

Refrigeration Dryers

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

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



Cool 12 - 272 - Non-cycling refrigeration dryers

Features & Benefits

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

General Specifications

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



Applications



Pneumatic tools and equipment



Pneumatic control systems



Painting



Injection moulding



Car shops



Tire inflation

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

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

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

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

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

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

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

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

AD 15 - 4200 - Non-cycling refrigeration dryers

General specifications

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

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

AD 15-65



Features & Benefits

- Stable performance and guaranteed dew point up to 3°C/37°F
- Ingeniously designed components to ensure maximum performance
 - Hot gas bypass valve to prevent freezing at lower loads
 - Zero-loss electronic drain to prevent loss of valuable compressed air
 - Brazed plate heat exchanger with integrated water separator and air-to-air heat exchange
- R513A refrigerant gas: low global warming impact, zero ozone depletion
- Digital display with real-time PDP monitoring
- Easy plug-and-play installation

AD 85-105



Features & Benefits

- Stable performance and guaranteed dew point up to 3°C/37°F
- Ingeniously designed components to ensure maximum performance
 - Hot gas bypass valve to prevent freezing at lower loads
 - Zero-loss electronic drain to prevent loss of valuable compressed air
 - Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange
- Environmental safe refrigerant gases R513A
- Digital display with real-time PDP monitoring
- Easy plug-and-play installation

Options



Filter support



Bypass valve

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

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

AD 125-270	AD 355-635	AD 750-4200
		
Features & Benefits	Features & Benefits	Features & Benefits
- Stable performance and guaranteed dew point up to 3°C/37°F - Rotary compressors and R410A refrigerant: the winning combination 30% more energy efficient - Requires 19% less refrigerant gas - Extremely reliable: low vibration levels and limited mechanical load - Ingeniously designed components to ensure maximum performance - Hot gas bypass valve to prevent freezing at lower loads - Zero-loss electronic drain to prevent loss of valuable compressed air - Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange - Digital display with real-time PDP monitoring and voltage-free contact for remote alarm - Easy plug-and-play installation	- Stable performance and guaranteed dew point up to 3°C/37°F - Rotary compressors and R410A refrigerant: the winning combination 30% more energy efficient - Requires 19% less refrigerant gas - Extremely reliable: low vibration levels and limited mechanical load - Ingeniously designed components to ensure maximum performance - Hot gas bypass valve to prevent freezing at lower loads - Zero-loss electronic drain to prevent loss of valuable compressed air - Aluminium block heat exchanger with integrated water separator and air-to-air heat exchange - Advanced controlling and monitoring thanks to the controller installed - Digital PDP display - Remote start/stop - Voltage-free contact for general alarm - Easy plug-and-play installation	- Stable performance and guaranteed dew point of 3°C/37°F. - Best in class scroll compressors and R410A refrigerant: The winning combination 30% more energy efficient 20% lower gas load - Extremely reliable: Less moving parts, low vibration levels and limited mechanical load - Ingeniously new designed components to ensure maximum performance - Ultra-efficient micro-channel condenser providing up to 40% more heat rejection, durable and easy maintenance - Hot gas bypass valve to prevent freezing at lower loads - Zero-loss electronic drain to prevent loss of valuable compressed air - New aluminium heat exchanger designed for maximum heat transfer and optimized air recovery (max. 2°C dT from inlet to outlet) - Advanced controlling and monitoring - Digital PDP display - Remote start/stop - Voltage-free contact for general alarm - Easy plug-and-play installation

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

AD 15 - 4200 - Non-cycling refrigeration dryers

Technical specifications for AD 15-425 50Hz

Pneumatech Variants →	Units	AD 15	AD 20	AD 30	AD 40	AD 65	AD 85	AD 105	AD 125	AD 145	AD 185	AD 230	AD 270	AD 355	AD 425
Specifications ↓															
Max Operating Pressure	bar	16	16	16	16	16	14	14	14	14	14	14	14	14	14
Flow	l/s	6	10	14	20	30	39	50	60	68	87	108	128	167	200
	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
Specifications ↓													
Max Operating Pressure	bar	14	14	14	14	14	14	14	14	14	14	14	14
Flow	l/s	250	300	400	500	583.3	750	833.3	1040	1166.7	1400	1650	2000
	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)⁽¹⁾
- ▶ Pressure dew point: 3°C/37°F (ISO 8573-1:2010 class 4)
- ▶ Power supply: 115/230VAC 50/60 Hz
- ▶ Refrigerant: R134a (AC 15-100), R410a (AC 125 - 200)



Options



Integrated high efficiency line filters



Electric panel protection IP 54

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 .

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

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

Technical specifications for AC 15 - 200 50Hz Aircooled

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

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

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

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

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

Pressure dewpoint (°C) - 30°C and 40°C										
Temperature		°C	25	30	35	38	45	50	55	60
		°F	77	86	95	100	113	122	131	140
PDP	4°C	39°F	1,14	1,09	1,03	1	0,8	0,67	0,53	0,4
	7°C	45°F	1,27	1,22	1,14	1,09	0,88	0,74	0,59	0,44
	10°C	50°F	1,4	1,35	1,24	1,18	0,96	0,8	0,65	0,49
	15°C	59°F	1,63	1,55	1,41	1,32	1,08	0,91	0,74	0,56

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

Air inlet pressure	barg	4	5	6	7	8	10	12	14	16
	psig	58	72	87	101	116	145	174	203	232
		0,74	0,84	0,92	1	1,05	1,15	1,25	1,31	1,35

Flow correction factor due to ambient temperature - 50Hz units

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

Flow correction factor due to ambient temperature - 60Hz units

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

AC 200 - 630 VSD - Cycling refrigeration dryers

Features & Benefits

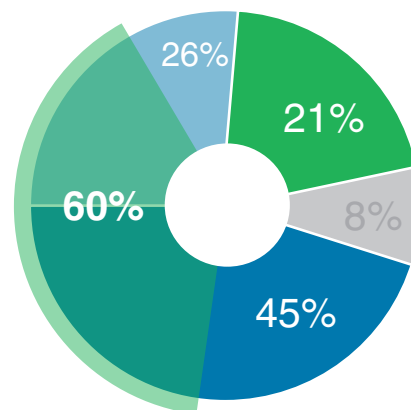
- ▶ Variable frequency drive providing variable frequency drive providing unmatched energy savings
 - Up to 60% in energy savings
 - Patented heat exchangers on air to air side allow very low internal pressure drops 100 - 180 mbar (1.5 - 2.6 PSI) depending on the size resulting in less energy consumption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

General Specifications

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



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



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

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

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

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

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

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

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

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

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

Technical specifications for AC 200-630 VSD							
Specifications ↓	Units	AC200 VSD	AC300 VSD	AC400 VSD	AC450 VSD	AC550 VSD	AC630 VSD
Maximum conditions at full flow ambient (Inlet) temp	°C	46 (60)	46 (60)	46 (60)	46 (60)	46 (60)	46 (60)
Inlet flow for pressure dew point (PDP) of 3°C / 37.4°F	l/s	100	140	180	220	260	300
	cfm	212	297	381	466	551	636
	m ³ /hr	360	500	650	790	940	1080
Pressure drop at full flow	bar	0.16	0.11	0.18	0.14	0.1	0.18
	psi	2.3	1.6	2.6	2	1.5	2.6
Power consumption	kW	0.66	1.04	1.54	1.77	1.9	2.64
	hp	0.90	1.41	2.09	2.41	2.58	3.59
Max. working pressure	bar	14.5	14.5	14.5	14.5	14.5	14.5
	psi	210	210	210	210	210	210
Compressed air connections (NPT for UL version)		G 1 1/2" F	G 2" F	G 2" F	G 2 1/2" F	G 2 1/2" F	G 2 1/2" F
Dimensions	L (mm)	805	805	805	805	805	805
	L (inch)	31.69	31.69	31.69	31.69	31.69	31.69
	H (mm)	962	962	962	962	962	962
	H (inch)	37.87	37.87	37.87	37.87	37.87	37.87
	W (mm)	1040	1040	1040	1040	1040	1040
	W (inch)	41	41	41	41	41	41
Weight	kg	130	134	134	143	150	165
	lbs	287	295	295	315	331	364

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

Correction factors for compressed air inlet pressure						
Operating pressure	barg	6	7	8	10	13
	psig	87	100	116	145	188
Pressure correction factor	Kp	0.97	1	1.03	1.07	1.12

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

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

Features & Benefits

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

General Specifications

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



Options



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Technical specifications AC 650 - 2100 fixed speed															
		Air Cooled							Water Cooled						
Pneumatech Variant → Specifications ↓	Units	AC 650	AC850	AC 1050	AC 1250	AC 1600	AC 1800	AC 2100	AC 650	AC 850	AC 1050	AC 1250	AC 1600	AC1800	AC2100
Flow ⁽¹⁾	l/s	310	410	510	610	760	870	1010	310	410	510	610	760	870	1010
	m³/hr	1116	1476	1836	2196	2736	3132	3636	1116	1476	1836	2196	2736	3132	3636
Power consumption	kW	2.80	3	4.5	4.8	5.3	6.6	7.4	2.00	2.4	4.1	3.1	3.6	4.5	5.1
	hp	3.75	4.02	6.03	6.44	7.11	8.85	9.92	2.68	3.22	5.50	4.16	4.83	6.03	6.84
Pressure drop over dryer	mbar	230	210	200	170	170	140	170	230	210	200	170	170	140	170
	psi	3.3	3.0	2.9	2.5	2.5	2.0	2.5	3.3	3.0	2.9	2.5	2.5	2.0	2.5
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Dimensions	L (mm)	1263	1263	1525	1040	1245	1245	1580	1263	1263	1263	1245	1580	1245	1245
	L (inch)	49.7	49.7	60.0	40.9	49.0	49.0	62.2	49.7	49.7	49.7	49.0	62.2	49.0	49.0
	W (mm)	850	850	850	1060	1060	1060	1060	850	850	850	1060	1060	1060	1060
	W (inch)	33.5	33.5	33.5	41.7	41.7	41.7	41.7	33.5	33.5	33.5	41.7	41.7	41.7	41.7
	H (mm)	1190	1375	1580	1580	1580	1580	1580	1190	1375	1375	1580	1580	1580	1580
	H (inch)	46.9	54.1	62.2	62.2	62.2	62.2	62.2	46.9	54.1	54.1	62.2	62.2	62.2	62.2
Inlet and Outlet Connections		G3"	G3"	G3"	DN100	DN100	DN150	DN150	G3"	G3"	G3"	DN100	DN150	DN150	DN150
Weight	kg	200	245	310	320	380	400	460	180	245	265	350	360	370	380
	lbs	441	540	683	705	838	882	1014	397	540	584	772	794	816	838

Technical specifications AC 650 - 2100 VSD															
		Air Cooled						Water Cooled							
Pneumatech Variant → Specifications ↓	Units	AC 650 VSD	AC 850 VSD	AC 1050 VSD	AC 1600 VSD	AC 1800 VSD	AC 2100 VSD	AC 650 VSD	AC 850 VSD	AC 1050 VSD	AC 1600 VSD	AC 1800 VSD	AC 2100 VSD		
Flow ⁽¹⁾	l/s	310	410	510	760	870	1010	310	410	510	760	870	1010		
	m³/hr	1116	1476	1836	2736	3132	3636	1116	1476	1836	2736	3132	3636		
Power consumption	kW	2.28	3.02	3.38	5.3	5.8	6.6	1.48	2.2	2.78	3.3	4.2	5.6		
	hp	3.06	4.05	4.53	7.11	7.78	8.85	1.98	2.95	3.73	4.43	5.63	7.51		
Pressure drop over dryer	mbar	230	210	200	170	140	170	230	210	200	90	120	170		
	psi	3.3	3.0	2.9	2.5	2.0	2.5	3.3	3.0	2.9	1.3	1.7	2.5		
Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A		
Dimensions	L (mm)	1263	1263	1263	1245	1245	1580	1263	1263	1263	1580	1580	1580		
	L (inch)	49.7	49.7	49.7	49.0	49.0	62.2	49.7	49.7	49.7	62.2	62.2	62.2		
	W (mm)	850	850	850	1060	1060	1060	850	850	850	1060	1060	1060		
	W (inch)	33.5	33.5	33.5	41.7	41.7	41.7	33.5	33.5	33.5	41.7	41.7	41.7		
	H (mm)	1190	1375	1375	1580	1580	1580	1190	1375	1375	1580	1580	1580		
	H (inch)	46.9	54.1	54.1	62.2	62.2	62.2	46.9	54.1	54.1	62.2	62.2	62.2		
Inlet and Outlet Connections		ISO7-R3*	ISO7-R3*	ISO7-R3*	DN100	DN150	DN150	ISO7-R3*	ISO7-R3*	ISO7-R3*	DN150	DN150	DN150		
Weight	kg	218	245	265	380	400	460	200	245	265	410	410	410		
	lbs	481	540	584	838	882	1014	441	540	584	904	904	904		

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

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

Features & Benefits

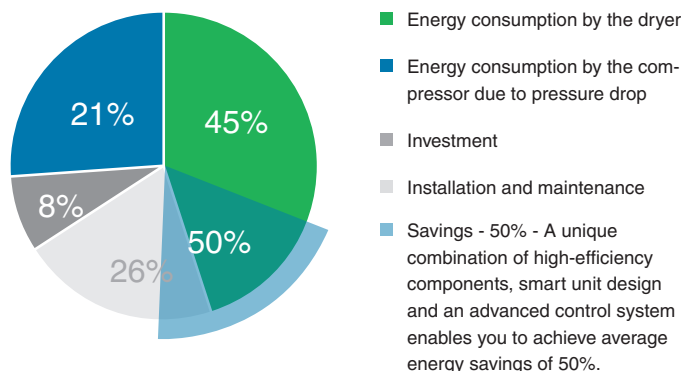
- ▶ Stable and guaranteed Performance at all operating conditions - PDP of 3°C thanks to direct expansion technology
- ▶ Lowest pressure drop
- ▶ Advanced control algorithm with three different control modes for variable speed versions:
 - Regulation of the refrigerant compressor based on actual load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

General Specifications

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



Reduced lifecycle costs and faster payback thanks to reduced power consumption



Options



Customized solutions
(contact your Pneumatech
representative for further
information)



Wooden box packaging

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

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

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

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

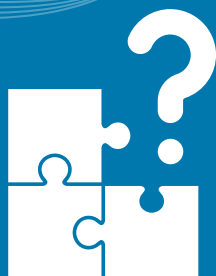
Technical specifications AC 2650 - 4200 fixed speed									
Air Cooled						Water Cooled			
Pneumatech Variants → Specifications ↓	Units	AC 2650	AC 3200	AC 3700	AC 4200	AC 2650	AC 3200	AC 3700	AC 4200
Flow ⁽¹⁾	l/s	1250	1500	1750	2000	1250	1500	1750	2000
	m³/hr	4500	5400	6300	7200	4500	5400	6300	7200
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															
Air Cooled									Water Cooled						
Pneumatech Variants → Specifications ↓	Units	AC 2650 VSD	AC 3200 VSD	AC 3700 VSD	AC 4200 VSD	AC 5100 VSD	AC 6400 VSD	AC 8500 VSD	AC 2650 VSD	AC 3200 VSD	AC 3700 VSD	AC 4200 VSD	AC 5100 VSD	AC 6400 VSD	AC 8500 VSD
Flow ⁽¹⁾	l/s	1250	1500	1750	2000	2400	3000	4000	1250	1500	1750	2000	2400	3000	4000
	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	67.9	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 ₂)	80 cycles
Layer Thickness	25-30 µm (1 mil)
UV Resistance	Excellent
Adhesion (cross hatch)	0 (European) 5b (USA)
Chemical Resistance	Excellent

Coating resistance of some typical corrosive gas vapors (based on exposure temperature of 20°C/68°F) – maximum concentrations

Chlorine	64 ppm	Ethanol	320 ppm
Ammonia	160 ppm	Sulphuric acid	320 ppm
Phosphoric acid	320 ppm	Seawater	640 ppm

