



PERFORMANCE DATA SHEET

Meets or exceeds MEPS, as described by the US DOE in docket 10CFR431 and NRCan's Amendment 14

Catalogue #: **MQS-90S2FC-S3**

HP	kW	Voltage	S.F. @ 60Hz	EFF.	P.F.	Frame	Design	L.R. Amps
2	1,49	230 / 460	1,15	85,5%	0,860	90S	B	25

60 Hz								
FLA							Code	F.L. RPM
208	230	416	460	480	575	600		
/	5,1	/	2,55	/	/	/	K	3525

50 Hz								
FLA			S.F. @ 50Hz		Efficiency	Power Factor	Code	F.L. RPM
190	380	415						
6,1	3,06	/	1,00		84,2%	0,88	L	2890

Wgt. Lbs	PH	Duty	Insul. Class	Amb.	Elevation	Temp. Rise° C
48,4	3	Cont.	F	40°C	1000M (3300 Ft)	35

% Efficiency		% Power Factor		Torque		Winding Resist. Ω	Safe Cold Start (Secs)
Full Load:	85,5%	Full Load:	0,86	Full Load Ft/Lbs	3,0		
3/4 Load:	85,3%	3/4 Load:	0,82	Locked Rotor %	280		
1/2 Load:	83,3%	1/2 Load:	0,75	Break Down %	380	/	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
/	/	Stainless Steel 304				TEFC	IP66	/

Ball Bearings		Grease	Mount Type	Orientation	Paint	Sound Pressure @ 3FT	Sound Power
DE	ODE						
6205	6205	Sealed Bearings	Rigid	Horizontal	-	/	/

Inverter Duty. Motor meets MG1 parts 31.4.4.2	Constant Torque Range	Variable Torque Range	Constant HP RPM
	10:1	20:1	2

WIRING CONNECTION DIAGRAM :	B	Nema C (IEC L) Dimension (mm)	370 mm
90 - 132, Dual Voltage, 12 Leads Connection 230 / 460 VAC 3 phase Low Voltage High Voltage WYE Start DELTA Run WYE Start DELTA Run			

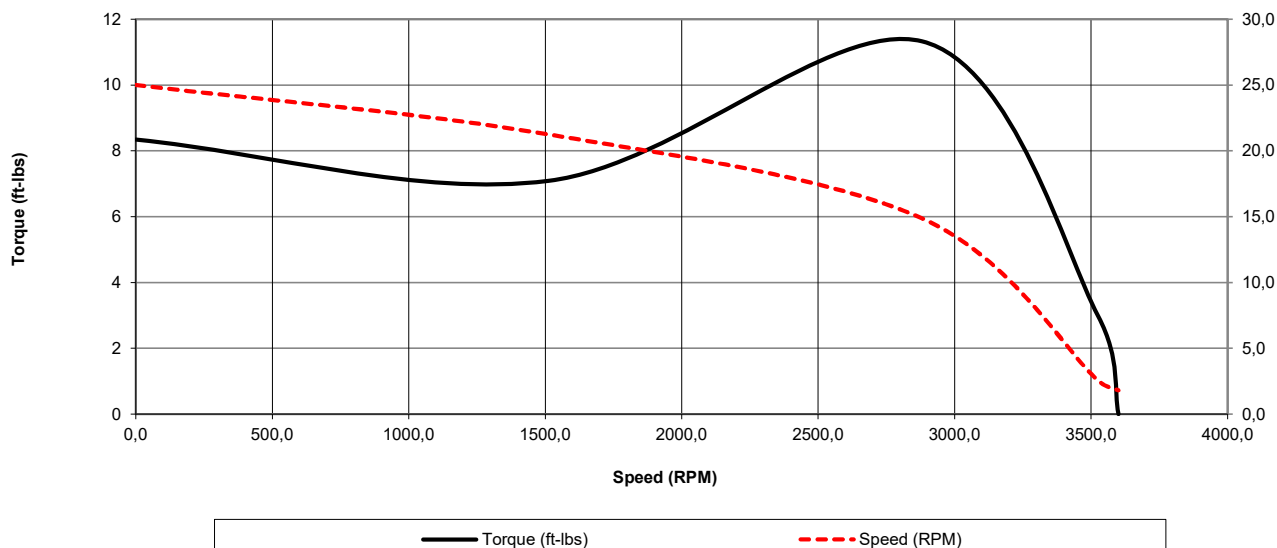
Date: 2023-12-21
 Customer:
 Contact:
 Submittee: J.C. Lavallée

Catalogue #: MQS-90S2FC-S3

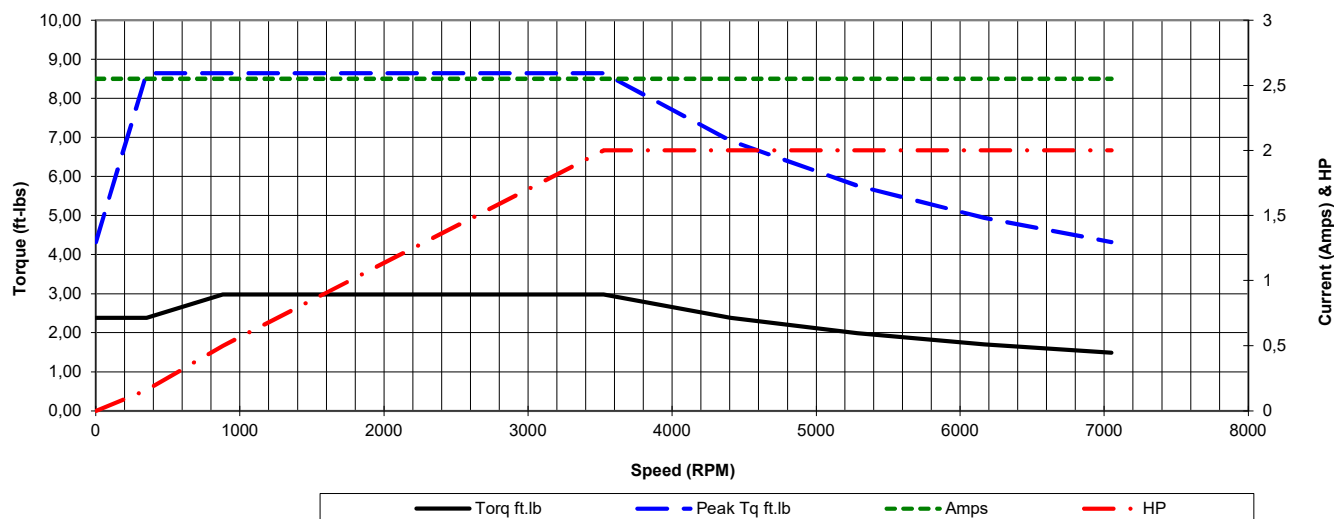
Meets or exceeds MEPS, as described by the US DOE in docket 10CFR431 and NRCan's Amendment 14

HP	VAC	RPM	Enclosure	Frame	Frequency	Design	Poles	LR Code Letter	Insulation Class	Temp. Rise °C
2	460	3525	TEFC	90S	60	B	2	K	F	35
	0Hz	6Hz	15Hz	30Hz	45Hz	60Hz	75Hz	90Hz	105Hz	120Hz
Amps	2,55	2,55	2,55	2,55	2,55	2,55	2,55	2,55	2,55	2,55
RPM	0	352,5	881,25	1762,5	2643,75	3525	4406,25	5287,5	6168,75	7050
Torq ft.lb	2,38	2,38	2,98	2,98	2,98	2,98	2,38	1,99	1,70	1,49
Peak Tq ft.lb	4,32	8,64	8,64	8,64	8,64	8,64	6,91	5,76	4,94	4,32
HP	0	0,2	0,5	1,0	1,5	2,0	2,0	2,0	2,0	2,0
	Locked Rotor	Pull-Up	Breakdown	Rated Load	Idle	Duty	S. F.	Ambient	Elevation	dBA @ 1M
Speed (RPM)	0,0	1512	2880	3525	3600	Cont.	1,15	40°C	3,300 ft	/
Current (Amps)	25,0	21,3	14,9	2,6	1,8	VFD Rating: Meets MG1 parts 31.4.4.2				
Torque (ft-lbs)	8,3	7,1	11,3	3,0	0,0	C.T.	10:1	V.T.	20:1	

Motor Speed Data



Motor Torque Capability vs RPM



Date: 2023-12-21
 Customer:
 Contact:
 Submittee: J.C. Lavallée

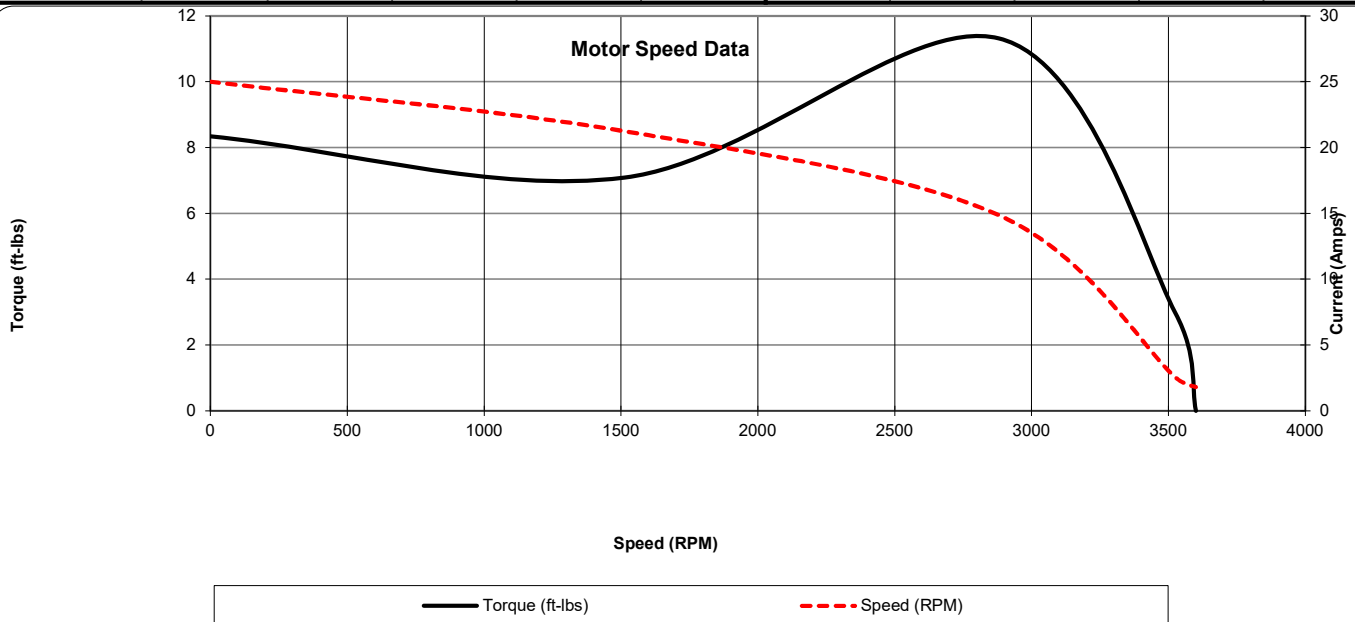
Catalogue #: MQS-90S2FC-S3

Meets or exceeds MEPS, as described by the US DOE in docket 10CFR431 and NRCan's Amendment 14

HP	VAC	RPM	Enclosure	Frame	Frequency	Design	Poles	LR Code Letter	Insulation Class	Temp. Rise °C
2	460	3525	TEFC	90S	60	B	2	K	F	35

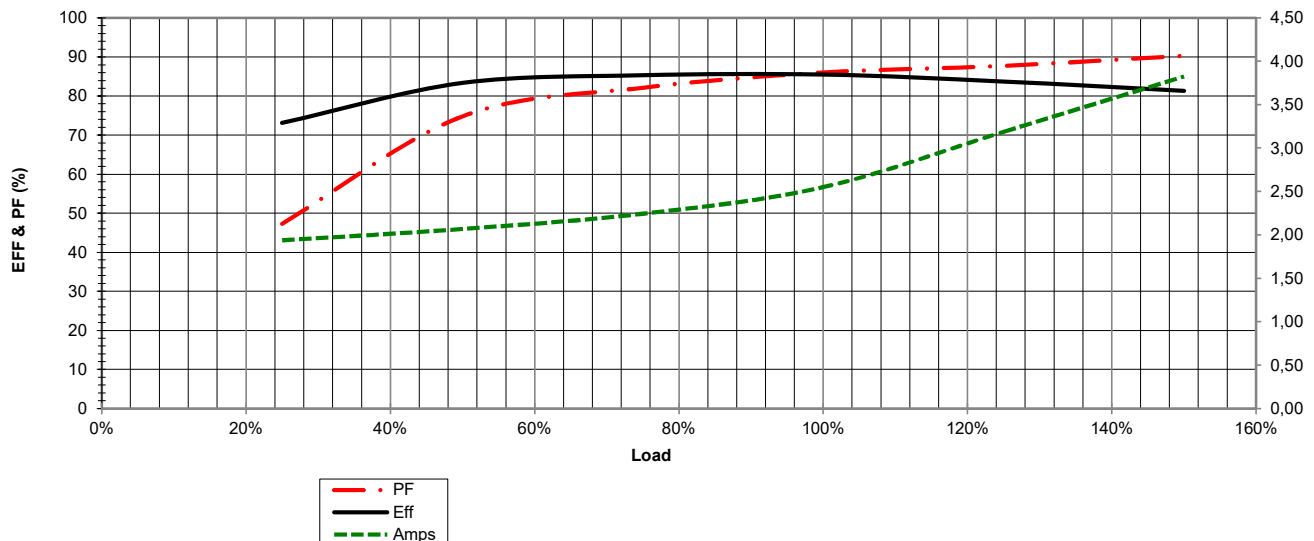
Load %	0%	25%	50%	75%	100%	125%	150%
Amps	1,81	1,94	2,07	2,24	2,55	3,19	3,83
Torq ft/lbs	0	0,73	1,47	2,22	2,98	3,74	4,52
RPM	0	3581,25	3562,5	3543,75	3525	3506,25	3487,5
Eff	0	73,09	83,34	85,29	85,50	83,72	81,33
PF	0	47,3	74,7942	82,13	86,0	87,7	90,3

	Locked Rotor	Pull-Up	Breakdown	Rated Load	Idle	Duty	S. F.	Ambient	Elevation	dBA @ 1M
Speed (RPM)	0	1512	2880	3525	3600	Cont.	1,15	40°C	3,300 ft	/
Current (Amps)	25	21,3	14,9	2,55	1,8105	VFD Rating: Meets MG1 parts 31.4.4.2				
Torque (ft-lbs)	8,34	7,09	11,32	2,98	0,0	C.T.	10:1	V.T.	20:1	

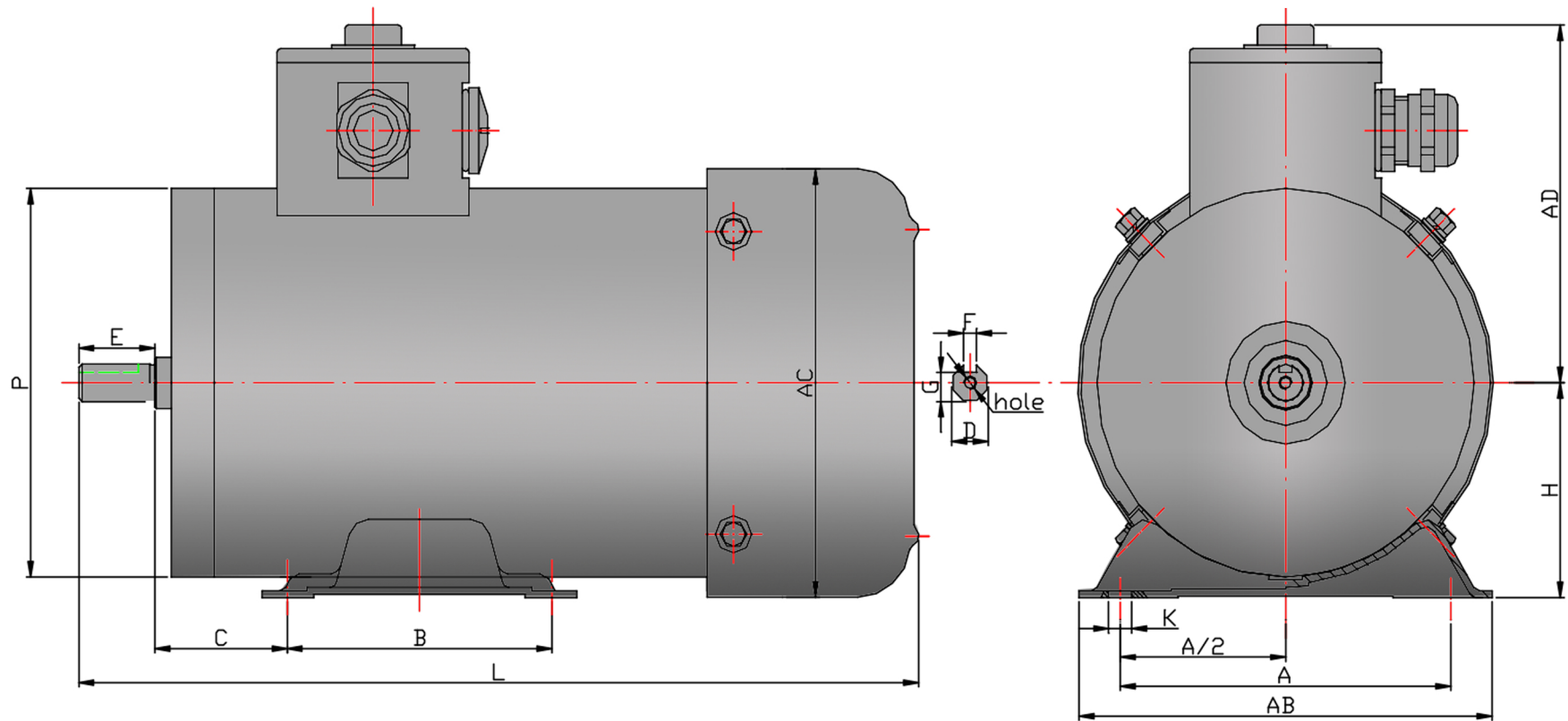


143T - 184T 575V Single Voltage DOL 3 Leads WYE Connection

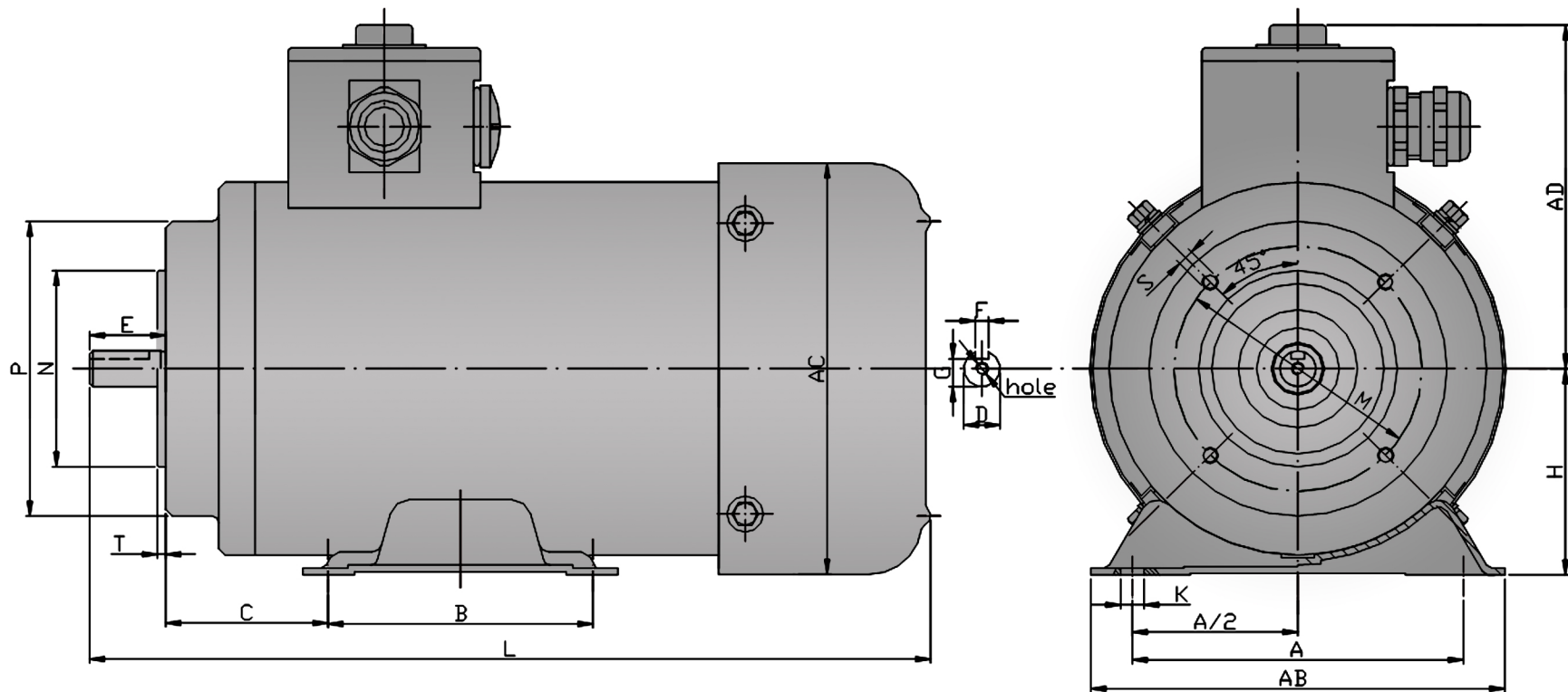
Motor Load Data



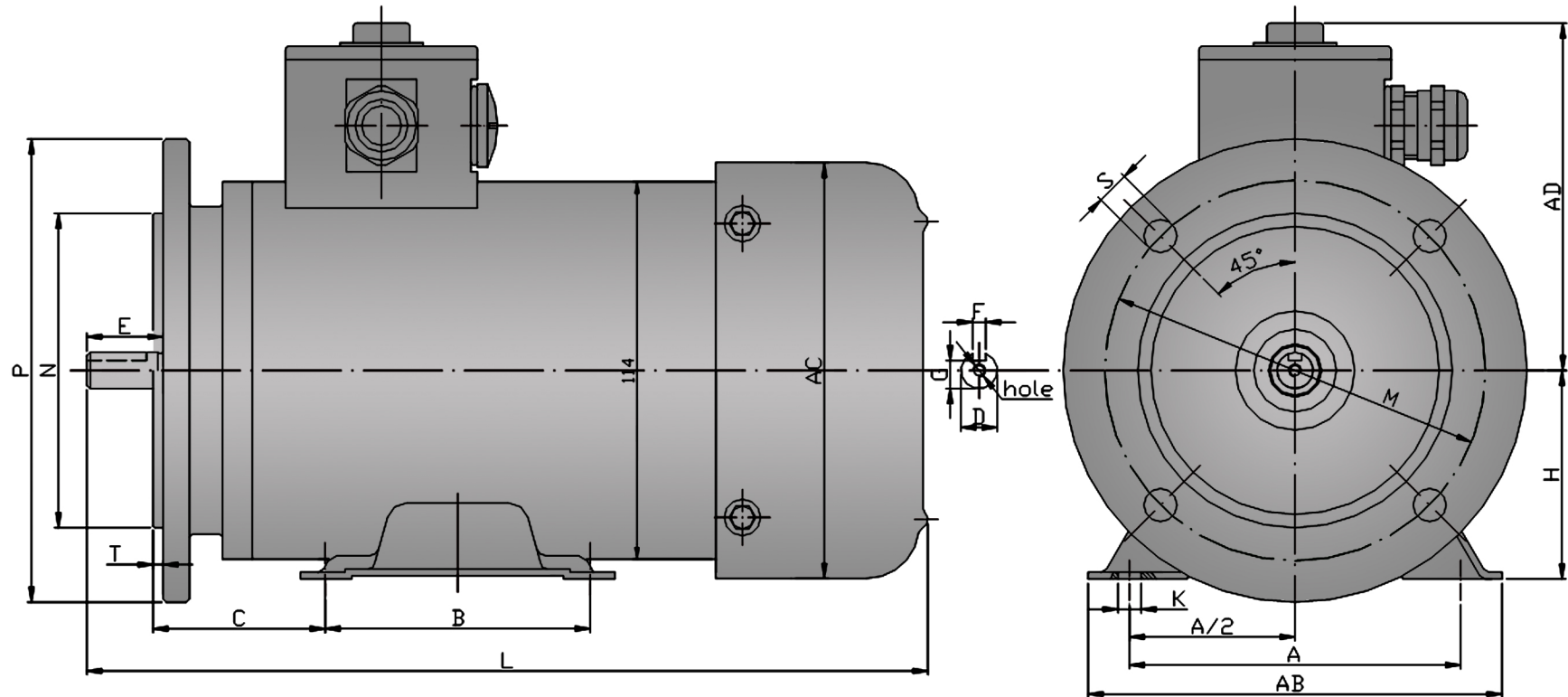
MaxMotion



Version: WT11	Revised: 22-09-2021	Frame	RPM	A	A/2	B	C	D	E	F	MPS/MQS-90S2FC-S3
Customer is responsible in determining that MEP product will fit/perform suitably in the intended application		90S	3600	140	70	100	56	24	50	8	
		G	H	K	P	hole	AB	AC	AD	L	
		20	90	10	164	M8	165	176	141	369	



Version: 1WTI			Revised: 24-04-2023			HP	RPM	FRAME	ENCLOSURE	MPS/MQS-90S2S3FCB34		
Customer is responsible in determining that MEP product will fit/perform suitably in the intended application						2	3600	90S	TEFC			
A	A/2	B	C	D	E	F	G	H	K	M	N	P
140	70	100	56	24	50	8	20	90	10	115	95	140
R	S	T	FLANGE HOLE	SHAFT HOLE	AB	AC	AD	L				
0	M8	3	4	M8	165	176	141	369				



Version: 1WTI			Revised: 17-04-2023			HP	RPM	FRAME	ENCLOSURE	MPS/MQS-90S2S3FCB35		
Customer is responsible in determining that MEP product will fit/perform suitably in the intended application						2	3600	90S	TEFC			
A	A/2	B	C	D	E	F	G	H	K	M	N	P
140	70	100	56	24	50	8	20	90	10	165	130	200
R	S	T	FLANGE HOLE	SHAFT HOLE	AB	AC	AD	L				
0	12	3,5	4	M8	165	176	141	369				

PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED

MaxMotion

Applications:

A versatile motor design that can be base mounted or flange mounted to equipment operating in wet and severe conditions, and where wash down duty and corrosive elements are found such as in the food processing, bottling, dairy, pharmaceutical, and chemical processing industries.



Features:

Design - IEC Design N with NEMA Design B torque Curves

Agency Listings and Standard - NEMA, IEEE, CSA, CSAus, CE, NRCan

Service Factor - 1.15 @ 60Hz and 1.0 @ 50hZ without derating power

Electrical Supply - At 60Hz : 230/460v Dual Rated & Plated for 50Hz : 190/380-415v

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

Insulation - Class F Insulation, with 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 - Double sealed with Lithium grease -30 Deg to 180 Deg C

Enclosure Protection - Meets Ingress Protection Standard IP69K

Frame Construction - Paint free with all 304 Stainless steel housing and shaft. Moisture proof sealant on all machined fits and shielded Viton type double lip seal . Four condensation plugs on each end shield for mounting flexibility.

Conduit Box - The round welded terminal box design comes completely encapsulated and offers two points of entry for easy access to the terminals. All while eliminating points where contaminants can build up, and maintaining the motors IP69K rating.

Inverter Duty - Suitable for Inverter Duty applications, at all voltages for speed ranges of 10:1 constant torque and 20:1 variable torque.

Nameplate - Permanently etched to stainless steel housing

Warranty - 18 Months from the date of manufacture

PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILTED & TEFC TOTALLY ENCLOSED FAN COOLED



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	CODE	WT (Lbs)	DE BRG	ODE BRG	"L" Dimension (mm)
0.25	3600	230/460	63	MQS-6312	73	1.06/.53	K	17.6	6202	6202	242
	3600	575	63	MPS-6312	73	0.424	K	17.6	6202	6202	242
	1800	230/460	63	MQS-6324	75	1.06/.53	K	17.6	6202	6202	242
	1800	575	63	MPS-6324	75	0.424	K	17.6	6202	6202	242
	1800	230/460	63	MQS-6324NVB14	75	1.06/.53	K	17.6	6202	6202	241
	1200	230/460	71	MQS-7116	63	1.32/0.66	K	20.9	6203	6203	250
	1200	575	71	MPS-7116	63	0.53	K	20.9	6203	6203	250
0.33	3600	230/460	63	MQS-6322	74	1.14/.57	K	17.6	6202	6202	242
	3600	575	63	MPS-6322	74	0.456	K	17.6	6202	6202	242
	1800	230/460	71	MQS-7114	77	1.14/.57	K	18.7	6203	6203	311
	1800	575	71	MPS-7114	77	0.456	K	18.7	6203	6203	311
	1200	230/460	71	MQS-7126	67	1.44/.72	K	25.3	6203	6203	311
	1200	575	71	MPS-7126	67	0.576	K	25.3	6203	6203	311
0.5	3600	230/460	71	MQS-7112	80	1.55/.78	K	25.3	6203	6203	311
	3600	575	71	MPS-7112	80	0.62	K	25.3	6203	6203	311
	1800	230/460	71	MQS-7124	78	1.62/.81	K	23.1	6203	6203	250
	1800	230/460	71	MQS-7124NVB14	78	1.62/.81	K	23.1	6203	6203	278
	1800	575	71	MPS-7124	78	0.648	K	23.1	6203	6203	250
	1800	575	71	MPS-7124NVB14	78	0.648	K	23.1	6203	6203	278
	1200	230/460	80	MQS-8016	77	1.75/.88	K	38.5	6204	6204	325
	1200	575	80	MPS-8016	77	0.7	K	38.5	6204	6204	325
0.75	3600	230/460	71	MQS-7122	80	2.075/1.04	K	28.6	6203	6203	311
	3600	575	71	MPS-7122	80	0.83	K	28.6	6203	6203	311
	1800	230/460	80	MQS-8014	79	2.24/1.12	K	38.5	6204	6204	325
	1800	230/460	80	MQS-8014NVB14	79	2.24/1.12	K	38.5	6204	6204	322
	1800	575	80	MPS-8014	79	0.896	K	38.5	6204	6204	325
	1800	575	80	MPS-8014NVB14	79	0.896	K	38.5	6204	6204	322
	1800	575	80	MPS-8014NVB14	79	0.896	K	38.5	6204	6204	322
1	3600	230/460	80	MQS-8012-S3	81	2.68/1.34	K	34.1	6204	6204	322
	3600	575	80	MPS-8012-S3	81	1.072	K	34.1	6204	6204	322
	1800	230/460	80	MQS-8024-S3	85.5	2.84/1.42	K	44	6204	6204	322
	1800	575	80	MPS-8024-S3	85.5	1.136	K	44	6204	6204	322
	1800	230/460	80	MQS-8024S3NVB14	85.5	2.84/1.42	K	44	6204	6204	322
	1800	230/460	80	MQS-8024S3NVB34	85.5	2.84/1.42	K	44	6204	6204	322
	1800	575	80	MPS-8024S3NVB14	85.5	1.136	K	44	6204	6204	322
	1200	230/460	90	MQS-90S6FC-S3	82.5	4.2/2.1	K	44	6205	6205	369
	1200	575	80	MPS-90S6FC-S3	82.5	1.68	K	44	6205	6205	369
	1200	575	80	MPS-90S6FC-S3	82.5	1.68	K	44	6205	6205	369

PREMIUM DESIGN B NEMA 12-12

304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED



HP	RPM	VOLTS	FRAME	CAT NO.	NOM EFF.	F.L. AMPS	CODE	WT (Lbs)	DE BRG	ODE BRG	"L" Dimension (mm)
1.5	3600	230/460	80	MQS-8022FC-S3	85	3.6/1.8	K	39.6	6204	6204	361
	3600	575	80	MPS-8022FC-S3	85	1.44	K	39.6	6204	6204	361
	3600	230/460	90	MQS-90S4FC-S3	86.5	4.29/2.145	K	48.4	6205	6205	369
	3600	575	90	MPS-90S4FC-S3	86.5	1.716	K	48.4	6205	6205	369
	1200	230/460	90	MQS-90L6FC-S3	87.5	4.8/2.4	K	57.2	6205	6205	414
	1200	575	90	MPS-90L6FC-S3	87.5	1.92	K	57.2	6205	6205	414
2	3600	230/460	90	MQS-90S2FC-S3	85.5	5.1/2.55	K	48.4	6205	6205	369
	3600	575	90	MPS-90S2FC-S3	85.5	2.04	K	48.4	6205	6205	369
	1800	230/460	90	MQS-90L4FC-S3	86.5	5.82/2.91	K	59.4	6205	6205	414
	1800	575	90	MPS-90L4FC-S3	86.5	2.328	K	59.4	6205	6205	414
	1200	230/460	100	MQS-100L6FC-S3	88.5	5.8/2.7	K	83.6	6206	6206	433
	1200	575	100	MPS-100L6FC-S3	88.5	2.16	K	83.6	6206	6206	433
3	3600	230/460	90	MQS-90L2FC-S3	86.5	7.2/3.6	K	64.9	6205	6205	414
	3600	575	90	MPS-90L2FC-S3	86.5	2.88	K	64.9	6205	6205	414
	1800	230/460	100	MQS-100L14FC-S3	89.5	7.2/3.6	K	74.8	6206	6206	433
	1800	575	100	MPS-100L14FC-S3	89.5	2.88	K	74.8	6206	6206	433
	1200	230/460	112	MQS-112M6FC-S3	89.5	8.4/4.2	K	111.1	6306	6306	469
	1200	575	112	MPS-112M6FC-S3	89.5	3.36	K	111.1	6306	6306	469
4	3600	230/460	100	MQS-100L2FC-S3	88.5	9.7/4.85	J	81.4	6206	6206	433
	3600	575	100	MPS-100L2FC-S3	88.5	3.88	J	81.4	6206	6206	433
	1800	230/460	100	MQS-100L24FC-S3	89.5	9.96/4.98	J	92.4	6206	6206	433
	1800	575	100	MPS-100L24FC-S3	89.5	3.984	J	92.4	6206	6206	433
5.5	3600	230/460	112	MQS-112M2FC-S3	88.5	12.86/6.43	J	99	6306	6306	469
	3600	575	112	MPS-112M2FC-S3	88.5	5.144	J	99	6306	6306	469
	1800	230/460	112	MQS-112M4FC-S3	89.5	13.2/6.6	J	111.1	6306	6306	469
	1800	575	112	MPS-112M4FC-S3	89.5	5.28	J	111.1	6306	6306	469
7.5	3600	230/460	132	MQS-132S12FC-S3	89.5	18.54/9.27	H	145.2	6308	6308	524
	3600	575	132	MPS-132S12FC-S3	89.5	7.416	H	145.2	6308	6308	524
	1800	230/460	132	MQS-132S4FC-S3	91.7	18/9	H	173.8	6308	6308	524
	1800	575	132	MPS-132S4FC-S3	91.7	7.2	H	173.8	6308	6308	524
10	3600	230/460	132	MQS-132S22FC-S3	90.2	23.72/11.86	H	171.6	6308	6308	524
	3600	575	132	MPS-132S22FC-S3	90.2	9.488	H	171.6	6308	6308	524
	1800	230/460	132	MQS-132M4FC-S3	91.7	23.6/11.8	H	200.2	6308	6308	564
	1800	575	132	MPS-132M4FC-S3	91.7	9.44	H	200.2	6308	6308	564