

Configuration options adsorption dryers PDAD with blower nozzles ADNA

FESTO



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Nominal flow rate q_n [l/min] for pressure dew point -40°C (temperature of medium at input 25°C saturated)


| | Input pressure p [bar] | | | | | | | | | | | | | |
|-----------------|------------------------|-------|--------|-------------------|--------|--------|-------------------|--------|--------|-------------------|--------|--------|--------|--|
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| PDAD-09 | | | | | | | | | | | | | | |
| Input | 73.6 | 88.3 | 103.1 | 117.8 | 132.5 | 147.2 | 162.0 | 176.7 | 191.4 | 206.1 | 220.9 | 235.6 | 250.3 | |
| | Air nozzle no. 9 | | | Air nozzle no. 7 | | | Air nozzle no. 6 | | | Air nozzle no. 5 | | | | |
| Purge air | 33.0 | 30.0 | 34.0 | 31.0 | 36.0 | 40.0 | 31.0 | 34.0 | 37.0 | 30.0 | 32.0 | 34.0 | 36.0 | |
| Output | 40.6 | 58.3 | 69.1 | 86.8 | 96.5 | 107.2 | 131.0 | 142.7 | 154.4 | 176.1 | 188.9 | 201.6 | 214.3 | |
| PDAD-13 | | | | | | | | | | | | | | |
| Input | 109.6 | 132.5 | 153.7 | 176.7 | 197.9 | 220.9 | 242.1 | 265.1 | 286.3 | 309.2 | 330.4 | 353.4 | 374.6 | |
| | Air nozzle no. 10 | | | Air nozzle no. 8 | | | Air nozzle no. 7 | | | Air nozzle no. 6 | | | | |
| Purge air | 42.0 | 52.0 | 61.0 | 51.0 | 54.0 | 68.0 | 45.0 | 49.0 | 54.0 | 62.0 | 67.0 | 71.0 | 76.0 | |
| Output | 67.6 | 80.5 | 92.7 | 125.7 | 143.9 | 152.9 | 197.1 | 216.1 | 232.3 | 247.2 | 263.4 | 282.4 | 298.6 | |
| PDAD-22 | | | | | | | | | | | | | | |
| Input | 186.2 | 225.3 | 261.3 | 300.4 | 336.4 | 375.5 | 411.5 | 450.6 | 486.6 | 525.7 | 561.7 | 600.8 | 636.8 | |
| | Air nozzle no. 14 | | | Air nozzle no. 12 | | | Air nozzle no. 10 | | | Air nozzle no. 9 | | | | |
| Purge air | 76.0 | 89.0 | 106.0 | 88.0 | 97.0 | 107.0 | 86.0 | 96.0 | 106.0 | 89.0 | 96.0 | 103.0 | 111.0 | |
| Output | 110.2 | 136.3 | 155.3 | 212.4 | 239.4 | 268.5 | 325.5 | 354.6 | 380.6 | 436.7 | 465.7 | 497.8 | 525.8 | |
| PDAD-51 | | | | | | | | | | | | | | |
| Input | 416.3 | 503.6 | 584.2 | 671.5 | 752.0 | 839.3 | 919.9 | 1007.2 | 1087.8 | 1175.1 | 1255.6 | 1342.9 | 1423.5 | |
| | Air nozzle no. 23 | | | Air nozzle no. 17 | | | Air nozzle no. 14 | | | Air nozzle no. 12 | | | | |
| Purge air | 166.0 | 204.0 | 230.0 | 165.5 | 194.5 | 216.0 | 165.0 | 182.5 | 198.5 | 160.5 | 176.0 | 182.5 | 201.5 | |
| Output | 250.3 | 299.6 | 354.2 | 506.0 | 557.5 | 623.3 | 754.9 | 824.7 | 889.3 | 1014.6 | 1079.6 | 1160.4 | 1222.0 | |
| PDAD-73 | | | | | | | | | | | | | | |
| Input | 613.5 | 742.1 | 860.9 | 989.5 | 1108.3 | 1236.9 | 1355.7 | 1484.3 | 1603.0 | 1731.7 | 1850.4 | 1979.1 | 2097.8 | |
| | Air nozzle no. 29 | | | Air nozzle no. 24 | | | Air nozzle no. 17 | | | Air nozzle no. 15 | | | | |
| Purge air | 233.0 | 270.0 | 311.0 | 261.0 | 302.0 | 339.0 | 248.0 | 272.0 | 295.0 | 243.0 | 261.0 | 282.0 | 301.0 | |
| Output | 380.5 | 472.1 | 549.9 | 728.5 | 806.3 | 897.9 | 1107.7 | 1212.3 | 1308.0 | 1488.7 | 1589.4 | 1697.1 | 1796.8 | |
| PDAD-100 | | | | | | | | | | | | | | |
| Input | 821.7 | 993.9 | 1153.0 | 1325.3 | 1484.3 | 1656.6 | 1815.6 | 1987.9 | 2146.9 | 2319.2 | 2478.2 | 2650.5 | 2809.6 | |
| | Air nozzle no. 23 | | | Air nozzle no. 17 | | | Air nozzle no. 14 | | | Air nozzle no. 12 | | | | |
| Purge air | 332.0 | 408.0 | 460.0 | 331.0 | 389.0 | 432.0 | 330.0 | 365.0 | 397.0 | 321.0 | 352.0 | 365.0 | 403.0 | |
| Output | 489.7 | 585.9 | 693.0 | 994.3 | 1095.3 | 1224.6 | 1485.6 | 1622.9 | 1749.9 | 1998.2 | 2126.2 | 2285.5 | 2406.6 | |

Configuration options PDAD with blower nozzles ADNA

| For type | Air nozzle for input pressure p | | |
|-----------------------------|---------------------------------|---------------|---------------|
| | 4 ... 6 bar | 10 ... 12 bar | 13 ... 16 bar |
| PDAD-09 with ADNA-PDAD-09 | Nr. 9 | Nr. 6 | Nr. 5 |
| PDAD-13 with ADNA-PDAD-13 | Nr. 10 | Nr. 7 | Nr. 6 |
| PDAD-22 with ADNA-PDAD-22 | Nr. 14 | Nr. 10 | Nr. 9 |
| PDAD-51 with ADNA-PDAD-51 | Nr. 23 | Nr. 14 | Nr. 12 |
| PDAD-73 with ADNA-PDAD-73 | Nr. 29 | Nr. 17 | Nr. 15 |
| PDAD-100 with ADNA-PDAD-100 | Nr. 23 (2x) | Nr. 14 (2x) | Nr. 12 (2x) |

Configuration options PDAD with blower nozzles ADNA

| Nominal flow rate q_n [l/min] for pressure dew point -70°C (temperature of medium at input 25°C saturated) | | | | | | | | | | | | | |
|--|------------------------|-------|-------|-------------------|--------|--------|-------------------|--------|--------|-------------------|--------|--------|--------|
| | Input pressure p [bar] | | | | | | | | | | | | |
| | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| PDAD-09 | | | | | | | | | | | | | |
| Input | 51.5 | 61.8 | 72.1 | 82.5 | 92.8 | 103.1 | 113.4 | 123.7 | 134.0 | 144.3 | 154.6 | 164.9 | 175.2 |
| | Air nozzle no. 9 | | | Air nozzle no. 7 | | | Air nozzle no. 6 | | | Air nozzle no. 5 | | | |
| Purge air | 33.0 | 30.0 | 34.0 | 31.0 | 36.0 | 40.0 | 31.0 | 34.0 | 37.0 | 30.0 | 32.0 | 34.0 | 36.0 |
| Output | 18.5 | 31.8 | 38.1 | 51.5 | 56.8 | 63.1 | 82.4 | 89.7 | 97.0 | 114.3 | 122.6 | 130.9 | 139.2 |
| PDAD-13 | | | | | | | | | | | | | |
| Input | 77.3 | 92.8 | 108.2 | 123.7 | 139.2 | 154.6 | 170.1 | 185.5 | 201.0 | 216.5 | 231.9 | 247.4 | 262.8 |
| | Air nozzle no. 10 | | | Air nozzle no. 8 | | | Air nozzle no. 7 | | | Air nozzle no. 6 | | | |
| Purge air | 42.0 | 52.0 | 61.0 | 51.0 | 54.0 | 68.0 | 45.0 | 49.0 | 54.0 | 62.0 | 67.0 | 71.0 | 76.0 |
| Output | 35.3 | 40.8 | 47.2 | 72.7 | 85.2 | 86.6 | 125.1 | 136.5 | 147.0 | 154.5 | 164.9 | 176.4 | 186.8 |
| PDAD-22 | | | | | | | | | | | | | |
| Input | 131.4 | 157.7 | 184.0 | 210.3 | 236.6 | 262.8 | 289.1 | 315.4 | 341.7 | 368.0 | 394.3 | 420.6 | 446.8 |
| | Air nozzle no. 14 | | | Air nozzle no. 12 | | | Air nozzle no. 10 | | | Air nozzle no. 9 | | | |
| Purge air | 76.0 | 89.0 | 106.0 | 88.0 | 97.0 | 107.0 | 86.0 | 96.0 | 106.0 | 89.0 | 96.0 | 103.0 | 111.0 |
| Output | 55.4 | 68.7 | 78.0 | 122.3 | 139.6 | 155.8 | 203.1 | 219.4 | 235.7 | 279.0 | 298.3 | 317.6 | 335.8 |
| PDAD-51 | | | | | | | | | | | | | |
| Input | 293.8 | 352.5 | 411.3 | 470.0 | 528.8 | 587.5 | 646.3 | 705.0 | 763.8 | 822.5 | 881.3 | 940.1 | 998.8 |
| | Air nozzle no. 23 | | | Air nozzle no. 17 | | | Air nozzle no. 14 | | | Air nozzle no. 12 | | | |
| Purge air | 166.0 | 204.0 | 230.0 | 165.5 | 194.5 | 216.0 | 165.0 | 182.5 | 198.5 | 160.5 | 176.0 | 182.5 | 201.5 |
| Output | 127.8 | 148.5 | 181.3 | 304.5 | 334.3 | 371.5 | 481.3 | 522.5 | 565.3 | 662.0 | 705.3 | 757.6 | 797.3 |
| PDAD-73 | | | | | | | | | | | | | |
| Input | 432.9 | 519.5 | 606.1 | 692.7 | 779.3 | 865.8 | 952.4 | 1039.0 | 1125.6 | 1212.2 | 1298.8 | 1385.3 | 1471.9 |
| | Air nozzle no. 29 | | | Air nozzle no. 24 | | | Air nozzle no. 17 | | | Air nozzle no. 15 | | | |
| Purge air | 233.0 | 270.0 | 311.0 | 261.0 | 302.0 | 339.0 | 248.0 | 272.0 | 295.0 | 243.0 | 261.0 | 282.0 | 301.0 |
| Output | 199.9 | 249.5 | 295.1 | 431.7 | 477.3 | 526.8 | 704.4 | 767.0 | 830.6 | 969.2 | 1037.8 | 1103.3 | 1170.9 |
| PDAD-100 | | | | | | | | | | | | | |
| Input | 579.8 | 695.8 | 811.7 | 927.7 | 1043.6 | 1159.6 | 1275.6 | 1391.5 | 1507.5 | 1623.4 | 1739.4 | 1855.4 | 1971.3 |
| | Air nozzle no. 23 | | | Air nozzle no. 17 | | | Air nozzle no. 14 | | | Air nozzle no. 12 | | | |
| Purge air | 332.0 | 408.0 | 460.0 | 331.0 | 389.0 | 432.0 | 330.0 | 365.0 | 397.0 | 321.0 | 352.0 | 365.0 | 403.0 |
| Output | 247.8 | 287.8 | 351.7 | 596.7 | 654.6 | 727.6 | 945.6 | 1026.5 | 1110.5 | 1302.4 | 1387.4 | 1490.4 | 1568.3 |

 **Note**

Please do not use the average consumption values (flow rate) as your guide when setting up the dryer, instead use

- the input pressure of the dryer,
- the peak value for the flow rate and
- the maximum permissible supply temperature.

The adsorption dryers are designed for continuous operation.

Intensely pulsed or intermittent operation leads to premature ageing of and/or damage to the drying agent and thus to failure of the dryer.

If the adsorption dryer PDAD is nonetheless to be used in pulsed or intermittent mode, the use of buffer re-

servoirs, through which the compressed air flows, is recommended for smoothing the pressure peaks. Depending on the application these can be mounted upstream and/or downstream of the dryer. The volume of a reservoir should be approx. 50% of the flow rate for one minute.

 **Note**

On delivery the adsorption dryer PDAD is configured with an air nozzle for an input pressure of 7 ... 9 bar.

If a different input pressure is used, the air nozzle must be exchanged. The set containing alternative air nozzles must be ordered separately as an accessory.