



# HP-DRY SERIES

## HIGH PRESSURE HEATLESS REGENERATION ADSORPTION DRYERS

**50, 100, 250, 400 bar**  
operating pressure

**1,5 to 50°C**  
inlet air temperature range

**-40°C**  
pressure dew points

**50 to 1600 Nm<sup>3</sup>/h**  
flow rate

**RAL 5012**  
standard colour

### DESCRIPTION

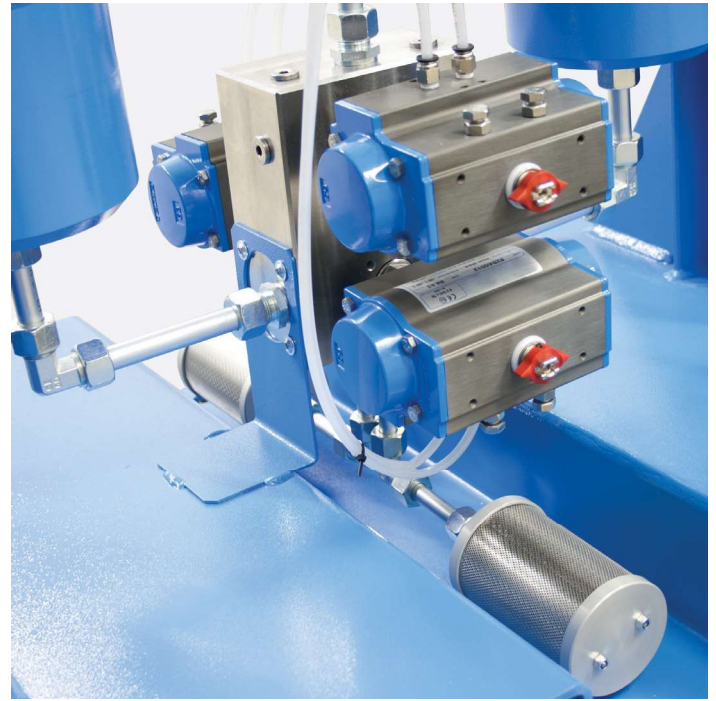
HP-DRY adsorption dryers have been designed for continuous separation of water vapour from compressed air thus reducing dew point. Operation of the dryer requires two columns operated alternately. Adsorption takes place under pressure in the first column while the second column regenerates with a portion of already dried compressed air at ambient pressure.

Dryers consists from control valves, controller with LED display and two columns filled with desiccant. Springs in the columns make sure that the desiccant beads will not move during operation. Proven robust design enables efficient and reliable operation, fast installation and simple maintenance.



### APPLICATIONS

- Compressed air systems



| 50 bar version   |                           |                           |                            |            |        |        |      |
|--|---------------------------|---------------------------|----------------------------|------------|--------|--------|------|
| Type   | Connection <sup>(3)</sup> | Inlet flow <sup>(1)</sup> | Outlet flow <sup>(2)</sup> | Dimensions |        |        | Mass |
|  | IN/OUT ["]                | [Nm <sup>3</sup> /h]      | [Nm <sup>3</sup> /h]       | H [mm]     | W [mm] | D [mm] | [kg] |
| HP-DRY 050 PN50  | G 3/8"                    | 50                        | 48,5                       | 1200       | 680    | 580    | 130  |
| HP-DRY 100 PN50  | G 3/8"                    | 100                       | 97                         | 1250       | 680    | 580    | 150  |
| HP-DRY 150 PN50  | G 3/8"                    | 150                       | 145,5                      | 1550       | 680    | 580    | 170  |
| HP-DRY 250 PN50  | G 3/8"                    | 250                       | 242,5                      | 1700       | 820    | 700    | 260  |
| HP-DRY 350 PN50  | G 1/2"                    | 350                       | 339,5                      | 1700       | 820    | 700    | 320  |
| HP-DRY 500 PN50  | G 1/2"                    | 500                       | 485                        | 1920       | 820    | 700    | 410  |
| HP-DRY 650 PN50  | G 1/2"                    | 650                       | 630,5                      | 2250       | 820    | 700    | 460  |
| OPERATING PRESSURE 50 bar - CORRECTION FACTORS - C <sub>op</sub> (35 °C; 50 bar) |                           |                           |                            |            |        |        |      |
| Operating pressure [bar]   | 25                        | 30                        | 35                         | 40         | 45     | 50     |      |
| Correction factor C <sub>op</sub>  | 0,51                      | 0,61                      | 0,71                       | 0,81       | 0,90   | 1      |      |

| 100 bar version  |                           |                           |                            |            |        |        |      |
|--|---------------------------|---------------------------|----------------------------|------------|--------|--------|------|
| Type   | Connection <sup>(3)</sup> | Inlet flow <sup>(1)</sup> | Outlet flow <sup>(2)</sup> | Dimensions |        |        | Mass |
|  | IN/OUT ["]                | [Nm <sup>3</sup> /h]      | [Nm <sup>3</sup> /h]       | H [mm]     | W [mm] | D [mm] | [kg] |
| HP-DRY 050 PN100   | G 3/8"                    | 50                        | 48,5                       | 1250       | 680    | 580    | 125  |
| HP-DRY 100 PN100   | G 3/8"                    | 100                       | 97                         | 1350       | 680    | 580    | 170  |
| HP-DRY 150 PN100   | G 3/8"                    | 150                       | 145,5                      | 1650       | 680    | 580    | 200  |
| HP-DRY 250 PN100   | G 3/8"                    | 250                       | 242,5                      | 1550       | 680    | 600    | 210  |
| HP-DRY 350 PN100   | G 1/2"                    | 350                       | 339,5                      | 1460       | 820    | 680    | 270  |
| HP-DRY 500 PN100   | G 1/2"                    | 500                       | 485                        | 1700       | 820    | 680    | 290  |
| HP-DRY 650 PN100   | G 1/2"                    | 650                       | 630,5                      | 1800       | 820    | 700    | 380  |
| HP-DRY 800 PN100   | G 1/2"                    | 800                       | 776                        | 1850       | 820    | 680    | 480  |
| OPERATING PRESSURE 100 bar - CORRECTION FACTORS - C <sub>op</sub> (35 °C; 100 bar) |                           |                           |                            |            |        |        |      |
| Operating pressure [bar]   | 50                        | 60                        | 70                         | 80         | 90     | 100    |      |
| Correction factor C <sub>op</sub>  | 0,50                      | 0,60                      | 0,70                       | 0,80       | 0,90   | 1,00   |      |

| 250 bar version   |                           |                           |                            |            |        |        |      |
|---|---------------------------|---------------------------|----------------------------|------------|--------|--------|------|
| Type  | Connection <sup>(3)</sup> | Inlet flow <sup>(1)</sup> | Outlet flow <sup>(2)</sup> | Dimensions |        |        | Mass |
|   | IN/OUT ["]                | [Nm <sup>3</sup> /h]      | [Nm <sup>3</sup> /h]       | H [mm]     | W [mm] | D [mm] | [kg] |
| HP-DRY 050 PN250  | G 3/8"                    | 50                        | 48,5                       | 1000       | 680    | 450    | 95   |
| HP-DRY 100 PN250  | G 3/8"                    | 100                       | 97                         | 1360       | 680    | 450    | 135  |
| HP-DRY 150 PN250  | G 3/8"                    | 150                       | 145,5                      | 1600       | 680    | 450    | 145  |
| HP-DRY 250 PN250  | G 3/8"                    | 250                       | 242,5                      | 1500       | 680    | 450    | 180  |
| HP-DRY 350 PN250  | G 1/2"                    | 350                       | 339,5                      | 1400       | 820    | 650    | 250  |
| HP-DRY 500 PN250  | G 1/2"                    | 500                       | 485                        | 1500       | 820    | 650    | 300  |
| HP-DRY 650 PN250  | G 1/2"                    | 650                       | 630,5                      | 1500       | 820    | 650    | 400  |
| HP-DRY 800 PN250  | G 1/2"                    | 800                       | 776                        | 1550       | 820    | 650    | 460  |
| HP-DRY 1000 PN250   | G 1/2"                    | 1000                      | 970                        | 1600       | 820    | 650    | 580  |
| HP-DRY 1200 PN250   | G 1/2"                    | 1200                      | 1164                       | 1550       | 820    | 700    | 620  |
| HP-DRY 1400 PN250   | G 1/2"                    | 1400                      | 1358                       | 1650       | 820    | 700    | 650  |
| OPERATING PRESSURE 50 bar - CORRECTION FACTORS - C <sub>op</sub> (35 °C; 250 bar) |                           |                           |                            |            |        |        |      |
| Operating pressure [bar]  | 110                       | 130                       | 160                        | 190        | 220    | 250    |      |
| Correction factor C <sub>op</sub>   | 0,44                      | 0,52                      | 0,64                       | 0,76       | 0,88   | 1,00   |      |
| OPERATING TEMPERATURE - CORRECTION FACTORS - C <sub>ot</sub>                      |                           |                           |                            |            |        |        |      |
| Operating temperature [°C]  | 25                        | 30                        | 35                         | 40         | 45     | 50     |      |
| Correction factor C <sub>ot</sub>   | 1                         | 1                         | 1                          | 0,97       | 0,87   | 0,80   |      |

| 400 bar version   |                           |                           |                            |            |        |        |      |
|---|---------------------------|---------------------------|----------------------------|------------|--------|--------|------|
| Type  | Connection <sup>(3)</sup> | Inlet flow <sup>(1)</sup> | Outlet flow <sup>(2)</sup> | Dimensions |        |        | Mass |
|   | IN/OUT ["]                | [Nm <sup>3</sup> /h]      | [Nm <sup>3</sup> /h]       | H [mm]     | W [mm] | D [mm] | [kg] |
| HP-DRY 100 PN400  | G 3/8"                    | 100                       | 97                         | 1120       | 680    | 450    | 120  |
| HP-DRY 150 PN400  | G 3/8"                    | 150                       | 145,5                      | 1360       | 680    | 450    | 135  |
| HP-DRY 250 PN400  | G 3/8"                    | 250                       | 242,5                      | 1450       | 680    | 580    | 190  |
| HP-DRY 350 PN400  | G 1/2"                    | 350                       | 339,5                      | 1350       | 820    | 580    | 270  |
| HP-DRY 500 PN400  | G 1/2"                    | 500                       | 485                        | 1380       | 820    | 650    | 310  |
| HP-DRY 650 PN400  | G 1/2"                    | 650                       | 630                        | 1450       | 820    | 650    | 440  |
| HP-DRY 800 PN400  | G 1/2"                    | 800                       | 776                        | 1230       | 820    | 650    | 425  |
| HP-DRY 1000 PN400   | G 1/2"                    | 1000                      | 970                        | 1450       | 820    | 650    | 600  |
| HP-DRY 1200 PN400   | G 1/2"                    | 1200                      | 1164                       | 1450       | 1000   | 900    | 850  |
| HP-DRY 1400 PN400   | G 1/2"                    | 1400                      | 1358                       | 1500       | 1000   | 900    | 800  |
| HP-DRY 1600 PN400   | G 1/2"                    | 1600                      | 1552                       | 1450       | 1000   | 900    | 1200 |
| OPERATING PRESSURE 50 bar - CORRECTION FACTORS - C <sub>op</sub> (35 °C; 400 bar) |                           |                           |                            |            |        |        |      |
| Operating pressure [bar]  | 250                       | 275                       | 300                        | 325        | 350    | 375    | 400  |
| Correction factor C <sub>op</sub>   | 0,63                      | 0,69                      | 0,75                       | 0,81       | 0,88   | 0,94   | 1,00 |
| DEW POINT - CORRECTION FACTORS - C <sub>dp</sub>                                  |                           |                           |                            |            |        |        |      |
| Dew point temperature [°C]  | -25                       | -40                       | -55                        |            |        |        |      |
| Correction factor C <sub>dp</sub>   | 1,1                       | 1                         | 0,7                        |            |        |        |      |

(1) Refers to 1bar(a) and 20°C, at nominal operating pressure, inlet temperature 35°C and pressure dew point at outlet -40°C.  
 (2) Purge air requirements depend on actual operating conditions (Typically about 3%).  
 (3) Threads of the dryer are male. It is possible to remove the fittings on the inlet and outlet, to get a pipe connection (for welding), where you should contact the manufacturer for the diameter and thickness. Also on the inlet you can remove the fittings and pipes entirely to get a female connection directly on the pre-filter.