



PERFORMANCE DATA SHEET

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

Catalogue #: **MQS-90L2FC-S3**

| HP | kW | Voltage | S.F. @ 60Hz | EFF. | P.F. | Frame | Design | L.R. Amps |
|----|------|-----------|-------------|-------|-------|-------|--------|-----------|
| 3 | 2,24 | 230 / 460 | 1,15 | 86,5% | 0,900 | 90L | B | 32 |

| 60 Hz | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|------|----------|
| FLA | | | | | | | Code | F.L. RPM |
| 208 | 230 | 416 | 460 | 480 | 575 | 600 | | |
| / | 7,2 | / | 3,6 | / | / | / | | |

| 50 Hz | | | | | | | |
|-------|------|-----|-------------|------------|--------------|------|----------|
| FLA | | | S.F. @ 50Hz | Efficiency | Power Factor | Code | F.L. RPM |
| 190 | 380 | 415 | | | | | |
| 8,6 | 4,31 | / | | | | | |

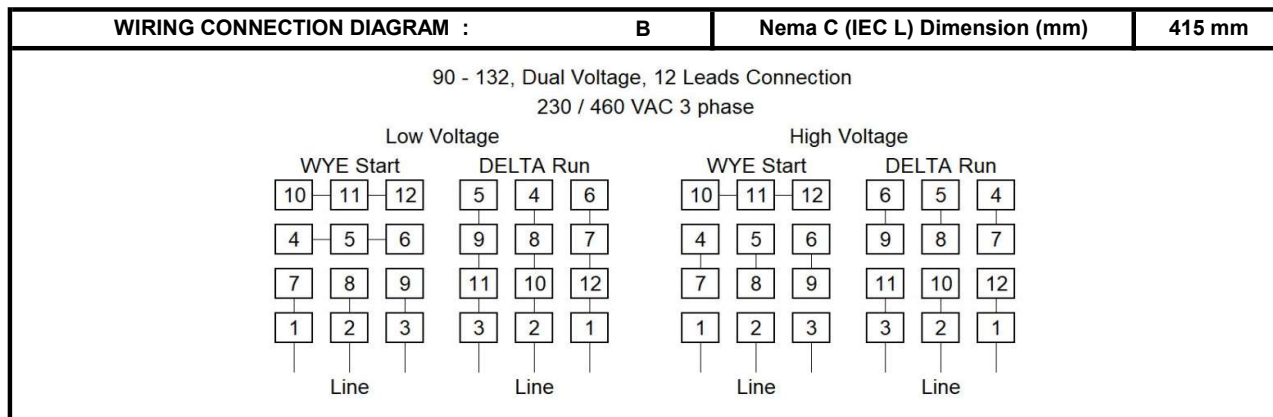
| Wgt. Lbs | PH | Duty | Insul. Class | Amb. | Elevation | Temp. Rise° C |
|----------|----|-------|--------------|------|-----------------|---------------|
| 64,9 | 3 | Cont. | F | 40°C | 1000M (3300 Ft) | 39 |

| % Efficiency | | % Power Factor | | Torque | | Winding Resist. Ω | Safe Cold Start (Secs) |
|--------------|-------|----------------|------|------------------|-----|-------------------|------------------------|
| Full Load: | 86,5% | Full Load: | 0,90 | Full Load Ft/Lbs | 4,5 | | |
| 3/4 Load: | 87,4% | 3/4 Load: | 0,87 | Locked Rotor % | 240 | | |
| 1/2 Load: | 86,9% | 1/2 Load: | 0,80 | Break Down % | 330 | | |

| 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 |



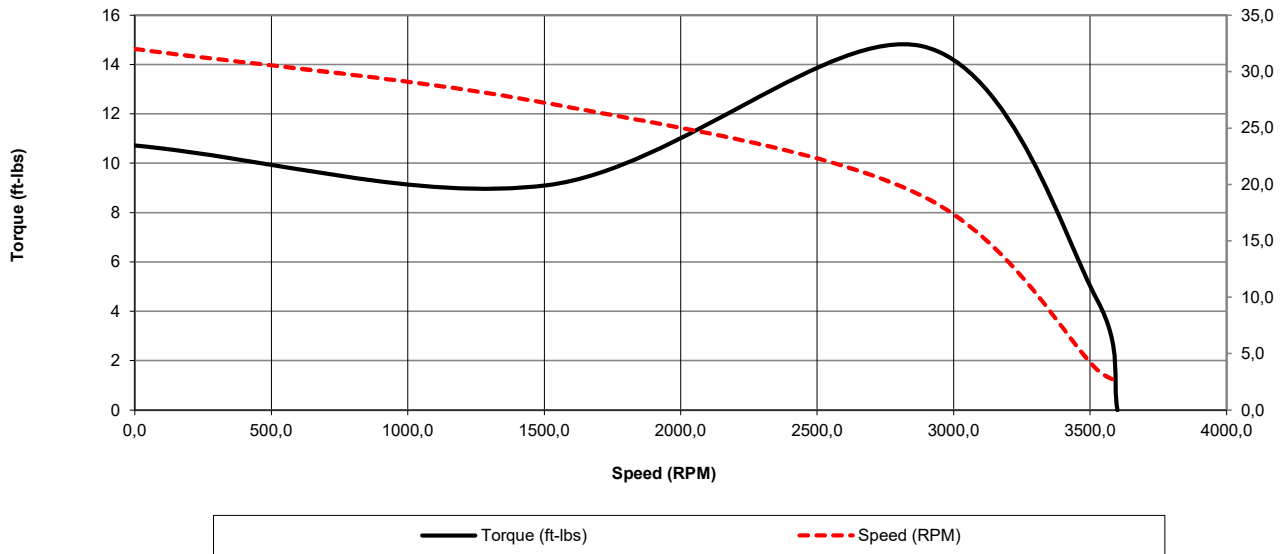
Date: 2023-12-21
 Customer: _____
 Contact: _____
 Submittee: J.C. Lavallée

Catalogue #: **MQS-90L2FC-S3**

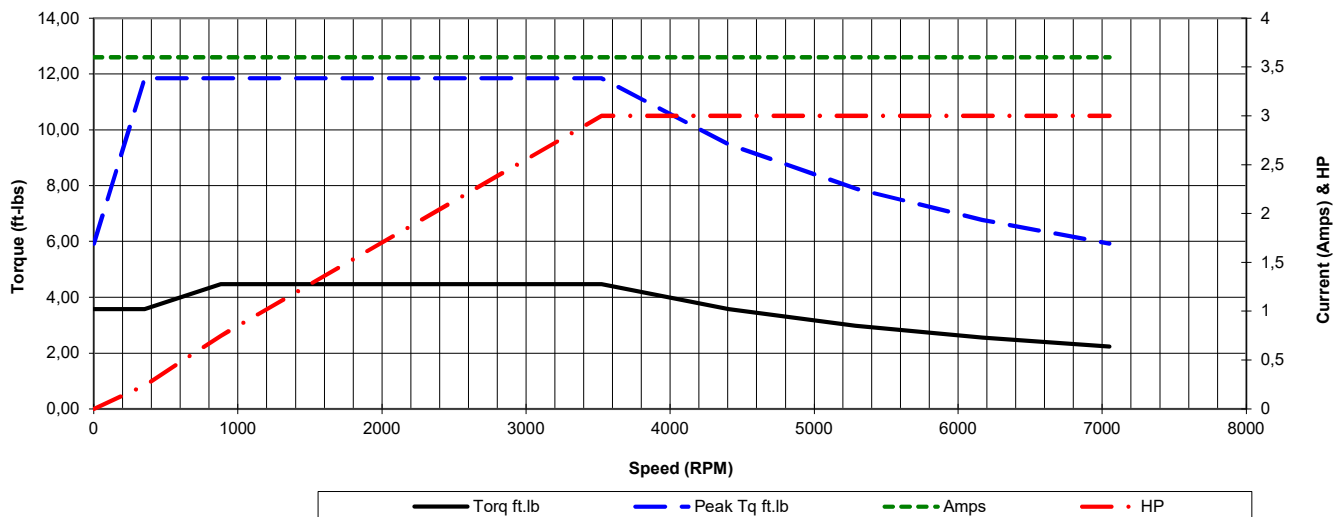
Meets or exceeds MEPS, as described by the US DOE in docket 10CFR431 and NRCan's Amendment 14

| HP | VAC | RPM | Enclosure | Frame | Frequency | Design | Poles | LR Code Letter | Insulation Class | Temp. Rise °C |
|-----------------|--------------|---------|-----------|------------|-----------|--------------------------------------|---------|----------------|------------------|---------------|
| 3 | 460 | 3525 | TEFC | 90L | 60 | B | 2 | K | F | 39 |
| | 0Hz | 6Hz | 15Hz | 30Hz | 45Hz | 60Hz | 75Hz | 90Hz | 105Hz | 120Hz |
| Amps | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 | 3,6 |
| RPM | 0 | 352,5 | 881,25 | 1762,5 | 2643,75 | 3525 | 4406,25 | 5287,5 | 6168,75 | 7050 |
| Torq ft.lb | 3,58 | 3,58 | 4,47 | 4,47 | 4,47 | 4,47 | 3,58 | 2,98 | 2,55 | 2,23 |
| Peak Tq ft.lb | 5,92 | 11,84 | 11,84 | 11,84 | 11,84 | 11,84 | 9,48 | 7,90 | 6,77 | 5,92 |
| HP | 0 | 0,2 | 0,8 | 1,5 | 2,3 | 3,0 | 3,0 | 3,0 | 3,0 | 3,0 |
| | 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) | 32,0 | 27,2 | 19,0 | 3,6 | 2,6 | VFD Rating: Meets MG1 parts 31.4.4.2 | | | | |
| Torque (ft-lbs) | 10,7 | 9,1 | 14,8 | 4,5 | 0,0 | C.T. | 10:1 | V.T. | 20:1 | |

Motor Speed Data



Motor Torque Capability vs RPM



MaxMotion

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

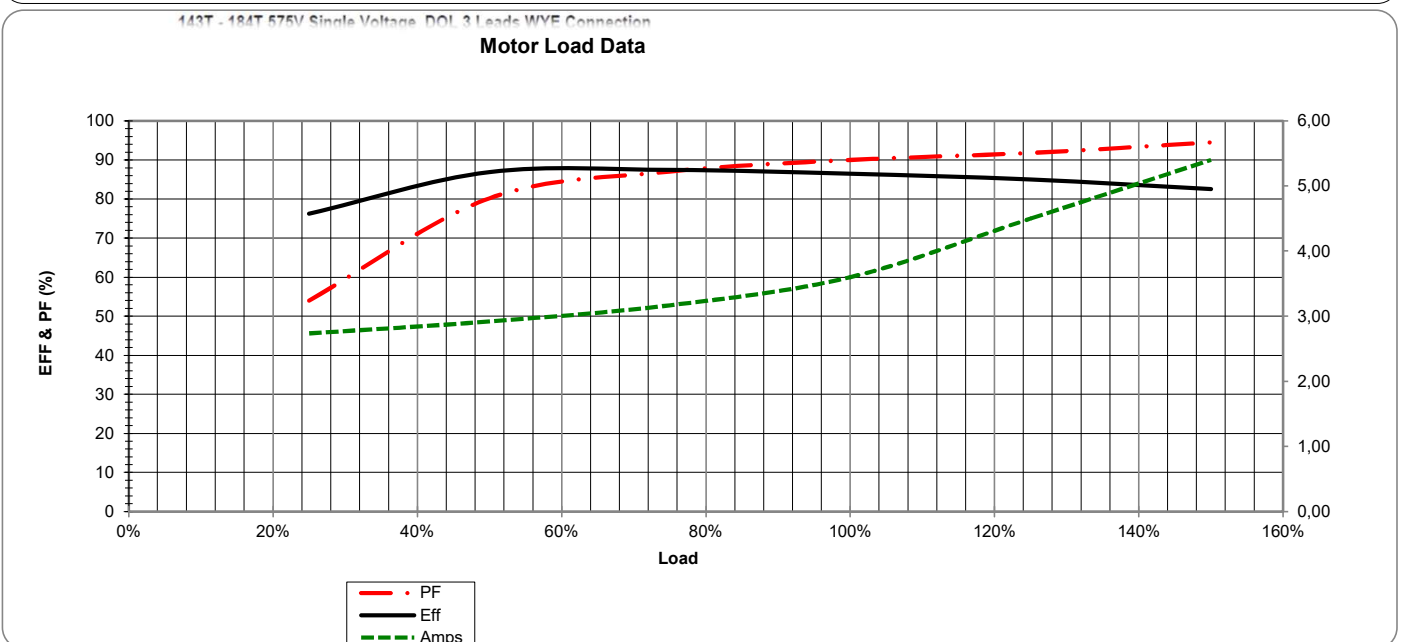
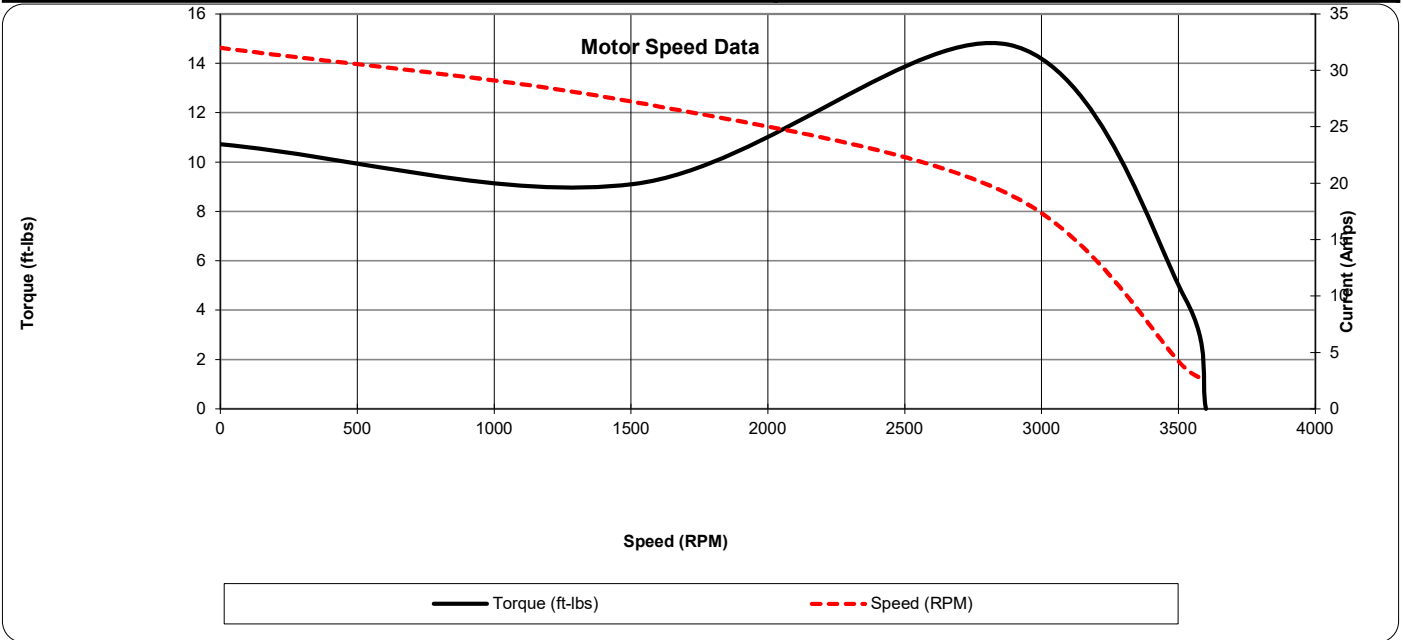
Catalogue #: **MQS-90L2FC-S3**

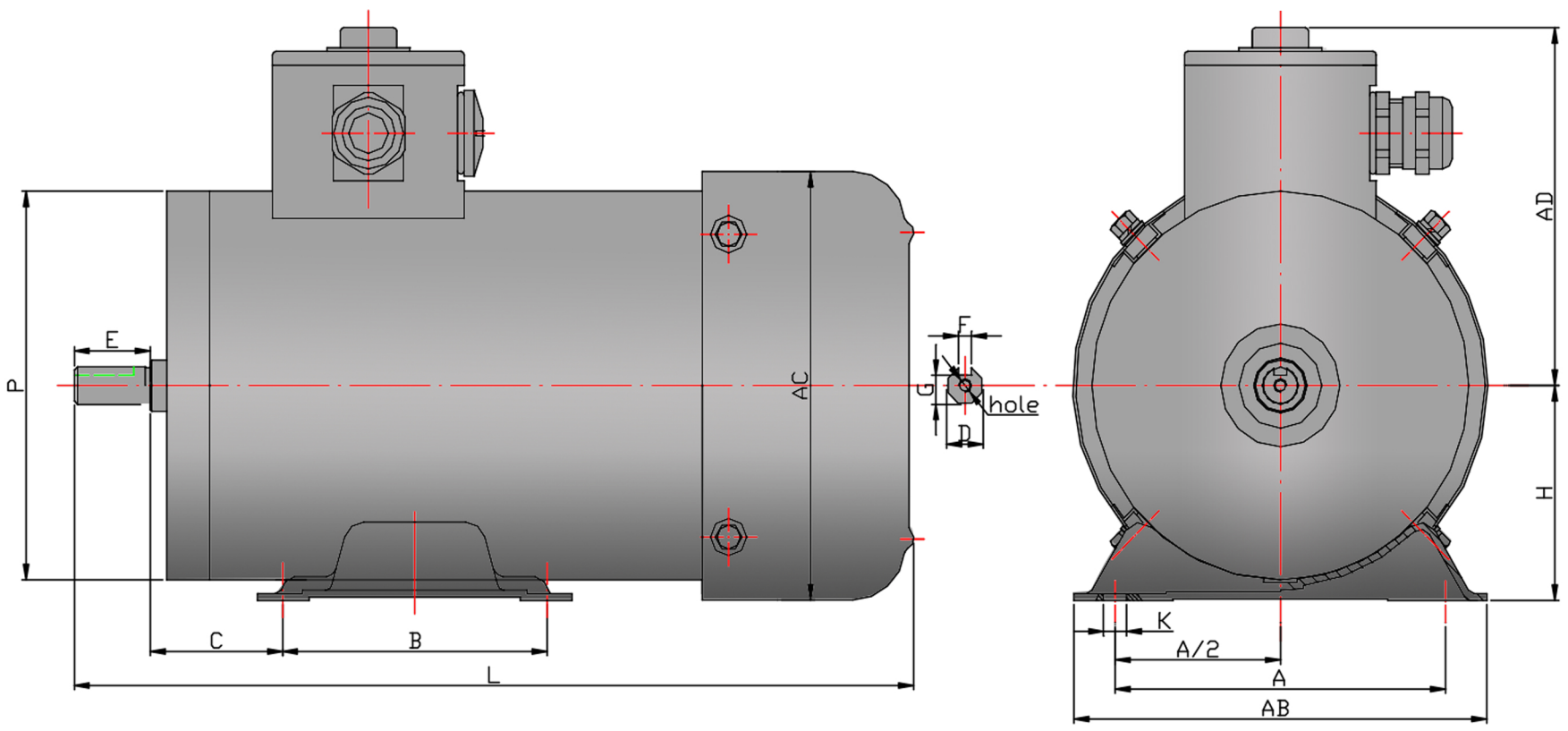
Meets or exceeds MEPS, as described by the US DOE in docket 10CFR431 and NRCan's Amendment 14

| HP | VAC | RPM | Enclosure | Frame | Frequency | Design | Poles | LR Code Letter | Insulation Class | Temp. Rise °C |
|----|-----|------|-----------|-------|-----------|--------|-------|----------------|------------------|---------------|
| 3 | 460 | 3525 | TEFC | 90L | 60 | B | 2 | K | F | 39 |

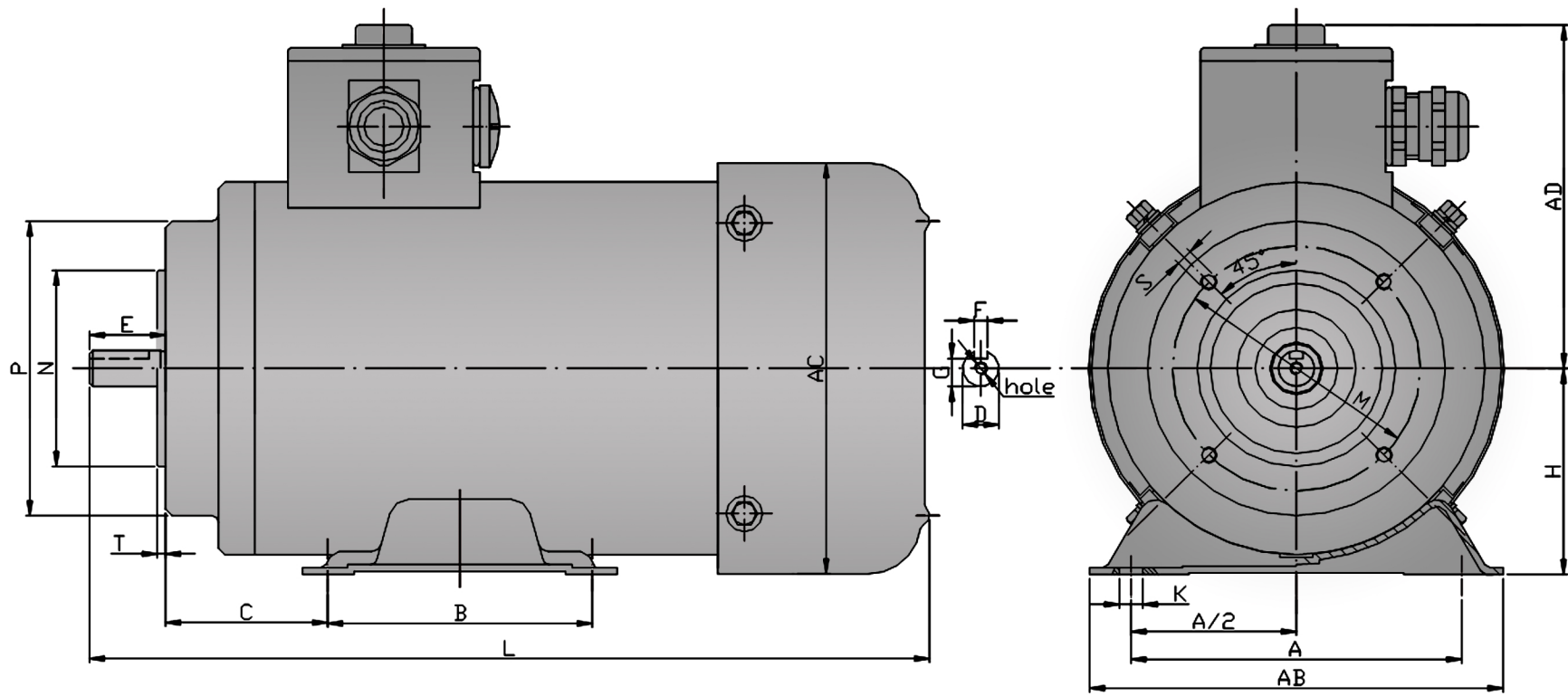
| Load % | 0% | 25% | 50% | 75% | 100% | 125% | 150% |
|-------------|------|---------|--------|---------|-------|---------|--------|
| Amps | 2,56 | 2,74 | 2,92 | 3,17 | 3,60 | 4,50 | 5,40 |
| Torq ft/lbs | 0 | 1,10 | 2,21 | 3,33 | 4,47 | 5,62 | 6,78 |
| RPM | 0 | 3581,25 | 3562,5 | 3543,75 | 3525 | 3506,25 | 3487,5 |
| Eff | 0 | 76,22 | 86,92 | 87,43 | 86,50 | 85,00 | 82,57 |
| PF | 0 | 54,0 | 80,19 | 87,03 | 90,0 | 91,8 | 94,5 |

| | 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) | 32 | 27,2 | 19,0 | 3,6 | 2,556 | VFD Rating: Meets MG1 parts 31.4.4.2 | | | | |
| Torque (ft-lbs) | 10,73 | 9,12 | 14,75 | 4,47 | 0,0 | C.T. | 10:1 | V.T. | 20:1 | |

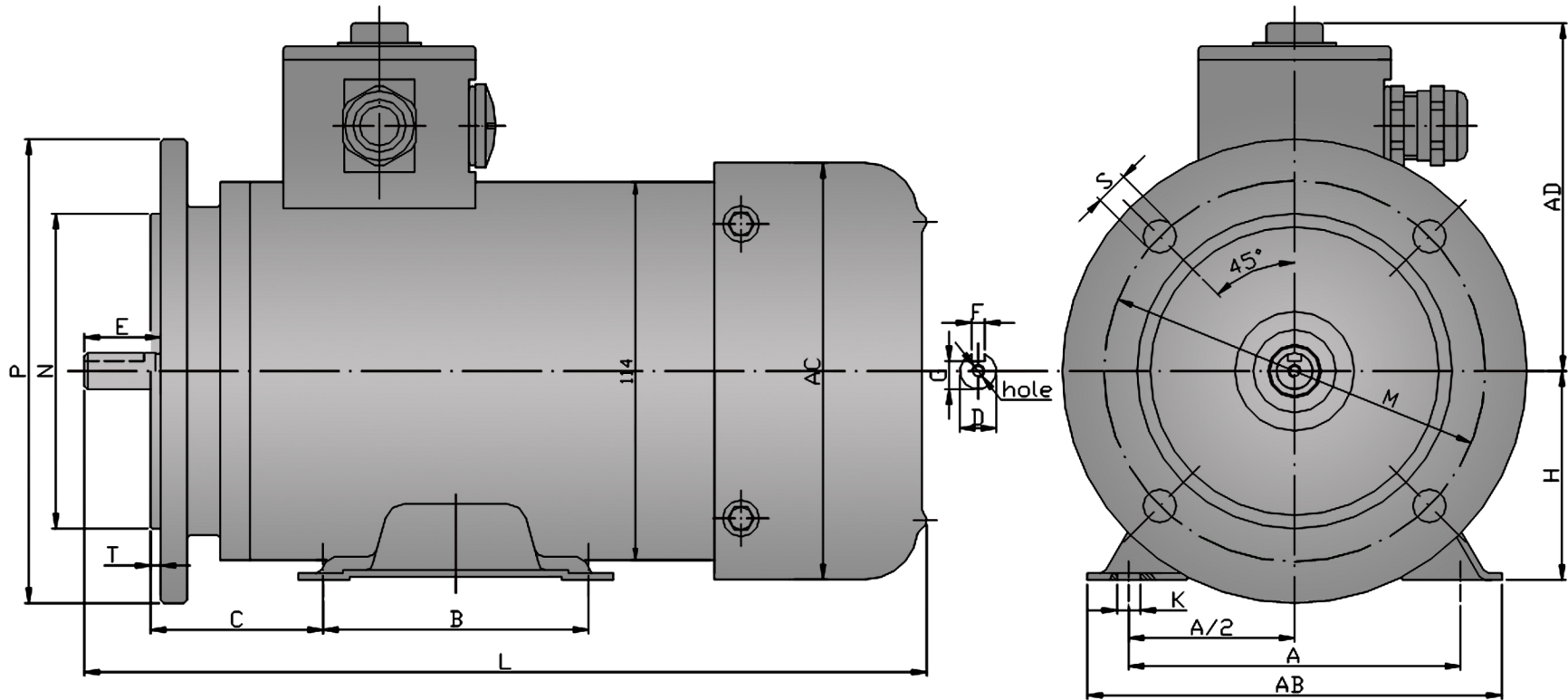




| | | | | | | | | | | | |
|---|---------------------|--------------|------------|----------|------------|-------------|-----------|-----------|-----------|----------|--------------------------|
| Version: WT11 | Revised: 22-09-2021 | Frame | RPM | A | A/2 | B | C | D | E | F | MPS/MQS-90L2FC-S3 |
| Customer is responsible in determining that MEP product will fit/perform suitably in the intended application | | 90L | 3600 | 140 | 70 | 125 | 56 | 24 | 50 | 8 | |
| | | G | H | K | P | hole | AB | AC | AD | L | |
| | | 20 | 90 | 10 | 164 | M8 | 165 | 176 | 141 | 414 | |



| Version: 1WTI | | Revised: 24-04-2023 | | | | HP | RPM | FRAME | ENCLOSURE | MPS/MQS-90L2S3FCB34 | | |
|---|-----|---------------------|-------------|------------|-----|-----|------|-------|-----------|---------------------|----|-----|
| Customer is responsible in determining that MEP product will fit/perform suitably in the intended application | | | | | | 3 | 3600 | 90L | TEFC | | | |
| A | A/2 | B | C | D | E | F | G | H | K | M | N | P |
| 140 | 70 | 125 | 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 | 414 | | | | |



| Version: 1WT1 | | Revised: 17-04-2023 | | | | HP | RPM | FRAME | ENCLOSURE | MPS/MQS-90L2S3FCB35 | | |
|---|-----|---------------------|-------------|------------|-----|-----|------|-------|-----------|---------------------|-----|-----|
| Customer is responsible in determining that MEP product will fit/perform suitably in the intended application | | | | | | 3 | 3600 | 90L | TEFC | | | |
| A | A/2 | B | C | D | E | F | G | H | K | M | N | P |
| 140 | 70 | 125 | 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 | 414 | | | | |

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 |



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 |