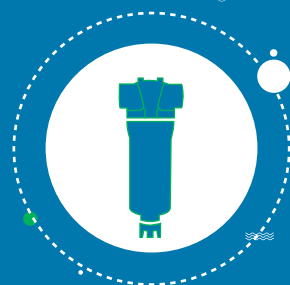
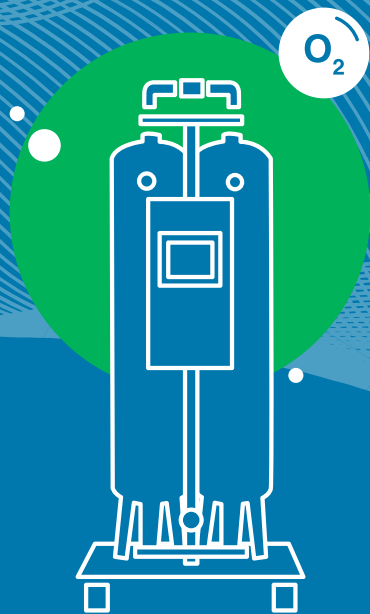


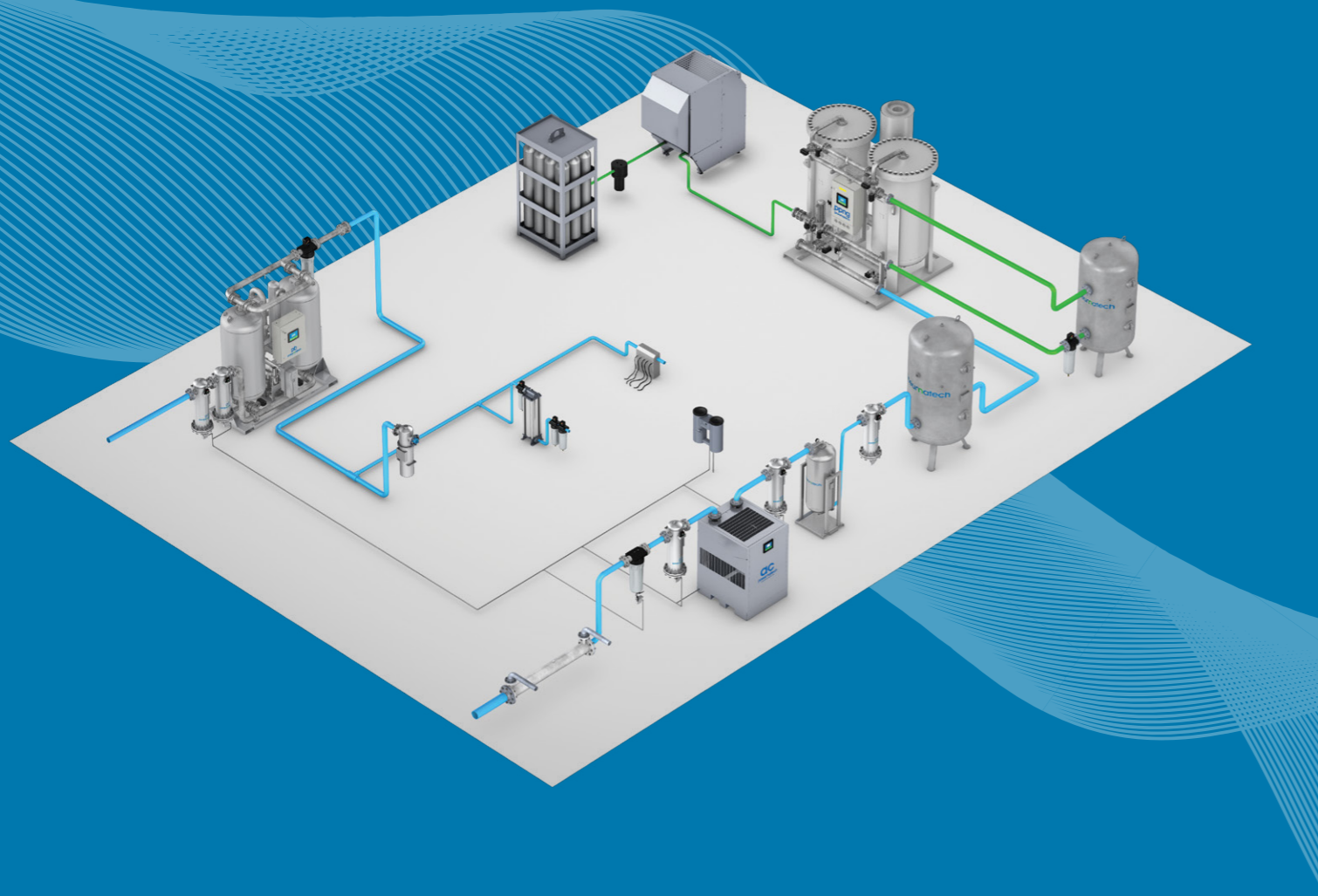
# AIR TREATMENT & GAS GENERATION

Product Catalogue 2024



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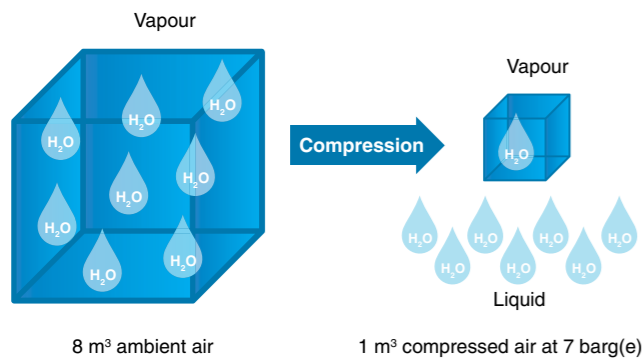
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Air treatment is the process of purifying compressed air to remove contaminants such as water (liquid or vapor), dust, dirt, and oil. This is important because these contaminants can cause a variety of problems in systems that use compressed air.

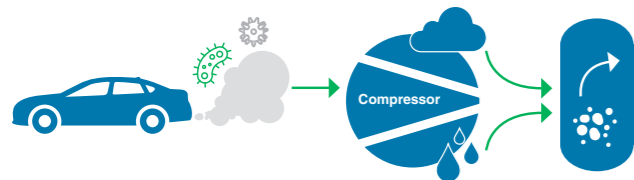
### How are contaminants in compressed air formed?

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<sub>2</sub> from the O<sub>2</sub>. 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 nitrogen in the air being adsorbed by the ZMS, instead of the oxygen.

#### Membrane:

Membrane technology is a very simple, reliable and continuous N<sub>2</sub> 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<sub>2</sub> or O<sub>2</sub> 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<sub>2</sub> or O<sub>2</sub> 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: 5-16 barg/58-232 psig (5-13 barg/58-189 psig from COOL 145 onwards)
- ▶ Max. ambient temperature: 40°C / 104°F
- ▶ Flow rate: 21 to 462 m³/hr (12-272 cfm)<sup>(1)</sup>
- ▶ 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)



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
Flow <sup>(1)</sup>	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
	m³/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	0.80	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												
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

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

## Applications



Pneumatic tools and equipment



Pneumatic control systems



Painting



Injection moulding



Car shops



Tire inflation

<sup>1</sup> 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 m<sup>3</sup>/hr/  
12 - 4238 cfm<sup>(1)</sup>
- ▶ 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:
  - R410A
    - » AD 125-4200
  - R513A
    - » AD 15-105
    - » AD 185-G 230/50
    - » AD 270-G 230/50
    - » AD 635-G 400/50

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.

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

AD 15-65	AD 85-105	AD 125-270	AD 355-635	AD 750-4200
				
Features & Benefits	Features & Benefits	Features & Benefits	Features & Benefits	Features & Benefits
<ul style="list-style-type: none"> <li>• Stable performance and guaranteed dew point up to 3°C/37°F</li> <li>• Ingeniously designed components to ensure maximum performance</li> <li>• Hot gas bypass valve to prevent freezing at lower loads</li> <li>• Zero-loss electronic drain to prevent loss of valuable compressed air</li> <li>• Brazed plate heat exchanger with integrated water separator and air-to-air heat exchange</li> <li>• R513A refrigerant gas: low global warming impact, zero ozone depletion</li> <li>• Digital display with real-time PDP monitoring</li> <li>• Easy plug-and-play installation</li> </ul>	<ul style="list-style-type: none"> <li>• Stable performance and guaranteed dew point up to 3°C/37°F</li> <li>• Ingeniously designed components to ensure maximum performance</li> <li>• Hot gas bypass valve to prevent freezing at lower loads</li> <li>• Zero-loss electronic drain to prevent loss of valuable compressed air</li> <li>• Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange</li> <li>• Environmental safe refrigerant gases R513A</li> <li>• Digital display with real-time PDP monitoring</li> <li>• Easy plug-and-play installation</li> </ul>	<ul style="list-style-type: none"> <li>• Stable performance and guaranteed dew point up to 3°C/37°F</li> <li>• Rotary compressors and R410A refrigerant: the winning combination                             <ul style="list-style-type: none"> <li>• 30% more energy efficient</li> <li>• Requires 19% less refrigerant gas</li> </ul> </li> <li>• Extremely reliable: low vibration levels and limited mechanical load</li> <li>• Ingeniously designed components to ensure maximum performance</li> <li>• Hot gas bypass valve to prevent freezing at lower loads</li> <li>• Zero-loss electronic drain to prevent loss of valuable compressed air</li> <li>• Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange</li> <li>• Digital display with real-time PDP monitoring and voltage-free contact for remote alarm</li> <li>• Easy plug-and-play installation</li> </ul>	<ul style="list-style-type: none"> <li>• Stable performance and guaranteed dew point up to 3°C/37°F</li> <li>• Rotary compressors and R410A refrigerant: the winning combination                             <ul style="list-style-type: none"> <li>• 30% more energy efficient</li> <li>• Requires 19% less refrigerant gas</li> </ul> </li> <li>• Extremely reliable: low vibration levels and limited mechanical load</li> <li>• Ingeniously designed components to ensure maximum performance</li> <li>• Hot gas bypass valve to prevent freezing at lower loads</li> <li>• Zero-loss electronic drain to prevent loss of valuable compressed air</li> <li>• Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange</li> <li>• Advanced controlling and monitoring thanks to the controller installed                             <ul style="list-style-type: none"> <li>• Digital PDP display</li> <li>• Remote start/stop</li> <li>• Voltage-free contact for general alarm</li> </ul> </li> <li>• Easy plug-and-play installation</li> </ul>	<ul style="list-style-type: none"> <li>• Stable performance and guaranteed dew point of 3°C/37°F.</li> <li>• Best in class scroll compressors and R410A refrigerant: The winning combination                             <ul style="list-style-type: none"> <li>• 30% more energy efficient</li> <li>• 20% lower gas load</li> <li>• Extremely reliable: Less moving parts, low vibration levels and limited mechanical load</li> </ul> </li> <li>• Ingeniously new designed components to ensure maximum performance                             <ul style="list-style-type: none"> <li>• Ultra-efficient micro-channel condenser providing up to 40% more heat rejection, durable and easy maintenance</li> <li>• Hot gas bypass valve to prevent freezing at lower loads</li> <li>• Zero-loss electronic drain to prevent loss of valuable compressed air</li> <li>• New aluminium heat exchanger designed for maximum heat transfer and optimized air recovery (max. 2°C dT from inlet to outlet)</li> </ul> </li> <li>• Advanced controlling and monitoring                             <ul style="list-style-type: none"> <li>• Digital PDP display</li> <li>• Remote start/stop</li> <li>• Voltage-free contact for general alarm</li> </ul> </li> <li>• Easy plug-and-play installation</li> </ul>

### Options



Filter support



Bypass valve

<sup>1</sup> 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
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
	m³/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
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
	m³/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)<sup>(1)</sup>
- ▶ Pressure dew point: 3°C/37°F (ISO 8573-1:2010 class 4)
- ▶ Power supply: 115/230VAC 50/60 Hz
- ▶ Refrigerant:
  - R513a
    - » AC 15-100
  - R410a
    - » AC 125-200



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 <sup>(1)</sup> 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 <sup>(1)</sup> 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

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



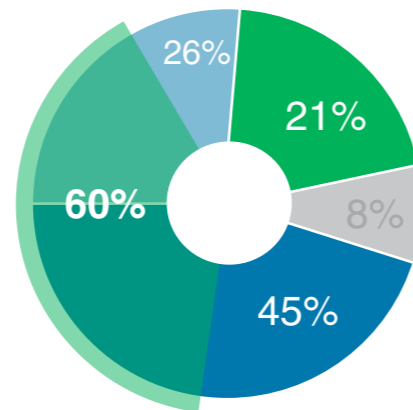
# AC 200 - 630 VSD - Cycling refrigeration dryers

## 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 PureLogic™ for advanced control and monitoring
  - PureLogic™ controller
    - » Touch based advance controller
    - » Modbus, Profibus or Ethernet/IP, (Consult us)
  - Intelligent connectivity system (ICONS)
    - » Insights from PureLogic™ 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



**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%

## 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
- ▶ Purelogic™ controller
- ▶ Zero loss drains
- ▶ Single electric connection for easy and smooth installation
- ▶ Refrigerant:
  - R513A
    - » AC 450 VSD-G 400/50
    - » AC 550 VSD-G 400/50
    - » AC 630 VSD-G 400/50

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 Nm<sup>3</sup>/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 <sup>3</sup> /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 2650 - 8500 - Large cycling refrigeration dryers (including VSD solutions)

## Features & Benefits

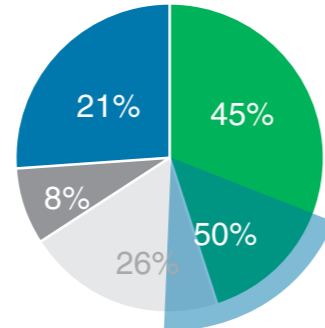
- ▶ Stable and guaranteed Performance at all operating conditions - PDP of 3°C thanks to direct expansion technology
- ▶ Lowest pressure drop
- ▶ Advanced control algorithm with three different control modes for variable speed versions:
  - Regulation of the refrigerant compressor based on actual load
  - 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



- Energy consumption by the dryer
- Energy consumption by the compressor due to pressure drop
- Investment
- Installation and maintenance
- Savings - 50% - A unique combination of high-efficiency components, smart unit design and an advanced control system enables you to achieve average energy savings of 50%.

## 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

Pneumatech Variants → Specifications ↓	Units	Air Cooled				Water Cooled			
		AC 2650	AC 3200	AC 3700	AC 4200	AC 2650	AC 3200	AC 3700	AC 4200
Flow <sup>(1)</sup>	l/s	1250	1500	1750	2000	1250	1500	1750	2000
	m³/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

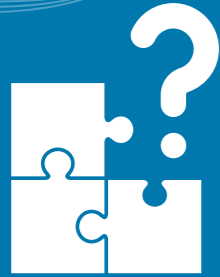
## Technical specifications AC 2650 - 8500 VSD

Pneumatech Variants → Specifications ↓	Units	Air Cooled							Water Cooled						
		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 <sup>(1)</sup>	l/s	1250	1500	1750	2000	2400	3000	4000	1250	1500	1750	2000	2400	3000	4000
	m³/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	1725	1725	1725	1725	1725	1736	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	68.3	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 <sub>2</sub> )	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 4 - 11 HE - Heatless adsorption dryers

## Features & benefits

- ▶ Stable low pressure dew point
- ▶ Easy desiccant maintenance with straightforward cartridge replacement
- ▶ Purge nozzle optimization
- ▶ Flexibility with wall mounting brackets included
- ▶ Delivered with one pre-filter (C grade) and one integrated dust filter
- ▶ PDP control (optional)

## General specifications

- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: -40°C/-40°F; -70°C/-100°F
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: 1.5-45°C/34.7-113°F
- ▶ Inlet temperature range: 1.5-50°C/34.7-122°F
- ▶ Power supply: 115VAC-230VAC 50/60Hz



### Options



Wall-mounting kit support as standard



PDP control

If you're in the market for a small adsorption dryer, you can now enjoy the performance and efficiency benefits of Pneumatech's premium PH HE offer. The new 4-11 size range (4-14 barg/58-203 psig) is compact and low-maintenance, offering you high-quality air with superior flexibility and reliability.

### The new high-efficiency compact adsorption dryer

- Air flow designed to deliver high efficiency and reduced energy costs
- High-performance desiccant mix (50% activated alumina and 50% molecular sieves)

- Plug-and-play installation with integrated wall mounting kit (easy 90° feet rotation)
- Fast and easy maintenance

### DC1 controller:

- Easy to use
- Optimizes performance and efficiency of the dryer
- Keeps the pressure dew-point stable

### Technical specifications for PH 4-11 HE

Specifications	Unit	(Versions PDP -40° / -40°F)			(Versions PDP -70°C / -100°F)		
		PH 4 HE	PH 7 HE	PH 11 HE	PH 4 HE	PH 7 HE	PH 11 HE
Nominal volume flow at dryer inlet	l/s	1.5	3	5	1.4	2.8	4.7
	m3/h	5.4	10.8	18	5	10	17
Connections Inlet / Outlet (PUSH-IN)	G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
	NPT	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Pressure drop at max. flow	barg	0.16	0.18	0.2	0.16	0.18	0.2
	psig	2.32	2.61	2.90	2.32	2.61	2.90
Height	mm	430	525	675	430	525	675
	inch	16.9	20.7	26.6	16.9	20.7	26.6
Width	mm	237	237	237	237	237	237
	inch	9.3	9.3	9.3	9.3	9.3	9.3
Length	mm	182	182	182	182	182	182
	inch	7.2	7.2	7.2	7.2	7.2	7.2
Mass	KG	7.5	9.5	12.5	7.5	9.5	12.5
	Lb	16.5	20.9	27.6	16.5	20.9	27.6
Included pre-filter size + integrated dust filter	Fine filter	PMH C 25	PMH C 25	PMH C 25	PMH C 25	PMH C 25	PMH C 25

# PH 12-64 HE with structured desiccant - Heatless adsorption dryers

## Features & benefits

- ▶ Solides 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
- ▶ Purge nozzle optimization
- ▶ Delivered with two pre-filters (G & C grade)
- ▶ PDP control (optional)
- ▶ Wall-mounting kit (optional)
- ▶ Condensate collection (optional)

## General specifications

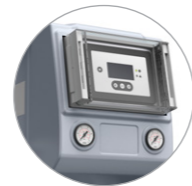
- ▶ Heatless adsorption dryers: extruded profile design
- ▶ Dew points achievable: -20°C/-5°F, -40°C/-40°F (with structured desiccant) -70°C/-94°F (with beads)
- ▶ Pressure range: 4-14 barg/58-203 psig
- ▶ Ambient temperature range: 2-45°C/35,6-113°F
- ▶ Inlet temperature range: 2-60°C/35,6-140°F
- ▶ Power supply: 115VAC-230VAC 50/60Hz



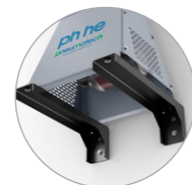
## Options



PDP control



IP65 / Nema4



Wall mounting kit



Condensate collector

The Pneumatech PH HE adsorption dryer has always earned its High-Efficiency label. Its new models with the Solides desiccant take these energy savings to a new level. In fact, thanks to their groundbreaking structured 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

### DC1 controller:

- Easy to use
- Optimizes performance and efficiency of the dryer
- Available with IP65/Nema4 (optional)

### A new type of heatless adsorption dryer

#### Solides structured desiccant:

- Much more efficient air flow reduces energy costs

Technical specifications for PH 12 HE up to PH 64 HE																		
Specifications	Unit	PH 12-64 HE (Versions PDP -40° / -40°F)						PH 17-94 HE (PDP -20°C / -4°F)						PH 14-40 HE (PDP -70°C / -100°F)				
		PH 12 HE	PH 22 HE	PH 33 HE	PH 43 HE	PH 53 HE	PH 64 HE	PH 17 HE	PH 34 HE	PH 49 HE	PH 64 HE	PH 79 HE	PH 94 HE	PH 14 HE	PH 21 HE	PH 27 HE	PH 33 HE	PH 40 HE
Nominal volume flow at dryer inlet	l/s	5.5	10	15	20	25	30	8	16	23	30	37	44	6	9	12	15	18
	m3/h	19.8	36	54	72	90	108	29	58	83	108	133	158	21.6	32.4	43.2	54	64.8
Connections Inlet / Outlet	G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
	NPT	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Pressure drop at max. flow	barg	0.08	0.11	0.15	0.18	0.24	0.25	0.08	0.12	0.17	0.25	0.32	0.37	0.045	0.085	0.13	0.18	0.22
	psig	1.16	1.6	2.17	2.61	3.48	3.63	1.16	1.74	2.47	3.63	4.64	5.37	0.65	1.23	1.89	2.61	3.19
Height	mm	949	1104	1259	1414	1594	1754	949	1104	1259	1414	1594	1754	1104	1259	1414	1594	1754
	inch	37.4	43.5	49.6	55.7	62.8	69.1	37.4	43.5	49.6	55.7	62.8	69.1	43.5	49.6	55.7	62.8	69.1
Width	mm	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363
	inch	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Length	mm	396	396	396	396	396	396	396	396	396	396	396	396	396	396	396	396	396
	inch	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Mass	KG	32	37	42	48	54	59	32	37	42	48	54	59	39	45	50	57	63
	Lb	70.5	81.6	92.6	105.8	119	130.1	70.5	81.6	92.6	105.8	119	130.1	86	99.2	110.2	125.7	138.9
Included pre-filter size	Fine filter	FG15	FG15	FG15	FG24	FG33	FG33	FG15	FG24	FG24	FG33	FG49	FG49	FG15	FG15	FG15	FG15	FG24
	Super fine filter	FC15	FC15	FC15	FC24	FC33	FC33	FC15	FC24	FC24	FC33	FC49	FC49	FC15	FC15	FC15	FC15	FC24
Dust filter		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	FS15	FS15	FS15	FS15	FS24

# PH 90-690 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.

### A new type of heatless adsorption dryer

#### Solid desiccant:

- Much more efficient air flow reduces energy costs
- 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



### Technical specifications for PH 90 HE up to PH 690 HE (Version PDP -40°)

Specifications	Unit	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	40	55	65	85	105	125	170	190	250	335
	m³/h	144	198	234	306	378	450	612	684	900	1206
Connections Inlet / Outlet	G	1"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	NPT	1"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Pressure drop at max. flow	barg	0.08	0.11	0.16	0.245	0.12	0.12	0.215	0.155	0.24	0.3
	psig	1.16	1.6	2.32	3.55	1.74	1.74	3.12	2.25	3.48	4.35
Height	mm	1205	1495	1495	1835	1495	1495	1835	1495	1835	1835
	inch	47.44	58.86	58.86	72.24	58.86	58.86	72.24	58.86	72.24	72.24
Width	mm	904	904	904	934	934	964	964	964	1042	1042
	inch	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	564	564	564	734	734	929
	inch	15.51	15.51	15.51	15.51	22.20	22.20	22.20	28.90	28.90	36.57
Mass	KG	110	128	140	165	215	234	276	331	389	500
	Lb	242	282	309	363	473	515	607	728	856	1100
Included pre filter size	Fine filter	FG 49	FG 49	FG 83	FG 83	FG 189	FG 189	FG 189	FG 189	FG 330	FG 330
	Super fine filter	FC 49	FC 49	FC 83	FC 83	FC 189	FC 189	FC 189	FC 189	FC 330	FC 330

### Technical specifications for PH 100 HE up to PH 625 HE (Version PDP -20°)

	Unit	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	50	65	80	105	125	150	195	225	300
	m³/h	180	234	288	378	450	540	702	810	1080
Connections Inlet / Outlet	G	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	NPT	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Pressure drop at max. flow	barg	0.125	0.17	0.245	0.33	0.12	0.18	0.28	0.2	0.33
	psig	1.81	2.46	3.55	4.78	1.74	2.61	4.06	2.9	4.78
Height	mm	1205	1495	1495	1835	1495	1495	1835	1495	1835
	inch	47.44	58.86	58.86	72.24	58.86	58.86	72.24	58.86	72.24
Width	mm	904	904	934	934	964	964	964	1042	1042
	inch	35.59	35.59	36.77	36.77	37.95	37.95	37.95	41.02	41.02
Length	mm	394	394	394	394	564	564	564	734	734
	inch	15.51	15.51	15.51	15.51	22.20	22.20	22.20	28.90	28.90
Mass	KG	110	128	141	165	218	234	277	331	394
	Lb	242	282	310	363	480	515	609	728	867
Included pre filter size	Fine filter	FG 49	FG 83	FG 83	FG 189	FG 189	FG 189	FG 189	FG 330	FG 330
	Super fine filter	FC 49	FC 83	FC 83	FC 189	FC 189	FC 189	FC 189	FC 330	FC 330

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 - 420 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
- ▶ Power supply: 230VAC 50/60Hz & 115VAC 50/60Hz



### Options



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 - 420 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 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 <sup>(1)</sup>	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	FC 33 A	FC 33 A	FC 49 A	FC 83 A	FC 83 A	FC 189 A	FC 189 A	FC 189 A	FC 189 A	FC 213 A
	Dust filter	FS 33 M	FS 33 M	FS 49 M	FS 83 M	FS 83 M	FS 189 M	FS 189 M	FS 189 M	FS 189 M	FS 213 M
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  
For filters A = Automatic drain - M = Manual drain

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

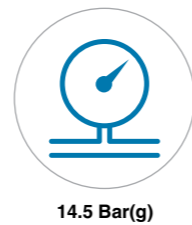
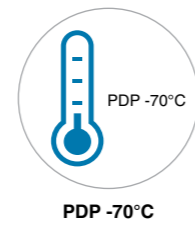
- ▶ Available in three standard variants
  - With Standard DC1 Controller (PDP Control optional)
  - With Purelogic™ (PDP control std available)
  - With Pneumatic Controller (no need of electricity for the installation and no PDP control possible)
- ▶ Lowest possible pressure drop thanks to innovative 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

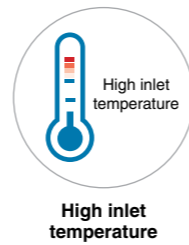
- ▶ Heatless adsorption dryers: welded vessel design
- ▶ Dew points achievable: -40°C/-40°F & -70°C/-94°F
- ▶ Pressure range: 4-9 barg/58-130 psig (14 barg/203 psig variant available as separate variant)
- ▶ Ambient temperature range: 1-50°C/34-122°F
- ▶ Inlet temperature range: 1-55°C/34-131°F
- ▶ Power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



### Variants



### Options



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 <sup>(1)</sup>	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 <sup>(2)</sup>	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
	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
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

# PH 55-550 S - 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°C/-3°F or -40°C/-40°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°C/-3°F & -40°C/-40°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
- ▶ 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 <sup>(1) (2)</sup>	%	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	FC 33 A	FC 33 A	FC 49 A	FC 83 A	FC 83 A	FC 189 A	FC 189 A	FC 189 A	FC 189 A	FC 213 A	FC 213 A
	Dust filter	FS 33 M	FS 33 M	FS 49 M	FS 83 M	FS 83 M	FS 189 M	FS 189 M	FS 189 M	FS 189 M	FS 213 M	FS 213 M
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. For filters A = Automatic drain – M = Manual drain

### 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

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

## Features & Benefits

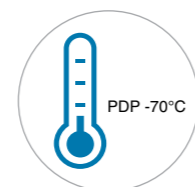
- ▶ Advanced energy management for lowest operating costs
  - Compressor synchronization
  - PDP control
  - Regeneration & cooling temperature control
  - Purge nozzle optimization (optional)
- ▶ Zero-purge variants for lowest life-cycle costs
  - Purge back-up mode for ambient conditions outside of 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 <sup>(1)</sup>	l/s	100	150	185	250	300	100	150	185	250	300
	m <sup>3</sup> /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 1/2"	1 1/2"	1 1/2"	2"	2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	NPT	1 1/2"	1 1/2"	1 1/2"	2"	2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Included pre and after filters	Fine filter	FG 189 A	FG 189 A	FG 189 A	FG 330 A	FG 330 A	FG 189 A	FG 189 A	FG 189 A	FG 330 A	FG 330 A
	Super fine filter	FC 189 A	FC 189 A	FC 189 A	FC 330 A	FC 330 A	FC 189 A	FC 189 A	FC 189 A	FC 330 A	FC 330 A
	Dust filter	FS 189 M	FS 189 M	FS 189 M	FS 330 M	FS 330 M	FS 189 M	FS 189 M	FS 189 M	FS 330 M	FS 330 M
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)  
For filters A = Automatic drain – M = Manual drain

### 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 -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 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 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

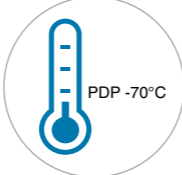





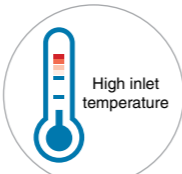
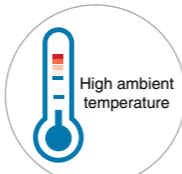



- ▶ Smart Cycle Control algorithm delivers energy savings at partial load without dew point sensor (optional)
- ▶ Advanced energy management for low operating costs with compressor synchronization and optional PDP control, regeneration & cooling temperature control, and purge nozzle optimization
- ▶ Optimal control and monitoring thanks to Purelogic™ Touch Controller
- ▶ High quality, high-efficiency, long-life desiccant ensures a PDP of -40°C/-40°F as standard (-70°C/-94°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°C/-40°F & -70°C/-94°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°C/34-104°F (for temperatures above 40°C and up to 55°C, see high ambient temperature option)
- ▶ Inlet temperature range: 1-45°C/34-113°F (for temperatures above 45°C, see high inlet temperature option)
- ▶ Power supply: 400 VAC 50 HZ; 440-460 VAC 60 HZ



### Options

 <b>-70°C PDP variant available</b> (only for ZP variants)	 <b>Insulated vessels</b> (std on -70°C PDP Variant)	 <b>Inlet blower filters</b>
 <b>2nd PDP read out</b>	 <b>Purge nozzle optimization</b>	 <b>External pilot air connection for low pressure inlet</b>
 <b>High inlet temperature variant</b> (not applicable on -70°C PDP)	 <b>High ambient temperature variant</b>	 <b>In and outlet filters</b>
 <b>Vessel safety valves</b>	 <b>Wooden packaging</b>	

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 m<sup>3</sup>/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 <sup>(1)</sup>	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
<b>Cooling mode</b>	-	Purge	Purge	Purge	Purge	Purge	Purge	Purge	Purge	Purge
<b>Nominal flow at dryer inlet<sup>(1)</sup></b>	l/s	360	480	630	970	1260	1600	2100	2500	3500
	m <sup>3</sup> /h	1296	1728	2268	3492	4536	5760	7560	9000	12600
<b>Avg purge air consumption</b>	%	2%	2%	2%	2%	2%	2%	2%	2%	2%
<b>Pressure drop over the dryer</b>	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
<b>Inlet and outlet connections</b>	<b>DN acc to DIN2633 PN16</b>	80	80	80	100	100	150	150	150	200
<b>Optional pre &amp; after filter sizes<sup>(2)</sup></b>	<b>Fine filter</b>	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
	<b>Super fine filter</b>	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
	<b>Dust filter</b>	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
<b>Mass</b>	<b>Kg</b>	1663	1741	2130	3009	3660	4862	5592	6682	8655
	<b>Lb</b>	3666	3838	4696	6634	8069	10719	12328	14731	19081
<b>Height</b>	<b>mm</b>	2585	2585	2707	2717	2700.6	2591	2587.5	2631	2990
	<b>Inch</b>	101.7	101.7	106.6	107	106.3	102	101.8	103.6	117.7
<b>Width</b>	<b>mm</b>	960	960	948	1000	1715.6	2374	2448.5	2629	2739
	<b>Inch</b>	37.8	37.8	37.3	39.4	67.5	93.5	96.4	103.5	107.8
<b>Length</b>	<b>mm</b>	1776	1776	1884	2359	2382	2448.5	2874.5	2458.5	3532
	<b>Inch</b>	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			799			799			957		
	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

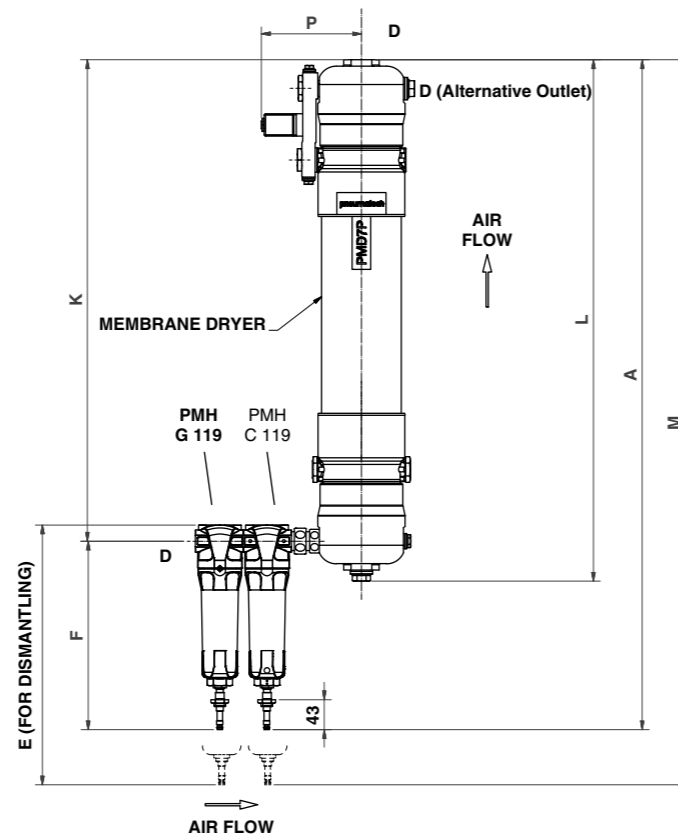
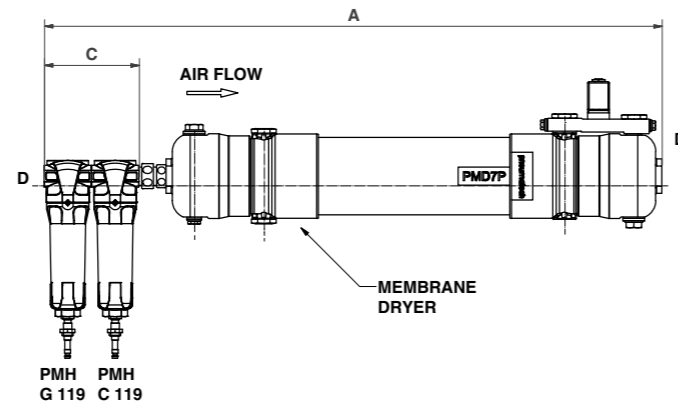
Kp Flow correction factor due to compressed air inlet pressure (e) 13bar					
Operating pressure	bar	11	12	13	14
Pressure correction factor	Kp	0.89	0.97	1.00	1.12

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



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.

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

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.

#### 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 <sup>(1)</sup>	l/s	0,83	1,33	2,50	5,00	7,50	
	m <sup>3</sup> /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..

### Applications



Dehumidified sampling gases for gas analysers



Laser machining tool



Paper industry



EDM tools



Food and beverages



Gas generators

# Gas Generators

Pneumatech designs and manufactures both standard and engineered on-site gas generator products. 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 have been developed as a plug-and-play solution for various applications like laser-cutting. Our engineering department hence becomes your best partner for all kinds of special requests.



# PPNG 1-5.5 HE - Nitrogen generators with pressure swing adsorption technology

## Features & Benefits

- ▶ Cost-efficient alternative to gas cylinders
- ▶ Outstanding air factors with innovative PSA cycle design
- ▶ Economizer function prevents air/energy waste
- ▶ Purity selection up to 99.999%
- ▶ Compact footprint
- ▶ Easy to install and use with existing compressed air networks

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) nitrogen generator with extruded profile design
- ▶ Nitrogen purity achievable up to 99.999%
- ▶ Inlet pressure range: 4-10 barg/60-145 psig
- ▶ Inlet temperature range: 5-50°/41-122°F
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- ▶ Power supply: 115V AC/230V AC & 50/60Hz



## Options

**Advanced controller**  
4.3" color display with TCP Modbus transmission.

**Nitrogen purity analyzer**  
Measures the purity of the produced nitrogen before allowing it to the outlet.

**Inlet PDP monitoring**  
Measures the PDP of compressed air at the inlet.

**Outlet PDP monitoring**  
Measures the PDP at the outlet.

**Mass flow controller**  
Ensures a constant nitrogen flow at the outlet.

**Flow meter sensor**  
Measures the nitrogen flow rate. Can be monitored with the advanced controller and re-transmitted through Modbus.

**External oxygen analyzer (wall mounted)**  
Measures the oxygen level in a room to ensure safety.

The PPNG 1-5.5 HE is Pneumatech's premium generator for low-flow nitrogen applications. The cost-efficient alternative to ordering and storing gas cylinders, the PPNG HE gives you complete control over your nitrogen supply. Extremely compact thanks to its small footprint, it easily fits in existing compressed air networks. Its innovative PSA cycle and highly efficient CMS keep your operational costs down, while its extruded profile design ensures superior reliability and a long lifetime.

## The nitrogen cylinder alternative

**Easy operation:** Easy to install and use, the PPNG 1-5.5 HE can simply be connected to your compressed air network.

**Long lifetime:** The PPNG's protective features ensure a long lifetime of the machine and the CMS.

**Efficiency:** Our innovative PSA cycle and high-quality CMS deliver best-in-class efficiency to keep your energy costs down and emissions low. The Economizer function ensures no air/energy is wasted because of stand-by losses.

**Quality and purity options:** A host of optional features is available for applications that require strict quality and purity control. These include inlet and outlet PDP monitoring, a nitrogen purity analyzer, and a flow meter sensor.

**Advanced controller:** An intuitive color touch screen shows the machine status, key parameters, service information, and alerts. The advanced controller can also be set up for remote monitoring when performance control is required.

## PSA nitrogen generation

The PPNG HE uses Pressure Swing Adsorption (PSA) technology to separate nitrogen from compressed air. As the air passes through a vessel filled with Carbon Molecular Sieves (CMS), the oxygen and other trace gases in the air are adsorbed by the CMS, leaving only nitrogen with a purity of up to 99.999% to reach the outlet.



Technical specifications for PPNG 1-5.5 HE								
Specifications	Units	Product → Purity ↓	PPNG 1 HE	PPNG 2 HE	PPNG 3 HE	PPNG 3.5 HE	PPNG 5 HE	PPNG 5.5 HE
Nominal free Nitrogen delivery <sup>(1)</sup>	m <sup>3</sup> /hr	95%	4.3	6.9	9.6	11.1	14.3	18.8
		99.9%	0.8	1.7	2.5	3.2	4.3	5.5
		99.999%		0.3	0.5	0.8	1.6	1.8
Nominal air consumption <sup>(1)</sup>	m <sup>3</sup> /hr	95%	8.1	13	18.2	21	27.2	35.7
		99.9%	2.9	6.2	9.4	12	15.9	20.3
		99.999%		2.4	3.3	5.6	10.9	12.6
Air factor		95%	1.9	1.9	1.9	1.9	1.9	1.9
		99.9%	3.7	3.7	3.7	3.7	3.7	3.7
		99.999%		7	7	7	7	7
Pressure dewpoint outlet (°C)	°C/°F		-40	-40	-40	-40	-40	-40
Maximum pressure drop	bar	95-99.9%	0.6	0.8	0.8	0.8	0.9	1
		99.95% - 99.999%	0.6	0.3	0.3	0.3	0.4	0.5
Length	mm		440	440	440	440	440	440
	inch		17	17	17	17	17	17
Width	mm		453	453	453	453	453	453
	inch		18	18	18	18	18	18
Height	mm		738	918	1093	1243	1493	1843
	inch		29	36	43	49	59	73
Mass	kg		54	63	76	83	96	113
	lbs		119	139	168	183	212	249
Inlet - Outlet Connections			DN15	DN15	DN15	DN15	DN15	DN15

(1) Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C/68°F & air inlet quality of ISO 8573-1:2010 class 1-4-1

# PPNG 6 - 90 HE - Nitrogen generator with pressure swing adsorption technology

## Features & Benefits

- ▶ Variable Flow Saver algorithm
  - PPNG 6-90 HE is able to match the lower demand by adapting the PSA cycle and the feed air intake
  - Upto 70% additional energy savings
- ▶ Advanced energy saving control
  - Reduced air consumption at low nitrogen demand
  - Also compensates for altering ambient conditions and purity settings
  - No compressed air use when no nitrogen is consumed
- ▶ Outstanding air factors: thanks to optimised proprietary PSA cycle
- ▶ High-quality, highest efficiency CMS on the market
- ▶ Guaranteed purity
  - Automatically regulates to the requested nitrogen pressure and purity
  - Minimum purity setting: blow off to protect the customers process if the purity isn't reached
  - Zirconia sensors for reliable purity measurement
- ▶ Designed & tested for cyclic load
- ▶ Optimal control and monitoring thanks to Purelogic™ Controller
  - Self-protective monitoring of the feed air quality
  - Feed-air blow-off in case of off-spec conditions
  - Nitrogen flow, purity and pressure measured and controlled
  - Automatic start-up
  - ICONS remote control and connectivity

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) nitrogen generators - extruded profile design
- ▶ Nitrogen purity achievable: 95% - 99.9% (PCT Variant) & 99.95%-99.999% (PPM variant)
- ▶ Inlet pressure range: 4-13 barg /60-189 psig
- ▶ Inlet temperature range: 5-60°C/41-140°F
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- ▶ Power supply: 115-230VAC/50-60Hz
- ▶ IEC, UL and CRN approvals



## Options



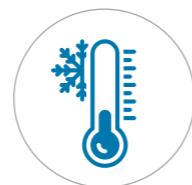
Wooden Packaging



Outlet (N<sub>2</sub>) dewpoint sensor



Room oxygen monitor (wall mounted)



Low ambient option

The PPNG 6-90 HE series is Pneumatech's premium on-site nitrogen solution for low to medium flows, with best-in-class performance and the most complete scope of supply.

The generator has outstanding air factors at full load thanks to the use of highly efficient Carbon Molecular Sieves (CMS) and back-flow pressurization.

The air consumption is also optimized at reduced nitrogen flow or pressure demands, thanks to the advanced energy

saving algorithm, which automatically adjusts the cycle times of the generator.

The control and monitoring capabilities of the PPNG 6-90 HE are truly impressive. Purity is guaranteed at all times by opening the consumer valve only at the requested purity level and flushing nitrogen when purity is not reached. Feed air quality is controlled by monitoring temperature, pressure and PDP. The feed air is blown off in case of contamination. All risks of possible CMS damage are eliminated thanks to the automatic start-up feature.

## Technical specifications for PPNG 6 - 90 HE

Specifications	Units	Variant	Product → Purity ↓	PPNG 6 HE	PPNG 7 HE	PPNG 9 HE	PPNG 12 HE	PPNG 15 HE	PPNG 18 HE	PPNG 22 HE	PPNG 28 HE	PPNG 30 HE	PPNG 37 HE	PPNG 41 HE	PPNG 50 HE	PPNG 65 HE	PPNG 75 HE	PPNG 90 HE	
Nominal free nitrogen delivery <sup>(1)</sup>	Nm <sup>3</sup> /hr	PCT (%)	95	18.2	23.4	28.7	36.4	46.9	57.3	70.3	86.0	93.8	114.7	128.9	157.7	184.8	211.4	264.3	
			99.9	5.7	7.3	8.9	11.3	14.6	17.9	21.9	26.8	29.2	35.7	40.7	49.8	64.4	72.9	91.1	
		PPM (%)	99.999	1.92	2.47	3.0	3.8	4.9	6.0	8.0	9.7	10.6	13.0	15.9	19.5	26.3	29.8	37.2	
Pressure dewpoint outlet	°C /°F			-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	
Maximum pressure drop		PCT (%)	95	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.9	0.9	0.4	0.5	0.8	
			99.9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.2	0.2	0.3
		PPM (%)	99.999	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Length	mm			775	775	775	775	775	775	1400	1400	1400	1400	1400	1400	1400	1400	1400	
	inch			31	31	31	31	31	31	55	55	55	55	55	55	55	55	55	
Width	mm			840	840	840	840	840	840	840	840	840	840	840	840	970	970	970	
	inch			33	33	33	33	33	33	33	33	33	33	33	33	38	38	38	
Height	mm			2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2067	2067	2067	
	inch			79	79	79	79	79	79	79	79	79	79	79	79	81	81	81	
Mass	kg			310	325	340	380	403	425	545	590	645	705	830	910	1140	1140	1560	
	lbs			683	716	749	838	888	937	1201	1301	1422	1554	1830	2006	2513	2513	3439	
Inlet and outlet connections	G/NPT			1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	

1. Flow is measured at Reference Conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C & Air Inlet Quality of ISO 8573-1:2010 class 1-4-1

# PPNG 6 - 68 S - Nitrogen generator with pressure swing adsorption technology

## Features & Benefits

- ▶ Energy saving control
- ▶ Outstanding air factors thanks to back-flow pressurization
- ▶ High-quality, high-efficient Carbon Molecular Sieves selected for the right application
- ▶ Guaranteed purity
  - Zirconia sensors for reliable purity measurement
  - Dedicated high purity variants
  - Purity certificates
- ▶ Designed & tested for cyclic load
- ▶ Reliable, efficient and low-maintenance angle seat valves
- ▶ Carefully designed exhaust silencers resulting in quiet and safe operation of the generator
- ▶ Optimal control and monitoring thanks to Purelogic™ Controller

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) nitrogen generators - extruded profile design
- ▶ Nitrogen purity achievable: 95% - 99.9% (PCT Variant) & 99.95%-99.999% (PPM variant)
- ▶ Inlet pressure range: 4-13 barg /60-189 psig
- ▶ Inlet temperature range: 5-60°C/41-140°F
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- ▶ Power supply: 115-230VAC/50-60Hz



## Options



Wooden packaging



Flow meter



PDP sensor kit

The PPNG 6-68s series provides an efficient source of nitrogen for use in various industries like food and beverage, pharma, electronics and plastics. PPNG nitrogen generators use Pressure Swing Adsorption technology to extract nitrogen molecules from the compressed air; and can reach purities from 95% up to 99,999%. Nitrogen pressures can go up to 12 barg without the need for an additional booster. The air factors of the PPNG6-68s range are outstanding, making the return on investment very attractive compared to traditional gas supply.

With its PPNG 6-68s series, Pneumatech follows the plug and play philosophy. Pressure vessels, valves, exhaust system,

sensors and controls are all integrated within a compact canopy, designed for easy transport, installation and service.

The Purelogic™ is the central brain of the nitrogen generator. It optimizes operating costs thanks to the availability of the energy saving control; ensures maximum reliability by keeping track of the most important parameters of the generator; and offers impressive control and monitoring capabilities.

The optional flow meter and inlet pressure dew point sensor can be added to the scope of supply to further exploit the monitoring capabilities of the Purelogic™ controller.

## Technical specifications for PPNG 6-68 S

Specifications	Units	Variant	Product→ Purity ↓	PPNG 6S	PPNG 7S	PPNG 9S	PPNG 12S	PPNG 15S	PPNG 18S	PPNG 22S	PPNG 28S	PPNG 30S	PPNG 37S	PPNG 41S	PPNG 50S	PPNG 63S	PPNG 68S
Nominal free nitrogen delivery <sup>(1)</sup>	Nm <sup>3</sup> /hr	PCT (%)	95	22.3	28.8	35.2	44.7	57.5	70.3	86.3	105.5	115.0	140.7	159.7	NA	NA	NA
			99.9	5.9	7.6	9.3	11.8	15.2	18.6	22.8	27.9	30.4	37.2	45.6	55.8	59.1	64.7
			PPM (%)	99.999	1.7	2.2	2.7	3.4	4.4	5.3	7.1	8.7	9.5	11.6	14.3	17.4	20.5
Nominal air consumption <sup>(1)</sup>	Nm <sup>3</sup> /hr	PCT (%)	95	43.1	55.5	67.9	86.3	111.0	135.8	166.5	203.7	222.0	271.5	308.3	NA	NA	NA
			99.9	23.9	30.8	37.7	47.9	61.6	75.3	92.4	113.0	123.2	150.7	182.5	223.3	226.8	258.6
			PPM (%)	99.999	11.5	14.8	18.1	22.9	29.5	36.1	47.4	58.0	63.2	77.3	93.4	114.2	122.4
Air Factor	-	PCT (%)	95	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	NA	NA	NA
			99.9	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.00	4.00	3.84	4.00
			PPM (%)	99.999	6.8	6.8	6.8	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.6	6.6	6.0
Pressure dewpoint outlet	°C /°F		-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Maximum pressure drop	barg	PCT (%)	95	0.8	0.8	0.8	1	1	1.1	1.2	1.2	1.2	1.2	1.4	NA	NA	NA
			99.9	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.9	0.9	0.9	1
			PPM (%)	99.999	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7
Length	mm		798	798	798	798	798	798	1422	1422	1422	1422	1422	1422	1422	1422	
	inch		31	31	31	31	31	31	56	56	56	56	56	56	56	56	
Width	mm		840	840	840	840	840	840	840	840	840	840	970	970	970	970	
	inch		33	33	33	33	33	33	33	33	33	33	38	38	38	38	
Height	mm		2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	2022	
	inch		80	80	80	80	80	80	80	80	80	80	80	80	80	80	
Mass	kg		244	257	270	306	339	360	599	627	663	716	805	1018	1191	1191	
	lbs		538	567	595	675	747	794	1321	1382	1462	1579	1775	2244	2626	2626	
Inlet and outlet connections	G/NPT		1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	

1. Flow is measured at Reference Conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C & Air Inlet Quality of ISO 8573-1:2010 class 1-4-1

# PPNG 100 - 800 HE - Nitrogen generators with pressure swing adsorption technology

## Features & Benefits

- ▶ Outstanding air factors with innovative PSA cycle design
- ▶ High-quality, high-efficiency Carbon Molecular Sieves
- ▶ Variable Flow Saver decreases air consumption at low nitrogen demand, reducing it to zero when no nitrogen is consumed
- ▶ Purity selection up to 99.999%
- ▶ Guaranteed purity thanks to automatic regulation and zirconia sensors
- ▶ Designed and tested for cyclic load
- ▶ Robust welded design and protective features ensure long CMS and generator lifetime
- ▶ Optional outdoor installation saves on floor space
- ▶ Optimal control, monitoring and connectivity thanks to Purelogic™ Controller

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) nitrogen generator
- ▶ Nitrogen purity achievable: 95%-99.9% (PCT) & 99.95%-99.999% (PPM)
- ▶ Inlet pressure range: 5-10 barg/72-150 psig
- ▶ Ambient temperature range: 5-50°C/41-122°F (-10-50°C/14-122°F with desiccant dryer)
- ▶ Required inlet air quality: 2-4-1 according to ISO 8573-1:2010 (2:3:1 required for lower than 5°C/41°F ambient)
- ▶ Power supply: 115V AC/230V AC & 50/60Hz

The PPNG 100-800 HE is Pneumatech's premium high-flow PSA nitrogen generator, delivering best-in-class performance, efficiency, and purity. It offers superior reliability and a long lifetime, even when installed outside. An innovative PSA cycle, highly efficient Carbon Molecular Sieves (CMS), and our unique Variable Flow Saver technology ensure maximum energy savings and sustainability.

## PSA nitrogen generation

The PPNG HE uses Pressure Swing Adsorption (PSA) technology to separate nitrogen from compressed air. As the air passes through a vessel filled with Carbon Molecular Sieves (CMS), the oxygen and other trace gases in the air are adsorbed by the CMS, leaving only nitrogen with a purity of up to 99.999% to reach the outlet. PSA generators are ideal for high-purity, high-flow applications.



## Options



Wooden packaging



Outlet PDP sensor

## Best-in-class PSA performance

### Guaranteed purity

- Zirconia sensors provide reliable purity measurement

### Long lifetime

- A heavy-duty welded design and a host of protective features ensure a long lifetime of the machine.

### Efficiency

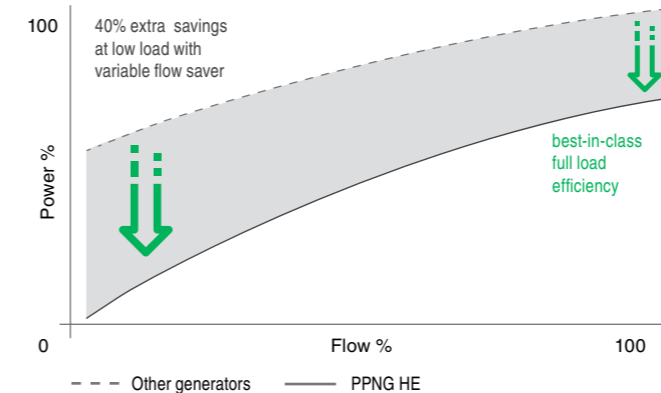
- Our innovative PSA cycle and high-efficiency CMS deliver best-in-class efficiency to keep energy costs low.

### Advanced Purelogic™ Controller

- Self-protective monitoring of the feed air quality
- Nitrogen flow, purity and pressure measurement and control
- Optional 24/7 ICONS remote monitoring of flow, pressure, purity and all other key data in real time

### Outdoor installation

- Save on valuable floor space! The PPNG HE's robust design allows for outdoor installation in temperatures down to -10°C/14°F.



## VFS: 40% savings at low load



Traditional nitrogen generators maintain a constant PSA cycle, regardless of the nitrogen demand. Thanks to the Variable Flow Saver algorithm, the PPNG HE is able to match the lower demand by adapting the PSA cycle and the feed air intake. The result: you enjoy up to 40% additional energy savings.

## Technical specifications for PPNG 100-800 HE

Specifications	Variant	Product → Purity ↓	Units	PPNG 100 HE	PPNG 125 HE	PPNG 150 HE	PPNG 200 HE	PPNG 250 HE	PPNG 300 HE	PPNG 350 HE	PPNG 400 HE	PPNG 500 HE	PPNG 650 HE	PPNG 800 HE
Nominal free nitrogen delivery (1)	PCT(%)	95%	m³/h	312.9	393.3	518.0	669.4	819.6	969.9	1187.4	1420.6	1779.7	2257.7	2870.9
		99.5%		157.3	197.8	251.6	325.2	398.2	471.1	576.8	690.1	864.6	1096.7	1394.6
		99.999%		45.9	57.7	67.6	87.4	107.0	126.6	155.1	185.5	232.3	294.7	374.7
Pressure dewpoint outlet		°C/°F	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Length			mm	1700	1700	1846	1846	1846	2100	2100	2100	3121	3121	3121
			inch	66.9	66.9	72.7	72.7	72.7	82.7	82.7	82.7	122.9	122.9	122.9
Width			mm	1830	1830	2296	2380	2496	2703	2780	2880	3684	3773	3860
			inch	72.0	72.0	90.4	93.7	98.3	106.4	109.4	113.4	145.0	148.5	152.0
Height			mm	2055	2370	2620	2633	2620	3028	3022	3025	3987	4211	4423
			inch	80.9	93.3	103.1	103.7	103.1	119.2	119.0	119.1	157.0	165.8	174.1
Mass			kg	2400	2630	3319	3907	4865	5687	6403	7360	8755	10619	12368
			lbs	1088.4	1192.7	1505.2	1771.9	2206.3	2579.1	2903.9	3337.9	3970.5	4815.9	5609.1
Inlet connections			G/NPT	DN50	DN50	DN80	DN80	DN80	DN100	DN100	DN100	DN150	DN150	DN150
Outlet connections			G/NPT	DN25	DN25	DN50	DN50	DN50	DN50	DN50	DN50	DN50	DN50	DN50

(1) Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C/68°F & air inlet quality of ISO 8573-1:2010 class 2-4-1

## Options

- Outlet dewpoint sensor**  
Monitors the outlet nitrogen pressure dewpoint for critical applications.
- External room oxygen monitor**  
Measures the oxygen level in a room to ensure safety.
- Low ambient temperature version**  
Allows the generator to run in temperatures down to -10°C/14°F.
- Low pdp sensor option**  
If the inlet air pressure dewpoint is -50°C/-58°F or below, a sensor calibrated for these low dewpoints can be provided.
- NEMA 4X / IP65 control box**  
Stainless steel enclosure shields the controller in outdoor installations, protecting it from corrosion and extreme conditions.

# PPNG 1-12 skid HE - High-pressure nitrogen skid

## Features & Benefits

- ▶ All-in-one solution with all components built-in and piped together
- ▶ Single power supply for the complete skid
- ▶ 30% more efficient than other high-pressure N<sub>2</sub> packages
- ▶ All components are built and tested to work together optimally
- ▶ 40-bar and 300-bar version in different sizes and with a wide range of options
- ▶ VSD compressor delivers double-digit energy savings and emissions reductions
- ▶ 40 or 300-bar booster sized to minimize power use
- ▶ High-efficiency PSA generator with purity selection up to 99.999%
- ▶ Additional filtration is built in as standard to protect critical N<sub>2</sub> applications
- ▶ Optimal control, monitoring and connectivity thanks to Purelogic™ Controller
- ▶ Forklift slots for easy lifting and moving

## General Specifications

- ▶ Purity range: 99.95% to 99.999%\*
- ▶ Outlet pressures available: 40 barg and 300 barg\*\*
- ▶ Ambient temperature range: 5-50°C/41-122°F\*\*\*
- ▶ Power supply: 400/3/50 (460/3/60 available upon request)

\* Lower purities available upon request  
 \*\* Different pressures available upon request  
 \*\*\* Above 35°C applications an oversized refrigerant dryer should be selected

Meet Pneumatech's all-in-one high-pressure nitrogen solution. The PPNG skid HE is the complete on-site nitrogen generation system that frees you from dependency on external suppliers. The PPNG skid HE comes in two versions: 40-bar for peak and on-demand nitrogen and 300-bar with bottle storage. Each comes in different sizes to meet your specific needs. Supremely easy to install and operate, the PPNG skid HE ensures an always dependable nitrogen supply while significantly lowering your operational costs.

## An all-in-one N<sub>2</sub> solution

The PPNG skid HE combines all components of a nitrogen generation system on one sturdy base frame: a VSD compressor, a high-pressure booster, a PSA nitrogen generator, and all necessary air and nitrogen storage and treatment. No need to specify, integrate, and commission all these separate components. Instead, you get a complete plug-and-play system with just one power supply and one nitrogen connection to manage.

## Options

### Pressure regulators

Regulate the stored nitrogen pressure to the required application pressure.

### Gas mixers

Allow mixing of nitrogen and oxygen for mixed gas applications.

### External room oxygen monitor

Measures the oxygen level in a room to ensure safety.

### Additional storage

- K6 – 6 x 50L cylinders up to 300 Barg, maximum 90 Nm3 volume
- K12 – 12 x 50L cylinders up to 300 Barg, maximum 180 Nm3 volume
- K16 – 16 x 50L cylinders up to 300 Barg, maximum 240 Nm3 volume

### High ambient temperature version

The unit comes as standard with a connection for an optional oversized refrigerant dryer to be easily connected to allow for reliable operation in temperatures higher than 35°C/95°F.

### Optimize (renewable) energy use

Looking to reduce your energy costs, your reliance on traditional energy sources, and your carbon footprint? With the optional Programmable Logic Controller, you can program the PPNG SolarNitro skid HE to produce nitrogen when you have excess solar energy or when electricity tariffs are low.

### Solar-powered N<sub>2</sub> generation:

Using your excess solar electricity to produce nitrogen is one of the most cost-efficient ways to harness this surplus energy.

### Reduce your energy costs:

Run the generator during the hours when lower electricity tariffs apply (e.g. at night or during the weekend) to save on energy costs.

## A complete nitrogen system

**PPNG HE nitrogen generator:** Efficient performance and guaranteed nitrogen purity up to 99.999%.

**Purelogic™ controller:** Optimal control and easy local and remote monitoring.

**4-stage inlet filtration:** Guaranteed air quality safeguards the N<sub>2</sub> generator and user applications.

**Variable speed drive compressor with integrated refrigerant dryer:** Guaranteed stable supply of pressure with double-digit reductions in energy use and emissions.

**40 barg receiver or 300 barg cylinder nitrogen storage:** Bottle rack with up to 16 high-pressure cylinders or a 40 barg receiver help manage peak demands by providing stored N<sub>2</sub>.

**40 barg or 300 barg nitrogen booster:** Sized to minimize power consumption and number of start/stops.

**Additional filtration:** Removes contaminants for sensitive applications.

**Local control panel and distribution board:** One panel to power and control the complete system.



Technical specifications for PPNG 1-12 skid HE

Pneumatech variant	PPNG Skid 1 HE	PPNG Skid 2 HE	PPNG Skid 3 HE	PPNG Skid 4 HE	PPNG Skid 5 HE	PPNG Skid 6 HE	PPNG Skid 7 HE	PPNG Skid 8 HE	PPNG Skid 9 HE	PPNG Skid 10 HE	PPNG Skid 11 HE	PPNG Skid 12 HE
<b>N<sub>2</sub> pressure - Nominal</b>	40	40	40	40	40	40	300	300	300	300	300	300
<b>N<sub>2</sub> capacity - 99.95%</b>	8.9	14.0	21.6	31.5	36.9	73.8	9.9	14.9	24.0	36.0	38.0	80.4
<b>N<sub>2</sub> capacity - 99.99%</b>	6.6	10.4	20.6	30.3	36.9	73.8	7.3	11.1	22.9	32.9	38.0	80.4
<b>N<sub>2</sub> capacity - 99.999%</b>	4.1	6.3	13.6	20.4	27.2	49.7	4.5	6.9	15.1	22.4	29.0	55.2
<b>Compressor model</b>	8 kw	11 kw	15 kw	22 kw	31 kw	45 kw	8 kw	8 kw	15 kw	19 kw	22 kw	45 kw
<b>Inlet filtration</b>	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D	PMH G - C - VT - D
<b>Air / N<sub>2</sub> buffer vessels (Litres)</b>	500	500	1000	1000	1500	2000	500	500	1000	1000	1500	2000
<b>Nitrogen generator</b>	PPNG12 HE	PPNG18 HE	PPNG37 HE	PPNG50 HE	PPNG68 HE	PPNG100 HE	PPNG12 HE	PPNG18 HE	PPNG37 HE	PPNG50 HE	PPNG68 HE	PPNG100 HE
<b>Nitrogen LP storage</b>	1000	1000	1000	1500	1000	2000	1000	1000	1000	1000	1000	1000
<b>Nitrogen booster</b>	7.5 kw	7.5 kw	7.5 kw	7.5 kw	7.5 kw	7.5 kw	5.5 kw	5.5 kw	5.5 kw	11 kw	11 kw	2x11 kw
<b>HP filtration</b>	50 Barg G - C - V - D	50 Barg G - C - V - D	50 Barg G - C - V - D	50 Barg G - C - V - D	50 Barg G - C - V - D	50 Barg G - C - V - D	HP V filter	HP V filter	HP V filter	HP V filter	HP V filter	HP V filter
<b>HP storage</b>	45 Barg 500L	45 Barg 500L	45 Barg 1000L	45 Barg 1000L	45 Barg 1000L	45 Barg 1000L	12 x 50L X 300 Barg	12 x 50L X 300 Barg	12 x 50L X 300 Barg	16 x 50L x 300 Barg	16 x 50L x 300 Barg	16 x 50L x 300 Barg

(1) Flow specified is at the outlet of the PPNG HE generator measured in Nm<sup>3</sup>/h at reference conditions: 1 bara and 20°C  
 (2) For the capacity at higher ambient temperatures please refer to our skid sizing calculator.  
 (3) 300 Barg skids will be set as standard to 290 Barg off-load pressure.

# PMNG 1 - 3 - Nitrogen generator with membrane technology

## Features & Benefits

- ▶ High Quality membrane separator
  - Superior membrane constructed from high quality Aluminum with technically advance fiber.
  - N<sub>2</sub> Generation is achieved without any moving part
  - Outstanding performance for 90-99,5% Nitrogen separation
- ▶ Simple, reliable and user friendly
  - All-in-one plug & play solution
  - All filters integrated in enclosed canopy design
  - Instant supply of nitrogen
  - No specialist installation or commissioning
- ▶ 3-stage pre-filtration integrated in the canopy
- ▶ No power supply required thanks to Pneumatic controlled valves & battery-powered nitrogen analyzer
- ▶ Guaranteed purity
  - Nitrogen analyzer (battery powered) with auto-calibration button (optional)
  - Purity controller to ensure constant N<sub>2</sub> purity at all times
- ▶ Compressed Air savings when desired purity is reached
  - Economizer (pneumatic) automatically stops air consumption when target pressure is reached

## General Specifications

- ▶ Membrane Nitrogen Generators
- ▶ Nitrogen purity achievable: 90%-99.5%
- ▶ Inlet pressure range: 4-13 bar/60-189 PSI
- ▶ Inlet temperature range: 5-50°C/41-122°F
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010



### Options



Economizer



Nitrogen analyser (battery powered)



Mobile version

Pneumatech's new smaller range of PMNG nitrogen generators utilizes proprietary membrane separation technology. Membrane generators are an excellent choice in low (90%) to medium (99,5%) purity applications such as tire inflation, fire prevention, tank blanketing and pipeline drying. Nitrogen pressures can go up to 12 bar (g) without the need for an additional booster.

Engineered for simplicity, durability and ease of use make the PMNG what we believe to be the most user friendly unit in the market. All pre-filters and controls are included inside the canopy. Only a supply of dry compressed air is needed to get nitrogen at the outlet of the generator. Also the start-up procedure of the PMNG is made so straightforward that it does not require any specialist.

Pneumatech offers a purity controller that delivers true consistent purity downstream in ANY flow situation. Our simple design allows adjustments to be made easily, with a single screw. The purity is reliably monitored thanks to the optional battery operated Nitrogen Analyser. The optional Economiser system is designed to save the utility costs of operating the compressor and reduces the wear and tear on Air and Nitrogen Systems.

This cost effective solution from Pneumatech significantly reduces Nitrogen costs over traditional sources of Nitrogen supply.

### Technical specifications for PMNG 1-3

Specifications	Units	Product→ Purity ↓	PMNG 1	PMNG 2	PMNG 3
Nominal air consumption	Nm <sup>3</sup> /hr	90%	15.48	30.96	46.44
		95%	9.72	19.44	29.16
		96%	9	18	27
		97%	7.56	15.12	22.68
		98%	6.84	13.68	16.92
		99%	6.12	12.24	18.36
Nominal free nitrogen delivery	Nm <sup>3</sup> /hr	99.5%	5.76	11.52	17.28
		90%	10.08	20.16	30.24
		95%	4.68	9.36	14.04
		96%	3.96	7.92	11.88
		97%	3.24	6.48	9.72
		98%	2.52	5.04	7.56
Air factor	-	99%	1.8	3.6	5.4
		99.5%	1.44	2.88	4.32
		90%	1.5	1.5	1.5
		95%	2.1	2.1	2.1
		96%	2.3	2.3	2.3
		97%	2.3	2.3	2.3
Pressure dewpoint outlet	°C /°F	98%	2.7	2.7	2.7
		99%	3.4	3.4	3.4
		99.5%	4.0	4.0	4.0
Length	mm		560.0	560.0	560.0
	inch		22.0	22.0	22.0
Width	mm		285.0	285.0	285.0
	inch		11.0	11.0	11.0
Height	mm		1150.0	1150.0	1150.0
	inch		45.0	45.0	45.0
Mass	kg		60.0	62.0	65.0
	lbs		132.3	136.7	143.3
Inlet connections	G		G1/2"	G1/2"	G1/2"
Outlet connections	G		G1/2"	G1/2"	G1/2"

1. Flow is measured at reference conditions: 1 Bar(a) and 20°C at operating pressure of 8 bar (g), inlet temperature 20°C & Air Inlet Quality of ISO 8573-1:2010 class 1-4-1.



# PMNG 4 - 40 HE - Nitrogen generators with membrane technology

## Features & Benefits

- ▶ Reduced air consumption by 35% on average (up to 51%) versus other membrane generators
- ▶ More flow in the same compact footprint
- ▶ All-in-one plug & play solution
- ▶ Very low sound levels
- ▶ Instant purity selection between 95% and 99.5%
- ▶ Proprietary membrane technology ensuring lasting performance
- ▶ No heater (which requires extra power) needed
- ▶ Guaranteed purity
- ▶ Reliable purity measurement
- ▶ All filters integrated in canopy
- ▶ No buffer vessels required
- ▶ Instant supply of nitrogen
- ▶ No specialist installation or commissioning
- ▶ Optimal control, monitoring and connectivity thanks to new Purelogic™ Controller

## General Specifications

- ▶ Membrane Nitrogen Generators
- ▶ Nitrogen purity achievable: 95%-99.5%
- ▶ Inlet pressure range: 4-13 barg/60-189 psig
- ▶ Inlet temperature range: 5-50°C/41-122°F
- ▶ Required inlet air quality: -4:- according to ISO 8573-1:2010
- ▶ Power supply: 115-230VAC/50-60Hz



### Options

#### Oil indicator

Monitors the oil level of the air going into the membranes.

#### Inlet dewpoint sensor

Monitors the inlet dewpoint and triggers a shutdown warning if the dewpoint is too high.

#### High ambient temperature software

Protects the unit in high ambient conditions.

#### Flow sensor

Ensures 24/7 nitrogen flow monitoring.

#### Outlet dewpoint sensor

Visualises the outlet pressure dewpoint for critical applications.

With the PMNG HE, on-site nitrogen production becomes exceptionally convenient and cost-efficient. A true all-in-one solution, the PMNG HE is ready to go the minute you connect it to your compressor. You don't even need additional process vessels or filtration. You save on floor space too, as the compact and quiet unit can be installed at the point of use. And its 35% on average lower energy use reduces your operational costs and environmental impact.

### Membrane nitrogen generation

The PMNG HE uses membrane technology, a very simple, reliable and continuous nitrogen production method. Hollow polymer membranes separate nitrogen from compressed air, permeating enriched oxygen into the atmosphere and leaving quality nitrogen with a purity between 95% and 99.5% at outlet.

### Best-in-class membrane technology

- Save 35% on average and up to 51% on running costs compared to other membrane nitrogen generators.
- Everything you need to generate nitrogen is built into the box. No external tanks or filters are needed.
- Top end models provide 43% more flow in the same small
- Thanks to its extremely low sound levels, the PMNG HE can be comfortably installed at the point of use without disturbing operators. canopy size.
- Everything you need to generate nitrogen is built into the box. No external tanks or filters are needed.

Technical specifications for PMNG 4-40 HE												
Specifications	Product →	Units	PMNG 4 HE	PMNG 8 HE	PMNG 12 HE	PMNG 16 HE	PMNG 20 HE	PMNG 24 HE	PMNG 28 HE	PMNG 32 HE	PMNG 36 HE	PMNG 40 HE
	Purity ↓											
Nominal free nitrogen delivery	95%	Nm <sup>3</sup> /h	24.7	49.4	74.1	98.8	123.5	148.2	172.9	197.5	222.2	246.9
	96%		20.9	41.8	62.7	83.6	104.5	125.5	146.4	167.3	188.2	209.1
	97%		17.2	34.5	51.7	68.9	86.2	103.4	120.6	137.9	155.1	172.4
	98%		13.4	26.8	40.3	53.7	67.1	80.5	93.9	107.4	120.8	134.2
	99%		9.6	19.3	28.9	38.5	48.1	57.8	67.4	77.0	86.6	96.3
Length	99.5%		7.1	14.2	21.4	28.5	35.6	42.7	49.9	57.0	64.1	71.2
		inch	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
Width		mm	820	820	820	820	820	820	820	820	820	820
		inch	30.4	30.4	57.9	57.9	57.9	57.9	57.9	57.9	57.9	57.9
Height		mm	772	772	1470	1470	1470	1470	1470	1470	1470	1470
		inch	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3
Mass		mm	2090	2090	2090	2090	2090	2090	2090	2090	2090	2090
		lbs	502.7	553.5	1040.8	1100.3	1219.4	1270.1	1360.5	1415.6	1517.0	1572.2
Shipping length		kg	228	251	472	499	553	576	617	642	688	713
		inch	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9
Shipping width		mm	988	988	988	988	988	988	988	988	988	988
		inch	32.4	32.4	54.1	54.1	54.1	54.1	54.1	54.1	54.1	54.1
Shipping height		mm	822	822	1375	1375	1375	1375	1375	1375	1375	1375
		inch	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1	92.1
Shipping mass		mm	2340	2340	2340	2340	2340	2340	2340	2340	2340	2340
		lbs	638.1	688.8	1212.8	1272.3	1391.4	1442.1	1532.5	1587.6	1689.0	1744.2
Dimensions of inlet and outlet connections		kg	289.4	312.4	550	577	631	654	695	720	766	791
			1/2"	1/2"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"	1 1/2" - 1"

(1) Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 8 barg, inlet temperature 20°C & air inlet quality of ISO 8573-1:2010 class -4:-

# PPOG 2 - 18 HE - Oxygen generator with pressure swing adsorption technology

## Features & Benefits

- ▶ 30% lower energy consumption than traditional generators
- ▶ 70% additional energy savings at low load
- ▶ Lowers your environmental impact
- ▶ Compact footprint
- ▶ Complete oxygen set-up: air and oxygen quality sensors, pressure regulator, and flow meters included
- ▶ Plug-and-play installation with automatic start-up
- ▶ Easy purity setting
- ▶ Guaranteed purity and cleanliness
- ▶ Optimal control and monitoring thanks to Purelogic™ Controller
- ▶ Connectivity to DCS, SCADA, and PLC systems available
- ▶ Available with IEC and CSA/UL approvals

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) Oxygen Generator
  - aluminum extrusions
- ▶ Oxygen purity achievable: 90%-95%
- ▶ Inlet pressure range: 4.5-10 barg /65-145 psig
- ▶ Inlet temperature range: 5-50°C/41-122°F (with the option for -10-50°C/14-122°F)
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- ▶ Power supply: 115-230VAC/50-60Hz



### Options



Low ambient temperature option (-10°C/14°F)



Oxygen pressure dewpoint sensor



Room oxygen monitor (wall mounted)



PDP sensor kit

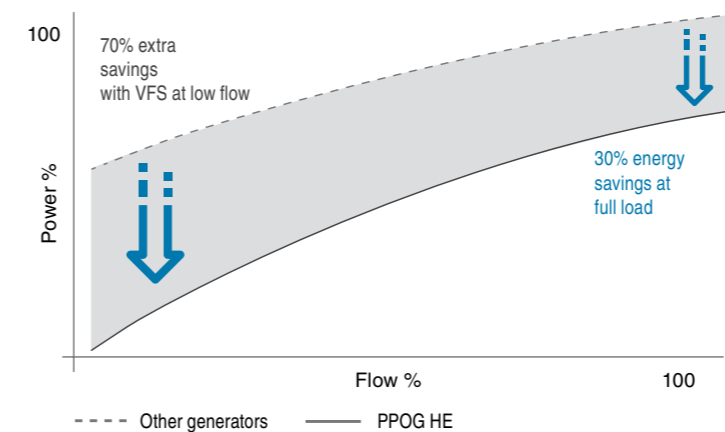
The PPOG High-Efficiency is a true game changer in on-site oxygen generation. 30% more efficient than traditional oxygen generators, the PPOG HE gives you the oxygen volume, purity and reliability you need at a massively reduced cost and a smaller environmental footprint.

Traditional oxygen generators maintain a constant PSA cycle, regardless of the oxygen demand. Thanks to the Variable Flow Saver algorithm, the PPOG HE is able to match the lower demand by adapting the PSA cycle and the feed air intake. The result: you enjoy up to 70% additional energy savings.

### Technical specifications for PPOG 2-18 HE

Specifications	Oxygen purity	Units	PPOG2HE	PPOG4HE	PPOG5HE	PPOG7HE	PPOG9HE	PPOG10HE	PPOG14HE	PPOG18HE
Nominal free oxygen flow*	90%	Nm <sup>3</sup> /h	3.3	6.6	10.0	13.3	16.6	19.7	26.3	32.9
	93%		3.0	6.0	9.4	12.5	15.7	18.1	24.1	30.2
	95%		2.5	5.1	8.3	11.1	13.9	15.2	20.3	25.3
Pressure dewpoint outlet		°C/°F	-40	-40	-40	-40	-40	-40	-40	-40
Oxygen outlet quality	ISO 8573-1:2010 Class 1-2-1									
Length	mm		840	840	840	840	840	970	970	970
	inch		33.1	33.1	33.1	33.1	33.1	38.2	38.2	38.2
Width	mm		796	796	1421	1421	1421	1421	1421	1421
	inch		31.3	31.3	55.9	55.9	55.9	55.9	55.9	55.9
Height	mm		2015	2015	2015	2015	2015	2015	2015	2015
	inch		79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
Mass	kg		318	400	624	706	788	970	1134	1298
	lbs		701	882	1376	1556	1737	2138	2500	2862
Inlet and outlet connections			1/2"	1/2"	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"

\* Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of compressed air of 6 barg and oxygen pressure at the outlet 5 barg, inlet temperature 20°C & air inlet quality of ISO 8573-1:2010 class 1-4-1



- Cleaned for oxygen use
- Air quality sensor at inlet protects your ZMS
- Oxygen sensor monitors quality and purity at outlet
- Pressure regulator and flow meters included as standard
- Antibacterial filters available for critical applications



# PPOG 1 - 120 - Oxygen generator with pressure swing adsorption technology

## Features & Benefits

- ▶ Energy saving control
- ▶ High-quality, high-efficient zeolite, selected for the right application
- ▶ Guaranteed purity
  - Zirconia sensors for reliable purity measurement
- ▶ Designed & tested for cyclic load
- ▶ Optimal control and monitoring thanks to Purelogic™ Controller
- ▶ Available with IEC and CSA/UL approvals

## General Specifications

- ▶ Pressure Swing Adsorption (PSA) Oxygen Generators - welded vessels
- ▶ Oxygen purity achievable: 90%-95%
- ▶ Inlet pressure range: 4-7.5 barg /58-109 psig
- ▶ Inlet temperature range: 5-45°C/41-113 F
- ▶ Required inlet air quality: 1-4-1 according to ISO 8573-1:2010
- ▶ Power supply: 115-230VAC/50-60Hz



Pneumatech gives oxygen to your business. With the PPOG range, Pneumatech offers an attractive replacement for traditional oxygen supply with very interesting returns on investment. The PPOG1-120 series uses Pressure Swing Adsorption technology to extract oxygen from compressed air, resulting in oxygen purity levels up to 95%.

The PPOG1-120 range is a welded vessel design, designed and tested for cyclic load. The Purelogic™ is the central brain of the generator. It optimizes operating costs thanks to the availability of the energy saving control; ensures maximum reliability by

monitoring the most important parameters of the generator; and offers impressive control and monitoring capabilities.

The calibrated flow meters are part of the standard scope of supply, in order to facilitate the start-up process and to provide transparency of the actual oxygen consumption. The optional oxygen buffer vessel is equipped with a pressure regulator, manometer and dust filter. Each of these components is approved for high-purity oxygen use. The optional inlet pressure dew point sensor provides additional security in case the upstream dryer would fail.

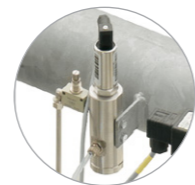
Technical specifications for PPOG 1-120																							
Specifications	Units	Product → Purity ↓	PPOG 1	PPOG 1.5	PPOG 2	PPOG 3	PPOG 4	PPOG 5	PPOG 6	PPOG 8	PPOG 11	PPOG 12	PPOG 14	PPOG 17	PPOG 20	PPOG 26	PPOG 33	PPOG 39	PPOG 50	PPOG 63	PPOG 93	PPOG 120	
Nominal free oxygen delivery <sup>(1)</sup>	Nm <sup>3</sup> /hr	90%	2.0	3.1	3.8	4.6	6.6	7.9	9.7	14.2	18.5	20.3	23.4	29.3	35.1	45.3	56.0	66.1	85.5	106.8	157.7	203.5	
		93%	1.6	2.5	3.5	4.3	5.6	7.3	9.0	13.4	18.3	19.3	21.4	27.6	33.0	42.7	51.9	64.1	79.4	101.7	154.6	188.2	
		95%	1.5	2.3	3.4	4.0	5.4	6.9	8.3	12.2	15.4	18.3	20.3	26.3	31.6	39.2	48.8	57.0	74.3	93.6	143.4	175.0	
Nominal air consumption	Nm <sup>3</sup> /hr	90%	22.6	30.5	36.6	54.9	73.3	103.8	103.8	157.5	192.3	219.8	256.4	329.6	366.3	518.9	634.8	799.6	982.8	1245.3	1867.9	2246.3	
		93%	22.0	29.9	36.0	53.7	67.1	100.7	102.6	146.5	189.2	213.6	244.2	319.9	355.3	512.8	604.3	781.3	964.5	1220.8	1953.3	2228.0	
		95%	21.4	28.7	35.4	51.9	65.9	97.7	102.6	140.4	170.9	207.5	238.1	313.1	347.9	500.5	586.0	763.0	915.6	1159.8	1892.3	2197.5	
Average air/oxygen ratio		90%	11.1	10.0	9.7	12.0	11.1	13.1	10.7	11.1	10.4	10.8	11.0	11.3	10.4	11.5	11.3	12.1	11.5	11.7	11.8	11.0	
		93%	13.5	11.8	10.4	12.6	12.0	13.8	11.5	10.9	10.3	11.1	11.4	11.6	10.8	12.0	11.6	12.2	12.2	12.0	12.6	11.8	
		95%	14.0	12.3	10.5	13.1	12.2	14.1	12.3	11.5	11.1	11.3	11.7	11.9	11.0	12.8	12.0	13.4	12.3	12.4	13.2	12.6	
Pressure dewpoint outlet (°C)	°C/°F		-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	
Oxygen outlet quality			ISO8573-1:2010 Class 1-2-1																				
Length	mm		600.0	600.0	750.0	750.0	850.0	850.0	1120.0	1120.0	1190.0	1230.0	1230.0	1640.0	1765.0	1960.0	1960.0	1960.0	2470.0	2920.0	2470.0	2920.0	
	inch		23.6	23.6	29.5	29.5	33.5	33.5	44.1	44.1	46.9	48.4	48.4	64.6	69.5	77.2	77.2	77.2	97.2	115.0	97.2	115.0	
Width	mm		757.0	757.0	770.0	770.0	848.0	848.0	875.0	875.0	924.0	943.0	947.0	1108.0	1135.0	1175.0	1175.0	1175.0	1305.0	1440.0	2610.0	2880.0	
	inch		29.8	29.8	30.3	30.3	33.4	33.4	34.4	34.4	36.4	37.1	37.3	43.6	44.7	46.3	46.3	46.3	51.4	56.7	102.8	113.4	
Height	mm		1467.0	1489.0	1801.0	1801.0	1630.0	1630.0	1962.0	1962.0	2252.0	2278.0	2678.0	2450.0	2492.0	3094.0	3094.0	3592.0	3097.0	3280.0	3097.0	3280.0	
	inch		57.8	58.6	70.9	70.9	64.2	64.2	77.2	77.2	88.7	89.7	105.4	96.5	98.1	121.8	121.8	141.4	121.9	129.1	121.9	129.1	
Mass	kg		193.8	226.8	324.8	330.6	412.6	412.6	723.0	735.0	1009.3	1192.3	1321.2	2359.3	2632.7	3150.0	3150.0	3681.0	4908.0	6489.0	9746.0	12470.0	
	lbs		427.3	500.0	716.1	728.9	909.6	909.6	1593.9	1620.3	2225.1	2628.5	2912.7	5201.4	5804.1	6944.6	6944.6	8115.2	10820.3	14305.8	21486.2	27491.6	
Inlet connections	G/ NPT		G1/2"	G1/2"	G1/2"	G1/2"	G1/2"	G1/2"	G 3/4"	G 3/4"	G1"	G1"	G1"	G1 1/2"	G1 1/2"	DN50	DN50	DN50	DN50	DN50	2xDN50	2xDN50	
Outlet connections	G/ NPT		G3/8"	G3/8"	G3/8"	G3/8"	G3/8"	G3/8"	G1/2"	G1/2"	G1/2"	G1/2"	G1/2"	G 3/4"	G 3/4"	G 3/4"	G 3/4"	G 3/4"	G 3/4"	G 3/4"	G 3/4"	2xG3/4"	2xG3/4"

1. Flow is measured at Reference Conditions: 1 bara and 20°C at operating pressure of compressed air of 6 barg and oxygen pressure at the outlet 4.5 barg, inlet temperature 20°C & Air Inlet Quality of ISO 8573-1:2010 class 1-4-1

## Options



Seaworthy packaging



PDP sensor kit



Oxygen buffer vessels

# Oxygen filters - PMH D Ox 10 - 2425

## Features & Benefits

- ▶ Market-leading performance: Custom-engineered filtration media deliver premium performance that meets quality standard ISO 8573-1:2010 with a significantly reduced pressure drop
- ▶ Corrosion protection: Internal and external electrophoretic paint finish and a tough exterior polyester powder coating
- ▶ Easy service: Externally accessible drain, profiled bowl design, and unique push fit elements ensure quick and reliable maintenance
- ▶ Flow-optimized design: Advanced filter head design for optimized flow performance
- ▶ Suitable for oxygen service: Oxygen filters are specifically designed, cleaned, and packaged to ensure all combustible components are removed from the filter to prevent risk of ignition in oxygen-enriched applications
- ▶ Product safety in mind: Guaranteed safe housing closure with rotational safety stop
- ▶ Dedicated manufacturing line to ensure cleanliness

## General Specifications

- ▶ Oxygen dust particle removal down to 0.01 micron
- ▶ 10 to 2425 Nm<sup>3</sup>/h oxygen flow
- ▶ Maximum working pressure 20.7 Barg
- ▶ Pressure drop <125 mbar
- ▶ Cleaned for oxygen in accordance with ASTM G93



## Complete O<sub>2</sub> systems for a wide range of applications



When it comes to O<sub>2</sub>, you can't afford to compromise on quality. With a Pneumatech oxygen generation system, you don't have to. That includes our premium PPOG HE PSA oxygen generator, but also all the filters that go with it. Our PMH D Ox filter range was designed, built and cleaned especially for oxygen service to meet the most stringent cleanliness and safety standards. Easy to service and highly efficient, Pneumatech oxygen filters give you industry-leading performance and peace of mind.

### PPOG 2-18 HE oxygen generator

30% more efficient than traditional oxygen generators, Pneumatech's PPOG HE gives you the oxygen volume, purity and reliability you need at a massively reduced cost and a smaller environmental footprint.

### LV270-3000 oxygen vessels

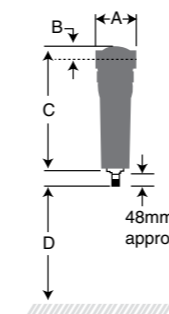
Our full range of oxygen vessels (270 to 3000L) are built and cleaned for safe oxygen use and are compliant with international standards and regulations.

### PMH D Ox 10-2425 oxygen filters

Pneumatech oxygen filters remove particles down to 0.01 micron. Thanks to their premium filtration media and filter design, you enjoy optimized performance, safety and easy service.

Technical Specifications for PMH D Ox 10-2425

Filter name	PMH D Ox 10	PMH D Ox 25	PMH D Ox 40	PMH D Ox 50	PMH D Ox 80	PMH D Ox 110	PMH D Ox 140	PMH D Ox 170	PMH D Ox 200	PMH D Ox 280	PMH D Ox 450	PMH D Ox 515	PMH D Ox 645	PMH D Ox 725	PMH D Ox 1130	PMH D Ox 1370	PMH D Ox 1450	PMH D Ox 2020	PMH D Ox 2425	
Grade	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Rated flow (m <sup>3</sup> /h)	10	25	40	50	80	110	140	170	200	280	450	515	645	725	1130	1370	1450	2020	2425	
Conn. In G/NPT "	1/8	1/4	1/4	3/8	1/2	1/2	3/4	1	3/4	1	1 1/4	1 1/2	1 1/2	2	2	2 1/2	3	3	3	
Drain conn. "	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	
Drain	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
A (mm)	50	50	70	70	70	127	127	127	127	127	140	140	170	170	170	220	220	220	220	
B (mm)	17	17	23	23	23	32	32	32	32	32	41	41	53	53	53	70	70	70	70	
C (mm)	157	157	231	231	231	285	285	285	370	370	476	476	508	508	708	736	736	857	1005	
D (mm)	60	60	70	70	70	80	80	80	80	80	85	85	100	100	100	100	100	100	100	
Weight (kg)	0.3	0.3	0.6	0.6	0.6	1.7	1.7	1.7	2	2	3	3	4.9	4.9	5.5	10.5	10.5	11.5	12.5	



## Applications



Biogas



Fish farming



Oxygen therapy



Vet clinics



Ozone



Metal and glass treatment

# Oxygen vessels - LV270 - 3000

## Features & Benefits

- ▶ Cleaned and built according to the major international guidelines and classifications for maximum security
- ▶ Materials are chosen to ensure component compatibility and protection from risks, reactions and corrosion
- ▶ Vessels are externally painted and have an inner vitroflex coating
- ▶ All components have been selected to ensure product and operator safety

## General Specifications

- ▶ Suitable for oxygen service
- ▶ 270 to 3000L oxygen vessels up to 11 Barg
- ▶ Cleaned and built according to ISO15001 (Anesthetic and respiratory equipment — Compatibility with oxygen), EIGA IGC Doc 33/06 (Guideline to cleaning of oxygen equipment for oxygen service) and ASTM G93/G93M – 19



Count on Pneumatech to offer a best-in-class solution for all your O2 production needs. That includes a complete range of buffer vessels. Built and cleaned especially for oxygen service, our oxygen vessel range meets the cleanliness requirements and safety standards defined by international legislation and guidelines, including ISO150001 and ASTM G93/G93M. And with a choice of 6 models (from 270 to 3000 liters), you will be sure to find the right vessel for your oxygen system.

### PPOG 2-18 HE oxygen generator

30% more efficient than traditional oxygen generators, Pneumatech's PPOG HE gives you the oxygen volume, purity and reliability you need at a massively reduced cost and a smaller environmental footprint.

### LV270-3000 oxygen vessels

Our full range of oxygen vessels (270 to 3000L) are built and cleaned for safe oxygen use and are compliant with international standards and regulations.

### PMH D Ox 10-2425 oxygen filters

Pneumatech oxygen filters remove particles down to 0.01 micron. Thanks to their premium filtration media and filter design, you enjoy optimized performance, safety and easy service.

Technical specifications for Oxygen vessels						
Vessel name	LV270 oxygen	LV500 oxygen	LV1000 oxygen	LV1500 oxygen	LV2000 oxygen	LV3000 oxygen
Volume (L)	270	500	1000	1500	2000	3000
Design pressure (Barg)	11	11	11.5	11.5	11.5	11.5
Design temperature (deg C)	-10 to 120	-10 to 120	-10 to 120	-10 to 120	-10 to 120	-10 to 120
Weight (shipping weight) kg	117	169	255	278	422	618
Height (mm)	1284	2034	2310	2270	2770	2929
Nominal diameter (mm)	600	600	790	1000	1000	1200
Inlet /outlet connection size	1"	1 1/2"	2"	2"	2"	3"
Approval	CE	CE	CE	CE	CE	CE

## Complete O2 systems for a wide range of applications



## Applications



Biogas



Fish farming



Oxygen therapy



Vet clinics



Ozone



Metal and glass treatment

## Oxygen solutions

Pneumatech offers packaged solutions for on-site oxygen generation, which guarantee peace-of-mind and quick returns compared to traditional oxygen supply.

A typical lineup consists of a compressor, a refrigerant dryer, filters, buffer vessels and a PPOG oxygen generator; and can be completed with a high-pressure oxygen booster and a bottle filling station. These can be containerized or skid-mounted, depending on the application and the needs.



### DO YOU KNOW THAT?

Our boosters are available in 3 kW to 15 kW models and can safely and reliably boost oxygen, nitrogen, helium or argon up to 200 barg / 2900 psig. By boosting a gas to these high pressures, you can bottle the gas you generate. This is particularly interesting to cover peak demand or as emergency back-up.



Pneumatech's on-site oxygen systems generate oxygen from 90% up to 95% purity, and are thus compliant with European pharmacopeia and United States Pharmacopeia (USP). Our production locations are moreover certified according to ISO 13485, the international quality management system for medical devices.

## Gas analysis solutions

Your oxygen or nitrogen generation system is an essential part of your production. That is why it is important to monitor its performance. This allows you to optimize your output and address any issues before they become costly problems. Pneumatech offers a range of gas analysis solutions that allow you to check your oxygen or nitrogen system's quality, purity and safety. For more information, please refer to the Pneumatech measurement equipment catalogue.



# Breathing Air Solutions

Pneumatech's industrial breathing air purifiers offers guaranteed protection against contaminants-complying with International breathing air standards with a small foot print for flexible installations.



# BA 25 - 300 - HE Breathing Air Purifiers

## Features & Benefits

- ▶ The Pneumatech solution for Industrial Breathing Air applications, build to exceed standards
- ▶ Compliance with stringent international standards
- ▶ Special 7-stage filtration process offered unparalleled compressed air purity
  - Water Separator - For liquid water
  - Fine Filter - For Oil and Water aerosols
  - Super Fine Filter - For Oil and Water aerosols
  - Adsorption Dryer - For Water vapour and CO<sub>2</sub>
  - Activated Carbon - For Gaseous impurities
  - Catalyst - For CO oxidation to CO<sub>2</sub>
  - Bacteria Filter - For Bacteria & dust particles
- ▶ Advanced energy management for lowest operating costs
  - Compressor synchronization
  - Purge nozzle optimization
  - PDP control - Dew Point switching
- ▶ Advanced gas sensors
  - Direct reading from the controller screen
  - Voltage free contacts for easy integration
  - Adjustable level of warnings
- ▶ Best in class performance thanks to unique and patented purge nozzle design:
  - Purging rate adjusted as per the customer requirements instead of having multiple sets of the nozzles
- ▶ Low noise levels
- ▶ High quality filters
  - Guaranteed air purity thanks to High-efficient glass fibre media.
  - Significant energy savings with lower pressure drops
- ▶ More compact and easy to use -
  - Smaller footprint than previous designs - 35% smaller
  - Pre-assembled and ready for use eliminating complex installation needs

## General Specifications

- ▶ Breathing Air Purifiers for Industrial applications.
- ▶ Dew points achievable: -40°C/-40°F
- ▶ Inlet pressure range: 4-13 barg/58-189 psig
- ▶ Ambient temperature range: 5-40°C/ 41-104°F
- ▶ Inlet temperature range: 5-50°C/41-122°F
- ▶ Power supply: 230 VAC 50 Hz/ 115 VAC 50Hz
- ▶ Maximum concentration of O<sub>2</sub> - 21,4%
- ▶ Reduced concentration of CO<sub>2</sub> below 500 PPM
- ▶ Reduced concentration of SO<sub>2</sub> / NO<sub>x</sub> below 2 PPM



The compressed air quality is of vital importance in many applications even more so in breathing air applications. The applications, such as short-blasting, tank cleaning, tunneling, spray painting and many more require breathing air that is free from contaminants that may be present in the compressed air fed breathing air systems. These contaminants are present in the feed air in the form of fumes, oil, vapors, gases, solid particles and microorganisms.

Pneumatech's breathing air purifiers offers guaranteed protection against such contaminants complying with International breathing Air standards. The BA HE range assures safe working environment in a wide range of applications. Built to exceed standards, BA HE purifiers provide certified breathing air, even in situations with polluted intake air to ensure personnel safety at all times. The seven-filtration stages of the BA HE have been

carefully designed to make sure the air quality at the outlet complies with stringent international standards.

New and unique design for the adsorption dryer offers significant advantage. The purge valve design (patent awaited) offers optimum purge performance. The renovated design drastically lowers the purge air consumption saving value for the customer from the compressed air lost. The gas sensors are available as an option to optimize the system further. The possibility to connect the signals to the PureLogic Controller offers optimal control and monitoring.

With approximately 35% reduction in size, new BA HE version offers significant space saving advantage allowing for more flexible installations

Technical Specifications BA 25 - 300 HE

Specifications ↓	Units	BA25 HE	BA35 HE	BA45 HE	BA75 HE	BA90 HE	BA110 HE	BA150 HE	BA220 HE	BA300 HE
Flow <sup>(1)</sup>	l/s	12	17	21	35	42	52	71	104	142
	m <sup>3</sup> /hr	43.2	61.2	75.6	126	151.2	187.2	255.6	374.4	511.2
	cfm	25.4	36.0	44.5	74.2	89.0	110.2	150.4	220.4	300.9
Installed power	(kW)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
	hp	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure drop over dryer	bar	0.9	1.4	1.1	1	0.9	0.9	0.9	1	1.4
	psi	13.1	20.3	16.0	14.5	13.1	13.1	13.1	14.5	20.3
Purge flow	(%)	18	18	18	18	18	18	18	18	18
Height	mm	1580	1598	1681	1678	1678	1678	1735	1776	1778
	inch	62.2	62.9	66.2	66.1	66.1	66.1	68.3	69.9	70.0
Width	mm	800	800	800	800	800	800	800	800	800
	inch	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Length	mm	700	700	700	700	700	700	700	900	900
	inch	27.6	27.6	27.6	27.6	27.6	27.6	27.6	35.4	35.4
Connection inlet/outlet	inch	1/2"	1/2"	1/2"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Net mass	kg	106	116	131	137	159	213	213	290	338
	lbs	234	256	289	302	351	470	470	639	745

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.

## Options



Electronic drains



VT saturation indicator (Oil indicator)



O<sub>2</sub>, CO & CO<sub>2</sub> sensors



NPT connections



Optimised purge nozzle



# BA 25 - 300 - S Breathing Air Purifiers

## Features & Benefits

- ▶ The Pneumatech solution for Industrial Breathing Air applications, build to exceed standards.
- ▶ Compliance with stringent international standards
- ▶ Special 7-stage filtration process offered unparalleled compressed air purity
  - Water separator - For liquid water
  - Fine filter - For oil and water aerosols
  - Super fine filter - For oil and water aerosols
  - Adsorption dryer - For water vapour and CO<sub>2</sub>
  - Activated carbon - For gaseous impurities
  - Catalyst - For CO oxidation to CO<sub>2</sub>
  - Bacteria filter - For bacteria & dust particles
- ▶ Best-in-class performance thanks to unique purge valve design (patent pending)
  - Lowest pressure drop during drying
  - Lowest purge loss by ensuring maximum purge air expansion during regeneration
- ▶ Low noise levels
- ▶ High quality filters
  - Guaranteed air purity thanks to High-efficient glass fiber media
  - Significant energy savings with lower pressure drops
- ▶ Compact and easy to connect design

## General Specifications

- ▶ Breathing air purifiers for industrial applications.
- ▶ Dew points achievable: -40°C/-40°F
- ▶ Inlet pressure range: 4-13 barg/58-189 psig
- ▶ Ambient temperature range: 5-40°C/ 41-104°F
- ▶ Inlet temperature range: 5-50°C/41-122°F
- ▶ Power supply: 230 VAC 50 Hz/ 115 VAC 50Hz
- ▶ Maximum concentration of O<sub>2</sub> - 21,4%
- ▶ Reduced concentration of CO<sub>2</sub> below 500 PPM
- ▶ Reduced concentration of SO<sub>2</sub> /NO<sub>x</sub> below 2 PPM



## Options



Electronic drains



VT saturation indicator (Oil indicator)



Gas sensors (As sales options)



NPT connections

The compressed air quality is of vital importance in many applications even more so in breathing air applications. The applications such as short-blasting, tank cleaning, tunneling, spray painting and many more require breathing air that is free from contaminants that may be present in the compressed air fed breathing air systems. These contaminants are present in the feed air in the form of fumes, oil, vapors, gases, solid particles and microorganisms.

Pneumatech's breathing air purifiers offers guaranteed protection against such contaminants complying with International breathing Air standards. The BA HE range assures safe working environment in a wide range of applications. Built to exceed standards, BA HE purifiers provide certified breathing air, even in situations with polluted intake air to ensure personnel safety at all times. The seven-filtration stages of the BA HE have been

carefully designed to make sure the air quality at the outlet complies with stringent international standards.

New and unique design for the adsorption dryer offers significant advantage. The purge valve design (patent awaited) offers optimum purge performance. The renovated design drastically lowers the purge air consumption saving value for the customer from the compressed air lost. The gas sensors are available as an option to optimize the system further. The possibility to connect the signals to the PureLogic Controller offers optimal control and monitoring.

With approximately 35% reduction in size, new BA S version offers significant space saving advantage allowing for more flexible installations

## Technical Specifications for BA 25 - 300 S

Specifications ↓	Units	BA25 S	BA35 S	BA45 S	BA75 S	BA90 S	BA110 S	BA150 S	BA220 S	BA300 S
Flow <sup>(1)</sup>	l/s	12	17	21	35	42	52	71	104	142
	m <sup>3</sup> /hr	43.2	61.2	75.6	126	151.2	187.2	255.6	374.4	511.2
	cfm	25.4	36.0	44.5	74.2	89.0	110.2	150.4	220.4	300.9
Installed power	(kW)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
	hp	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Pressure drop over dryer	bar	0.65	0.93	0.72	0.71	0.64	0.74	0.75	0.91	1.48
	psi	9.4	13.4	10.5	10.3	9.3	10.7	10.9	13.3	21.4
Purge flow	%	18	18	18	18	18	18	18	18	18
Height	mm	1247	1642	1212	1467	1592	1522	1715	1824	1848
	inch	49.1	64.6	47.7	57.8	62.7	59.9	67.5	71.8	72.8
Width	mm	550	550	800	800	800	800	800	800	800
	inch	21.7	21.7	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Length	mm	450	450	700	700	700	700	700	900	900
	inch	17.7	17.7	27.6	27.6	27.6	27.6	27.6	35.4	35.4
Inlet and Outlet Connections	inch	1/2"	1/2"	1/2"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Net mass	kg	77	87	102	108	130	184	184	261	309
	lbs	170	192	225	238	287	406	406	575	681

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.

# Filter Solutions

Pneumatech offers you a comprehensive line-up of innovative filter solutions to meet your specific needs. Our filtration solutions are engineered cost-effectively to provide the best air quality and meet today's increasing quality demands.

For general applications we provide oil coalescing, particulate and oil vapor filters in a wide range of flows and pressures. Pneumatech is also your partner for breathing air, silicone-free, sterile & process filtration.



# Ultimate water separators

## Features & Benefits

- ▶ Energy saving
  - Reducing both energy consumption and operating costs
- ▶ Flexible Installation
  - Modular design and accessible fixings enable simple close coupling assembly
- ▶ Cost effective
  - No replacement components required
- ▶ Product safety in mind
  - Guaranteed safe housing closure with rotational safety stop
- ▶ Corrosion protection
  - Internal and external electrophoretic painting followed by a tough polyester powder coating

## General Specifications

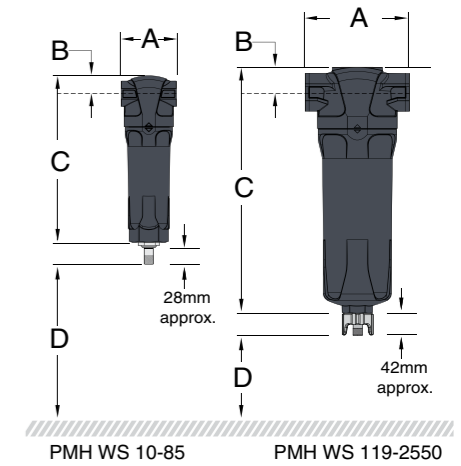
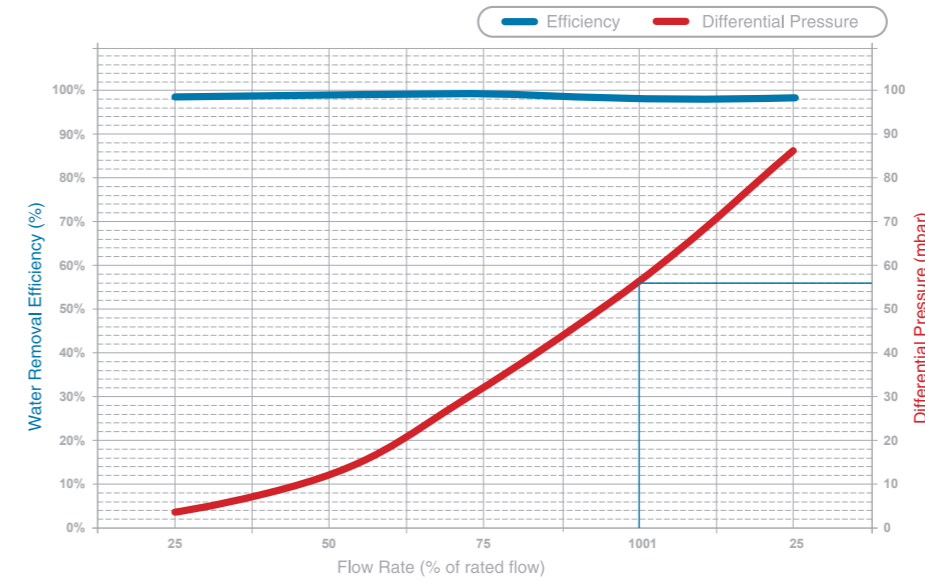
- ▶ 13 sizes from 10-2550 m<sup>3</sup>/h
- ▶ Proven centrifugal technology
- ▶ Unique module with unique vanes to eliminate points of low efficiency
- ▶ Eliminates 99% bulk water, even at low velocities
- ▶ Minimal operating pressure loss (50-60 mbar)
- ▶ No replacement components necessary
- ▶ External accessible drain valve
- ▶ Same installation accessories as the filter series
- ▶ Electronic drain available as an option



Integrating into Pneumatech's compressed air filtration range, the new Ultimate Water Separator combines proven centrifugal technology with a new forward thinking housing design to deliver market leading water removal efficiencies – eliminating 99% bulk water with continuously low differential pressure.

The custom engineered centrifugal module features unique vanes to eliminate points of low efficiency, and a vortex arrestor to stop re-entrainment – ensuring minimal operating pressure loss and maintaining excellent liquid removal, even at low velocity. Remove 99% of bulk water when tested in accordance with ISO 12500-4

## Tested performance



With exceptional performance at any flow rate, the new Ultimate water separator is perfect for use with variable speed compressors.

Filter Model	Pipe Size	Flow Rate			Dimension (mm)				Weight (kg) Approx.	Element Model
		m <sup>3</sup> /h	CFM		A	B	C	D		
PMH WS 10	1/8"	10	6		50	17	157	60	0.25	-
PMH WS 25	1/4"	25	15		50	17	157	60	0.25	-
PMH WS 42	1/4"	42	25		70	24	231	70	0.6	-
PMH WS 59	3/8"	59	35		70	24	231	70	0.6	-
PMH WS 85	1/2"	85	50		70	24	231	70	0.6	-
PMH WS 119	1/2"	119	70		127	32	285	80	1.7	-
PMH WS 212	3/4"	212	125		127	32	285	80	1.7	-
PMH WS 297	1"	297	175		127	32	285	80	1.7	-
PMH WS 476	1 1/4"	476	280		140	40	475	80	3	-
PMH WS 545	1 1/2"	545	321		140	40	475	80	3	-
PMH WS 1189	2"	1189	700		170	53	508	100	4.9	-
PMH WS 1444	2 1/2"	1444	850		220	70	413	100	8	-
PMH WS 2550	3"	2550	1500		220	70	413	100	8	-

## Options



Electronic drain



Wall brackets

# Ultimate filters - Threaded filters

## Features & Benefits

- ▶ Flow-optimised design
- ▶ Improved air flow characteristics
- ▶ Reduced energy consumption
- ▶ Reduced costs of ownership
- ▶ 6 filtration grades
- ▶ Increased performance
  - Significantly reduced differential pressure <125 mbar
  - Exceptional oil aerosol and particulate removal
- ▶ New filtration technology
  - NEW deep pleated media
  - NEW housing design for flexible installation and simplified serviceability
  - NEW externally accessible drain
- ▶ Tested and validated in accordance with ISO 12500-1 & ISO 8573-1:2010
- ▶ Dead stop head to bowl connection with lock indication for safety closure
- ▶ Corrosion protected housings: internal and external electrophoretic paint finish followed by a tough polyester powder coating
- ▶ Unique, specially designed adapter for removal of the automatic and manual drains from the bowl without a need to open the filter (for sizes 119-2550 m³/h)
- ▶ Multiple options
  - Differential pressure gauge with/without potential free contact
  - Manual drain
  - Automatic drain
  - Electronic drain
  - Wall brackets
  - Connection kits
- ▶ Two ranges available:
  - HE version with differential pressure gauge
  - S version without differential pressure gauge

## General Specifications

- ▶ Significantly reduced differential pressure <125 mbar
- ▶ Maximum working pressure: 16 bar(g)/232 psi(g)
- ▶ With manual drain: up to 20.7 bar(g)/300 psi(g)
- ▶ Available from 1/8" to 3"
- ▶ Flow rates from 10-2550 m³/h (6-1500 cfm)



## Options



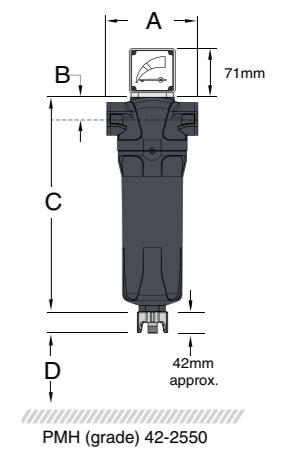
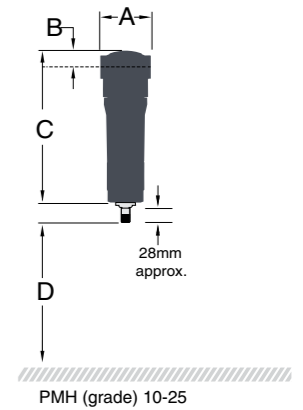
With energy efficiency and low total cost of ownership the Pneumatech Ultimate Filter surpasses conventional filters in the market place, providing to be the most advanced filter yet.

with the new element design, significantly improves air flow and performance, making the Ultimate filter one of the most energy efficient filter housings available.

The expertly engineered Ultimate Series not only achieves the highest air purity standards in line with ISO 8573-1:2010, it also incorporates the latest in filtration technology. The new filter housing reduces differential pressure loss which, when combined

With a range that incorporates coalescence filters, dust filters, activated carbon filters and water separators, available in a wide range of port sizes suitable for installation worldwide.

Filter Model	Pipe Size G/ NPT	Flow Rate		Dimension (mm)				Weight (kg) Approx.	Element Model
		m³/h	CFM	A	B	C	D		
PMH (grade) 10	1/8"	10	6	50	17	157	60	0.25	F(grade)-1
PMH (grade) 25	1/4"	25	15	50	17	157	60	0.25	F(grade)-2
PMH (grade) 42	1/4"	42	25	70	24	231	70	0.6	F(grade)-3
PMH (grade) 54	3/8"	54	32	70	24	231	70	0.6	F(grade)-4
PMH (grade) 85	1/2"	85	50	70	24	231	70	0.6	F(grade)-5
PMH (grade) 119	1/2"	119	70	127	32	285	80	1.7	F(grade)-6
PMH (grade) 144	3/4"	144	85	127	32	285	80	1.7	F(grade)-7
PMH (grade) 178	1"	178	105	127	32	285	80	1.7	F(grade)-8
PMH (grade) 212	3/4"	212	125	127	32	371	80	2	F(grade)-9
PMH (grade) 297	1"	297	175	127	32	371	80	2	F(grade)-10
PMH (grade) 476	1 1/4"	476	280	140	40	475	80	3	F(grade)-11
PMH (grade) 545	1 1/2"	545	321	140	40	475	80	3	F(grade)-12
PMH (grade) 765	2"	765	450	170	53	508	100	4.9	F(grade)-13
PMH (grade) 1189	2"	1189	700	170	53	708	100	5.5	F(grade)-14
PMH (grade) 1444	2 1/2"	1444	850	220	70	736	100	10.5	F(grade)-15
PMH (grade) 1529	3"	1529	900	220	70	736	100	10.5	F(grade)-16
PMH (grade) 2125	3"	2125	1250	220	70	857	100	11.5	F(grade)-17
PMH (grade) 2550	3"	2550	1500	220	70	1005	100	12.5	F(grade)-18



Grade	P	G	S	C	D	V
Particle removal (micron) ■	5	-	1	-	0.01	-
Outlet oil aerosol concentration (mg/m³) ■	1	0.3	-	0.01	-	0.003
Total mass efficiency (%)	>90	>99.25	-	>99.9	-	-
Quality class of air at outlet (particles / oil) ▲	4 / 3	- / 3	3 / -	- / 2	1 / -	- / 1
Initial pressure drop over filter in dry applications (bar)	0.05	0.055	0.055	0.085	0.085	0.115
Initial pressure drop over filter in wet applications (bar) ★	0.08	0.125	-	0.125	-	-

## Pressure correction factors

For maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure

Operating pressure barg (psig)	4 (58)	5 (72)	6 (87)	7 (100)	8 (115)	10 (145)	12 (174)	14 (203)	16 (232)	20 (290)
7 barg – correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51	1.6

# Ultimate filters - Elements

## Features & Benefits

- ▶ Push fit Pneumatech filtration
- ▶ High quality stainless steel cylinders
- ▶ Custom engineered
- ▶ Custom outer drainage layer
- ▶ Unique element end cap
- ▶ Piracy protection (from size 3)
- ▶ Color coding system for optimum identification

## General Specifications

- ▶ 6 filtration grades: coalescence, dust & oil vapor filtration



- **Push Fit Pneumatech Filtration**  
Elements ensure perfect sealing within the filter housing and assist with easy removal
- **High quality stainless steel cylinders**  
provide corrosion resistance and deliver strength and stability to the element
- **Custom engineered**  
hydrophobic & oleophobic borosilicate media specifically developed to deliver consistently low pressure drop, combined with pleated element construction for high dirt holding capacity and an increased filtration surface area
- **Custom outer drainage layer**  
prevents oil carryover and improves coalescence performance
- **Unique element end cap**  
colour coding system for quick and simple grade identification

## Market-leading filtration performance

To ensure optimal performance and low cost, filter elements should be replaced with original parts every 12 months/8000 hours (whichever comes first). Activated carbon filter elements should be replaced every 6 months/1000 hours (whichever comes first).

Pneumatech utilizes deep pleated media to deliver market leading filtration performance. The new forward thinking design delivers exceptional results in both oil aerosol removal and particulate retention; significantly reducing differential pressure and energy consumption for low operational lifetime costs. Engineered to

deliver a step change in performance, the new ultimate element optimizes filtration efficiencies and produces compressed air in line with the highest standards of air purity, meeting the quality classes specified in ISO 8573-1: 2010.

## Performance assured

### Filter housing design

The ISO 8573 group of international standards is used for the classification of compressed air

- ▶ 1000 hour neutral salt spray test for corrosion to ISO 9227:2006
- ▶ Burst pressure tested in excess of 100 barg for a 5:1 safety factor
- ▶ Housings are pressure decay tested before despatch. Fine filters are 100% aerosol integrity tested

### Element technology

The new series is available in a complete range of contamination removal grades designed to meet the compressed air purity requirements throughout industry

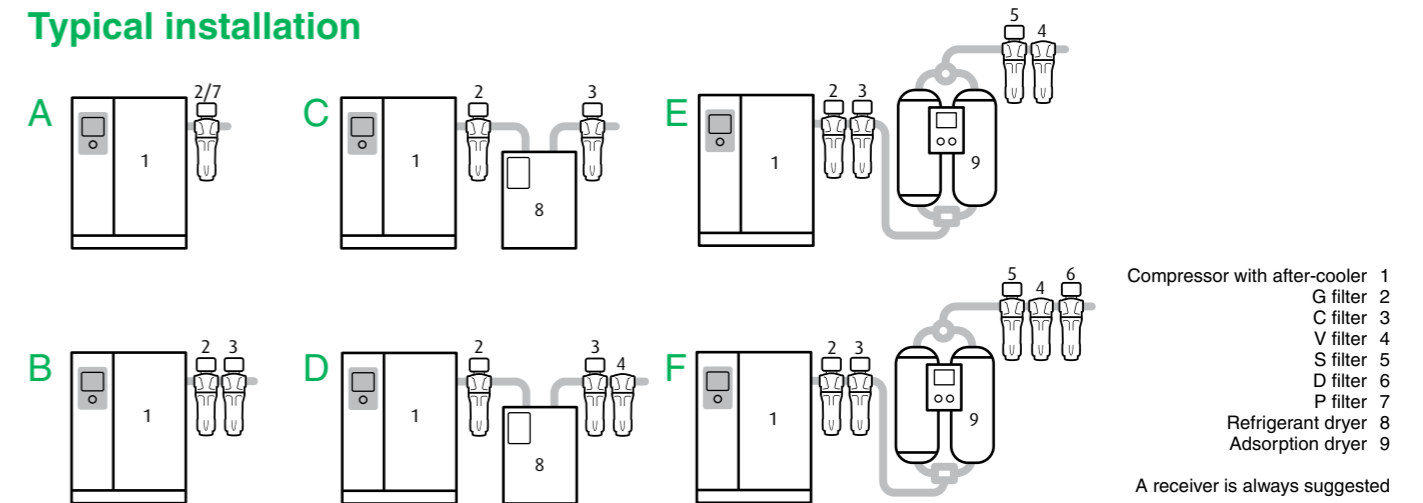
- ▶ ISO 8573-1:2010 compressed air purity standard
- ▶ ISO 12500 series international standard for compressed air filter testing

### Independent validation

Housing are approved to international standards including:

- ▶ Pressure equipment directive 2014/68/EU - Lloyd's register EMEA - notified body no. 0038
- ▶ ISO 9001 quality systems - LRQ0930553 - Lloyd's register EMEA - notified body no. 0038
- ▶ CRN approved - CRNOE19418 - for use within Canada

## Typical installation



**A.** General purpose protection  
air purity to ISO 8573-1:2010  
G filter [ 3 : - : 3 ]  
P filter [ 4 : - : 3 ]

**B.** General purpose protection  
and reduced oil concentration  
air purity to ISO 8573-1:2010  
[ 1 : - : 2 ]

**C.** High quality air  
with reduced dew point  
air purity to ISO 8573-1:2010  
[ 1 : 4 : 2 ]

**D.** High quality air with reduced  
dew point and oil concentration  
air purity to ISO 8573-1:2010  
[ 1 : 4 : 1 ]

**E.** High quality air with extremely  
low dew point  
air purity to ISO 8573-1:2010  
[ 2 : 2 : 1 ]

**F.** High quality air with extremely  
low dew point  
air purity to ISO 8573-1:2010  
[ 1 : 2 : 1 ]

# FF 1 - 12 - Flanged filters

## Features & Benefits

- ▶ Guaranteed air purity
  - High-efficient glass fiber and foam media
- ▶ No risks of:
  - Cracked filter media
  - Cylinder implosion
  - Top cap leakages
  - Oil re-entrainment
- ▶ Significant energy savings
  - Optimal filter media selection allows low pressure losses
  - Zero-loss electronic drain included as standard
- ▶ Highest quality standards
  - In-house research, development & production
  - Each filter subjected to rigorous quality control
  - Fully tested and qualified according to ISO standards
- ▶ Robust design
  - Stainless steel cores guarantee ultimate strength
  - Protection paper to avoid damaging of glass fiber media
  - Special coating ensures high corrosion protection, and therefore a housing lifetime of at least 20 years
- ▶ Easy service and installation
  - Bottom cover with special rotating system
  - Different grade, different colour
  - Differential pressure gauge, with voltage free contact

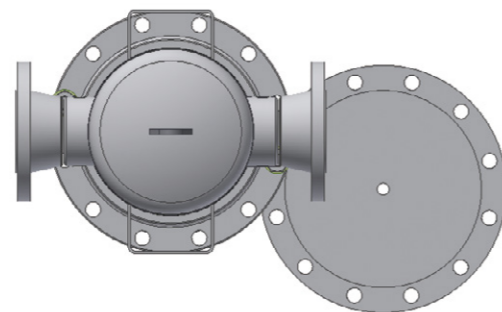


## General Specifications

- ▶ Compressed air inlet pressure: 1-16 barg/15-232 psig
- ▶ Max. ambient air temperature: 66°C/151 °F (35°C/95 °F for V grade)
- ▶ Available grades:
  - P: pre-filter
  - G: fine filter
  - C: super fine filter
  - V: activated carbon filter for oil vapor
  - S: dust filter
  - D: dust filter- high efficient

### Zooming in

#### Special rotating system of bottom cover



Pneumatech's flanged filter range contains the same type of robust, high-efficient filter cartridges as the threaded range. The cartridges are contained in a welded steel housing which is pressure-rated up to 16 barg / 232 psig and provided with flanged connections at the compressed air inlet and outlet. The filter housings are completely cleaned, zinc phosphate and KTL

coated at the inside and outside and externally painted afterwards. This guarantees a housing lifetime of at least 20 years.

All flanged filters are standard equipped with a zero-loss electronic drain and differential pressure gauge with voltage-free contact connections. The special rotating system of the bottom cover makes filter cartridge replacement very straightforward.

### Technical specifications for flanged filters FF 1-12

Pneumatech Variant → Specifications ↓	Units	FF 1	FF 2	FF 3	FF 4	FF 5	FF 6	FF 7	FF 8	FF 9	FF 10	FF 11	FF 12
Nominal (max.) Flow Rate <sup>(1)</sup>	l/s	"550 (630)"	"850 (970)"	1100 (1260)	1400 (1600)	1800 (2200)	2200 (2400)	3000 (3600)	4000	5000	6000	7000	8000
	m <sup>3</sup> /hr	1980 (2268)	3060 (3492)	3960 (4536)	5040 (5760)	6480 (7920)	7920 (8640)	10800 (12960)	14400	18000	21600	25200	28800
	cfm	1165 (1335)	1801 (2055)	2331 (2670)	2966 (3390)	3814 (4662)	4662 (5085)	6357 (7628)	8476	10594	12713	14832	16951
Max Pressure	barg	16	16	16	16	16	16	16	16	16	16	16	16
	psig	232	232	232	232	232	232	232	232	232	232	232	232
Connection	DN	DN80	DN100	DN100	DN150	DN150	DN150	DN200	DN200	DN250	DN250	DN300	DN300
Dimensions (A)	mm	370	510	510	620	640	640	820	820	820	920	920	1040
	inch	14.6	20.1	20.1	24.4	25.2	25.2	32.3	32.3	32.3	36.2	36.2	40.9
Dimensions (B)	mm	190	230	230	290	285	285	400	400	400	550	550	525
	inch	7.5	9.1	9.1	11.4	11.2	11.2	15.7	15.7	15.7	21.7	21.7	20.7
Dimensions (C)	mm	1295	1360	1360	1480	1555	1555	1745	1745	1745	2085	2085	2070
	inch	51.0	53.5	53.5	58.3	61.2	61.2	68.7	68.7	68.7	82.1	82.1	81.5
Weight	kg	76	141	143	210	176	178	420	428	432	594	597	1140
	lbs	167.6	310.9	415.3	463	388	392.4	925.9	943.6	952.4	1034	1479.3	1984.2
Number of filter elements		1	3	4	5	6	7	10	14	16	20	24	28
Filter element size		1F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)	2F (grade)
Order example:		FF 1 C HE (superfine filter with differential pressure gauge)											

1. Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 10°C & std PDP of 3°C at the inlet.

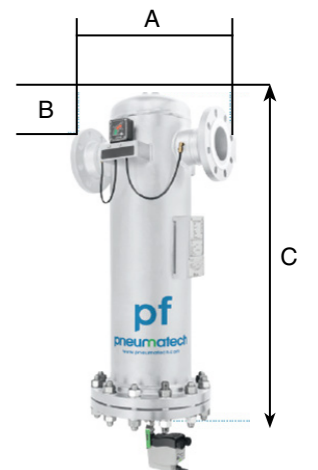
### Filter elements performance

Grades → Performance ↓	P	G	C	V	S	D
	Pre-filter	Fine filter - Oil aerosols/ solid particles	Super fine filter - Oil aerosols/ solid particles	Activated Carbon - Oil vapor	Dust filter	High efficiency dust filter
Particle removal efficiency at nominal flow (% at MPPS)	92.03%	99.92%	99.98%	n/a	99.92%	99.98%
Oil carry-over at nominal flow (mg/m <sup>3</sup> )	<1*	<0,07*	<0,008*	<0,003	n/a	n/a

\* Oil aerosol content

### Correction factors

Inlet pressure (barg)	1	2	3	4	5	6	7	8	10	12	14	16
Inlet pressure (psig)	15	29	44	58	72.5	87	102	116	145	174	203	232
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1	1.06	1.2	1.31	1.41	1.5



# VT - Activated carbon towers + vessels

## Features & Benefits

- ▶ Guaranteed air purity with residual oil content below 0,003 mg/m<sup>3</sup>
  - Superb 2-layer activated carbon material
  - Designed with sufficient safety margin
  - Performance certified by external body
- ▶ Significant energy savings & limited system operating costs
  - Optimal internal flow path
  - Average pressure drop of 125 mbar only
- ▶ Certified class 1 performance, according to ISO 8573-1:2010
  - If combined with Pneumatech oil coalescing filters (G & C)
- ▶ Compact and reliable product design
  - Wall-mounting kit, optional for VT1 - 7
  - Easy to lift, install and service
- ▶ The VT is capable of removing hydrocarbons, odors and oil vapors from compressed air

## General Specifications

- ▶ Compressed air inlet pressure:
  - VT 1-9: 1-16 barg/15-232 psig (extruded Versions)
  - VT with optional oil indicator: 1-8,8 barg/15-127 psig
  - VT 11-15: 1-14,5 barg/15-210 psig (Welded Versions)
  - VT11-15: life time 12000 hours
- ▶ Ambient air temperature: (Extruded Versions)
  - -10 - 50°C/14 - 122°F
- ▶ Ambient air temperature: (Welded Versions)
  - -10 - 80°C/14 - 176°F
- ▶ Compressed air inlet temperature:
  - 1 - 66°C/34 - 151°F



VT 1-9

VT 11-15

### Options



Wall mounting kit



Oil indicator



Oil indicator welded version



Dust filter



ISO 8573-1:2010 Class 1 validation certificate

Pneumatech's VT activated carbon towers and vessels are high-efficiency filtration products designed to meet the most demanding industry applications. Examples are pharmaceutical, medical, food & beverage, electronics and chemical industries.

The VT is capable of removing hydrocarbons, odors and oil vapors from compressed air. The activated carbon layers will, by the use Activated carbon vessels for higher flows available on request. Please consult Pneumatech for further support.

1. Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C & inlet PDP of 3°C at the outlet. of adsorption, reduce the residual oil content to less than 0,003 mg/m<sup>3</sup>. In combination with Pneumatech G and C filters, the VT meets the requirements of air purity class 1 for total oil, according to ISO 8573-1:2010 in a typical compressed air installation, as was certified by an external body.

### Technical specifications for VT 1-9

Pneumatech Variant→ Specifications ↓	Units	VT 1	VT 2	VT 3	VT 4	VT 5	VT 6	VT 7	VT 8	VT 9
Capacity <sup>(1)</sup>	l/s	20	45	60	95	125	150	185	245	310
	m <sup>3</sup> /hr	72	162	216	342	450	540	666	882	1116
	cfm	42	95	127	201	265	318	392	519	657
Initial pressure drop over filter when dry	barg	0,015	0,065	0,11	0,085	0,135	0,1	0,145	0,185	0,27
Connection	G/NPT	1/2"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Dimensions (A)	mm	490	715	840	715	840	715	840	840	840
	inch	19.29	28.15	33.07	28.15	33.07	28.15	33.07	33.07	33.07
Dimensions (B)	mm	223	223	223	387	387	551	551	715	879
	inch	8.78	8.78	8.78	15.24	15.24	21.69	21.69	28.15	34.61
Dimensions (C)	mm	190	190	190	190	190	190	190	190	190
	inch	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48	7.48
Weight	kg	10	15	18	29	34	42	50	67	84
	lbs	22.0	33.1	39.7	63.9	75.0	92.6	110.2	147.7	185.2

1. Flow is measured at reference conditions: 1 bara and 20°C at operating pressure of 7 barg, inlet temperature 20°C & inlet PDP of 3°C at the outlet.

### Technical specifications vessel version VT 11-15

Pneumatech Variant→ Specifications ↓	Units	VT 11	VT 12	VT 13	VT 14	VT 15
Capacity	l/s	425	550	850	1100	1800
	m <sup>3</sup> /hr	1530	1980	3060	3960	6480
	cfm	901	1165	1801	2331	3814
Initial pressure drop over filter when dry	bar	0.070	0.080	0.095	0.095	0,120
Connection	DIN	80	80	100	100	150
Dimensions (A)	mm	2435	2435	2449	2449	2535
	inch	95.9	95.9	96.4	96.4	99.8
Dimensions (B)	mm	1048	1048	1175	1175	1810
	inch	41.3	41.3	46.3	46.3	71.3
Dimensions (C)	mm	1125	1125	1118	1118	1213
	inch	44.3	44.3	44.0	44.0	47.8
Weight	kg	264	302	391	602	882
	lbs	582	666	862	1327	1944

### Correction factors

For other compressed air inlet temperatures, please multiply the filter capacity by the following correction factor (Kt):

Inlet temperature	°C	20	25	30	35	40	45	50	55	60
	°F	68	77	86	95	104	113	122	131	140
Correction factor	Kt	1.67	1.43	1.25	1	0.71	0.56	0.37	0.25	0.19

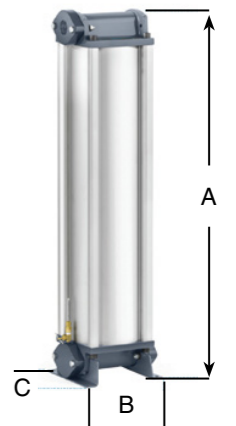
For other compressed air inlet pressures, please multiply the filter capacity by the following correction factor (Kp):

Inlet pressure	barg	3	4	5	6	7	8	9	10	11	12	13
	psig	44	58	73	87	102	116	131	145	160	174	189
Correction factor	Kp	0.57	0.77	0.83	1	1	1	1	1.05	1.05	1.11	1.18

Correction factors for VT 11-15 (for other compressed air inlet temperatures)

Inlet pressure	°C	20	25	30	35	40	45	50	55	60	65
Correction factor	Kt	1	1	1	1	0,83	0,67	0,59	0,48	0,42	0,33

\* for oil free compressors correction factor is always 1



# HP - High Pressure Filters

## Features & Benefits

- ▶ High reliability
  - High-performance aluminum or stainless steel housings to withstand ultimately high operational pressures
  - Double O-rings, epoxy sealed caps and anti-corrosive coated filter housing
- ▶ Maximum contaminant removal
  - Removal of dry and wet dust, particulates, oil aerosol and water droplets
  - High-efficiency glass fiber and fleece media
- ▶ Significant energy savings & limited system operating costs
  - Optimal design and filter media allow for low pressure drops
- ▶ Easy to service
  - Cartridge color based on type of filtration grade, makes it easy to service

## General Specifications

- ▶ Operating pressures: 50-100-350 barg / 725-1450-5075 psig
- ▶ Operating temperature range:
  - 0-120°C/32-248°F (for grades S, D, G & C)
  - 0-35°C/32-95°F (for grade V)
- ▶ Available grades:
  - G: general oil coalescing filtration (max oil carry-over: 0,08 mg/m³)
  - C: fine oil coalescing filtration (max oil carry-over: 0,007 mg/m³)
  - S: general dust filtration (99,92% at MPPS)
  - D: fine dust filtration (99,98% at MPPS)
  - V: oil vapor filtration (max oil carry-over: 0,003 mg/m³)
- ▶ Inlet and outlet connections: threaded
- ▶ Housing material: Aluminum (50 barg/725 psig only) or stainless steel (complete range)
- ▶ Timer drain and manual drain for 50 bar filters available as an option



## Applications



Laser cutting



PET bottling



Pressure testing of components



High-pressure die casting



Autoclave

Pneumatech's high pressure filters are engineered to cost effectively provide the best air purity and meet today's increasing quality demands up to working pressures of 350 barg/5075 psig. All high pressure filter housings are hydraulically tested to ensure safe and reliable operation at all times. The hydrostatic test certificate is supplied with every filter.

The high pressure filters are available in 3 pressure ranges. The 50 barg (725 psig) range is available in both aluminum and stainless steel housings. As the performance of both filters is the same, the choice between the 2 can be made based on the customer's preference. The 100 barg (1450 psig) and 350 barg (5075 psig) filters are available in stainless steel housings.

### Technical specifications for HP 1-9 50 barg Aluminium Filters

Pneumatech Variant→ Specifications ↓	Units	1	2	3	4	5	6	7	8	9
Capacity	l/s	44	69	125	153	232	347	479	535	889
	m³/hr	160	250	450	550	835	1250	1725	1925	3200
	cfm	94	147	265	324	492	736	1015	1132	1882
Connection	BSP	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	1 1/2"	2"	2"
Dimensions (A)	mm	63	63	110	110	110	146	146	146	146
	inch	2,48	2,48	4,33	4,33	4,33	5,75	5,75	5,75	5,75
Dimensions (B)	mm	150	190	280	280	365	498	498	498	700
	inch	5,91	7,48	11,02	11,02	14,37	19,61	19,61	19,61	27,56
Weight	kg	0,3	0,3	2,2	2,2	2,9	6,4	6,6	6,5	9,2
	lbs	0,7	0,7	4,9	4,9	6,4	14,1	14,6	14,3	20,3

### Technical specifications for HP 1-7 100 barg Stainless Steel

Pneumatech Variant→ Specifications ↓	Units	1	2	3	4	5	6	7
Capacity <sup>(1)</sup>	l/s	28	88	128	189	333	472	944
	m³/hr	100	315	460	680	1200	1700	3400
	cfm	59	185	271	400	706	1001	2001
Connection	BSP	1/4"	1/2"	3/4"	1"	1"	1 1/2"	2"
Dimensions (A)	mm	65	65	88	135	135	150	150
	inch	2,56	2,56	3,46	5,31	5,31	5,91	5,91
Dimensions (B)	mm	135	250	275	265	480	525	815
	inch	5,31	9,84	10,83	10,43	18,90	20,67	32,09
Weight	kg	3,2	5,6	6,1	10,5	14,7	22	28
	lbs	7,1	12,3	13,4	23,1	32,4	48,5	61,7

### Technical specifications for HP 1-8 50 barg Stainless Steel

Pneumatech Variant→ Specifications ↓	Units	1	2	3	4	5	6	7	8
Capacity <sup>(1)</sup>	l/s	28	56	94	139	278	472	567	944
	m³/hr	100	200	340	500	1000	1700	2040	3400
	cfm	59	118	200	294	589	1001	1201	2001
Connection	BSP	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	2"
Dimensions (A)	mm	85	85	85	110	110	150	150	150
	inch	3,35	3,35	3,35	4,33	4,33	5,91	5,91	5,91
Dimensions (B)	mm	202	227	257	270	422	517	517	817
	inch	7,95	8,94	10,12	10,63	16,61	20,35	20,35	32,17
Weight	kg	1,7	2	2,2	4	5	15	15	21
	lbs	3,7	4,4	4,9	8,8	11,0	33,1	33,1	46,3

### Technical specifications for HP 1-6 350 barg Stainless Steel

Pneumatech Variant→ Specifications ↓	Units	1	2	3	4	5	6
Capacity <sup>(1)</sup>	l/s	13	31	71	142	208	369
	m³/hr	48	111	255	510	750	1330
	cfm	28	65	150	300	441	783
Connection	BSP	1/4"	1/4"	1/2"	3/4"	1"	1"
Dimensions (A)	mm	41	65	88,5	88,5	150	150
	inch	1,61	2,56	3,48	3,48	5,91	5,91
Dimensions (B)	mm	103	135	210	280	330	480
	inch	4,06	5,31	8,27	11,02	12,99	18,90
Weight	kg	1,6	3,2	5,6	6,1	14,5	17,4
	lbs	3,5	7,1	12,3	13,4	32,0	38,4

### Correction factors: 50 barg Aluminum & Stainless Steel

Operating pressure	barg	4	6	8	10	15	20	30	40	50
	psig	58	87	116	145	218	290	435	581	726
Correction factor	Kp	0.14	0.22	0.28	0.34	0.47	0.56	0.7	0.85	1

### Correction factors: 100 barg Stainless Steel

Operating pressure	barg	20	30	40	50	60	70	80	90	100
	psig	290	435	581	726	871	1016	1161	1306	1451
Correction factor	Kp	0.45	0.57	0.68	0.8	0.84	0.88	0.92	0.96	1

### Correction factors: 350 barg Stainless Steel

Operating pressure	barg	-	-	50	100	150	200	250	300	350
	psig	-	-	726	1451	2177	2903	3628	4354	5080
Correction factor	Kp	-	-	0.73	0.78	0.82	0.87	0.91	0.96	1



1. Flow is referred to an absolute pressure of 1 barg and temperature of 20°C



# FP & FP HP - Process filters (incl. high pressure)

## Features & Benefits

- ▶ Enhanced stainless steel (1,4401) filter housing
  - Designed for applications with high risk of corrosion
  - High hygiene standards
- ▶ Advanced filter cartridge design
  - High filtration efficiency
  - Guaranteed performance over the entire lifetime
  - Low pressure drop
- ▶ Ultimate strength
- ▶ 100% integrity tested (DOP test)
- ▶ All components meet the FDA requirements for contact with food in accordance with the Code of Federal Regulations (CFR), title 21.
- ▶ Wide range of cartridges to suit application needs

## General Specifications: FP 1-18

- ▶ Stainless steel process filters
  - Maximum working pressure:
    - 14 barg/203 psig up to PF12
    - 10 barg /145 psig from PF13
- ▶ Operating pressure: 10-16 barg / 145-232 psig
- ▶ Operating temperature range<sup>1</sup>: 0-150°C / 41-302°F
- ▶ Body connections: DIN 11851 (Milk pipe connections)
- ▶ Surface finish: Ra 1.6, electro-polished externally
- ▶ Inlet and outlet connections: Threaded up to PF12, flanged from PF13

<sup>1</sup>Operating temperature range can vary as per the filter element used.



In process industries where the risk of corrosion of the compressed air system components is high, Pneumatech's FP 1-18 process filter range provides the right solution. The filter housing is made out of stainless steel grade 1,4401. The surface has been smoothed with advanced mechanical and electro-polishing techniques to a level of Ra 1,6. To avoid

micro-organism contamination between the filter head and bowl, these are connected by a milk pipe connection as per DIN 11851.

The filter cartridges are available in 4 different filtration grades for a wide variety of applications. All cartridges have been extensively tested to guarantee the best filtration efficiency over the entire cartridge lifetime.

### Technical Specifications FP 1-18

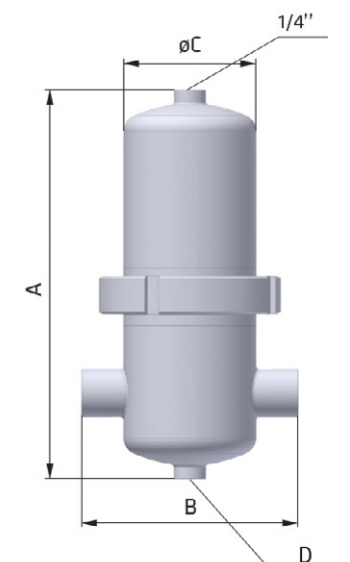
Pneumatech Variant → Specifications ↓	Units	FP 1	FP 2	FP 3	FP 4	FP 5	FP 6	FP 7	FP 8	FP 9	FP 10	FP 11	FP 12	FP 13	FP 14	FP 15	FP 16	FP 17	FP 18
Flow <sup>(1)</sup>	m <sup>3</sup> /hr	75	105	150	225	315	420	600	900	1260	1680	2400	3600	5040	6720	9600	13440	17280	21120
	cfm	44	62	88	132	185	247	353	530	742	989	1413	2119	2966	3955	5650	7910	10171	12431
Operating Pressure	barg/psig	16/232	16/232	16/232	16/232	16/232	16/232	16/232	16/232	16/232	16/232	12/174	12/174	10/145	10/145	10/145	10/145	10/145	10/145
Connections	inch	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2"	2 1/2"	3"	3"	DN100	DN100	DN150	DN150	DN200	DN200
Dimensions	A (mm)	202	232	230	254	275	337	386	457	583	740	1004	1029	986	1240	1311	1351	1496	1496
	A (inch)	8.0	9.1	9.1	10.0	10.8	13.3	15.2	18.0	23.0	29.1	39.5	40.5	38.8	48.8	51.6	53.2	58.9	58.9
	B (mm)	116	120	125	125	136	155	180	180	180	224	224	252	410	410	480	540	660	660
	B (inch)	4.6	4.7	4.9	4.9	5.4	6.1	7.1	7.1	7.1	8.8	8.8	9.9	16.1	16.1	18.9	21.3	26.0	26.0
	C (mm)	76.1	76.1	76.1	76.1	88.9	88.9	114.3	114.3	114.3	139.7	139.7	168.3	219.1	219.1	273	323.9	406.4	406.4
	C (inch)	3.0	3.0	3.0	3.0	3.5	3.5	4.5	4.5	4.5	5.5	5.5	6.6	8.6	8.6	10.7	12.8	16.0	16.0
Mass	kg	1.7	1.9	1.9	2	2.6	3	4.3	4.8	5.3	9	10.8	16.2	45	46	70	80	135	135
	lbs	3.7	4.2	4.2	4.4	5.7	6.6	9.5	10.6	11.7	19.8	23.8	35.7	99.2	101.4	154.3	176.4	297.6	297.6

1. Flow is measured at Reference Conditions: 1 bara and 20°C

### Technical specifications for FP HP 1-8

Pneumatech Variant → Specifications ↓	Units	FP HP 1	FP HP 2	FP HP 3	FP HP 4	FP HP 5	FP HP 6	FP HP 7	FP HP 8
Flow <sup>(1)</sup>	m <sup>3</sup> /hr	150	225	315	420	600	900	1260	2400
	cfm	88	132	185	247	353	530	742	1413
Operating Pressure	barg/psig	50/725	50/725	50/725	50/725	50/725	50/725	50/725	50/725
Connections	Inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2"	3"
Dimensions	A (mm)	231	253	274	336	387	453	580	1005
	A (inch)	9.1	10.0	10.8	13.2	15.2	17.8	22.8	39.6
	B (mm)	125	125	136	155	180	180	180	224
	B (inch)	4.9	4.9	5.4	6.1	7.1	7.1	7.1	8.8
	C (mm)	76.1	76.1	88.9	88.9	114.3	114.3	114.3	139.7
	C (inch)	3.0	3.0	3.5	3.5	4.5	4.5	4.5	5.5
Mass	kg	2.5	2.6	3.4	3.9	5.6	6.2	6.9	14.1
	lbs	5.5	5.7	7.5	8.6	12.3	13.7	15.2	31.1

1. Flow is measured at Reference Conditions: 1 bara and 20°C



### Correction factors

Operating pressure	barg	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	20	30	40	50
	psig	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232	100	290	435	725
Correction factor	Kp	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13	2,63	3,88	5,13	6,38

# FS - Sterile filters

## Features & Benefits

- ▶ Enhanced high-grade stainless steel filter housing suitable for sterilization.
  - Designed for applications with high risk of corrosion
  - High hygiene standards thanks to sanitary couplings
- ▶ Advanced filter cartridge design
  - High microbiological filtration efficiency
  - Designed to withstand a large number of sterilization cycles thanks to silicon bonded joint and additional NOMEX layer
- ▶ Stainless steel cylinders and end-caps
- ▶ Low pressure drop
- ▶ 100% integrity tested (DOP test)
- ▶ All components meet the FDA requirements for contact with food in accordance with the Code of Federal Regulations (CFR), title 21.

## General Specifications

- ▶ Maximum working pressure: 14 barg/203 psig
- ▶ Operating temperature range<sup>1</sup>: -20°C to 150°C/-4°F to 302°F
- ▶ Body connections: DIN 11851 (Milk pipe connections)
- ▶ Surface finish: Ra 0.8, electro-polished externally
- ▶ Inlet and outlet connections: threaded



Pneumatech's FSI filters are designed for compressed air and gas applications that need to be free from microbiological contamination, and can thus be sterilized regularly.

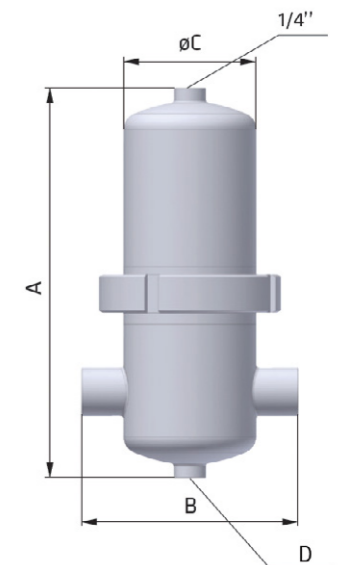
Pneumatech's FSI filter housings are made out of stainless steel grade 1.4404, with a surface that has been smoothed to a level of Ra 0,8. There is no void inside the entire filter housing; and thus no risk of micro-organism contamination.

The filter elements are manufactured with silicon as bonded joint to ensure robustness at high operating and sterilization

temperatures. For the same reason, an additional NOMEX layer is used at the inside and outside of the filter element. The filter cylinders and end-caps are made out of stainless steel. This all results in a highly efficient and exceptionally strong filter, which keeps its performance after a large number of sterilization cycles, with cycle temperatures up to 200°C (392°F). The filtration grade is Super Fine coalescent filter.

Filter Model	Pipe Size	Flow Rate		Dimension (mm)				Weight (kg) Approx.	Element Model
		G/NPT	Nm³/h	SCFM	A	B	C		
FSI 1	1/4"	75	44	225	116	76.1	1/8	1.7	-
FSI 2	3/8"	105	62	251	120	76.1	1/8	1.9	-
FSI 3	1/2"	150	88	253	125	76.1	1/8	1.9	-
FSI 4	3/4"	225	132	281	125	76.1	1/8	2.0	-
FSI 5	1"	315	185	290	136	88.9	1/8	2.6	-
FSI 6	1 1/4"	420	247	357	155	88.9	1/8	3.0	-
FSI 7	1 1/2"	600	353	408	179	114.3	1/4	4.3	-
FSI 8	2"	900	530	476	179	114.3	1/4	4.8	-
FSI 9	2"	1260	742	602	180	114.3	1/4	5.3	-
FSI 10	2 1/2"	1680	989	762	224	139.7	1/4	9.0	-
FSI 11	3"	2400	1413	1030	224	139.7	1/4	10.8	-
FSI 12	3"	3600	2119	1035	238	154	1/4	16.2	-

Correction factors																
Operating pressure	barg	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	psig	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	Kp	0,38	0,50	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13



# Condensate Management

Pneumatech's condensate management portfolio includes solutions for separating, draining, detecting and treating oily condensate.

Water separators can be used downstream of the compressor instead of - or together with - the air receiver. We offer three types of condensate drains depending on your needs: a timer drain, a mechanical zero loss float drain and an electronic zero loss drain. Also for condensate treatment we give you the choice, i.e. between the cost-competitive ECOBOX solution and our premium, patented OWS technology.



# WD - Water detector

## Features & Benefits

- ▶ 24/7 peace-of-mind at a reasonable cost
  - Water level as low as 3 cl detected
  - Can be installed at every critical application in the compressed air network
- ▶ Transparency of operation
  - Alarm message on control panel
  - Potential-free contact to trigger alarm in control room
  - Test button for manual drainage
- ▶ Easy mechanical and electrical installation

## General Specifications

- ▶ Water detector
- ▶ Operating pressure range: 0,2-16 barg/2,9-232 psig
- ▶ Operating temperature range: 1-60°C/34-140°F
- ▶ Power supply: 230VAC 50/60Hz

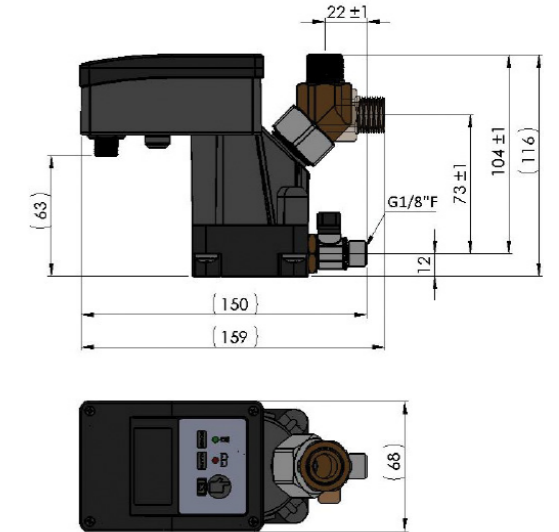


Despite all efforts to make dryers, water separators and drains reliable, a failure can never be ruled out. The consequence of condensate water in your pipe network and operations can be dramatic: from corrosion and ice formation to bad product quality and process malfunctioning.

The installation of a Pressure Dew Point (PDP) sensor downstream brings a solution, but is often a too large investment.

Pneumatech's Water Detector (WD) provides peace-of-mind at an affordable cost. The WD gives an alarm as soon as a 3cl water level is detected. This alarm message is visible, audible and can be routed to a control room thanks to the potential-free contact. The ball valve at the outlet is meant to release water after an alarm situation and is closed during normal operation.

Technical Specifications for WD	
General characteristics	WD
First alarm level (cl)	3
Second alarm level (cl)	6,7
Max. power consumption (W)	10
Electrical connection	Solenoid plug type B - 2+PE
Potential free contact connection	M12 connector A-coding 4-pole Both Normally Open (NO) and Normally Closed (NC) possible
IP Protection	IP65
Physical characteristics	WD
Length (mm / inch)	160 / 6,3
Width (mm / inch)	69 / 2,71
Height (mm / inch)	116 / 4,5
Weight (kg / Lbs)	0,6 / 1,32
Connections	WD
Inlet	G1/2", horizontal + vertical
Outlet	Ball valve for condensate removal
Features	WD
Test button	Yes
Indicative LEDs	Yes
Potential free alarm	Yes



## Options



Power supply cable (2m)



Voltage-free contact cable (5m)

# CDE 5-350 - Electronic zero loss drains

## Features & Benefits

- ▶ No loss of compressed air
  - Automatic controlled drainage of condensate without compressed air loss.
- ▶ Maximum reliability
  - Built-in, easy to clean filter cup.
  - Control circuit: forced opening/closing cycles of the valve in case of clogged drain pipes.
  - Potential-free contact to trigger alarm in case of malfunction.
  - Test button for manual drainage.
- ▶ Easy installation and maintenance
  - Control panel displays all drain functions.
  - Straightforward mechanical and electrical connections.
  - Heater kits available to protect again freezing in cold environments.
  - Can be used for oil-lubricated and oil-free installations.

## General Specifications

- ▶ Zero loss drain
- ▶ Operating pressure range: 0.2-16 barg/2.9-232 psig
- ▶ Operating temperature range: 1-60°C/34-140°F
- ▶ Compressor capacity: from 50 up to 18000 m3/hr\*
- ▶ Power supply: 230VAC 50/60Hz, 24VAC 50/60Hz, 24VDC 50/60Hz, 115VAC 50/60Hz

\*based on RH 60%, Tamb 20°C/68°F reference conditions

## Options

- ▶ Heater kits
- ▶ Voltage-free contact cable for remote control



### Options



Mounting kits



Wear kits



Power supply cable (2m)



Voltage-free contact cable (5m)

The Pneumatech CDE 5-350 is the top quality drain that removes moisture from your compressed air system with maximum reliability and efficiency. An electronic zero loss drain, it only releases condensate when needed without losing compressed

air and wasting energy. With advanced reliability features built in, the CDE gives you premium performance, peace of mind and operational savings.

## Why do you need drains?

Atmospheric air always contains some moisture, also referred to as humidity. When air is compressed, the concentration of these water vapors increases. This moisture can cause all sort of

production problems, from corrosion in your piping system to faulty tools and compromised products. Drains are the components that physically remove this moisture from your system.

## Zero loss drain design

- ▶ A sensor constantly monitors the storage tank. Condensate is only discharged when the maximum level has been reached.
- ▶ A small quantity of condensate remains to ensure no air is lost during removal.
- ▶ Control circuit automatically unclogs the drain pipes.
- ▶ Control panel displays all drain functions:
  - Power status
  - Alarm indicator
  - Test button for manual drainage

### Technical specifications for CDE 5-350

Pneumatech Variant→ Specifications ↓	Unit	CDE 5	CDE 10	CDE 15L	CDE 20L	CDE 35L	CDE 150	CDE 350
<b>General characteristics</b>								
Nominal Drain capacity	(l/h)	2	3	5	10	20	90	200
Compressor capacity	(m³/hr) <sup>(1)</sup>	180	378	450	900	1800	9600	18000
Compressor capacity	(cfm) <sup>(1)</sup>	106	222	265	530	1059	5650	10594
Max. power consumption	(W)				10			
Electrical connection		Industrial form connector type B/ISO 6952 11mm EN175301-803						
Potential free contact connection		M12 connector A-coding 4-pole						
IP Protection		IP65						
<b>Physical characteristics</b>								
Length	mm	136	160	163	163	163	188	247
Length	inch	5.4	6.3	6.4	6.4	6.4	7.4	9.7
Width	mm	60	69	69	69	69	130	130
Width	inch	2.4	2.7	2.7	2.7	2.7	5.1	5.1
Height	mm	120	120	140	155	214	230	230
Height	inch	4.7	4.7	5.5	6.1	8.4	9.1	9.1
Weight	kg	0.4	0.5	0.6	0.7	1.2	1.8	3.45
Weight	lbs	0.9	1.1	1.3	1.5	2.6	4.0	7.6
<b>Connections</b>								
Inlet	(G/NPT)	1/2	1/2	2 x 1/2	2 x 1/2	2 x 1/2	2 x 1/2	2 x 1/2
Outlet	mm	1 x Ø12	1 x Ø12	1 x Ø12	1 x Ø12	1 x Ø12	1 x Ø12	1 x Ø12
<b>Features</b>								
Test button						Yes		
Indicative LEDs						Yes		
Potential free alarm						Yes (NC/NO)		

1. The calculation of compressor capacity is based on the maximum condensate drainage of a compressor aftercooler in moderate climate conditions.

## CDT - Timer drains

### Features & Benefits

- ▶ Guaranteed reliability
  - Compact design, made in house
  - Integrated ball-valve with double inlet thread 1/2" and 1/4" and an integrated strainer easy to clean
  - Test button to condensate manually and check the valve function
- ▶ Endless flexibility
  - Simple to install and fully automatic
  - No limitation in air flow
  - Cycle and valve opening intervals can be set independently of each other
  - Supplied with 2m cable with solenoid plug
  - NPT connection available
- ▶ IP65 enclosed
- ▶ Transparency of operation
  - Two LEDs display shows the operating status

### CDT HP - High pressure timer drain

#### Features & Benefits

- ▶ Guaranteed reliability
  - Compact design, made in house
  - Test button to condensate manually and check the valve function
- ▶ Endless flexibility
  - Simple to install and fully automatic
  - No limitation in air flow
  - Cycle and valve opening intervals can be set independently of each other
  - Supplied with connector plug type A (solenoid plug over moulded with 2m cable to be wired)
  - NPT connection available
- ▶ IP65 enclosed
- ▶ Transparency of operation
  - The display easily allows reading the set value
  - Two LEDs display shows the operating status

Pneumatech's CDT condensate drains discharge the condensate automatically, based on pre-set time intervals. The opening and closing times can be set with high flexibility, which make the drains suitable for almost all capacities. CDT drains are selected in heavy-duty operations, where the large cross-sections opening, and the simplicity of the drain are highly valued.

High pressure timer drain CDT HP are available for operating pressure up to 350 bar (400 bar for 115V).



Technical specifications												
Timer Drain	CDT				CDT HP30			CDT HP100			CDT HP350	
	230V	115V	24VAC G	24VAC N	230V G	115V N	24VAC G	230V G	115V N	24VAC G	230V G	115V N
Pressure or Max pressure	0,2-16 bar (3-232 psi)				30 bar (435 psi)			100 bar (1450 psi)			350 bar (5076 psi) 400 bar (5800 psi)	
Orifice valve	4,5 mm				1,5 mm			1,2 mm			1 mm, 0,9 mm	
Power	25W		23W		8W		17W		8W		16W	
IN/OUT connection	Inlet G & N 1/2" - 1/4" - Outlet hose barb for plastic tube Ø10mm				G 1/4"	NPT 1/4"	G 1/4"	G 1/4"	NPT 1/4"	G 1/4"	G 1/4"	NPT 1/4"
Voltage	230V 50/60 Hz	115V 50/60 Hz	24V 50/60 Hz	24V 50/60 Hz	230V 50/60 Hz	115V 50/60 Hz	24V 50/60 Hz	230V 50/60 Hz	115V 50/60 Hz	24V 50/60 Hz	230V 50/60 Hz	115V 50/60 Hz
Body material	brass				brass			brass			Inox	
Seal	FKM				FKM			PTFE			PU, Peek	
Valve type	2/2 direct acting				2/2 direct acting							
Protection	IP65				IP65							
Electrical connection	DIN43650A				DIN43650A							
Min/Max operating temp.	1-60°C / 34-140°F				1-60°C / 34-140°F							
Timer cycle	On: 0,5 - 10 s ; Off: 0,5 - 45 min				On: 0,1 to 99 s ; Off: 0,5 - 99 min							

## CDF - Mechanical float drains

### Features & Benefits

- ▶ No loss of compressed air
  - Automatic controlled drainage of condensate without any compressed air leak
- ▶ Plug-and-play solution
  - No power supply needed
  - No programming or calibration
- ▶ Guaranteed reliability
  - Large cross-section openings
  - Well-proven, rugged aluminum design
  - Provided with a separate manual drain to depressurize the pressure aluminium housing and allow manual discharge for venting or draining

Pneumatech's CDF drain discharges the condensate automatically and without compressed air losses up to 10 bar.

The condensate is accumulated in the aluminium receiver (pressure-proof housing) and as soon as the maximum level has reached, the condensate will be drained out without any air loss. The direct acting valve is piloting by a precise level float sensor that ensures reliability and efficiency. In its depressurized state the valve is closed (NC design).

The drain is equipped with an integrated venting function, which prevents the risk of possible air slots. The CDF drain has a well-proven, rugged aluminium design with threaded connections at inlet and outlet.



Technical specifications		
Timer Drain	CDF G	CDF N
Type	Float ball type	
Operating media	Condensate (air-water-oil) - non aggressive	
Pressure	0,2 - 10 bar (3 - 145 psi)	
Min recommended pressure	1,5 bar (22 psi)	
Orifice valve	2,5 mm	
Nominal volume flow <sup>(1)</sup>	20000 m3/h	
Drain capacity (@ 7bar)	2,8l/min (167l/h)	
Drain capacity (@ 10bar)	4,2l/min (250l/h)	
IN/OUT connection (on the die-cast valve body)	G 1/2"	
Inlet size by brass adapter	Bsp 1/2" Male / Bsp 1/2" Male	Bsp 1/2" Male / NPT 1/2" Male
Housing material	Aluminium	
Floating body	Stainless steel	
Seal	NBR	
Plastic cap	PA6	
Valve type	Direct acting, normally closed	
Min/Max operating temperature	2-65°C / 35-149°F	
Dimensions (mm)	135x110x130 (without inlet nipple)	
Weight (kg)	0.6	

(1) Refer to 1bar and 20°C at 7bar operating pressure, intake air of compressor 25°C at 60% of relative humidity, 35°C compressed air temperature

# OWS 25 - 5300 - Oil water separators

## Features & Benefits

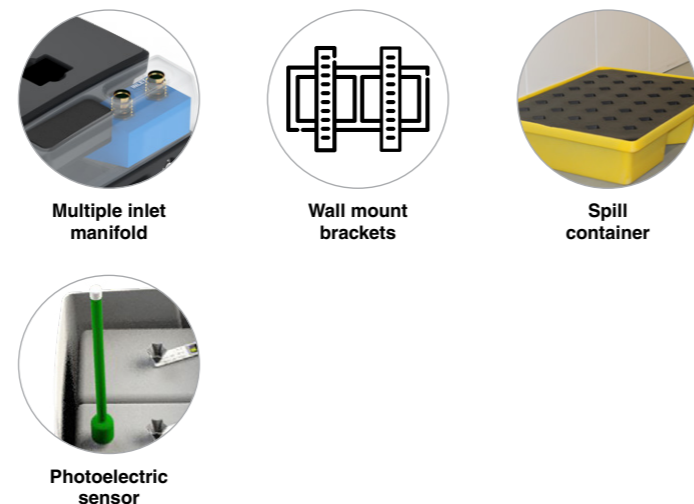
- ▶ Stable and reliable performance for weak as well as stable emulsions thanks to patented dual stage filtration technology
  - Filtering all types of condensate
  - No risk of spillage thanks to large capacity chamber design
- ▶ Eliminating all potential health issues
  - No standing or stagnant water
  - Optional anti-bacteria kit
- ▶ Accurate and quick indication of filter replacement thanks to saturation indicator
- ▶ Overflow indicator signalizes if the emulsion is flowing too quickly through the media
- ▶ DIBT certified
- ▶ Hassle-free maintenance with genuine service kits
- ▶ Optimized serviceability
  - Easy to remove first stage filtration bags
  - 2<sup>nd</sup> stage filter cartridge adapted from outside for easy exchange
  - Built-in wheels for larger cartridge for easy transport

## General Specifications

- ▶ Service interval 4000 hours
- ▶ Oil water separator
- ▶ Clean wastewater with oil content at the outlet at just 10ppm, and the possibility of going to as low as 5ppm depending on the set-up
- ▶ Flow range at mild ambient conditions: 43-8998 m<sup>3</sup>/hr/25-5296 cfm
- ▶ Standard version with activated carbon for unstable emulsions such as those containing mineral oil
- ▶ Organoclay version for stable emulsions with synthetic oil as well as for polypropylen based lubricants



## Options



Pneumatech offers with the new OWS generation a patented way to turn oily condensate from mineral oil, synthetic oil as well as polypropylene based lubricants into harmless water that can be drained away, while capturing the oil to be easily disposed of in an environmentally friendly manner. The multi-stage separation process, using both buoyant oleophilic filters and activated carbon/organoclay ensures exceptional performance, lower disposal costs and trouble free operation.

The OWS range eliminates oil through multi-stage filtration rather than the conventional gravity systems which have limitations on the type of condensate that can be treated. As a result, the OWS separator capacity is not linked to the type of emulsion collected since. The OWS range also eliminates stable emulsions by using organoclay cartridge in the second filtration stage.

Technical specifications for OWS 25-5300											
Installation Type	Pneumatech Variant → Specifications ↓	Units	OWS 25	OWS 53	OWS 106	OWS 180	OWS 360	OWS 636	OWS 1325	OWS 2650	OWS 5300
Complete installation <sup>(1)</sup> with Dryer <sup>(2)</sup>	Cold Climate <sup>3</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	58	119	241	407	817	1440	2999	5998	11995
		cfm <sup>(6)</sup>	34	71	141	240	480	848	1766	3532	7065
	Mild Climate <sup>4</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	43	90	180	306	612	1080	2250	4500	9000
		cfm <sup>5</sup>	25	53	106	180	360	636	1325	2650	5300
	Hot Climate <sup>5</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	22	43	86	148	299	526	1094	2189	4378
		cfm <sup>(6)</sup>	13	26	52	88	175	309	645	1289	2578
Complete installation <sup>(1)</sup> without Dryer <sup>(2)</sup>	Cold Climate <sup>3</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	72	151	299	511	1019	1800	3751	7499	15001
		cfm <sup>(6)</sup>	42	88	133	300	601	1060	2208	4417	8833
	Mild Climate <sup>4</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	54	112	227	382	767	1350	2812	5627	11250
		cfm <sup>(6)</sup>	32	66	133	225	451	795	1656	3313	6625
	Hot Climate <sup>5</sup>	m <sup>3</sup> /hr <sup>(6)</sup>	32	61	122	205	410	724	1512	3020	6041
		cfm <sup>(6)</sup>	18	36	71	121	242	427	890	1779	3558
Connections	inlet (BSP/NPT)		1x1/2"	2x1/2"	2x1/2"	2x3/4"	2x1/2"	2x3/4"	2x3/4"	2x3/4"	-
	outlet (BSP/NPT)		1x1/2"	1x1/2"	1x1/2"	1x3/4"	1x1/2"	1x3/4"	1x3/4"	1x1"	-
Dimensions	Length	mm	250	250	414	417	510	600	682,5	902	902 (x2)
		inch	9,8	9,8	16,2	16,4	20,0	23,6	26,8	35,5	35,5 (x2)
	Width	mm	147	147	279	286	396	446	546	782	782 (x2)
		inch	5,7	5,7	10,9	11,2	15,6	17,5	21,4	30,8	30,78 (x2)
	Height	mm	215	215	430	510	580	725	960	1012	1012 (x2)
		inch	8,4	8,4	16,9	20,0	22,8	28,5	37,7	39,8	39,8 (x2)
	Weight	kgs	3	3	14	19	36	63	113	207	413
		lbs	7	7	30	42	79	138	249	455	911

Reference conditions  
 Relative air humidity: 60%  
 Air inlet temperature: 25°C (77°F) Running hours per day: 12 hrs  
 Effective working pressure: 7 bar (102 psi)

**Note:** Capacity is based on the compressor running at 7 barg / 100 psig for 12 hours per day, with all condensate from the compressor, the air receiver, the filters and fridge dryer being piped into the unit.

Correction factors							
Relative humidity	%	0.5	0.6	0.7	0.8	0.9	-
	Correction factor	1.10	1.00	0.85	0.74	0.66	-
Ambient temperature	°C	15	20	25	30	35	40
	Correction factor	1.33	1.17	1.00	0.76	0.50	0.30
Running hours per day	hrs	12	18	24	-	-	-
	Correction factor	1	0.88	0.75	-	-	-

# ECOBX 2 - 4 - Oil water separators

## Features & Benefits

- ▶ Excellent performance
  - 2-stage filtration with advanced adsorption media
  - After separation, water contains oil levels below 15 ppm<sup>(1)</sup>
  - Emulsion treatment possible (on request)
- ▶ Eliminating potential health issues
  - No standing or stagnant water
- ▶ Plug-and-play installation and service
  - Connection points at inlet
  - Compact footprint
  - No pre-soaking required
- ▶ Time-based service indicator and sampling kit (standard) to verify outlet concentration on a regular base.



Pneumatech extends its cost-competitive ECOBOX condensate cleaning solution with 3 more models, up to 1400 m<sup>3</sup>/hr. The models are designed according to the same success factors: reliable double adsorption with recycled glass media, compact footprint, and easy installation and service.

Additionally the ECOBOX 2 - 4 has 4 connections points at the inlet; and a sample test point at the outlet.

Technical specifications for ECOBOX 2-4				
		ECOBX 2	ECOBX 3	ECOBX 4
Maximum rated flow - normal climate <sup>(2)</sup>	l/s	53	158	389
	m <sup>3</sup> /hr	190	570	1400
	cfm	112	335	824
Connections	Inlet	4 x 12mm	4 x 12mm	4 x 12mm
		4 x 1/2"	4 x 1/2"	4 x 1/2"
	Outlet	12mm	20mm	20mm
		1/2"	3/4"	3/4"
Weight	kg	2,7	3,6	14,8
	lbs	6,0	7,9	32,6
Dimensions	Length (mm)	215	345	432
	Length (inch)	8,46	13,58	17,01
	Width (mm)	257	282	495
	Width (inch)	10,12	11,10	19,49
	Height (mm)	500	654	989
	Height (inch)	19,69	25,75	38,94
Service life for filter <sup>(3)</sup>		4,000 Operating Hrs	4,000 Operating Hrs	4,000 Operating Hrs

1. 15ppm is generally well below the acceptance level for disposal in the sewage, but due to strongly varying international and local regulations, it is the user's responsibility to consult local waste water discharge regulations and ensure compliance.
2. In tropical climates (high ambient temperatures and humidity levels), the air generally contains more water vapor. The extra condensate, generated during the compression and cooling process of the air, shortens the contact time in the device, leaving less time for the media to absorb the oil. Climatic conditions used in the table above are defined as follows:
  - a. Cold climate conditions: average ambient temperature of 20°C/ 68°F- relative humidity of 50 %
  - b. Normal climate conditions: average ambient temperature of 25°C/ 75°F - relative humidity of 50%
  - c. Hot climate conditions: average ambient temperature of 35°/ 95°F - relative humidity of 70 %
3. Pneumatech assumes as well maintained compressor plant and reasonable operating conditions. Performance on mineral or mineral-based lubricants should be as above, irrespective of compressor type, condensate drain technology or climate, provided the condensate produced is not a stable emulsion.

## Options



Extra 4 port kit



## CA - Air cooled aftercoolers

### Features & Benefits

- ▶ Highly efficient axial fans
- ▶ Cooling down to 10°C/18°F above ambient
- ▶ Negligible pressure drop
- ▶ Robust construction and compact design
- ▶ Easy to dismantle for cleaning

### General Specifications

- ▶ Air cooled aftercooler
- ▶ Max. operating pressure: 15 barg/218 psig
- ▶ Operating temperature: 170°C/338°F
- ▶ Approach above ambient temperature: 10°C/18°F
- ▶ Flow Rate: 66 to 4500 Nm<sup>3</sup>/hr (39 to 2649 cfm)



Compressed air will always be 100% saturated with water when it leaves a compressor. But also the outlet temperature has an important influence on the water load downstream the compressor. In order to minimize the load – and thus size – of the downstream refrigeration or adsorption dryer, it is therefore recommended to install a highly efficient aftercooler between the compressor and the dryer.

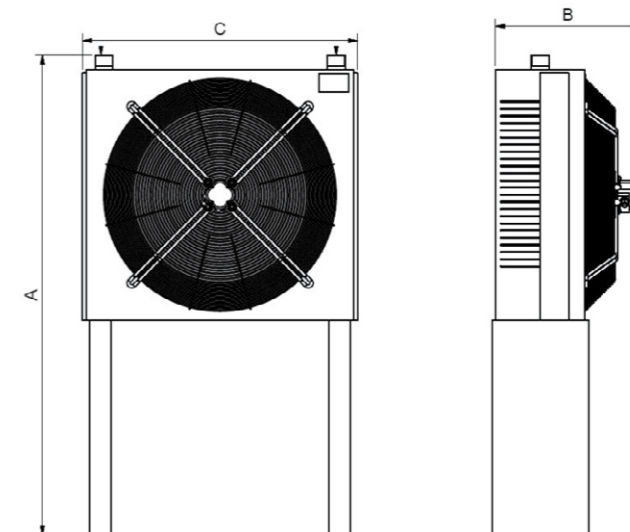
Pneumatech's air cooled aftercoolers CA 1-14 consist of a reliable axial fan with supreme efficiency. The fan forces ambient air over the copper tubes and aluminum fins of the heat exchanger. Hence the compressed air is cooled down to only 10°C/18°F above ambient temperature.

In this way, the CA is a simple product, but with a major impact on the investment and lifecycle cost of your downstream equipment!

Technical specifications for air cooled aftercoolers CA 1-14

Pneumatech Variant → Specifications ↓	Units	CA 1	CA 2	CA 3	CA 4	CA 5	CA 6	CA 7	CA 8	CA 9	CA 10	CA 11	CA 12	CA 13	CA 14
Flow <sup>(1)</sup>	m <sup>3</sup> /hr	66	126	222	294	390	522	774	990	1260	1560	1890	2520	3090	4500
	cfm	39	74	131	173	230	307	456	583	742	918	1112	1483	1819	2649
PipeSize	inch	G1"	G1"	G1 1/2"	G1 1/2"	G2"	G2"	G2"	G2 1/2"	DN100	DN100	DN100	DN100	DN125	DN125
Power Supply	Ph/Volt/Fr	1/230/50	1/230/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50	3/400/50
Fan	Ø mm -W	Ø250-45W	Ø250-45W	Ø350-110W	Ø400-130W	Ø500-540W	Ø500-540W	Ø630-370W	Ø630-370W	Ø800-1470W	Ø800-1470W	Ø800-1470W	Ø800-1470W	2xØ800-1470W	2xØ800-1470W
Dimensions	A (mm)	957	957	1024	1024	1136	1136	1450	1450	1634	1634	1800	2000	2090	2300
	A (inch)	37.7	37.7	40.3	40.3	44.7	44.7	57.1	57.1	64.3	64.3	70.9	78.7	82.3	90.6
	B (mm)	320	320	368	368	355	355	465.5	465.5	564.1	564.1	790	795	830	850
	B (inch)	12.6	12.6	14.5	14.5	14.0	14.0	18.3	18.3	22.2	22.2	31.1	31.3	32.7	33.5
	C (mm)	400	400	490	490	764	764	775	775	1616	1616	1560	1740	1850	2010
Weight	kg	19	20	27	29	44	48	61	66	127	143	148	166	212	315
	lbs	41.9	44.1	59.5	63.9	97.0	105.8	134.5	145.5	280.0	315.3	326.3	366.0	467.4	694.5

1. Flow refers to 1 barg and 20°C at 7 barg operating pressure.



Note : In- and outlet connections can be chosen freely in the 4 corners of the heat exchanger

# CW 300 – 7390 - Water cooled aftercoolers

## Features & Benefits

- ▶ Close temperature approach thanks to counter-current heat exchange
- ▶ Robust shell-and-tube design: stainless steel tubes within coated shell for premium installations
- ▶ Optional CU version
- ▶ Negligible pressure drop
- ▶ Compact design
- ▶ Detailed calculations available on request

## General Specifications

- ▶ Water cooled aftercooler
- ▶ Operating pressure of compressed air: 0-10 barg/0-145 psig
- ▶ Operating temperature of compressed air: 2-200°C/35-392°F
- ▶ Flow Rate: 510 to 12550 Nm<sup>3</sup>/hr/ 300 to 7387 cfm



Compressed air will always be 100% saturated with water when it leaves a compressor. But also the outlet temperature has an important influence on the water load downstream the compressor. In order to minimize the load – and thus size – of the downstream refrigeration or adsorption dryer, it is therefore recommended to install a highly efficient aftercooler between the compressor and the dryer.

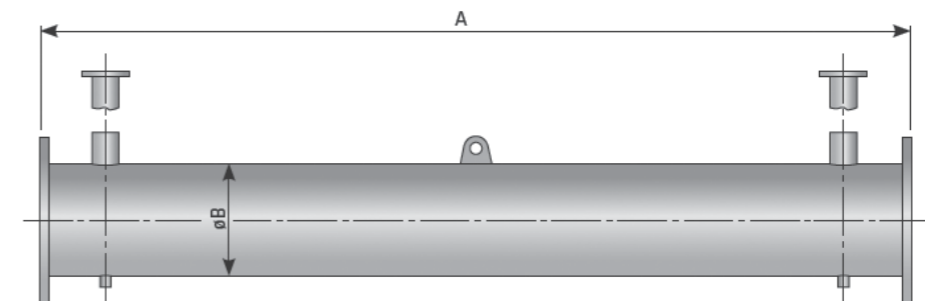
Pneumatech's water cooled aftercoolers CW 300-7390 are robust shell-and-tube heat exchangers with excellent efficiency. Hot compressed air or gas passes through the stainless steel tubes while cooling water flows in counter-current around the tubes. This results in a minimal temperature difference between the outgoing compressed air and the incoming cooling water. Detailed design calculations are available on request.

Technical specifications for 300 - 7390													
	Pneumatech Variant → Specifications ↓	Units	CW 300	CW 590	CW 1040	CW 1300	CW 1680	CW 2320	CW 2650	CW 3120	CW 3430	CW 5020	CW 7390
Compressed air	Flow Capacity <sup>(3)</sup>	[m <sup>3</sup> /h]	510	1000	1760	2200	2850	3940	4500	5300	5820	8520	12550
		cfm	300	590	1040	1300	1680	2320	2650	3120	3430	5020	7390
	Connection		DN100	DN100	DN100	DN100	DN125	DN125	DN150	DN150	DN200	DN250	DN 300
	Pressure Drop	[mbar]	10	30	100	190	100	20	110	180	50	40	50
Cooling water	Flow Capacity <sup>(4)</sup>	[m <sup>3</sup> /h]	0.87	1.7	2.96	3.75	4.63	6.63	7.31	9.03	9.91	14.51	20,14
		Connection		DN32	DN32	DN32	DN32	DN40	DN40	DN40	DN40	DN50	DN100
		Pressure Drop	[mbar]	4	12	31	56	72	128	126	170	94	150
Power	Cooling/heat rejection	[kW]	5.02	9.85	17.09	21.67	26.78	38.37	42.28	52.21	57.33	83.93	116,47
Dimensions	A	[mm]	1.250	1.500	1.750	2.000	1.500	1.750	1.500	1.750	1.500	1.500	1.500
		[in]	0.04	0.05	0.06	0.07	0.05	0.06	0.05	0.06	0.05	0.05	0.05
	ØB	[mm]	114.3	114.3	114.3	114.3	139.7	139.7	168.3	168.3	219.1	273	323.9
		[in]	4.5	4.5	4.5	4.5	5.5	5.5	6.6	6.6	8.6	10.7	12.7

<sup>(3)</sup> Compressed air flow at 7 bar(g) working pressure and 50°C inlet temperature (100% saturated). Compressed air outlet temperature 10°C higher than inlet cooling water temperature.

<sup>(4)</sup> At 25°C inlet cooling water temperature, 5°C differential water temperature.

Please consult Pneumatech team for accurate sizing based on the operating conditions. Given table is only valid at the reference conditions hence the sizing has to be validated to confirm the performance of the selected version.



# Piping Systems

The optimal piping network is sized, planned and installed to support sustainable operational excellence in the production process. Material and product design, installation and maintenance costs, flexibility and safety. They all influence your total cost of ownership and the level of efficiency in your production. If you are looking for a high performing and effortless system that can be customized to fit any production site, AIRnet will turn out to be the best investment choice you can make.



# AIRnet - Aluminium range

## Features and Benefits

- ▶ Time and tooling
  - Quick connections with no need to crimp, thread, solder or glue the pipe
  - No heavy tooling or machinery required
  - PF series and black series can be connected to any existing network via simple use of adaptor unions and nipple sockets
  - PF series is assembled by hand, a push of the pipe into the fitting is all it takes
- ▶ Modularity
  - Easy to handle and easy to work with lightweight materials
  - Modular design supports extensions and modifications to meet new demands
  - Components are interchangeable and reusable after disassembly
  - Quickdrops are easily mounted, both horizontally and vertically
- ▶ Sustainability
  - Optimized inner body design minimizes flow resistance and pressure drop in the fittings
  - Low friction factor and seamless connections minimize pressure drops in the pipe network
  - Superior sealing technology ensures a leak free system and maintains performance over time
  - Durable and corrosion resistant materials offers a maintenance free system
- ▶ Safety
  - Safety factor of 4 for all diameters (burst pressure)
  - Camera control and automatic assembly guarantee zero defect manufacturing
  - Plastic components and pipe clips comply to UL 94 HB and UL 94 V-2 for flammability
  - Torque indicators ensure sufficient torquing



### Options



Fittings



Fittings



White torque indicators



Aluminium RAL 5012



Aluminium RAL 6018

Pipes 20 (3/4") - 25 (1") - 40 (1 1/2") - 50 (2") - 63 (2 1/2") - 80 (3") - 100 (4") - 158 (6") mm		
Applications	Compressed Air and Vacuum	EN standard
Additional gases	Nitrogen, Helium, Argon, Neon, Xenon and Krypton	-
Material	Extruded aluminum alloy EN AW-6060 T6 (similar to alloy 6063T5)	EN 755-2 (ASTM B241)
Safety factor	4 for all diameters (burst pressure)	(Calculated according to ASME B31.1)
Working pressure	Max 16 bar(g) (Max 232 psig)	-
Working temperature	-20°C to 80°C (-4°F to 176°F)	-
Vacuum level	13 mbar(a) (0.189 psia)	-
Dewpoint	Lowest allowable pressure dewpoint is -40°C (-40°F)	-
Outside treatment	Polyester powder paint (QUALICOAT certified)	-
Inside treatment	Chrome free conversion treatment	-
Colors	Blue RAL 5012 and Green RAL 6018 and Grey RAL 7001 : only 20-25mm (3/4"-1")	-

Fittings 20 (3/4") - 25 (1") - 40 (1 1/2") - 50 (2") mm (pf series)		
Connection	Push to fit technology	EN standard
Materials	Engineered polymer PA6 - GF30 fiberglass reinforcement Aluminum high pressure die casting EN AC-46100 (Similar to A03830) Wrought aluminum alloy EN AW-6026 (Similar to alloy 6082)	EN 1706 (ASTM B85) EN 755-2 (ASTM B221)
Seal fittings	NBR 70 Sh A (PTFE coating on pipe seal)	-

Fittings 63 (2 1/2") - 80 (3") mm (PM series)		
Connection	Torque to grip technology	EN standard
Materials	Aluminum high pressure die casting EN AC-43400 (Similar to A360) Wrought aluminum alloy EN AW-6026 (Similar to alloy 6082)	ASTM B85 / EN 1706 ASTM B221
Seal fittings	NBR 70 Sh A	-

Fittings 100 (4") - 158 (6") mm		
Connection	Bolt clamp technology	EN standard
Materials	Aluminum permanent mold casting EN AC-43100 (Similar to A13600) Stainless Steel EN 1.4301 (Similar to alloy 304)	EN 1706 (ESTM B85) EN 10088-2 (AISI 304)
Seal fittings	NBR 70 Sh A	-

## AIRnet - Stainless steel range

AIRnet stainless steel is a piping system designed to deliver a fast, easy, reliable and clean distribution network for compressed air, nitrogen, vacuum specifically for industries that demand the highest quality of air.

### Features and Benefits

- No corrosion, leak resistant and 10 year guarantee
  - Press fit system ensures fast installation with minimal tools
  - No welding, no threading: just push & press
  - Silicone free system
  - FKM Seal (approved by all international regulating bodies for Pharma, F&B)
  - Can be used for clean room applications (316 L)
  - Considerable savings on the labor cost
- ▶ Advantage of press connection
- 20% enlargement of the sealing surface area with a security seal ring minimizes the risk of accidents
  - Eliminates the risk of sealing ring being pressed out or damaged
  - The fit between the sealing ring and the groove makes the pipes insertion easier.



### Airnet product information

Product range	Pipes SS304L: D15 (1/2"), D28 (1"), D35 (1 1/4"), D42 (1 1/2"), D54 (2"), D76 (2 3/4"), D89 (3 1/2"), D108 (4") Pipes SS316L: D15 (1/2"), D28 (1"), D42 (1 1/2")	-
Applications	Compressed Air, Nitrogen, Vacuum...	-
Material	Stainless Steel AISI 304L 1.4301 Stainless Steel AISI 316L 1.4404	EN10088 ASTM A666
Safety factor	4, Burst pressure > 64 Bar (> 928 PSI)	-
Working pressure	16 Bar (232 PSI)	-
Working temperature	-20°C to 120°C (- 4°F to 248° F)	-
Vacuum level	20 mbar (0.29 PSI) abs	-
Dewpoint	Lowest allowable pressure dewpoint is -40°C (-40°F)	-
Treatment	Annealing	-
Fittings	D15 (1/2"), D28 (1"), D35 (1 1/4"), D42 (1 1/2"), D54 (2"), D76 (2 3/4"), D89 (3 1/2"), D108 (4")	-
Connection	Press fit system	-
Materials	Stainless steel AISI 316L 1.4404	EN10088 ASTM A666
Seal fittings	FKM (fluoroelastomer)	-



# Air Receivers

Pneumatech offers receivers in a large variety of sizes and treatments to suit your needs. These can be used for compressed air or inert gases like nitrogen.



# V Range - Air & Nitrogen receivers

## Features & Benefits

- ▶ Available in variety of sizes and treatments to suit your needs
  - Painted vessels
  - Galvanized vessels
  - Vitrified vessels
- ▶ Equipped with connection kit as standard up to 3000 liters Including pressure gauge, safety valves, and ball valves.
- ▶ Vitroflex vessels are 100% water and steam resistant

## General Specifications

- ▶ Types: painted - galvanized - vitrified (Vitroflex)
- ▶ Max. pressure:
  - Standard range: 11 barg/ 160 psig
  - Note: Each size will have different pressure rating. Refer table for specific details
- ▶ 16 bar variant: 16 barg/ 232psig
- ▶ Volume:
  - 100 - 5000 liters for standard range
  - 500 - 5000 liters for 16 bar variant



### Connection Kit



Vessels have several functions: they stabilize pressure peaks and provide thus a stable air- or nitrogen flow; have a storage function in case of a high consumption; and help with the preliminary separation and removal of condensate.

Pneumatech offers a wide range of vessels capable of handling pressures up to 16 barg / 232 psig. They are available in 3 types: painted, galvanized and vitrified. Painted vessels are generally

used where receivers are not subjected to extreme weather conditions and perfectly clean air is not an absolute requirement. Galvanized vessels are used when there is a possibility of corrosion. Vitrified vessels (Vitroflex) are treated with vitreous enamel, which makes them 100% water and steam resistant.

### Painted standard vessels

Variant	V100	V200	V270	V500	V720	V900	V1000	V1500	V2000	V3000	V4000	V5000
Capacity (L)	100	200	270	500	720	900	1000	1500	2000	3000	4000	5000
Pressure (barg)	11	11	11	11	10,8	11	12	11,5	11,5	11,5	11,5	11,5
Diameter Ø	370	446	500	600	800	800	800	1000	1000	1200	1450	1450
H tot (mm)	1172	1570	1668	2055	2030	2120	2315	2305	2805	2965	3070	3570
h (mm)	124	174	170	155	150	130	115	180	180	185	180	180
a	3/4"	1"	1"	1"	2"	1 1/2"	2"	2"	2"	3"	3"	3"
b	3/4"	1"	1"	1"	2"	1 1/2"	2"	2"	2"	3"	3"	3"
c	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/4"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	n.d.	n.d.	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	1/2"	1/2"	1/2"	2"	2"	2"	2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
f	1/2"	1/2"	1/2"	2"	2"	2"	2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
l (mm)	298	397	599	775	895	860	745	590	595	700	780	780
m (mm)	998	1222	1304	1560	1705	1780	1685	1860	2355	2410	2430	2930
Kit type included	1	2	3	4	4	6	7	B	B	B	Not included	
Weight (kg)	37	51	62	127	180	200	204	278	352	537	802	923
Applicable directive	2014/29/EU						2014/68/EU (PED)					

### Galvanized standard vessels

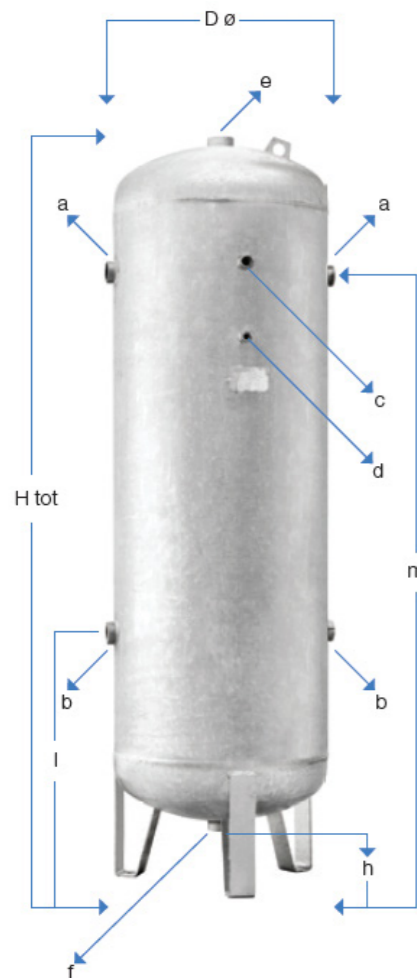
Variant	V100	V200	V270	V500	V720	V900	V1000	V1500	V2000	V3000	V4000	V5000
Capacity (L)	100	200	270	500	720	900	1000	1500	2000	3000	4000	5000
Pressure (barg)	11	11	11	11	10,8	11	11,5	11,5	11,5	11,5	11,5	11,5
Diameter Ø	370	430	500	600	790	790	790	1000	1000	1200	1450	1450
H tot (mm)	1229	1530	1685	2077	1863	2213	2345	2305	2805	2965	3070	3570
h (mm)	176	135	192	174	200	200	200	180	180	185	180	180
a	3/4"	3/4"	3/4"	1 1/2"	1 1/2"	2"	2"	2"	2"	3"	3"	3"
b	3/4"	3/4"	3/4"	1 1/2"	1 1/2"	2"	2"	2"	2"	3"	3"	3"
c	3/8"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	2"	2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
f	2"	2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
l (mm)	447	397	442	689	690	800	725	590	595	700	780	780
m (mm)	1055	1280	1422	1689	1440	1800	1725	1860	2355	2410	2430	2930
Kit type included	1	A	A	A	A	A	B	B	B	B	Not included	
Weight (kg)	40	55	66	143	184	209	224	306	387	591	882	1025
Applicable directive	2014/29/EU						2014/68/EU (PED)					

Vitroflex standard vessels												
Variant	V100	V200	V270	V500	V720	V900	V1000	V1500	V2000	V3000	V4000	V5000
Capacity (L)	100	200	270	500	720	900	1000	1500	2000	3000	4000	5000
Pressure (barg)	N.A.	11	11	11	10,8	11	11,5	11,5	11,5	11,5	11,5	11,5
Diameter Ø	N.A.	430	500	600	790	790	790	1000	1000	1200	1450	1450
H tot (mm)	N.A.	1530	1685	2077	1863	2213	2345	2305	2805	2965	3070	3570
h (mm)	N.A.	135	192	174	200	200	200	180	180	185	180	180
a	N.A.	3/4"	3/4"	1"1/2"	1"1/2"	2"	2"	2"	2"	3"	3"	3"
b	N.A.	3/4"	3/4"	1"1/2"	1"1/2"	2"	2"	2"	2"	3"	3"	3"
c	N.A.	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
d	N.A.	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	N.A.	2"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"
f	N.A.	2"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"
l (mm)	N.A.	397	442	689	690	800	725	590	595	700	780	780
m (mm)	N.A.	1280	1422	1689	1440	1800	1725	1860	2355	2410	2430	2930
Kit type included	N.A.	A	A	A	A	A	B	B	B	B	not included	
Weight (kg)	N.A.	50	60	130	167	190	204	278	352	537	802	932
Applicable directive	2014/29/EU						2014/68/EU (PED)					

Painted 16 bar variant vessels						
Capacity (L)	500	1000	2000	3000	4000	5000
Pressure (barg)	16	16	16	16	16	16
Diameter Ø	600	800	1000	1200	1430	1430
H tot (mm)	2055	2315	2810	2930	3110	3610
h (mm)	155	115	175	170	190	190
a	1"	2"	2"	2"	2"	2"
b	1"	2"	2"	2"	2"	2"
c	n.d.	3/8"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	2"	2"	2"	2"	2"	2"
f	2"	2"	2"	2"	2"	2"
l (mm)	775	745	565	645	765	765
m (mm)	1560	1685	2340	2370	2450	2950
Kit type included	5	8	C	C	Not included	
Weight (kg)	159	246	490	620	905	1055
Applicable directive	2014/29/EU		2014/68/EU (PED)			

Galvanized 16 bar variant vessels						
Capacity (L)	500	1000	2000	3000	4000	5000
Pressure (barg)	16	16	16	16	16	16
Diameter Ø	600	790	1000	1200	1430	1430
H tot (mm)	2120	2365	2810	2930	3110	3610
h (mm)	175	200	175	170	190	190
a	2"	2"	2"	2"	2"	2"
b	2"	2"	2"	2"	2"	2"
c	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	2"	2"	2"	2"	2"	2"
f	2"	2"	2"	2"	2"	2"
l (mm)	485	725	565	645	765	765
m (mm)	1745	1725	2340	2370	2450	2950
Kit type included	C	C	C	C	Not included	
Weight (kg)	176	308	539	682	995	1160
Applicable directive	2014/68/EU (PED)					

## V HP - Air & Nitrogen receivers



Vitroflex 16 bar variant vessels						
Capacity (L)	500	1000	2000	3000	4000	5000
Pressure (barg)	16	16	16	16	16	16
Diameter Ø	600	790	1000	1200	1430	1430
H tot (mm)	2120	2365	2810	2930	3110	3610
h (mm)	175	200	175	170	190	190
a	2"	2"	2"	2"	2"	2"
b	2"	2"	2"	2"	2"	2"
c	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
d	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
e	2"	2"	2"	2"	2"	2"
f	2"	2"	2"	2"	2"	2"
l (mm)	485	725	565	645	765	765
m (mm)	1745	1725	2340	2370	2450	2950
Kit type included	C	C	C	C	Not included	
Weight (kg)	176	308	490	620	905	1055
Applicable directive	2014/68/EU (PED)					



## DBH range - Air and Nitrogen high pressure receivers

### Features & Benefits

- ▶ Available in variety of sizes and treatments to suit your needs
  - Painted vessels
  - Galvanized vessels
- ▶ Connection kit available for all models, with a small extra cost.

### General Specifications

- ▶ Types: painted - galvanized
- ▶ Two different variants: 23 bar and 41 bar
- ▶ Volume: from 250 to 3000 liters
- ▶ Manufactured according to PED 2014/68/ EU – AD 2000, Module: H1
- ▶ Ambient temperature from -10°C to +50°C



In high-pressure air or nitrogen installations, it is often required to have a buffer vessel to stabilize the flow and to have an additional storage.

Pneumatech offers high pressure vessels in two two versions: 41 bar and 23 bar maximum pressure.

The new range of high pressure vessels is available in different

sizes to meet your specific needs, ranging from 250 litres up to 3000 litres.

All the high pressure vessels are manufactured according to PED 2014/68/EU – AD 2000, Module: H1 standards, fulfilling the most stringent regulations for pressurized equipment and vessels.

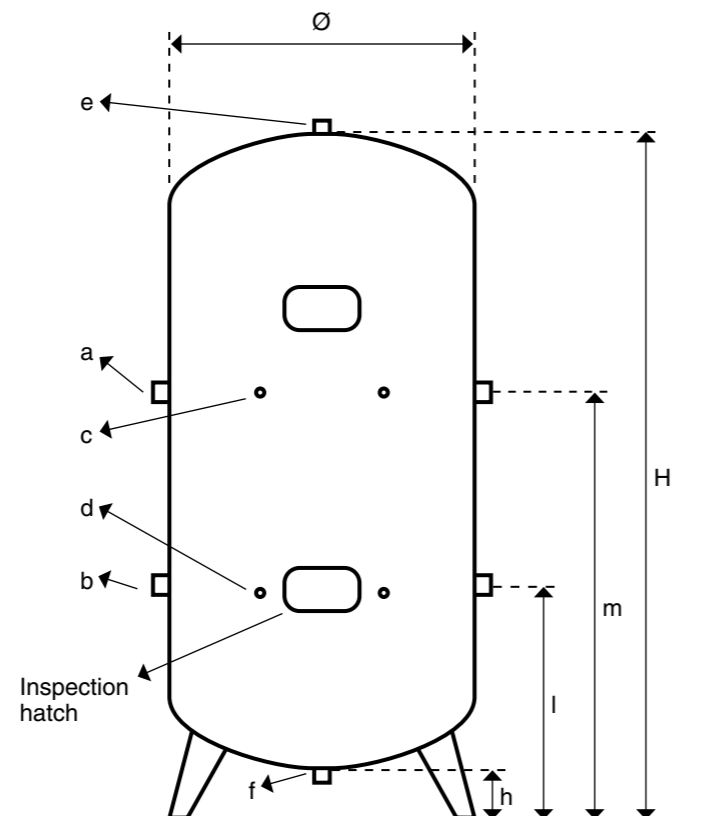
#### 23 bar vessels, Painted (P) and Galvanized (VZ)

Variant	DBH250-23-ST	DBH500-23-ST	DBH1000-23-ST	DBH2000-23-ST	DBH3000-23-ST
Capacity (L)	250	500	1000	2000	3000
Pressure (barg)	23	23	23	23	23
Diameter Ø	500	600	800	1100	1250
H tot (mm)	1575	1955	2380	2490	2770
h (mm)	165	155	240	200	200
a	1 1/4"	1 1/4"	1 1/4"	2 1/2"	2 1/2"
b	1 1/4"	1 1/4"	1 1/4"	2 1/2"	2 1/2"
c	1/2"	1/2"	1/2"	1/2"	1/2"
d	1/2"	1/2"	1/2"	1/2"	1/2"
e	1 1/2"	1 1/2"	1 1/2"	1"	1"
f	1 1/2"	1 1/2"	1 1/2"	1"	1"
l (mm)	540	905	1020	925	935
m (mm)	1290	1805	1810	1715	1725
Weight (kg)	160	250	400	800	
Inspection hatch	1 x (100x150)	1 x (100x150)	2 x (100x150)	2 x (100x150)	2 x (100x150)
Kit (optional)	ARS-23-A	ARS-23-A	ARS-23-B	ARS-23-B	ARS-23-B

#### 41 bar vessels, Painted (P) and Galvanized (VZ)

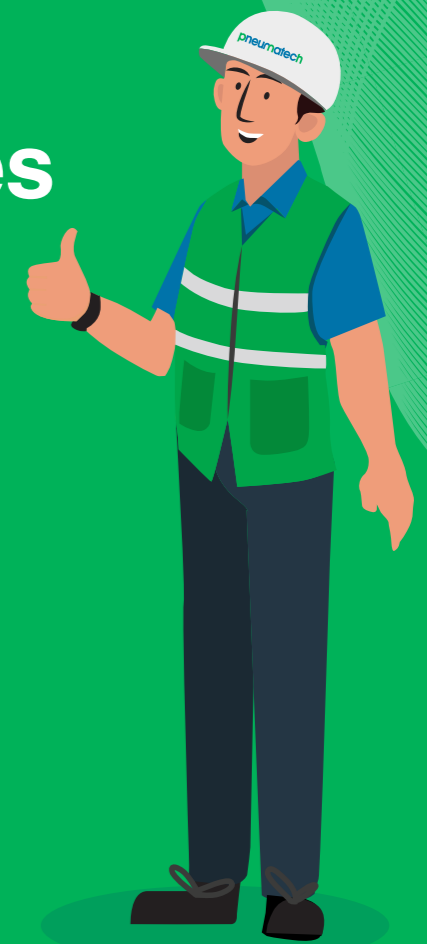
Variant	DBH250-41-ST	DBH500-41-ST	DBH1000-41-ST	DBH2000-41-ST	DBH3000-41-ST
Capacity (L)	250	500	1000	2000	3000
Pressure (barg)	41	41	41	41	41
Diameter Ø	500	600	800	1100	1250
H tot (mm)	1595	2015	2285	2520	2800
h (mm)	165	155	125	200	200
a	1 1/4"	1 1/4"	1 1/4"	2 1/2"	2 1/2"
b	1 1/4"	1 1/4"	1 1/4"	2 1/2"	2 1/2"
c	1/2"	1/2"	1/2"	1/2"	1/2"
d	1/2"	1/2"	1/2"	1/2"	1/2"
e	1 1/2"	1 1/2"	1 1/2"	1" (2" galv.)	1" (2" galv.)
f	1 1/2"	1 1/2"	1 1/2"	1" (2" galv.)	1" (2" galv.)
l (mm)	550	935	915	940	950
m (mm)	1300	1725	1705	1730	1740
Weight (kg)	200	330	570	1150	
Inspection hatch	1 x (100x150)	1 x (100x150)	2 x (100x150)	2 x (100x150)	2 x (100x150)
Kit (optional)	ARS-23-C	ARS-23-C	ARS-23-D	ARS-23-D	ARS-23-D

### DBH range - Air and Nitrogen high pressure receivers



# PNEUMACHECK Advanced Services

A PNEUMACHECK audit will help you determine how you can maximize your air or gas equipment to improve its performance, energy savings, and sustainability.



# PNEUMACHECK

Are you using your compressed air or industrial gas system optimally? If your answer is “I don’t know” or “definitely not”, you are losing a lot of money. Because the costs of an inefficient or unreliable installation quickly add up. A PNEUMACHECK audit will help you determine how you can maximize your air or gas equipment to improve its performance, energy savings, and sustainability.

## Optimize your air, nitrogen and oxygen system

- ▶ Find out your compressed air or N<sub>2</sub> flow profiles.
- ▶ Test your compressed air system’s moisture, oil vapor and particle content to determine whether your air quality meets your requirements.
- ▶ Test the purity of the N<sub>2</sub> and O<sub>2</sub> you generate.
- ▶ Measure the pressure (drops) in your air and N<sub>2</sub> network to identify potential energy waste.
- ▶ Find leaks in your air or N<sub>2</sub> system.
- ▶ Measure the energy consumption of your compressed air equipment, including your compressor and dryer.

## The all-in-one PNEUMACHECK box

- ▶ Flow Check Universal (max. version, probe length 220 mm, with display)
- ▶ Check Box M3 with 2 digital and 2 analog inputs
- ▶ 1/2" ball valve stainless steel
- ▶ 3x welding nipples
- ▶ Connection cable 5m (ODU/M12)
- ▶ Drilling device
- ▶ PMH basic software
- ▶ Protection frame (up to 50 bar)

## A complete auditing solution

With PNEUMACHECK, you get a comprehensive auditing solution, from accurate measurement to expert advice.

### 1. Measurement:

Our specialist comes to you to install the PNEUMACHECK Box, a plug-and-play measurement, monitoring and logging device. It comes with all the tools needed to connect to your installation. The equipment does not interfere with your production during the data gathering process.

### 2. Analysis and expertise:

Our experts analyze and summarize your data in one report filled with actionable insights.

### 3. Result:

Optimizing your air and gas system allows you to cut your energy costs, reduce your environmental footprint, and meet your quality and safety standards.



## A wide range of PNEUMACHECK solutions

Pneumatech is the industry leader in air treatment and gas generation. Our range of PNEUMACHECK solutions helps you save money and improve your operational sustainability.

PNEUMACHECK audit	What we measure & optimize	How you benefit
Nitrogen and compressed air flow	<ul style="list-style-type: none"> <li>• Determination of your optimal gas generator size based on your current N<sub>2</sub> flow.</li> <li>• Pre-check for compressed air leakages.</li> </ul>	<ul style="list-style-type: none"> <li>• Make the switch to producing your own N<sub>2</sub> based on a data-driven assessment of the benefits you will enjoy.</li> <li>• Experience the energy efficiency and cost savings of generating N<sub>2</sub> with a system optimized to your needs and requirements.</li> <li>• Get an overview of all leakages in your network.</li> </ul>
Air and gas PDP	<ul style="list-style-type: none"> <li>• Measurement of moisture content in compressed air and gases.</li> <li>• Analysis of dryer performance and efficiency.</li> <li>• Prevention of condensate in pipework and at the application.</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent damage to your air system, your pneumatic equipment and your products caused by condensate.</li> <li>• Ensure the required PDP for your sensitive applications.</li> </ul>
Air and gas pressure	<ul style="list-style-type: none"> <li>• Measurement of the pressure in your compressed air and gas installation.</li> <li>• Measurement of the pressure drop in your air and gas piping, filters and dryers.</li> </ul>	<ul style="list-style-type: none"> <li>• Enjoy the cost and emissions savings of an optimized air and gas pressure and the elimination of pressure drops.</li> </ul>
Air, gas and vacuum leakages	<ul style="list-style-type: none"> <li>• Detection and analysis of leaks in your air, gas and vacuum network.</li> <li>• Sealing of leaks in your air, gas and vacuum system.</li> </ul>	<ul style="list-style-type: none"> <li>• Significantly reduce costs and improve your environmental footprint by eliminating energy waste because of leaks.</li> </ul>
Air system power consumption	<ul style="list-style-type: none"> <li>• Measurement of your air system’s actual performance, including your compressor and dryer’s power consumption.</li> <li>• Recommendations on how to adjust and optimize your air installation’s performance and energy use.</li> </ul>	<ul style="list-style-type: none"> <li>• Enjoy the energy cost savings of optimizing your air system’s power consumption. This will also reduce your environmental footprint.</li> </ul>
Air oil vapor content	<ul style="list-style-type: none"> <li>• Testing for the presence of oil vapors.</li> <li>• Checking if your compressed air meets your quality class requirements for the presence/absence of oil vapors.</li> <li>• Checking if your installation meets breathing air standards.</li> </ul>	<ul style="list-style-type: none"> <li>• Prevention of compressed air quality issues, especially for sensitive applications.</li> </ul>
Air particle content	<ul style="list-style-type: none"> <li>• Checking if your compressed air meets your quality class requirements for particle content.</li> </ul>	<ul style="list-style-type: none"> <li>• Prevention of compressed air quality issues that can affect your system, tools and final products.</li> </ul>
Gas purity	<ul style="list-style-type: none"> <li>• Measurement of the purity of the N<sub>2</sub> or O<sub>2</sub> you generate.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure the quality of your N<sub>2</sub> or O<sub>2</sub> supply to prevent compromising your final product.</li> <li>• Comply with Pharmacopeia and EU food grade standards.</li> <li>• Meet breathing air safety requirements.</li> </ul>

# PNEUMACHECK - Nitrogen flow audit

Are you overpaying for nitrogen deliveries? Why? Producing your own nitrogen is the cost efficient, flexible and sustainable alternative. But don't just take our word for it. You can calculate your own N<sub>2</sub> cost savings. And it all starts with finding your true nitrogen requirements with PNEUMACHECK.

## With a PNEUMACHECK nitrogen flow audit, you can...

- ▶ Find out your factory's N<sub>2</sub> flow profile
- ▶ Understand the nitrogen usage of the different applications and processes in your plant
- ▶ Identify if and where N<sub>2</sub> is being wasted
- ▶ Confidently select and size an on-site Pneumatech gas generation system to replace your liquid or bottle supply

## On-site gas generation – the preferred solution

Many companies still purchase their nitrogen – even though producing N<sub>2</sub> on-site offers more advantages.

Here are just four:

- Greater cost-efficiency saves you money
- Eliminating bottle or liquid deliveries reduces your environmental footprint
- Take charge of your own N<sub>2</sub> supply
- Less hassle by removing supply logistics

## PNEUMACHECK helps you save

Pneumatech is the industry leader in air treatment and gas generation. Our range of PNEUMACHECK solutions help you save money and improve your operational sustainability. Contact your Pneumatech expert to find out which PNEUMACHECK will benefit you most:

- Compressed air usage
- Air system leakage detection
- Moisture detection
- Compressed air quality audit
- Air and gas pressure measurement
- Nitrogen flow audit
- Oxygen flow audit

## Did you know?

- Liquid nitrogen tanks can have more than 20% boil-off losses.
- Up to 10% of nitrogen in delivered cylinders cannot be used.
- The ROI of an on-site nitrogen generator can be less than 1- 2 years.

## An A-Z nitrogen flow solution

With PNEUMACHECK, you get a complete nitrogen flow solution, from accurate measurement to expert advice:

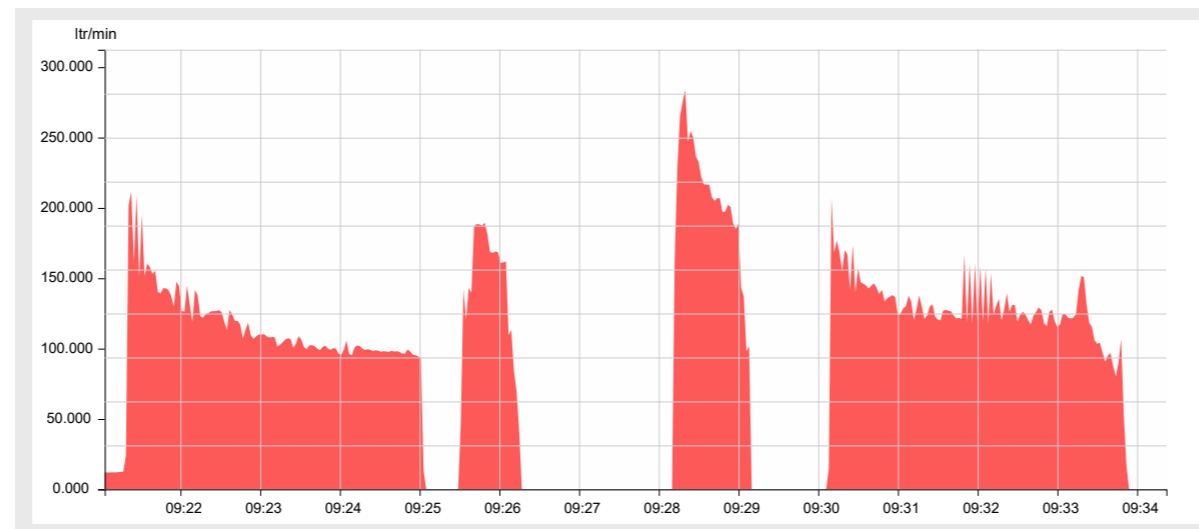
### 1. Measurement:

- High-accuracy flow meter: Measures your N<sub>2</sub> flow and usage
- Data logger: Records your N<sub>2</sub> flow data and makes it available for analysis
- Installation equipment: All the tools to make a convenient connection with your installation

### 2. Analysis and expertise:

- Report: Our experts analyze and summarize your flow data in one report filled with actionable insights.
- Advice: Based on this data, we can simulate the on-site generation system that meets your specific requirements.

## Measurement result example



Technical specifications	
Pressure	standard up to 16 bar, up to 50 bar with use of frame (included)
Flow	up to 10,000 cubic meter per hour
Pipe diameter	½ - 6 in/DN 15 - 150 (up to DN 300 as an option)
Electrical supply*	100-240 VAC; 50/60 Hz

\* the mobile Check Box provides up to 8 hours of continuous operation without electrical supply.

## The process:

Our specialist comes to you to install the Pneumatech Flow Check Box, a plug-and-play flow metering, monitoring and logging solution. After installation, this measuring equipment will not impact your production processes.



## The result:

You get a deep dive into your current gas usage and the options for optimizing your nitrogen systems and processes.



# ICONS

Advanced connectivity for optimal performance  
and remote monitoring



The ICONS software is available for all our compressed air dryers and gas generators equipped with the Purelogic controller, allowing for remote monitoring. Please contact your local Pneumatech representative for more information.

### Improve your Efficiency

- ▶ Avoid downtime
- ▶ Get noticed in case of warnings
- ▶ Get recommendations to improve the health of your installation
- ▶ Optimize your energy consumptions

### Be in control

Monitor your compressed air installation from your computer, tablet or mobile device. Anywhere, any time.

### Which ICONS user are you?



#### RighTime license

- Keep an eye on compressed air dryers & gas generators status and service requirements
- Get basic recommendations
- Easy access to service and advice



#### UpTime license

- Get a phone message in case of warnings or shutdowns
- Get recommendations to increase uptime
- Review the Health Score of your installation



#### Energy license

- Analyze and optimize the energy efficiency of your compressor room.
- Get access to performance indicators, benchmarks and trends.
- Optimize you installation with reports and recommendations.



Pneumatech reserves the right to change or revise specifications and product design in connection with any features of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

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