HI-ZORB

High Quality Compressed Air - At Point of Use

Medical, Dental, Pharmaceutical and Manufacturing

HI-LINE INDUSTRIES

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HI-ZORB Adsorption Dryer

The HI-ZORB point of use desiccant dryer is designed to give high quality air at a low budget. However we have done this without compromising on quality. The standard unit dries air to a dewpoint of -40c and comes with pre and after filtration.

The proven extruded aluminium technology is ideal for an array of applications, including dental, medical, powder coating, printing and laser technology, pneumatic control and general manufacturing.

The HI-ZORB is available from 5 cfm to 100 cfm and is an off the shelf product for next day delivery.

HI-ZORB Principles of Operation

HI-ZORB comprises of aluminium top and bottom valve blocks and extruded aluminium twin chambers filled with desiccant (DRI-ZORB 27).

The air is dried as the air passes through the desiccant bed. One chamber is drying, whilst the other chamber is regenerating using the PSA principle (Pressure Swing Adsorption). The change is automatic and controlled by a solid state controller.

A small amount of the dried compressed air is used to regenerate the saturated desiccant bed by expanding the dry air from line pressure to atmospheric pressure, removing moisture adsorbed by the desiccant and therefore regenerating the dryer.

HI-ZORB Installation Advice

Hi-line recommend a by-pass line including filter to be installed around the HI-ZORB to ensure clean compressed air is supplied to the application, when the dryer is being serviced

HI-ZORB Technical Specification

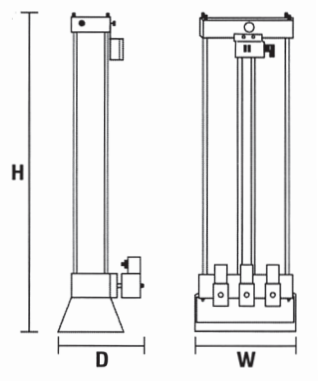
Model	CFM	Dimensions D x W x H	Conn	Filters	Weight	Voltage
Hi-Zorb 5	5	191 x 155 x 615	3/8"	HF25-2 & 3	8.5	240
Hi-Zorb 10	10	191 x 155 x 615	3/8"	HF25-2 & 3	9.8	240
Hi-Zorb 15	15	210 x 210 x 715	1/2"	HF25-2 & 3	15	240
Hi-Zorb 20	20	210 x 210 x 875	1/2"	HF25-2 & 3	17	240
Hi-Zorb 35	35	275 x 225 x 870	3/4"	HF50-2 & 3	27	240
Hi-Zorb 50	50	275 x 225 x 1130	3/4"	HF50-2 & 3	33	240
Hi-Zorb 75	75	330 x 245 x 1110	1"	HF120-2 & 3	52	240
Hi-Zorb 100	100	330 x 245 x 1405	1"	HF120-2 & 3	61	240

Operating pressure barg (psig)	4 (58)	5 (72)	6 (87)	7 (100)	8 (116)	9 (130)	10 (145)	11 (160)	12 (174)	13 (189)
Pressure correction factor (PCF)*	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.73

Inlet Temperature °C (°F)	20 (68)	25 (77)	30 (86)	35 (95)	40 (104)	45 (113)	50 (122
Temperature correction factor (TCF)	1.07	1.06	1.04	1.00	0.93	0.78	0.64

Dewpoint °C (°F)	-40 (-40)	-70 (-100)
Dewpoint correction factor (DCF)	1	0.7

- **Small & Compact**
- **Pre & After Filtration**
- **Dewpoint down to -70 deg C**
- **240 Volt**
- **5 cfm - 100 cfm**



HI-ZORB selection

To select the HI-ZORB suitable for your application, the following information is required:

• Minimum inlet pressure • Maximum inlet flow
• Maximum inlet temperature • Dewpoint required

With the above information follow the selection example below:

Compressor outlet pressure @ 7 barg (100 psig) and flow rate @ 90 Nm^3/h (53 scfm)
Dryer inlet pressure, after pipework, valves, receiver and filtration @ 6.4 barg (93 psig)

Dryer inlet temperature	30°C
Outlet dewpoint	-40°C
Pressure correction factor (P)	0.9
Temperature correction factor (T)	1.04
Dew point correction factor (D)	1

Corrected dryer flow rate = Compressor flow rate / P x T x D = 90 / 0.9 x 1.04 x 1 = 96 Nm^3/h (56 scfm)

As the above drying sizing table, the correct dryer for this application, with a corrected flow rate of 96 Nm^3/h (56 scfm) is a **HI-ZORB 75**

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