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## PRD & ANC Series

Non-Cycling Refrigerated Air Dryers  
(10 - 1200 scfm)



# PRD & ANC 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 ANC Series non-cycling refrigerated dryer (ranging from 10 - 1200 scfm) package complete with Parker Airtek high efficiency filtration.

Parker Airtek'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 (ANC200 and up) 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

- "Plug and Play" design for easy installation
- 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)
- 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 ISO9001 and ISO14001



### Benefits of Models ANC200 - ANC1200

- 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
- 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
- High efficiency Parker Airtek JD Series Pre-Filter standard on all models



# Benefits

PRD and ANC 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 Airtek's ANC Series offers average pressure drops which are about one half those of conventional systems.

## Lowest Differential Pressure

Parker Airtek 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 CO<sub>2</sub> Emissions

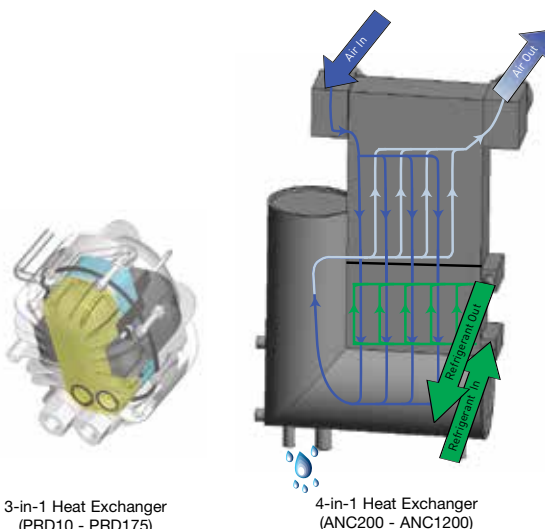
Many countries worldwide are looking closely at their manufacturing industries in an effort to reduce the amount of harmful greenhouse gases released into the atmosphere. The use of electricity has a direct impact on the generation and release of CO<sub>2</sub>. By significantly reducing the energy consumption of its products, Parker Airtek can help you reduce your carbon footprint and protect the environment.

## Environmentally Friendly

Montreal Protocol compliant R134a (PRD Series) & R404a (ANC 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  
(ANC200 - ANC1200)

# Airtek filtration, add to your savings

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. In order to build upon the low pressure drop of the PRD and ANC Series, not just any compressed air filter will do.

## Sources of Contamination

### 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 the second major liquid contaminant - oil.

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.

## Airtek High Efficiency Filtration

- Maximum oil carryover 0.012 PPM w/w - ISO12500-1 tested at 40 PPM inlet challenge.
- Elements are self sealing (JC models)
- Elements utilize low turbulence flow design (JD models)
- Epoxy saturated borosilicate glass nanofiber media with outer synthetic fabric dryer layer allowing swift removal of coalesced liquids
- Includes differential pressure indicator and manual drain providing visual assurance of performance (JC models)
- Differential pressure gauge and auto drain (JD models)
- Durable aluminum chromated heads and bowls with powder coated finish
- Large sump capacity to handle condensate
- Simple installation and easy maintenance



JC Series



JD Series

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

ISO8573-1:2010 CLASS	Solid Particulate			Water		Oil	
	Maximum number of particles per m³			Mass Concentration ppm	Vapor Pressure Dewpoint	Liquid g/m³	Total Oil (aerosol liquid and vapor) 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	-	-	-	≤ 50°F (10°C)	-		-
7	-	-	-	5 - 10	- ≤ 0.5		-
8	-	-	-	-	0.5 - 5		-
9	-	-	-	-	5 - 10		-
X	-	-	-	> 10	- > 10		> 10

# Technical

## 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	1/2" NPT-F	10	16.9 (430)	17.7 (450)	8.3 (210)	42	19	115V/1Ph/60Hz	JC0015-C10	JC0015-C
PRD15	1/2" NPT-F	15	16.9 (430)	17.7 (450)	8.3 (210)	42	19	115V/1Ph/60Hz	JC0015-C10	JC0015-C
PRD25	1/2" NPT-F	25	19.9 (505)	19.7 (500)	8.3 (210)	52	24	115V/1Ph/60Hz	JC0025-C10	JC0025-C
PRD35	1/2" NPT-F	35	19.9 (505)	19.7 (500)	8.3 (210)	52	24	115V/1Ph/60Hz	JC0050-C10	JC0050-C
PRD50	3/4" NPT-F	50	22.2 (565)	20.5 (520)	8.9 (225)	58	27	115V/1Ph/60Hz	JC0050-C10	JC0050-C
PRD75	3/4" NPT-F	75	22.2 (565)	20.5 (520)	8.9 (225)	68	31	115V/1Ph/60Hz	JC0085-C10	JC0085-C
PRD100	3/4" NPT-F	100	23.4 (604)	21.9 (555)	16.7 (425)	110	50	115V/1Ph/60Hz	JC0110-C10	JC0110-C
PRD125	1 1/2" NPT-F	125	23.4 (604)	21.9 (555)	16.7 (425)	115	52	115V/1Ph/60Hz & 230V/1Ph/60Hz	JC0150-C10	JC0150-C
PRD150	1 1/2" NPT-F	150	23.4 (604)	21.9 (555)	16.7 (425)	128	58	115V/1Ph/60Hz & 230V/1Ph/60Hz	JC0150-C10	JC0150-C
PRD175	1 1/2" NPT-F	175	23.4 (604)	21.9 (555)	16.7 (425)	132	60	230V/1Ph/60Hz	JC0250-C10	JC0250-C
ANC200	2" NPT-F	200	42 (1067)	28.2 (716.28)	42 (1067)	402	182	230V/1Ph/60Hz	JD0340H-7CPY	JD0320H-6CY
ANC250	2" NPT-F	250	42.1 (1069)	28.4 (721)	42.4 (1077)	421	191	230V/1Ph/60Hz 230V/3Ph/60Hz 460V/3Ph/60Hz	JD0340H-7CPY	JD0320H-6CY
ANC325	2" NPT-F	325	42.1 (1069)	28.4 (721)	42.4 (1077)	432	196	230V/1Ph/60Hz 230V/3Ph/60Hz 460V/3Ph/60Hz	JD0340H-7CPY	JD0320H-6CY
ANC400	2" NPT-F	400	42.1 (1069)	28.4 (721)	42.4 (1077)	441	200	230V/3Ph/60Hz & 460V/3Ph/60Hz	JD0465H-7CPY	JD0430H-6CY
ANC500	2" NPT-F	500	42.1 (1069)	28.4 (721)	42.4 (1077)	460	209	230V/3Ph/60Hz & 460V/3Ph/60Hz	JD0900J-7CPY	JD0650J-6CY
ANC700	3" NPT-F	700	48.6 (1234)	36.4 (925)	56.4 (1433)	670	304	230V/3Ph/60Hz & 460V/3Ph/60Hz	JD1300K-7CPY	JD0900K-6CY
ANC850	3" NPT-F	850	48.6 (1234)	36.4 (925)	56.4 (1433)	688	312	230V/3Ph/60Hz & 460V/3Ph/60Hz	JD1300K-7CPY	JD0900K-6CY
ANC1050	3" NPT-F	1050	48.6 (1234)	36.4 (925)	56.4 (1433)	745	338	460V/3Ph/60Hz	JD1300K-7CPY	JL1250-C
ANC1200	3" NPT-F	1200	48.6 (1234)	36.4 (925)	56.4 (1433)	766	347	460V/3Ph/60Hz	JD1300K-7CPY	JL1250-C

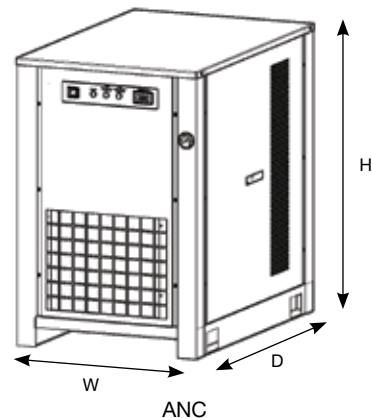
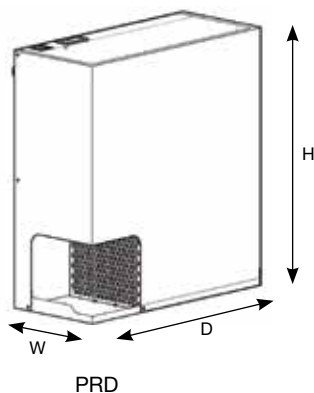
\*Flowrates at the following climatic conditions - Ambient Temperature: 100°F (38°C), Inlet Temperature: 100°F (38°C), Inlet Pressure: 100 psi g (7 bar g).

\*\*Parker Airtek recommends grade C10 or 7CPY pre-filter and grade C or 6CY after-filter.

**Note:** Filters supplied loose, pre-filter supplied standard with ANC models.

## 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
ANC200 - ANC1200	115°F (45°C)	140°F (60°C)	41°F (5°C)	200 psi g (14 bar g)	R404a





## 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	1.00	0.91	0.82

Inlet Temperature (C2)	°F	90	100	110	120	140	149
	°C	32	38	43	49	60	65
	CF	1.24	1.00	0.81	0.67	0.45	0.43

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	1.00	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
  - power on light
  - built-in demister for high efficient removal of condensed liquid
  - removable cabinet for easy access to internal components
  - moisture dewpoint indicator
  - 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

## Correction Factors for Models ANC200 - ANC1200

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	1.00	0.95	0.90	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	1.10	1.00	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	9.0	9.7	10.3
	CFP	0.80	0.84	0.90	0.92	0.96	1.00	1.01	1.02	1.03	1.04	1.05

### Notes:

- Models ANC200 - ANC1200 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 ANC 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 Airtek are designed to provide air quality that meets with 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 Airtek is redefining customer service.



Filter Elements and Consumable Parts	Maintenance, Repair and Overhaul	Customer Support	Specialized Services
Genuine Replacement filter elements Preventative Maintenance Kits Repair Kits Installation Kits Upgrade Kits	Installation and Commissioning Maintenance and Repair Updates and Upgrades Service Contracts Parts Service Warranty	Business Development Technical Support Group Training Technical Publications	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](http://www.parker.com/balston)

### Finite Airtex Filtration Airtex/donnick hunter/Zander

Lancaster, NY  
716 686 6400  
[www.parker.com/faf](http://www.parker.com/faf)

### Finite Airtex Filtration/Finite

Oxford, MI  
248 628 6400  
[www.parker.com/finitefilter](http://www.parker.com/finitefilter)

### Engine Filtration & Water Purification Racor

Modesto, CA  
209 521 7860  
[www.parker.com/racor](http://www.parker.com/racor)

Holly Springs, MS  
662 252 2656  
[www.parker.com/racor](http://www.parker.com/racor)

Beaufort, SC  
843 846 3200  
[www.parker.com/racor](http://www.parker.com/racor)

### Racor – Village Marine Tec.

Gardena, CA  
310 516 9911  
[desalination.parker.com](http://desalination.parker.com)

### Parker Sea Recovery

Carson, CA  
310 637 3400  
[www.searecovery.com](http://www.searecovery.com)

### Hydraulic Filtration Hydraulic Filter

Metamora, OH  
419 644 4311  
[www.parker.com/hydraulicfilter](http://www.parker.com/hydraulicfilter)

Laval, QC Canada  
450 629 9594  
[www.parkerfarr.com](http://www.parkerfarr.com)

### Process Filtration

#### domnick hunter Process Filtration

Oxnard, CA  
805 604 3400  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

Madison, WI  
608 824 0500  
[www.scilog.com](http://www.scilog.com)

Phoenixville, PA  
610 933 1600  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

### Aerospace Filtration

#### Velcon Filtration

Colorado Springs, CO  
719 531 5855  
[www.velcon.com](http://www.velcon.com)

## Europe

### Compressed Air Treatment domnick hunter Filtration & Separation

Gateshead, England  
+44 (0) 191 402 9000  
[www.parker.com/dhfs](http://www.parker.com/dhfs)

### Parker Gas Separations

Etten-Leur, Netherlands  
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### Hiross Zander

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### Engine Filtration & Water Purification Racor

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### Racor Research & Development

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[www.parker.com/rfde](http://www.parker.com/rfde)

### Hydraulic Filtration Hydraulic Filter

Arnhem, Holland  
+31 26 3760376  
[www.parker.com/hfde](http://www.parker.com/hfde)

### Ujala Operation

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[www.parker.com/hfde](http://www.parker.com/hfde)

### Condition Monitoring Centre

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[www.parker.com/hfde](http://www.parker.com/hfde)

### Parker Kittiwake

West Sussex, England  
+44 (0) 1903 731 470  
[www.kittiwake.com](http://www.kittiwake.com)

### Parker Procal

Peterborough, England  
+44 (0) 1733 232 495  
[www.kittiwake.com](http://www.kittiwake.com)

### Process Filtration

#### domnick hunter Process Filtration

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+44 (0) 191 410 5121  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

### Parker Twin Filter BV

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+31(0)75 655 50 00  
[www.twinfilter.com](http://www.twinfilter.com)

## Asia Pacific

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+61 2 9634 7777  
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+91 22 651 370 8185  
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+91 80 2783 6794  
[www.johnfowlerindia.com](http://www.johnfowlerindia.com)

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+81 45 870 1522  
[www.parker.com/japan](http://www.parker.com/japan)

### Parker Techno

Osaka, Japan  
+81 66 340 1600  
[www.techno.taiyo-ltd.co.jp](http://www.techno.taiyo-ltd.co.jp)

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Hwaseon-City  
+82 31 359 0852  
[www.parker.com/korea](http://www.parker.com/korea)

### Singapore

Jurong Town, Singapore  
+65 6887 6300  
[www.parker.com/singapore](http://www.parker.com/singapore)

### Thailand

Bangkok, Thailand  
+66 2186 7000  
[www.parker.com/thailand](http://www.parker.com/thailand)

## Latin America

### Parker Comercio Ltda. Filtration Division

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+55 12 4009 3500  
[www.parker.com/br](http://www.parker.com/br)

### Pan American Division

Miami, FL  
305 470 8800  
[www.parker.com/panam](http://www.parker.com/panam)

## Africa

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