

# ultrafilter HEATLESS HL Adsorption Dryer

**NEW**



The NEW product line of HeatLess adsorption dryers

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## Why drying compressed air?

■ Compressed air is used in almost all areas of industrial manufacturing as a source of energy or processing. Compressed air needs to be dry, oilfree and clean in order to prevent costly production downtimes and losses in the production quality. The atmospheric air drawn in contains harmful substances, dirt particles and moisture in the form of water vapour, which condenses in compressed air pipes and can lead to considerable damages (corrosion, freezing etc.).

## Adsorption dryers

■ Beneath the fridge dryers the adsorption dryers represent the most common drying method for compressed air. Maximum efficiency and the highest operation safety, coupled with low operation costs are features conveying the advantages of the adsorption dryers. State of the art technology and selected materials are the basis for high operational safety.

## HEATLESS HL adsorption dryers

■ As a complete system the HEATLESS HL adsorption dryer has a prefilter (with automatic condensate drain), silencers and an integrated dust filter onboard providing maximum efficiency and operational safety. HEATLESS HL adsorption dryer are produced for a wide range of applications and are delivered ready to connect and easy to install.

■ With 12 sizes for volume flows from 50 to 1000 m<sup>3</sup>/h and pressure dew points of -20 °C, -40 °C or -70°C customized solutions are offered. While matching perfectly to compressors requirements, no over-sizing is necessary. The demand for regeneration air remains constant.

■ The water load of the dryer depends on the actual operation conditions. If the inlet conditions, airflow, pressure or ambient temperatures vary, the amount of water load will also vary. With a continuous dew point measurement at the outlet of the dryer, the newly developed "UPEC" control will determine the actual amount of moisture that enters the dryer and will assess the optimum time when the dryer requires regeneration whilst maintaining a constant selected dew point.

This leads to considerable savings in regeneration air. Example: An heatless dryer designed for 100 m<sup>3</sup>/h, 35 °C inlet temperature and 7 bar (g) operational pressure requires approx. 15 m<sup>3</sup>/h regeneration air during a fixed circle. At an average compressed air requirement of 60% , an average inlet temperature of 30 °C and average pressure of 7,2 bar the water load is reduced to approx. 45% of the design value. On average the dryer is now only using 6,75 m<sup>3</sup>/h and is therewith saving 8,25 m<sup>3</sup>/h. According to compressor type and condition this is equivalent to a power consumption of up to 1 kW. At a full cost price of 2 cents per m<sup>3</sup> of generated compressed air and 8.000 operating hours per year the yearly saving is accumulated to Euro 1.320,--.

■ An intermittent control is already integrated in the standard series of ultrapure high-efficiency dryer. The dryer can be linked to the compressor and is self-adjusting to the compressor start stop mode, which leads to considerable savings in regeneration air.

■ All operation data of the dryer are shown on the display of the control system.



**ULTRAFILTER**  
THE FILTRATION MANUFACTURER

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## Compact design

Due to the compact design the new series of HL dryers are saving installation space and shipping costs.

The symmetric design with the central position of the UPEC control system are service- and maintenance friendly. Service components are easy to maintain, because they are accessible from the front side of the dryer. Pre- and afterfilters are also installed in central position, easy to access from both side (no preferred flow direction). The modular system design allows to modify a HEATLESS HL dryer to an OFA of free air system or to an ALG air breathing system (see options).

## UPEC 2008 control system



## HEATLESS HL Standards:

- high energy efficiency
- high reserve capacity
- reliability
- safe operation, easy to maintain
- UPEC 2008 control panel
- high corrosion resistance due to galvanised piping
- easy to ship due to compact dimensions
- Pre- and afterfilter onboard
- Dew point -20°C up to -70°C



## Quality product

■ Only the best components were used for the production of the ultrafilter high-efficiency compressed air dryers. According to our quality safety program in appliance to DIN ISO 9001 these products are declared „quality product“. Together with the maintenance- and user-friendly construction, absolute operation safety and reliability is ensured, guaranteed by a 5-years-operation warranty. Therefore products of these performance are marked „Made in Germany“.

All ultrafilter HEATLESS HL adsorption dryers guarantee lowest possible total cost of ownership

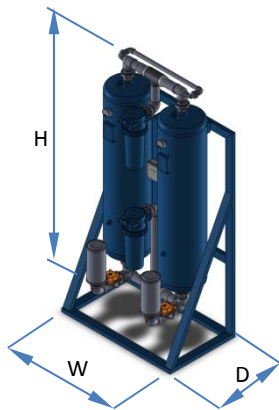
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## Technical Data

Size Heatless HL	Volume Flow $V_{nom}$ m <sup>3</sup> /h	Connection DIN G"	Dimensions			Weight kg
			Width W mm	Depth D mm	Height H mm	
0050	50	G ¼	580	380	1.200	90
0080	80	G ¼	580	380	1.550	115
0100	100	G 1	580	380	1.480	145
0150	150	G 1	800	450	1.850	180
0175	175	G 1	800	450	1.700	240
0225	225	G 1 ½	800	480	1.760	285
0300	300	G 1 ½	800	480	1.720	370
0375	375	G 1 ½	1.000	600	2.020	430
0550	550	G 2	1.000	600	1.960	520
0650	650	G 2	1.000	600	2.000	680
0850	850	G 2	1.300	800	2.200	770
1000	1000	G 2 ½	1.300	800	2.300	850

Volume Flow  $V_{nom}$  in m<sup>3</sup>/h related to 20 °C and 1 bar abs suction condition of compressor, 7 bar g operating pressure and 35 °C inlet temperature.



### Guidance for determinating the dryer size:

Inlet volume flow **V<sub>eff</sub>**: 300 m<sup>3</sup>/h  
 Operating pressure: 8 bar g  
 Inlet temperature: 45 °C  
 Required PDP: - 40 °C  
 Correction factor **K 1**: 0,76

$$V_{corr} = \frac{V_{eff}}{K1} = \frac{300 \text{ m}^3/\text{h}}{0,76} = 395 \text{ m}^3/\text{h}$$

Selected dryer size : **0550**

### HEATLESS HL Options:

- dew point control
- anti freezing trace heating
- bypass complete with valves
- start up device
- flow meter
- pneumatic control panel
- data logger
- easy to modify to ALG air breathing system
- easy to modify to OFA oil free air system
- shrinking foil packaging
- alternative power supply (24 V<sub>DC</sub>, 110 V<sub>AC</sub>)
- NPT connection at battery limits



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THE FILTRATION MANUFACTURER



### **ultrafilter trykluftprogram:**

ultrafilter valideret trykluft program indenfor, filter, Køletørrer samt adsorptionstørrer.

—  
ultrafilter validated Compressed air filter program with filter, dryer and desiccant dryer.



### **Trykluftfilter:**

Trykluftfilter til brug for håndværkere, værksteder og til mindre kritiske applikation i industrien.

—  
Compressed air filter for use by craftsmen, workshops, and for less critical applications in the industry.



### **Procesfiltrering:**

Procesfilter for luft og Gas samt væskefiltrering fra 3M / Cuno , sterilfilter, dampfilter samt Membran filtrering.

—  
Process filter for air / gas and liquid filtration, sterile filter steam filter, and Membran filtration.



### **Vandfilter**

Stort program for vandfilter fra Cuno & 3M

—  
A wide range of water filter from Cuno & 3M



### **Nitrogen og Oxygen systemer**

Produktion af egen nitrogen eller oxygen, med et modul opbygget system som kan udvides efter behov.

—  
Producing own nitrogen or oxygen, with a modular system which can be expanded as needed.



### **Måleinstrumenter**

Måleudstyr til måling og overvågning af trykluft- og nitrogen udstyr.

—  
Measuring equipment for measuring and monitoring of compressed air and nitrogen plant.



### **Service:**

Vi tilbyder opstart og montering af alle vores produkter. og kan tilbyde serviceaftaler på alle vores produkter.

Vi har samarbejdspartner i Danmark, Sverige, Norge, Finland, og Island.

—  
We offer start-up and installation of all our products. And we can offer service on all our products. We have partner in Denmark, Sweden, Norway, Finland, Iceland.

### **ultrafilter Skandinavien ApS**

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