

# Series M004 Multi-Vane Air Motors



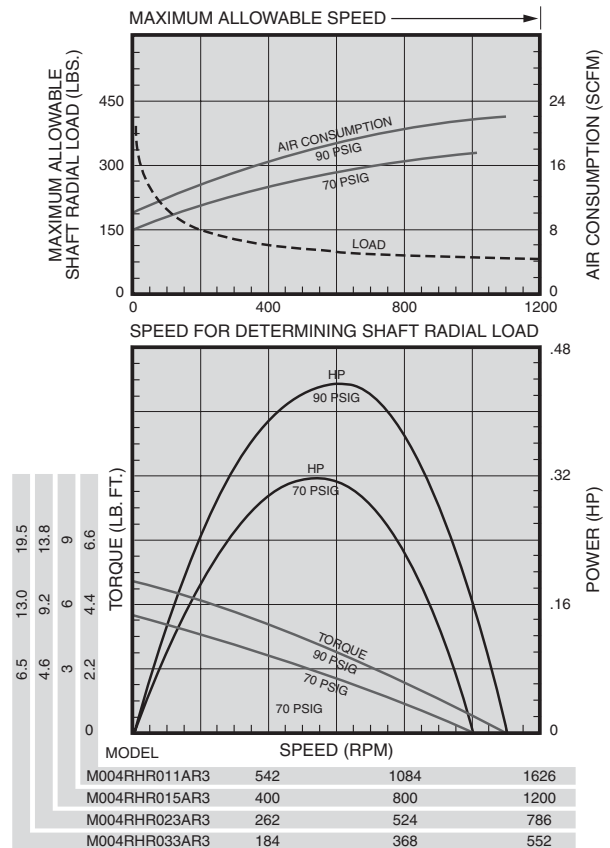
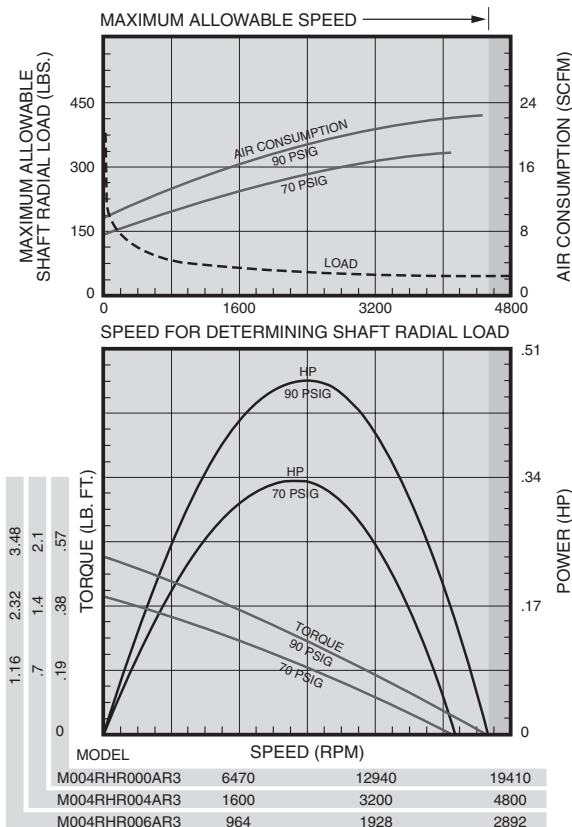
## SPECIFICATIONS

| Model  | Max. Power |      | Speed at Max. Power | Free Speed▲ | Starting Torque |       | Stall Torque |       | Air Consumption at Max. Power |                   | Weight                         |      |
|--|------------|------|---------------------|-------------|-----------------|-------|--------------|-------|-------------------------------|-------------------|--------------------------------|------|
|  | hp         | kw   | rpm                 | rpm         | lb.-ft.         | Nm    | lb.-ft.      | Nm    | scfm                          | m <sup>3</sup> /m | lb.                            | kg   |
| <b>Non-Reversible</b> Direction of rotation is counterclockwise when facing the shaft. |            |      |                     |             |                 |       |              |       |                               |                   |                                |      |
| M004RHR000AR3  | 0.50       | 0.37 | 10,000              | 18,000      | 0.40            | 0.54  | 0.53         | 0.72  | 20.0                          | 0.57              | 2 <sup>1</sup> / <sub>16</sub> | 0.95 |
| M004RHR004AR3  | 0.47       | 0.35 | 2470                | 4450        | 1.46            | 1.98  | 1.94         | 2.63  | 19.5                          | 0.55              | 2 <sup>3</sup> / <sub>16</sub> | 1.00 |
| M004RHR006AR3  | 0.47       | 0.35 | 1490                | 2680        | 2.42            | 3.28  | 3.22         | 4.37  | 19.5                          | 0.55              | 2 <sup>3</sup> / <sub>16</sub> | 1.00 |
| M004RHR011AR3  | 0.44       | 0.33 | 825                 | 1490        | 3.92            | 5.32  | 5.22         | 7.08  | 19.0                          | 0.54              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RHR015AR3  | 0.44       | 0.33 | 610                 | 1095        | 5.32            | 7.21  | 7.10         | 9.63  | 19.0                          | 0.54              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RHR023AR3  | 0.44       | 0.33 | 395                 | 715         | 8.10            | 11.0  | 10.8         | 14.6  | 19.0                          | 0.54              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RHR033AR3  | 0.44       | 0.33 | 280                 | 505         | 11.5            | 15.6  | 15.4         | 20.8  | 19.0                          | 0.54              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RHR050AR3  | 0.41       | 0.31 | 175                 | 315         | *16.5           | *22.4 | *22.1        | *30.0 | 18.5                          | 0.52              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |
| M004RHR083AR3  | 0.41       | 0.31 | 106                 | 190         | *27.5           | *37.3 | *36.7        | *49.7 | 18.5                          | 0.52              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |
| M004RHR167AR3  | 0.41       | 0.31 | 53                  | 95          | *55.0           | *74.5 | *73.3        | *99.4 | 18.5                          | 0.52              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |
| <b>Reversible</b>  |            |      |                     |             |                 |       |              |       |                               |                   |                                |      |
| M004RVR000AR3  | 0.40       | 0.30 | 8000                | 16,000      | 0.32            | 0.43  | 0.42         | 0.57  | 19.0                          | 0.54              | 2 <sup>1</sup> / <sub>16</sub> | 0.95 |
| M004RVR004AR3  | 0.37       | 0.28 | 1975                | 3955        | 1.13            | 1.53  | 1.51         | 2.05  | 18.5                          | 0.52              | 2 <sup>3</sup> / <sub>16</sub> | 1.00 |
| M004RVR006AR3  | 0.37       | 0.28 | 1190                | 2380        | 1.88            | 2.55  | 2.51         | 3.40  | 18.5                          | 0.52              | 2 <sup>3</sup> / <sub>16</sub> | 1.00 |
| M004RVR011AR3  | 0.34       | 0.25 | 660                 | 1325        | 3.00            | 4.07  | 4.00         | 5.42  | 18.0                          | 0.51              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RVR015AR3  | 0.34       | 0.25 | 485                 | 975         | 4.07            | 5.52  | 5.43         | 7.36  | 18.0                          | 0.51              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RVR023AR3  | 0.34       | 0.25 | 315                 | 635         | 6.23            | 8.45  | 8.30         | 11.2  | 18.0                          | 0.51              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RVR033AR3  | 0.34       | 0.25 | 225                 | 450         | 8.85            | 12.0  | 11.8         | 16.0  | 18.0                          | 0.51              | 2 <sup>3</sup> / <sub>16</sub> | 1.09 |
| M004RVR050AR3  | 0.31       | 0.23 | 140                 | 280         | *12.3           | *16.7 | *16.5        | *22.4 | 17.5                          | 0.50              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |
| M004RVR083AR3  | 0.31       | 0.23 | 84                  | 169         | *20.6           | *27.9 | *27.5        | *37.3 | 17.5                          | 0.50              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |
| M004RVR167AR3  | 0.31       | 0.23 | 42                  | 85          | *41.3           | *56.0 | *55.0        | *74.5 | 17.5                          | 0.50              | 2 <sup>1</sup> / <sub>16</sub> | 1.22 |

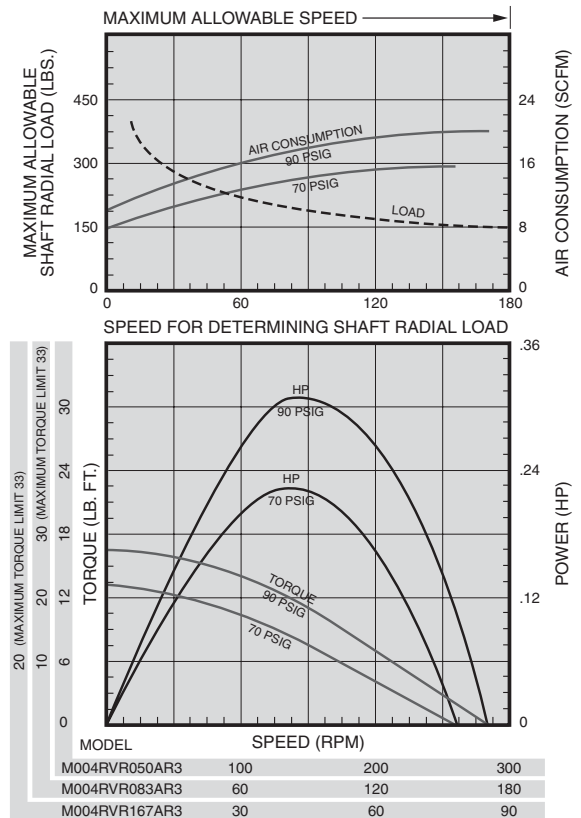
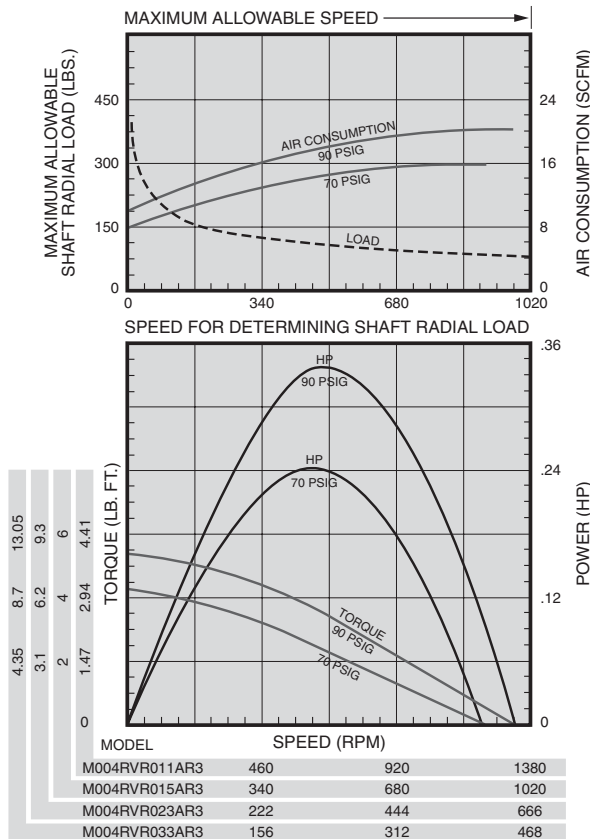
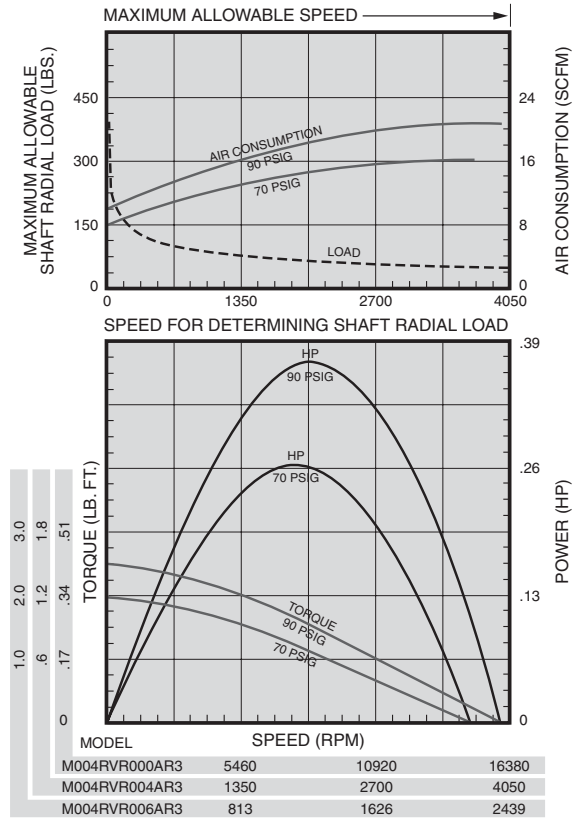
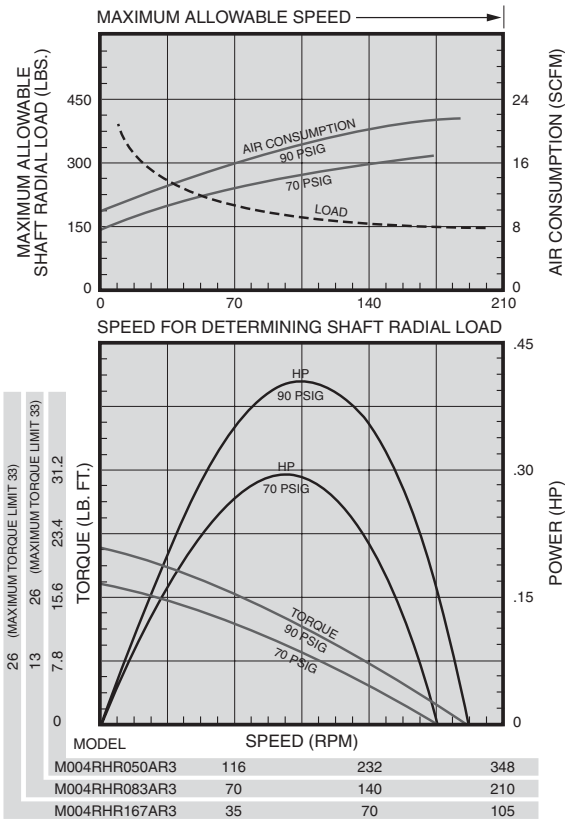
▲ ALL models must be operated with sufficient load to prevent speed from exceeding maximum allowable speed shown on performance curve.

\* Applications with these models must be limited to 33 lb.-ft. (44.7 Nm) torque.

Performance figures are at 90 psig (620 kPa) air pressure.



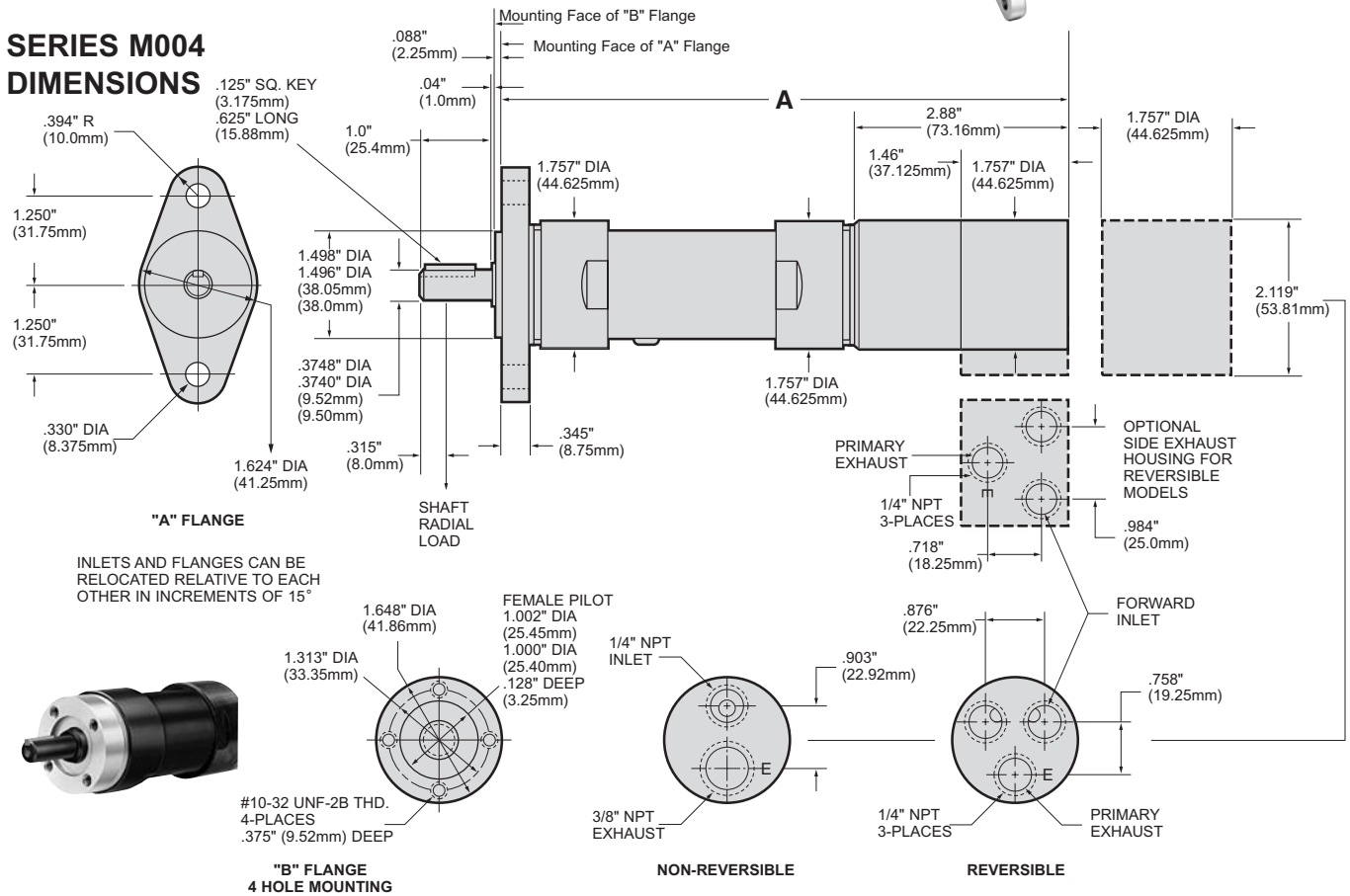
# Series M004 Multi-Vane Air Motors



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## SERIES M004 DIMENSIONS



## SERIES M004 MODEL NUMBER SYMBOLIZATION



HP = Approximate horsepower range (.31 to .50)

Rotation = RV Reversible  
 RH Non-Reversible, Right Hand from Rear of Motor (CCW facing shaft)  
 LH Non-Reversible, Left Hand from Rear of Motor (CW facing shaft)

Air Inlet & Exhaust = R Rear, S Side (Side Inlet and Exhaust available on Reversible Models only)

Gear Ratio = 023 is 1 to 23, 033 is 1 to 33, etc.

Flange = A 2 Hole Flange, B 4 Hole Face Mounting

Shaft = R3 3/8" Round Keyed  
 T3 3/8"-24 UNF-2A Threaded  
 Threaded Shaft Extension is .512" (13mm)  
 Full Thread Length is .424" (10.75mm)  
 S3 3/8" Square Drive  
 Square Shaft Extension is 1.791" (45.5mm)

## DIMENSIONS

| Gear Ratios<br>(Refer to Model No.) | A     |        |
|-------------------------------------|-------|--------|
|                                     | in.   | mm     |
| 000, 004, 006                       | 6.248 | 158.69 |
| 011, 015, 023, 033                  | 6.984 | 177.38 |
| 050, 083, 167                       | 7.745 | 196.73 |

## EQUIPMENT OPTIONS

| Furnished with Cataloged Models | Standard Options  | Extra Options  |
|---------------------------------|---|--|
| 2 Hole Flange Mounting          | 4 Hole Face Mounting  | R1440-212-1<br>3/8" Square Drive Adapter, 1" long with 3/8"-24 Female threads for use with Threaded Shaft. |
| 3/8" Round Keyed Shaft          | 3/8"-24 Threaded Shaft                                      |  |
|                                 | Side Inlet and Exhaust Housing (for Reversible Models only) | Required for 3/8" Adapter<br>(2) R2J-561 set screws  |

**Note: On all Series M002, M004, and M007 Air Motors, performance is the same for both directions of rotation. On Non-Reversible models, direction of rotation may be easily changed without the need of additional parts by inverting cylinder. See Assembly Instruction form number listed in price sheet.**