



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

Catalogue #: MQSP-302TSL

| HP | kW   | Voltage | S.F. @ 60Hz | Efficiency | Power Factor | Frame | Design | L.R. Amps |
|----|------|---------|-------------|------------|--------------|-------|--------|-----------|
| 3  | 2,24 | 230/460 | 1,15        | 86,5%      | 0,802        | 145TC | B      | 32        |

| 60 Hz |     |     |      |     |     |     |      |          |
|-------|-----|-----|------|-----|-----|-----|------|----------|
| FLA   |     |     |      |     |     |     | Code | F.L. RPM |
| 208   | 230 | 416 | 460  | 480 | 575 | 600 |      |          |
| /     | 8,1 | /   | 4,05 | /   | /   | /   | K    | 3535     |

| 50 Hz |     |     |             |            |              |      |          |  |
|-------|-----|-----|-------------|------------|--------------|------|----------|--|
| FLA   |     |     | S.F. @ 50Hz | Efficiency | Power Factor | Code | F.L. RPM |  |
| 190   | 380 | 415 |             |            |              |      |          |  |
| 9,0   | 4,5 | /   | 1,00        | 85,5%      | 0,88         | K    | 2915     |  |

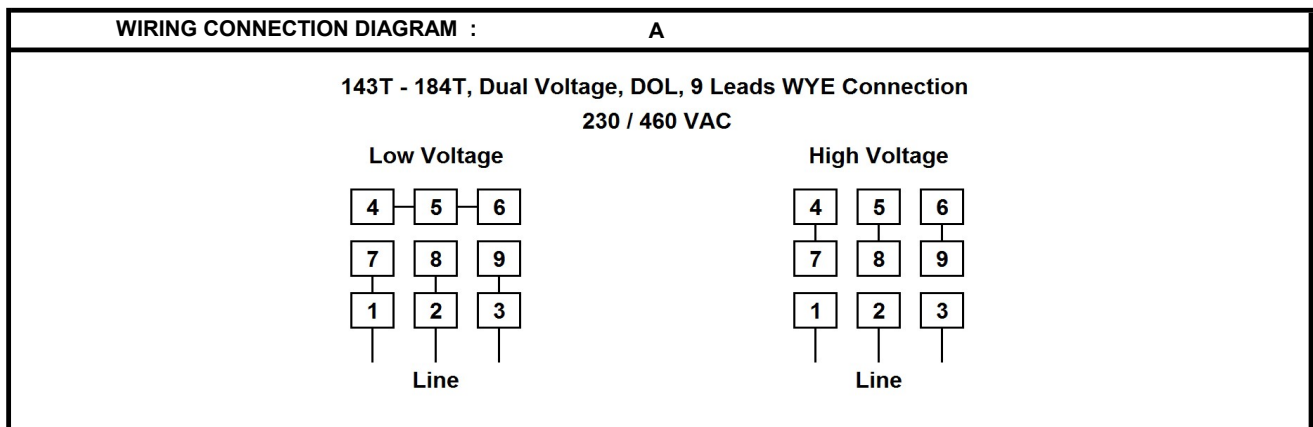
| Wgt. Lbs | PH | Duty  | Insul. Class | Amb. | Elevation       | Temp. Rise° C |
|----------|----|-------|--------------|------|-----------------|---------------|
| 53       | 3  | Cont. | F            | 40°C | 1000M (3300 Ft) | 32            |

| % Efficiency |       | % Power Factor |      | Torque           |     | Winding Resist. Ω | Safe Cold Start (Secs) |
|--------------|-------|----------------|------|------------------|-----|-------------------|------------------------|
| Full Load:   | 86,5% | Full Load:     | 0,80 | Full Load Ft/Lbs | 4,5 |                   |                        |
| 3/4 Load:    | 87,1% | 3/4 Load:      | 0,79 | Locked Rotor %   | 200 |                   |                        |
| 1/2 Load:    | 84,2% | 1/2 Load:      | 0,67 | Break Down %     | 330 | 3,8               | 12                     |

| 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 |
|--------------------------|-----------------------------|----------------|-----------------|-----------------|------------------|-----------|-------------|----------------|
| 0,14                     | 5,2                         | 304SS          | Stainless Steel |                 |                  | TEFC      | IP69K       | 14 AWG         |

| Ball Bearings |      | Grease          | Mount Type | Orientation | Paint | Sound Pressure @ 3FT | Sound Power |
|---------------|------|-----------------|------------|-------------|-------|----------------------|-------------|
| DE            | ODE  |                 |            |             |       |                      |             |
| 6205          | 6205 | Sealed Bearings | Foot       | Horizontal  | -     | 78                   | 88          |

| Inverter Duty.<br>Motor meets MG1 parts 31.4.4.2 | Constant Torque Range | Variable Torque Range | Constant HP RPM |
|--|-----------------------|-----------------------|-----------------|
|  | 10:1                  | 20:1                  | 5400            |

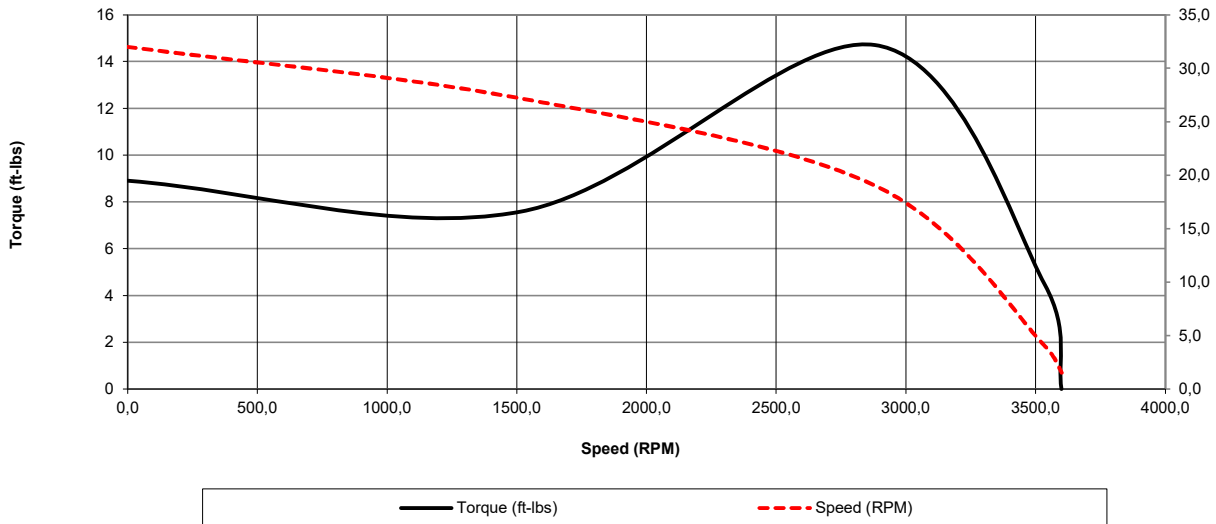


Date: 2024-01-29  
 Customer: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Submittee: J.C. Lavallée

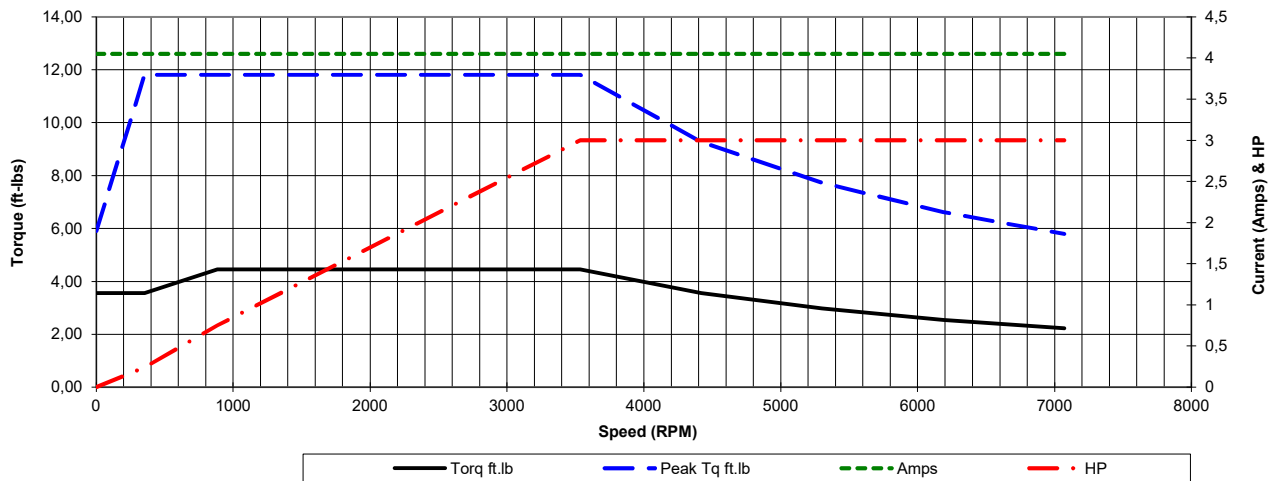
Catalogue #: **MQSP-302TSL**

| NEMA PREMIUM NR CAN NEMA 12 - 12 |              |         |           |            |           |   |         |                |                  |               |
|----------------------------------|--------------|---------|-----------|------------|-----------|---|---------|----------------|------------------|---------------|
| HP                               | VAC          | RPM     | Enclosure | Frame      | Frequency | Design                                      | Poles   | LR Code Letter | Insulation Class | Temp. Rise °C |
| 3                                | 460          | 3535    | TEFC      | 145TC      | 60        | B   | 2       | K              | F                | 32            |
|                                  | 0Hz          | 6Hz     | 15Hz      | 30Hz       | 45Hz      | 60Hz  | 75Hz    | 90Hz           | 105Hz            | 120Hz         |
| Amps                             | 4,05         | 4,05    | 4,05      | 4,05       | 4,05      | 4,05  | 4,05    | 4,05           | 4,05             | 4,05          |
| RPM                              | 0            | 353,5   | 883,75    | 1767,5     | 2651,25   | 3535  | 4418,75 | 5302,5         | 6186,25          | 7070          |
| Torq ft.lb                       | 3,57         | 3,57    | 4,46      | 4,46       | 4,46      | 4,46  | 3,57    | 2,97           | 2,55             | 2,23          |
| Peak Tq ft.lb                    | 5,91         | 11,81   | 11,81     | 11,81      | 11,81     | 11,81                                       | 9,27    | 7,73           | 6,62             | 5,79          |
| 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      | 3535       | 3600      | Continuous                                  | 1,15    | 40°C           | 3,300 ft         | 78            |
| Current (Amps)                   | 32,0         | 27,2    | 19,0      | 4,1        | 1,5       | <b>VFD Rating: Meets MG1 parts 31.4.4.2</b> |         |                |                  |               |
| Torque (ft-lbs)                  | 8,9          | 7,6     | 14,7      | 4,5        | 0,0       | CT  | 10:1    | VT             | 20:1             |               |

Motor Speed Data



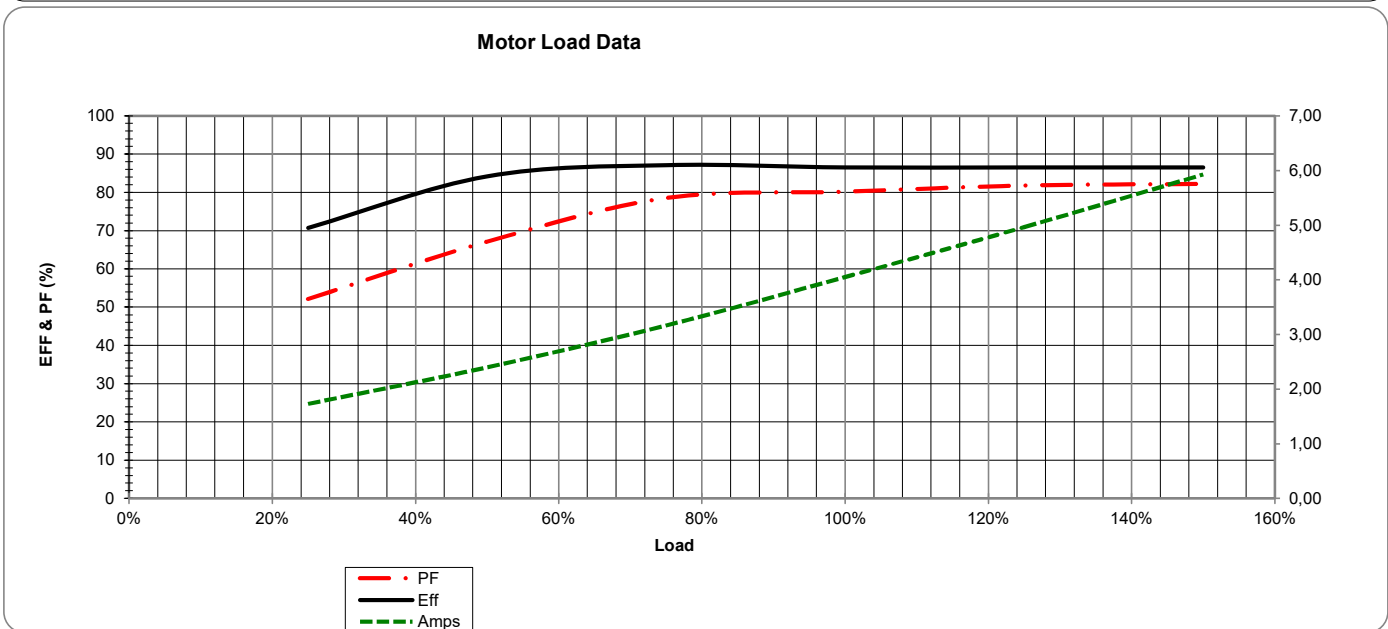
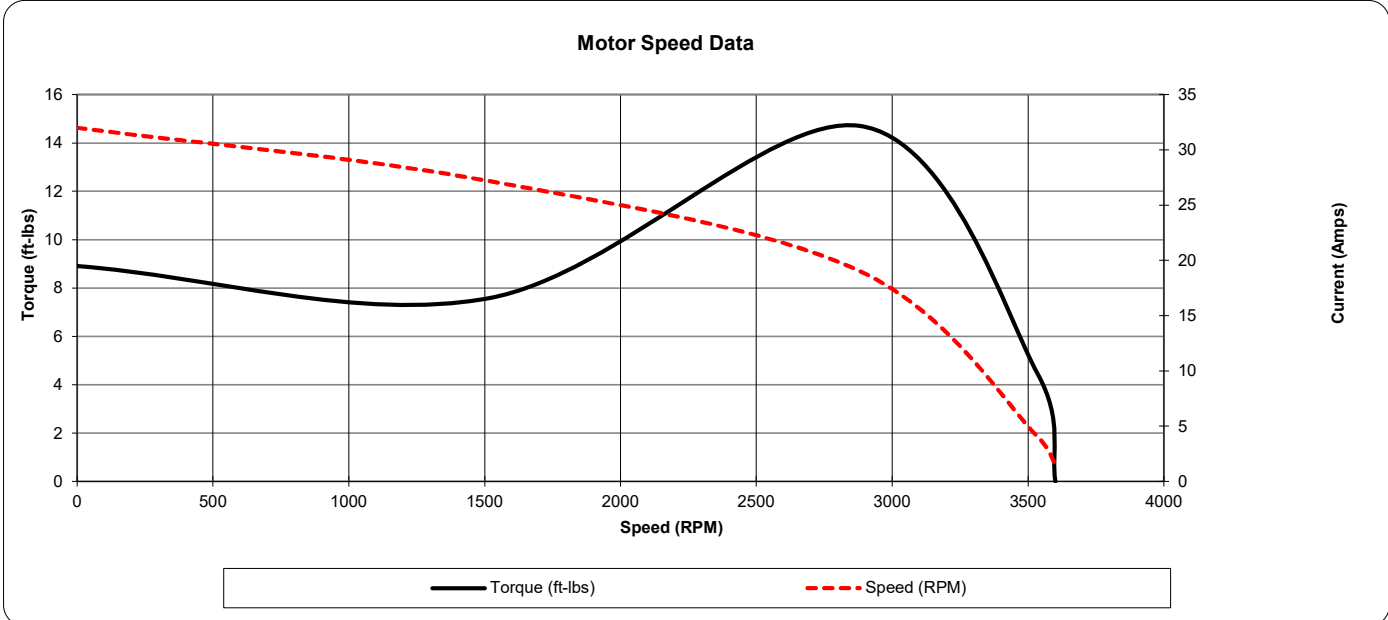
Motor Torque Capability vs RPM

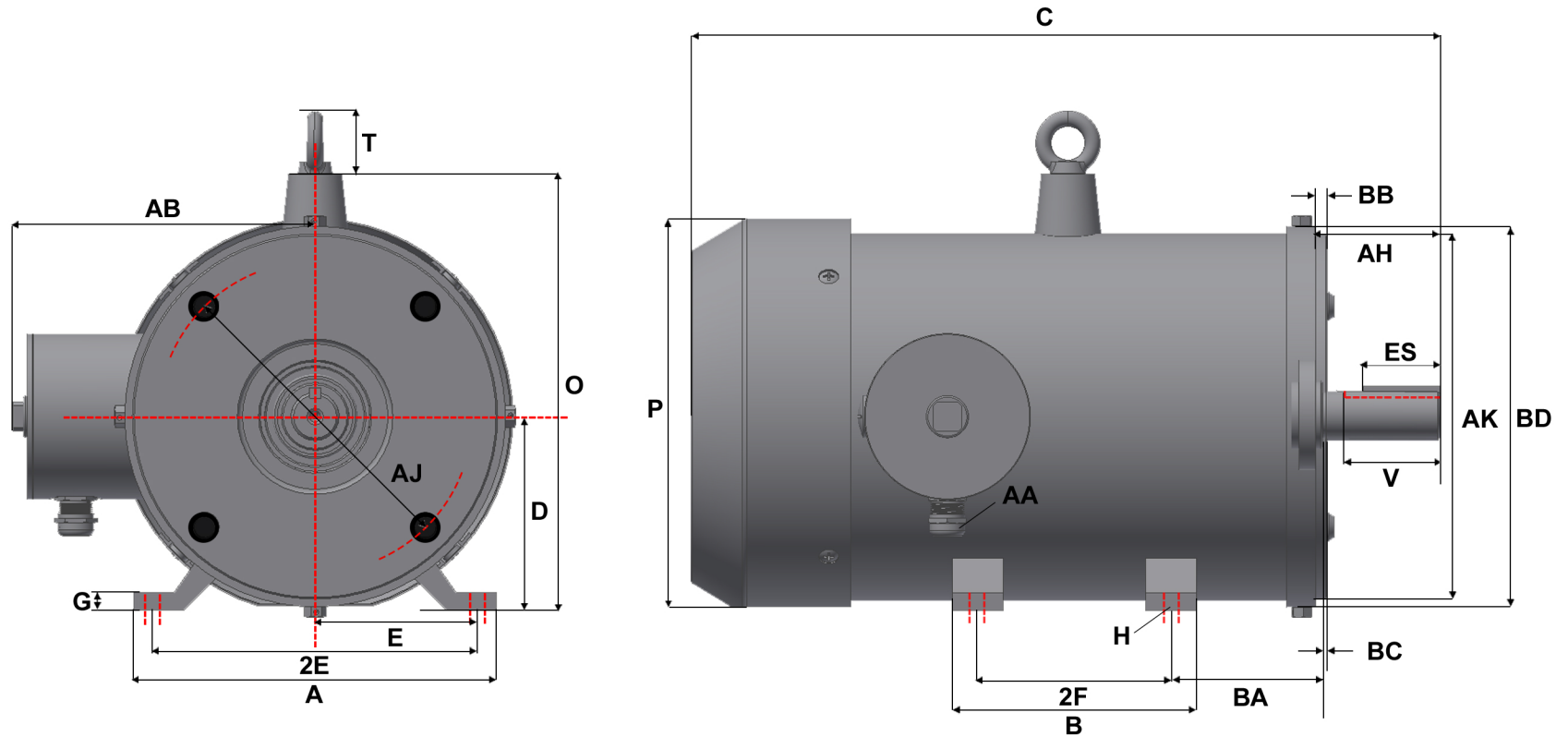


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Catalogue #: MQSP-302TSL

| NEMA PREMIUM NR CAN NEMA 12 - 12 |              |         |           |            |           |                                      |        |                |                  |               |
|----------------------------------|--------------|---------|-----------|------------|-----------|--------------------------------------|--------|----------------|------------------|---------------|
| HP                               | VAC          | RPM     | Enclosure | Frame      | Frequency | Design                               | Poles  | LR Code Letter | Insulation Class | Temp. Rise °C |
| 3                                | 460          | 3535    | TEFC      | 145TC      | 60        | B                                    | 2      | K              | F                | 32            |
| Load %                           | 0%           | 25%     | 50%       | 75%        | 100%      | 125%                                 | 150%   |                |                  |               |
| Amps                             | 1,54         | 1,73    | 2,40      | 3,16       | 4,05      | 4,96                                 | 5,93   |                |                  |               |
| Torq ft/lbs                      | 0            | 1,10    | 2,21      | 3,33       | 4,46      | 5,60                                 | 6,75   |                |                  |               |
| RPM                              | 0            | 3583,75 | 3567,5    | 3551,25    | 3535      | 3518,75                              | 3502,5 |                |                  |               |
| Eff                              | 0            | 70,73   | 84,20     | 87,10      | 86,50     | 86,50                                | 86,50  |                |                  |               |
| PF                               | 0            | 52,1    | 67,1      | 78,5       | 80,2      | 81,8                                 | 82,2   |                |                  |               |
|                                  | Locked Rotor | Pull-Up | Breakdown | Rated Load | Idle      | Duty                                 | S. F.  | Ambient        | Elevation        | dBA @ 1M      |
| Speed (RPM)                      | 0            | 1512    | 2880      | 3535       | 3600      | Continuous                           | 1,15   | 40°C           | 3,300 ft         | 78            |
| Current (Amps)                   | 32           | 27,2    | 19,0      | 4,05       | 1,539     | VFD Rating: Meets MG1 parts 31.4.4.2 |        |                |                  |               |
| Torque (ft-lbs)                  | 8,91         | 7,58    | 14,71     | 4,46       | 0,0       | CT                                   | 10:1   | VT             | 20:1             |               |





| Version: 1WTI   |        | Revised: 02-10-2020 |         | HP   | RPM  | FRAME | ENCLOSURE | MQSP/MPSP-302TSL |      |      |       |       |
|---|--------|---------------------|---------|------|------|-------|-----------|------------------|------|------|-------|-------|
| Customer is responsible in determining that MEP product will fit/perform suitably in the intended application |        |                     |         | 3    | 3600 | 145TC | TEFC      |                  |      |      |       |       |
| A   | B      | C                   | D       | E    | 2E   | 2F    | G         | H                | O    | P    | R     | S     |
| 6.30  | 5.80   | 15.58               | 3.50    | 2.75 | 5.50 | 5.00  | 0.315     | 0.34             | 6.98 | 6.95 | 0.771 | 0.188 |
| T   | U      | V                   | AA      | AB   | AH   | AJ    | AK        | BA               | BB   | BC   | BD    | ES    |
| 0.00  | 0.8750 | 1.496               | 1/2 NPT | 5.95 | 2.12 | 5.875 | 4.50      | 2.75             | 0.16 | 0.12 | 6.45  | 1.41  |

# PREMIUM DESIGN B NEMA 12-12

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

MaxMotion

## Applications:

A durable and versatile motor design that can be base 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 and conveyor Industries.



## Features:

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

**Agency listings and standard** - Meets or exceeds MEPS (Minimum Efficiency Performance Standards) as described by US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14. Also CSAus and CE Certified.

**Service Factor** - 1.15

**Electrical Supply** - At 60Hz: 575V and 230/460V dual rated and at 50Hz: 190/380.

**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

**Bearing** - Double sealed with Lithium grease -30 Deg to 180 Deg C

**Enclosure Protection** - Meets Ingress Protection Standard IP69K

**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.

**Terminal 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** - Inverter Duty 10:1 Constant Torque, 20:1 Variable Torque

**Nameplate** - Permanently etched to stainless steel housing

**Warranty** - 24 Months



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



| HP  | FL RPM | VOLTS   | FRAME | CAT NO.      | NOM EFF. | F.L. AMPS | CODE | WT (Lbs) | DE BRG | ODE BRG | "C" Dimension (Inch) |
|-----|--------|---------|-------|--------------|----------|-----------|------|----------|--------|---------|----------------------|
| 1/3 | 1725   | 575     | 56C   | MPS-134L     | 73.4     | 0.44      | K    | 28       | 6205   | 6205    | 9.8                  |
|     | 1725   | 230/460 | 56C   | MQS-134L     | 73.4     | 1.1/.55   | K    | 28       | 6205   | 6205    | 9.8                  |
|     | 1725   | 575     | 56C   | MPS-134LFC   | 73.4     | 0.44      | K    | 28       | 6205   | 6205    | 11.59                |
|     | 1725   | 230/460 | 56C   | MQS-134LFC   | 73.4     | 1.1/.55   | K    | 28       | 6205   | 6205    | 11.59                |
| 1/2 | 3460   | 575     | 56C   | MPS-122L     | 73.4     | 0.6       | K    | 29       | 6205   | 6205    | 9.8                  |
|     | 3460   | 230/460 | 56C   | MQS-122L     | 73.4     | 1.5/.75   | K    | 29       | 6205   | 6205    | 9.8                  |
|     | 1725   | 575     | 56C   | MPS-124L     | 78.2     | 0.688     | K    | 31       | 6205   | 6205    | 9.8                  |
|     | 1725   | 230/460 | 56C   | MQS-124L     | 78.2     | 1.72/.86  | K    | 31       | 6205   | 6205    | 9.8                  |
|     | 1725   | 575     | 56C   | MPS-124LFC   | 78.2     | 0.688     | K    | 31       | 6205   | 6205    | 11.59                |
|     | 1725   | 230/460 | 56C   | MQS-124LFC   | 78.2     | 1.72/.86  | K    | 31       | 6205   | 6205    | 11.59                |
|     | 1155   | 575     | 56C   | MPS-126L     | 75.3     | 0.75      | K    | 31       | 6205   | 6205    | 9.8                  |
|     | 1155   | 230/460 | 56C   | MQS-126L     | 75.3     | 1.8/.9    | K    | 31       | 6205   | 6205    | 9.8                  |
| 3/4 | 3460   | 575     | 56C   | MPS-342L     | 76.8     | 0.96      | K    | 33       | 6205   | 6205    | 10.78                |
|     | 3460   | 230/460 | 56C   | MQS-342L     | 76.8     | 2.4/1.2   | K    | 33       | 6205   | 6205    | 10.78                |
|     | 1725   | 575     | 56C   | MPS-344L     | 81.1     | 0.96      | K    | 33       | 6205   | 6205    | 10.78                |
|     | 1725   | 230/460 | 56C   | MQS-344L     | 81.1     | 2.4/1.2   | K    | 33       | 6205   | 6205    | 10.78                |
|     | 1725   | 575     | 56C   | MPS-344LFC   | 81.1     | 0.96      | K    | 33       | 6205   | 6205    | 12.57                |
|     | 1725   | 230/460 | 56C   | MQS-344LFC   | 81.1     | 2.4/1.2   | K    | 33       | 6205   | 6205    | 12.57                |
|     | 1155   | 575     | 56C   | MPS-346L     | 81.7     | 1.04      | K    | 34       | 6205   | 6205    | 10.78                |
|     | 1155   | 230/460 | 56C   | MQS-346L     | 81.7     | 2.6/1.3   | K    | 34       | 6205   | 6205    | 10.78                |
| 1   | 3470   | 575     | 56C   | MPSP-102L    | 77       | 1.12      | K    | 35       | 6205   | 6205    | 12.57                |
|     | 3470   | 230/460 | 56C   | MQSP-102L    | 77       | 2.8/1.4   | K    | 35       | 6205   | 6205    | 12.57                |
|     | 3470   | 575     | 56C   | MPSP-102LNV  | 77       | 1.12      | K    | 35       | 6205   | 6205    | 10.78                |
|     | 3470   | 230/460 | 56C   | MQSP-102LNV  | 77       | 2.8/1.4   | K    | 35       | 6205   | 6205    | 10.78                |
|     | 1765   | 575     | 56C   | MPSP-104L    | 86.7     | 1.216     | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1765   | 230/460 | 56C   | MQSP-104L    | 86.7     | 3.01/1.52 | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1765   | 575     | 56C   | MPSP-104LNV  | 86.7     | 1.216     | K    | 36       | 6205   | 6205    | 10.78                |
|     | 1765   | 230/460 | 56C   | MQSP-104LNV  | 86.7     | 3.01/1.52 | K    | 36       | 6205   | 6205    | 10.78                |
|     | 1740   | 575     | 143TC | MPSP-104TL   | 85.5     | 1.36      | K    | 36       | 6205   | 6205    | 12.63                |
|     | 1740   | 230/460 | 143TC | MQSP-104TL   | 85.5     | 3.4/1.7   | K    | 36       | 6205   | 6205    | 12.63                |
|     | 1740   | 575     | 143TC | MPSP-104TLNV | 85.5     | 1.36      | K    | 36       | 6205   | 6205    | 10.84                |
|     | 1740   | 230/460 | 143TC | MQSP-104TLNV | 85.5     | 3.4/1.7   | K    | 36       | 6205   | 6205    | 10.84                |
|     | 1165   | 575     | 56C   | MPSP-106L    | 82.5     | 1.4       | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1165   | 230/460 | 56C   | MQSP-106L    | 82.5     | 3.5/1.75  | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1165   | 575     | 143TC | MPSP-106TL   | 82.5     | 1.4       | K    | 42       | 6205   | 6205    | 13.81                |
|     | 1165   | 230/460 | 143TC | MQSP-106TL   | 82.5     | 3.5/1.75  | K    | 42       | 6205   | 6205    | 13.81                |
| 1.5 | 3470   | 575     | 56C   | MPSP-152L    | 84       | 1.68      | K    | 28       | 6205   | 6205    | 12.57                |
|     | 3470   | 230/460 | 56C   | MQSP-152L    | 84       | 4.2/2.1   | K    | 28       | 6205   | 6205    | 12.57                |
|     | 3470   | 575     | 56C   | MPSP-152LNV  | 84       | 1.68      | K    | 28       | 6205   | 6205    | 11.96                |
|     | 3470   | 230/460 | 56C   | MQSP-152LNV  | 84       | 4.2/2.1   | K    | 28       | 6205   | 6205    | 11.96                |
|     | 3480   | 575     | 143TC | MPSP-152TL   | 84       | 1.6       | K    | 39       | 6205   | 6205    | 12.63                |
|     | 3480   | 230/460 | 143TC | MQSP-152TL   | 84       | 2.21/1.92 | K    | 39       | 6205   | 6205    | 12.63                |
|     | 3480   | 575     | 143TC | MPSP-152TLNV | 84       | 1.6       | K    | 39       | 6205   | 6205    | 12.02                |
|     | 3480   | 230/460 | 143TC | MQSP-152TLNV | 84       | 2.21/1.92 | K    | 39       | 6205   | 6205    | 12.02                |
|     | 1750   | 575     | 56C   | MPSP-154L    | 86.5     | 1.76      | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1750   | 230/460 | 56C   | MQSP-154L    | 86.5     | 4.4/2.2   | K    | 36       | 6205   | 6205    | 12.57                |
|     | 1750   | 575     | 56C   | MPSP-154LNV  | 86.5     | 1.76      | K    | 36       | 6205   | 6205    | 11.96                |
|     | 1750   | 230/460 | 56C   | MQSP-154LNV  | 86.5     | 4.4/2.2   | K    | 36       | 6205   | 6205    | 11.96                |
|     | 1740   | 575     | 145TC | MPSP-154TL   | 86.5     | 1.76      | K    | 42       | 6205   | 6205    | 13.81                |
|     | 1740   | 230/460 | 145TC | MQSP-154TL   | 86.5     | 4.4/2.2   | K    | 42       | 6205   | 6205    | 13.81                |
|     | 1740   | 575     | 145TC | MPSP-154TLNV | 86.5     | 1.76      | K    | 42       | 6205   | 6205    | 12.02                |
|     | 1740   | 230/460 | 145TC | MQSP-154TLNV | 86.5     | 4.4/2.2   | K    | 42       | 6205   | 6205    | 12.02                |
|     | 1150   | 575     | 56C   | MPSP-156L    | 87.5     | 1.96      | K    | 36       | 6205   | 6205    | 13.75                |
|     | 1150   | 230/460 | 56C   | MQSP-156L    | 87.5     | 4.9/2.45  | K    | 36       | 6205   | 6205    | 13.75                |
|     | 1170   | 575     | 182TC | MPSP-156TL   | 87.5     | 1.96      | K    | 79       | 6308   | 6308    | 17.00                |
|     | 1170   | 230/460 | 182TC | MQSP-156TL   | 87.5     | 4.9/2.45  | K    | 79       | 6308   | 6308    | 17.00                |



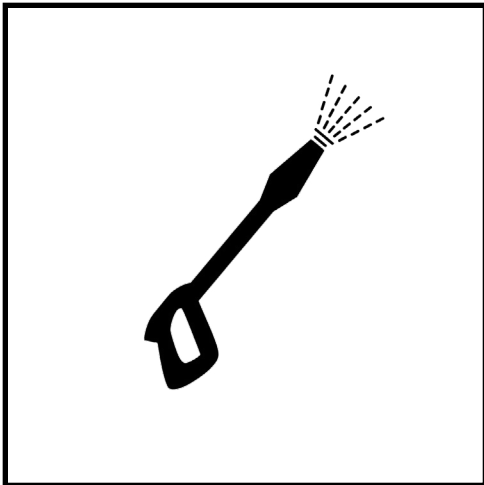
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304 GRADE STAINLESS STEEL TENV TOTALLY ENCLOSED  
NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED



| HP   | FL RPM  | VOLTS   | FRAME          | CAT NO.        | NOM EFF. | F.L. AMPS | CODE | WT (Lbs) | DE BRG | ODE BRG | "C" Dimension (Inch) |
|------|---------|---------|----------------|----------------|----------|-----------|------|----------|--------|---------|----------------------|
| 2    | 3480    | 575     | 145TC          | MPSP-202TL     | 85.5     | 1.92      | K    | 46       | 6205   | 6205    | 13.81                |
|      | 3480    | 230/460 | 145TC          | MQSP-202TL     | 85.5     | 4.8-2.4   | K    | 46       | 6205   | 6205    | 13.81                |
|      | 3480    | 575     | 145TC          | MPSP-202TLNV   | 85.5     | 1.92      | K    | 46       | 6205   | 6205    | 13.81                |
|      | 3480    | 230/460 | 145TC          | MQSP-202TLNV   | 85.5     | 4.8-2.4   | K    | 46       | 6205   | 6205    | 13.81                |
|      | 1760    | 575     | 56C            | MPSP-204L      | 86.5     | 2.16      | K    | 36       | 6205   | 6205    | 13.75                |
|      | 1760    | 230/460 | 56C            | MQSP-204L      | 86.5     | 5.8/2.7   | K    | 36       | 6205   | 6205    | 13.75                |
|      | 1760    | 575     | 56C            | MPSP-204LNV    | 86.5     | 2.16      | K    | 40       | 6205   | 6205    | 13.75                |
|      | 1760    | 230/460 | 56C            | MQSP-204LNV    | 86.5     | 5.8/2.7   | K    | 40       | 6205   | 6205    | 13.75                |
|      | 1740    | 575     | 145TC          | MPSP-204TL     | 86.5     | 2.16      | K    | 49       | 6205   | 6205    | 13.81                |
|      | 1740    | 230/460 | 145TC          | MQSP-204TL     | 86.5     | 5.4/2.7   | K    | 49       | 6205   | 6205    | 13.81                |
|      | 1740    | 575     | 145TC          | MPSP-204TLNV   | 86.5     | 2.16      | K    | 54       | 6205   | 6205    | 13.81                |
|      | 1740    | 230/460 | 145TC          | MQSP-204TLNV   | 86.5     | 5.4/2.7   | K    | 54       | 6205   | 6205    | 13.81                |
|      | 1175    | 575     | 184TC          | MPSP-206TL     | 88.5     | 2.48      | L    | 95       | 6308   | 6308    | 17.00                |
|      | 1175    | 230/460 | 184TC          | MQSP-206TL     | 88.5     | 6.2/3.1   | L    | 95       | 6308   | 6308    | 17.00                |
| 3    | 3535    | 575     | 184TC          | MPSP-302TL     | 86.5     | 3.24      | K    | 81       | 6308   | 6308    | 17.00                |
|      | 3535    | 230/460 | 182TC          | MQSP-302TL     | 86.5     | 8.1/4.05  | K    | 81       | 6308   | 6308    | 17.00                |
|      | 3535    | 575     | 184TC          | MPSP-302TLNV   | 86.5     | 3.24      | K    | 81       | 6308   | 6308    | 14.70                |
|      | 3535    | 230/460 | 182TC          | MQSP-302TLNV   | 86.5     | 8.1/4.05  | K    | 81       | 6308   | 6308    | 14.70                |
|      | 3535    | 575     | 145TC          | MPSP-302TSL    | 86.5     | 3.24      | K    | 81       | 6205   | 6205    | 15.58                |
|      | 3535    | 230/460 | 145TC          | MQSP-302TSL    | 86.5     | 8.1/4.05  | K    | 81       | 6205   | 6205    | 15.58                |
|      | 1765    | 575     | 182TC          | MPSP-304TL     | 89.5     | 3.2       | K    | 89       | 6308   | 6306    | 17.00                |
|      | 1765    | 230/460 | 182TC          | MQSP-304TL     | 89.5     | 8/4       | K    | 89       | 6308   | 6306    | 17.00                |
|      | 1760    | 575     | 56C            | MPSP-304TL-56C | 89.5     | 3.2       | K    | 63       | 6205   | 6205    | 15.52                |
|      | 1760    | 230/460 | 56C            | MQSP-304TL-56C | 89.5     | 8/4       | K    | 63       | 6205   | 6205    | 15.52                |
|      | 1760    | 575     | 182TC          | MPSP-304TLNV   | 89.5     | 3.2       | K    | 98       | 6205   | 6205    | 14.70                |
|      | 1760    | 230/460 | 182TC          | MQSP-304TLNV   | 89.5     | 8/4       | K    | 98       | 6205   | 6205    | 14.70                |
|      | 1765    | 575     | 145TC          | MPSP-304TSL    | 89.5     | 3.2       | K    | 78       | 6308   | 6306    | 15.58                |
|      | 1765    | 230/460 | 145TC          | MQSP-304TSL    | 89.5     | 8/4       | K    | 78       | 6308   | 6306    | 15.58                |
| 1765 | 575     | 145TC   | MPSP-304TSL-F0 | 89.5           | 3.2      | K         | 78   | 6308     | 6306   | 15.58   |                      |
| 1175 | 575     | 213TC   | MPSP-306TL     | 89.5           | 3.44     | K         | 110  | 6308     | 6208   | 20.70   |                      |
| 1175 | 230/460 | 213TC   | MQSP-306TL     | 89.5           | 8.6/4.3  | K         | 110  | 6308     | 6208   | 20.70   |                      |
| 5    | 3525    | 575     | 184TC          | MPSP-502TL     | 88.5     | 4.88      | J    | 95       | 6308   | 6306    | 17.00                |
|      | 3525    | 230/460 | 184TC          | MQSP-502TL     | 88.5     | 12.2/6.1  | J    | 95       | 6308   | 6306    | 17.00                |
|      | 1765    | 575     | 184TC          | MPSP-504TL     | 89.5     | 5         | J    | 104      | 6308   | 6306    | 17.00                |
|      | 1765    | 230/460 | 184TC          | MQSP-504TL     | 89.5     | 12.5/6.25 | J    | 104      | 6308   | 6306    | 17.00                |
|      | 1175    | 575     | 215TC          | MPSP-506TL     | 89.5     | 5.44      | J    | 171      | 6308   | 6208    | 21.50                |
|      | 1175    | 230/460 | 215TC          | MQSP-506TL     | 89.5     | 13.6/6.8  | J    | 171      | 6308   | 6208    | 21.50                |
| 7    | 3520    | 575     | 213TC          | MPSP-702TL     | 89.5     | 7.52      | H    | 110      | 6308   | 6208    | 20.70                |
|      | 3520    | 230/460 | 213TC          | MQSP-702TL     | 89.5     | 18.8/9.4  | H    | 110      | 6308   | 6208    | 20.70                |
|      | 1755    | 575     | 213TC          | MPSP-704TL     | 91.7     | 7.44      | H    | 163      | 6308   | 6208    | 20.70                |
| 1755 | 230/460 | 213TC   | MQSP-704TL     | 91.7           | 18.6/9.3 | H         | 163  | 6308     | 6208   | 20.70   |                      |
| 10   | 3525    | 575     | 215TC          | MPSP-1002TL    | 90.2     | 9.76      | H    | 175      | 6308   | 6208    | 20.70                |
|      | 3525    | 230/460 | 215TC          | MQSP-1002TL    | 90.2     | 24.4/12.2 | H    | 175      | 6308   | 6208    | 20.70                |
|      | 1760    | 575     | 215TC          | MPSP-1004TL    | 91.7     | 9.79      | H    | 200      | 6308   | 6208    | 21.50                |
|      | 1760    | 230/460 | 215TC          | MQSP-1004TL    | 91.7     | 24.4/12.2 | H    | 200      | 6308   | 6208    | 21.50                |
| 15   | 3530    | 575     | 254TC          | MPSP-1502TL    | 92.4     | 14.8      | G    | 286      | 6309   | 6309    | 23.20                |
|      | 3530    | 230/460 | 254TC          | MQSP-1502TL    | 92.4     | 37/18.5   | G    | 286      | 6309   | 6309    | 23.20                |
|      | 1765    | 575     | 254TC          | MPSP-1504TL    | 92.4     | 14.4      | G    | 286      | 6309   | 6309    | 23.20                |
|      | 1765    | 230/460 | 254TC          | MQSP-1504TL    | 92.4     | 36/18     | G    | 286      | 6309   | 6309    | 23.20                |
| 20   | 3530    | 575     | 256TC          | MPSP-2002TL    | 93       | 18.4      | G    | 352      | 6309   | 6309    | 24.80                |
|      | 3530    | 230/460 | 256TC          | MQSP-2002TL    | 93       | 46/23     | G    | 352      | 6309   | 6309    | 24.80                |
|      | 1765    | 575     | 256TC          | MPSP-2004TL    | 93       | 19.6      | G    | 352      | 6309   | 6309    | 24.80                |
|      | 1765    | 230/460 | 256TC          | MQSP-2004TL    | 93       | 49/24.4   | G    | 352      | 6309   | 6309    | 24.80                |





When this power wash icon is displayed, this means the fixture is rated IP69K.

### What is IP69K?

The IP69K rating is for applications where high pressure and high temperature wash-down are used to sanitize equipment. The IP69K test specification was initially developed for road vehicles, especially those that need regular intensive cleaning (dump trucks, cement mixers, etc.), but has been widely adopted in the Food & Beverage industries as a test of products to withstand sanitary washdown.

### More specifics on IP69K

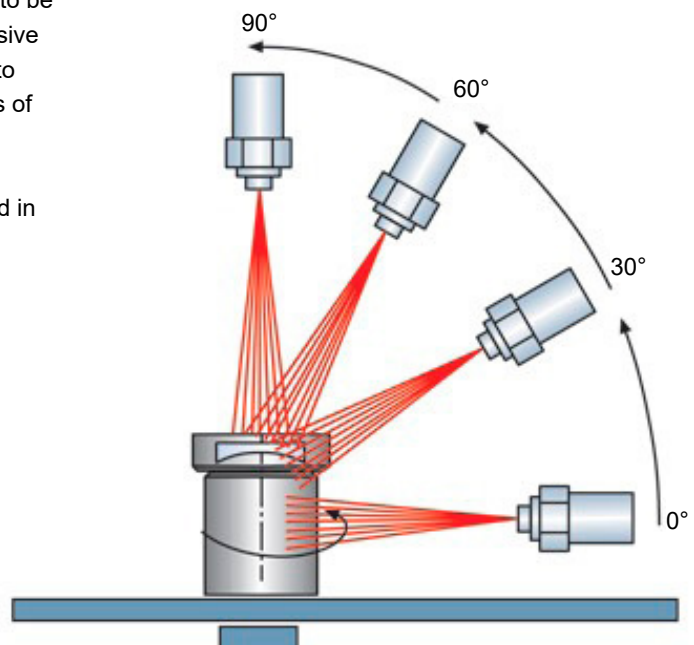
In applications where devices were regularly exposed to high-pressure or high temperature wash downs, the highest ratings of IP68 was sometimes found to be insufficient. Therefore, a special rating was created by ISO to test this intensive cleaning. In the IEC 60529 rating system, IP6 refers to the product's ability to resist ingress of dust. The 69K refers to the product's ability to resist ingress of high temperature (steam) / high pressure water.

Only if the device passes this test can it be considered IP69K rated and used in harsh environments with high pressure / steam cleaning.

Testing procedure per ISO 20653:

*(depicted in image to right)*

- A spray nozzle that is fed with 80°C water at 80–100 bar (~1160-1450) and a flow rate of 14–16 L/min.
- The nozzle is held 10-15cm from the tested device at angles of 0°, 30°, 60° and 90° for 30 seconds each.
- The test device sits on a turntable that rotates once every 12 seconds.



### IP68, IP69 and IP69K - The facts

Even though you can do an internet search for IP69, it is important to note that there is no IP69 rating. The IP chart goes from IP68 to IP69K. In addition, just because IP69K is a higher number does not mean the coverage or rating is higher or better than IP68. In fact, IP68 and IP69K are very different ratings. While both share the same first digit "6" which is protection against the ingress of solid objects and are rated as dust tight, that is where the similarity ends. IP68 is rated for prolonged immersion in water, IP69K as noted above involves pressure washing at high temperatures.