

PH 2 - 45 HE - Extruded profile heatless adsorption dryers

Features & Benefits

- ▶ Advanced energy management for lowest operating costs
 - Compressor synchronization
 - Purge nozzle optimization (optional)
 - PDP control (optional)
- ▶ High-quality, high-efficient desiccant, selected for the right application – molecular sieves
- ▶ Spring-loaded cartridges, hence minimizing the risk of crushed desiccant
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ Designed for transportability & mountability
 - Dryer can be installed vertically or horizontally
 - Wall-mounting kit (optional)
- ▶ In & outlet can be reversed
- ▶ Low noise levels while purging
- ▶ High reliability and robust design

General Specifications

- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: -40°C/-40°F & -70°C/-94°F
- ▶ Pressure range: 4-16 barg/58-232 psig
- ▶ Ambient temperature range: 1-50°C/34-122°F
- ▶ Inlet temperature range: 1-60°C/34-140°F
- ▶ Power supply: 230VAC 50/60Hz



Options



Purge nozzle optimization



Wall mounting kit



PDP control



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 2-45 HE adsorption dryers are capable of drying air to a PDP of $-70^{\circ}\text{C}/-94^{\circ}\text{F}$, simply by reducing the flow, thanks to the use of carefully selected molecular sieves. The desiccant is housed in a robust extruded aluminum body, which can operate until 16 barg/232 psig (fatigue load). The dryers are equipped with a mounted pre-filter and an integrated after-filter as standard,

can be installed vertically and can also be wall-mounted with a specially designed wall-mounting kit (optional).

The controller ensures the lowest operational costs thanks to compressor synchronization and the optional PDP control. LED's on the controller indicate whether power supply is connected, towers are pressurized and solenoids are functioning properly. It also provides with preventive maintenance information. Alarms can also be triggered remote thanks to the available voltage-free contact.

Technical specifications for PH 2 HE up to PH 45 HE (standard version, PDP -40°C)

Specification	Unit	PH 2 HE	PH 4 HE	PH 6 HE	PH 11 HE	PH 15 HE	PH 20 HE	PH 25 HE	PH 35 HE	PH 45 HE
Nominal volume flow at dryer inlet ⁽¹⁾	l/s	1	2	3	5	7	10	12	17	22
	m ³ /hr	4	7	11	18	25	36	43	61	79
Average purge air consumption	%	18	18	18	18	18	18	18	18	18
Inlet and outlet connections	G	1/4"	1/4"	1/4"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
	NPT	1/4"	1/4"	1/4"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Pressure drop at max. flow	barg	0.012	0.075	0.185	0.01	0.04	0.075	0.125	0.21	0.34
	psig	0.17	1.09	2.68	0.15	0.58	1.09	1.81	3.05	4.93
Included pre-filter size	Super fine filter	Mini 3 C HE	Mini 3 C HE	Mini 3 C HE	TF 1 C HE	TF 1 C HE	TF 1 C HE	TF 1 C HE	TF 1 C HE	TF 1 C HE
Mass	Kg	7	9	11	19	22	25	29	35	44
	Lb	15.5	19.8	24.2	41.9	48.5	55.1	63.9	77.1	97
Height	mm	540	720	855	640	725	875	1015	1270	1505
	inch	21.2	28.3	33.6	25.1	28.5	34.4	39.9	50	59.2
Width	mm	197	197	197	320	320	320	320	320	320
	inch	7.7	7.7	7.7	12.5	12.5	12.5	12.5	12.5	12.5
Length	mm	106	106	106	149	149	149	149	149	149
	inch	4.1	4.1	4.1	5.8	5.8	5.8	5.8	5.8	5.8

1. Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 35°C & std PDP of -40°C at the outlet.

Flow correction factors due to air inlet pressure Kp

Operating pressure	barg	4	5	6	7	8	9	10	11	12	13	14	15	16
	psig	58	72	87	100	116	130	145	160	174	189	203	218	232
Pressure correction factor	Kp	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	1.87	2	2.12

Flow correction factors due to air inlet temperature Kt

Temperature	$^{\circ}\text{C}$	20	25	30	35	40	45	50
	$^{\circ}\text{F}$	68	77	86	95	104	113	122
Temperature correction factor	Kt	1.07	1.06	1.04	1	0.88	0.67	0.55

Flow correction factors due to pressure dew point Kdp

Dew point	$^{\circ}\text{C}$	-40	-70
	$^{\circ}\text{F}$	-40	-94
Dew point correction factor	Kdp	1	0.7