



# Adsorption Dryers

Pneumatech offers four different adsorption dryer technologies. Heatless dryers (PH) have the lowest initial investment cost, while zero-purge adsorption dryers (PB ZP) the lowest lifecycle cost. Heater purge (PE) and blower purge (PB) dryers balance between both.

No matter what your preference is, Pneumatech guarantees stable, dry air at the lowest operating costs and with excellent control and monitoring capabilities for each dryer you select.

## **PH 700 - 2950 HE -**

Welded vessel heatless adsorption dryers

# PH 700 - 2950 HE - Welded vessel heatless adsorption dryers

## Features & Benefits

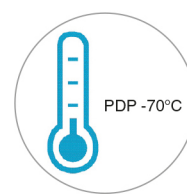
- ▶ Advanced energy management for lowest operating costs
  - PDP control
  - Compressor synchronization
  - Purge nozzle optimization (optional)
- ▶ High-quality, high-efficient desiccant, selected for the right application
  - PDP -40°C/-40°F (std): activated alumina
  - PDP -70°C/-94°F (option): molecular sieves
- ▶ Minimal risk of crushed desiccant thanks to the large vessel diameter and the sonic nozzle
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ High reliability and robust design
- ▶ Low noise levels while purging
- ▶ Designed for transportability
- ▶ Optimal control and monitoring thanks to the Purelogic™ controller



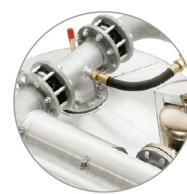
## General Specifications

- ▶ Heatless adsorption dryers: welded vessel design
- ▶ Dew points achievable: -40°C/-40°F & -70°C/-94°F
- ▶ Pressure range: 4-10 bar/58-145 PSI (14.5 Bar/210 PSI variant available on request)
- ▶ Ambient temperature range: 1-40°C/34-104°F
- ▶ Inlet temperature range: 1-55°C/34-131°F
- ▶ Power supply: 230V 50 Hz; 115V 60 Hz 3 ph

## Options



PDP -70°C



Purge nozzle optimization



2nd PDP read out



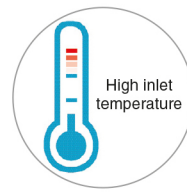
In and outlet filters



Vessel Safety valves



Wooden Packaging



High inlet temperature



Incorporating high-quality components, PH heatless adsorption dryers provide you with clean, dry air to extend the life of your equipment and products. Heatless adsorption dryers use dry, expanded purge air to remove moisture from the desiccant material.

PH 700-2950 HE adsorption dryers are capable of drying air to a PDP of -40°C/-40°F as standard and -70°C/-94°F as option for higher flows up to 5040 m³/h. The desiccant is housed in welded vessels, which are coated and can operate up to

10 bar/145 PSI (fatigue load). All dryers can be equipped with 2 coalescing pre-filters before and 1 particulate filter after the dryer (optional).

The PH 700-2950 HE range has the Purelogic™ as central brain of the adsorption dryer. The Purelogic™ optimizes operating costs; ensures maximum reliability by monitoring the most important parameters; and offers impressive control and monitoring capabilities.

Technical specifications for PH 700 HE up to PH 2950 HE (standard version, PDP -40°C)							
Specification	Unit	PH700 HE	PH850 HE	PH1165 HE	PH1800 HE	PH2350 HE	PH2950 HE
Nominal volume Flow at Dryer Inlet <sup>(1)</sup>	l/s	330	400	550	850	1100	1400
	m³/hr	1188	1440	1980	3060	3960	5040
Avg. purge air consumption	%	18	16	17.8	17.9	18	16.3
Inlet and outlet connections	DIN PN16	DN80	DN80	DN80	DN100	DN100	DN150
Pressure Drop over Dryer excluding Filters	Bar	0.1	0.1	0.1	0.1	0.1	0.11
	PSI	1.45	1.45	1.45	1.45	1.45	1.60
Optional Pre & After Filter Sizes <sup>(2)</sup>	General purpose coalescing filter	10 G HE	10 G HE	G 1F	G 2F	G 3F	G 4F
	High efficiency coalescing filter	10 C HE	10 C HE	C 1F	C 2F	C 3F	C 4F
	Particulate filter	10 S HE	10 S HE	S 1F	S 2F	S 3F	S 4F
Mass	Kg	950	1030	1310	2120	2600	3700
	Lb	2109	2287	2908	4706	5772	8215
Height	mm	2537	2537	2592	2655	2637	2576
	inch	99.9	99.9	102.0	104.5	103.8	101.4
Width	mm	1088	1088	1091	1259	1259	1428
	inch	42.8	42.8	43.0	49.6	49.6	56.2
Length	mm	1776	1776	1884	2359	2472	2693
	inch	69.9	69.9	74.2	92.9	97.3	106.0

1. Flow is measured at Reference Conditions: 1 Bar(a) and 20°C at operating pressure of 7 bar (g), inlet temperature 35°C & std PDP of -40°C at the outlet.

2. Filters are sized at reference conditions. Consult the AML of the filters for sizing outside the reference conditions.

Correction factor Kp x Kt for PDP -40/-70							
T inlet	Working Pressure Bar(G)(PSI)						
°C(°F)	4.5 (65)	5 (73)	6 (87)	7 (102)	8 (116)	9 (131)	10 (145)
<=35(95)	0.59	0.70	0.88	1	1	1.05	1.10
40(104)	0.50	0.59	0.74	0.84	0.95	1.05	1.10
45(113)	0.42	0.50	0.62	0.71	0.80	0.89	0.98
50(122)/55(131) for HIT	0.33	0.38	0.48	0.55	0.62	0.69	0.76

PDP Flow correction factor				
Dew point	°C	-40	-50	-60
	°F	-40	-58	-76
Dew point correction factor	Kdp	1	0.9	0.85



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