



## LPH SERIES - Liquid Ring Vacuum Pumps



**SIHI Pumps**  
[www.sterlingamericas.com](http://www.sterlingamericas.com)



## **SIHI PUMPS PERFORMANCE AND RELIABILITY**

### **Vacuum**

*More than 29" Hg Vacuum attainable with a **single pump unit**.*

### **Higher Vacuum**

*Achievable by incorporating **other SIHI Products**.*

### **Operational Safety**

*Provided by the low temperature rise of the Liquid Ring Principle ensuring the **safest compression of hazardous and explosive vapors**.*

### **Entrained Liquid Handling**

*Liquid slugs and condensables pass through the pump **without damage** and only a momentary reduction in performance.*

### **Long Economical Life**

*Elimination of internal metallic contact minimizes maintenance and increases life - **only one moving part and no internal lubrication required**.*

### **Low Vibration & Noise Levels**

*Absence of reciprocating parts assures **quiet and low vibration operation** - eliminating the need for special foundations.*

### **Low Starting Torque**

*Permits considerable **savings in electrical starting and control components**.*

### **Construction Flexibility**

*Models available in a variety of shaft seals and materials including **Cast Iron, Bronze, Stainless Steels, Hastelloys and Titanium**.*



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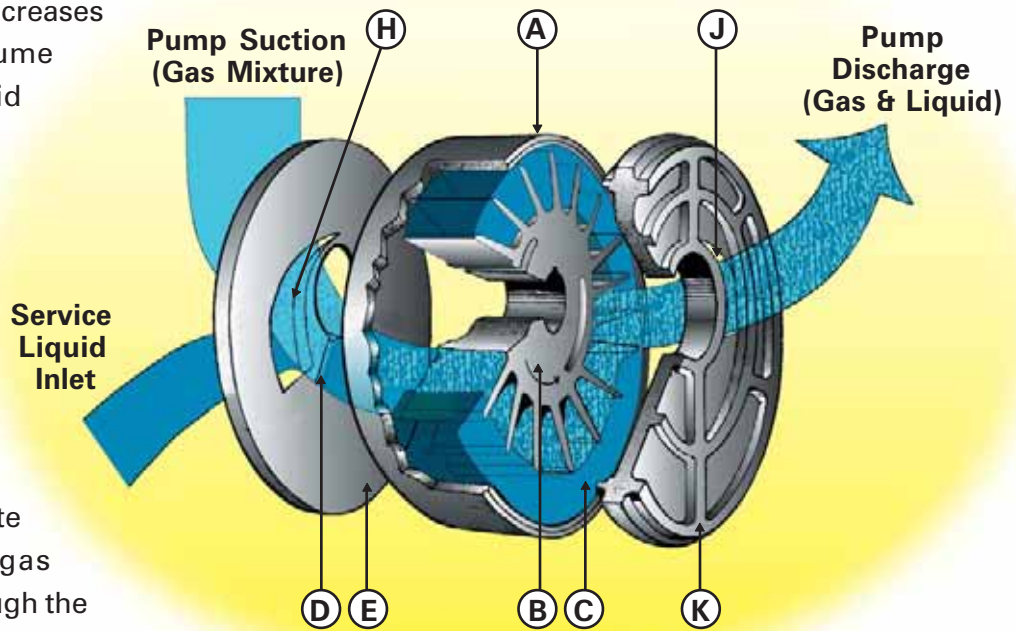
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QUALITY SYSTEM

## SINGLE ACTING LIQUID RING PUMPS

In a round pump body (A), a shaft mounted impeller (B) is positioned at a point eccentric to the centerline of the pump body. The centrifugal action of the rotating impeller forces the service liquid introduced via channel (D) towards the periphery of the pump body forming the liquid ring (C).

When pumping action is achieved, the gas mixture being handled is introduced to the impeller through the suction port (H), in the intermediate plate (E), causing a vacuum at the pump suction. The gas mixture fills the impeller cavity between the inside diameter of the liquid ring and the root of the impeller blade.

As the impeller rotates, the impeller blade immersion in the liquid ring increases reducing the volume between the liquid ring and the root of the impeller blade. The result is the compression of the gas mixture until it reaches the discharge port (J), located in the intermediate plate (K). The gas mixture exits through the discharge port.



During the compression cycle heat is being imparted to the liquid ring. In order to maintain a temperature below the vapor point of the service liquid, cooling must be applied. Cooling is achieved by continuously adding a cool supply of service liquid to the liquid ring. The amount of service liquid added is equal to that discharged through the discharge port (J) together with the compressed gas mixture. The gas mixture and service liquid is eventually passed through the pump discharge for separation.

- = Gas Mixture
- = Service Liquid
- = Gas & Liquid

★ *The illustration is intended to depict the operating principle of the SIHI liquid ring pump only and should not be considered for engineering details of construction.*

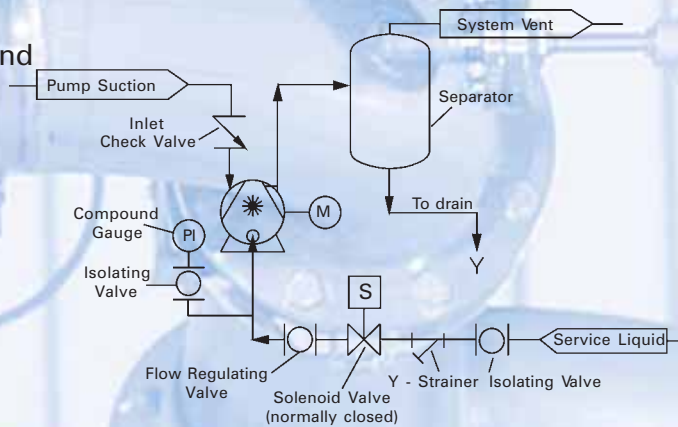
# SERVICE LIQUID ARRANGEMENTS

## ONCE THROUGH

Used where service liquid is plentiful and contamination is not a problem.

### Benefits

- Simplicity
- Lowest initial cost

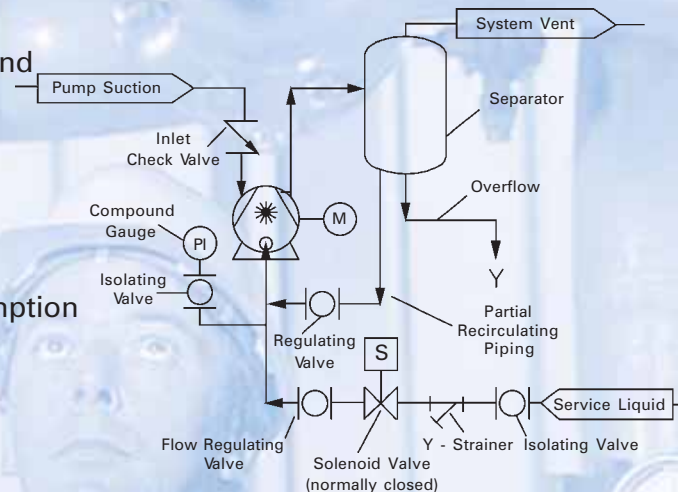


## PARTIAL RECIRCULATION

Used where service liquid is available and contamination problems are minimal.

### Benefits

- Simplicity
- Low initial cost
- Reduced service liquid consumption

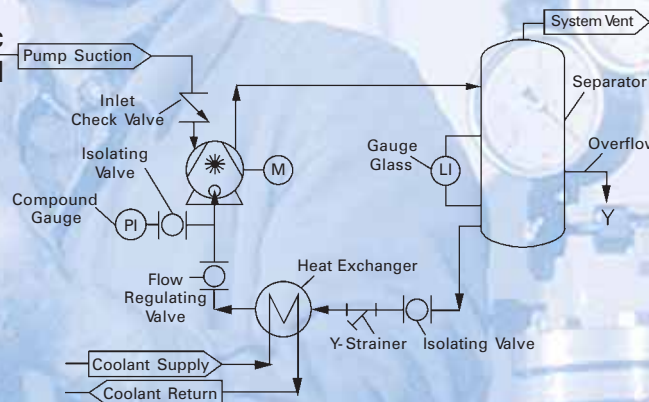


## TOTAL RECIRCULATION

Used where gases and liquids are toxic or hazardous, and when environmental contamination is a concern.

### Benefits

- Service liquid contained and separated from nonhazardous coolant systems
- Low service liquid usage
- Allows recovery of condensable inlet gases



Accessories for the above service liquid arrangements can be provided by SIHI Pumps in completely piped, assembled and tested factory packages.

# SERVICE LIQUID

# Medium Vacuum Performance (Dry Air)

| Model Number<br>(Inlet x Outlet Size)<br>measured in inches | Vacuum in inches Hg.            |            | 4     | 8     | 12    | 16    | 20   | 24   | 26   | 26.4 | Average<br>Service<br>Liquid<br>Flow<br>USGPM |     |
|---|---------------------------------|------------|-------|-------|-------|-------|------|------|------|------|---|-----|
|   | Absolute Pressure in Inches Hg. |            | 25.92 | 21.92 | 17.92 | 13.92 | 9.92 | 5.92 | 3.92 | 3.52 |   |     |
|   | Absolute Pressure in mm Hg.     |            | 658   | 557   | 455   | 354   | 252  | 150  | 100  | 89   |   |     |
|   | Speed                           | Horsepower | CFM   | CFM   | CFM   | CFM   | CFM  | CFM  | CFM  | CFM  |   |     |
| LPH 20103 (1¼ x 1¼)   | 3500                            | *1.5       | 13.6  | 14.3  | 14.8  | 14.7  | 13.8 | 11.3 | -    | -    | 1.0   |     |
|   | LPH 20105 (1¼ x 1¼)             | 3500       | 2     | 23.5  | 27.0  | 29.0  | 29.5 | 28.0 | 22.0 | -    | -   | 1.0 |
|   | LPH 20107 (1¼ x 1¼)             | 3500       | 3     | 29.5  | 32.0  | 33.5  | 34.0 | 31.7 | 23.0 | -    | -   | 1.1 |
| LPH 3404 (1½ x 1½)  | 1150                            | 2          | 20    | 20    | 19    | 17    | 10   | -    | -    | -    | 3   |     |
|   | 1750                            | 3          | 40    | 40    | 40    | 40    | 40   | 32   | -    | -    | 3   |     |
| LPH 3408 (1½ x 1½)  | 1150                            | 3          | 40    | 40    | 38    | 34    | 23   | -    | -    | -    | 3   |     |
|   | 1750                            | 5          | 75    | 75    | 75    | 75    | 74   | 65   | -    | -    | 3   |     |
| LPH 40412 (1½ x 1½)   | 1750                            | 7.5        | 118   | 118   | 118   | 118   | 117  | 102  | 60   | -    | 3   |     |
| LPH 40517 (2 x 2)   | 1750                            | 10         | 164   | 167   | 167   | 167   | 163  | 147  | 105  | -    | 5   |     |
| LPH 50518 (2½ x 2½)   | 1150                            | *7.5       | 152   | 153   | 155   | 151   | 142  | 118  | 82   | 70   | 8   |     |
|   | 1750                            | 15         | 248   | 250   | 250   | 248   | 240  | 217  | 184  | 170  | 8   |     |
| LPH 50523 (2½ x 2½)   | 1150                            | 10         | 182   | 186   | 187   | 184   | 173  | 142  | 90   | 70   | 7   |     |
|   | 1750                            | 20         | 315   | 325   | 330   | 327   | 318  | 288  | 250  | 235  | 7   |     |
| LPH 60520 (4 x 4)   | 1150                            | 15         | 225   | 232   | 235   | 233   | 218  | 175  | 120  | -    | 7   |     |
|   | 1450                            | 20         | 295   | 300   | 305   | 305   | 300  | 276  | 225  | 175  | 7   |     |
|   | 1750                            | 25         | 365   | 365   | 365   | 362   | 352  | 322  | 267  | 220  | 7   |     |
| LPH 60527 (4 x 4)   | 1150                            | 20         | 283   | 290   | 295   | 295   | 290  | 255  | 150  | -    | 8   |     |
|   | 1450                            | 25         | 395   | 395   | 395   | 395   | 390  | 350  | 285  | 225  | 8   |     |
|   | 1750                            | 40         | 470   | 470   | 470   | 470   | 456  | 415  | 350  | 300  | 8   |     |
| LPH 70123 (4 x 4)   | 880                             | 30         | 455   | 455   | 455   | 455   | 440  | 375  | 285  | 259  | 10  |     |
|   | 975                             | *30        | 502   | 502   | 502   | 502   | 483  | 410  | 330  | 295  | 10  |     |
|   | 1030                            | 40         | 540   | 540   | 540   | 540   | 520  | 440  | 340  | 300  | 10  |     |
|   | 1150                            | *40        | 600   | 600   | 600   | 600   | 580  | 485  | 380  | 305  | 10  |     |
| LPH 70530 (5 x 5)   | 880                             | 40         | 590   | 590   | 590   | 590   | 575  | 535  | 450  | 365  | 15  |     |
|   | 975                             | *40        | 685   | 685   | 685   | 675   | 655  | 590  | 485  | 410  | 15  |     |
|   | 1030                            | 50         | 735   | 735   | 730   | 720   | 690  | 625  | 520  | 420  | 15  |     |
|   | 1150                            | 60         | 825   | 820   | 812   | 795   | 760  | 685  | 545  | 430  | 15  |     |
| LPH 70540 (5 x 5)   | 880                             | 50         | 850   | 850   | 850   | 850   | 830  | 770  | 630  | 500  | 17  |     |
|   | 975                             | 60         | 913   | 913   | 913   | 913   | 910  | 845  | 700  | 600  | 17  |     |
|   | 1030                            | 60         | 985   | 985   | 985   | 985   | 980  | 910  | 770  | 660  | 17  |     |
|   | 1150                            | 75         | 1120  | 1120  | 1120  | 1120  | 1095 | 1000 | 825  | 700  | 17  |     |
| LPH 80540 (8 x 8)   | 700                             | 75         | 1153  | 1188  | 1200  | 1190  | 1137 | 1025 | 918  | 875  | 27  |     |
|   | 735                             | 75         | 1235  | 1258  | 1275  | 1255  | 1220 | 1108 | 980  | 940  | 27  |     |
|   | 880                             | 100        | 1437  | 1470  | 1475  | 1466  | 1425 | 1320 | 1168 | 1120 | 27  |     |
| LPH 80553 (8 x 8)   | 700                             | 100        | 1490  | 1532  | 1560  | 1565  | 1550 | 1425 | 1210 | 1150 | 31  |     |
|   | 735                             | 100        | 1600  | 1635  | 1655  | 1650  | 1625 | 1525 | 1305 | 1250 | 31  |     |
|   | 880                             | 125        | 1890  | 1933  | 1955  | 1950  | 1905 | 1787 | 1555 | 1495 | 31  |     |
| LPH 80557 (8 x 8)   | 575                             | 75         | 1610  | 1610  | 1600  | 1560  | 1500 | 1350 | 1100 | 950  | 24  |     |
|   | 680                             | 100        | 1960  | 1950  | 1935  | 1890  | 1820 | 1700 | 1410 | 1140 | 24  |     |
|   | 735                             | 125        | 2130  | 2125  | 2115  | 2080  | 2015 | 1880 | 1580 | 1440 | 24  |     |
| LPH 90554 (10 x 10)   | 465                             | 100        | 1610  | 1610  | 1590  | 1560  | 1500 | 1354 | 1120 | 1000 | 44  |     |
|   | 600                             | 125        | 2150  | 2150  | 2150  | 2120  | 2060 | 1915 | 1670 | 1590 | 44  |     |
|   | 700                             | 150        | 2470  | 2470  | 2470  | 2440  | 2380 | 2200 | 1880 | 1765 | 44  |     |
| LPH 90567 (10 x 10)   | 465                             | 125        | 1830  | 1830  | 1825  | 1810  | 1760 | 1580 | 1260 | 1145 | 53  |     |
|   | 600                             | 150        | 2650  | 2650  | 2650  | 2640  | 2590 | 2420 | 2150 | 2060 | 53  |     |
|   | 700                             | 200        | 2980  | 2980  | 2980  | 2975  | 2930 | 2780 | 2460 | 2295 | 53  |     |
| LPH 10054 (12 x 12)   | 410                             | *150       | 3000  | 3000  | 3000  | 2970  | 2900 | 2620 | 2000 | 1678 | 74  |     |
|   | 490                             | *200       | 3650  | 3720  | 3770  | 3750  | 3660 | 3445 | 3000 | 2886 | 74  |     |
|   | 565                             | *250       | 4300  | 4300  | 4300  | 4280  | 4200 | 3930 | 3500 | 3357 | 74  |     |
| LPH 11055 (14 x 14)   | 335                             | 250        | 4240  | 4240  | 4240  | 4230  | 4130 | 3710 | 2600 | 2060 | 108   |     |
|   | 415                             | *300       | 5600  | 5600  | 5600  | 5550  | 5480 | 5064 | 4200 | 3828 | 108   |     |
|   | 475                             | 400        | 6300  | 6300  | 6300  | 6260  | 6150 | 5770 | 4900 | 4416 | 108   |     |

\* Horsepower given is for motors with 1.15 service factor only. Use next larger size with 1.0 service factor motors.

This data represents average values for pumps in standard material of construction discharging against atmospheric pressure at sea level. Capacity in cubic feet per minute at inlet pressure for air at 20°C (68°F) and using 15°C (59°F) water as the service liquid. When handling 100% saturated air see performance data on following pages.

# High Vacuum Performance (Dry Air)

| Model Number<br>(Inlet x Outlet Size)<br>measured in inches | Vacuum in Inches Hg.            |            | 4     | 12    | 20   | 22.5 | 25   | 27.5 | 28   | 28.7 | 28.9 | Average<br>Service<br>Liquid<br>Flow<br>USGPM |
|---|---------------------------------|------------|-------|-------|------|------|------|------|------|------|------|---|
|   | Absolute Pressure in Inches Hg. |            | 25.92 | 17.92 | 9.92 | 7.42 | 4.92 | 2.42 | 1.92 | 1.22 | 0.98 |   |
|   | Absolute Pressure in mm Hg.     |            | 658   | 455   | 252  | 188  | 125  | 61.5 | 48.8 | 31   | 25   |   |
|   | Speed                           | Horsepower | CFM   | CFM   | CFM  | CFM  | CFM  | CFM  | CFM  | CFM  | CFM  |   |
| LPH 25003 (1¼ x 1¼)   | 3500                            | 2          | 13.5  | 14.5  | 14.9 | 14.9 | 14.5 | 11.5 | 11.0 | 7.0  | -    | 1.4   |
|   | LPH 25007 (1¼ x 1¼)             | 3500       | 3     | 27.0  | 30.0 | 31.0 | 31.0 | 31.0 | 26.5 | 23.0 | 12.0 | 1.4   |
| LPH 3704 (1½ x 1½)  | 1150                            | 3          | 25    | 25    | 25   | 25   | 25   | 21   | 18   | -    | -    | 4   |
|   | 1750                            | 5          | 37    | 37    | 37   | 42   | 42   | 33   | 29   | 20   | 17   | 4   |
| LPH 3708 (1½ x 1½)  | 1150                            | 5          | 42    | 42    | 44   | 44   | 44   | 43   | 40   | -    | -    | 5   |
|   | 1750                            | 7.5        | 70    | 70    | 70   | 75   | 74   | 62   | 55   | 41   | 30   | 5   |
| LPH 45312 (1½ x 1½)   | 1150                            | 5          | 54    | 54    | 57   | 61   | 66   | 68   | 64   | 48   | 42   | 3   |
|   | 1750                            | 7.5        | 88    | 90    | 102  | 110  | 112  | 102  | 95   | 70   | 61   | 3   |
| LPH 45317 (1½ x 1½)   | 1150                            | 5          | 60    | 67    | 74   | 80   | 87   | 82   | 78   | 58   | 48   | 4   |
|   | 1750                            | 10         | 105   | 105   | 150  | 155  | 150  | 136  | 125  | 90   | 73   | 4   |
| LPH 55312 (2 x 2)   | 1150                            | 7.5        | 106   | 106   | 118  | 123  | 124  | 119  | 110  | 82   | 71   | 10  |
|   | 1750                            | *15        | 141   | 141   | 177  | 196  | 199  | 186  | 173  | 130  | 117  | 10  |
| LPH 55316 (2 x 2)   | 1150                            | 10         | 112   | 112   | 135  | 145  | 148  | 130  | 118  | 87   | 76   | 11  |
|   | 1750                            | 20         | 200   | 200   | 228  | 244  | 248  | 230  | 210  | 149  | 122  | 11  |
| LPH 55320 (2 x 2)   | 1150                            | 15         | 117   | 117   | 147  | 157  | 160  | 143  | 131  | 106  | 82   | 13  |
|   | 1750                            | 25         | 206   | 206   | 247  | 302  | 315  | 290  | 265  | 183  | 148  | 13  |
| LPH 65320 (2½ x 2½)   | 1150                            | 15         | 194   | 194   | 200  | 210  | 220  | 220  | 215  | 175  | 160  | 9   |
|   | 1450                            | 25         | 265   | 267   | 285  | 285  | 290  | 290  | 270  | 210  | 190  | 9   |
|   | 1750                            | 30         | 324   | 325   | 330  | 340  | 345  | 320  | 305  | 235  | 210  | 9   |
| LPH 65327 (2½ x 2½)   | 1150                            | 20         | 235   | 232   | 245  | 255  | 280  | 280  | 260  | 200  | 180  | 9   |
|   | 1450                            | 30         | 320   | 320   | 330  | 340  | 350  | 350  | 335  | 240  | 200  | 9   |
|   | 1750                            | 40         | 375   | 375   | 385  | 395  | 410  | 395  | 360  | 255  | 210  | 9   |
| LPH 75320 (4 x 4)   | 880                             | 40         | 370   | 385   | 420  | 445  | 460  | 430  | 405  | 315  | 295  | 19  |
|   | 975                             | 40         | 410   | 415   | 470  | 500  | 515  | 480  | 455  | 365  | 335  | 19  |
|   | 1030                            | *40        | 425   | 430   | 485  | 515  | 535  | 495  | 470  | 370  | 335  | 19  |
|   | 1150                            | *50        | 445   | 460   | 515  | 545  | 570  | 530  | 490  | 375  | 340  | 19  |
| LPH 75330 (4 x 4)   | 880                             | 50         | 510   | 535   | 610  | 635  | 670  | 600  | 535  | 400  | 380  | 20  |
|   | 975                             | 50         | 565   | 590   | 670  | 700  | 740  | 675  | 615  | 455  | 390  | 20  |
|   | 1030                            | 60         | 580   | 620   | 700  | 730  | 770  | 695  | 630  | 485  | 395  | 20  |
|   | 1150                            | 75         | 595   | 655   | 745  | 770  | 830  | 730  | 665  | 470  | 400  | 20  |
| LPH 75340 (4 x 4)   | 880                             | 50         | 665   | 665   | 700  | 755  | 850  | 810  | 740  | 510  | 460  | 21  |
|   | 975                             | 60         | 735   | 740   | 800  | 850  | 930  | 905  | 840  | 600  | 510  | 21  |
|   | 1030                            | *60        | 760   | 770   | 835  | 885  | 955  | 925  | 860  | 630  | 525  | 21  |
|   | 1150                            | 100        | 800   | 820   | 890  | 940  | 995  | 955  | 890  | 650  | 525  | 21  |
| LPH 85340 (6 x 6)   | 700                             | 100        | 1075  | 1110  | 1165 | 1180 | 1180 | 1105 | 1005 | 780  | 695  | 38  |
|   | 735                             | 100        | 1120  | 1175  | 1220 | 1230 | 1235 | 1180 | 1080 | 860  | 765  | 38  |
|   | 880                             | 125        | 1300  | 1325  | 1440 | 1465 | 1490 | 1450 | 1375 | 1010 | 840  | 38  |
| LPH 85353 (6 x 6)   | 700                             | *100       | 1275  | 1290  | 1400 | 1460 | 1490 | 1460 | 1360 | 1080 | 980  | 50  |
|   | 735                             | 125        | 1325  | 1340  | 1430 | 1490 | 1540 | 1520 | 1400 | 1140 | 1030 | 50  |
|   | 880                             | 150        | 1500  | 1550  | 1690 | 1760 | 1820 | 1770 | 1610 | 1250 | 1130 | 50  |
| LPH 95354 (8 x 8)   | 465                             | 125        | 1340  | 1470  | 1640 | 1690 | 1710 | 1630 | 1550 | 1220 | 1030 | 71  |
|   | 600                             | *150       | 1960  | 1980  | 2070 | 2100 | 2100 | 1980 | 1900 | 1440 | 1180 | 71  |
|   | 700                             | *200       | 2325  | 2380  | 2460 | 2470 | 2470 | 2280 | 2130 | 1650 | 1295 | 71  |
| LPH 95367 (8 x 8)   | 465                             | 125        | 1540  | 1600  | 1770 | 1870 | 1980 | 1980 | 1930 | 1650 | 1295 | 76  |
|   | 600                             | 200        | 2050  | 2130  | 2320 | 2460 | 2540 | 2450 | 2340 | 1900 | 1530 | 76  |
|   | 700                             | 250        | 2420  | 2500  | 2660 | 2780 | 2860 | 2770 | 2640 | 2160 | 1650 | 76  |
| LPH 10534 (8 x 8)   | 400                             | 200        | 2475  | 2500  | 2660 | 2850 | 2980 | 2950 | 2850 | 2350 | 1975 | 108   |
|   | 490                             | *250       | 3130  | 3175  | 3400 | 3640 | 3750 | 3600 | 3450 | 2800 | 2260 | 108   |
|   | 590                             | 350        | 3575  | 3675  | 4000 | 4220 | 4350 | 4180 | 3950 | 3100 | 2475 | 108   |
| LPH 11535 (10 x 10)   | 335                             | *250       | 3530  | 3540  | 3820 | 4050 | 4270 | 4300 | 4120 | 3400 | 2885 | 147   |
|   | 415                             | *350       | 4520  | 4650  | 4950 | 5180 | 5360 | 5300 | 5030 | 3900 | 3240 | 147   |
|   | 470                             | 450        | 4800  | 5050  | 5540 | 5750 | 6050 | 5850 | 5570 | 4400 | 3500 | 147   |

\* Horsepower given is for motors with 1.15 service factor only. Use next larger size with 1.0 service factor motors.

This data represents average values for pumps in standard material of construction discharging against atmospheric pressure at sea level. Capacity in cubic feet per minute at inlet pressure for air at 20°C (68°F) and using 15°C (59°F) water as the service liquid. When handling 100 % saturated air see performance data on following pages.

**IF REQUIREMENTS ARE IN THE DARK BLUE AREA, A MORE EFFICIENT SELECTION CAN BE MADE FROM PUMPS LISTED ON PRECEDING PAGE.**

# Medium Vacuum Performance (Saturated Air)

| Model Number<br>(Inlet x Outlet Size)<br>measured in inches | Vacuum in inches Hg.            |            | 4     | 8     | 12    | 16    | 20   | 24   | 26   | 26.4 | Average<br>Service<br>Liquid<br>Flow<br>USGPM |
|---|---------------------------------|------------|-------|-------|-------|-------|------|------|------|------|---|
|   | Absolute Pressure in Inches Hg. |            | 25.92 | 21.92 | 17.92 | 13.92 | 9.92 | 5.92 | 3.92 | 3.52 |   |
|   | Absolute Pressure in mm Hg.     |            | 658   | 557   | 455   | 354   | 252  | 150  | 100  | 89   |   |
|   | Speed                           | Horsepower | CFM   | CFM   | CFM   | CFM   | CFM  | CFM  | CFM  | CFM  |   |
| LPH 20103 (1¼ x 1¼)   | 3500                            | *1.5       | 13.8  | 14.6  | 15.2  | 15.2  | 14.4 | 12.2 | -    | -    | 1.0   |
| LPH 20105 (1¼ x 1¼)   | 3500                            | 2          | 23.9  | 27.6  | 29.7  | 30.5  | 29.3 | 23.7 | -    | -    | 1.0   |
| LPH 20107 (1¼ x 1¼)   | 3500                            | 3          | 30.0  | 32.7  | 34.3  | 35.1  | 33.1 | 24.8 | -    | -    | 1.1   |
| LPH 3404 (1½ x 1½)  | 1150                            | 2          | 20    | 20    | 19    | 18    | 10   | -    | -    | -    | 3   |
|   | 1750                            | 3          | 41    | 41    | 41    | 41    | 42   | 35   | -    | -    | 3   |
| LPH 3408 (1½ x 1½)  | 1150                            | 3          | 41    | 41    | 39    | 35    | 24   | -    | -    | -    | 3   |
|   | 1750                            | 5          | 76    | 77    | 77    | 77    | 77   | 70   | -    | -    | 3   |
| LPH 40412 (1½ x 1½)   | 1750                            | 7.5        | 120   | 120   | 121   | 122   | 122  | 110  | 67   | -    | 3   |
| LPH 40517 (2 x 2)   | 1750                            | 10         | 167   | 170   | 171   | 172   | 170  | 159  | 118  | -    | 5   |
| LPH 50518 (2½ x 2½)   | 1150                            | *7.5       | 155   | 156   | 159   | 156   | 148  | 127  | 92   | 80   | 8   |
|   | 1750                            | 15         | 252   | 255   | 256   | 256   | 251  | 234  | 207  | 194  | 8   |
| LPH 50523 (2½ x 2½)   | 1150                            | 10         | 185   | 190   | 192   | 190   | 181  | 153  | 101  | 80   | 7   |
|   | 1750                            | 20         | 321   | 332   | 338   | 338   | 333  | 311  | 281  | 268  | 7   |
| LPH 60520 (4 x 4)   | 1150                            | 15         | 229   | 237   | 241   | 241   | 228  | 189  | 135  | -    | 7   |
|   | 1450                            | 20         | 300   | 306   | 313   | 315   | 314  | 298  | 253  | 199  | 7   |
|   | 1750                            | 25         | 371   | 373   | 374   | 374   | 368  | 347  | 300  | 251  | 7   |
| LPH 60527 (4 x 4)   | 1150                            | 20         | 288   | 296   | 302   | 305   | 303  | 275  | 168  | -    | 8   |
|   | 1450                            | 25         | 402   | 403   | 405   | 408   | 408  | 377  | 320  | 256  | 8   |
|   | 1750                            | 40         | 478   | 480   | 482   | 485   | 477  | 448  | 393  | 342  | 8   |
| LPH 70123 (4 x 4)   | 880                             | 30         | 463   | 464   | 466   | 470   | 460  | 404  | 320  | 295  | 10  |
|   | 975                             | *30        | 511   | 512   | 515   | 518   | 505  | 442  | 370  | 336  | 10  |
|   | 1030                            | 40         | 550   | 551   | 554   | 557   | 544  | 474  | 382  | 342  | 10  |
|   | 1150                            | *40        | 611   | 612   | 615   | 619   | 606  | 523  | 427  | 348  | 10  |
| LPH 70530 (5 x 5)   | 880                             | 40         | 600   | 602   | 605   | 609   | 601  | 577  | 505  | 416  | 15  |
|   | 975                             | *40        | 697   | 699   | 702   | 697   | 685  | 636  | 544  | 467  | 15  |
|   | 1030                            | 50         | 748   | 750   | 748   | 743   | 721  | 674  | 584  | 479  | 15  |
|   | 1150                            | 60         | 840   | 837   | 832   | 821   | 795  | 739  | 612  | 490  | 15  |
| LPH 70540 (5 x 5)   | 880                             | 50         | 865   | 868   | 871   | 877   | 868  | 830  | 707  | 570  | 17  |
|   | 975                             | 60         | 929   | 932   | 936   | 942   | 951  | 911  | 786  | 684  | 17  |
|   | 1030                            | 60         | 1002  | 1005  | 1010  | 1017  | 1025 | 981  | 864  | 752  | 17  |
|   | 1150                            | 75         | 1140  | 1143  | 1148  | 1156  | 1145 | 1078 | 926  | 798  | 17  |
| LPH 80540 (8 x 8)   | 700                             | 75         | 1173  | 1213  | 1230  | 1228  | 1189 | 1105 | 1030 | 997  | 27  |
|   | 735                             | 75         | 1257  | 1284  | 1307  | 1296  | 1276 | 1195 | 1100 | 1072 | 27  |
|   | 880                             | 100        | 1462  | 1500  | 1512  | 1513  | 1490 | 1423 | 1311 | 1277 | 27  |
| LPH 80553 (8 x 8)   | 700                             | 100        | 1516  | 1564  | 1599  | 1616  | 1621 | 1537 | 1358 | 1311 | 31  |
|   | 735                             | 100        | 1628  | 1669  | 1697  | 1703  | 1699 | 1645 | 1465 | 1425 | 31  |
|   | 880                             | 125        | 1923  | 1973  | 2004  | 2013  | 1992 | 1927 | 1745 | 1704 | 31  |
| LPH 80557 (8 x 8)   | 575                             | 75         | 1638  | 1643  | 1640  | 1610  | 1568 | 1456 | 1235 | 1083 | 24  |
|   | 680                             | 100        | 1994  | 1990  | 1984  | 1951  | 1903 | 1833 | 1583 | 1299 | 24  |
|   | 735                             | 125        | 2167  | 2169  | 2168  | 2147  | 2107 | 2027 | 1774 | 1641 | 24  |
| LPH 90554 (10 x 10)   | 465                             | 100        | 1638  | 1643  | 1630  | 1610  | 1568 | 1460 | 1257 | 1140 | 44  |
|   | 600                             | 125        | 2188  | 2195  | 2204  | 2188  | 2154 | 2065 | 1875 | 1812 | 44  |
|   | 700                             | 150        | 2513  | 2521  | 2532  | 2519  | 2489 | 2372 | 2110 | 2012 | 44  |
| LPH 90567 (10 x 10)   | 465                             | 125        | 1862  | 1868  | 1871  | 1868  | 1840 | 1704 | 1414 | 1305 | 53  |
|   | 600                             | 150        | 2697  | 2705  | 2717  | 2725  | 2708 | 2610 | 2413 | 2348 | 53  |
|   | 700                             | 200        | 3032  | 3042  | 3055  | 3071  | 3064 | 2998 | 2761 | 2616 | 53  |
| LPH 10054 (12 x 12)   | 410                             | *150       | 3053  | 3062  | 3076  | 3066  | 3032 | 2825 | 2245 | 1913 | 74  |
|   | 490                             | *200       | 3714  | 3797  | 3865  | 3871  | 3827 | 3715 | 3368 | 3290 | 74  |
|   | 565                             | *250       | 4376  | 4389  | 4408  | 4418  | 4392 | 4238 | 3929 | 3827 | 74  |
| LPH 11055 (14 x 14)   | 335                             | 250        | 4315  | 4328  | 4347  | 4367  | 4318 | 4001 | 2919 | 2348 | 108   |
|   | 415                             | *300       | 5699  | 5716  | 5741  | 5729  | 5730 | 5461 | 4715 | 4364 | 108   |
|   | 475                             | 400        | 6411  | 6430  | 6459  | 6462  | 6430 | 6222 | 5500 | 5034 | 108   |

\* Horsepower given is for motors with 1.15 service factor only. Use next larger size with 1.0 service factor motors.

This data represents average values for pumps in standard material of construction discharging against atmospheric pressure at sea level. Capacity in cubic feet per minute at inlet pressure for air with 100% saturation at 20°C (68°F) and using 15°C (59°F) water as the service liquid. When handling saturated air at higher temperatures the capacity of vacuum pumps will increase substantially; performance is available upon application.



# High Vacuum Performance (Saturated Air)

| Model Number<br>(Inlet x Outlet Size)<br>measured in inches | Vacuum in Inches Hg.            |            | 4     | 12    | 20   | 22.5 | 25   | 27.5 | 28   | 28.7 | 28.9 | Average<br>Service<br>Liquid<br>Flow<br>USGPM |
|---|---------------------------------|------------|-------|-------|------|------|------|------|------|------|------|---|
|   | Absolute Pressure in Inches Hg. |            | 25.92 | 17.92 | 9.92 | 7.42 | 4.92 | 2.42 | 1.92 | 1.22 | 0.98 |   |
|   | Absolute Pressure in mm Hg.     |            | 658   | 455   | 252  | 188  | 125  | 61.5 | 48.8 | 31   | 25   |   |
|   | Speed                           | Horsepower | CFM   | CFM   | CFM  | CFM  | CFM  | CFM  | CFM  | CFM  | CFM  |   |
| LPH 25003 (1 1/4 x 1 1/4)                                   | 3500                            | 2          | 13.7  | 14.9  | 15.6 | 15.8 | 15.9 | 14.0 | 14.2 | 11.1 | -    | 1.4   |
| LPH 25007 (1 1/4 x 1 1/4)                                   | 3500                            | 3          | 27.5  | 30.8  | 32.4 | 32.9 | 34.0 | 32.3 | 29.7 | 19.0 | -    | 1.4   |
| LPH 3704 (1 1/2 x 1 1/2)                                    | 1150                            | 3          | 25    | 26    | 26   | 27   | 27   | 25   | 23   | -    | -    | 4   |
| LPH 3708 (1 1/2 x 1 1/2)                                    | 1750                            | 5          | 37    | 37    | 38   | 44   | 46   | 40   | 37   | 32   | 32   | 4   |
|   | 1150                            | 5          | 43    | 43    | 46   | 47   | 48   | 52   | 52   | -    | -    | 5   |
| LPH 45312 (1 1/2 x 1 1/2)                                   | 1750                            | 7.5        | 71    | 72    | 73   | 80   | 81   | 76   | 71   | 65   | 56   | 5   |
|   | 1150                            | 5          | 55    | 55    | 60   | 65   | 72   | 83   | 83   | 76   | 78   | 3   |
| LPH 45317 (1 1/2 x 1 1/2)                                   | 1750                            | 7.5        | 90    | 92    | 107  | 117  | 123  | 124  | 123  | 111  | 114  | 3   |
|   | 1150                            | 5          | 61    | 69    | 77   | 85   | 95   | 100  | 101  | 92   | 89   | 4   |
| LPH 55312 (2 x 2)   | 1750                            | 10         | 107   | 108   | 157  | 165  | 164  | 166  | 162  | 142  | 136  | 4   |
|   | 1150                            | 7.5        | 108   | 109   | 123  | 131  | 136  | 145  | 142  | 130  | 132  | 10  |
| LPH 55316 (2 x 2)   | 1750                            | *15        | 143   | 145   | 185  | 208  | 218  | 227  | 224  | 205  | 218  | 10  |
|   | 1150                            | 10         | 114   | 115   | 141  | 154  | 162  | 158  | 153  | 137  | 141  | 11  |
| LPH 55320 (2 x 2)   | 1750                            | 20         | 204   | 205   | 238  | 259  | 272  | 280  | 271  | 235  | 227  | 11  |
|   | 1150                            | 15         | 119   | 120   | 154  | 167  | 175  | 174  | 169  | 167  | 153  | 13  |
| LPH 65320 (2 1/2 x 2 1/2)                                   | 1750                            | 25         | 210   | 211   | 258  | 321  | 345  | 353  | 343  | 289  | 275  | 13  |
|   | 1150                            | 15         | 197   | 199   | 209  | 223  | 241  | 268  | 278  | 276  | 298  | 9   |
| LPH 65327 (2 1/2 x 2 1/2)                                   | 1450                            | 25         | 270   | 274   | 298  | 303  | 318  | 353  | 349  | 332  | 354  | 9   |
|   | 1750                            | 30         | 330   | 333   | 345  | 361  | 378  | 390  | 394  | 371  | 391  | 9   |
|   | 1150                            | 20         | 239   | 238   | 256  | 271  | 307  | 341  | 336  | 316  | 335  | 9   |
| LPH 75320 (4 x 4)   | 1450                            | 30         | 326   | 328   | 345  | 361  | 383  | 426  | 433  | 379  | 372  | 9   |
|   | 1750                            | 40         | 382   | 384   | 403  | 419  | 449  | 481  | 465  | 403  | 391  | 9   |
|   | 880                             | 40         | 377   | 395   | 439  | 472  | 504  | 524  | 524  | 498  | 549  | 19  |
| LPH 75330 (4 x 4)   | 975                             | 40         | 417   | 425   | 491  | 531  | 564  | 585  | 588  | 577  | 624  | 19  |
|   | 1030                            | *40        | 432   | 441   | 507  | 547  | 586  | 603  | 608  | 585  | 624  | 19  |
|   | 1150                            | *50        | 453   | 472   | 538  | 579  | 624  | 646  | 633  | 592  | 633  | 19  |
|   | 880                             | 50         | 519   | 548   | 638  | 674  | 734  | 731  | 692  | 632  | 707  | 20  |
| LPH 75340 (4 x 4)   | 975                             | 50         | 575   | 605   | 701  | 743  | 811  | 822  | 795  | 719  | 726  | 20  |
|   | 1030                            | 60         | 590   | 636   | 732  | 775  | 844  | 847  | 814  | 766  | 735  | 20  |
|   | 1150                            | 75         | 605   | 672   | 779  | 818  | 909  | 889  | 860  | 743  | 745  | 20  |
| LPH 85340 (6 x 6)   | 880                             | 50         | 677   | 682   | 732  | 802  | 931  | 987  | 957  | 806  | 856  | 21  |
|   | 975                             | 60         | 748   | 759   | 836  | 902  | 1019 | 1102 | 1086 | 948  | 949  | 21  |
|   | 1030                            | *60        | 773   | 789   | 873  | 940  | 1046 | 1127 | 1112 | 995  | 977  | 21  |
|   | 1150                            | 100        | 814   | 841   | 931  | 998  | 1090 | 1163 | 1151 | 1027 | 977  | 21  |
| LPH 85353 (6 x 6)   | 700                             | 100        | 1094  | 1138  | 1218 | 1253 | 1293 | 1346 | 1299 | 1232 | 1294 | 38  |
|   | 735                             | 100        | 1140  | 1205  | 1276 | 1306 | 1353 | 1437 | 1396 | 1359 | 1424 | 38  |
|   | 880                             | 125        | 1323  | 1358  | 1506 | 1555 | 1632 | 1766 | 1778 | 1596 | 1564 | 38  |
| LPH 95354 (8 x 8)   | 700                             | *100       | 1297  | 1323  | 1464 | 1550 | 1632 | 1778 | 1758 | 1706 | 1824 | 50  |
|   | 735                             | 125        | 1348  | 1374  | 1495 | 1582 | 1687 | 1851 | 1810 | 1801 | 1917 | 50  |
|   | 880                             | 150        | 1526  | 1589  | 1767 | 1869 | 1994 | 2156 | 2081 | 1975 | 2103 | 50  |
| LPH 95367 (8 x 8)   | 465                             | 125        | 1364  | 1507  | 1715 | 1794 | 1873 | 1985 | 2004 | 1927 | 1917 | 71  |
|   | 600                             | *150       | 1994  | 2030  | 2164 | 2230 | 2301 | 2412 | 2456 | 2275 | 2196 | 71  |
|   | 700                             | *200       | 2366  | 2440  | 2572 | 2622 | 2706 | 2777 | 2754 | 2607 | 2411 | 71  |
| LPH 10534 (8 x 8)   | 465                             | 125        | 1567  | 1640  | 1851 | 1985 | 2169 | 2412 | 2495 | 2607 | 2411 | 76  |
|   | 600                             | 200        | 2086  | 2184  | 2426 | 2612 | 2783 | 2984 | 3025 | 3002 | 2848 | 76  |
|   | 700                             | 250        | 2463  | 2563  | 2781 | 2952 | 3133 | 3374 | 3413 | 3413 | 3071 | 76  |
| LPH 11535 (10 x 10)   | 400                             | 200        | 2519  | 2563  | 2781 | 3026 | 3265 | 3593 | 3684 | 3713 | 3676 | 108   |
|   | 490                             | *250       | 3185  | 3255  | 3555 | 3865 | 4108 | 4385 | 4460 | 4424 | 4207 | 108   |
|   | 590                             | 350        | 3638  | 3768  | 4182 | 4480 | 4765 | 5091 | 5107 | 4898 | 4607 | 108   |
| LPH 11535 (10 x 10)   | 335                             | *250       | 3592  | 3629  | 3994 | 4300 | 4678 | 5237 | 5326 | 5372 | 5370 | 147   |
|   | 415                             | *350       | 4600  | 4767  | 5176 | 5500 | 5872 | 6455 | 6503 | 6162 | 6031 | 147   |
|   | 470                             | 450        | 4884  | 5177  | 5793 | 6105 | 6628 | 7125 | 7201 | 6952 | 6515 | 147   |

\* Horsepower given is for motors with 1.15 service factor only. Use next larger size with 1.0 service factor motors.

This data represents average values for pumps in standard material of construction discharging against atmospheric pressure at sea level. Capacity in cubic feet per minute at inlet pressure for air with 100% saturation at 20°C (68°F) and using 15°C (59°F) water as the service liquid. When handling saturated air at higher temperatures the capacity of vacuum pumps will increase substantially; performance is available upon application.

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# LPH SERIES LIQUID RING VACUUM PUMPS

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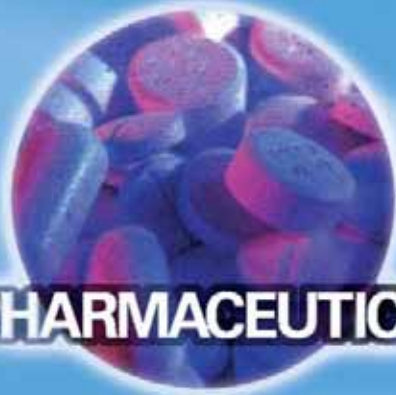
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