

# Ingersoll Rand

Refrigerated Air Dryers



*Innovation*

*Reliability*

*Efficiency*

# *Reliable, Efficient, Low Cost of Ownership*

Providing clean, dry, compressed air is especially important in applications where moisture or contamination can cause system corrosion, damage to air-powered tools or degradation of products or processes touched by the compressed air.

# Ingersoll Rand

Refrigerated dryers from Ingersoll Rand offer multiple design features to ensure a constant dew point at all load levels and will deliver a continuous dry air performance that satisfies ISO 7183 industry standards.

### **Clean, Reliable, Refrigerated Air**

These units provide complete, affordable solutions for a wide selection of applications, including:

- Dry Cleaning.
- Light Processing.
- Petrochemical.
- Automotive.
- Manufacturing.
- Oil and Gas.

### **Designed for Optimum Efficiency**

Multi-stage filtering helps remove residual contaminants. Using refrigerated dryers from Ingersoll Rand will provide clean, dry air which means less corrosion in the air distribution system, less damage to air-powered tools and reduced potential for contamination in production process.

Ingersoll Rand offer multiple design features to ensure constant dew point at all load levels and will deliver continuous dry air performance that satisfies ISO 7183 industry standards.

### **Low Cost of Ownership**

Ingersoll Rand's refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint which reduces power consumption, reduces installation time and facilitates maintenance.



Corrosion



Spoiled Paint Finish



# Optimise your Choice

*The 'D' Refrigerated Dryer Range - one range for all applications. These units provide a small footprint with complete, affordable solutions for applications ranging from dry cleaning to automotive body shops, to light processing and manufacturing applications. The high capacity units are designed for large-scale industrial, automotive and petrochemical applications.*

## **Control Panel : D12IN-A to D480IN-A**

- Full feature, multi-function control panel.
- Energy saving mode – shuts dryer off during low loads.
- Alarm display:
  - High and very high dew point.
  - Low dew point.
  - Probe failure.
- Fan speed indication.
- Remote alarm contact.
- Service intervals.
- History of last 10 alarms.



## **Electronic Drain Valve : D12IN-A to D480IN-A**

The programmable electronic drain valve is fully adjustable to help minimise air loss.

- Easily adjusted from the dryer control panel to match all possible working conditions.
- Proven reliability – thousands in service.
- Includes a strainer for quick maintenance.

### Control Panel : D600IN-A to D950IN-A

Includes all the main functions to control and monitor the unit:

- Energy saving mode – shuts dryer off during low loads.
- Alarm display:
  - Dew Point – high/low temperature.
  - High ambient temperature.
  - No-loss drain failure.
- Terminal for remote alarm signal.
- Terminal for remote alarm for no-loss drain.
- History of last 10 alarms.

### Control Panel : D1300IN-A to D5400IN-A

This range has all the main functions you would expect to control and monitor the unit:

- Energy saving mode – shuts dryer off during low loads.
- Alarm display:
  - Dew Point – high/low temperature.
  - High ambient temperature.
  - No-loss drain failure.
- Terminal for remote alarm signal.
- Terminal for remote alarm for no-loss drain.
- Remote ON/OFF.
- History of the last 50 alarms.

### Electronic No-loss Drain : D600IN-A to D5400IN-A

The powerful no loss electronic drain eliminates the need for pre-setting the unit.

- Using state-of-the-art software and combined with a special transducer interface to measure the presence of condensate, it is released only when needed.
- Continuous monitoring ensures fast, effective discharge of the condensate with no deficit of compressed air.



**Advanced Microprocessor Controls :**  
**D4620IN-W to D22800IN-W**  
**and D6600IN-A to D13500IN-A**

- Dew Point – high/low temperature.
- Air inlet temperature displays.
- Air outlet temperature.
- Multi level menus to allow user programming.
- Volt free general alarm contact.

**Reliable Design**

Scroll compressors with corrosion resistant materials deliver cost efficient, long-life performance. They feature fewer moving parts, are fully-instrumented and monitored for reliability and are protected by IP54-rated electrical enclosures.

This makes them the optimum investment for high-volume needs with a lot at stake – and the bigger, the better!

Every unit delivers advanced microprocessor control with multi-level menus, password protection and alarms.

Units with capacities above 150 m<sup>3</sup>/min also add self-diagnostic software plus the ability to trim energy consumption during periods of reduced demand.





## Technical Specifications

Model	Class 5 < 7° C Dew Point		Class 4 < 3° C Dew Point		Nominal Power kW	Standard Power Supply V / Ph / Hz	Air Connections BSP in	Dimensions			Weight kg	Max. Working Pressure bar g
	m³/min FAD 20°C	m³/hr FAD 20°C	m³/min FAD 20°C	m³/hr FAD 20°C				Width mm	Length mm	Height mm		
<b>Air Cooled</b>												
D12IN-A	0.2	12	0.2	9.6	0.12	230/1/50	3/8"	305	360	402	17	14
D25IN-A	0.4	25	0.3	20.0	0.12	230/1/50	3/8"	305	360	402	23	14
D42IN-A	0.7	42	0.6	33.6	0.18	230/1/50	1/2"	389	431	452	25	14
D54IN-A	0.9	54	0.7	43.2	0.18	230/1/50	1/2"	389	431	452	26	14
D72IN-A	1.2	72	1.0	57.6	0.20	230/1/50	1/2"	389	431	452	26	14
D108IN-A	1.8	108	1.4	86.4	0.41	230/1/50	3/4"	420	515	562	33	14
D144IN-A	2.4	144	1.9	115.2	0.47	230/1/50	3/4"	420	515	562	38	14
D180IN-A	3.0	180	2.4	144.0	0.61	230/1/50	3/4"	420	515	562	43	14
D240IN-A	4.0	240	3.2	192.0	0.68	230/1/50	1 1/2"	500	679	978	76	14
D300IN-A	5.0	300	4.0	240.0	1.04	230/1/50	1 1/2"	500	679	978	87	14
D360IN-A	6.0	360	4.8	288.0	1.04	230/1/50	1 1/2"	500	679	978	87	14
D480IN-A	8.0	480	6.4	384.0	1.40	230/1/50	1 1/2"	500	679	978	110	14
D600IN-A	12.0	720	10.0	600.0	1.85	230/1/50	2"	720	780	1425	120	14
D780IN-A	15.6	936	13.0	780.0	1.98	400/3/50	2"	720	780	1425	130	12
D950IN-A	19.0	1140	15.8	950.0	2.58	400/3/50	2"	720	780	1425	150	12
D1300IN-A	26.0	1560	21.7	1300.0	3.40	400/3/50	3"	784	1388	1585	260	12
D1410IN-A	28.2	1692	23.5	1410.0	3.40	400/3/50	3"	784	1388	1585	270	12
D1890IN-A	37.8	2268	31.5	1890.0	5.30	400/3/50	3"	784	1388	1585	300	12
D2520IN-A	50.4	3024	42.0	2520.0	6.88	400/3/50	DN 100	914	1388	1585	330	12
D3000IN-A	60.0	3600	50.0	3000.0	7.81	400/3/50	DN 125	1500	1510	1570	420	12
D4200IN-A	84.0	5040	70.0	4200.0	11.29	400/3/50	DN 125	1500	1510	1570	520	12
D4800IN-A	96.0	5760	80.0	4800.0	12.91	400/3/50	DN 150	1500	1510	1570	620	12
D5400IN-A	108.0	6480	90.0	5400.0	12.91	400/3/50	DN 150	1500	1510	1570	720	12
D6600IN-A	127.0	7618	102.7	6162.0	9.90	400/3/50	DN 150	910	1940	1447	624	14
D9000IN-A	160.5	9630	130.4	7822.0	11.00	400/3/50	DN 200	930	3000	2079	1077	14
D11400IN-A	204.1	12249	165.9	9952.0	14.35	400/3/50	DN 200	930	3000	2079	1102	14
D13500IN-A	261.5	15692	212.9	12772.0	19.84	400/3/50	DN 250	1150	3390	2210	1850	12
<b>Water Cooled</b>												
D4620IN-W	81.8	4909	65.8	3948.0	5.23	400/3/50	DN 150	910	1940	1310	560	14
D5400IN-W	104.7	6282	84.1	5045.0	6.76	400/3/50	DN 150	910	1940	1310	526	14
D6600IN-W	133.6	8015	105.7	6343.0	9.00	400/3/50	DN 150	910	1940	1310	659	14
D9000IN-W	163.8	9825	131.6	7897.0	10.47	400/3/50	DN 200	930	3000	1927	1055	14
D11400IN-W	209.8	12588	168.5	10113.0	14.23	400/3/50	DN 200	930	3000	1927	1065	14
D13500IN-W	267.6	16055	214.6	12876.0	19.40	400/3/50	DN 250	2975	1165	1980	1730	12
D18000IN-W	372.1	22326	300.3	18017.0	23.70	400/3/50	DN 300	3575	1315	2230	2750	12
D22800IN-W	471.5	28291	380.0	22802.0	31.54	400/3/50	DN 300	3575	1315	2230	2785	12

### Notes:

- 1) Data refers to the following conditions: air FAD 20°C/1 bar a, pressure 7 bar g, ambient temperature 25°C, air inlet temperature 35°C, water inlet temperature = 30°C, condensing mean temperature = 40°C, stated pressure dew points in accordance with ISO 8573-1:2001 standards.

#### Maximum Inlet Temperature

D12IN-A to D5400IN-A	60 °C
D6600IN-A to D13500IN-A	65 °C
D4620IN-W to D22800IN-W	65 °C

#### Maximum Ambient Temperature

D12IN-A to D950IN-A	50 °C
D1300IN-A to D13500IN-A	46 °C
D4620IN-W to D22800IN-W	46 °C

#### Water Connections BSP (inches)

D4620IN-W to D6600IN-W	1 1/2"
D9000IN-W to D22800IN-W	2"

If Pressostatic valve option installed on D13500IN-W, D18000IN-W & D22800IN-W, the inlet water connection changes to two 1 1/2" BSP connections.

# Features

Features	Air Cooled						Water Cooled	
	D12IN-A to D180IN-A	D240IN-A to D480IN-A	D600IN-A to D950IN-A	D1300IN-A to D5400IN-A	D6600IN-A to D11400IN-A	D13500IN-A	D4620IN-W to D11400IN-W	D13500IN-W to D22800IN-W
Dew Point Indication	✓	✓	✓	✓	✓	✓	✓	✓
On/off Switch		✓	✓	✓	✓	✓	✓	✓
Terminal for Remote Alarm Signal	✓	✓	✓	✓	✓	✓	✓	✓
Remote Control				✓	✓	✓	✓	✓
Energy Saving Mode	✓	✓	✓	✓	✓	✓	✓	✓
Remote ON/OFF Switch				✓	✓	✓	✓	✓
High Pressure Switch	✓	✓	✓	✓	✓	✓	✓	✓
Variable Speed Fan	✓	✓						
Fan Pressure Switch			✓	✓	✓	✓		
History of Last 10 Alarms	✓	✓	✓					
History of Last 50 Alarms				✓	✓	✓	✓	✓
Hot Gas By-pass Valve		✓	✓	✓	✓	✓	✓	✓
Electronic No-loss Drain			✓	✓	✓	✓	✓	✓
Electronic Drain Valve	✓	✓						
Internal Pre-filter						✓		✓

Maintaining air quality is so important that the International Standards Organisation (ISO) developed six compressed air quality classes, as defined by ISO 8573-1:2001.

## ISO 8573-1:2001 Air Quality Classes

Quality Class	Solid - Maximum Number of Particles per m <sup>3</sup>			Water Pressure Dew Point °C	Oil & Oil Vapour mg/m <sup>3</sup>
	0.1-0.5 micron	0.5-1 micron	1-5 micron		
0	As specified by the end-user or manufacturer and more stringent than Class 1				
1	100	1	0	-70°C	0.01
2	100,000	1000	10	-40°C	0.1
3	N/A	10,000	500	-20°C	1
4	N/A	N/A	1,000	3°C	5
5	N/A	N/A	20,000	7°C	N/A
6	N/A	N/A	N/A	10°C	N/A

To determine which industry classification you require, ask yourself these simple questions:

- Does compressed air quality affect my production process and the quality of my end products?
- Will poor compressed air quality decrease my productivity, cost savings and product quality standards?
- What internal and external ambient conditions affect the quality of my compressed air produced by my system?



# Energy and Environmental

Energy savings mode shuts dryer off during low loads. The D12IN-A to D950IN-A units are rated for 50°C and units above this range are rated for 46°C ambient air conditions – which covers a large range of applications.

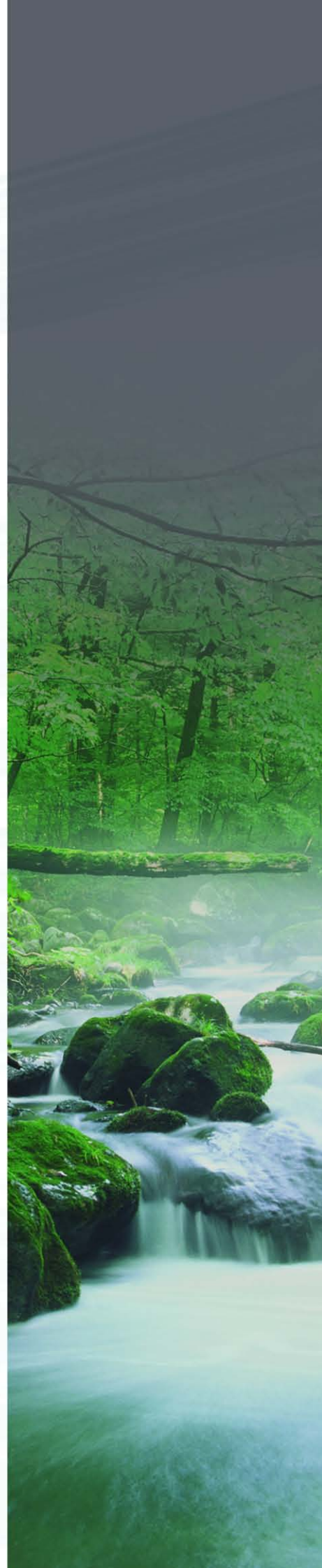
## Environmental Friendly Refrigerant

D12IN-A to D480IN-A	R134A
D600IN-A to D5400IN-A	R507
D6600IN-A to D13500IN-A	R407C
D4620IN-W to D22800IN-W	R407C



Progress is *greener* with Ingersoll Rand

Ingersoll Rand offers industry-leading products and solutions that enable businesses around the world to reduce energy consumption and costs and decrease harmful environmental emissions. From air compressors that reduce energy consumption to electric-powered golf cars with near-zero emissions, Ingersoll Rand provides the knowledge, experience and solutions to help our clients achieve their sustainability goals.



# Global Reach, Local Service

*Ingersoll Rand provides its products and services directly or through distributors to customers in close to 200 countries.*



Ingersoll Rand maintains offices, warehouses and customer centres throughout the world.

Ingersoll Rand focuses on providing innovation to increase your productivity and profitability. Expect more with Ingersoll Rand. **We are your total solutions provider.**



# UltraCare



## Helping you maintain a healthy business

A lot can (and will) happen over the life of a compressed air system. With ever increasing demands for machine availability, reducing production losses due to unplanned maintenance and downtime is essential.

That is why we offer UltraCare. A responsive, flexible, contract maintenance agreement, designed to provide Ingersoll Rand authorised scheduled maintenance ensuring increased system reliability and lowest energy. UltraCare eliminates unscheduled downtime and costly repairs.

Provided an Ingersoll Rand prefilter is installed you have 5 years peace of mind on the complete dryer.

## Air Filtration

Ingersoll Rand's next generation of compressed air filters features our new Element Replacement Indicator (ERI). An illuminating approach to filter maintenance that yields real, measurable benefits for you, for your company and for our environment.

Using Ingersoll Rand filters you will achieve a low overall air treatment pressure drop. Proactive servicing ensures that the cost of pressure drop is kept to the lowest possible level. Reactive costs more money and can affect your productivity.

(see our Air Filtration brochure for further details).

## All Inclusive!

- Unlimited running hours.
- Total peace of mind.

(for more details see our UltraCare brochure).







Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers' energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car®, the global leader in golf and utility vehicles for businesses and individuals.

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