

# MaxMotion

## PERFORMANCE DATA SHEET

Meets or exceeds MEPS (Minimum Efficiency Performance Standards), as described by the US Department of Energy in docket 10CFR431 and Natural Resources Canada's Amendment 14

Catalogue #: **MQR-124CW**

| HP  | kW   | Voltage   | S.F. @ 60Hz | EFF.  | P.F.  | Frame | Design | L.R. Amps |
|-----|------|-----------|-------------|-------|-------|-------|--------|-----------|
| 0,5 | 0,37 | 230 / 460 | 1,15        | 74,0% | 0,668 | 56HC  | B      | 10        |

| 60 Hz |       |     |       |     |     |     |   | Code | F.L. RPM |
|-------|-------|-----|-------|-----|-----|-----|---|------|----------|
| FLA   |       |     |       |     |     |     |   |      |          |
| 208   | 230   | 416 | 460   | 480 | 575 | 600 |   |      |          |
| /     | 1,898 | /   | 0,949 | /   | /   | /   | L | 1725 |          |

| 50 Hz |         |     |     |             |            |      |      |          |
|-------|---------|-----|-----|-------------|------------|------|------|----------|
| HP    | kW      | FLA |     | S.F. @ 50Hz | Efficiency | P.F. | Code | F.L. RPM |
|       |         | 190 | 380 |             |            |      |      |          |
| 0,33  | 0,24618 | 1,8 | 0,9 | 1,15        | 70,0%      | 0,59 | L    | 1440     |

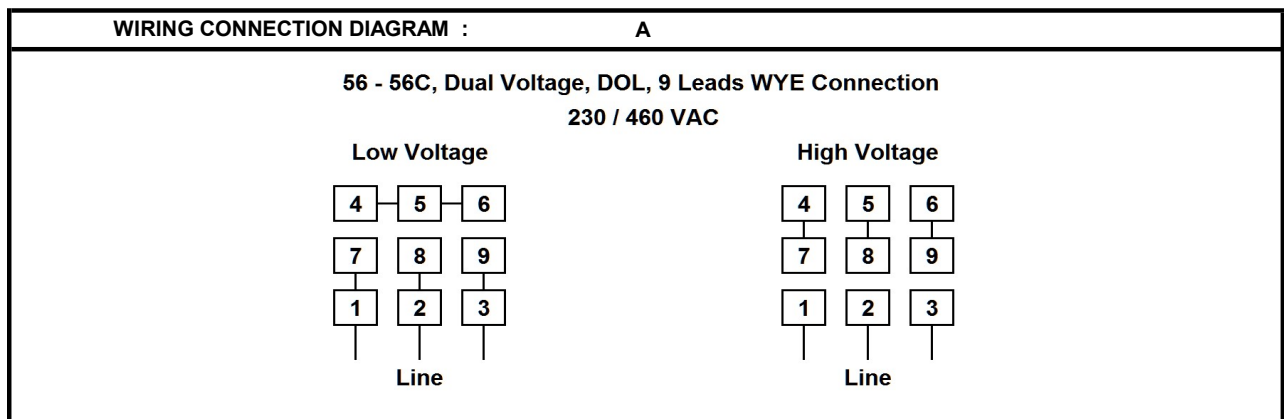
| Wgt. Lbs | PH | Duty  | Insul. Class | Amb. | Elevation       | Temp. Rise° C |
|----------|----|-------|--------------|------|-----------------|---------------|
| 24       | 3  | Cont. | F            | 40°C | 1000M (3300 Ft) | 50            |

| % Efficiency |       | % Power Factor |      | Torque           |     | Winding Resist. Ω | Safe Cold Start (Secs) |
|--------------|-------|----------------|------|------------------|-----|-------------------|------------------------|
| Full Load:   | 74,0% | Full Load:     | 0,67 | Full Load Ft/Lbs | 1,5 |                   |                        |
| 3/4 Load:    | 66,7% | 3/4 Load:      | 0,63 | Locked Rotor %   | 250 |                   |                        |
| 1/2 Load:    | 55,3% | 1/2 Load:      | 0,55 | Break Down %     | 360 | /                 | 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 |
|--------------------------|-----------------------------|----------------|----------------|-----------------|------------------|-----------|-------------|----------------|
| /                        | /                           | Steel          | Rolled Steel   | Aluminium Alloy |                  | TEFC      | IP55        | 16AWG          |

| Ball Bearings |      | Grease          | Mount Type | Orientation | Paint | Sound Pressure @ 3FT | Sound Power |
|---------------|------|-----------------|------------|-------------|-------|----------------------|-------------|
| DE            | ODE  |                 |            |             |       |                      |             |
| 6205          | 6203 | Sealed Bearings | Rigid      | Horizontal  | Black | /                    | /           |

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



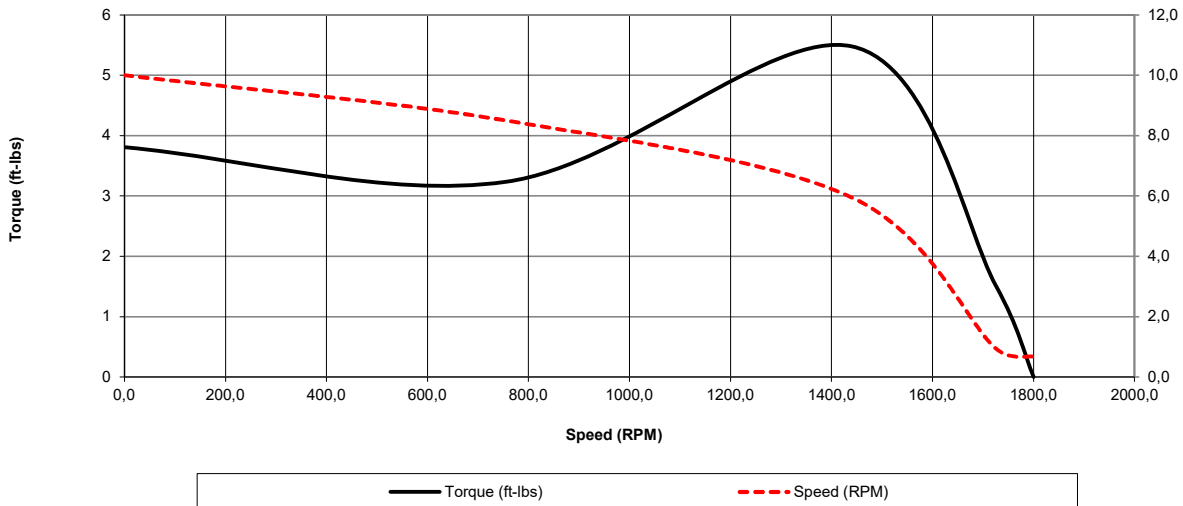
Date: 2023-12-21  
 Customer: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Submittee: J.C. Lavallée

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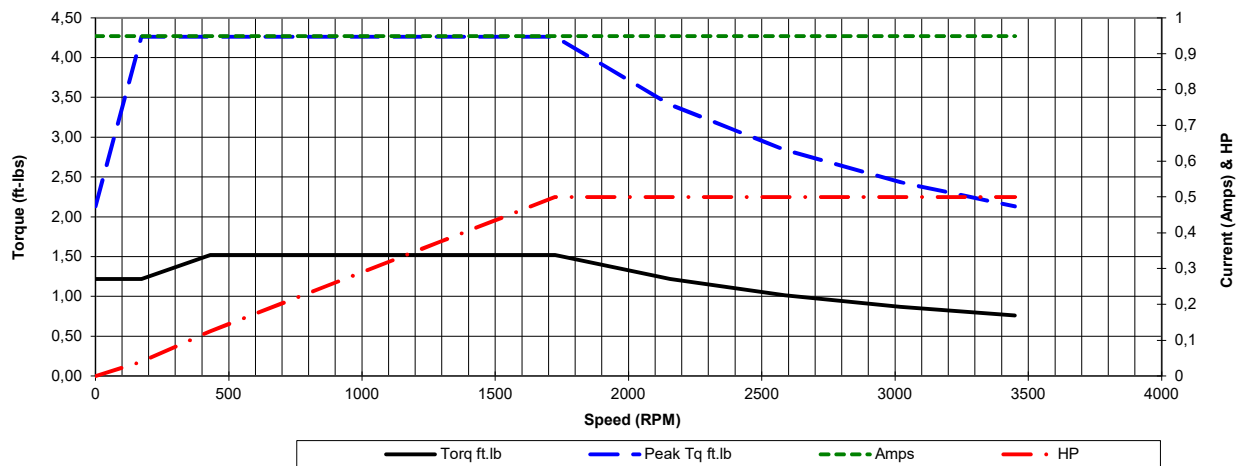
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| HP               | VAC          | RPM     | Enclosure | Frame      | Frequency | Design                               | Poles   | LR Code Letter | Insulation Class | Temp. Rise °C |
|------------------|--------------|---------|-----------|------------|-----------|--------------------------------------|---------|----------------|------------------|---------------|
| 0,5              | 460          | 1725    | TEFC      | 56HC       | 60        | B                                    | 4       | L              | F                | 50            |
|                  | 0Hz          | 6Hz     | 15Hz      | 30Hz       | 45Hz      | 60Hz                                 | 75Hz    | 90Hz           | 105Hz            | 120Hz         |
| Amps             | 0,949        | 0,949   | 0,949     | 0,949      | 0,949     | 0,949                                | 0,949   | 0,949          | 0,949            | 0,949         |
| RPM              | 0            | 172,5   | 431,25    | 862,5      | 1293,75   | 1725                                 | 2156,25 | 2587,5         | 3018,75          | 3450          |
| Torq ft.lb       | 1,22         | 1,22    | 1,52      | 1,52       | 1,52      | 1,52                                 | 1,22    | 1,01           | 0,87             | 0,76          |
| Peak Tq ft.lb    | 2,13         | 4,26    | 4,26      | 4,26       | 4,26      | 4,26                                 | 3,41    | 2,84           | 2,44             | 2,13          |
| HP               | 0            | 0,0     | 0,1       | 0,3        | 0,4       | 0,5                                  | 0,5     | 0,5            | 0,5              | 0,5           |
|                  | Locked Rotor | Pull-Up | Breakdown | Rated Load | Idle      | Duty                                 | S. F.   | Ambient        | Elevation        | dBA @ 1M      |
| Speed (RPM)      | 0,0          | 756     | 1440      | 1725       | 1800      | Continuous                           | 1,15    | 40°C           | 3,300 ft         | /             |
| Current (Amps)   | 10,0         | 8,5     | 6,0       | 0,9        | 0,7       | VFD Rating: Meets MG1 parts 31.4.4.2 |         |                |                  |               |
| Torque (ft.-lbs) | 3,8          | 3,2     | 5,5       | 1,5        | 0,0       | C.T.                                 | 10:1    | V.T.           | 20:1             |               |

Motor Speed Data



Motor Torque Capability vs RPM





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| HP  | VAC | RPM  | Enclosure | Frame | Frequency | Design | Poles | LR Code Letter | Insulation Class | Temp. Rise °C |
|-----|-----|------|-----------|-------|-----------|--------|-------|----------------|------------------|---------------|
| 0,5 | 460 | 1725 | TEFC      | 56HC  | 60        | B      | 4     | L              | F                | 50            |

| Load %      | 0%   | 25%     | 50%    | 75%     | 100%  | 125%    | 150%   |
|-------------|------|---------|--------|---------|-------|---------|--------|
| Amps        | 0,67 | 0,72    | 0,77   | 0,84    | 0,95  | 1,19    | 1,42   |
| Torq ft/lbs | 0    | 0,37    | 0,74   | 1,13    | 1,52  | 1,92    | 2,33   |
| RPM         | 0    | 1781,25 | 1762,5 | 1743,75 | 1725  | 1706,25 | 1687,5 |
| Eff         | 0    | 34,70   | 55,30  | 66,74   | 74,00 | 72,40   | 70,33  |
| PF          | 0    | 46,8    | 55     | 63      | 66,8  | 68,1    | 70,1   |

|                 | Locked Rotor | Pull-Up | Breakdown | Rated Load | Idle    | Duty                                 | S. F. | Ambient | Elevation | dBA @ 1M |
|-----------------|--------------|---------|-----------|------------|---------|--------------------------------------|-------|---------|-----------|----------|
| Speed (RPM)     | 0            | 756     | 1440      | 1725       | 1800    | Continuous                           | 1,15  | 40°C    | 3,300 ft  | /        |
| Current (Amps)  | 10           | 8,5     | 6,0       | 0,949      | 0,67379 | VFD Rating: Meets MG1 parts 31.4.4.2 |       |         |           |          |
| Torque (ft-lbs) | 3,81         | 3,23    | 5,48      | 1,52       | 0,0     | C.T.                                 | 10:1  | V.T.    | 20:1      |          |

