

# Ingersoll Rand

Refrigerated Air Dryers

Innovation  
Reliability  
Efficiency



Ingersoll Rand Industrial Technologies provides products, services and solutions to enhance the efficiency and productivity of our commercial, industrial and process customers. Our innovative products include air compressors, air systems components, tools, pumps, material and fluid handling systems and microturbines.

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Product improvement is a continuing goal at Ingersoll Rand. Designs and specifications are subject to change without notice or obligation.



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## 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.

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.
- Automotive.
- Textile.
- Petrochemical.
- Manufacturing.
- Oil and Gas.
- Workshops.

### Designed for Optimum Efficiency

Multi-stage filtering helps remove residual contaminants. Using refrigerated dryers along-with filters 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 dewpoint 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 : D72IN-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 : D72IN-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.



D72IN-A to D480IN-A

### Control Panel : D600IN-A to D5400IN-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 50 alarms. (10 alarms history for D600IN-A to D950IN-A)
- Remote ON/OFF. (applicable for D1300IN-A to D5400IN-A)

### 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.



D600IN-A to D950IN-A

D1300IN-A to D5400IN-A



**Advanced Microprocessor Controls :**

**D6600IN-W to D22800IN-W and**

- 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.



D6600IN-W to D11400IN-W



D13500IN-W to D22800IN-W

**Technical Specifications**

Model	Flow Rate		Standard Voltage V / Ph / Hz	Air Connections BSP in	Dimensions			Weight kg	Max Working Pressure bar g
	M <sup>3</sup> /Hr	CFM			mm	mm	mm		
<b>Air Cooled</b>									
D72IN-A	72	42	230/1/50	½"	389	431	452	26	14
D144IN-A	144	85	230/1/50	¾"	420	515	562	38	14
D180IN-A	180	106	230/1/50	¾"	420	515	562	43	14
D240IN-A	240	141	230/1/50	1½"	500	679	978	76	14
D300IN-A	300	177	230/1/50	1½"	500	679	978	87	14
D360IN-A	360	212	230/1/50	1½"	500	679	978	87	14
D480IN-A	480	283	230/1/50	1½"	500	679	978	110	14
D600IN-A	600	353	230/1/50	2"	720	780	1425	120	14
D780IN-A	780	459	400/3/50	2"	720	780	1425	130	12
D950IN-A	950	559	400/3/50	2"	720	780	1425	150	12
D1300IN-A	1300	765	400/3/50	3"	784	1388	1585	260	12
D1410IN-A	1410	830	400/3/50	3"	784	1388	1585	260	12
D1890IN-A	1890	1112	400/3/50	3"	784	1388	1585	300	12
D2520IN-A	2520	1483	400/3/50	DN100	914	1388	1585	330	12
D3000IN-A	3000	1766	400/3/50	DN125	1500	1510	1570	420	12
D4200IN-A	4200	2472	400/3/50	DN125	1500	1510	1570	520	12
D4800IN-A	4800	2825	400/3/50	DN150	1500	1510	1570	620	12
D5400IN-A	5400	3178	400/3/50	DN150	1500	1510	1570	720	12
<b>Water Cooled*</b>									
D6600IN-W	6343	3733	400/3/50	DN150	910	1940	1310	659	14
D9000IN-W	7897	4648	400/3/50	DN200	930	3000	1927	1055	14
D11400IN-W	10113	5952	400/3/50	DN200	930	3000	1927	1065	14
D13500IN-W	12876	7579	400/3/50	DN250	2975	1165	1980	1730	12
D18000IN-W	18017	10604	400/3/50	DN300	3575	1315	2230	2750	12
D22800IN-W	22802	13421	400/3/50	DN300	3575	1315	2230	2785	12

Notes :

- 1) 'A' indicates Air Cooled Version and 'W' indicates water Cooled version.
- 2) Above values are nominal & are at Ingersoll Rand standard conditions. Correction factors apply for actual operating conditions.
- 3) Dryers up to D480IN-A are rated for Class 5 and all other dryers are rated for Class 4 Pressure Dew Point in accordance to ISO8573-1:2001 standards.
- 4) Intermediate range of D4200IN-NA/NW, D5300IN-NA/NW and D6000IN-NA/NW air-cooled and water-cooled models are also available.
- 5) High Pressure dryers rated up to 35 bar g are also available.

**Maximum Inlet Temperature**

D72IN-A to D5400IN-A	60°C
D4200IN-NA to D6000IN-NA	55°C
D4200IN-NW to D6000IN-NW	55°C
D6600IN-W to D22800IN-W	65°C

**Maximum Ambient temperature**

D72IN-A to D5400IN-A	50°C
D4200IN-NA to D6000IN-NA	45°C
D4200IN-NW to D6000IN-NW	45°C
D6600IN-W to D22800IN-W	46°C

**Water Connections BSP (inches)**

D4200IN-NW to D6000IN-NW	1½"
D6600IN-W	1½"
D9000IN-W to D22800IN-W	2 X 1½"



# Features

Features	Air Cooled				Water Cooled	
	D72IN-A to D180IN-A	D240IN-A to D480IN-A	D600IN-A to D950IN-A	D1300IN-A to D5400IN-A	D6600IN-W to D11400IN-A	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						✓

## ISO Air Quality Standards

Air quality ratings have three parts : 1. Solids 2. Water 3. Oil

Each part has a class level ; for example, referring to the chart below, an ISO class 1.5.1 has a 1 micron solid particle size limit, a < 7°C pressure dew point limit, and a 0.01 mg/m³ oil limit.

## ISO 8573-1:2001

Quality Class	Particle Size (micron)	Concentration (# part/m³)	Pressure Dew Point		Oil Carryover (mg/m³)
			( °C )	( °F )	
0	As specified by the user, and more stringent than Class 1				
1	0.1 - 0.5	100	-70	-94	0.01
	0.5 - 1.0	1			
2	1.0 - 0.5	0	-40	-40	0.1
	0.1 - 0.5	100,000			
	0.5 - 1.0	1,000			
3	1.0 - 5.0	10	-20	-4	1
	0.5 - 1.0	10,000			
4	1.0 - 5.0	500	3	37	5
	1.0 - 5.0	1,000			
5	1.0 - 5.0	20,000	7	45	
6	5	5	10	50	
7	40	10			

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, savings and product quality standards?
- What internal and external ambient conditions affect the quality of my compressed air produced by my system?

# Optimise your Choice

Energy savings mode shuts dryer off during low loads. The D72IN-A to D950IN-A units are rated for 50°C and units above this range are rated for 45°C/46°C ambient air conditions – which covers a large range of applications.

## Environmental Friendly Refrigerant

D72IN-A to D480IN-A	R134a
D600IN-A to D5400IN-A	R404a
D4200IN-NA/NW to D5300IN-NA/NW	R407c
D6000IN-NA/NW	R404a
D6600IN-W to D22800IN-W	R407c



## The easiest way to protect your air system and budgets is PackageCare



PackageCare – much more than Extended Warranty, is a Long-Term Comprehensive Service Contract covering visits of expertly trained service engineers, consumables and all parts including wear tear and breakdowns, if any. Moreover, it's at fixed and predictable cost.



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.