

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



PRD & PNC Series
Non-Cycling Refrigerated Air Dryers
(10 - 1200 scfm)



PRD & PNC Series Non-Cycling Refrigerated Air Dryers

The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains moisture which, when cooled, will turn into liquid water, causing extensive damage not only to the compressed air network, but also to the finished product.

These costly contamination problems can be avoided by installing a PRD or PNC Series non-cycling refrigerated dryer (ranging from 10 - 1200 scfm) package complete with Parker high efficiency filtration.

Parker's revolutionary 3-in-1 heat exchanger (PRD10 - PRD175) features a 3-in-1 aluminum design with integral air connections. All models include an air-to-air freecooler, while the unique "slowflow" demister ensures perfect dewpoints whatever the operating conditions. Our 4-in-1 heat exchanger (PNC200 - PNC1200) offers

minimal pressure drops and class leading performance, and significantly increases the efficiency of the whole compressed air treatment process.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.

Benefits of Models PRD10 - PRD175

- Easy access to all dryer components by removing a single canopy
- "Plug and Play" design for easy installation - more compact than any dryer on the market
- Robust timed solenoid drain equals improved reliability (PRD15 - PRD175)
- Unique 3-in-1 heat exchanger
- Oversized demister separator resulting in excellent liquid removal over all operating conditions
- Oversized condenser to operate in ambients to 122°F (50°C)
- Unique drain niche allows drain access without removing a single panel
- 3-stage dewpoint indicator
- Fan pressure switch (all models)
- High refrigerant temperature switch (all models)
- High refrigerant pressure switch (PRD150-175)
- Fan cycling ensures stable operation
- All models incorporate a dewpoint indicator
- Extremely compact footprint
- Low pressure differential across dryer (1.45 psi average)
- ETL listed complete unit
- Dryers manufactured in facility certified to ISO/TS16949:2009
- Advanced helium leak tests



Benefits of Models PNC200 - PNC1200

- Optimum dewpoint levels for highest system performance
- Unique 4-in-1 heat exchanger
- High reliability, easy to use and maintain
- Environmentally friendly
- Extremely low pressure drop design
- Easy to use, highly reliable control panel
- ETL listed
- Visual indication of dewpoint performance
- High and low refrigerant pressure alarm light
- Lighted On/Off switch
- Crankcase heater prevents refrigerant migration into compressor oil which provides compressor lubrication integrity, both prior to start-up and during the "off" cycle
- Oversized condenser to operate in ambient to 115°F (45°C) with pre-filter
- Dryers manufactured in facility certified to ISO9001 and ISO14001
- High efficiency Parker Pre-Filter recommended on all models
- Unique design allows for easy filter and bypass install
- CRN registered all provinces



3rd
Party
Validated

Benefits

PRD and PNC Series are designed to significantly reduce the operational costs of the compressor by minimizing pressure loss.



Reduced indirect costs

Electricity required by the compressor to compensate for pressure drops in the air dryer accounts for around 25% of its total cost over 5 years. Parker PRD and PNC Series offer average pressure drops which are about one half those of conventional systems.

Lowest Differential Pressure

Parker refrigerated dryers have an average of 2.0 psid versus the industry average of 5.0 psid.

Example: 500 scfm dryer operating, 8760 hours per year

Cost of Power	Savings Realized
\$0.05 per KW =	\$546 per year
\$0.10 per KW =	\$1091 per year
\$0.15 per KW =	\$1638 per year

Reduced CO₂ Emissions

Many countries worldwide are looking closely at their manufacturing industries in an effort to reduce the amount of harmful greenhouse gases released into the atmosphere. The use of electricity has a direct impact on the generation and release of CO₂. By significantly reducing the energy consumption of its products, Parker can help you reduce your carbon footprint and protect the environment.

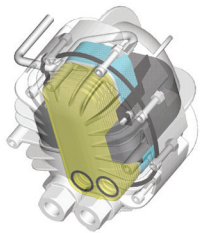


Environmentally Friendly

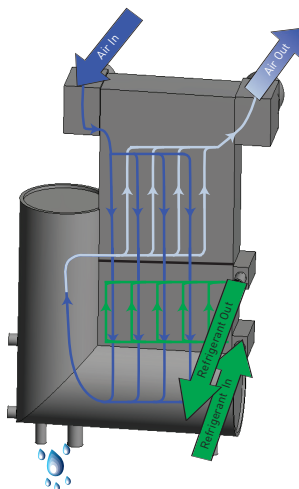
Montreal Protocol compliant R134a (PRD Series) & R404a (PNC Series) refrigerants allow for zero ozone depletion, low global warming potential and low refrigerant charge.

Heat Exchanger provides less than 2 psi pressure drop

The heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing. The flow path of the heat exchanger has been designed in order to optimize its performances. In particular, large volumes allow low air velocity through the heat exchanger section, resulting in high exchange efficiency and low pressure drops. Pressure drops are further improved thanks to the absence of interconnecting pipes through the different sections of the heat exchanger and to a straight forward path of the compressed air flow with smooth and minimum changes of flow directions.



3-in-1 Heat Exchanger
(PRD10 - PRD175)



4-in-1 Heat Exchanger
(PNC200 - PNC1200)

The heat exchanger is designed for ease of filter and bypass installation. All units are designed for ease of service and serviceability.

Add to your savings with Parker Filtration

Any restriction to airflow within a filter housing and element will reduce the system pressure. To generate compressed air, large amounts of electrical energy are consumed, therefore any pressure lost within the system can be directly converted into a cost for wasted energy. The higher the pressure loss, the higher the energy costs.

Compressed air and gas lines typically contain water, oil, and particulate contamination.

The contaminants of greatest concern in precision compressed air systems are water, oil, and solids.

Water vapor is present in all compressed air and it becomes greatly concentrated by the compression process. While air dryer systems can be used effectively to remove water from compressed air, they will not remove oil, which is the second major liquid contaminant.

Most oil comes from compressor lubrication carry-over, but even the air produced by oil-free compressors has hydrocarbon contamination brought into the system through the intake.

The third contaminant is solid matter including dirt, rust, and scale. Solid particulates, combined with aerosols of water and oil, can clog and shorten the life of air system components and can foul processes.

Parker High Efficiency Filtration

- Elements utilize low turbulence flow design
- Epoxy saturated borosilicate glass nanofiber media with outer synthetic fabric dryer layer allowing swift removal of coalesced liquids
- Differential pressure gauge and auto drain
- Durable aluminum chromated heads and bowls with powder coated finish
- Large sump capacity to handle condensate
- Simple installation and easy maintenance
- CRN certified



Parker Filtration

International Standard ISO8573-1 has become the industry standard method for specifying compressed air cleanliness.

ISO8573-1:2010 CLASS	Solid Particulate			Vapor Pressure Dewpoint	Water Liquid g/m ³	Oil Total Oil (aerosol liquid and vapor) ppm	
	Maximum number of particles per m ³						Mass Concentration ppm
	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron				
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	- ≤ -94°F (-70°C)	-	0.01	
2	≤ 400,000	≤ 6,000	≤ 100	- ≤ -40°F (-40°C)	-	0.1	
3	-	≤ 90,000	≤ 1,000	- ≤ -4°F (-20°C)	-	1	
4	-	-	≤ 10,000	- ≤ 37.4°F (3°C)	-	5	
5	-	-	≤ 100,000	- ≤ 44.6°F (7°C)	-	-	
6	-	-	-	≤ 5 ≤ 50°F (10°C)	-	-	
7	-	-	-	5 - 10	- ≤ 0.5	-	
8	-	-	-	-	0.5 - 5	-	
9	-	-	-	-	5 - 10	-	
X	-	-	-	> 10	> 10	> 10	

Technical

PRD Product Selection



Model	Air Connections	Nominal Capacity (scfm)*	Dimensions ins (mm)			Weight		Primary Voltages	Recommended Pre-Filter Model	Recommended After-Filter Model
			H	W	D	lbs	kg			
PRD10-A11516016FLU	1/2" NPT-F	10	16.9 (430)	17.7 (450)	8.3 (210)	42	19	115V/1Ph/60Hz	AO010CNFX	AA010CNFX
PRD15-A11516016TXU	1/2" NPT-F	15	16.9 (430)	17.7 (450)	8.3 (210)	42	19	115V/1Ph/60Hz	AO010CNFX	AA010CNFX
PRD25-A11516016TXU	1/2" NPT-F	25	19.9 (505)	19.7 (500)	8.3 (210)	52	24	115V/1Ph/60Hz	AO015CNFI	AA015CNFI
PRD35-A11516016TXU	1/2" NPT-F	35	19.9 (505)	19.7 (500)	8.3 (210)	52	24	115V/1Ph/60Hz	AO015CNFI	AA015CNFI
PRD50-A11516016TXU	3/4" NPT-F	50	22.2 (565)	20.5 (520)	8.9 (225)	58	27	115V/1Ph/60Hz	AO020DNFI	AA020DNFI
PRD75-A11516016TXU	3/4" NPT-F	75	22.2 (565)	20.5 (520)	8.9 (225)	68	31	115V/1Ph/60Hz	AO025DNFI	AA025DNFI
PRD100-A11516016TXU	3/4" NPT-F	100	23.4 (604)	21.9 (555)	16.7 (425)	110	50	115V/1Ph/60Hz	AO025DNFI	AA025DNFI
PRD125-A11516016TXU	1 1/2" NPT-F	125	23.4 (604)	21.9 (555)	16.7 (425)	115	52	115V/1Ph/60Hz	AO025ENFI	AA025ENFI
PRD125-A23016016TXU	1 1/2" NPT-F	125	23.4 (604)	21.9 (555)	16.7 (425)	115	52	230V/1Ph/60Hz	AO025ENFI	AA025ENFI
PRD150-A11516016TXU	1 1/2" NPT-F	150	23.4 (604)	21.9 (555)	16.7 (425)	128	58	115V/1Ph/60Hz	AO030GNFI	AA030GNFI
PRD150-A23016016TXU	1 1/2" NPT-F	150	23.4 (604)	21.9 (555)	16.7 (425)	128	58	230V/1Ph/60Hz	AO030GNFI	AA030GNFI
PRD175-A23016016TXU	1 1/2" NPT-F	175	23.4 (604)	21.9 (555)	16.7 (425)	132	60	230V/1Ph/60Hz	AO030GNFI	AA030GNFI

*Flowrates at the following climatic conditions - Ambient Temperature: 100°F (38°C), Inlet Temperature: 100°F (38°C), Inlet Pressure: 100 psi g (7 bar g).

Technical Data

Models	Max Ambient Temperature	Max Inlet Temperature	Min Ambient Temperature	Max Inlet Pressure	Refrigerant
PRD10 - PRD175	122°F (50°C)	149°F (65°C)	41°F (5°C)	232 psi g (16 bar g)	R134a

Correction Factors for Models PRD10 - PRD175

To obtain dryer capacity at new conditions, multiply nominal capacity x C1 x C2 x C3.

Ambient Temperature (C1)	°F	60	70	80	90	100	110	120
	°C	16	21	27	32	38	43	49
	CF	1.34	1.26	1.17	1.09	1	0.91	0.82

Inlet Temperature (C2)	°F	90	100	110	120	140	149
	°C	32	38	43	49	60	65
	CF	1.24	1	0.81	0.67	0.45	0.44

Working Pressure (C3)	psi g	60	80	100	125	150	175	200	230
	bar g	4	6	7	9	10	12	14	16
	CFP	0.83	0.93	1	1.07	1.12	1.16	1.19	1.22

Notes:

- Standard equipment includes:
 - Models PRD10 - PRD175 have electromechanical control
 - 6' power cord (115V models) on Models PRD10 - PRD125 only.
 - on/off switch
 - R134a environmentally friendly refrigerant on PRD10 - PRD175
 - power on light
 - built-in demister for high efficient removal of condensed liquid.
 - removable cabinet for easy access to internal components
 - moisture dewpoint indicator and
 - automatic condensate drain on Model PRD10
 - timed solenoid condensate drain on Models PRD15 - PRD175.
- For reliable operation and to meet warranty conditions, a pre-filter must be installed.

PNC0250 - A4 - F1

A = Air-Cooled

2 = (230V/1Ph/60Hz)
 3 = (230V/3Ph/60Hz)
 4 = (460V/3Ph/60Hz)
 5 = (575V/3Ph/60Hz)

Blank = Dryer Only
 F1 = Dryer Plus Pre-Filter
 F2 = Dryer Plus Pre-Filter & After-Filter



PNC Product Selection

Model	Air In/Out	Nominal Capacity (scfm) ¹	Dimensions ins (mm)			Weight		Filtration ²	
			Height	Width	Depth	lbs	kg	Pre-Filter	After-Filter
PNC0200-A2- ³	2" NPT	200	42 (1067)	28.125 (714.375)	42 (1067)	402	182	JD0340H-7CPY	JD0320H-6CY
PNC0250- ^{**}	2" NPT	250	42.1 (1069)	28.4 (721)	42.4 (1077)	421	191	JD0340H-7CPY	JD0320H-6CY
PNC0325- ^{**}	2" NPT	325	42.1 (1069)	28.4 (721)	42.4 (1077)	432	196	JD0340H-7CPY	JD0320H-6CY
PNC0400- ^{**}	2" NPT	400	42.1 (1069)	28.4 (721)	42.4 (1077)	441	200	JD0465H-7CPY	JD0430H-6CY
PNC0500- ^{**}	2" NPT	500	42.1 (1069)	28.4 (721)	42.4 (1077)	460	209	JD0900J-7CPY	JD0650J-6CY
PNC0700- ^{**}	3" NPT	700	48.6 (1234)	36.4 (925)	56.4 (1433)	670	304	JD1300K-7CPY	JD0900K-6CY
PNC0850- ^{**}	3" NPT	850	48.6 (1234)	36.4 (925)	56.4 (1433)	688	312	JD1300K-7CPY	JD0900K-6CY
PNC1050- ^{**}	3" NPT	1050	48.6 (1234)	36.4 (925)	56.4 (1433)	745	338	JD1300K-7CPY	HF3-801-6CU-DG
PNC1200- ^{**}	3" NPT	1200	48.6 (1234)	36.4 (925)	56.4 (1433)	766	347	JD1300K-7CPY	HF3-801-6CU-DG

Notes:

- Flowrates at the following climatic conditions - Ambient Temperature: 100°F (38°C), Inlet Temperature: 100°F (38°C), Inlet Pressure: 100 psi g (7 bar g).
- Filter packages recommended based on flowrates not connection size.
- PNC200 only available 230V/1Ph/60Hz.
- For reliable operation and to meet warranty conditions, a pre-filter must be installed.

Replacement Elements

Model	Pre-Filter Element	After-Filter Element
PNC0200-A2- ³	JF0340H-7CPK	JF0320H-6CK
PNC0250- ^{**}	JF0340H-7CPK	JF0320H-6CK
PNC0325- ^{**}	JF0340H-7CPK	JF0320H-6CK
PNC0400- ^{**}	JF0465H-7CPK	JF0430H-6CK
PNC0500- ^{**}	JF0900J-7CPK	JF0650J-6CK
PNC0700- ^{**}	JF1300K-7CPK	JF0900K-6CK
PNC0850- ^{**}	JF1300K-7CPK	JF0900K-6CK
PNC1050- ^{**}	JF1300K-7CPK	6CU51-280 X 1
PNC1200- ^{**}	JF1300K-7CPK	6CU51-280 X 1

Note:

- Replacement element kits include: replacement element, head-to-bowl o-ring, and lube



CRN all Provinces (PNC Dryer and Filters)

Correction Factors for Models PNC200 - PNC1200

To obtain dryer capacity at new conditions, multiply nominal capacity x C1 x C2 x C3.

Ambient Temperature (C1)	°F	80	90	95	100	105	110	115
	°C	27	32	35	38	41	43	46
	CF	1.12	1.08	1.05	1	0.95	0.9	0.84

Inlet Temperature (C2)	°F	80	85	90	95	100	105	110	115	120	130	140
	°C	27	29	32	35	38	41	43	46	49	54	60
	CF	1.22	1.22	1.22	1.1	1	0.92	0.83	0.76	0.69	0.56	0.46

Working Pressure (C3)	psi g	50	60	75	80	90	100	110	125	130	140	150
	bar g	3.5	4.1	5.2	5.5	6.2	6.9	7.6	8.6	9	9.7	10.3
	CFP	0.8	0.84	0.9	0.92	0.96	1	1.01	1.02	1.03	1.04	1.05

Notes:

- Models PNC200 - PNC1200 include the following equipment as standard:
 - on/off switch
 - power light
 - high pressure alarm light
 - low pressure alarm light
 - R404a environmentally friendly refrigerant
 - built-in demister for high efficient removal of condensed liquid
 - removable cabinet for easy access to internal components
 - moisture dewpoint indicator
 - automatic condensate drain
- For reliable operation and to meet warranty conditions, a pre-filter must be installed, included standard with the PNC dryer.

Aftermarket

Compressed air equipment users demand much more than the supply of high quality products in order to maintain a competitive edge.

Modern production technology is increasingly demanding the provision of a higher purity and more reliable compressed air supply. Products and solutions that are manufactured by Parker are designed to provide air quality that meets and often exceeds international standards.

As well as the requirement for air purity and reliability, there are additional factors to consider when choosing the right service provider for your compressed air and gas purification system. For example, knowledge of the many regulations regarding the management of industrial waste, energy efficiency improvement programs and consideration of any environmental impact. It is anticipated that future legislations will demand further in-depth technical and knowledge-based support from service providers.

Our commitment to industry does not stop with the supply of high quality products. We are also committed to ensuring that our equipment provides high performance by providing a trouble-free service from a bespoke maintenance and verification package - all tailored to your own specific requirements.

We offer a wide range of valuable services that will impact positively on your drive towards improved production efficiency and product quality with reduced production rejections and operational costs.

From initial selection to installation, commissioning, preventative maintenance and specialized services, Parker is redefining customer service.



Filter Elements and Consumable Parts	Maintenance, Repair and Overhaul	Customer Support	Specialized Services
<ul style="list-style-type: none"> Genuine Replacement filter elements Preventative Maintenance Kits Repair Kits Installation Kits Upgrade Kits 	<ul style="list-style-type: none"> Installation and Commissioning Maintenance and Repair Updates and Upgrades Service Contracts Parts Service Warranty 	<ul style="list-style-type: none"> Business Development Technical Support Group Training Technical Publications 	<ul style="list-style-type: none"> Air Quality Testing Dewpoint Measurement Leak Detection Particle Counting Micro-biological Testing



Worldwide Filtration Manufacturing Locations

North America

**Compressed Air Treatment
Filtration & Separation/Balston**
Haverhill, MA
978 858 0505
www.parker.com/balston

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Airtek/domnick hunter/Zander**
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desalination.parker.com

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