

Our Products Develop Tomorrow's Technologies



| <b>WELCH BELT DRIVE Rotary Vane</b> |                      | 1373                 | 1374                 | 1375                 | 1376                 | 1380                 | 1395                 | 1396                 | 1397                 | 1398                 | 1399                 | 1400                 | 1402                 | 1403 | 1404 |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------|------|
| Pump Speed (CFM)                    | 10.6                 | 23                   | 35                   | 10.6                 | 5.6                  | 70.8                 | 99                   | 17.7                 | 53.1                 | 1.9                  | 9                    | 5.6                  |                      |      |      |
| Inlet Flange                        | 1 1/2 12             | 1 3/4 20             | 3 1/4                | 1-20                 | 1-20                 | 3 1/4                | 3 1/4                | 1 3/4-20             | 3 1/4                | 3/4-20               | 3/4-20               | 3/4-20               | 1-20                 |      |      |
| Outlet Flange                       | 1-20                 | 1 3/4-20             | 3 1/2 sq.            | 1-20                 | 1-20                 | 3 1/2 sq.            | 3 1/2 sq.            | 1 3/4-20             | 1 3/4-20             | 3 1/2 sq.            | 3/4-20               | 3/4-20               | 1-20                 |      |      |
| Ultimate Pressure (Torr)            | 1.5X10 <sup>-2</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 1.5X10 <sup>-2</sup> | 2.0X10 <sup>-3</sup> | 2.0X10 <sup>-3</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 2.0X10 <sup>-3</sup> | 1.5X10 <sup>-2</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> |      |      |
| Rotation Speed (rpm)                | 525                  | 510                  | 335                  | 525                  | 535                  | 340                  | 470                  | 400                  | 245                  | 750                  | 580                  | 525                  |                      |      |      |
| Oil Capacity (liters)               | 2.37                 | 1.2                  | 0.95                 | 2.4                  | 3.5                  | 2.37                 | 2.37                 | 1.2                  | 2.37                 | 0.47                 | 0.59                 | 2.1                  |                      |      |      |
| Oil Type Hydrocarbon                | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              |      |      |
| Tubing ID (inches)                  |                      | 1 5/8                |                      | 13/16                | 13/16                |                      |                      | 1 5/8                |                      | 7/16                 | 7/16                 | 13/16                |                      |      |      |
| Weight (Lbs)                        | 150                  | 220                  | 416                  | 156                  | 91                   | 601                  | 622                  | 205                  | 601                  | 51                   | 58                   | 112                  |                      |      |      |
| Length (inches)                     | 21                   | 26                   | 32.5                 | 20                   | 20                   | 44                   | 44                   | 26                   | 44                   | 17                   | 17.8                 | 20                   |                      |      |      |
| Width (inches)                      | 13                   | 13.7                 | 21                   | 14                   | 12                   | 21                   | 21                   | 13.7                 | 21                   | 9                    | 9                    | 12                   |                      |      |      |
| Height (inches)                     | 16                   | 18.8                 | 32                   | 15.4                 | 15                   | 35                   | 35                   | 18.8                 | 35                   | 10                   | 12                   | 15                   |                      |      |      |
| Common Motor Phase                  | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    |                      |      |      |
| Common Motor Voltage                | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              |      |      |
| <b>WELCH BELT DRIVE Rotary Vane</b> |                      | 1405                 | 1410                 | 1400N                | 1402N                | 1376N                |                      |                      |                      |                      |                      |                      |                      |      |      |
| Pump Speed (CFM)                    | 3.2                  | 0.7                  | 0.9                  | 5.6                  | 10.6                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Inlet Flange                        | 1-20                 | 3/8-18               | NW16                 | NW25                 | NW25                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Outlet Flange                       | 1-20                 | 1/2-0D               | NW16                 | NW25                 | NW25                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Ultimate Pressure (Torr)            | 1.0X10 <sup>-4</sup> | 2.0X10 <sup>-2</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Rotation Speed (rpm)                | 525                  | 750                  | 580                  | 525                  | 525                  |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Oil Capacity (liters)               | 2.1                  | 0.47                 | 0.59                 | 2.1                  | 2.37                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Oil Type Hydrocarbon                | DuoSeal              | DuoSeal              | Gold                 | Gold                 | Gold                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Tubing ID (inches)                  | 7/16                 |                      | 7/16                 | 13/16                | 13/16                |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Weight (Lbs)                        | 112                  | 50                   | 58                   | 112                  | 156                  |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Length (inches)                     | 20                   | 21                   | 17.8                 | 19.3                 | 19.3                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Width (inches)                      | 12                   | 13                   | 9                    | 14.1                 | 12.3                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Height (inches)                     | 15                   | 16                   | 12.6                 | 15.4                 | 15.6                 |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Common Motor Phase                  | 1                    | 1                    | 1                    | 1                    | 1                    |                      |                      |                      |                      |                      |                      |                      |                      |      |      |
| Common Motor Voltage                | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              |                      |                      |                      |                      |                      |                      |                      |                      |      |      |



\*Welch does not carry this size

| <b>WELCH Pump Models</b>   |         | <b>Hose Connector</b> |                    | <b>ISO/NW/KF Connector</b> |                  |
|--|---------|-----------------------|--------------------|----------------------------|------------------|
| Pump Models  | Hose ID | Welch PN              | Thread Size        | ISO/NW/KF                  | Welch PN         |
| 1399, 1400&N, 8905, 8990   | 7/16"   | 1393J                 | 3/4"-20            | NW16                       | 1.12" 1393F      |
| 1402, 1380, 1376, 8920, 8925, 8907, 8912, 8917, 1405, 1376N, 1402N | 13/16"  | 1393K                 | 1"-20              | NW25                       | 1.2" 1393G       |
| 1374, 1387   | 1 5/8"  | 1393L                 | 1 3/4"-20          | NW40                       | 1.4" 1393H       |
| 1405(new style), 1402  | 7/16"   | 1393M                 | 1-20 (new style)   | NW25                       | 1.2" 1393G       |
| *1405(old style)   |         |                       | 3/4"-20(old style) | NW16                       | 1.2" UC ANW16-05 |
| 8905   |         |                       | 3/4"-20            | NW16                       | 1.12" 8905K-05   |
| 8907, 8912, 8917, 8920, 8925                                       |         |                       | 1 1/8"-20          | NW25                       | 1.4" 8907K-05    |

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| WELCH<br>DIRECT DRIVE<br>Rotary Vane |                      | 8803                 | 8804                 | 8806                 | 8811                 | 8814                 | 8816 | 8821 | 8851 | 8890                 | 8905                 | 8905A                | 8907A                | 8910A                | 8912A                |
|--------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------|------|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Pump Speed (cfm)                     | 1.25                 | 1.25                 |                      |                      |                      |                      |      |      |      | 1.1                  | 1.1                  | 2.6                  | 2.6                  | 3.8                  | 3.8                  |
| Inlet Flange                         | Barb 3/8             | Barb 3/8             |                      |                      |                      |                      |      |      |      | Barb 1/4mpf          | unibarb 3/4-20       | unibarb 1 1/8-20     | unibarb 1 1/8-20     | unibarb 1 1/8-20     | unibarb 1 1/8-20     |
| Outlet Flange                        | 3/4-20               | 3/4-20               |                      |                      |                      |                      |      |      |      | 1-20                 | 3/4-20               | 1-20                 | 1-20                 | 1-20                 | 1-20                 |
| Ultimate Pressure (Torr)             | 3.0X10 <sup>-2</sup> | 1.0X10 <sup>-3</sup> |                      |                      |                      |                      |      |      |      | 1.0X10 <sup>-1</sup> | 1.0X10 <sup>-1</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> | 1.0X10 <sup>-4</sup> |
| Rotation Speed (rpm)                 | 3450                 | 3450                 |                      |                      |                      |                      |      |      |      | 3450                 | 3450                 | 1725                 | 1725                 | 1725                 | 1725                 |
| Oil Capacity (liter)                 | 0.28                 | 0.12                 |                      |                      |                      |                      |      |      |      | 0.48                 | 0.42                 | 1.0                  | 1.0                  | 0.9                  | 0.9                  |
| Oil Type Hydrocarbon                 | DuoSeal              | DuoSeal              |                      |                      |                      |                      |      |      |      | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              |
| Tubing Needed ID inches              | 3/8                  | 3/8                  |                      |                      |                      |                      |      |      |      | 3/8                  | 3/16-7/16            | 7/16-13/16           | 7/16-13/16           | 7/16-13/16           | 7/16-13/16           |
| Weight (lbs)                         | 16                   | 22                   |                      |                      |                      |                      |      |      |      | 24.5                 | 24.5                 | 40                   | 40                   | 41                   | 41                   |
| Length (inches)                      | 14.5                 | 14.5                 |                      |                      |                      |                      |      |      |      | 14.5                 | 14.1                 | 19.5                 | 19.5                 | 18.5                 | 18.5                 |
| Width (inches)                       | 5.1                  | 5.1                  |                      |                      |                      |                      |      |      |      | 5.1                  | 5.1                  | 6.5                  | 6.5                  | 6.5                  | 6.5                  |
| Height (inches)                      | 8.4                  | 8.4                  |                      |                      |                      |                      |      |      |      | 8.4                  | 8.4                  | 9.6                  | 9.6                  | 9.6                  | 9.6                  |
| Common Motor Phase                   | 1                    | 1                    |                      |                      |                      |                      |      |      |      | 1                    | 1                    | 1                    | 1                    | 1                    | 1                    |
| Common Motor Voltage                 | 115/220              | 115/220              |                      |                      |                      |                      |      |      |      | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              | 115/220              |
| WELCH<br>DIRECT DRIVE<br>Rotary Vane |                      | 8915                 | 8915A                | 8917A                | 8920                 | 8925A                |      |      |      |                      |                      |                      |                      |                      |                      |
| Pump Speed (cfm)                     |                      |                      | 6.1                  | 7.7                  | 11.3                 |                      |      |      |      |                      |                      |                      |                      |                      |                      |
| Inlet Flange                         |                      |                      | unibarb 1 1/8-20     | unibarb 1 1/8-20     | unibarb 1 1/8-20     | unibarb 1 1/8-20     |      |      |      |                      |                      |                      |                      |                      |                      |
| Outlet Flange                        |                      |                      | 1-20                 | 1-20                 | 1-20                 | 1-20                 |      |      |      |                      |                      |                      |                      |                      |                      |
| Ultimate Pressure (Torr)             |                      |                      | 1.0X10 <sup>-4</sup> | 3.0X10 <sup>-4</sup> | 4.0X10 <sup>-4</sup> | 4.0X10 <sup>-4</sup> |      |      |      |                      |                      |                      |                      |                      |                      |
| Rotation Speed (rpm)                 |                      |                      | 1725                 | 1725                 | 1725                 | 1725                 |      |      |      |                      |                      |                      |                      |                      |                      |
| Oil Capacity (liter)                 |                      |                      | 0.9                  | 1.3                  | 1.1                  | 1.1                  |      |      |      |                      |                      |                      |                      |                      |                      |
| Oil Type Hydrocarbon                 |                      |                      | DuoSeal              | DuoSeal              | DuoSeal              | DuoSeal              |      |      |      |                      |                      |                      |                      |                      |                      |
| Oil Type PFPE                        |                      |                      | 7/16-13/16           | 9/16-13/16           | 9/16-13/16           | 9/16-13/16           |      |      |      |                      |                      |                      |                      |                      |                      |
| Weight (lbs)                         |                      |                      | 43                   | 58.5                 | 69                   | 69                   |      |      |      |                      |                      |                      |                      |                      |                      |
| Length (inches)                      |                      |                      | 18.5                 | 20.5                 | 21.2                 | 21.2                 |      |      |      |                      |                      |                      |                      |                      |                      |
| Width (inches)                       |                      |                      | 6.5                  | 7.1                  | 7.1                  | 7.1                  |      |      |      |                      |                      |                      |                      |                      |                      |
| Height (inches)                      |                      |                      | 9.6                  | 10.7                 | 10.7                 | 10.7                 |      |      |      |                      |                      |                      |                      |                      |                      |
| Common Motor Phase                   |                      |                      | 1                    | 1                    | 1                    | 1                    |      |      |      |                      |                      |                      |                      |                      |                      |
| Common Motor Voltage                 |                      |                      | 115/220              | 115/220              | 115/220              | 115/220              |      |      |      |                      |                      |                      |                      |                      |                      |

\*Welch does not carry this size



| WELCH<br>Pump Models   | Hose Connector |          | ISO/NW/KF Connector |             |
|--|----------------|----------|---------------------|-------------|
|  | Hose ID        | Welch PN | Thread Size         | ISO/NW/KF A |
| 1399, 1400&N, 8905, 8890   | 7/16"          | 1393J    | 3/4"-20             | NW16 1.12"  |
| 1402, 1380, 1376, 8920, 8925, 8907, 8912, 8917, 1405, 1376N, 1402N | 13/16"         | 1393K    | 1"-20               | NW25 1.2"   |
| 1374, 1397   | 1 5/8"         | 1393L    | 1 3/4"-20           | NW40 1.4"   |
| 1405(new style), 1402  | 7/16"          | 1393M    | 1-20 (new style)    | NW25 1.2"   |
| *1405(old style)   |                |          | 3/4"-20(old style)  | NW16 1.2"   |
| 8905   |                |          | 3/4"-20             | NW16 1.12"  |
| 8907, 8912, 8917, 8920, 8925                                       |                |          | 1 1/8"-20           | NW25 1.4"   |