81.5	2.6-2.4/1.2	12.5	1.65-1.8/0.9	2.20		320		69.00	0.084
MTSP-P75-3BD18R		1745 (1455)		82.5	2.5-2.4/1.2		2.10-1.90/0.95			300		78.00	
MTSN-001-3BD18R	1 (3/4)	1755 (1460)		85.5	3.3-3.1/1.55	15	1.8-2/1	3.00	300	400	290	74.00	0.138
MTSP-001-3BD18R		1750 (1460)			3.1-2.8/1.45		2.76-2.50/1.25		285	300	250	75.00	0.1
MTSN-1P5-3BD18R	1 1/2 (1)	1755 (1460)		86.5	4.8-4.4/2.2	20	2.55-2.8/1.4	4.40	300	400		74.00	0.184
MTSN-1P5-3BD18R-14													
MTSP-1P5-3BD18R		1750 (1460)			4.1-4.0/2.0		3.32-3.00/1.50		285	300		75.00	0.138
MTSP-1P5-3BD18R-14													
MTSN-002-3BD18R	2 (1 1/2)	1750 (1455)			6-5.4/2.7	25	2.9-3.2/1.6	5.90	300	400		79.00	0.25
MTSP-002-3BD18R					6.2-6.0/3.0		3.87-3.50/1.75		285	300		78.00	0.184
MTSP-002-3BD18R-14													
C-face - 3600 RPM													
MTSP-P33-3BD36R	1/3 (1/4)	3500 (2890)	B	74.0	1.2-1.1/0.55	8	x-0.74/0.37	0.50	285	300	250	85.00	0.027
MTSP-P50-3BD36R	1/2 (1/3)	3460 (2900)		77.0	1.6-1.5/0.75	10	1.06-0.96/0.48	0.70				88.00	0.036
MTSP-001-3BD36R	1 (3/4)	3470 (2890)		80.0	2.9-2.8/1.4	15	1.55-1.40/0.70	1.50				90.00	0.054
MTSP-1P5-3BD36R	1 1/2 (1)	3480 (2900)		84.0	4.2-4.0/2.0	20	1.77-1.60/0.80	2.30				91.00	0.072
MTSP-1P5-3BD36R-14				86.5									
MTSP-002-3BD36R	2 (1 1/2)			85.5	4.9-4.8/2.4	25	1.92-1.74/0.87	2.90					0.094

*@ 60Hz (@ 50Hz)

IronHorse MTS Washdown 3-phase Motors

Wiring Diagram



Accessories



MTAS-FAN-56



MTAS-SHROUD-56140

MTSP Accessories		
Part Number	***Price***	***Fits***
Replacement Fans		
MTAS-FAN-56		1/3 hp, 1/2 hp and 3/4 hp IronHorse MTS series TEFC motors
MTAS-FAN-143180		1 hp 2- and 4-pole, 1-1/2 hp 2-pole and 3 hp and 5 hp 4-pole IronHorse MTS series TEFC motors
MTAS-FAN-145		1-1/2 hp 4-pole, 2 hp 2- and 4-pole IronHorse MTS series TEFC motors
MTAS-FAN-180-26		1 hp, 1-1/2 hp and 2 hp 6-pole and 3 hp and 5 hp 2-pole IronHorse MTS series TEFC motors
MTAS-FAN-210-6		3 hp and 5 hp 6-pole IronHorse MTS series TEFC motors
MTAS-FAN-210		7-1/2 hp and 10 hp IronHorse MTS series TEFC motors
MTAS-FAN-250		15 hp and 20 hp IronHorse MTS series TEFC motors
Replacement Shrouds		
MTAS-SHROUD-56140		56 and 140T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-180		180T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-210		210T frame IronHorse MTS series TEFC motors
MTAS-SHROUD-250		250T frame IronHorse MTS series TEFC motors

Mounting

MTSP/MTSN stainless-steel motors can be mounted in any orientation, horizontal or vertical. Ensure the T-drain plugs are installed as necessary for proper drainage.

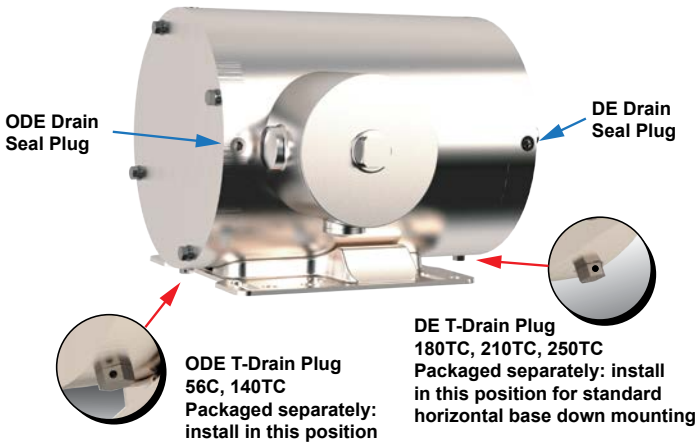
The motors have four drain holes in the 12:00, 3:00, 6:00, and 9:00 positions. Motors are shipped with Drain Seal plugs installed in all positions. T drain plugs are packaged separately. If drainage is needed, replace any drain seal plug with the included T drain plug. Installation location should be the lowest point of the motor based on the mounting orientation.

For 56C and 140TC:

- Drive End–No Drain Installed. Optional M10x1 T-Drain Plug ships with motor (install if front drain is needed).
- Opposite Drive End – No Drain installed. Optional M6x1 T-Drain Plug ships with motor. (install if rear drain needed).

For 180TC, 210TC, 250TC:

- Drive End–No Drain installed. Optional M10x1 T-Drain Plug ships with motor (install if drain is needed).
- Opposite Drive End – No drain holes.



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.**