

**FILTRATION** > 1) to filter liquid or gas obtained after filtration  
verb (filter) 2) ultraviolet BREWING to filter filtration noun.

ETYMOLOGY: 17c: from CHEMICAL rare to filter:

CONSTRUCTION

DEFENCE

ELECTRICITY

ELECTRONICS

ENGINEERING

GENERAL

MINING

OFFSHORE

PACKAGING

PAPER

## FILTRATION - PURIFICATION - SEPARATION

**PURIFICATION** > 1) to make or become pure. 2) to cleanse something of contaminating or harmful substances. 3) to rid something of intrusive elements.

ETYMOLOGY: 14c: from Latin purificare, from purus pure.

**SEPARATION**  
2) the state  
ce line when  
that separa  
ETYMOLOG



## Starlette Plus Refrigeration Dryers

5 - 250 scfm



**domnick hunter**

[www.domnickhunter.com](http://www.domnickhunter.com)

## Why Starlette Plus refrigeration dryers?

Compressed air is an important provider of energy for industry; what is often overlooked however is the need to provide quality treatment for this air.

Compressed air contains condensate which, when cooled, will turn into water, causing extensive damage to both the compressed air network and the finished product itself.



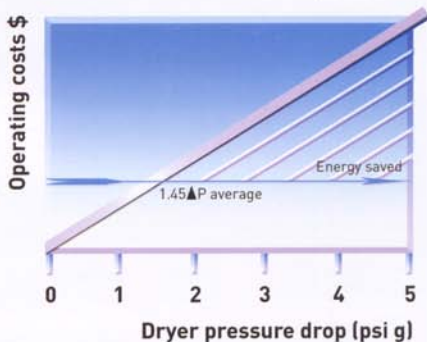
DRD125 - 175

domnick hunter Starlette Plus refrigeration dryers actively remove this condensate to achieve near perfectly dry compressed air. The benefits are notable: less system downtime, reduced costs and maintenance, and an improved finished product. Starlette Plus, thanks to its SmartPack heat exchanger [patent pending] and the most compact dimensions on the market, will prove a major asset in your factory.



Compressed air networks are complex and each application differs from the next; achieving the optimum compressed air treatment solution is not merely a matter of selecting the right components. **purecare** ensures a solution designed by people with specific experience concerning individual customer needs, backed up by over 40 years experience and the extensive range of domnick hunter products. A solution without compromises. But **purecare** goes further still. We stay close to the user, ensuring the system operates perfectly, and at minimum cost, at all times and for many years to come. And because neither time, nor technology, stands still, we ensure our users continuously receive the very best solution, allowing them to concentrate on maximizing their business. Welcome to **purecare**.

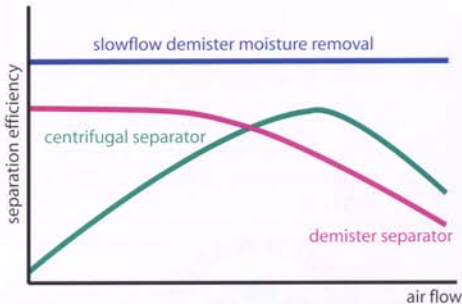
## Energy Efficiency



Poorly constructed heat exchangers and liquid separators create a high pressure differential across the dryer which leads to high operational costs and poor dewpoint performance.

The Starlette Plus dryer range utilizes advanced heat exchanger and demister separation technology and delivers uncompromising performance at the lowest cost of ownership.

## Moisture separation technology



The oversized "slowflow" demister is non-velocity sensitive and therefore offers excellent liquid separation whatever the airflow.

## SmartPack Heat Exchanger (patent pending)

The revolutionary SmartPack 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.

### Demister Separator

A high capacity demister separator is employed for the removal of condensed liquids. This lowers the air velocity which maximizes the condensate separation from the air, even when the dryer is not operating at maximum flow. This design also ensures the differential pressure across the dryer is kept to a minimum.

### Condensate Drain Niche

The Starlette Plus Refrigeration Dryer range comes standard with a level sensing automatic float drain. Other drains are available upon request. The positioning of the drain niche allows for easy access to the drain without the requirement of removing panels.



### Refrigerant Condenser

Oversized high efficiency air cooled condenser. Re-positioned to improve reliability and reduce the risk of dirt contamination.

### Refrigerant Compressor

Maintenance free hermetically sealed refrigerant compressor. Low refrigerant charge eliminates the requirement for pre-heating on start up & prevents any liquid refrigerant returns.

### Assured Quality & Performance

Every dryer undergoes sophisticated testing, including dewpoint tests with compressed air flow. Multiple helium leak testing, again on every dryer, ensures years of trouble-free operation.

## Key Features:

- "Plug & Play" design for easy installation and operation (DRD5 - DRD125)
- Small space saving design
- Oversized demister separator resulting in excellent liquid removal over all operating conditions
- Low pressure differential across the dryer (1.45 psi g average)
- Environmentally friendly refrigerant
- Oversized condenser to operate in ambients to 122°F (50°C)
- All models incorporate a dewpoint indicator

# Product Selection & Technical Data

## Technical Data

Maximum ambient temperature	122°F [50°C]
Maximum inlet temperature	Models DRD5 - DRD175: 149°F [65°C] Models DRD200 - DRD250: 140°F [60°C]
Minimum ambient temperature	41°F [5°C]
Maximum inlet pressure	Models DRD5 - DRD175: 232 psi g [16 bar g] Models DRD200 - DRD250: 203 psi g [14 bar g]
Refrigerant:	Models DRD5 - DRD175: R134a Models DRD200 - DRD250: R407C

\*Capacities are based upon:

Ambient temperature:	100°F [38°C]
Inlet temperature:	100°F [38°C]
Working pressure:	100 psi g [7 bar g]



Model	Pipe Size	*Nominal Flow			Primary Voltages	Recommended Filtration	
		scfm	Nm <sup>3</sup> /hr	Nm <sup>3</sup> /min		General Purpose Pre-Filter	High Efficiency Outlet Filter
DRD5	3/8" NPT-F	5	8	0.1	115V/1ph/60Hz	A0010CNFX	AA010CNFX
DRD10	3/8" NPT-F	10	17	0.3	115V/1ph/60Hz	A0010CNFX	AA010CNFX
DRD15	3/8" NPT-F	15	26	0.4	115V/1ph/60Hz	A0010CNFX	AA010CNFX
DRD25	3/8" NPT-F	25	43	0.7	115V/1ph/60Hz	A0015CNFI	AA015CNFI
DRD35	3/8" NPT-F	35	60	1.0	115V/1ph/60Hz	A0015CNFI	AA015CNFI
DRD50	3/8" NPT-F	50	85	1.4	115V/1ph/60Hz	A0020DNFI	AA020DNFI
DRD75	3/8" NPT-F	75	127	2.1	115V/1ph/60Hz	A0025DNFI	AA025DNFI
DRD100	3/8" NPT-F	100	170	2.8	115V/1ph/60Hz & 230V/1ph/60Hz	A0025DNFI	AA025DNFI
DRD125	1/2" NPT-F	125	212	3.5	115V/1ph/60Hz & 230V/1ph/60Hz	A0025DNFI	AA025DNFI
DRD150	1/2" NPT-F	150	255	4.2	115V/1ph/60Hz & 230V/1ph/60Hz	A0030GNFI	AA030GNFI
DRD175	1/2" NPT-F	175	297	5.0	230V/1ph/60Hz	A0030GNFI	AA030GNFI
DRD200	1/2" NPT-F	200	340	5.7	230V/1ph/60Hz	A0030GNFI	AA030GNFI
DRD250	1/2" NPT-F	250	425	7.1	230V/3ph/60Hz & 440V/3ph/60Hz	A0035GNFI	AA035GNFI

## Weights and Dimensions

### DRD Refrigeration Dryers

Model	Dimension ins (mm)			Weight lbs [Kg]
	A	B	C	
DRD5	8.3 [210]	17 [430]	17.7 [450]	42 [19]
DRD10	8.3 [210]	17 [430]	17.7 [450]	42 [19]
DRD15	8.3 [210]	17 [430]	17.7 [450]	42 [19]
DRD25	8.3 [210]	19.9 [505]	19.7 [500]	52 [24]
DRD35	8.3 [210]	19.9 [505]	19.7 [500]	52 [24]
DRD50	8.9 [225]	22.3 [565]	20.5 [520]	58 [27]
DRD75	8.9 [225]	22.3 [565]	20.5 [520]	68 [31]
DRD100	8.9 [225]	22.3 [565]	20.5 [520]	77 [35]
DRD125	16.7 [425]	23.8 [605]	21.8 [555]	115 [52]
DRD150	16.7 [425]	23.8 [605]	21.8 [555]	128 [58]
DRD175	16.7 [425]	23.8 [605]	21.8 [555]	132 [60]
DRD200	28.0 [711]	37.0 [940]	22.0 [559]	183 [83]
DRD250	28.0 [711]	42.0 [1067]	41.0 [1041]	287 [130]



### Air Flow Correction Factors

Capacity correction factors to be used when operating conditions differ from those shown above.

To obtain dryer capacity at new conditions multiply nominal capacity\* x C1 x C2 x C3

### Models DRD5 - DRD175

#### Ambient Temperature [C1]

°F	60	70	80	90	100	110	120
°C	16	21	27	32	38	43	49
Correction Factor	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
Correction Factor	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
Correction Factor	0.83	0.93	1.00	1.07	1.12	1.16	1.19	1.22

### Models DRD200 - DRD250

#### Ambient Temperature [C1]

°F	70	80	90	100	110	120	122
°C	21	27	32	38	43	49	50
Correction Factor	1.22	1.15	1.05	1.00	0.94	0.79	0.71

#### Inlet Temperature [C2]

°F	90	100	110	120	130	140
°C	32	38	43	49	54	60
Correction Factor	1.22	1.00	0.82	0.68	0.56	0.46

#### Working Pressure [C3]

psi g	50	80	100	125	150	174	203
bar g	3	6	7	9	10	12	14
Correction Factor	0.77	0.93	1.00	1.07	1.12	1.15	1.18

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Publication Reference: 731 03/04 Rev 002 USA 05/07



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