

## PERFORMANCE DATA SHEET NEMA PREMIUM NR CAN NEMA 12 - 12

Catalogue #: MPOP-43

HP	kW	Voltage	S.F. @ 60Hz	EFF.	P.F.	Frame	Design	L.R. Amps
20	14.92	575	1.15	92.4%	0.78	286T	B	116

60 Hz								
FLA							Code	F.L. RPM
208	230	416	460	480	575	600		
/	/	/	/	/	21	20.13	G	1185

50 Hz								
FLA			S.F. @ 50Hz	Efficiency	Power Factor	Code	F.L. RPM	
190	380	415						
/	/	/	/	/	/	/	/	

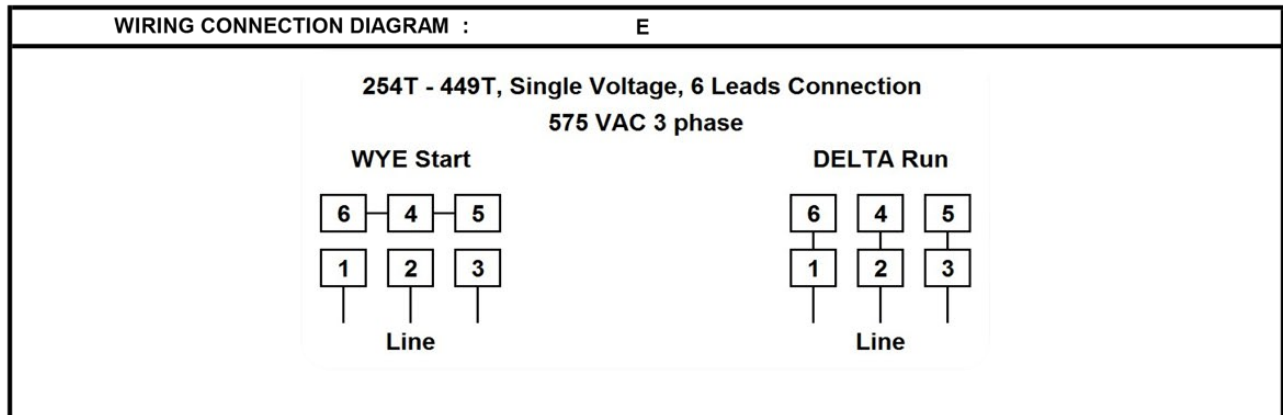
Wgt. Lbs	PH	Duty	Insul. Class	Amb.	Elevation	Temp. Rise° C
394	3	Cont.	F	40°C	1000M (3300 Ft)	60

% Efficiency		% Power Factor		Torque		Winding Resist. Ω	Safe Cold Start (Secs)
Full Load:	92.4%	Full Load:	0.78	Full Load Ft/Lbs	88.6		
3/4 Load:	91.7%	3/4 Load:	0.73	Locked Rotor %	160		
1/2 Load:	91.5%	1/2 Load:	0.61	Break Down %	250	0.84	20

Rotor Inertia Wk2 Lb-Ft2	Max Load Inertia Wk2 Lb-Ft2	Shaft Material	Frame Material	DE Bracket Type	ODE Bracket Type	Enclosure	NEMA Rating	Lead Wire Size
5.70	385	Standard	Cast Iron	Standard	Standard	ODP	IP23	12AWG

Ball Bearings		Grease	Mount Type	Orientation	Paint	Sound Pressure @ 3FT	Sound Power
DE	ODE						
6311	6311	Mobil PolyrexEm	Rigid	Horizontal	Green	69	80

Inverter Duty. Motor meets MG1 parts 31.4.4.2	Constant Torque Range	Variable Torque Range	Constant HP RPM
	10:1	20:1	1800

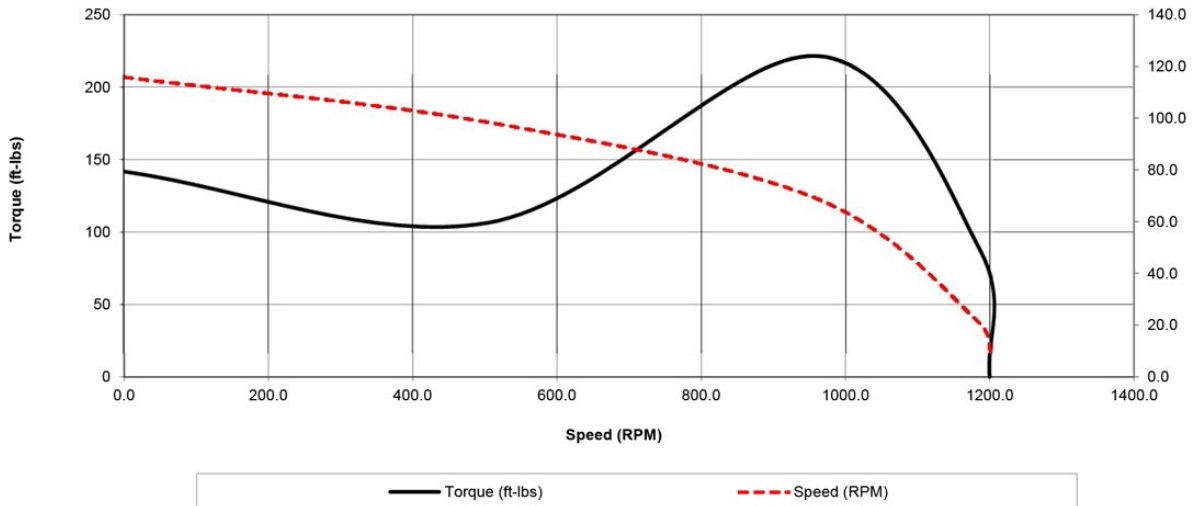


Date: 2020-02-18  
 Customer: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Submittee: J.C. Lavallée

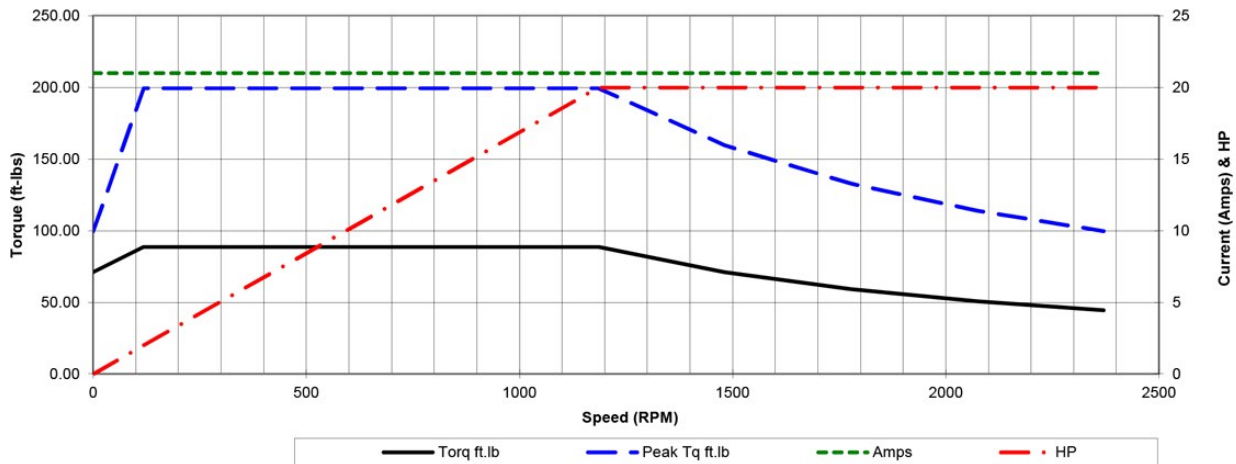
Catalogue #: **MPOP-43**

NEMA PREMIUM NR CAN NEMA 12 - 12										
HP	VAC	RPM	Enclosure	Frame	Frequency	Design	Poles	LR Code Letter	Insulation Class	Temp. Rise °C
20	575	1185	ODP	286T	60	B	6	G	F	60
	0Hz	6Hz	15Hz	30Hz	45Hz	60Hz	75Hz	90Hz	105Hz	120Hz
Amps	21	21	21	21	21	21	21	21	21	21
RPM	0	118.5	296.25	592.5	888.75	1185	1481.25	1777.5	2073.75	2370
Torq ft.lb	70.91	88.64	88.64	88.64	88.64	88.64	70.91	59.09	50.65	44.32
Peak Tq ft.lb	99.72	199.44	199.44	199.44	199.44	199.44	159.55	132.96	113.97	99.72
HP	0	2.0	5.0	10.0	15.0	20.0	20.0	20.0	20.0	20.0
	Locked Rotor	Pull-Up	Breakdown	Rated Load	Idle	Duty	S. F.	Ambient	Elevation	dBA @ 1M
Speed (RPM)	0.0	504	960	1185	1200	Continuous	1.15	40°C	3300 ft	69
Current (Amps)	116.0	98.6	69.0	21.0	10.0	VFD Rating: Meets MG1 parts 31.4.4.2				
Torque (ft-lbs)	141.8	106.4	221.6	88.6	0.0	C.T.	10:1	V.T.	20:1	

Motor Speed Data



Motor Torque Capability vs RPM

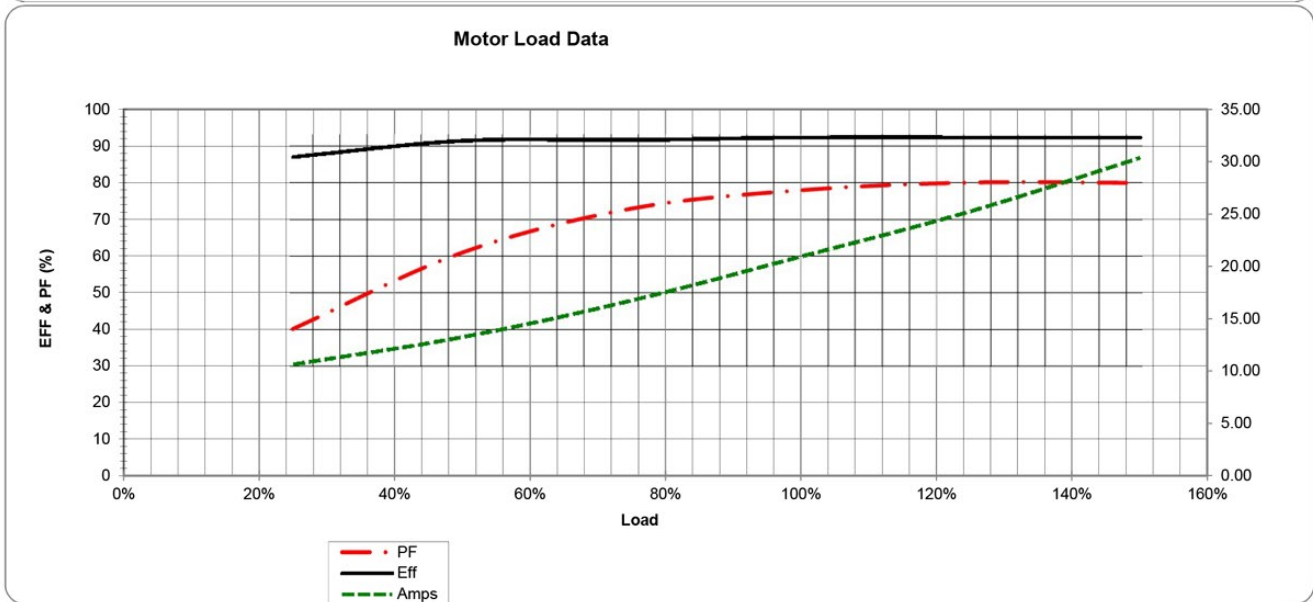
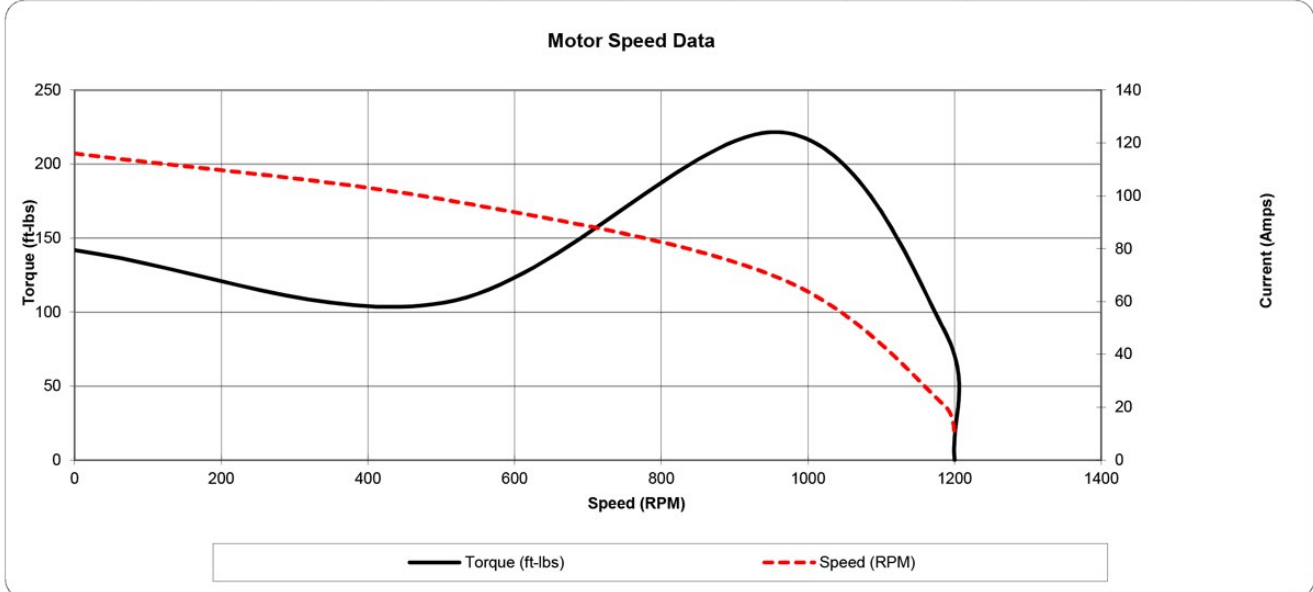




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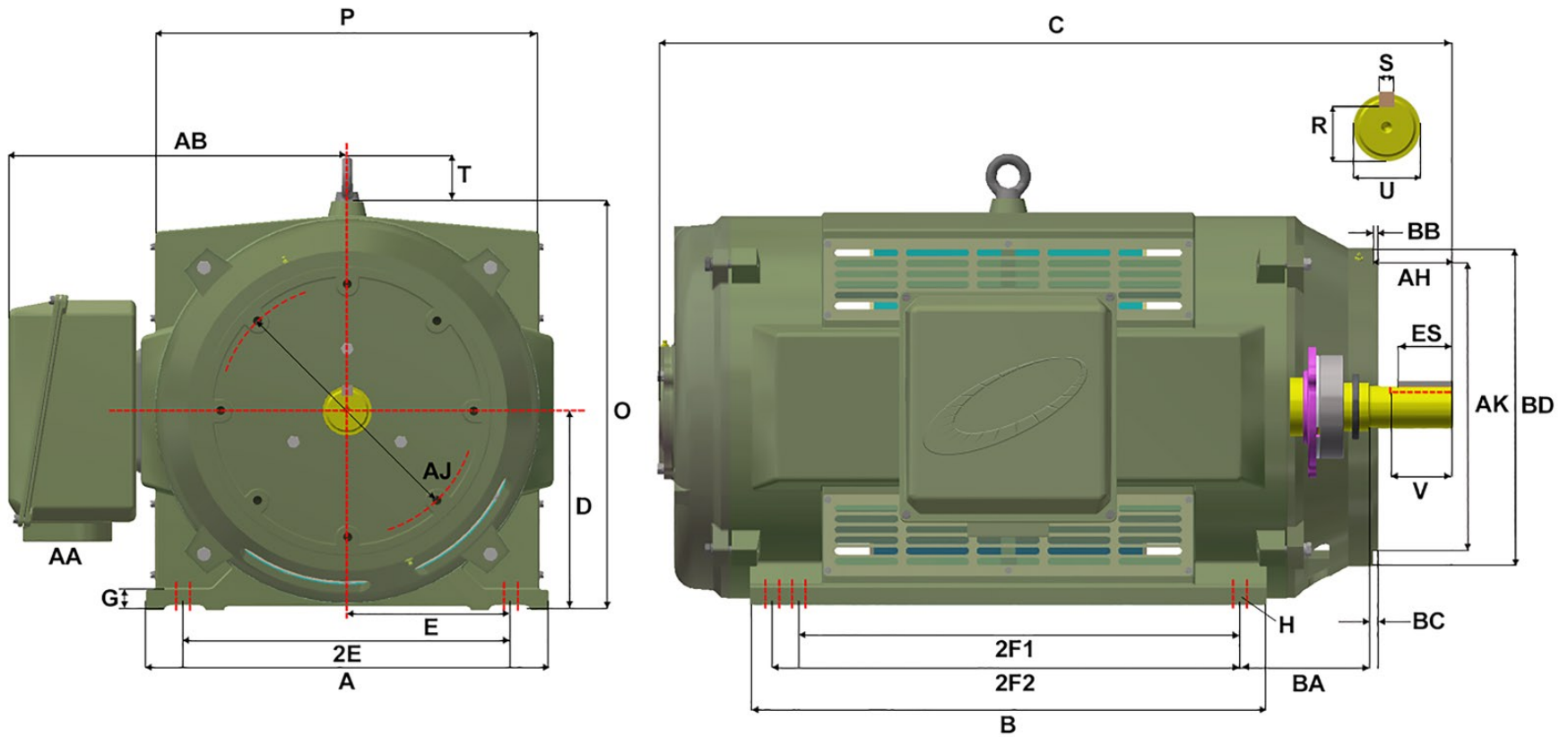
Catalogue #: **MPOP-43**

NEMA PREMIUM NR CAN NEMA 12 - 12										
HP	VAC	RPM	Enclosure	Frame	Frequency	Design	Poles	LR Code Letter	Insulation Class	Temp. Rise °C
20	575	1185	ODP	286T	60	B	6	G	F	60
Load %	0%	25%	50%	75%	100%	125%	150%			
Amps	10.00	10.70	13.30	16.80	21.00	25.30	30.40			
Torq ft/lbs	0	22.13	44.26	66.68	89.25	112.12	135.28			
RPM	0	1196.25	1192.5	1188.75	1185	1181.25	1177.5			
Eff	0	87.07	91.50	91.70	92.40	92.40	92.40			
PF	0	40.2	61	73	78	80.1	80			
	Locked Rotor	Pull-Up	Breakdown	Rated Load	Idle	Duty	S. F.	Ambient	Elevation	dBA @ 1M
Speed (RPM)	0	504	960	1185	1200	Continuous	1.15	40°C	3300 ft	69
Current (Amps)	116	98.6	69.0	21	10	VFD Rating: Meets MG1 parts 31.4.4.2				
Torque (ft-lbs)	141.83	106.37	221.60	88.64	0.0	C.T.	10:1	V.T.	20:1	

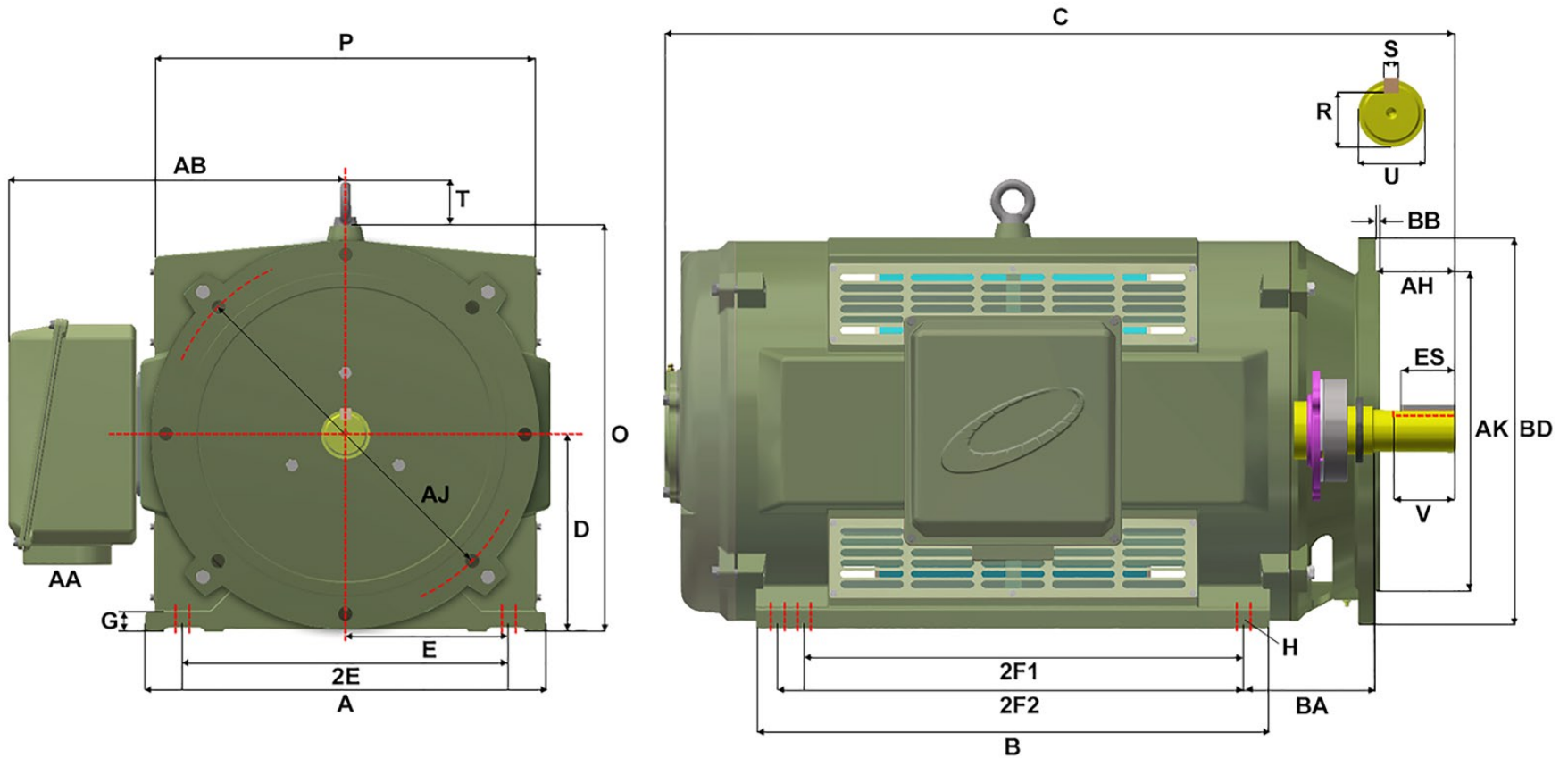




Version: 2WTI		Revised: 08-10-2019		HP	RPM	FRAME	ENCLOSURE	MPOP/MQOP-43					
Customer is responsible in determining that Max Motion product will fit/perform suitably in the intended application				20	1200	286T	ODP						
A	B	C	D	E	2E	2F1	2F2	G	H	O	P	R	S
13.00	12.80	24.80	7.00	5.50	11.00	9.50	11.00	0.70	6 X 0.53	14.30	13.95	1.591	0.500
T	U	V	AA	AB	BA	ES	N-W						
2.20	1.875	4.63	1.50	10.10	4.75	3.28	4.62						



Version: 2WTI		Revised: 08-10-2019		HP	RPM	FRAME	ENCLOSURE	MPOP/MQOP-43C									
Customer is responsible in determining that Max Motion product will fit/perform suitably in the intended application								20	1200	286T	ODP						
A	B	C	D	E	2E	2F1	2F2	G	H	O	P	R	S				
13.00	12.80	24.80	7.00	5.50	11.00	9.50	11.00	0.70	6 X 0.53	14.30	13.95	1.591	0.500				
T	U	V	AA	AB	AH	AJ	AK	BA	BB	BC	BD	ES					
2.20	1.875	4.63	1.50	10.10	4.38	9.00	10.50	4.75	0.25	0.25	11.25	3.28					



Version: 2WTI		Revised: 08-10-2019		HP	RPM	FRAME	ENCLOSURE	MPOP/MQOP-43D									
Customer is responsible in determining that Max Motion product will fit/perform suitably in the intended application								20	1200	286T	ODP						
A	B	C	D	E	2E	2F1	2F2	G	H	O	P	R	S				
13.00	12.80	24.80	7.00	5.50	11.00	9.50	11.00	0.70	6 X 0.53	14.30	13.95	1.591	0.500				
T	U	V	AA	AB	AH	AJ	AK	BA	BB	BC	BD	ES					
2.20	1.875	4.63	1.50	10.10	4.62	12.50	11.00	4.75	0.25	0.00	14.00	3.28					



## PREMIUM DESIGN B NEMA 12-12

ROLLED STEEL & CAST IRON CONSTRUCTION RIGID BASE

ODP OPEN DRIPROOF

MaxMotion

### Applications:

For general purpose use on compressors, pumps, conveyors, fans, blowers and other machinery in environments that are relatively clean & dry.

### Features:



**Design** - NEMA standard MG-1, Design B meets MG-1 Part 31

**Agency listings and standard** - NEMA, IEEE, CSA, CSAus, IEC, CE, NRCan

**Service Factor** - 1.15

**Electrical Supply** - At 60Hz: 575V and 230/460V dual rated and at 50Hz: 190/380, Frame 445T+ are only 460V or 575V

**Windings** - Highest quality Enamel coated Corona resistant inverter duty magnet wire. VPI with additional dip and bake.

**Insulation** - Non hygroscopic class F with class B temperature rise

**Voltage and frequency variation** - +/- 10% as based on two voltage points of the motor being either 230 / 460 or 333 / 575

**Bearings** - 143T to 215T are shielded bearings, 254T to 449T are regreasable with brass grease nipples and retaining bearing caps. Frame 404T to 449T are with roller bearings.

**Bearing lubricant** - Frame 143T to 215T is lithium grease, -30 Deg C to 100 Deg C amb. Frame 254T+ are long life mobil Polyrex EM, -29 Deg C to 177 Deg C.

**Enclosure Protection** - Open Dripproof, IP Class 23, frame 143T to 215T are rolled steel construction and 254T+ are cast iron frame.

**Conduit Box** - Oversize cast iron, diagonally split. Can be rotated in 90 Deg steps. Lead separator gasket to seal conduit box from frame and gasketed cover. Grounding terminal inside conduit box and threaded conduit entry.

**Inverter duty** - Suitable for inverter application at 230V, 460V, 575V for speed ranges of 10:1 constant torque and 20:1 variable torque.

**Nameplate** - Corrosion resistant stainless steel showing all data connection diagrams and certifications

**Drain plugs** - Located at the lowest point of each end bracket.

**Warranty** - 3 years



**PREMIUM DESIGN B NEMA 12-12**  
**ROLLED STEEL & CAST IRON CONSTRUCTION RIGID BASE**  
 ODP OPEN DRIPROOF



HP	FL RPM	VOLTS	FRAME	CAT NO.	CONSTRUCTION	NOM EFF.	F.L. AMPS	CODE	WT (Lbs)	DE BRG	ODE BRG	"C" Dimension (Inch)
1	3515	230/460	143T	MQOP-1	Rolled Steel	77	3.2/1.6	M	41	6205	6205	11,2
	3515	575	143T	MPOP-1	Rolled Steel	77	1.3	M	41	6205	6205	11,2
	1755	230/460	143T	MQOP-2	Rolled Steel	85,5	3.2/1.5	M	47	6205	6205	11,2
	1755	575	145T	MPOP-2	Rolled Steel	85,5	1.3	M	47	6205	6205	12
	1170	230/460	145T	MQOP-3	Rolled Steel	82,5	3.4/1.7	M	52	6205	6205	12
	1170	575	145T	MPOP-3	Rolled Steel	82,5	1.4	M	52	6205	6205	12
1 1/2	3510	230/460	143T	MQOP-6	Rolled Steel	84	4/2	M	46	6205	6205	11,2
	3510	575	143T	MPOP-6	Rolled Steel	84	1.6	M	46	6205	6205	11,2
	1755	2230/460	145T	MQOP-7	Rolled Steel	86,5	4.6/2.3	M	55	6205	6205	12
	1755	575	145T	MPOP-7	Rolled Steel	86,5	1.9	M	55	6205	6205	12
	1175	230/460	182T	MQOP-8	Rolled Steel	86,5	4.8/2.4	M	95	6206	6206	14,1
	1175	575	182T	MPOP-8	Rolled Steel	86,5	1.9	M	95	6206	6206	14,1
2	3515	230/460	145T	MQOP-11	Rolled Steel	85,5	5.2/2.6	L	52	6205	6205	12
	3515	575	145T	MPOP-11	Rolled Steel	85,5	2.1	L	52	6205	6205	12
	1750	230/460	145T	MQOP-12	Rolled Steel	86,5	6/3	L	56	6206	6206	12
	1750	575	145T	MPOP-12	Rolled Steel	86,5	2.4	L	56	6206	6206	12
	1180	230/460	184T	MQOP-13	Rolled Steel	87,5	6/3	L	103	6206	6206	14,9
	1180	575	184T	MPOP-13	Rolled Steel	87,5	2.4	L	103	6206	6206	14,9
3	3500	230/460	145T	MQOP-16	Rolled Steel	85,5	7.4/3.7	K	90	6205	6205	12
	3500	575	145T	MPOP-16	Rolled Steel	85,5	3	K	90	6205	6205	12
	1770	230/460	182T	MQOP-17	Rolled Steel	89,5	8.2/4.1	K	97	6206	6206	14,1
	1770	575	182T	MPOP-17	Rolled Steel	89,5	3.3	K	97	6206	6206	14,1
	1180	230/460	213T	MQOP-18	Rolled Steel	88,5	8.6/4.3	K	136	6208	6208	16,54
	1180	575	213T	MPOP-18	Rolled Steel	88,5	3.4	K	136	6208	6208	16,54
5	3520	230/460	184T	MQOP-21	Rolled Steel	86,5	12.4/6.2	J	110	6206	6206	14,9
	3520	575	184T	MPOP-21	Rolled Steel	86,5	5	J	110	6206	6206	14,9
	1170	230/460	184T	MQOP-22	Rolled Steel	89,5	13.4/6.7	J	112	6206	6206	14,9
	1170	575	184T	MPOP-22	Rolled Steel	89,5	5.4	J	112	6206	6206	14,9
	1180	230/460	215T	MQOP-23	Rolled Steel	89,5	14/7	J	162	6208	6208	17,52
	1180	575	215T	MPOP-23	Rolled Steel	89,5	5.6	J	162	6208	6208	17,52
7.5	3520	230/460	184T	MQOP-26	Rolled Steel	88,5	17.6/8.8	H	145	6206	6206	14,9
	3520	575	184T	MPOP-26	Rolled Steel	88,5	7	H	145	6206	6206	14,9
	1770	230/460	213T	MQOP-27	Rolled Steel	91	19.2/9.6	H	150	6208	6208	16,54
	1770	575	213T	MPOP-27	Rolled Steel	91	7.7	H	150	6208	6208	16,54
	1175	230/460	254T	MQOP-28	Cast Iron	90,2	20.8/10.4	H	272	6309	6309	22,15
	1175	575	254T	MPOP-28	Cast Iron	90,2	8.3	H	272	6309	6309	22,15
10	3545	230/460	215T	MQOP-31	Rolled Steel	89,5	25.6/12.8	H	167	6208	6208	17,52
	3545	575	215T	MPOP-31	Rolled Steel	89,5	10.2	H	167	6208	6208	17,52
	1775	230/460	215T	MQOP-32	Cast Iron	91,7	26/13	H	167	6208	6208	17,52
	1775	575	215T	MPOP-32	Cast Iron	91,7	10.5	H	167	6208	6208	17,52
	1175	230/460	256T	MQOP-33	Cast Iron	91,7	27/13.5	H	293	6309	6309	22,15
	1175	575	256T	MPOP-33	Cast Iron	91,7	10.8	H	293	6309	6309	22,15
15	3545	230/460	215T	MQOP-36	Rolled Steel	90,2	38/19	G	286	6208	6208	17,52
	3545	575	215T	MPOP-36	Rolled Steel	90,2	15.5	G	286	6208	6208	17,52
	1765	230/460	254T	MQOP-37	Cast Iron	93	36/18	G	297	6309	6309	22,15
	1765	575	254T	MPOP-37	Cast Iron	93	14.4	G	297	6309	6309	22,15
	1180	230/460	284T	MQOP-38	Cast Iron	91,7	40/20	G	363	6311	6311	24,8
	1180	575	284T	MPOP-38	Cast Iron	91,7	16	G	363	6311	6311	24,8
20	3530	230/460	254T	MQOP-41	Cast Iron	91	46/23	G	315	6309	6309	22,15
	3530	575	254T	MPOP-41	Cast Iron	91	18.5	G	315	6309	6309	22,15
	1765	230/460	256T	MQOP-42	Cast Iron	93	48/24	G	315	6309	6309	22,15
	1765	575	256T	MPOP-42	Cast Iron	93	19.2	G	315	6309	6309	22,15
	1180	230/460	284T	MQOP-43	Cast Iron	92,4	52/26	G	394	6311	6311	24,8
	1180	575	284T	MPOP-43	Cast Iron	92,4	21	G	394	6311	6311	24,8
25	3540	230/460	256T	MQOP-46	Cast Iron	91,7	57/28.5	G	385	6309	6309	22,15
	3540	575	256T	MPOP-46	Cast Iron	91,7	23	G	385	6309	6309	22,15
	1775	230/460	284T	MQOP-47	Cast Iron	93,6	60/30	G	392	6311	6311	24,8
	1775	575	284T	MPOP-47	Cast Iron	93,6	24	G	392	6311	6311	24,8
	1185	230/460	324T	MQOP-48	Cast Iron	93	64/32	G	508	6312	6312	27,1
	1185	575	324T	MPOP-48	Cast Iron	93	26	G	508	6312	6312	27,1
30	3545	230/460	284TS	MQOP-51	Cast Iron	91,7	70/35	G	409	6311	6311	23,43
	3545	575	284TS	MPOP-51	Cast Iron	91,7	28	G	409	6311	6311	23,43
	1775	230/460	286T	MQOP-52	Cast Iron	94,1	70/35	G	418	6311	6311	24,8
	1775	575	286T	MPOP-52	Cast Iron	94,1	28	G	418	6311	6311	24,8
	1185	230/460	326T	MQOP-53	Cast Iron	93,6	76/38	G	537	6312	6312	27,1
	1185	575	326T	MPOP-53	Cast Iron	93,6	30.5	G	537	6312	6312	27,1





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 ODP OPEN DRIPROOF



HP	FL RPM	VOLTS	FRAME	CAT NO.	CONSTRUCTION	NOM EFF.	F.L. AMPS	CODE	WT (Lbs)	DE BRG	ODE BRG	"C" Dimension (Inch)
30	3545	230/460	286TS	MQOP-56	Cast Iron	92,4	90/45	G	510	6311	6311	23,43
	3545	575	286TS	MPOP-56	Cast Iron	92,4	36	G	510	6311	6311	23,43
	1780	230/460	324T	MQOP-57	Cast Iron	94,1	96/48	G	519	6312	6312	27,1
	1780	575	324T	MPOP-57	Cast Iron	94,1	38,4	G	519	6312	6312	27,1
	1180	230/460	364T	MQOP-58	Cast Iron	94,1	100/50	G	697	6313	6313	29,3
	1180	575	364T	MPOP-58	Cast Iron	94,1	40	G	697	6313	6313	29,3
50	3545	230/460	324TS	MQOP-61	Cast Iron	93	110/55	G	548	6312	6312	25,6
	3545	575	324TS	MPOP-61	Cast Iron	93	44	G	548	6312	6312	25,6
	1778	230/460	326T	MQOP-62	Cast Iron	94,5	118/59	G	594	6312	6312	27,1
	1778	575	326T	MPOP-62	Cast Iron	94,5	48	G	594	6312	6312	27,1
	1185	230/460	365T	MQOP-63	Cast Iron	94,1	126/63	G	752	6313	6313	29,3
	1185	575	365T	MPOP-63	Cast Iron	94,1	50	G	752	6313	6313	29,3
75	3550	230/460	326TS	MQOP-66	Cast Iron	93,6	132/66	G	704	6312	6312	25,6
	3550	575	326TS	MPOP-66	Cast Iron	93,6	52,8	G	704	6312	6312	25,6
	1780	230/460	364T	MQOP-67	Cast Iron	95	140/70	G	766	6313	6313	29,3
	1780	575	364T	MPOP-67	Cast Iron	95	56	G	766	6313	6313	29,3
	1190	230/460	404T	MQOP-68	Cast Iron	94,5	140/70	G	1000	NU319	6318	33,3
	1190	575	404T	MPOP-68	Cast Iron	94,5	56	G	1000	NU319	6318	33,3
100	3565	230/460	364TS	MQOP-71	Cast Iron	93,6	166/83	G	766	6313	6313	27,17
	3565	575	364TS	MPOP-71	Cast Iron	93,6	67	G	766	6313	6313	27,17
	1780	230/460	365T	MQOP-72	Cast Iron	95	174/87	G	783	6313	6313	29,3
	1780	575	365T	MPOP-72	Cast Iron	95	70	G	783	6313	6313	29,3
	1190	230/460	405T	MQOP-73	Cast Iron	94,5	174/87	G	1120	NU319	6318	33,3
	1190	575	405T	MPOP-73	Cast Iron	94,5	70	G	1120	NU319	6318	33,3
150	3570	230/460	365TS	MQOP-76	Cast Iron	93,6	222/112	G	1040	6313	6313	27,17
	3570	575	365TS	MPOP-76	Cast Iron	93,6	90	G	1040	6313	6313	27,17
	1785	230/460	404T	MQOP-77	Cast Iron	95,4	224/112	G	1058	NU319	6318	33,3
	1785	575	404T	MPOP-77	Cast Iron	95,4	90	G	1058	NU319	6318	33,3
	1190	230/460	444T	MQOP-78	Cast Iron	95	234/117	G	1320	NU319	6318	39,5
	1190	575	444T	MPOP-78	Cast Iron	95	94	G	1320	NU319	6318	39,5
200	3575	460	404TS	MQOP-81	Cast Iron	94,1	138	G	1247	6314	6314	33,3
	3575	575	404TS	MPOP-81	Cast Iron	94,1	110	G	1247	6314	6314	33,3
	1785	460	405T	MQOP-82	Cast Iron	95,4	141	G	1342	NU319	6318	33,3
	1785	575	405T	MPOP-82	Cast Iron	95,4	113	G	1342	NU319	6318	33,3
	1190	460	445T	MQOP-83	Cast Iron	95	146	G	1400	NU319	6318	39,5
	1190	575	445T	MPOP-83	Cast Iron	95	118	G	1400	NU319	6318	39,5
250	3575	460	405TS	MQOP-86	Cast Iron	94,1	166	G	1408	6314	6314	33,3
	3575	575	405TS	MPOP-86	Cast Iron	94,1	132	G	1408	6314	6314	33,3
	1790	460	444T	MQOP-87	Cast Iron	95,8	167	G	1672	NU319	6318	39,5
	1790	575	444T	MPOP-87	Cast Iron	95,8	134	G	1672	NU319	6318	39,5
	1190	460	447T	MQOP-88	Cast Iron	95,4	173	G	1800	NU319	6318	43
	1190	575	447T	MPOP-88	Cast Iron	95,4	138	G	1800	NU319	6318	43
300	3575	460	444TS	MQOP-96	Cast Iron	95	219	G	1584	6314	6314	34,75
	3575	575	444TS	MPOP-96	Cast Iron	95	175	G	1584	6314	6314	34,75
	1790	460	445T	MQOP-97	Cast Iron	95,8	220	G	1782	NU319	6318	39,5
	1790	575	445T	MPOP-97	Cast Iron	95,8	176	G	1782	NU319	6318	39,5
	1190	460	449T	MQOP-98	Cast Iron	95,4	230	G	2100	NU319	6318	48
	1190	575	449T	MPOP-98	Cast Iron	95,4	185	G	2100	NU319	6318	48
350	3575	460	445TS	MQOP-101	Cast Iron	95	270	G	1870	6314	6314	34,75
	3575	575	445TS	MPOP-101	Cast Iron	95	216	G	1870	6314	6314	34,75
	1790	460	447T	MQOP-102	Cast Iron	95,8	280	G	2150	NU319	6318	43
	1790	575	447T	MPOP-102	Cast Iron	95,8	224	G	2150	NU319	6318	43
400	3580	460	447TS	MQOP-106	Cast Iron	95,4	322	G	2002	6314	6314	38,25
	3580	575	447TS	MPOP-106	Cast Iron	95,4	258	G	2002	6314	6314	38,25
	1790	460	449T	MQOP-107	Cast Iron	95,8	335	G	2220	NU319	6318	48
	1790	575	449T	MPOP-107	Cast Iron	95,8	260	G	2220	NU319	6318	48
450	3580	460	449TS	MQOP-111	Cast Iron	95,4	373	G	2400	6314	6314	43,25
	3580	575	449TS	MPOP-111	Cast Iron	95,4	299	G	2400	6314	6314	43,25

