



MTDP Series Open Drip-Proof AC Motors – 3-Phase

T-Frame ODP Motors – 3-phase – 1 to 50hp



MTDP Series 3-Phase Motor

IronHorse® MTDP, open drip-proof motors range in size from 1hp to 50hp at 1800 rpm and 3hp, 5hp, and 7.5 hp at 3600 rpm. Frame sizes are available from 143T to 326T. All models have a rolled steel frame; frame sizes up to 256T have cast aluminum end bells, while frame sizes of 284T or larger have cast-iron end bells. All frame sizes have a fixed base.

Features

- Open drip-proof enclosure
- Rolled steel shell frame / cast aluminum or cast-iron end bells
- Large easy-to-wire junction box with rubber gasket
- No mounting orientation restrictions
- 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
- CURUS certified, CE

Accessories Available

- Junction boxes (replacement/spare)
- C-face kits
- Drive end endbell
- Opposite drive end endbell
- Current diverter rings (CDRs)

Applications

- Conveyors
- Fans
- Gear reducers
- Pumps



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Motor Specifications – 3-phase MTDP Series Motors – 1800 & 3600 RPM									
Part Number	Price	HP	Voltage	Housing	NEMA Frame	Service Factor	F.L. Amps @ 208/230V/460V 60Hz	Approx Weight (lb)	Drawing Links
1800 RPM									
<u>MTDP-001-3BD18</u>	\$;04kdf:	1	208– 230/460 VAC	ODP IP23	143T	1.15 (sine), 1.0 (drive)	2.9 / 2.6 / 1.3	33.1	PDF
<u>MTDP-1P5-3BD18</u>	\$04kdh:	1 1/2			145T		4.6 / 4.2 / 2.1	34.2	PDF
<u>MTDP-002-3BD18</u>	\$-04kdj:	2			145T		5.9 / 5.4 / 2.7	38.6	PDF
<u>MTDP-003-3BD18</u>	\$04kdo:	3			182T		8.4 / 7.6 / 3.8	68.3	PDF
							8.7 / 7.8 / 3.9		
<u>MTDP-005-3BD18</u>	\$04kdq:	5			184T		13.6 / 12.4 / 6.2	91.5	PDF
							13.7 / 12.4 / 6.2		
<u>MTDP-7P5-3BD18</u>	\$;04kdt:	7 1/2			213T		20.7 / 18.8 / 9.4	140.2	PDF
							21.7 / 19.6 / 9.8		
<u>MTDP-010-3BD18</u>	\$04kdu:	10			215T		28.3 / 25.6 / 12.8	156.0	PDF
<u>MTDP-015-3BD18</u>	\$;004kdv:	15			254T		37.6 / 34.2 / 17.1	214.9	PDF
							38.5 / 34.8 / 17.4		
<u>MTDP-020-3BD18</u>	\$;004kdx:	20			256T		49.5 / 45.0 / 22.5	260.1	PDF
				51.5 / 46.6 / 23.3					
<u>MTDP-025-3BD18</u>	\$;004kdy:	25	284T	66.3 / 60.0 / 30.0	300.0	PDF			
<u>MTDP-030-3BD18</u>	\$;004kdz:	30	286T	79.4 / 71.8 / 35.9	330.0	PDF			
				77.6 / 70.2 / 35.1					
<u>MTDP-040-3BD18</u>	\$;004kdj:	40	324T	105.6 / 95.8 / 47.9	440.0	PDF			
<u>MTDP-050-3BD18</u>	\$;004kdj:	50	326T	130.3 / 117.4 / 58.7	470.0	PDF			
				131.2 / 118.6 / 59.3					
3600 RPM									
<u>MTDP-003-3BD36</u>	\$-04kdl:	3	208– 230/460 VAC	ODP IP23	145T	1.15 (sine), 1.0 (drive)	7.9 / 7.2 / 3.6	39.7	PDF
<u>MTDP-005-3BD36</u>	\$04kdp:	5			182T		12.3 / 11.8 / 5.9	64.9	PDF
<u>MTDP-7P5-3BD36</u>	\$04kds:	7 1/2	184T	18.9 / 17.2 / 8.6	78.1	PDF			
				19.2 / 17.4 / 8.7					

Specifications in GREEN apply to motors manufactured after September 2020

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.



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Performance Data – 3-phase MTDP Series Motors (230V / 60Hz data except as indicated)																
Part Number	HP	NEMA Design	FL RPM	Current @ 230/460V (Amps)			Torque (lb-ft)			Min Speed (rpm)		Maximum Speed (rpm)		FL Efficiency (%)	FL Power Factor	Rotor Inertia (lb-ft²)
				No Load	Full Load	Locked Rotor	Full Load	Locked Rotor	Break -down	CT 10:1	VT 20:1	CHP(1)	Safe			
1800 RPM																
<u>MTDP-001-3BD18</u>	1	B	1745	1.32 / 0.66	2.6 / 1.3	21.46 / 10.73	3.03	8.18	10.09	175.5	87.75	2700	3600	85.5	0.81	0.09
	1742		1.40 / 0.70	2.8 / 1.4	21.18 / 10.59	9.51		10.03								
<u>MTDP-1P5-3BD18</u>	1 1/2		1747	2.44 / 1.22	4.2 / 2.1	34.52 / 17.26	4.44	15.63	16.56	175.5	87.75	2700	3600	86.5	0.76	0.09
<u>MTDP-002-3BD18</u>	2		1744	2.96 / 1.48	5.4 / 2.7	47.24 / 23.62	6.06	21.15	23.45	175.5	87.75	2700	3600	86.5	0.79	0.10
<u>MTDP-003-3BD18</u>	3		1759	3.38 / 1.69	7.6 / 3.8	69.9 / 34.95	8.8	32.12	37.58	175.5	87.75	2700	3600	89.5	0.82	0.36
			1753	3.74 / 1.87	7.8 / 3.9	63.64 / 31.82		30.36	31.68						0.8	
<u>MTDP-005-3BD18</u>	5		1749	4.46 / 2.23	12.4 / 6.2	105.76 / 52.88	14.9	50.21	57.07	175.5	87.75	2700	3600	89.5	0.83	0.48
			1745			93.34 / 46.67		40.83	46.04						0.84	
<u>MTDP-7P5-3BD18</u>	7 1/2		1763	9.52 / 4.76	18.8 / 9.4	141.26 / 70.63	21.98	101.11	87.04	176	88	2700	3600	91	0.81	0.95
			1758	10.56 / 5.28	19.6 / 9.8	118.62 / 59.31	22.02	78.39	81.03						0.78	
<u>MTDP-010-3BD18</u>	10		1753	10.24 / 5.12	25.6 / 12.8	160.8 / 80.4	30.14	97.35	100.67	176	88	2700	3600	91.7	0.81	1.16
<u>MTDP-015-3BD18</u>	15		1776	10.2 / 5.1	34.2 / 17.1	261.8 / 130.9	43.63	101.22	128.27	176.5	88.2	2700	3600	93	0.87	2.03
			1774	11.4 / 5.7	34.8 / 17.4	235.6 / 117.8	43.6	113.36	120.30						0.85	
<u>MTDP-020-3BD18</u>	20		1765	11.06 / 5.53	45.0 / 22.5	325.2 / 162.6	59.84	175.93	166.36	176.5	88.2	2700	3600	93	0.9	2.44
			1769	13.96 / 6.98	46.6 / 23.3	303.4 / 151.7	59.67	154.54	178.40						0.86	
<u>MTDP-025-3BD18</u>	25		1775	24.6 / 12.3	60.0 / 30.0	380 / 190	72.30	175.69	184.37	177	88.5	2700	2700	93.6	0.83	3.25
<u>MTDP-030-3BD18</u>	30		1780	31.4 / 15.7	71.8 / 35.9	499.6 / 249.8	86.87	241.50	277.12	177	88.5	2700	2700	94.1	0.82	3.69
			1775	24.8 / 12.4	70.2 / 35.1	433 / 216.5	87.47	252.79	291.28						0.84	
<u>MTDP-040-3BD18</u>	40		1778	36.8 / 18.4	95.8 / 47.9	630 / 315	118.10	419.26	457.05	177.5	88.75	2700	2700	94.1	0.84	7.35
<u>MTDP-050-3BD18</u>	50		1776	46 / 23	117.4 / 58.7	818 / 409	145.2	512.56	441.41	177.5	88.75	2700	2700	94.5	0.84	8.99
			1781	46.2 / 23.1	118.6 / 59.3	771 / 385.5	146.7	476.78	517.85							
3600 RPM																
<u>MTDP-003-3BD36</u>	3	B	3439	2.82 / 1.41	7.2 / 3.6	68.62 / 34.31	4.51	17.27	18.67	350.5	175.25	5400	7200	85.5	0.87	0.07
			3441	3.02 / 1.51	7.4 / 3.7	63.26 / 31.63	4.5	18.09	22.28						0.86	
<u>MTDP-005-3BD36</u>	5		3509	3.64 / 1.82	11.8 / 5.9	94.02 / 47.01	7.43	25.26	26.15	350.5	175.25	5400	7200	86.5	0.89	0.15
<u>MTDP-7P5-3BD36</u>	7 1/2		3502	4.2 / 2.3	17.2 / 8.6	135.06 / 67.53	11.06	33.73	38.38	350.5	175.25	5400	5400	88.5	0.9	0.20
			3499	4.86 / 2.43	17.36 / 8.68	132.26 / 66.13	11.02	33.17	41.99							

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Current Diverter Rings (CDRs)

CDRs provide a premium shaft grounding solution that uses proprietary conductive filaments and maintenance free shaft sleeve to divert harmful shaft currents away from the bearings to ground.

Features

Conductive Filaments - provide a path to ground for shaft currents, away from the bearings.

Shaft Sleeve - promotes premium grounding performance through consistent contact with conductive filaments; prevents conduction inhibiting oxidation from forming on the shaft.

Conductive Rings - maintain conductivity for shaft currents and drives shaft sleeve.

- Standard Material: Bearing Bronze
- Movement: Axial- 0.13 mm [0.005 in] | Radial- 0.64 mm [0.025in] Consult Inpro/Seal engineering for shaft movement outside limits shown.
- Temperature (Elastomers): Conductive O-Ring: Conductive Silicone- -65°C [-85°F] – 232°C [450°F]
- Speed: 10,000 SFPM Consult Inpro/Seal engineering for speeds exceeding 6,000 SFPM.
- Shaft Size: 15.88 mm [0.625 in] – 508 mm [20 in] Consult engineering for shaft sizes above 203.2 mm [8 in]
- Mounting Configurations: Press-In, Clip-On, Side-Mount, Epoxy, Flexbracket, Bolt-Through
- Standard Overall Length: 8.89 mm [0.350 in]



Current Diverter Ring





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Junction Box
MTADP-JBOX-140



C-Face Flange
MTADP-CFACE-140TC



Current Diverter Ring
MTADP-CDR-140



Drive End Endbell
MTADP-DEB-140



Opposite End Endbell
MTADP-OEB-140

MTDP Series 3-phase Motor Spare/Replacement Parts				
Part Number	Price	Accessory Type	Applicable MTDP Motor Number	Motor HP
<u>MTADP-JBOX-140</u>	\$4kce:	junction box	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-JBOX-180</u>	\$;4kcf:		180T frame ODP	3, 5, 7.5HP
<u>MTADP-JBOX-210</u>	\$4kcg:		210T frame ODP	7.5, 10HP
<u>MTADP-JBOX-250</u>	\$4kch:		250T frame ODP	15, 20HP
<u>MTADP-JBOX-280</u>	\$-04kci:		280T frame ODP	25, 30HP
<u>MTADP-JBOX-320</u>	\$-04kcj:		320T frame ODP	40, 50HP
<u>MTADP-CFACE-140TC</u>	\$4qx3:	c-face flange	140T frame ODP	1, 1.5 HP
<u>MTADP-CFACE-180TC</u>	\$4qx4:		180T frame ODP	3, 5 HP
<u>MTADP-CFACE-210TC</u>	\$04qx5:		210T frame ODP	7.5, 10HP
<u>MTADP-CFACE-250TC</u>	\$04qx6:		250T frame ODP	15, 20HP
<u>MTADP-CFACE-280TC</u>	\$04qx7:		280T frame ODP	25, 30HP
<u>MTADP-CFACE-320TC</u>	\$04qx8:		320T frame ODP	40, 50HP
<u>MTADP-DEB-140</u>	\$4kcs:	drive end (DE) endbell	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-DEB-180</u>	\$;4kct:		180T frame ODP	3, 5, 7.5 HP
<u>MTADP-DEB-210</u>	\$4kcu:		210T frame ODP	7.5, 10HP
<u>MTADP-DEB-250</u>	\$04kcv:		250T frame ODP	15, 20HP
<u>MTADP-DEB-280</u>	\$04kcx:		280T frame ODP	25, 30HP
<u>MTADP-DEB-320</u>	\$04kcy:		320T frame ODP	40, 50HP
<u>MTADP-OEB-140</u>	\$4kcz:	opposite drive end (ODE) endbell	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-OEB-180</u>	\$;4kcj:		180T frame ODP	3, 5 HP
<u>MTADP-OEB-210</u>	\$;4kcj:		210T frame ODP	7.5, 10HP
<u>MTADP-OEB-250</u>	\$04kc_:		250T frame ODP	15, 20HP
<u>MTADP-OEB-280</u>	\$04kc#:		280T frame ODP	25, 30HP
<u>MTADP-OEB-320</u>	\$;04kcl:		320T frame ODP	40, 50HP
<u>MTADP-CDR-140</u>	\$04kc?:	current diverter ring	140T frame ODP	1, 1.5, 2, 3 HP
<u>MTADP-CDR-180</u>	\$;04kc,:		180T frame ODP	3, 5, 7.5 HP
<u>MTADP-CDR-210</u>	\$04kd0:		210T frame ODP	7.5, 10HP
<u>MTADP-CDR-250</u>	\$04kd1:		250T frame ODP	15, 20HP
<u>MTADP-CDR-280</u>	\$04kd2:		280T frame ODP	25, 30HP
<u>MTADP-CDR-320</u>	\$04kd3:		320T frame ODP	40, 50HP

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