

M-D Pneumatics™

# COMPETITOR<sup>®</sup> PLUS™

## Rotary Positive Blowers

**COMPETITOR PLUS** rotary blowers are designed to be interchangeable with equivalent sizes of Roots Universal RA<sup>®</sup>, and many Sutorbilt<sup>®</sup> California Series B and F, and Legend™ Series L and P blowers. **COMPETITOR PLUS** models are rated up to 15 PSIG discharge pressure or 16" Hg dry vacuum.

In addition to interchangeability, Tuthill Vacuum & Blower Systems has improved on existing designs with the following superior features ordinarily found only on premium blowers:

### Helical Gearing

**COMPETITOR PLUS** blowers are timed with hardened, precision helical gears, keyed to the rotor shafts, not taper fit spur gears as offered by other manufacturers, which have greater backlash, and can slip and lose timing. Helical gears are also quieter, reducing mechanical noise.

### Stronger Bearings

All **COMPETITOR PLUS** blowers include double row ball bearings at the gear end, stronger than single row ball bearings offered by other manufacturers. Drive shaft bearing is cylindrical roller type for additional strength against side loading from V-belt drives. As a result of this superior design, **COMPETITOR PLUS** blowers offer design bearing life as much as 50% greater than models offered by other manufacturers.

### Rotors with Integral Shafts

**COMPETITOR PLUS** blowers include precision machined ductile iron rotors with large, integrally cast shafts, not press fit and/or pinned shafts offered by other manufacturers, which can loosen over time and cause rotor clash. All rotors are dynamically balanced for vibration-free rotation.

### Positive End Clearances

End clearances are positively established at the blower gear end, eliminating the risk of shifting end clearances when installing or removing drive components. This also eliminates the need for those special fork and saddle tools required by other brands to reset end clearances.

### Polished Sealing Surfaces

All shaft surfaces in contact with sealing members are polished to reduce seal wear and risk of leakage.

### Individually Tested

Every **COMPETITOR PLUS** blower is factory tested to assure you of the highest quality. While some manufacturers perform only sample testing, We go the distance to insure that your blower meets our rigid ISO 9001 registered quality standards.

### ISO 9001 Registration

**COMPETITOR PLUS** blowers are manufactured under the Tuthill Vacuum & Blower Systems ISO 9001 registered quality assurance program, the first American manufacturer of rotary blowers to gain such international recognition.

### Warranty

Every **COMPETITOR PLUS** blower is backed by the Tuthill Vacuum & Blower Systems limited warranty for a period of 18 months after installation or 2 years after original blower shipment, whichever occurs first.

### Reduced Noise Versions Available

Many **COMPETITOR PLUS** models are available with tri-lobe rotors and specially tuned housing to reduce blower noise.

### Worldwide Sales and Service

With sales offices and service facilities located on six continents, you can be assured of availability and service for your **COMPETITOR PLUS** blowers.

### Material Specifications:

**Housing:** Cast iron

**End Plates:** Cast iron

**End Cover:** Cast iron

**Rotors:** Ductile iron

**Shafts:** Ductile iron, cast integrally with rotors

**Bearings:** Gear end - Double row ball, both rotors

Drive end - Cylindrical roller on drive rotor

Single row ball on driven rotor

**Drive Shaft:** Ductile iron, cast integrally with drive rotor

**Gears:** Heat treated alloy steel, helical cut

**Seals:** Lip seals on rotor shafts and drive shaft

**Lubrication:** Oil splash on gear end, grease on drive end

| Model Size | Max. Press. PSI | Max. Vac. (in. Hg) | Maximum RPM | Displacement CFR |
|------------|-----------------|--------------------|-------------|------------------|
| 2002       | 12              | 16                 | 5275        | .016             |
| 2004       | 7               | 16                 | 5275        | .032             |
| 3002       | 15              | 16                 | 3600        | .0467            |
| 3003       | 12              | 15                 | 3600        | .0616            |
| 3006       | 7               | 15                 | 3600        | .102             |
| 4002       | 15              | 16                 | 3600        | .061             |
| 4005       | 10              | 16                 | 3600        | .121             |
| 4007       | 7               | 15                 | 3600        | .160             |
| 5003       | 15              | 16                 | 2850        | .132             |
| 5006       | 13              | 16                 | 2850        | .221             |
| 5009       | 8               | 15                 | 2850        | .323             |
| 6005       | 15              | 16                 | 2350        | .246             |
| 6008       | 14              | 16                 | 2350        | .395             |
| 6015       | 7               | 14                 | 2350        | .740             |
| 7006       | 15              | 16                 | 2050        | .402             |
| 7011       | 10              | 16                 | 2050        | .738             |
| 7018       | 6               | 12                 | 2050        | 1.200            |

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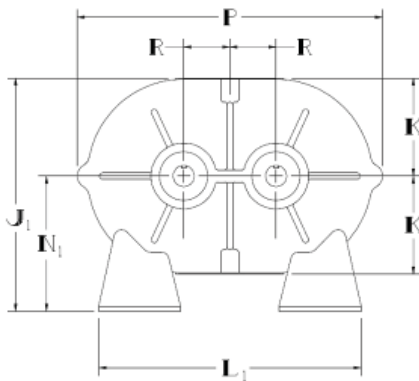
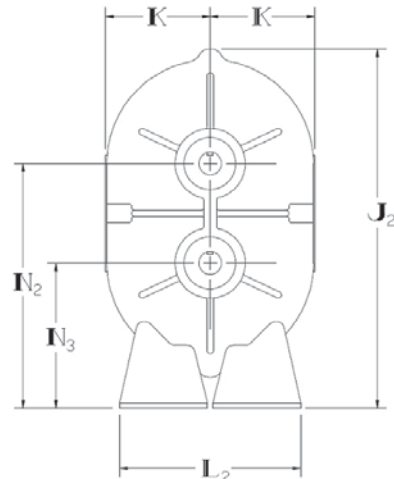
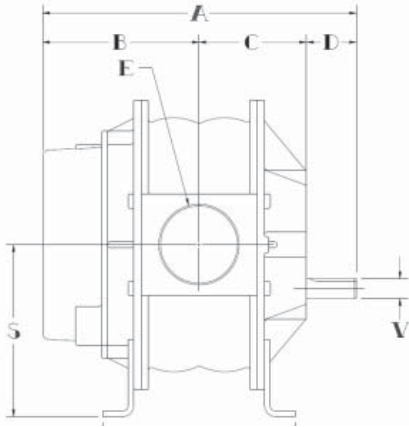
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**Performance**

Pressure performance is based on inlet conditions of 14.70 PSIA and 70° F. Vacuum performance is based on inlet temperature of 70° F and discharge pressure of 14.70 PSIA. In conjunction with our program of continuous testing and upgrading, all specifications are subject to change without notice. All data are approximate. Request a quotation for your specific application.



| Blower Model | SPEED (RPM) | 6 PSIG |     | 7 PSIG |     | 10 PSIG |     | 12 PSIG |     | 13 PSIG |     | 14 PSIG |     | 15 PSIG |     | Max. Vacuum |      |     |
|--------------|-------------|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-------------|------|-----|
|              |             | CFM    | BHP | CFM    | BHP | CFM     | BHP | CFM     | BHP | CFM     | BHP | CFM     | BHP | CFM     | BHP | "Hg         | CFM  | BHP |
| 2002         | 1750        | 8      | 0.9 | 6      | 1   | 2       | 1.4 |         |     |         |     |         |     |         |     | 9           | 7    | 0.7 |
|              | 3600        | 38     | 1.8 | 36     | 2.1 | 32      | 2.8 | 29      | 3.3 |         |     |         |     |         |     | 14          | 28   | 2.1 |
|              | 5275        | 64     | 2.7 | 63     | 3.1 | 59      | 4.2 | 56      | 4.9 |         |     |         |     |         |     | 16          | 51   | 3.4 |
| 2004         | 1750        | 24     | 1.6 | 22     | 1.9 |         |     |         |     |         |     |         |     |         |     | 10          | 21   | 1.4 |
|              | 3600        | 83     | 3.3 | 81     | 3.8 |         |     |         |     |         |     |         |     |         |     | 15          | 65   | 4   |
|              | 5275        | 137    | 4.9 | 135    | 5.6 |         |     |         |     |         |     |         |     |         |     | 16          | 116  | 6.3 |
| 3002         | 1150        | 22     | 1.6 | 19     | 1.8 |         |     |         |     |         |     |         |     |         |     | 10          | 18   | 1.3 |
|              | 2700        | 94     | 3.8 | 92     | 4.3 | 85      | 6   | 81      | 7.1 | 79      | 7.6 | 77      | 8.2 | 75      | 8.7 | 16          | 72   | 4.8 |
|              | 3600        | 136    | 5   | 134    | 5.7 | 127     | 7.9 | 123     | 9.4 | 121     | 10  | 119     | 11  | 118     | 12  | 16          | 114  | 6.4 |
| 3003         | 1150        | 30     | 2   | 27     | 2.4 |         |     |         |     |         |     |         |     |         |     | 10          | 26   | 1.7 |
|              | 2700        | 126    | 4.8 | 122    | 5.5 | 114     | 7.7 | 109     | 9.2 |         |     |         |     |         | 14  | 107         | 5.4  |     |
|              | 3600        | 181    | 6.4 | 178    | 7.4 | 169     | 10  | 164     | 12  |         |     |         |     |         | 15  | 158         | 7.7  |     |
| 3006         | 1150        | 61     | 3.3 | 57     | 3.8 |         |     |         |     |         |     |         |     |         |     | 11          | 50   | 3   |
|              | 2700        | 219    | 7.7 | 215    | 8.9 |         |     |         |     |         |     |         |     |         |     | 15          | 187  | 9.3 |
|              | 3600        | 311    | 10  | 306    | 12  |         |     |         |     |         |     |         |     |         |     | 15          | 279  | 12  |
| 4002         | 850         | 17     | 1.5 | 15     | 1.7 |         |     |         |     |         |     |         |     |         |     | 10          | 14   | 1.3 |
|              | 1760        | 72     | 3.1 | 70     | 3.6 | 62      | 5   | 58      | 5.9 | 56      | 6.4 | 54      | 6.9 |         | 14  | 56          | 3.5  |     |
|              | 3600        | 184    | 6.4 | 181    | 7.4 | 174     | 10  | 170     | 12  | 168     | 13  | 166     | 14  | 164     | 15  | 16          | 161  | 8.2 |
| 4005         | 850         | 41     | 2.9 | 36     | 3.3 |         |     |         |     |         |     |         |     |         |     | 9           | 39   | 2.2 |
|              | 1760        | 151    | 5.9 | 146    | 6.9 | 133     | 9.6 | 125     | 11  |         |     |         |     |         | 14  | 122         | 6.7  |     |
|              | 3600        | 373    | 12  | 368    | 14  | 355     | 20  | 348     | 24  |         |     |         |     |         | 16  | 331         | 16   |     |
| 4007         | 850         | 54     | 3.7 | 47     | 4.3 |         |     |         |     |         |     |         |     |         |     | 9           | 51   | 2.8 |
|              | 1760        | 199    | 7.7 | 192    | 8.9 |         |     |         |     |         |     |         |     |         |     | 13          | 168  | 8.2 |
|              | 3600        | 492    | 16  | 486    | 18  |         |     |         |     |         |     |         |     |         |     | 15          | 445  | 19  |
| 5003         | 700         | 37     | 2.6 | 32     | 3   |         |     |         |     |         |     |         |     |         |     | 10          | 31   | 2.2 |
|              | 1760        | 176    | 6.6 | 172    | 7.6 | 160     | 11  | 153     | 13  | 150     | 14  | 147     | 15  |         | 14  | 150         | 7.5  |     |
|              | 2850        | 320    | 11  | 316    | 12  | 304     | 17  | 297     | 21  | 294     | 22  | 291     | 24  | 288     | 25  | 16          | 282  | 14  |
| 5006         | 700         | 70     | 4.3 | 63     | 4.9 |         |     |         |     |         |     |         |     |         |     | 10          | 60   | 3.5 |
|              | 1760        | 304    | 11  | 297    | 12  | 279     | 17  | 269     | 21  | 264     | 23  |         |     |         | 14  | 264         | 12   |     |
|              | 2850        | 545    | 17  | 538    | 20  | 520     | 28  | 510     | 34  | 505     | 37  |         |     |         | 16  | 487         | 22   |     |
| 5009         | 700         | 118    | 6.1 | 109    | 7.1 |         |     |         |     |         |     |         |     |         |     | 11          | 97   | 5.5 |
|              | 1760        | 460    | 15  | 451    | 18  |         |     |         |     |         |     |         |     |         |     | 14          | 409  | 18  |
|              | 2850        | 812    | 25  | 803    | 29  |         |     |         |     |         |     |         |     |         |     | 15          | 750  | 30  |
| 6005         | 700         | 94     | 4.9 | 88     | 5.6 | 71      | 7.9 |         |     |         |     |         |     |         |     | 12          | 72   | 4.8 |
|              | 1760        | 355    | 12  | 348    | 14  | 332     | 20  | 322     | 24  | 318     | 26  | 313     | 27  | 309     | 29  | 16          | 302  | 16  |
|              | 2350        | 500    | 16  | 493    | 19  | 477     | 27  | 467     | 32  | 463     | 34  | 458     | 37  | 454     | 39  | 16          | 447  | 21  |
| 6008         | 700         | 151    | 7.6 | 141    | 8.8 | 114     | 12  | 129     | 14  | 124     | 15  |         |     |         |     | 12          | 115  | 7.5 |
|              | 1760        | 569    | 19  | 559    | 22  | 533     | 31  | 517     | 37  | 510     | 40  | 503     | 43  |         |     | 15          | 498  | 23  |
|              | 2350        | 802    | 26  | 792    | 30  | 766     | 42  | 750     | 50  | 743     | 54  | 736     | 58  |         |     | 16          | 717  | 33  |
| 6015         | 700         | 282    | 14  | 263    | 16  |         |     |         |     |         |     |         |     |         |     | 10          | 257  | 11  |
|              | 1760        | 1067   | 35  | 1048   | 41  |         |     |         |     |         |     |         |     |         |     | 14          | 957  | 40  |
|              | 2350        | 1503   | 47  | 1484   | 54  |         |     |         |     |         |     |         |     |         |     | 14          | 1393 | 53  |
| 7006         | 650         | 168    | 7.2 | 160    | 8.3 | 141     | 12  | 129     | 14  | 124     | 15  |         |     |         |     | 13          | 133  | 7.6 |
|              | 1760        | 614    | 19  | 606    | 23  | 587     | 32  | 575     | 38  | 570     | 41  | 565     | 44  | 560     | 47  | 16          | 551  | 25  |
|              | 2050        | 731    | 23  | 723    | 26  | 703     | 37  | 692     | 44  | 686     | 48  | 681     | 51  | 676     | 55  | 16          | 667  | 29  |
| 7011         | 650         | 317    | 13  | 304    | 15  | 270     | 21  |         |     |         |     |         |     |         |     | 13          | 257  | 14  |
|              | 1760        | 1136   | 35  | 1123   | 41  | 1089    | 58  |         |     |         |     |         |     |         |     | 16          | 1026 | 45  |
|              | 2050        | 1350   | 41  | 1337   | 47  | 1303    | 67  |         |     |         |     |         |     |         |     | 16          | 1240 | 53  |
| 7018         | 650         | 545    | 21  |        |     |         |     |         |     |         |     |         |     |         |     | 10          | 519  | 17  |
|              | 1760        | 1877   | 56  |        |     |         |     |         |     |         |     |         |     |         |     | 12          | 1811 | 55  |
|              | 2050        | 2225   | 65  |        |     |         |     |         |     |         |     |         |     |         |     | 12          | 2159 | 64  |

**Dimensions**

| Model Size | A     | B     | C     | D    | E          | H     | J1    | J2    | K    | L1    | L2    | N1    | N2    | N3    | P     | R    | S     | V     |
|------------|-------|-------|-------|------|------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 2002       | 10.00 | 4.88  | 2.63  | 2.50 | 1" NPT     | 5.00  | 6.88  | 9.69  | 3.13 | 5.13  | 5.13  | 3.75  | 6.25  | 3.75  | 9.38  | 1.25 | 5.00  | .625  |
| 2004       | 12.00 | 5.88  | 3.63  |      | 2" NPT     | 7.00  |       |       |      |       |       |       |       |       |       |      |       |       |
| 3002       | 11.56 | 5.69  | 3.38  |      | 1 1/4" NPT | 6.75  |       |       |      |       |       |       |       |       |       |      |       |       |
| 3003       | 12.44 | 6.19  | 3.75  |      | 2" NPT     | 7.63  | 8.94  | 12.81 |      |       |       |       |       |       |       |      |       |       |
| 3006       | 14.81 | 7.38  | 4.94  | 2.50 | 2 1/2" NPT | 10.00 |       |       | 3.94 | 7.25  | 7.25  | 5.00  | 8.50  | 5.00  | 12.19 | 1.75 | 6.75  | .875* |
| 4002       | 12.94 | 6.25  | 3.69  |      | 1 1/2" NPT | 7.25  |       |       |      |       |       |       |       |       |       |      |       |       |
| 4005       | 15.69 | 7.63  | 5.06  |      | 2 1/2" NPT | 10.00 | 10.63 | 15.13 |      |       |       |       |       |       |       |      |       |       |
| 4007       | 17.44 | 8.50  | 5.94  | 3.00 | 3" NPT     | 11.75 |       |       | 4.38 | 8.00  | 8.00  | 6.25  | 10.25 | 6.25  | 13.69 | 2.00 | 8.25  | .875  |
| 5003       | 15.25 | 7.38  | 4.50  |      | 2 1/2" NPT | 8.38  |       |       |      |       |       |       |       |       |       |      |       |       |
| 5006       | 17.88 | 8.69  | 5.81  |      | 4" NPT     | 11.00 | 12.13 | 17.38 |      |       |       |       |       |       |       |      |       |       |
| 5009       | 20.88 | 10.19 | 7.31  | 3.38 | 4" NPT     | 14.00 |       |       | 5.38 | 10.50 | 10.50 | 6.75  | 11.25 | 6.25  | 17.19 | 2.50 | 8.75  | 1.125 |
| 6005       | 18.75 | 9.44  | 5.63  |      | 3" NPT     | 10.13 | 15.06 |       |      |       |       |       |       |       |       |      |       |       |
| 6008       | 21.75 | 10.94 | 7.13  |      | 5" NPT     | 13.13 | 15.06 | 21.69 |      |       |       |       |       |       |       |      |       |       |
| 6015       | 28.75 | 14.44 | 10.63 | 3.69 | 6" FLG     | 20.13 | 16.44 |       | 6.25 | 17.00 | 11.00 | 8.75  | 14.75 | 8.75  | 19.81 | 3.00 | 11.75 | 1.375 |
| 7006       | 20.31 | 10.31 | 5.94  |      | 4" NPT     | 11.75 | 20.63 |       |      |       |       |       |       |       |       |      |       |       |
| 7011       | 25.31 | 12.69 | 8.44  |      | 6" FLG     | 16.75 | 19.50 | 26.13 | 9.63 |       |       |       |       |       |       |      |       |       |
| 7018       | 32.31 | 16.31 | 11.94 | 4.06 | 8" FLG     | 23.75 | 19.50 |       | 8.50 | 21.00 | 14.00 | 11.00 | 18.00 | 11.00 | 23.25 | 3.50 | 14.50 | 1.562 |

Values shown are approximate and should not be used for construction. Certified drawings are available through your local Tuthill Vacuum & Blower Systems Sales Professional.

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