

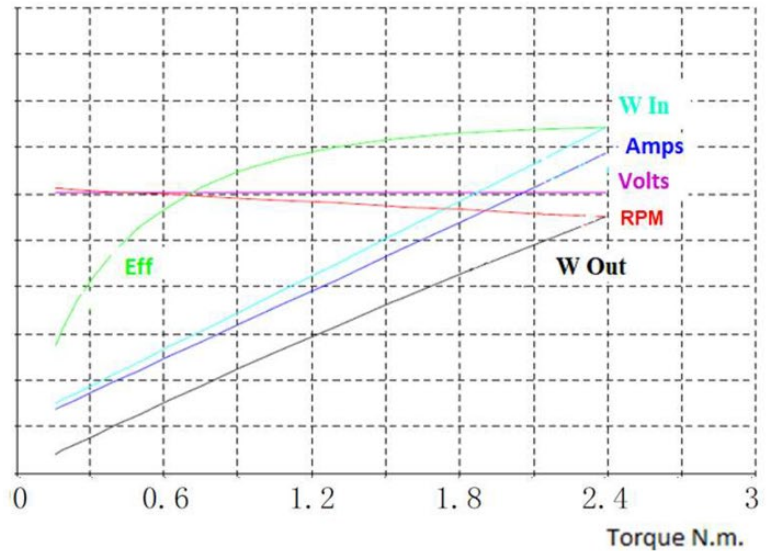
Model: MM5018FC/NV

Description: MaxMotion 0.50HP, 1750RPM, 180VDC, TEFC/NV, 56C

Tester: 01

Test Date: 2018.11.09

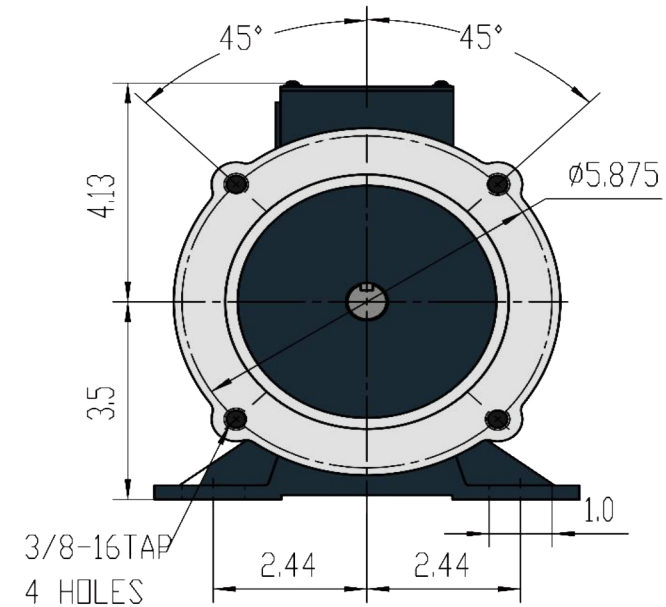
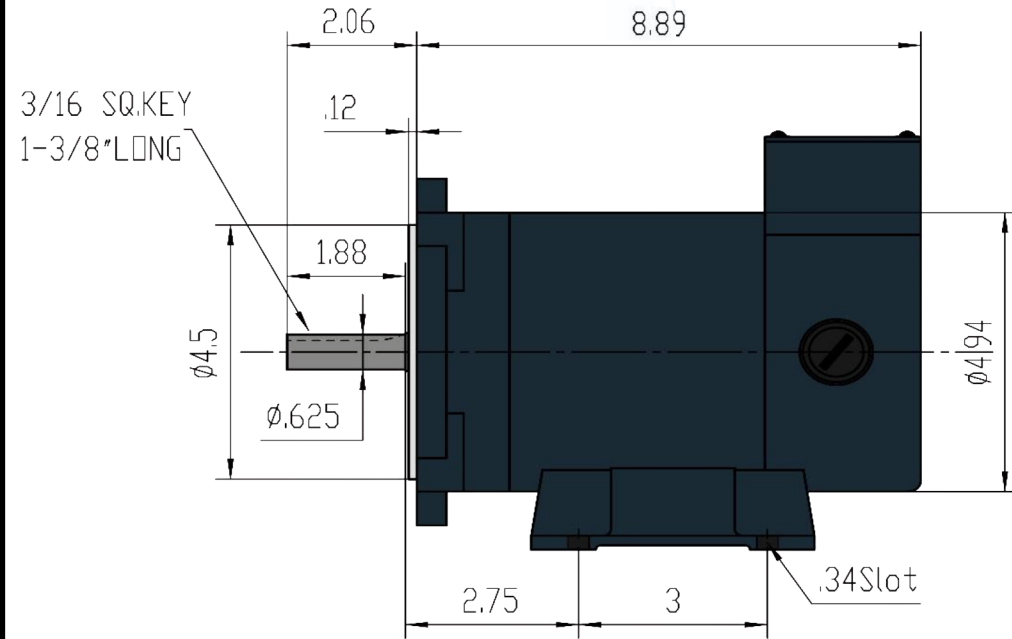
| V   | A   | W In | RPM  | W out | Eff. % |
|-----|-----|------|------|-------|--------|
| 300 | 5   | 700  | 300  | 500   | 100    |
| 270 | 4.5 | 630  | 2700 | 450   | 90     |
| 240 | 4   | 560  | 2400 | 400   | 80     |
| 210 | 3.5 | 490  | 2100 | 350   | 70     |
| 180 | 3   | 420  | 1800 | 300   | 60     |
| 150 | 2.5 | 350  | 1500 | 250   | 50     |
| 120 | 2   | 280  | 1200 | 200   | 40     |
| 90  | 1.5 | 210  | 900  | 150   | 30     |
| 60  | 1   | 140  | 600  | 100   | 20     |
| 30  | 0.5 | 70   | 300  | 50    | 10     |
| 0   | 0   | 0    | 0    | 0     | 0      |



| Measured Points   | V     | A     | Input Watts | N.m.  | RPM  | Output Watts | %     |
|-------------------|-------|-------|-------------|-------|------|--------------|-------|
| No Load           | 180.2 | 0.391 | 70.66       | 0.106 | 1905 | 21.22        | 30.0% |
| Rated             | 180.1 | 2.554 | 460.2       | 2.044 | 1752 | 375          | 81.4% |
| Efficiency Max.   | 180   | 2.812 | 506.4       | 2.278 | 1734 | 413.6        | 81.6% |
| Max. Kw Output    | 180   | 3.142 | 565.9       | 2.571 | 1710 | 460.4        | 81.3% |
| Max. Torq. Output | 180   | 3.142 | 565.9       | 2.571 | 1710 | 460.4        | 81.3% |
| End               | 180   | 3.142 | 565.9       | 2.571 | 1710 | 460.4        | 81.3% |

| Load          | Measure   | V            | A            | Input Watts  | N.m.         | RPM         | Output Watts | Eff %        |
|---------------|-----------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|
| 5.7%          | 1         | 180.2        | 0.391        | 70.66        | 0.106        | 1905        | <b>21.22</b> | 30.0%        |
| 6.4%          | 2         | 180.2        | 0.411        | 74.18        | 0.12         | 1904        | <b>24.08</b> | 32.4%        |
| 8.2%          | 3         | 180.2        | 0.449        | 81.0         | 0.154        | 1901        | <b>30.81</b> | 38.0%        |
| 10.7%         | 4         | 180.2        | 0.503        | 90.7         | 0.202        | 1897        | <b>40.19</b> | 44.3%        |
| 13.8%         | 5         | 180.2        | 0.566        | 102.1        | 0.26         | 1892        | <b>51.66</b> | 50.5%        |
| 17.2%         | 6         | 180.2        | 0.641        | 115.6        | 0.326        | 1887        | <b>64.56</b> | 55.8%        |
| 21.5%         | 7         | 180.2        | 0.735        | 132.5        | 0.41         | 1892        | <b>80.61</b> | 60.8%        |
| 26.2%         | 8         | 180.2        | 0.837        | 150.9        | 0.502        | 1872        | <b>98.39</b> | 65.1%        |
| 31.8%         | 9         | 180.2        | 0.958        | 172.6        | 0.611        | 1863        | <b>119.2</b> | 69.0%        |
| 37.9%         | 10        | 180.1        | 1.096        | 197.6        | 0.734        | 1852        | <b>142.3</b> | 72.0%        |
| 45.0%         | 11        | 180.1        | 1.255        | 226.2        | 0.875        | 1841        | <b>168.6</b> | 74.5%        |
| 52.5%         | 12        | 180.1        | 1.427        | 257.1        | 1.029        | 1828        | <b>197.0</b> | 76.6%        |
| 61.1%         | 13        | 180.1        | 1.62         | 292.0        | 1.207        | 1814        | <b>229.2</b> | 78.5%        |
| 70.3%         | 14        | 180.1        | 1.836        | 330.9        | 1.401        | 1798        | <b>263.7</b> | 79.7%        |
| 80.2%         | 15        | 180.1        | 2.076        | 374.0        | 1.614        | 1778        | <b>300.6</b> | 80.3%        |
| 90.9%         | 16        | 180.1        | 2.335        | 420.6        | 1.848        | 1761        | <b>340.7</b> | 81.0%        |
| <b>100.0%</b> | <b>17</b> | <b>180.1</b> | <b>2.554</b> | <b>460.2</b> | <b>2.044</b> | <b>1752</b> | <b>375.0</b> | <b>81.4%</b> |
| <b>100.0%</b> | <b>18</b> | <b>180.1</b> | <b>2.554</b> | <b>460.2</b> | <b>2.044</b> | <b>1752</b> | <b>375.0</b> | <b>81.4%</b> |
| 110.3%        | 19        | 180          | 2.812        | 506.4        | 2.278        | 1734        | <b>413.6</b> | 81.6%        |
| 122.8%        | 20        | 180          | 3.142        | 565.9        | 2.571        | 1710        | <b>460.4</b> | 81.3%        |

# MaxMotion



Customer is responsible in determining that MaxMotion product will fit/perform suitably in the intended application

Version: 1NIN

Revised: April 2020

| HP  | RPM  | Voltage | Amps | Const. | Frame | Insul.  | Torque    | P. Code | Wgt lbs | Rated |
|-----|------|---------|------|--------|-------|---------|-----------|---------|---------|-------|
| 0,5 | 1750 | 180Vdc  | 3,14 | TENV   | 56C   | Class H | 18 in/lbs | K (SCR) | 25      | IP45  |

## MM5018NV

# DC PERMANENT MAGNET MOTOR

HEAVY GAUGE ROLLED STEEL CONSTRUCTION | TENV TOTALLY NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED SCR RATED, 90VDC, 180VDC

MaxMotion

## Applications:

For use with SCR rated single phase DC variable speed controls used in conveyors, pumps, packaging equipment and many other applications where economical precise speed control is required.



## Features:

**Design** - SCR Rated

**Construction** - Rolled Steel, NEMA C-Face Footed with Removable Base

**Agency listings and standard** - NEMA, UL Recognized and CSA Certified, RoHS Compliant

**Service Factor** - 1.0

**IP Rating** - IP45

**Insulation** - Class F Insulation

**Speed Range** - 20:1 Constant Torque, Linear Speed/Torque Characteristics over entire speed range

**Voltage** - 90V & 180V

**Bearings** - Permanently Lubricated High quality Double Shielded Ball Bearings

**Brushes** - Oversized for Extra Long Life, Easy brush access with Unique brush Holder

**Enclosure Protection** - (TEFC) Totally Enclosed Fan Cooled & (TENV) Totally Enclosed Non-Ventilated

**Duty** - Continuous

**Warranty** - 18 Months

# DC PERMANENT MAGNET MOTOR

HEAVY GAUGE ROLLED STEEL CONSTRUCTION | TENV TOTALLY NON-VENTILATED & TEFC TOTALLY ENCLOSED FAN COOLED SCR RATED, 90VDC, 180VDC



| HP   | FL RPM | VOLTS | FRAME | CAT NO.      | CONSTRUCTION | ENCLOSURE | NOM EFF. | F.L. AMPS | DE BEARING | NDE BEARING | WT (Lbs) | "C" Dimension (Inch) |
|------|--------|-------|-------|--------------|--------------|-----------|----------|-----------|------------|-------------|----------|----------------------|
| 0.25 | 1773   | 90    | 56C   | MM2590NV     | ROLLED STEEL | TENV      | 76.70%   | 2.05      | 6203       | 6203        | 21       | 8                    |
|      | 1773   | 90    | 56C   | MM2590FC     | ROLLED STEEL | TEFC      | 76.70%   | 2.05      | 6203       | 6203        | 21       | 9.6                  |
|      | 1717   | 180   | 56C   | MM2518NV     | ROLLED STEEL | TENV      | 71.90%   | 2.55      | 6203       | 6203        | 21       | 8                    |
|      | 1717   | 180   | 56C   | MM2518FC     | ROLLED STEEL | TEFC      | 71.90%   | 2.55      | 6203       | 6203        | 21       | 9.6                  |
| 0.33 | 1691   | 90    | 56C   | MM3390NV     | ROLLED STEEL | TENV      | 77.70%   | 5.1       | 6203       | 6203        | 23       | 8                    |
|      | 1691   | 90    | 56C   | MM3390FC     | ROLLED STEEL | TEFC      | 77.70%   | 5.1       | 6203       | 6203        | 23       | 9.6                  |
|      | 1687   | 180   | 56C   | MM3318NV     | ROLLED STEEL | TENV      | 69.90%   | 2.55      | 6203       | 6203        | 23       | 8                    |
|      | 1687   | 180   | 56C   | MM3318FC     | ROLLED STEEL | TEFC      | 69.90%   | 2.55      | 6203       | 6203        | 23       | 9.6                  |
| 0.5  | 1702   | 90    | 56C   | MM5090NV     | ROLLED STEEL | TENV      | 81.90%   | 6.28      | 6203       | 6203        | 25       | 8.88                 |
|      | 1702   | 90    | 56C   | MM5090FC     | ROLLED STEEL | TEFC      | 81.90%   | 6.28      | 6203       | 6203        | 25       | 10.4                 |
|      | 1752   | 180   | 56C   | MM5018NV     | ROLLED STEEL | TENV      | 81.40%   | 3.14      | 6203       | 6203        | 25       | 8.88                 |
|      | 1752   | 180   | 56C   | MM5018FC     | ROLLED STEEL | TEFC      | 81.40%   | 3.14      | 6203       | 6203        | 25       | 10.4                 |
| 0.75 | 1651   | 90    | 56C   | MM7590FC     | ROLLED STEEL | TEFC      | 83.90%   | 9.82      | 6203       | 6203        | 30       | 11.45                |
|      | 1675   | 180   | 56C   | MM7518FC     | ROLLED STEEL | TEFC      | 84.00%   | 4.9       | 6203       | 6203        | 30       | 11.45                |
| 1    | 1739   | 90    | 56C   | MM1090FC     | ROLLED STEEL | TEFC      | 84.00%   | 12.7      | 6203       | 6203        | 33       | 12.24                |
|      | 1739   | 180   | 56C   | MM1018FC     | ROLLED STEEL | TEFC      | 84.70%   | 6.4       | 6203       | 6203        | 33       | 12.24                |
| 1.5  | 1793   | 180   | 56C   | MM1518FC-56C | ROLLED STEEL | TEFC      | 83.30%   | 7.86      | 6203       | 6203        | 45       | 14.39                |
|      | 1793   | 180   | 145TC | MM1518FC     | ROLLED STEEL | TEFC      | 83.30%   | 7.86      | 6305       | 6305        | 45       | 13.8                 |
| 2    | 1751   | 180   | 56C   | MM2018FC-56C | ROLLED STEEL | TEFC      | 82.80%   | 10.4      | 6305       | 6305        | 55       | 14.75                |
|      | 1751   | 180   | 145TC | MM2018FC     | ROLLED STEEL | TEFC      | 82.80%   | 10.77     | 6305       | 6305        | 55       | 14.8                 |
| 3    | 1814   | 180   | 145TC | MM3018FC     | ROLLED STEEL | TEFC      | 82.50%   | 18.6      | 6305       | 6305        | 70       | 16.9                 |

