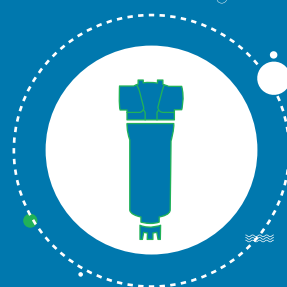
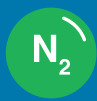
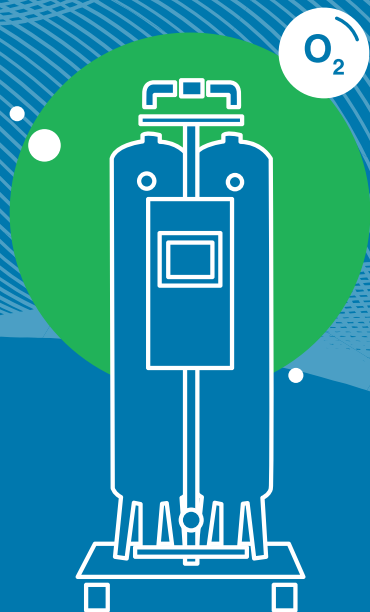


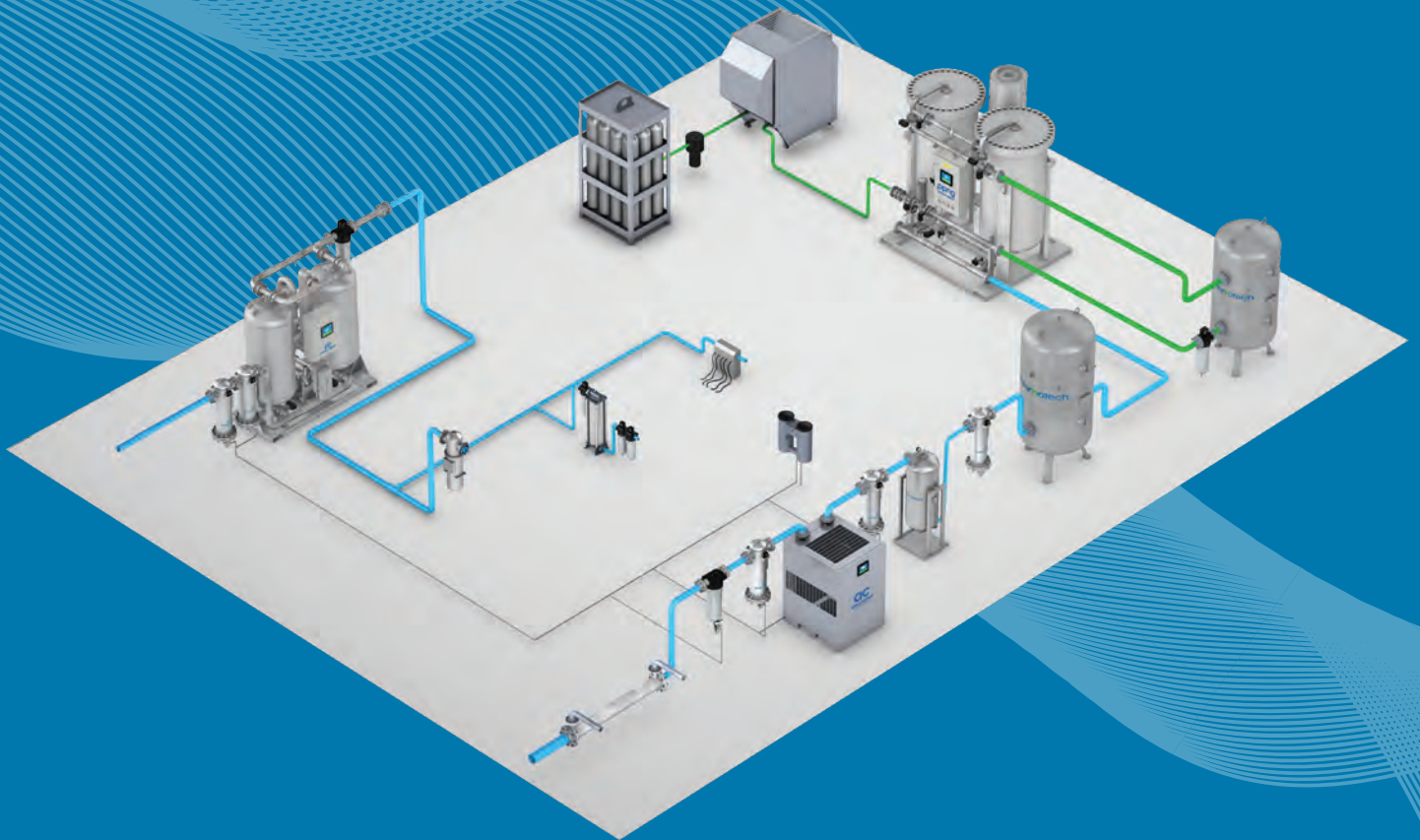
AIR TREATMENT & GAS GENERATION

Product Catalogue 2023



Your partner for air treatment & on-site gas generation

Since 1966, Pneumatech has provided industry-leading compressed air treatment and on-site gas generation solutions to customers across the globe. Our compressed air treatment range helps you to protect your upstream equipment, ensures your compressed air system to run more efficiently, avoiding humidity and the build-up of rust, all while supporting you in your quest for the best quality end product. Our on-site nitrogen and oxygen generators provide you with premium, industrial gas without the cumbersome handling of bottles, cost-efficient, easy and at the purity level required by you.



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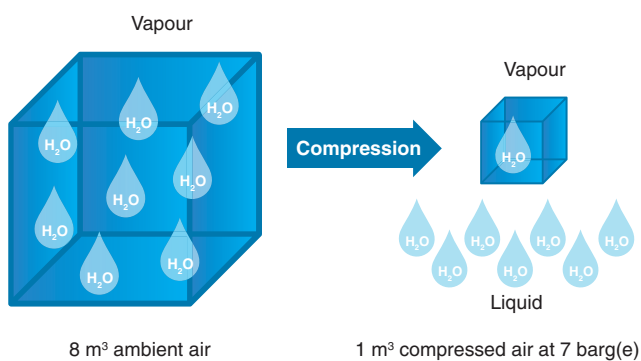
Compressed Air Treatment

Air treatment is the process of purifying compressed air to remove contaminants such as water (liquid or vapor), dust, dirt, and oil. This is important because these contaminants can cause a variety of problems in systems that use compressed air.

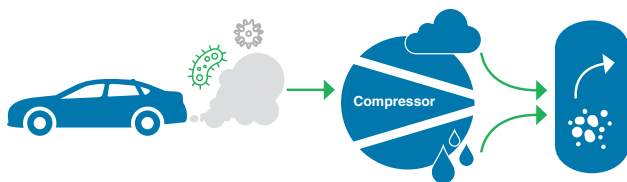
How are contaminants in compressed air formed?

Contaminants in compressed air can be formed in different ways:

- **Water vapor:** Water vapor is naturally present in ambient air and is drawn in by the compressor along with the air. When the air is compressed, the water vapor becomes more concentrated, increasing the risk of condensation.



- **Dust:** Dust and other particulate matter are present in ambient air and can be drawn into the compressor along with the air.



- **Oil:** Compressors contain lubricating oil to keep the moving parts functioning smoothly. Over time, the oil can break down and become contaminated with dirt and other particles, which can be carried into the compressed air stream. Additionally, compressors can leak oil, which can also contaminate the compressed air.
- **Wear and tear:** As compressors age and are used extensively, they can begin to wear down. This can lead to the introduction of additional contaminants, such as metal particles, into the compressed air stream.
- **Piping and hoses:** As compressed air travels through pipes and hoses, it can pick up additional contaminants, such as dirt and moisture, from the inside walls of the pipes and hoses.

What problems can contaminants form?

Contaminants in compressed air can cause various problems, depending on the specific contaminant and the application in which the compressed air is being used. Some common problems that can be caused by contaminants in compressed air include:

- Corrosion of pipe lines
- Bad quality of the end product
- Malfunctioning of controls
- Build-up of ice
- Cultivation of micro-organisms
- Damaged production equipment, leading to inefficiencies and increased costs
- Air pollution, creating unhealthy work environments
- Pollution of the condensate

The Pneumatech solution

As the leader in compressed air quality, Pneumatech offers a comprehensive range of air treatment equipment, including all types of dryers, filters, drains and (oil-)water separators. That means you can get top-quality, fully compatible air solutions from just a single source.

Producing your own nitrogen or oxygen is the smart environmentally friendly choice. Using an on-site gas generator is more cost-efficient, dependable and sustainable than gas deliveries.

How do gas generators work?

To produce your own nitrogen or oxygen, all you need is a compressor and a gas generator system.

That's because air consists of 78% nitrogen and 21% oxygen. When you feed compressed air into a nitrogen generator, it separates the N_2 from the O_2 . There are two main technologies to produce nitrogen or oxygen:

PSA:

Pressure Swing Adsorption (PSA) separates nitrogen from compressed air using a carbon molecular sieve (CMS). As the air passes through a vessel filled with CMS, the oxygen in the air is adsorbed by the CMS. This allows nitrogen to pass through with a purity of up to 99.999% to reach the outlet. PSA generators are ideal for high-purity, high-flow applications.

To generate oxygen a different adsorbent called Zeolite Molecular Sieve is used resulting in the oxygen in the air being adsorbed by the ZMS, instead of the nitrogen.

Membrane:

Membrane technology is a very simple, reliable and continuous N_2 production method. Compressed air is pushed through hollow polymer membranes. The oxygen in the air premeates through the fiber walls and escapes into the atmosphere. This leaves quality nitrogen with a purity between 95% and 99.5% at the generator outlet.

The benefits of on-site gas generation:

1. On-site gas generation offers convincing benefits compared to liquid or gaseous N_2 or O_2 deliveries:
2. Cost efficiency: Producing your own nitrogen or oxygen with the purity you need allows you to significantly reduce your cost of gas.
3. Sustainability: Eliminate the transport emissions that gas deliveries generate. In addition, Pneumatech's on-site generation solutions are super efficient, minimizing your energy use and your environmental footprint.
4. A reliable nitrogen or oxygen supply: No need to count on external vendors. On-site generation gives you complete control over your nitrogen supply.
5. No logistics: Say goodbye to always monitoring your N_2 or O_2 supply, working with vendors, and tracking and handling deliveries.



Greater cost-efficiency saves you money



Eliminating bottle or liquid deliveries reduces your environmental footprint



Take charge of your own nitrogen supply



Less hassle by removing supply logistics

The Pneumatech solution

Pneumatech's nitrogen and oxygen generators are available with Pressure Swing Adsorption (PSA) technology, resulting in nitrogen purities up to 99,999% and oxygen purities up to 95%. Membrane technology is also offered for nitrogen purity levels up to 99,5%. Pre-defined high-pressure nitrogen skids are available as a plug-and-play solution for various applications.

Refrigeration Dryers

With our refrigeration dryers too, we let you choose between investment cost and lifecycle cost.

Pneumatech's COOL range is our robust, no-frills drying solution, meant for basic condensate removal in your compressed air system. With the AD dryers we guarantee dry air through real-time PDP monitoring, while also reducing power consumption and compressed air losses. Our premium AC dryers optimize the energy consumption based on the actual compressed air demand, through energy saving algorithms or variable speed technology.



Cool 12 - 272 - Non-cycling refrigeration dryers

Features & Benefits

- ▶ Solid performance & strong reliability
 - Stable pressure dew point as low as 5°C/41°F ensuring ISO 8573-1 class 5 quality
- ▶ Compact & easy to install
 - Simple vertical design
 - Plug and play mechanical & electrical connections
- ▶ Super cost saver
 - Low initial investment
 - Efficient cooling system ensures low energy costs
 - Increased lifetime of tools and equipment
- ▶ Easy maintenance at low cost
 - Long service intervals
 - Easy access to key components

General Specifications

- ▶ Non-cycling refrigeration dryers
- ▶ Operating pressure: 4-16 barg/58-232 psig (4-13 barg/58-189 psig from COOL 145 onwards)
- ▶ Max. ambient temperature: 50°C/122°F
- ▶ Flow rate: 21 to 462 m³/hr (12-272 cfm)⁽¹⁾
- ▶ Pressure dew point: 5°C/41°F (ISO 8573-1:2010 class 5)
- ▶ Power supply: 230VAC 50 Hz (60Hz version on request)
- ▶ Refrigerant: R134a (COOL 12-145) or R410A (COOL 184-272)



Applications



Pneumatic tools and equipment



Pneumatic control systems



Painting



Injection moulding



Car shops



Tire inflation

¹ Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C .

The compressed air coming out of the compressor is always saturated. Pneumatech's reliable and robust COOL refrigeration dryers are an efficient solution to lower the presence of moisture and the resultant corrosion in your compressed air system. COOL dryers can act as a second line of defence after water separators and aftercoolers giving you a stable dew point as low as 5°C/41°F, maintaining the ISO 8573-1 class 5 air quality.

Designed to work up to 16 barg/232 psig, COOL dryers deliver stable performance thanks to the efficient refrigerant gas and carefully selected components. The simple vertical design and small foot print make COOL dryers the easy-to-use drying solution in various industrial applications such as car shops, spray painting, injection moulding, tire inflation and many more.

Technical specifications for COOL 12-272 50 Hz													
Pneumatech Variants →	Units	COOL 12	COOL 21	COOL 30	COOL 42	COOL 64	COOL 76	COOL 106	COOL 127	COOL 145	COOL 184	COOL 230	COOL 272
Specifications ↓													
Flow ⁽¹⁾	l/s	5.8	10.0	14.2	20.0	30.4	35.8	50.0	60.0	68.3	86.7	108.3	128.3
	m ³ /hr	21	36	51	72	110	129	180	216	246	312	390	462
Nominal electric power	kW	0.13	0.13	0.16	0.28	0.32	0.30	0.42	0.68	0.74	0.70	0.75	0.95
Power Supply Voltage/Phase		230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1	230/50/1
Max Operating Pressure	barg	16	16	16	16	16	16	16	16	13	13	13	13
	psig	232	232	232	232	232	232	232	232	188	188	188	188
Refrigerant Gas		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R410A	R410A	R410A
Inlet and Outlet Connections	G Threads	1/2" F	1/2" F	1/2" F	1/2" F	1/2" F	3/4" F	1" F	1" F	1 1/2" F	1 1/2" F	1 1/2" F	1 1/2" F
Dimensions	L (mm)	233	233	233	233	233	233	233	310	310	310	310	310
	L (inch)	8.8	8.8	8.8	8.8	8.8	8.8	8.8	12.2	12.2	12.2	12.2	12.2
	W (mm)	550	550	550	550	550	550	559	706	706	706	706	706
	W (inch)	22	22	22	22	22	22	22	27.8	27.8	27.8	27.8	27.8
	H (mm)	561	561	561	561	561	561	561	994	994	994	994	994
	H (inch)	22.1	22.1	22.1	22.1	22.1	22.1	22.1	39.1	39.1	39.1	39.1	39.1
Weight	kg	19	19	19	20	25	27	30	52	57	59	80	80
	lbs	42	42	42	44	55	59	66	114	125	130	176	176

1.Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C.

Correction factors for ambient temperature					
Ambient temperature	°C	25	30	35	40
	°F	77	86	95	104
Temperature correction factor	Kt (amb)	1	0.92	0.84	0.8

Correction factors for compressed air inlet temperature						
Inlet temperature	°C	30	35	40	45	50
	°F	86	95	104	113	122
Temperature correction factor	Kt	1.24	1	0.8	0.69	0.54

Correction factors for compressed air inlet pressure													
Operating pressure	barg	5	6	7	8	9	10	11	12	13	14	15	16
	psig	73	87	101	116	131	145	159	174	188	203	218	232
Pressure correction factor	Kp	0.9	0.96	1	1.03	1.06	1.08	1.1	1.12	1.13	1.15	1.16	1.17

AD 15 - 4200 - Non-cycling refrigeration dryers

General specifications

- ▶ Non-cycling refrigeration dryers
- ▶ Operating Pressure:
 - AD 15 - 65: 4-16 barg/60-232 psig
 - AD 85 - 4200: 4-14 barg/60-203 psig
- ▶ Max. inlet temperature: 55°C/113°F
- ▶ Flow rate: 21 - 7200 m³/hr/
12 - 4238 cfm⁽¹⁾
- ▶ Pressure dew point: up to +3°C/37°F
- ▶ Power supply:
 - AD 15 - 270: 230V AC 50/60 Hz
 - AD 355 - 4200: 400V/50Hz; 380V/60Hz; 460V/60Hz
- ▶ Refrigerant: R513A (AD 15 - 105); R410A (AD 125 - 4200);

Refrigeration Dryers: AD Series (15-4200) Non cycling

AD 15-65	AD 85-105
	
Features & Benefits	Features & Benefits
<ul style="list-style-type: none"> • Stable performance and guaranteed dew point up to 3°C/37°F • Ingeniously designed components to ensure maximum performance <ul style="list-style-type: none"> • Hot gas bypass valve to prevent freezing at lower loads • Zero-loss electronic drain to prevent loss of valuable compressed air • Brazed plate heat exchanger with integrated water separator and air-to-air heat exchange • R513A refrigerant gas: low global warming impact, zero ozone depletion • Digital display with real-time PDP monitoring • Easy plug-and-play installation 	<ul style="list-style-type: none"> • Stable performance and guaranteed dew point up to 3°C/37°F • Ingeniously designed components to ensure maximum performance <ul style="list-style-type: none"> • Hot gas bypass valve to prevent freezing at lower loads • Zero-loss electronic drain to prevent loss of valuable compressed air • Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange • Environmental safe refrigerant gases R513A • Digital display with real-time PDP monitoring • Easy plug-and-play installation

Options



Filter support



Bypass valve

Pneumatech's AD 15-4200 non-cycling refrigeration dryers are designed to protect your compressed air system by lowering the presence of moisture in the compressed air. Thanks to the new controller with digital display, real time PDP monitoring is possible. The zero-loss electronic drains avoid compressed air losses. The well-designed heat exchangers ensure maximum cooling efficiency, making the AD dryers a genuine air drying solution in industrial applications. The AD15-105 is introducing the efficient and environmental friendly R513A refrigerant, reducing the global warming potential largely.

The AD125-4200 range is equipped with the winning combination: rotary compressors and R410A refrigerant. This combination is up to 30% more energy efficient, requires 20% less refrigerant gas and is 100% compliant with European regulation EU No 517/2014, hereby significantly reducing the ecological footprint of these dryers. Rotary compressors are moreover very reliable thanks to the low vibration levels and limited mechanical load. R410A guarantees stable evaporation, which makes the pressure dew point of up to 3°C/37°F achievable.

AD 125-270	AD 355-635	AD 750-4200
		
<p>Features & Benefits</p>	<p>Features & Benefits</p>	<p>Features & Benefits</p>
<ul style="list-style-type: none"> • Stable performance and guaranteed dew point up to 3°C/37°F • Rotary compressors and R410A refrigerant: the winning combination <ul style="list-style-type: none"> • 30% more energy efficient • Requires 19% less refrigerant gas • Extremely reliable: low vibration levels and limited mechanical load • Ingeniously designed components to ensure maximum performance <ul style="list-style-type: none"> • Hot gas bypass valve to prevent freezing at lower loads • Zero-loss electronic drain to prevent loss of valuable compressed air • Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange • Digital display with real-time PDP monitoring and voltage-free contact for remote alarm • Easy plug-and-play installation 	<ul style="list-style-type: none"> • Stable performance and guaranteed dew point up to 3°C/37°F • Rotary compressors and R410A refrigerant: the winning combination <ul style="list-style-type: none"> • 30% more energy efficient • Requires 19% less refrigerant gas • Extremely reliable: low vibration levels and limited mechanical load • Ingeniously designed components to ensure maximum performance <ul style="list-style-type: none"> • Hot gas bypass valve to prevent freezing at lower loads • Zero-loss electronic drain to prevent loss of valuable compressed air • Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange • Advanced controlling and monitoring thanks to the controller installed <ul style="list-style-type: none"> • Digital PDP display • Remote start/stop • Voltage-free contact for general alarm • Easy plug-and-play installation 	<ul style="list-style-type: none"> • Stable performance and guaranteed dew point of 3°C/37°F. • Rotary compressors and R410A refrigerant: The winning combination <ul style="list-style-type: none"> • 30% more energy efficient • 20% lower gas load • Extremely reliable: Less moving parts, low vibration levels and limited mechanical load • Ingeniously new designed components to ensure maximum performance <ul style="list-style-type: none"> • Ultra-efficient micro-channel condenser providing up to 40% more heat rejection, durable and easy maintenance • Hot gas bypass valve to prevent freezing at lower loads • Zero-loss electronic drain to prevent loss of valuable compressed air • New aluminium heat exchanger designed for maximum heat transfer and optimized air recovery (max. 2°C dT from inlet to outlet) • Advanced controlling and monitoring <ul style="list-style-type: none"> • Digital PDP display • Remote start/stop • Voltage-free contact for general alarm • Easy plug-and-play installation

¹ Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C .

AD 15 - 4200 - Non-cycling refrigeration dryers

Technical specifications for AD 15-425 50Hz

Pneumatech Variants →	Units	AD 15	AD 20	AD 30	AD 40	AD 65	AD 85	AD 105	AD 125	AD 145	AD 185	AD 230	AD 270	AD 355	AD 425
Specifications ↓															
Max Operating Pressure	bar	16	16	16	16	16	14	14	14	14	14	14	14	14	14
Flow	l/s	6	10	14	20	30	39	50	60	68	87	108	128	167	200
	m ³ /hr	22	36	50	72	108	140	180	216	245	313	389	461	601	720
Power	kW	0.13	0.17	0.19	0.27	0.29	0.67	0.71	0.63	0.7	0.9	0.97	1.12	1.54	1.98
Connection	inch/DIN	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Power Supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
Weight	kgs	19	19	20	25	27	44	44	62	60	62	82	82	145	158
Dimensions	L (mm)	493	493	493	493	493	497	497	557	557	557	587	587	1070	1070
	W (mm)	350	350	350	350	350	370	370	460	460	460	580	580	805	805
	H (mm)	450	450	450	450	450	764	764	789	789	789	899	899	962	962

Technical specifications for AD 530-4200 50Hz

Pneumatech Variants →	Units	AD 530	AD 635	AD 750	AD 1000	AD 1250	AD 1600	AD 1800	AD 2200	AD 2500	AD 3000	AD 3500	AD 4200
Specifications ↓													
Max Operating Pressure	bar	14	14	14	14	14	14	14	14	14	14	14	14
Flow	l/s	250	300	400	500	583.3	750	833.3	1040	1166.7	1400	1650	2000
	m ³ /hr	900	1080	1440	1800	2100	2700	3000	3744	4200	5040	5940	7200
Power	kW	2.01	2.77	3.5	3.69	4.55	6.09	6.54	7.1	7.3	8.26	10.2	12.18
Connection	inch/DIN	2 1/2"	2 1/2"	3"	3"	3"	DN 100	DN 100	DN 100	DN 100	DN 150	DN 150	DN 150
Power Supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Weight	kgs	165	164	230	325	338	390	462	508	508	810	815	900
Dimensions	L (mm)	1070	1070	1005	1005	1005	1005	1005	1005	1005	1455	1455	1455
	W (mm)	805	805	1132	1121	1121	1121	1531	1531	1531	1979	1979	1979
	H (mm)	962	962	1399	1596	1596	1826	1826	1826	1826	1826	1826	1833

Correction factors for ambient temperature

Room temperature	°C		25	30	35	40	43	46
	A	AD 15-270	1	0.92	0.84	0.8	0.79	-
		AD 355-4200	1	0.91	0.81	0.72	0.67	0.62

Operating temperature	°C		30	35	40	45	50	55	60
	B	AD 15-270	1.24	1	0.82	0.69	0.58	0.45	-
		AD 355-4200	1	1	0.82	0.69	0.58	0.49	0.42

Operating temperature	bar		5	6	7	8	9	10	11	12	13	14	15	16
	C	AD 15-270	0.9	0.96	1	1.03	1.06	1.08	1.1	1.12	1.13	1.15	1.16	1.17
		AD 355-4200	0.9	0.97	1	1.03	1.05	1.07	1.09	1.11	1.12	1.15	-	-

AC 15 - 200 - Cycling refrigeration dryers

Features & Benefits

- ▶ Premium energy efficiency
 - Energy-saving & flow control: adapt energy consumption to the real load
 - Lowest pressure drop over heat exchanger and air piping
 - Zero-loss drains
 - AC15-100 optionally available in 20 bar version with timer drain
- ▶ Strong performance & reliability
 - Stable pressure dew point as low as 3°C
 - Guaranteed drying performance in wide range of ambient temperatures
- ▶ Optimal control and monitoring
 - Energy-saving control
 - Voltage-free contact for remote alarm
 - Auto-restart after voltage-failure
- ▶ Easy installation and maintenance at low cost
 - Pipe connections on top
 - Long service intervals
 - Easy access to key components

General Specifications

- ▶ AC refrigeration dryers: cycling type
- ▶ Operating pressure: 4-16 barg/58-232 psig (4-14 barg/58-189 psig from AC 125 onwards)
- ▶ Max. inlet temperature: 60°C/140°F
- ▶ Flow rate : 22-1026 m³/hr (13-604 cfm)⁽¹⁾
- ▶ Pressure dew point: 3°C/37°F (ISO 8573-1:2010 class 4)
- ▶ Power supply: 115/230VAC 50/60 Hz
- ▶ Refrigerant: R134a (AC 15-100), R410a (AC 125 - 200)



Options



Integrated high efficiency line filters



Electric panel protection IP 54

¹Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C .

Pneumatech's AC range offers premium refrigeration drying technology at the lowest operational costs. All AC dryers are equipped with our proprietary energy saving algorithm, which adapts the energy consumption to the real load by continuously monitoring the ambient temperature and the pressure dewpoint. In this way, the risk of downstream corrosion is reduced to zero at all times. When there is less cooling needed, the refrigerant compressor stops and power consumption is significantly reduced, with savings up to 50%.

Premium energy efficiency is also guaranteed thanks to low pressure drops over the heat exchangers, zero-loss drains and our winning combination: rotary compressors and R410A refrigerant on AC125-200. This combination is up to 30% more energy efficient, requires 19% less refrigerant gas and is 100% compliant with European regulation EU No 517 / 2014.

Technical specifications for AC 15 - 200 50Hz Aircooled

Pneumatech Variant → Specifications ↓	Units	AC 15	AC 20	AC 30	AC 40	AC 50	AC 65	AC 85	AC 100	AC 125	AC 150	AC 200
Flow ⁽¹⁾ 16 bar	l/s	6	10	15	20	25	30	40	50	60	70	95
	m3/hr	22	36	54	72	90	108	144	180	216	252	342
Flow ⁽¹⁾ 20 bar	l/s	7.3	14.5	21.8	27.6	34.8	43.5	58	72.5	n/a	n/a	n/a
	m3/hr	26	52	78	99	125	157	209	261	n/a	n/a	n/a
Power consumption	kW	0.2	0.2	0.33	0.41	0.41	0.41	0.57	0.5	0.7	0.7	0.89
	hp	0.27	0.27	0.44	0.55	0.55	0.55	0.76	0.67	0.94	0.94	1.19
Pressure drop over dryer 16 bar	barg	0.07	0.11	0.12	0.12	0.17	0.25	0.2	0.2	0.21	0.28	0.25
	psig	1.02	1.60	1.74	1.74	2.47	3.63	2.90	2.90	3.05	4.06	3.63
Pressure drop over dryer 20 bar	barg	0.04	0.09	0.1	0.1	0.14	0.2	0.16	0.16	n/a	n/a	n/a
	psig	0.58	1.31	1.45	1.45	2.03	2.90	2.32	2.32	n/a	n/a	n/a
Refrigerant type		R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R410A	R410A	R410A
Dimensions	L (mm)	496	496	496	496	496	496	716	716	792	792	792
	L (inch)	19.5	19.5	19.5	19.5	19.5	19.5	28.2	28.2	31.2	31.2	31.2
	W (mm)	377	377	377	377	377	377	380	380	500	500	500
	W (inch)	14.8	14.8	14.8	14.8	14.8	14.8	15.0	15.0	19.7	19.7	19.7
	H (mm)	461	461	461	461	461	461	676	676	680	680	680
	H (inch)	18.1	18.1	18.1	18.1	18.1	18.1	26.6	26.6	26.8	26.8	26.8
Inlet and Outlet Connections		ISO7-R3/4"(m)	ISO7-R3/4"(m)	ISO7-R3/4"(m)	ISO7-R3/4"(m)	ISO7-R3/4"(m)	ISO7-R3/4"(m)	ISO7-R1"(m)	ISO7-R1"(m)	ISO7-R1"(m)	ISO7-R1"(m)	ISO7-R1"(m)
Weight	kg	27	27	32	34	34	34	56	57	80.4	80.4	107.4
	lbs	60	60	71	75	75	75	123	126	177	177	237

1. Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C .

K1 Flow correction factors due to compressed air inlet temperature and/or pressure dewpoint (PDP) - 50Hz units										
Temperature	°C	25	30	35	40	45	50	55	60	
	°F	77	86	95	104	113	122	131	140	
PDP	3°C	37°F	1,2	1,1	1	0,85	0,72	0,6	0,49	0,37
	5°C	41°F	1,35	1,23	1,11	0,94	0,8	0,67	0,55	0,42
	7°C	45°F	1,5	1,35	1,22	1,02	0,88	0,75	0,61	0,47
	10°C	50°F	1,72	1,54	1,38	1,15	1	0,86	0,7	0,54
	15°C	59°F	2,11	1,89	1,68	1,43	1,23	1,03	0,83	0,62

K1 Flow correction factors due to compressed air inlet temperature and/or pressure dewpoint (PDP) - 60Hz units										
Temperature	°C	25	30	35	38	45	50	55	60	
	°F	77	86	95	100	113	122	131	140	
PDP	4°C	39°F	1,14	1,09	1,03	1	0,8	0,67	0,53	0,4
	7°C	45°F	1,27	1,22	1,14	1,09	0,88	0,74	0,59	0,44
	10°C	50°F	1,4	1,35	1,24	1,18	0,96	0,8	0,65	0,49
	15°C	59°F	1,63	1,55	1,41	1,32	1,08	0,91	0,74	0,56

K2 Flow correction factors due to compressed air inlet pressure (g)												
Air inlet pressure	barg	4	5	6	7	8	10	12	14	16		
	psig	58	72	87	101	116	145	174	203	232		
		0,74	0,84	0,92	1	1,05	1,15	1,25	1,31	1,35		

Flow correction factor due to ambient temperature - 50Hz units							
Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
		1,00	0,95	0,88	0,81	0,74	0,67

Flow correction factor due to ambient temperature - 60Hz units							
Temperature	°C	25	30	35	38	45	50
	°F	77	86	95	100	113	122
		1,10	1,06	1,02	1,00	0,93	0,88

AC 200 - 630 VSD - Cycling refrigeration dryers

Features & Benefits

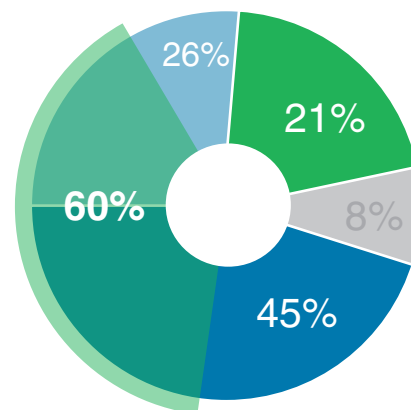
- ▶ Variable frequency drive providing variable frequency drive providing unmatched energy savings
 - Up to 60% in energy savings
 - Patented heat exchangers on air to air side allow very low internal pressure drops 100 - 180 mbar (1.5 - 2.6 PSI) depending on the size resulting in less energy consumption of the compressor at or below 0.18 bar / 2.6 PSI
 - Faster payback as low as 1.5 years as compared to non-cycling or thermal mass dryers
- ▶ Increased uptime, powered by ICONS and new PureLogicT™ for advanced control and monitoring
 - PureLogicT™ controller
 - » Touch based advance controller
 - » Modbus, Profibus or Ethernet/IP, (Consult us)
 - Intelligent connectivity system (ICONS)
 - » Insights from PureLogicT™ controller delivered to your device
 - » On-time maintenance to control costs and ensure a longer machine life.
 - » Recognize potential problems before they affect your uptime

General Specifications

- ▶ Stable and guaranteed performance at all operating conditions - PDP of 3°C – ISO 8573- 1:2010 air purity class 4 guaranteed
- ▶ Reduced power consumptions at all conditions – performance is guaranteed even at ambient conditions as high as 46°C (115°F)
- ▶ 100% of the compressed air nominal flow at all operational temperatures up to the maximum
- ▶ No oversizing necessary for operation at maximum temperature with 100% of the nominal flow
- ▶ Reduced energy consumption of the dryer compared to oversized solution
- ▶ Fully hermetically sealed refrigerant compressor with VSD inverter
- ▶ Patented energy efficient HEAT EXCHANGER
- ▶ PurelogicT™ controller
- ▶ Zero loss drains
- ▶ Single electric connection for easy and smooth installation



Reduced total cost of ownership and faster payback – as low as 1.5 years thanks to reduced power consumption:



- Energy consumption by the dryer
- Energy consumption by the compressor due to pressure drop
- Investment
- Installation and maintenance
- **Savings - 60%** - A unique combination of high-efficiency components, smart unit design and an advanced control system enables you to achieve average energy savings of 60%

The AC VSD from Pneumatech raises the bar in refrigerant dryer performance. Using variable speed drive technology, it significantly reduces energy consumption while consistently supplying top-quality air. And, thanks to a carbon footprint that is smaller than that of its competitors, it even benefits the environment.

AC 200-630 VSD is Pneumatech's premium refrigeration dryer range at smaller flows: from 360 to 1080 Nm³/hr (210 CFM to 635 CFM)

The new AC VSD refrigerant dryer from Pneumatech was engineered to make a difference, delivering energy savings of up to 60%. At the same time, the AC VSD supports production quality and reliability and offers a small carbon footprint.

The use of variable speed drive (VSD) technology ensures that the AC VSD only uses the energy it needs at any point. The result is a much lower electric bill that greatly reduces the total cost of dryer ownership.

At the same time, Pneumatech's new dryer produces a stable supply of Class 4 purity air, which helps protect production reliability and quality. The AC VSD maintains its low dew point even in ambient temperatures of up to 46°C.

In spite of its sophisticated technology, the dryer is easy to operate thanks to its intuitive PureLogic™ controller. Users can even analyze and optimize their dryer's performance from anywhere by taking advantage of the advanced connectivity and remote monitoring option.

But the AC VSD's benefits extend beyond its outstanding performance. Due to its low energy consumption, it features a smaller carbon footprint than its competitors. Combined with an excellent TEWI-score, it helps companies meet their climate goals.

Lastly, the new AC VSD from Pneumatech is more compact than conventional dryers and can fit even in tight spaces.

Technical specifications for AC 200-630 VSD

Specifications ↓	Units	AC200 VSD	AC300 VSD	AC400 VSD	AC450 VSD	AC550 VSD	AC630 VSD
Maximum conditions at full flow ambient (Inlet) temp	°C	46 (60)	46 (60)	46 (60)	46 (60)	46 (60)	46 (60)
Inlet flow for pressure dew point (PDP) of 3°C / 37.4°F	l/s	100	140	180	220	260	300
	cfm	212	297	381	466	551	636
	m ³ /hr	360	500	650	790	940	1080
Pressure drop at full flow	bar	0.16	0.11	0.18	0.14	0.1	0.18
	psi	2.3	1.6	2.6	2	1.5	2.6
Power consumption	kW	0.66	1.04	1.54	1.77	1.9	2.64
	hp	0.90	1.41	2.09	2.41	2.58	3.59
Max. working pressure	bar	14.5	14.5	14.5	14.5	14.5	14.5
	psi	210	210	210	210	210	210
Compressed air connections (NPT for UL version)		G 1 1/2" F	G 2" F	G 2" F	G 2 1/2" F	G 2 1/2" F	G 2 1/2" F
Dimensions	L (mm)	805	805	805	805	805	805
	L (inch)	31.69	31.69	31.69	31.69	31.69	31.69
	H (mm)	962	962	962	962	962	962
	H (inch)	37.87	37.87	37.87	37.87	37.87	37.87
	W (mm)	1040	1040	1040	1040	1040	1040
	W (inch)	41	41	41	41	41	41
Weight	kg	130	134	134	143	150	165
	lbs	287	295	295	315	331	364

Correction factors for ambient temperature

Ambient temperature	°C	25	30	35	40	46
	°F	77	86	95	104	114
Temperature correction factor	Kt (amb)	1	0.91	0.81	0.72	0.62

Correction factors for compressed air inlet pressure

Operating pressure	barg	6	7	8	10	13
	psig	87	100	116	145	188
Pressure correction factor	Kp	0.97	1	1.03	1.07	1.12

Correction factors for compressed air inlet temperature

Inlet temperature	°C	25	30	35	40	46	50	55	60
	°F	77	86	95	104	114	122	131	140
Temperature correction factor	Kt	1.1	1.05	1	0.82	0.69	0.58	0.49	0.42

AC 650 - 2100 Cycling refrigeration dryers (including VSD solutions)

Features & Benefits

- ▶ Premium energy efficiency
 - Energy-saving & flow control: adapt energy consumption to the real load
 - Variable speed range: exact match between energy consumption and actual demand (available for AC 1600-2100)
 - Lowest pressure drop over heat exchanger and air piping
 - Zero-loss drains
- ▶ Strong performance & reliability
 - Stable pressure dew point as low as 3°C
 - Rotary refrigerant compressors: limited mechanical load & low vibrations
 - Guaranteed drying performance in wide range of ambient temperatures
 - Refrigeration cycle optimized in all conditions thanks to automatic expansion valve & electronic hot gas bypass valve
- ▶ Air-cooled as well as water-cooled versions available
- ▶ Optimal control and monitoring thanks to the Purelogic™ controller
 - Communication via industrial protocols like Modbus, Profibus or Ethernet/IP
 - Internet-based visualization
- ▶ Easy maintenance at low cost
 - Pipe connections on top
 - Long service intervals
 - Easy access to key components

General Specifications

- ▶ AC refrigeration dryers: cycling type including VSD option (only for AC 1600-2100)
- ▶ Operating Pressure: 2 - 14 barg/29 - 180 psig
- ▶ Max. temperature: 50°C/122°F
- ▶ Flow rate: 1116-3636 m³/hr (657-2141 cfm)⁽¹⁾
- ▶ Pressure dew point: 3°C/37°F
- ▶ Power supply: 400V/50Hz; 380V/60Hz; 400-460V/60Hz
- ▶ Refrigerant: R410a
- ▶ Cooling type: Air-cooled and water-cooled



Options



IP 54 protection
(only for 650-1050;
standard on AC1250-2100)

K1 Flow correction factors due to compressed air inlet temperature and/or pressure dewpoint (PDP) - 50Hz units

Temperature	°C	25	30	35	40	45	50	55	60
	°F	77	86	95	104	113	122	131	140
PDP	3°C 37°F	1,2	1,1	1	0,85	0,72	0,6	0,49	0,37
	5°C 41°F	1,35	1,23	1,11	0,94	0,8	0,67	0,55	0,42
	7°C 45°F	1,5	1,35	1,22	1,02	0,88	0,75	0,61	0,47
	10°C 50°F	1,72	1,54	1,38	1,15	1	0,86	0,7	0,54
	15°C 59°F	2,11	1,89	1,68	1,43	1,23	1,03	0,83	0,62

¹ Flow is measured at reference conditions: ambient pressure of 1 bara and 25°C at operating pressure of 7 barg, inlet temperature 35°C.

K1 Flow correction factors due to compressed air inlet temperature and/or pressure dewpoint (PDP) - 60Hz units

Temperature	°C	25	30	35	38	45	50	55	60
	°F	77	86	95	100	113	122	131	140
PDP	4°C 39°F	1,14	1,09	1,03	1	0,8	0,67	0,53	0,4
	7°C 45°F	1,27	1,22	1,14	1,09	0,88	0,74	0,59	0,44
	10°C 50°F	1,4	1,35	1,24	1,18	0,96	0,8	0,65	0,49
	15°C 59°F	1,63	1,55	1,41	1,32	1,08	0,91	0,74	0,56

K2 Flow correction factor due to compressed air inlet pressure (g)

Air inlet pressure	barg	2	3	4	5	6	7	8	10	12	14
	psig	29	44	58	72	87	101	116	145	174	203
		0,5	0,63	0,74	0,84	0,92	1	1,05	1,15	1,25	1,31

Flow correction factor due to ambient temperature or cooling water temperature - 50Hz units

Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
		1,00	0,95	0,88	0,81	0,74	0,67

Flow correction factor due to ambient temperature or cooling water temperature - 60Hz units

Temperature	°C	25	30	35	38	45	50
	°F	77	86	95	100	113	122
		1,10	1,06	1,02	1,00	0,93	0,88

AC 650-2100 is Pneumatech's premium refrigeration dryer range at higher flows: from 1120 up to 3636 m³/hr (657-2141 cfm).

As in the small AC range, operating costs are significantly reduced thanks to the energy saving and flow switch algorithms, the zero-loss drains, the low pressure drop over the heat exchangers and the combination of rotary compressors and R410A refrigerant. The refrigeration cycle is further optimized in all working conditions by making use of the automatic expansion valve & electronic hot gas bypass valve.

From AC 650 onwards, dedicated variable speed (VSD) variants have been added to the range. The VSD controller incorporated

in these dryers matches the energy consumption to the actual compressed air demand. This reduces energy used by as much as 70%, compared to conventional dryers. It works by varying the speed of the compressor, hereby ensuring a stable dew point.

The Purelogic™ is installed as standard on all dryers: it ensures maximum reliability by monitoring the most important parameters of the dryer and offers impressive control and monitoring capabilities, like internet-based visualization.

The entire range is available in both air-cooled and water-cooled versions.

Technical specifications AC 650 - 2100 fixed speed

		Air Cooled							Water Cooled						
Pneumatech Variant → Specifications ↓	Units	AC 650	AC850	AC 1050	AC 1250	AC 1600	AC 1800	AC 2100	AC 650	AC 850	AC 1050	AC 1250	AC 1600	AC1800	AC2100
Flow ⁽¹⁾	l/s	310	410	510	610	760	870	1010	310	410	510	610	760	870	1010
	m ³ /hr	1116	1476	1836	2196	2736	3132	3636	1116	1476	1836	2196	2736	3132	3636
Power consumption	kW	2.80	3	4.5	4.8	5.3	6.6	7.4	2.00	2.4	4.1	3.1	3.6	4.5	5.1
	hp	3.75	4.02	6.03	6.44	7.11	8.85	9.92	2.68	3.22	5.50	4.16	4.83	6.03	6.84
Pressure drop over dryer	mbar	230	210	200	170	170	140	170	230	210	200	170	170	140	170
	psi	3.3	3.0	2.9	2.5	2.5	2.0	2.5	3.3	3.0	2.9	2.5	2.5	2.0	2.5
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Dimensions	L (mm)	1263	1263	1525	1040	1245	1245	1580	1263	1263	1263	1245	1580	1245	1245
	L (inch)	49.7	49.7	60.0	40.9	49.0	49.0	62.2	49.7	49.7	49.7	49.0	62.2	49.0	49.0
	W (mm)	850	850	850	1060	1060	1060	1060	850	850	850	1060	1060	1060	1060
	W (inch)	33.5	33.5	33.5	41.7	41.7	41.7	41.7	33.5	33.5	33.5	41.7	41.7	41.7	41.7
	H (mm)	1190	1375	1580	1580	1580	1580	1580	1190	1375	1375	1580	1580	1580	1580
	H (inch)	46.9	54.1	62.2	62.2	62.2	62.2	62.2	46.9	54.1	54.1	62.2	62.2	62.2	62.2
Inlet and Outlet Connections		G3"	G3"	G3"	DN100	DN100	DN150	DN150	G3"	G3"	G3"	DN100	DN150	DN150	DN150
Weight	kg	200	245	310	320	380	400	460	180	245	265	350	360	370	380
	lbs	441	540	683	705	838	882	1014	397	540	584	772	794	816	838

Technical specifications AC 650 - 2100 VSD

		Air Cooled						Water Cooled					
Pneumatech Variant → Specifications ↓	Units	AC 650 VSD	AC 850 VSD	AC 1050 VSD	AC 1600 VSD	AC 1800 VSD	AC 2100 VSD	AC 650 VSD	AC 850 VSD	AC 1050 VSD	AC 1600 VSD	AC 1800 VSD	AC 2100 VSD
Flow ⁽¹⁾	l/s	310	410	510	760	870	1010	310	410	510	760	870	1010
	m ³ /hr	1116	1476	1836	2736	3132	3636	1116	1476	1836	2736	3132	3636
Power consumption	kW	2.28	3.02	3.38	5.3	5.8	6.6	1.48	2.2	2.78	3.3	4.2	5.6
	hp	3.06	4.05	4.53	7.11	7.78	8.85	1.98	2.95	3.73	4.43	5.63	7.51
Pressure drop over dryer	mbar	230	210	200	170	140	170	230	210	200	90	120	170
	psi	3.3	3.0	2.9	2.5	2.0	2.5	3.3	3.0	2.9	1.3	1.7	2.5
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Dimensions	L (mm)	1263	1263	1263	1245	1245	1580	1263	1263	1263	1580	1580	1580
	L (inch)	49.7	49.7	49.7	49.0	49.0	62.2	49.7	49.7	49.7	62.2	62.2	62.2
	W (mm)	850	850	850	1060	1060	1060	850	850	850	1060	1060	1060
	W (inch)	33.5	33.5	33.5	41.7	41.7	41.7	33.5	33.5	33.5	41.7	41.7	41.7
	H (mm)	1190	1375	1375	1580	1580	1580	1190	1375	1375	1580	1580	1580
	H (inch)	46.9	54.1	54.1	62.2	62.2	62.2	46.9	54.1	54.1	62.2	62.2	62.2
Inlet and Outlet Connections		ISO7-R3*	ISO7-R3*	ISO7-R3*	DN100	DN150	DN150	ISO7-R3*	ISO7-R3*	ISO7-R3*	DN150	DN150	DN150
Weight	kg	218	245	265	380	400	460	200	245	265	410	410	410
	lbs	481	540	584	838	882	1014	441	540	584	904	904	904

*3 control modes i.e Economy, lowest dewpoint and maximum saving control offer different power consumptions.

AC 2650 - 8500 - Large cycling refrigeration dryers (including VSD solutions)

Features & Benefits

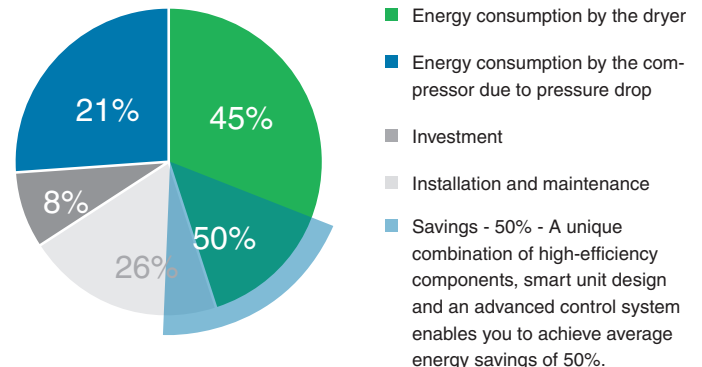
- ▶ Stable and guaranteed Performance at all operating conditions - PDP of 3°C thanks to direct expansion technology
- ▶ Lowest pressure drop
- ▶ Advanced control algorithm with three different control modes for variable speed versions:
 - Regulation of the refrigerant compressor based on actual load
 - Economy: PDP = ambient temperature minus 20°C (68°F)
 - Lowest Dew-point: best possible PDP
 - Max. saving: PDP = ambient temperature minus 15°C (59°F)
 - Much better turndown efficiency is achieved when the unit runs in a partial load condition
- ▶ Zero glide refrigerant – R410a: No-temperature-glide effect resulting in stable guaranteed PDP
- ▶ Comprehensive scope of supply:
 - Energy efficient heat exchanger
 - Fully hermetically sealed refrigerant compressor with phase sequence relay
 - Refrigerant filter/dryer (standard on all AC 2650-8500 fixed speed and VSD dryers)
 - Electronic hot gas bypass valve (EHGPV)
 - Purelogic™ for advanced control and monitoring

General Specifications

- AC refrigeration dryers: cycling type including VSD
- Operating Pressure: 4-14 barg/ 58-189 psig
- Max. Ambient temperature: 46°C/115°F (AC 5100/6400/8500 VSD air cooled - 40°C/115°F)
- Flow rate: 450-14400 m³/hr (2650-8475 cfm)
- Pressure dew point: 3°C/37°F
- Power supply: 400V/50Hz; 380V/60Hz; 400-460V/60Hz
- Refrigerant: R410a
- Cooling type: Air-cooled and water-cooled



Reduced lifecycle costs and faster payback thanks to reduced power consumption



Options



Customized solutions
(contact your Pneumatech
representative for further
information)



Wooden box packaging

AC 2650-8500 FS/VSD is Pneumatech's premium refrigeration dryer range at higher flows: from 4500 up to 14400 m³/hr (2650-8475 cfm). AC 2650-8500 (VSD) refrigerant dryers are engineered in house and tested using the most stringent methods (at ambient temperatures up to 46°C/115°F). They exceed the international standards for compressed air purity and are tested according to ISO 7183:2007.

New AC Range is the most efficient dryer for continuous and varying air demand applications. A combination of new innovative technologies integrated in the new AC 2650-8500 (VSD) dryers'

design makes them a perfect match for customers looking for reliable equipment with a low cost of ownership. The unique combination of high efficiency components, a smart unit design and an advanced unit control system gives an opportunity to save on average 50% of the consumed energy.

Significantly reduced power consumption and low quantities of refrigerant make sure the AC 2650-8500 (VSD) dryers operate at the lowest possible carbon footprint

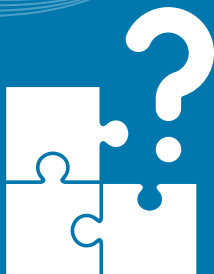
Technical specifications AC 2650 - 4200 fixed speed									
Air Cooled						Water Cooled			
Pneumatech Variants → Specifications ↓	Units	AC 2650	AC 3200	AC 3700	AC 4200	AC 2650	AC 3200	AC 3700	AC 4200
Flow ⁽¹⁾	l/s	1250	1500	1750	2000	1250	1500	1750	2000
	m ³ /hr	4500	5400	6300	7200	4500	5400	6300	7200
Power consumption	kW	6.80	8.9	10.5	12.2	5.3	5.8	6.4	8.70
	hp	9.12	11.94	14.08	16.36	7.11	7.78	8.58	11.67
Pressure drop over dryer	mBar	180	180	150	190	180	160	150	190
	psi	2.6	2.6	2.2	2.8	2.6	2.3	2.2	2.8
Refrigerant type	kg	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Dimensions	L (mm)	1474	1474	1474	1474	1474	1474	1474	1474
	L (inch)	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0
	W (mm)	1579	1579	1579	1579	1579	1579	1579	1579
	W (inch)	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2
	H (mm)	2295	2295	2295	2295	1725	1725	1725	1725
	H (inch)	90.4	90.4	90.4	90.4	67.9	67.9	67.9	67.9
Inlet and Outlet Connections		DN150	DN150	DN150	DN150	DN150	DN150	DN150	DN150
Weight	kg	835	865	910	950	775	800	845	850
	lbs	1841	1907	2006	2094	1709	1764	1863	1874

Technical specifications AC 2650 - 8500 VSD															
Air Cooled									Water Cooled						
Pneumatech Variants → Specifications ↓	Units	AC 2650 VSD	AC 3200 VSD	AC 3700 VSD	AC 4200 VSD	AC 5100 VSD	AC 6400 VSD	AC 8500 VSD	AC 2650 VSD	AC 3200 VSD	AC 3700 VSD	AC 4200 VSD	AC 5100 VSD	AC 6400 VSD	AC 8500 VSD
Flow ⁽¹⁾	l/s	1250	1500	1750	2000	2400	3000	4000	1250	1500	1750	2000	2400	3000	4000
	m ³ /hr	4500	5400	6300	7200	8640	10800	14400	4500	5400	6300	7200	8640	10800	14400
Power consumption	kW	5.50	7.4	8.4	8.8	6.4	12.8	18.7	4.4	5.1	6.1	6.7	5.5	10.6	14.5
	hp	7.38	9.92	11.26	11.80	8.58	17.17	25.08	5.90	6.84	8.18	8.98	7.38	14.21	19.44
Pressure drop over dryer	mBar	180	180	150	190	270	190	190	180	180	150	190	270	190	190
	psi	2.6	2.6	2.2	2.8	3.9	2.8	2.8	2.6	2.6	2.2	2.8	3.9	2.8	2.8
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Dimensions	L (mm)	1474	1474	1474	1474	1474	2502	2502	1474	1474	1474	1474	1474	2502	2502
	L (inch)	58.0	58.0	58.0	58.0	58.0	98.5	98.5	58.0	58.0	58.0	58.0	58.0	98.5	98.5
	W (mm)	1579	1579	1579	1579	1579	1579	1579	1579	1579	1579	1579	1579	1579	1579
	W (inch)	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2	62.2
	H (mm)	2295	2295	2295	2295	2295	2295	2295	2295	1725	1725	1725	1725	1725	1736
	H (inch)	90.4	90.4	90.4	90.4	90.4	90.4	90.4	67.9	67.9	67.9	67.9	67.9	67.9	68.3
Inlet and Outlet Connections		DN150	DN150	DN150	DN150	DN150	DN200	DN200	DN150	DN150	DN150	DN150	DN150	DN200	DN200
Weight	kg	850	880	920	965	990	1690	1820	800	815	855	865	870	1410	1540
	lbs	1874	1940	2028	2127	2183	3726	4012	1764	1797	1885	1907	1918	3109	3395

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 3°C at the outlet.

For accurate sizing for your operating conditions consult Pneumatech

Anti-corrosion treatment (available for all refrigerant dryers)



Problem

Refrigerant dryers can be subjected to severe corrosion when placed in environments rich of e.g ammonia and sulfurs, or close to the seaside. In these cases incompatible metals like copper will be affected since the condenser-fan is blowing a high volume of polluted air through the dryer. Corrosion and pollution of condensers will directly impact the dryer performance. Corrosion can even lead to leaks in the condenser and refrigeration piping.



Solution

Pneumatech offers a long-lasting corrosion protection to the condenser and the refrigerant piping without affecting heat transfer and pressure drop. The heat conductive pigmentation in the coating is oriented in such a way that it creates a very high chemical resistance at a low layer thickness. Therefore it is considered the best available option to prevent refrigeration dryer failure and unnecessary energy consumption.

Technical specifications	
Coating type	Aluminum pigmented polyurethane
Color	Champagne
Pretreatment	Degreasing
Temperature Range (dry)	-20 to 150°C (-4° to 302°F)
Substrates	Aluminum and Copper
ASTM B117	4000+ hours(neutral-salt spray test)
Kesternich (2.0 ltr SO ₂)	80 cycles
Layer Thickness	25-30 µm (1 mil)
UV Resistance	Excellent
Adhesion (cross hatch)	0 (European) 5b (USA)
Chemical Resistance	Excellent

Coating resistance of some typical corrosive gas vapors (based on exposure temperature of 20°C/68°F) – maximum concentrations			
Chlorine	64 ppm	Ethanol	320 ppm
Ammonia	160 ppm	Sulphuric acid	320 ppm
Phosphoric acid	320 ppm	Seawater	640 ppm



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. Heated 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 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°C/-94°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)

Specifications	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	PH 2 C HE	PH 2 C HE	PH 2 C HE
Mass	kg	7	9	11	19	22	25	29	35	44
	lbs	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	°C	20	25	30	35	40	45	50
	°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	°C	-40	-70
	°F	-40	-94
Dew point correction factor	Kdp	1	0.7

PH 45 - 690 HE with structured desiccant - Heatless adsorption dryers

Features & Benefits

- ▶ Structured desiccant offers highly efficient air flow and regeneration
- ▶ Stable low pressure dew point
- ▶ 40% longer desiccant lifetime
- ▶ Easy desiccant maintenance
- ▶ No desiccant dust that can cause dryer failures and compromise production
- ▶ Pneumatic valves add robustness in demanding environments
- ▶ Vertical or horizontal installation
- ▶ Purge nozzle optimization
- ▶ PDP control (optional for DC1 controller)
- ▶ Wall-mounting kit (optional for Simplex models)

General Specifications

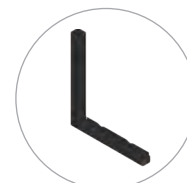
- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: -20°C/-5°F, -40°C/-40°F
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: 2-45°C/36-113°F
- ▶ Inlet temperature range : 2-60°C/ 36-140°F
- ▶ Power supply: 230VAC 50/60Hz & 115VAC 50/60Hz



Options



PDP control



Wall mounting kit

The Pneumatech PH HE adsorption dryer has always earned its High-Efficiency label. Its new models with structured desiccant take these energy savings to a new level. In fact, thanks to their groundbreaking solid desiccant, the newest additions to the PH HE range offer the lowest total cost of ownership on the market. They also set new standards in reliability, low maintenance requirements and versatility for truly superior dryer performance.

- Evenly distributed air flow extends desiccant lifetime
- 40% longer lifetime
- No desiccant dust to filter out
- Fast and easy maintenance

Pneumatic valves: enhance reliability in tough conditions

PureLogic™ Touch controller:

- Easy to use
- Optimizes performance and efficiency of the dryer
- Connectivity to DCS, SCADA and PLC systems available

A new type of heatless adsorption dryer

Solid desiccant:

- Much more efficient air flow reduces energy costs

Technical specifications for PH 45 HE up to PH 690 HE (Version PDP -40°)

Specifications	Unit	PH 45 HE	PH 65 HE	PH 90 HE	PH 110 HE	PH 135 HE	PH 180 HE	PH 220 HE	PH 265 HE	PH 355 HE	PH 400 HE	PH 535 HE	PH 690 HE
Nominal volume flow at dryer inlet	l/s	20	30	40	55	65	85	105	125	170	190	250	335
	m3/h	72	108	144	198	234	306	378	450	612	684	900	1206
Connections Inlet / Outlet	G	1/2"	1/2"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	NPT	1/2"	1/2"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Pressure drop at max. flow	barg	0.08	0.08	0.08	0.11	0.16	0.245	0.12	0.12	0.215	0.155	0.24	0.3
	psig	1.16	1.16	1.16	1.6	2.32	3.55	1.74	1.74	3.12	2.25	3.48	4.35
Height	mm	1205	1205	1205	1495	1495	1835	1495	1495	1835	1495	1835	1835
	inch	47.44	47.44	47.44	58.86	58.86	72.24	58.86	58.86	72.24	58.86	72.24	72.24
Width	mm	864	864	904	904	904	934	934	964	964	964	1042	1042
	inch	34.02	34.02	35.59	35.59	35.59	36.77	36.77	37.95	37.95	37.95	41.02	41.02
Length	mm	394	394	394	394	394	394	564	564	564	734	734	929
	inch	15.51	15.51	15.51	15.51	15.51	15.51	22.2	22.2	22.2	28.9	28.9	36.57
Mass	KG	95	100	110	128	140	165	215	234	276	331	389	500
	Lb	209	220	242	282	309	363	473	515	607	728	856	1100
Included pre filter size	Fine filter	PMH 85 G	PMH 119 G	PMH 178 G	PMH 178 G	PMH 297 G	PMH 297 G	PMH 545 G	PMH 545 G	PMH 545 G	PMH 545 G	PMH 1189 G	PMH 1189 G
	Super fine filter	PMH 85 C	PMH 119 C	PMH 178 C	PMH 178 C	PMH 297 C	PMH 297 C	PMH 545 C	PMH 545 C	PMH 545 C	PMH 545 C	PMH 1189 C	PMH 1189 C

Technical specifications for PH 50 HE up to PH 625 HE (version PDP -20°C)

Specifications	Unit	PH 50 HE	PH 75 HE	PH 100 HE	PH 140 HE	PH 165 HE	PH 215 HE	PH 265 HE	PH 320 HE	PH 415 HE	PH 475 HE	PH 625 HE
Nominal volume flow at dryer inlet	l/s	25	35	50	65	80	105	125	150	195	225	300
	m3/h	90	126	180	234	288	378	450	540	702	810	1080
Connections Inlet / Outlet	G	1/2"	1/2"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	NPT	1/2"	1/2"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Pressure drop at max. flow	barg	0.08	0.08	0.125	0.17	0.245	0.33	0.12	0.18	0.28	0.2	0.33
	psig	1.16	1.16	1.81	2.46	3.55	4.78	1.74	2.61	4.06	2.9	4.78
Height	mm	1205	1205	1205	1495	1495	1835	1495	1495	1835	1495	1835
	inch	47.44	47.44	47.44	58.86	58.86	72.24	58.86	58.86	72.24	58.86	72.24
Width	mm	864	904	904	904	934	934	964	964	964	1042	1042
	inch	34.02	35.59	35.59	35.59	36.77	36.77	37.95	37.95	37.95	41.02	41.02
Length	mm	394	394	394	394	394	394	564	564	564	734	734
	inch	15.51	15.51	15.51	15.51	15.51	15.51	22.20	22.20	22.20	28.90	28.90
Mass	KG	95	100	110	128	141	165	218	234	277	331	394
	Lb	209	220	242	282	310	363	480	515	609	728	867
Included pre filter size	Fine filter	PMH 85 G	PMH 119 G	PMH 178 G	PMH 297 G	PMH 297 G	PMH 545 G	PMH 545 G	PMH 545 G	PMH 545 G	PMH 1189 G	PMH 1189 G
	Super fine filter	PMH 85 C	PMH 119 C	PMH 178 C	PMH 297 C	PMH 297 C	PMH 545 C	PMH 545 C	PMH 545 C	PMH 545 C	PMH 1189 C	PMH 1189 C

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 or -20°C at the outlet
For applications that require -70° PDP, please refer to the previous PH HE range

PH 55 - 550 HE - Extruded profile heatless adsorption dryers

Features & Benefits

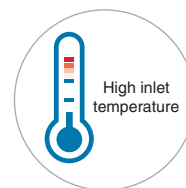
- ▶ Advanced energy management for lowest operating costs
 - Compressor synchronization
 - Purge nozzle optimization
 - PDP control (optional)
- ▶ Best-in-class performance thanks to unique valve and exhaust design (patent pending)
 - Lowest pressure drop during drying
 - Lowest purge loss by ensuring maximum purge air expansion during regeneration
- ▶ Low noise levels during purge and blow-off
- ▶ High-quality, high-efficient desiccant, selected for the right application
 - PDP -70°C/-94°F: molecular sieves
- ▶ Spring-loaded desiccant, minimizing the risk of crushing
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ Designed for transportability & mountability
 - Wall-mounting kit for PH 55-190 HE (optional)
- ▶ Optimal control and monitoring thanks to the Purelogic™ controller (optional)
- ▶ Desiccant bags for easy service from the top

General Specifications

- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: -70°C/-94°F
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: 1-45°C/34-113°F
- ▶ Inlet temperature range: 1-50°C/34-122°F (For temperatures up to 60°C/140°F: see HIT option)
- ▶ Power supply: 230VAC 50/60Hz & 115VAC 50/60Hz



Options



High inlet temperature



Wall mounting kit



PDP control



Purelogic controller



IP65 protection

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 55-550 HE adsorption dryers are available in one PDP variant: -70°C/-94°F, optimized to provide the lowest purge loss. The unique manifold (patent pending) includes pilot air controlled 3/2-way valves, which switch fast and reliably. The pressure drop over the valves is reduced to a minimum. This does not only result in a low pressure drop over the dryer, but also ensures maximum purge air expansion during regeneration. The latter makes that the purge consumption of the dryers has been reduced significantly.

The desiccant is spring-loaded and housed in a robust extruded aluminum body, which can operate up to 14 barg/203 psig (fatigue load). The dryers are equipped with a mounted pre-filter and after-filter as standard and can also be wall-mounted with a specially designed wall-mounting kit (optional).

Operating costs are optimized at all times thanks to the availability of compressor synchronization and purge nozzle optimization as standard and PDP control as option. The full machine status can be checked on the display of the controller and the vessel pressure gauges on the unit.

The controller indicates whether power supply is connected, towers are pressurized, valves are functioning properly or preventive maintenance needs to be done. In case the optional PDP control is connected, the PDP value can be monitored from the display. Alarms and warnings can also be triggered remote with the available voltage-free contacts.

Optionally the Purelogic™ can be used as central brain of the adsorption dryer.

The Purelogic™ offers impressive control and monitoring capabilities, and can communicate with industrial protocols such as Modbus, Profibus or Ethernet/IP.

Technical specifications for PH 55 HE up to PH 420 HE (version PDP -70°C)

Specification	Unit	PH 55 HE	PH 75 HE	PH 95 HE	PH 120 HE	PH 140 HE	PH 190 HE	PH 230 HE	PH 275 HE	PH 350 HE	PH 420 HE
Nominal volume flow at dryer inlet ⁽¹⁾	l/s	25	35	45	55	65	90	110	130	165	195
	m³/hr	90	126	162	198	234	324	396	468	594	702
Regeneration air consumption average at max. flow	%	24	24	24	24	24	24	24	25	25	26
Connection inlet/outlet	G	1/2"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	NPT	1/2"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Pressure drop at max. flow	barg	0.035	0.073	0.133	0.043	0.063	0.133	0.08	0.123	0.112	0.156
	psig	0.51	1.06	1.93	0.62	0.91	1.93	1.16	1.78	1.62	2.26
Included pre & after filter size	Super fine filter	TF 3 C HE	TF 4 C HE	TF 5 C HE	TF 5 C HE	TF 6 C HE	TF 6 C HE	TF 6 C HE	TF 7 C HE	TF 8 C HE	TF 8 C HE
	Dust filter	TF 3 S HE	TF 4 S HE	TF 5 S HE	TF 5 S HE	TF 6 S HE	TF 6 S HE	TF 6 S HE	TF 7 S HE	TF 8 S HE	TF 8 S HE
Height	mm	1205	1205	1495	1495	1835	1495	1495	1835	1495	1835
	inch	47.4	47.4	58.9	58.9	72.2	58.9	58.9	72.2	58.9	72.2
Width	mm	807	827	847	847	877	907	906	907	907	907
	inch	31.8	32.6	33.3	33.3	34.5	35.7	35.7	35.7	35.7	35.7
Length	mm	394	394	394	394	394	564	564	564	734	734
	inch	15.5	15.5	15.5	15.5	15.5	22.2	22.2	22.2	28.9	28.9
Mass	kg	100	109	128	140	165	217	234	276	331	389
	lb	220.5	240.3	282.2	308.6	363.8	478.4	515.9	608.5	729.7	857.6

*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 -70°C at the outlet

Flow correction factors due to air inlet pressure

Operating pressure	barg	4	5	6	7	8	9	10	11	12	13	14
	psig	58	72	87	100	116	130	145	160	174	189	203
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

Flow correction factors due to air inlet temperature

Temperature	°C	20	25	30	35	40	45	50
	°F	68	77	86	95	104	113	122
Temperature correction factor	Kt	1	1	1	1	0.84	0.67	0.55

PH 760 - 3390 HE - Welded vessel heatless adsorption dryers

Features & Benefits

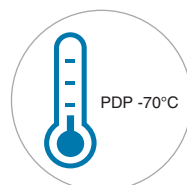
- ▶ Available in three standard variants
 - With Standard DC1 Controller (PDP Control optional)
 - With Purelogic™ (PDP control std available)
 - With Pneumatic Controller (no need of electricity for the installation and no PDP control possible)
- ▶ Lowest possible pressure drop thanks to innovative open silencer design
- ▶ Improved performance with reduced purge rate to 16% across the complete range
- ▶ Advanced energy management for lowest operating costs
 - PDP control - (std with Purelogic™ and optional with DC1 Controller)
 - 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 and high inlet temp. (option): molecular sieves
- ▶ Minimal risk of crushed desiccant thanks to the large vessel diameter and the sonic nozzle (std available)
- ▶ 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

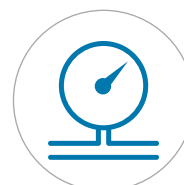
- ▶ Heatless adsorption dryers: welded vessel design
- ▶ Dew points achievable: -40°C/-40°F & -70°C/-94°F
- ▶ Pressure range: 4-9 barg/58-130 psig (14 barg/203 psig variant available as separate variant)
- ▶ Ambient temperature range: 1-50°C/34-122°F
- ▶ Inlet temperature range: 1-55°C/34-131°F
- ▶ Power supply: 230VAC 50 Hz; 115VAC 60 Hz 3 ph



Variants



PDP -70°C



14.5 Bar(g)



DC1 controller



Purelogic™



Pneumatic controlled

Options



Purge nozzle optimization



PDP Control for DC1 controller variants (std with Purelogic™ Controller)



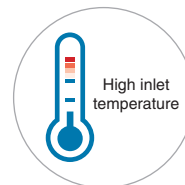
In and outlet filters



Vessel Safety valves



Wooden Packaging



High inlet temperature

High inlet temperature

Pneumatech presents the newly designed and significantly improved heatless adsorption dryer range – PH 760-3390 HE. 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 760-3390 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 5760 m³/hr/3390 cfm. The desiccant is housed in welded vessels, which are coated and can operate up to 9 barg/130 psig (fatigue load) with std variant and up to 14,5 barg/203 psi with high pressure variant (fatigue load). All dryers can be equipped with 2 coalescing pre-filters before and 1 particulate filter after the dryer (optional).

Thanks to ingeniously designed mechanical components i.e open type of silencers and large vessels, PH 760-3390 HE range offers highest performance with lowest pressure drop and improved purge loss of 16%.

Considering different needs of the customers, the PH 760-3390 HE range offers 3 different controller for different requirements. DC 1 Controller version has a basic controller with required controls and monitoring such as Service Alarm, General alarm relay, synchronization control and optional dew point control whereas Purelogic™ controller version will have 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. For special applications where Pneumatic control is preferred and no electricity is possible, PH 760-3390 HE also operates with Pneumatically enabled controller.

Technical specifications for PH 760 HE up to PH 3390 HE (standard version, -40 PDP °C)

Specification	Unit	PH760 HE	PH1020 HE	PH1330 HE	PH2060 HE	PH2670 HE	PH3390 HE
Max volume Flow at Dryer Inlet ⁽¹⁾	l/s	360	480	630	970	1260	1600
	m³/hr	1296	1728	2268	3492	4536	5760
Regeneration Air Consumption average at max. flow	%	16	16	16	16	16	16
Pressure Drop over Dryer excluding Filters	bar	0.15	0.15	0.15	0.15	0.15	0.18
	psi	2.18	2.18	2.18	2.18	2.18	2.61
Inlet and outlet connections	DIN PN16	DN80	DN80	DN80	DN100	DN100	DN150
Optional Pre & After Filter Sizes ⁽²⁾	General purpose coalescing filter	PMH G 1529	PMH G 1529	G 1F	G 2F	G 3F	G 4F
	High efficiency coalescing filter	PMH C 1529	PMH C 1529	C 1F	C 2F	C 3F	C 4F
	Particulate filter	PMH S 1529	PMH S 1529	S 1F	S 2F	S 3F	S 4F
Length	mm	1776	1776	1884	2359	2472	2788
	inch	69.9	69.9	74.1	92.8	97.3	109.7
Width	mm	822	822	822	1000	1026	1417
	inch	32.3	32.3	32.3	39.3	40.3	55.7
Height	mm	2549	2549	2604	2671	2653	2576.5
	inch	100.3	100.3	102.5	105.1	104.4	101.4
Length	inch	69.9	69.9	74.2	92.9	97.3	109.8
Width	inch	32.4	32.4	32.4	39.4	40.4	55.8
Height	inch	100.4	100.4	102.5	105.2	104.4	101.4
Mass	kg	1220	1300	1620	2651	3100	4600
	lbs	2690	2866	3571	5844	6834	10141

*1. Flow is measured at Reference Conditions: 1 Bar(a) and 25°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.

For accurate sizing for your operating conditions consult Pneumatech

The cost-efficient alternative to PH HE adsorption dryers

Features & Benefits

- ▶ Advanced energy management for lowest operating costs
 - Compressor synchronization
 - Purge nozzle optimization (2 nozzles)
 - PDP control (optional)
- ▶ High reliability and low maintenance costs thanks to unique valve design (patent pending)
- ▶ High-quality desiccant, resulting in a consistent PDP of $-20^{\circ}\text{C}/-3^{\circ}\text{F}$ or $-40^{\circ}\text{C}/-40^{\circ}\text{F}$
- ▶ Spring-loaded desiccant, minimizing the risk of crushing
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ Designed for transportability & mountability
 - Wall-mounting kit for PH 55-140 S (optional)
- ▶ Advanced controller to monitor machine status at all times
- ▶ Desiccant bags for easy service from the top

General Specifications

- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: $-20^{\circ}\text{C}/-3^{\circ}\text{F}$ & $-40^{\circ}\text{C}/-40^{\circ}\text{F}$
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: $1-45^{\circ}\text{C}/34-113^{\circ}\text{F}$
- ▶ Inlet temperature range: $1-50^{\circ}\text{C}/34-122^{\circ}\text{F}$
- ▶ Power supply: 230VAC 50/60Hz & 115VAC 50/60Hz



Options



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 55-550 S adsorption dryers are available in 2 PDP variants: -20°C/-4°F and -40°C/-40°F. The unique manifold (patent pending) includes pilot air controlled 3/2-way valves, which switch fast and reliably.

The desiccant is spring-loaded and housed in a robust extruded aluminum body, which can operate up to 14 barg/203 psig (fatigue load). Pre- and afterfilters are delivered as standard with every dryer.

Operating costs are optimized at all times thanks to the availability of compressor synchronization and purge nozzle optimization as standard and PDP control as option. The full machine status can be checked on the display of the controller and the vessel pressure gauges on the unit. The controller indicates whether power supply is connected, towers are pressurized, valves are functioning properly or preventive maintenance needs to be done. In case the optional PDP control is connected, the PDP value can be monitored from the display. Alarms and warnings can also be triggered remote with the available voltage-free contacts.

Technical specifications for PH 55 S up to PH 550 S (standard version, PDP -40 °C)

Specification	Unit	PH 55 S	PH 75 S	PH 95 S	PH 120 S	PH 140 S	PH 190 S	PH 230 S	PH 275 S	PH 350 S	PH 420 S	PH 550 S
Nominal volume flow at dryer inlet	l/s	25	35	45	55	65	90	110	130	165	195	260
	m³/hr	90	126	162	198	234	324	396	468	594	702	936
Regeneration air consumption average at max. flow ^{(1) (2)}	%	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
Pressure drop at max. flow	barg	0.03	0.059	0.107	0.171	0.251	0.107	0.171	0.251	0.447	0.251	0.494
	psig	0.44	0.86	1.55	2.48	3.64	1.55	2.48	3.64	6.48	3.64	7.16
Connection inlet/outlet	G	1"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	NPT	1"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Integrated filter model	Super fine filter	TF 2 C S	TF 3 C S	TF 4 C S	TF 5 C S	TF 5 C S	TF 6 C S	TF 6 C S	TF 6 C S	TF 7 C S	TF 8 C S	TF 8 C S
	Dust filter	TF 2 S S	TF 3 S S	TF 4 S S	TF 5 S S	TF 5 S S	TF 6 S S	TF 6 S S	TF 6 S S	TF 7 S S	TF 8 S S	TF 8 S S
Height	mm	1070	1115	1285	1465	1615	1285	1465	1615	1695	1615	1915
	inch	42.1	43.9	50.6	57.7	63.6	50.6	57.7	63.6	66.7	63.6	75.4
Width	mm	620	620	620	620	620	620	620	620	620	620	620
	inch	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
Length	mm	401	401	401	401	401	571	571	571	571	738	738
	inch	15.8	15.8	15.8	15.8	15.8	22.5	22.5	22.5	22.5	29.1	29.1
Mass	kg	87	88	99	114	124	165	197	211	245	298	328
	lbs	191.8	194.0	218.3	251.3	273.4	363.8	434.3	465.2	540.1	657.0	723.1

*1. Flow is measured at reference conditions: 1 bara and 25°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
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

Flow correction factors due to air inlet temperature Kt

Temperature	°C	20	25	30	35	40	45	50
Temperature correction factor	Kt	1	1	1	1	0.84	0.67	0.55

PE 760 - 3390 S - Heated purge adsorption dryers

Features & Benefits

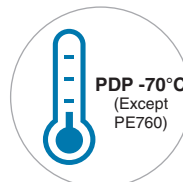
- ▶ Advanced energy management for lowest operating costs
 - Compressor synchronization
 - PDP control (optional)
 - Regeneration & cooling temperature control
- ▶ High-quality, high-efficient desiccant, selected for the right application
 - PDP -40°C/-40°F (std): Activated Alumina⁽¹⁾
 - PDP -70°C/-94°F (option): Molecular sieves and Activated alumina
- ▶ Minimal risk of crushed desiccant thanks to the sonic nozzle and the large vessel diameter
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ High reliability and robust design
- ▶ Low noise levels while purging
- ▶ Designed for transportability
- ▶ High efficient heaters, designed for maximum lifetime and minimal risk
- ▶ Optimal control and monitoring thanks to the Purelogic™ controller

General Specifications

- ▶ Heated purge adsorption dryers: welded vessel design
- ▶ Dew points achievable: -40°C/-40°F & -70°C/-94°F
- ▶ Pressure range: 4-10 barg/58-145 psig
- ▶ Ambient temperature range: 1-40°C/34-104°F
- ▶ Inlet temperature range: 1-45°C/34-113°F
- ▶ Power supply: 400VAC 50Hz; 440-460VAC 60Hz



Options



PDP -70°C
(Except PE760)



In and outlet filters



Wooden packaging
(Std on PE760)



PDP control



Vessel insulation
(required for
PDP-70°C option)



Vessel safety
valves
(Std on PE760)

¹For PE760S (-40°C PDP) Desiccant used is silica gel WR & NWR.

With distinctive, patented technology, PE adsorption dryers provide you with a dry air solution; at a lower initial investment cost than PB blower purge dryers and a lower lifecycle cost than PH heatless dryers. PE dryers use heated purge air to remove moisture from the desiccant material.

PE 760S-3390S adsorption dryers are capable of drying air to a PDP of -40°C/-40°F as standard and -70°C/-94°F as option. The desiccant is housed in welded vessels, which are coated and can

operate up to 10 barg/145 psig (fatigue load). Mounted pre- and after- filters can be ordered as an option.

The Purelogic™ is the central brain of the adsorption dryer. It optimizes operating costs thanks to the availability of regeneration temperature control, PDP control (optional) and compressor synchronization; ensures maximum reliability by monitoring the most important parameters of the dryer; and offers impressive control and monitoring capabilities.

Technical specifications for PE 760S up to PE 3390S (standard version, PDP -40 °C)

Specification	Unit	PE 760 S	PE 1020 S	PE 1330 S	PE 2060 S	PE 2670 S	PE 3390 S
Nominal volume flow at dryer inlet ^{(1) (2)}	l/s	360	480	630	970	1260	1600
	m ³ /hr	1296	1728	2268	3492	4536	5760
Average purge air consumption	%	10	10	10	10	10	10
Pressure drop at max. flow	barg	0.27	0.17	0.17	0.17	0.17	0.11
	psig	3.92	2.47	2.47	2.47	2.47	1.60
Inlet and outlet connections	PN16	DN 50	DN 80	DN 80	DN 100	DN 100	DN 150
Optional pre & after filter sizes ⁽³⁾	Fine filter	PMH G 1189	PMH G 1529	PMH G 2125	FF 2 G HE	FF 3 G HE	FF 4 G HE
	Super fine filter	PMH C 1189	PMH C 1529	PMH C 2125	FF 2 C HE	FF 3 C HE	FF 4 C HE
	Dust filter	PMH S 1189	PMH S 1529	PMH S 2125	FF 2 S HE	FF 3 S HE	FF 4 S HE
Mass	kg	820	1130	1410	2280	2750	3560
	lbs	1808	2491	3109	5027	6063	7848
Height	mm	1829	2558	2612	2702	2684	2603
	inch	72	101	103	106	106	102
Width	mm	1075	930	930	1085	1085	1342
	inch	42	37	37	43	43	53
Length	mm	1100	1764	1884	2359	2472	2708
	inch	43	69	74	93	97	107

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.

2. Dryer designed for mentioned volume flow, based on average duty of 80%.

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

Correction factor Kp x Kt for -40°C PDP

T inlet	Working pressure barg (psig)													
°C (°F)	4.5 (65)	5 (73)	6 (87)	7 (102)	8 (116)	9 (131)	10 (145)							
<=20 (68)	"1,00"													
25 (77)								0.89						
30 (86)								0.74	0.87					
35 (95)								0.59	0.7	0.88				
40 (104)								0.42	0.5	0.62	0.71	0.8	0.89	0.98
45 (113)								0.29	0.34	0.43	0.49	0.55	0.61	0.67

Notes for PDP-40 variants

1) Correction factors are for 100% saturated compressed air

Correction factor Kp x Kt for -70°C PDP

T inlet	Working pressure barg (psig)													
°C (°F)	4.5 (65)	5 (73)	6 (87)	7 (102)	8 (116)	9 (113)	10 (145)							
<=20 (68)	"1,00"													
25 (77)								0.89						
30 (86)								0.74	0.87					
35 (95)								0.59	0.70	0.88				
40 (104)								0.45	0.53	0.67	0.76	0.86	0.95	
45 (113)								0.34	0.40	0.51	0.58	0.65	0.73	0.80

Notes for PDP-70 variants

1) Correction factors are for 80% saturated compressed air

PB 210 - 635 HE (P/ZP) - Blower purge/zero purge adsorption dryers

Features & Benefits

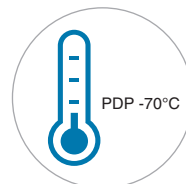
- ▶ Advanced energy management for lowest operating costs
 - Compressor synchronization
 - PDP control
 - Regeneration & cooling temperature control
 - Purge nozzle optimization (optional)
- ▶ Zero-purge variants for lowest life-cycle costs
 - Purge back-up mode for ambient conditions outside of limitations
- ▶ High-quality, high-efficient desiccant, selected for the right application
 - PDP -40°C/-40°F (std): silica gel WR & NWR
 - PDP -70°C/-94°F (optional): molecular sieves
- ▶ Minimal risk of crushed desiccant thanks to the sonic nozzle and the large vessel diameter
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ High reliability and robust design
- ▶ Low noise levels while purging
- ▶ Designed for transportability
- ▶ High efficient heaters, designed for maximum lifetime and minimal risk
- ▶ Compact, efficient and reliable side-channel centrifugal blower
- ▶ Optimal control and monitoring thanks to the Purelogic™ controller

General Specifications

- ▶ Blower purge & zero purge adsorption dryers: welded vessel design
- ▶ Dew points achievable:
-40°C/-40°F & -70°C/-94°F
(-70°C/-94°F only with Purge Cooled option)
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: 1-45°C/34-113°F
- ▶ Inlet temperature range: 1-50°C/34-122°F
- ▶ Power supply: 400VAC 50Hz;
440-460VAC 60Hz



Options



-70°C PDP variant available
(only available on blower purge variants)



Reverse in and outlet pipe



NEMA 4 electrical enclosure



Insulated vessels



Inlet blower filters



Purge nozzle optimization

PB dryers are for customers who focus on energy efficiency and low lifecycle costs, while maintaining the highest standards in air purity. PB dryers use heated blower purge air to remove moisture from the desiccant material and have therefore no purge loss during regeneration. The Zero Purge variants reduce life cycle cost even further by also eliminating purge loss during cooling.

PB 210-635 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 purge units. The desiccant is housed in welded vessels, which are coated and can operate up to 14.5 barg/210 psig (fatigue load). All dryers are standard equipped with 2 coalescing pre-filters before and 1 particulate filter after the dryer.

Operating costs are reduced to the absolute minimum thanks to PDP control, regeneration & cooling temperature control and compressor synchronization; which are all integrated in the Purelogic™ controller. Zero Purge variants are equipped with a purge back-up mode which switches the dryer to purge cooling mode in case PDP could not be met at ambient conditions outside of limitations. The Purelogic™ also ensures maximum reliability by monitoring the most important parameters of the dryer and offers impressive control and monitoring capabilities.

Technical specifications for PB 210 HE up to PB 635 HE (ZP) (standard version, PDP -40°C)

Specification	Unit	PB 210HE	PB 320 HE	PB 390 HE	PB 530 HE	PB 635 HE	PB 210 HE ZP	PB 320 HE ZP	PB 390 HE ZP	PB 530 HE ZP	PB 635 HE ZP
Cooling Mode	-	Purge	Purge	Purge	Purge	Purge	Zero Purge	Zero Purge	Zero Purge	Zero Purge	Zero Purge
Nominal volume flow at dryer inlet ⁽¹⁾	l/s	100	150	185	250	300	100	150	185	250	300
	m³/hr	360	540	666	900	1080	360	540	666	900	1080
Purge air consumption average	%	2	2	2	2	2	0	0	0	0	0
Pressure Drop Over Dryer	barg	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	psig	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
Inlet and outlet connections	G	1 ½"	1 ½"	1 ½"	2"	2"	1 ½"	1 ½"	1 ½"	2"	2"
	NPT	1 ½"	1 ½"	1 ½"	2"	2"	1 ½"	1 ½"	1 ½"	2"	2"
Included pre and after filters	Fine filter	TF 6 G HE	TF 7 G HE	TF 8 G HE	TF 9 G HE	TF 9 G HE	TF 6 G HE	TF 7 G HE	TF 8 G HE	TF 9 G HE	TF 9 G HE
	Super fine filter	TF 6 C HE	TF 7 C HE	TF 8 C HE	TF 9 C HE	TF 9 C HE	TF 6 C HE	TF 7 C HE	TF 8 C HE	TF 9 C HE	TF 9 C HE
	Dust filter	TF 6 S HE	TF 7 S HE	TF 8 S HE	TF 9 S HE	TF 9 S HE	TF 6 S HE	TF 7 S HE	TF 8 S HE	TF 9 S HE	TF 9 S HE
Height	mm	1720	1770	1770	1816	1853	1855	1891	1891	1969	2006
	inch	67.7	69.7	69.7	71.5	73.0	73.0	74.4	74.4	77.5	79.0
Width	mm	770	870	870	955	1010	840	966	966	1098	1123
	inch	30.3	34.3	34.3	37.6	39.8	33.1	38.0	38.0	43.2	44.2
Length	mm	1250	1300	1300	1345	1425	1174	1360	1360	1580	1507
	inch	49.2	51.2	51.2	53.0	56.1	46.2	53.5	53.5	62.2	59.3
Mass	kg	640	680	710	775	820	400	498	537	663	765
	lbs	1411	1499	1565	1709	1808	882	1098	1184	1462	1687

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. (For ZP versions inlet temperature is 33°C)

Flow correction factors due to air inlet pressure

Operating pressure	barg	4.5	5	6	7	8	9	10	11	12	13	14
	psig	65	72	87	100	116	130	145	160	174	189	203
Pressure correction factor	Kp	0.687	0.75	0.88	1	1.13	1.25	1.38	1.5	1.62	1.74	1.86

Flow correction factors due to air inlet temperature (For -40°C PDP Units with Silica Gel)

Temperature	°C	20	25	30	35	40	45
	°F	68	77	86	95	104	113
Temperature correction factor	Kt	1	1	1	1	0.75	0.55

Flow correction factors due to air inlet temperature (For -70°C PDP Units with Molecular Sieves)

Temperature	°C	20	25	30	35	40	45	50	55
	°F	68	77	86	95	104	113	122	131
Temperature Correction Factor	Kt	1	1	1	1	1	0.78	0.61	0.49

Flow correction factors due to Pressure Dew Point (For 11 barg Units)

Dew point	°C	0	-40	-70
	°F	32	-40	-94
Dew point correction factor	Kdp	1	1	0.8

For accurate sizing for your operating conditions consult Pneumatech

PB 760-7400 HE (P/ZP) - Blower purge/Zero purge adsorption dryers

Features & Benefits

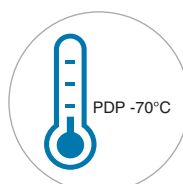
- ▶ Smart Cycle Control algorithm delivers energy savings at partial load without dew point sensor (optional)
- ▶ Advanced energy management for low operating costs with compressor synchronization and optional PDP control, regeneration & cooling temperature control, and purge nozzle optimization
- ▶ Optimal control and monitoring thanks to Purelogic™ Touch Controller
- ▶ High quality, high-efficiency, long-life desiccant ensures a PDP of $-40^{\circ}\text{C}/-40^{\circ}\text{F}$ as standard ($-70^{\circ}\text{C}/-94^{\circ}\text{F}$ as option)
- ▶ Minimal risk of crushed desiccant thanks to the sonic nozzle and the large welded vessels
- ▶ Counter-current regeneration for optimal energy efficiency and guaranteed dry air
- ▶ In-house developed and endurance tested components ensure high reliability and low maintenance (four-way and switching valves)
- ▶ The electric heater's design and stainless-steel, insulated build ensure optimal flow, energy efficiency and a long lifetime
- ▶ Compact base frame with forklift slots designed to save floor space
- ▶ Galvanized pipes with flanged connections simplify maintenance and minimize the risk of leakage

General Specifications

- ▶ Blower purge & zero purge adsorption dryers: welded vessel design
- ▶ Dew points achievable: $-40^{\circ}\text{C}/-40^{\circ}\text{F}$ & $-70^{\circ}\text{C}/-94^{\circ}\text{F}$
- ▶ Pressure range: 4.5-10 barg/65-145 psig; PB 4450 & 7400 HE 4.5-9 barg/130 psig (4.5- 14.5 barg/65-210 psig available upon request for all models)
- ▶ Ambient temperature range: $1-40^{\circ}\text{C}/34-104^{\circ}\text{F}$ (for temperatures above 40°C and up to 55°C , see high ambient temperature option)
- ▶ Inlet temperature range: $1-45^{\circ}\text{C}/34-113^{\circ}\text{F}$ (for temperatures above 45°C , see high inlet temperature option)
- ▶ Power supply: 400 VAC 50 HZ; 440-460 VAC 60 HZ



Options



-70°C PDP variant available
(only for ZP variants)



Insulated vessels
(std on -70°C PDP Variant)



Inlet blower filters



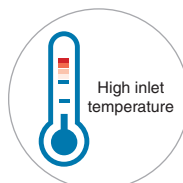
2nd PDP read out



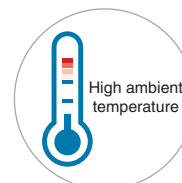
Purge nozzle optimization



External pilot air connection for low pressure inlet



High inlet temperature variant
(not applicable on -70°C PDP)



High ambient temperature variant



In and outlet filters



Vessel safety valves



Wooden packaging

The Pneumatech PB 760-7400 HE delivers a low PDP of -40°C/-40°F as standard (-70°C/-94°F optional) with minimal lifecycle costs. The range comes in blower purge and two zero purge variants, each offering flows up to 12,600 m³/hr. The PB HE

keeps your operating costs to a minimum thanks to the superior efficiency of its multiple layered high-efficiency desiccant, its advanced Purelogic™ Touch control features, and its new and unique Smart Cycle Control algorithm.

Adsorption dryer technology

Adsorption dryers remove moisture from compressed air by passing it through one of two towers filled with desiccant. When the desiccant in one tower is saturated, PB HE dryers use heated blower purge air to remove the moisture from the adsorbent

material (while the other tower handles the drying). That means they have no purge loss during regeneration. The zero purge variants reduce lifecycle costs even further by also eliminating purge loss during cooling.

Technical specifications for PB 760-7400 HE (standard version, PDP -40°C)

Specifications	Unit ⁽³⁾	PB 760 HE	PB 1000 HE	PB 1350 HE	PB 2050 HE	PB 2650 HE	PB 3400 HE	PB 4450 HE	PB 5300 HE	PB 7400 HE
Cooling mode	-	Purge	Purge	Purge	Purge	Purge	Purge	Purge	Purge	Purge
Nominal flow at dryer inlet ⁽¹⁾	l/s	360	480	630	970	1260	1600	2100	2500	3500
	m ³ /h	1296	1728	2268	3492	4536	5760	7560	9000	12600
Avg purge air consumption	%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Pressure drop over the dryer	barg	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.2	0.2
	psig	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.9	2.9
Inlet and outlet connections	DN acc to DIN2633 PN16	80	80	80	100	100	150	150	150	200
Optional pre & after filter sizes ⁽²⁾	Fine filter	PMH G 1529	PMH G 2125	PMH G 2550	FF 3 G HE	FF 4 G HE	FF 5 G HE	FF 6 G HE	FF 7 G HE	FF 8 G HE
	Super fine filter	PMH C 1529	PMH C 2125	PMH C 2550	FF 3 C HE	FF 4 C HE	FF 5 C HE	FF 6 C HE	FF 7 C HE	FF 8 C HE
	Dust filter	PMH S 1529	PMH S 2125	PMH S 2550	FF 3 S HE	FF 4 S HE	FF 5 S HE	FF 6 S HE	FF 7 S HE	FF 8 S HE
Mass	Kg	1663	1741	2130	3009	3660	4862	5592	6682	8655
	Lb	3666	3838	4696	6634	8069	10719	12328	14731	19081
Height	mm	2585	2585	2707	2717	2700.6	2591	2587.5	2631	2990
	Inch	101.7	101.7	106.6	107	106.3	102	101.8	103.6	117.7
Width	mm	960	960	948	1000	1715.6	2374	2448.5	2629	2739
	Inch	37.8	37.8	37.3	39.4	67.5	93.5	96.4	103.5	107.8
Length	mm	1776	1776	1884	2359	2382	2448.5	2874.5	2458.5	3532
	Inch	69.9	69.9	74.2	92.9	93.8	96.4	113.1	96.8	139

(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

(2) Filters are sized at reference conditions. Consult the AML of the filters for sizing outside the reference conditions and for other filters models

(3) For ZP (zero purge) units consult the AML

3 versions to meet your needs

Choose the PB HE that works best for you:

- 1 Purge models with standard cooling, using a small amount of dry air.
- 2 Zero purge models with open loop cooling, using a blower to cool down with ambient fresh air. This is more energy-efficient compared to standard cooling as no compressed air is lost. It is also the ideal choice for moderate climates.
- 3 Zero purge models with closed loop cooling, using an additional air or water cooler. The cooling air runs in a closed loop, preventing the desiccant to become pre-saturated with moisture from the ambient air. This is the best choice for hot and humid climates.

Membrane Dryers

Because they are not powered by electricity, membrane dryers function safely in environments that must be explosion proof such as laboratories. Thanks to their quiet operation, membrane dryers can be used close to the workplace.

Pneumatech offers a range of 5 models for low flow applications.



PMD 1 - 7 - Membrane dryers

Features and Benefits

- ▶ Lowest total cost of ownership ensuring the highest air quality
- ▶ Compact size and flexible design allows different orientation per application
- ▶ Pneumatech's unique PMD dryer range ensures the lowest pressure drop and the lowest purge air use – providing real energy savings without compromise in production reliability and efficiency. Simple yet eco-friendly technology.
- ▶ Dry air in environments with strict safety or environmental requirements:
 - Low flow environments
 - Areas without electrical supply
 - Areas with explosion proof requirements
 - Noise sensitive areas
 - Corrosion sensitive areas
 - Pneumatech's membrane dryers perform where others won't:
 - Small spaces
 - Areas where flexible mounting is required
 - High vibration areas
 - Widely fluctuating temperatures
- ▶ State of the art fiber technology offering maximum efficiency
 - An engineers unique coating helps the PMD membrane dryers increase the separation efficiency between water vapour, oxygen and nitrogen
 - Extremely low air leakages and lowest purge loss in comparison with other standard membrane dryers
- ▶ Lowest pressure drop thanks to minimal air resistance
 - Simple and longitudinal design ensures steady compressed air flow eliminating unwanted twists and turns inside the housing resulting into minimal pressure drop and utmost efficiency
- ▶ Variants to suit your performance needs
- ▶ Equipped with our Ultimate filters for optimal performance
- ▶ Pneumatech's dryer range includes the P and N model range, each in 7 different sizes
- ▶ P range: Ensures a suppression of 32° C (55° F), giving at the reference conditions an outlet air pressure dew point of 3° C (40° F)
- ▶ N range: Lowers the inlet dew point with 55°C (100° F), giving a pressure dew point of -20°C (-5° F) at the reference conditions



Variants



Version with purge control



Version without purge control

Options



Electronic drain



Wall brackets

With its pre-filters, Pneumatech PMD dryers remove oil particles and moisture from compressed air in the most demanding conditions, at the lowest energy cost. Thanks to their special fiber technology, PMD dryers ensure the lowest pressure drop and purge air loss for the highest possible efficiency, saving you time and money.

From small spaces to environments with fluctuating ambient temperatures, PMD dryers can perform in a wide variety of harsh and critical conditions. PMD dryers also come with different types of membranes, allowing you to choose the exact air treatment you need and the dew point your operation requires. With an innovative design, PMD dryers provide the quality of air that will increase the reliability and energy efficiency of your production.

Technical specifications for PMD P																									
Product → Specification ↓	Unit	PMD 1P			PMD 2P			PMD 3P			PMD 4P			PMD 5P			PMD 6P			PMD 7P					
Pressure	bar	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13			
	psi	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190			
Max. inlet flow	m³/h	10.8	14.4	18	18.0	25.2	30.6	32.4	43.2	50.4	50.4	68.4	79.2	68.4	90.0	115.2	90.0	122.4	151.2	126.0	158.4	198.0			
	cfm	5.0	18.0	10.6	10.6	14.8	18.0	19.1	25.4	29.7	29.7	40.3	46.6	40.3	53.0	67.8	53.0	72.1	89.0	74.2	93.3	116.6			
Purge	%	14	10	8	15	11	9	15	11	9	15	14	11	14	11	8	14	10	8	14	11	9			
Pressure drop	mBar	100	100	100	170	170	170	170	170	170	270	270	270	170	175	180	240	240	250	180	200	190			
	psi	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	3.9	3.9	3.9	2.5	2.5	2.6	3.5	3.5	3.6	2.6	2.9	2.8			
Filter model		PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 54, PMH C 54	PMH G 85, PMH C 85	PMH G 85, PMH C 85	PMH G 85, PMH C 85	PMH G 85, PMH C 85	PMH G 85, PMH C 85	PMH G 119, PMH C 119	PMH G 119, PMH C 119	PMH G 119, PMH C 119	PMH G 119, PMH C 119	PMH G 119, PMH C 119	PMH G 119, PMH C 119				
Connection	G	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"			
Weight excl. filters	kg	0.6	0.6	0.6	0.6	0.6	0.6	1.7	1.7	1.7	1.7	1.7	1.7	2.8	2.8	2.8	2.8	2.8	2.8	5.0	5.0	5.0			
	lbs	1.3	1.3	1.3	1.3	1.3	1.3	3.7	3.7	3.7	3.7	3.7	3.7	6.2	6.2	6.2	6.2	6.2	6.2	11.0	11.0	11.0			
Weight incl. filters	kg	2.9	2.9	2.9	2.9	2.9	2.9	4.0	4.0	4.0	4.2	4.2	4.2	5.3	5.3	5.7	5.7	5.7	5.7	7.9	7.9	8.9			
	lbs	6.4	6.4	6.4	6.4	6.4	6.4	8.8	8.8	8.8	9.2	9.2	9.2	11.7	11.7	12.5	12.5	12.5	12.5	17.4	17.4	20			
Dimensions	mm	A			99			99			122			122			145			145			170		
	inch	A			3.9			3.9			4.8			4.8			5.7			5.7			6.7		
	mm	B			532			532			733			733			79			709			732		
	inch	B			20.9			20.9			28.9			28.9			27.9			27.9			28.8		
	mm	C			757			757			959			959			934			934			957		
	inch	C			29.8			29.8			37.8			37.8			36.8			36.8			37.7		
	mm	D			264			264			277			277			287			342			355		
	inch	D			10.4			10.4			10.9			10.9			11.3			13.5			14.0		
	mm	E			716			716			906			906			881			936			953		
	inch	E			28.2			28.2			35.7			35.7			34.7			36.9			37.5		
	mm	F			291			291			313			313			334			334			361		
	inch	F			11.5			11.5			12.3			12.3			13.1			13.1			14.2		

Notes:
 Add 100mm free space below the filters for easy cartridge exchange
 The purge stop option adds 50mm to diameter A and height D

Kp Flow correction factor due to compressed air inlet pressure (e) 7bar							
Operating pressure	bar	4	5	6	7	8	9
Pressure correction factor	Kp	0.61	0.74	0.87	1.00	1.12	1.25

Kp Flow correction factor due to compressed air inlet pressure (e) 10bar						
Operating pressure	bar	8	9	10	11	12
Pressure correction factor	Kp	0.79	0.88	1.00	1.06	1.14

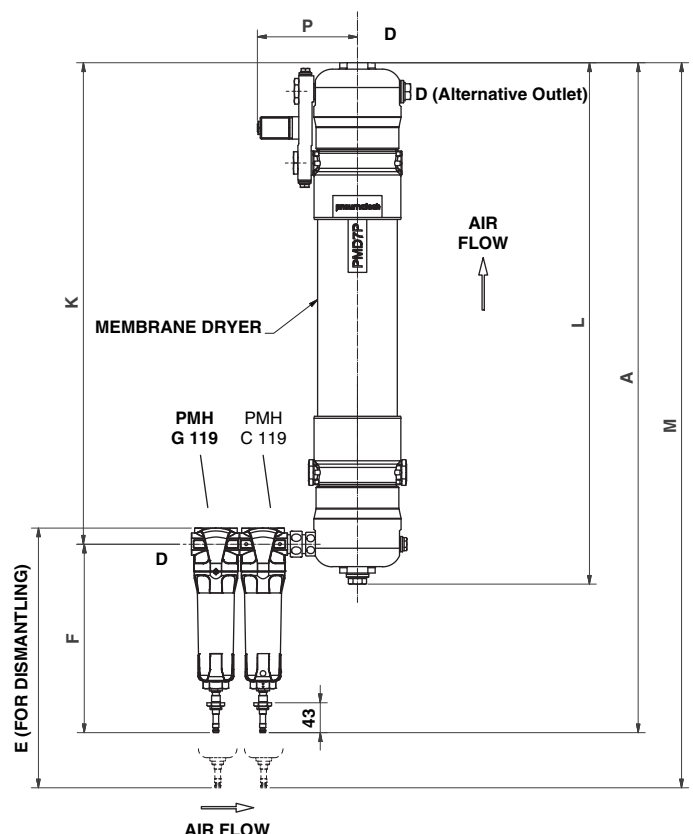
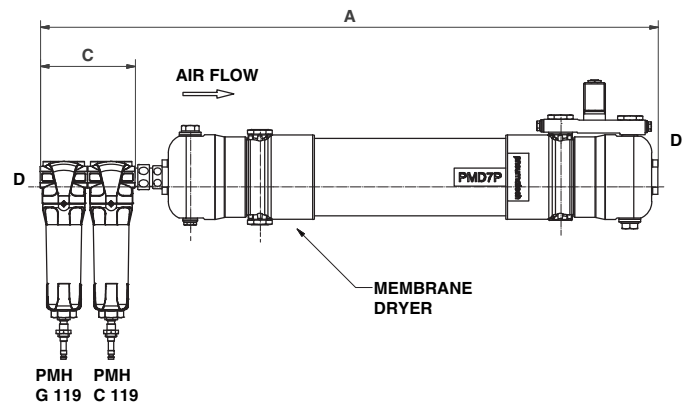
Kp Flow correction factor due to compressed air inlet pressure (e) 13bar					
Operating pressure	bar	11	12	13	14
Pressure correction factor	Kp	0.89	0.97	1.00	1.12

Please contact Pneumatech team for conditions other than the standard.

PMD 1 - 7 - Membrane dryers

General Specifications

- ▶ Standard equipment, complete scope of supply ensuring peace of mind for you
 - Purge block, fitted onto the dryer, controls the purged air
 - Two pre-filters, all interconnection components included, ensure optimal inlet air quality
 - Flexible inlet and outlet caps allow filters and dryer to be mounted in two settings for optimal use of available space
 - Optional equipment
 - Purge air stop to save purge when there is no air consumption
 - Wall mounting
 - Electronic condensate drain
- ▶ Membrane Dryers
 - Pressure dew point suppressions of 15°C (27°F) to as much as 95°C (171°F) are possible. Correction factors give the correct flow
 - Compressed air inlet pressure: 4 - 14bar(g), 58 - 203 psi(g)
 - Ambient temperature range: 1-66°C/34-150°F
 - Inlet temperature range: 1-66°C/34-150°F
 - The achievable PDP of the PMD membrane dryer range is dependent on inlet dew point



Technical specifications for PMD N

Product → Specification ↓	Unit	PMD 1N			PMD 2N			PMD 3N			PMD 4N			PMD 5N			PMD 6N			PMD 7N					
Pressure	bar	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13	7	10	13			
	psi	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190	102	145	190			
Max. inlet flow	m³/h	5.4	7.2	9.0	12.6	16.2	19.8	21.6	28.8	36.0	32.4	43.2	54.0	46.8	64.8	82.8	61.2	79.2	100.8	93.6	126.0	162.0			
	cfm	3.2	4.2	5.3	7.4	9.5	11.7	12.7	17.0	21.2	19.1	25.4	31.8	27.6	38.2	48.8	36.0	46.6	59.4	55.1	74.2	95.4			
Purge	%	18	13	11	19	13	10	17	12	10	17	14	10	17	12	10	19	14	10	18	13	10			
Pressure drop	m bar	80	80	80	250	240	240	160	150	150	250	240	240	180	190	190	250	240	250	250	240	250			
	psi	1.2	1.2	1.2	3.6	3.5	3.5	2.3	2.2	2.2	3.6	3.5	3.5	2.6	2.8	2.8	3.6	3.5	3.6	3.6	3.5	3.6			
Filter model		PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 54 PMH C 54	PMH G 85 PMH C 85	PMH G 85 PMH C 85	PMH G 85 PMH C 85	PMH G 85 PMH C 85	PMH G 85 PMH C 85	PMH G 85 PMH C 85	PMH G 119 PMH C 119	PMH G 119 PMH C 119	PMH G 119 PMH C 119				
Connection	G	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"			
Weight excl. filters	kg	0.7	0.7	0.7	0.9	0.9	0.9	2.4	2.4	2.4	2.4	2.4	2.4	3.6	3.6	3.6	3.6	3.6	3.6	6.8	6.8	6.8			
	lbs	1.5	1.5	1.5	2.0	2.0	2.0	5.3	5.3	5.3	5.3	5.3	5.3	7.9	7.9	7.9	7.9	7.9	7.9	15.0	15.0	15.0			
Weight incl. filters	kg	3.0	3.0	3.0	3.2	3.2	3.2	4.7	4.7	4.7	4.7	4.7	4.7	6.1	6.1	6.1	6.1	6.1	6.1	9.7	9.7	9.7			
	lbs	6.6	6.6	6.6	7.0	7.0	7.0	10.3	10.3	10.3	10.3	10.3	10.3	13.4	13.4	13.4	13.4	13.4	13.4	21.3	21.3	21.3			
Dimensions	mm	A			99			99			122			122			145			145			170		
	inch	A			3.9			3.9			4.8			4.8			5.7			5.7			6.7		
	mm	B			715			1020			1076			1076			1074			1074			1113		
	inch	B			28.1			40.2			42.4			42.4			42.3			42.3			43.8		
	mm	C			940			1245			1302			1302			1299			1299			1338		
	inch	C			37.0			49.0			51.3			51.3			51.1			51.1			52.7		
	mm	D			264			264			277			277			287			287			355		
	inch	D			10.4			10.4			10.9			10.9			11.3			11.3			14.0		
	mm	E			899			1204			1249			1249			1246			1246			1334		
	inch	E			35.4			47.4			49.2			49.2			49.1			49.1			52.5		
	mm	F			291			291			313			313			334			334			361		
	inch	F			11.5			11.5			12.3			12.3			13.1			13.1			14.2		

Notes: PMD 5P-7: dimensions, filters and weight of PMD 6P
 Add 100mm free space below the filters for easy cartridge exchange
 The purge stop option adds 50mm to diameter A and height D

Kp Flow correction factor due to compressed air inlet pressure (e) 7bar							
Operating pressure	bar	4	5	6	7	8	9
Pressure correction factor	Kp	0.62	0.75	0.88	1.00	1.13	1.26

Kp Flow correction factor due to compressed air inlet pressure (e) 10bar						
Operating pressure	bar	8	9	10	11	12
Pressure correction factor	Kp	0.84	0.94	1.00	1.12	1.22

Kp Flow correction factor due to compressed air inlet pressure (e) 13bar					
Operating pressure	bar	11	12	13	14
Pressure correction factor	Kp	0.96	1.04	1.00	1.20

Please contact Pneumatech team for conditions other than the standard.

M POU 2 - 16 - Point-of-use membrane dryers

Features and Benefits

- ▶ No power source needed
- ▶ Simple yet eco-friendly technology
 - No desiccants or refrigerants used for drying
 - No condensate drains
- ▶ Guaranteed performance
 - High water vapor selectivity thanks to non-porous membrane
 - No penetration of gases other than moisture
- ▶ Maintenance free
 - No wear and tear of any mechanical or electrical part
 - No need of replacement of any component
- ▶ Easy to transport and install
 - Built-in purging circuits
 - Easy and simple dew point adjustments thanks to the purge low control

General Specifications

- ▶ Dew point suppression achievable up to 40°C below inlet temperature
 - Note: only energy-efficient up to pressure dew point reductions of 30°C/86°F
- ▶ Operating pressure range:
0 - 8.5 barg/0-120 psig
- ▶ Operating temperature range:
-20° - 55°C / -4° - 131°F
- ▶ Ambient temperature range:
-20° - 55°C / -4° - 131°F



Applications



Dehumidified
sampling gases for
gas analysers



Laser
machining tool



Paper industry



EDM tools



Food and
beverages



Gas
generators

Pneumatech offers an easy-to-use and simple drying solution for small compressed air needs. Pneumatech's point-of-use membrane dryer does not require any power source, is compact and easy to install. This makes the dryer suitable for various smaller compressed air applications where a higher degree of dehumidification is required, such as laser machining tools, precision measuring equipment, gas analyzers and small gas generators.

can go up to 40°C below inlet temperature. This is achieved by a hollow-fiber membrane, where moisture can diffuse through the fine pores of the fiber bundles. When differences in moisture concentration arise between the inside and outside of a fiber membrane, moisture is transferred through the membrane surface to equalize the moisture concentration on both sides of the membrane. Part of the dry air is used as purge air in order to remove the moisture from the incoming wet air.

The pressure dew point achieved by membrane dryers is dependent on the inlet temperature of the compressed air; but

Technical specifications for M POU 2-16							
Product → Specification ↓	Unit		M POU 2	M POU 3	M POU 5	M POU 11	M POU 16
Nominal volume flow at dryer inlet ⁽¹⁾	l/s		0,83	1,33	2,50	5,00	7,50
	m ³ /hr		3	4,8	9	18	27
Supply Gas Inlet and outlet connections	Inlet (G/NPT)		1/8"	1/8"	1/4"	3/8"	3/8"
	Outlet (G/NPT)		1/4"	1/4"	1/4"	1/4"	1/4"
Weight	kg		0,27	0,27	0,34	0,68	0,72
	lbs		0,59	0,6	0,76	1,5	1,59
Dimensions	Width	mm	61	61	70	100	100
		inch	2,4	2,4	2,8	3,9	3,9
	Height	mm	112	112	153	200	200
		inch	4,4	4,4	6,0	7,9	7,9
	Length	mm	31	31	40	50	50
		inch	1,2	1,2	1,6	2,0	2,0

1. Flow is measured at Reference Conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 35°C & 40°C dew point reduction on inlet temperature..