

**new!**

**EVO<sup>dry</sup>**

**EVO<sup>med</sup>**



[www.ethafilter.com](http://www.ethafilter.com)

## EVOLUTION

The **EVO** range is the natural evolution in adsorption dryers technique.

All the experience matured by ETHAFILTER in fifteen years of producing the ZEO and TWIN-CON ranges is now incorporated in this new line of products.

As for the other dryers offered, **EVO<sup>dry</sup>** and **EVO<sup>med</sup>** guarantee a purity of compressed air conforming to the **ISO 8573.1** standard (for industrial use) and to the European Pharmacopoeia standards (hospital-medical use).

The acknowledged reliability and high performance of the ZEO<sup>dry</sup> and ZEO<sup>med</sup> adsorption dryers are combined with a new and appealing design.



## LIGHTWEIGHT AND DESIGN

Precise design parameters combined with new lightweight materials such as aluminium alloys have allowed ETHAFILTER to reduce the weight of **EVO<sup>dry</sup>** and **EVO<sup>med</sup>** offering substantial advantages when handling these dryers without compromising safety and reliability.

The external enclosure protects the fittings, valve assemblies and piping as well as the adsorption towers from dirt and weather. The result is a product pleasing in appearance but at the same time easily accessible for maintenance and inspection purposes.

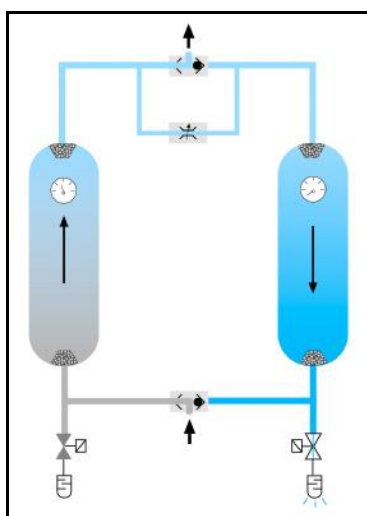
**INNOVATIVE CLEAN TECHNOLOGY**

**EVO<sup>dry</sup>** has been studied for industrial applications. It is an adsorption dryer which incorporates “heatless” technology, a regeneration process which uses the expansion of dry gas without using heat.

This line of products expresses simplicity combined with design: in fact these dryers consist of two towers, commutation valve assemblies commanded by an electronic circuit that controls timed cycles (or as an option pneumatic logic). The cycle as for the ZEO<sup>dry</sup> and TWIN-CON<sup>dryer</sup> ranges consists of two half cycles: first the saturated compressed air passes through the tower on the left which removes moisture, thus drying it, whilst the right saturated tower is regenerated. The second half cycle takes place by changing-over the towers through simply a pressure release valve that exchange the dryer operation symmetrically but mirrored: the right tower now adsorbs whilst the left tower is being regenerated.

### Classes and performance:

Class -20 °C: residue	0.11	g H <sub>2</sub> O/m <sup>3</sup>	150 ppm <sub>v</sub>	3 % r.h.
Class -40 °C: residue	0.015	g H <sub>2</sub> O/m <sup>3</sup>	18 ppm <sub>v</sub>	0.5 % r.h.
Class -70 °C: residue	0.003	g H <sub>2</sub> O/m <sup>3</sup>	< 3 ppm <sub>v</sub>	< 0.5 % r.h.



### Optional accessories:

- filters mounted upstream or downstream the dryer with various micron ratings in a cascade configuration. These filters offer maximum efficiency for protecting the dryer by improved performance and longevity.

- economiser ETHA<sup>economy</sup>: as desiccant masses and time cycles are calculated for maximum duty operation, i.e. with maximum incoming moisture, the ETHA<sup>economy</sup> economiser saves on energy by reducing the consumption of regeneration air, based upon the effective moisture content which is sensor controlled. This by-passes the fixed time controlled cycle and extends adsorbing time in proportion to the reduction in moisture corresponds to the actual demand, temperature and compressed air supply pressure.

EVO <sup>dry</sup>	Ø	Flow rate	
		Nm <sup>3</sup> /h	NI/min
15	1"	150	2.500
18	1"	180	3.000
22	1"	210	3.500
30	1 ½"	300	5.000
37	1 ½"	360	6.000
45	1 ½"	480	8.000
55	2"	600	10.000

↳ Flow rates are referred to 7 bar<sub>(g)</sub> pressure and 35 °C

EVO <sup>med</sup>	Ø	Flow rate	
		Nm <sup>3</sup> /h	NI/min
11	¾"	96	1.600
15	¾"	120	2.000
18	1"	150	2.500
22	1"	192	3.200
30	1 ¼"	258	4.300
37	1 ½"	300	5.000
45	2"	400	6.700

↳ Flow rates are referred to 9 bar<sub>(g)</sub> pressure and 25 °C;

### EVO<sup>med</sup>

Compressed air used in medical applications is governed at an international level by the *European Pharmacopoeia*. The European Pharmacopoeia provides guidelines and instructions to be respected concerning hygiene and safety of patients and operators when utilising preparations and medicines for medical, therapeutic and preventive use and also covers the use of medical and surgical instruments. **EVO<sup>med</sup>** has been designed and developed with the aim of ensuring utmost purity of compressed air, by reducing impurities and toxic substances including CO and CO<sub>2</sub> and other substances which can contaminate the compressed air carried through the piping for medical use. It is the convenient and cost effective alternative solution to gas cylinders using expensive cryogenic fluids.

