



D-Rs Series Refrigerated Air Dryer



D-Rs Series

Refrigerated Air Dryer

The D-Rs series refrigerant dryers are dedicated to providing users with cleaner and drier air, going the extra mile to meet customer needs. They consistently deliver higher efficiency, lower emissions, mature technology, and perfect reliability.

Product Information

- Non-circulating refrigerated dryer
- Rated pressure dew point: 7°C
- Rated treatment capacity: 0.7~145 m³/min
- Air/water-cooled models



Product Highlights



Operating Condition Enhancement

Rated Condition:

Inlet air temperature: 40°C
Ambient temperature: 30°C
Working pressure: 7 bar
Pressure dew point: 7°C (with 3°C correctable margin)

Extreme Condition:

Inlet air temperature: 60°C
Ambient temperature: 46°C
Working pressure: 16 bar



Refrigeration System Optimization

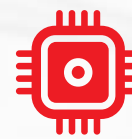
Full range of high-efficiency scroll/rotor compressors equipped with R407C high-efficiency refrigerant to ensure refrigeration efficiency.

Adoption of automatic bypass valves and electronic bypass valves to enhance the automatic adjustment capability during load changes.



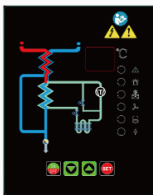
Heat Exchanger Upgrade

Adopts high-efficiency heat exchanger design to enhance heat transfer efficiency, reduce pressure loss, and improve system energy consumption.



Intelligent Control System

A brand-new control system with standard features: anti-icing blockage, remote start/stop, 485 communication, and fault alarm functions.



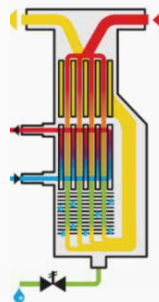
New Control Panel

The operation panel features an intuitive design, providing six working status indication functions:

- Fault indication
- Over-temperature indication
- Defrost indication
- Fan operation indication
- Compressor operation indication
- Power indication

New Heat Exchanger Process Design

A new heat exchange process and reverse airflow design are adopted, enabling higher gas-water separation efficiency. The increased area of the precoolers reduces the temperature difference between inlet and outlet, resulting in lower relative humidity of compressed air. With a designed working pressure of 16bar, an inlet-outlet temperature difference of 5°C, and a pressure loss of <0.15bar, the heat exchange efficiency is significantly improved.



Condenser Upgrade (Water-cooled):

Adopts a newly designed 316 stainless steel plate-type condenser, featuring high heat exchange efficiency, excellent corrosion resistance, and non-pressure vessel structure. A water flow regulator is standard-equipped.



High-efficiency Refrigeration Compressors

The full range adopts high-efficiency scroll and rotor compressors, equipped with R407 environmental-friendly refrigerant, ensuring both refrigeration efficiency and system stability.

High-quality Bypass Valves

For models below D1380Rs, automatic hot gas bypass valves are adopted to automatically adjust the opening degree according to load changes.

For models above D1380Rs, electronic bypass valves are added to open when the temperature is below the freezing point, ensuring dew point stability and preventing low-temperature icing blockage during load fluctuations.



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Model	Flow		Voltage V/Ph/hz	Voltage Range	Air Connection Pipe Diameter mm	Dimensions (mm)			Weight kg
	m³/min	m³/hr				L	W	H	
Air-cooled									
D42Rs-A	0.7	42	220/1/50	10%	0.75" BSPT	400	400	650	47
D72Rs-A	1.2	72	220/1/50	10%	0.75" BSPT	400	400	650	47
D108Rs-A	1.8	108	220/1/50	10%	1" BSPT	520	430	660	56
D216Rs-A	3.6	216	220/1/50	10%	1.5" BSPT	600	500	770	72
D294Rs-A	4.9	294	220/1/50	10%	1.5" BSPT	700	650	850	79
D342Rs-A	5.7	342	220/1/50	10%	1.5" BSPT	700	650	850	88
D390Rs-A	6.5	390	220/1/50	10%	1.5" BSPT	700	650	850	92
D444Rs-A	7.4	444	220/1/50	10%	1.5" BSPT	700	650	850	97
D540Rs-A	9	540	220/1/50	10%	1.5" BSPT	750	660	880	116
D690Rs-A	11.5	690	220/1/50	10%	2" BSPT	900	600	1100	147
D810Rs-A	13.5	810	220/1/50	10%	2" BSPT	900	600	1100	153
D990Rs-A	16.5	990	380/3/50	10%	2.5" BSPT	1000	650	1200	173
D1050Rs-A	17.5	1050	380/3/50	10%	2.5" BSPT	1000	650	1200	178
D1170Rs-A	19.5	1170	380/3/50	10%	2.5" BSPT	1000	650	1200	186
D1380Rs-A	23	1380	380/3/50	10%	3" FLG	1160	760	1260	225
D1590Rs-A	26.5	1590	380/3/50	10%	3" FLG	1160	760	1260	231
D1740Rs-A	29	1740	380/3/50	10%	3" FLG	1260	800	1350	264
D2100Rs-A	35	2100	380/3/50	10%	3" FLG	1260	800	1350	276
D2340Rs-A	39	2340	380/3/50	10%	4" FLG	1320	1040	1700	355
D2700Rs-A	45	2700	380/3/50	10%	4" FLG	1320	1040	1700	367
D3090Rs-A	51.5	3090	380/3/50	10%	4" FLG	1320	1040	1700	384
D3480Rs-A	58	3480	380/3/50	10%	5" FLG	1600	1280	1800	446
D4080Rs-A	68	4080	380/3/50	10%	5" FLG	1600	1280	1800	465
D4200Rs-A	70	4200	380/3/50	10%	5" FLG	1600	1280	1800	487
D4560Rs-A	76	4560	380/3/50	10%	6" FLG	1760	1350	1900	764
D4800Rs-A	80	4800	380/3/50	10%	6" FLG	1760	1350	1900	798
D5520Rs-A*	92	5520	380/3/50	10%	6" FLG	1900	1480	2120	1126
D5940Rs-A*	99	5940	380/3/50	10%	6" FLG	1900	1480	2120	1154
D7680Rs-A*	128	7680	380/3/50	10%	6" FLG	2040	1960	2120	1582
D8700Rs-A*	145	8700	380/3/50	10%	8" FLG	1900	2500	2200	1837

*Non-standard customization is available. For details, please consult the Market Department of Ingersoll Rand

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	m³/min	m³/hr				L	W	H	
Water-cooled									
D690Rs-W*	11.5	690	220/1/50	10%	2" BSPT	850	500	920	136
D810Rs-W*	13.5	810	220/1/50	10%	2" BSPT	850	500	920	144
D990Rs-W*	16.5	990	380/3/50	10%	2.5" BSPT	1010	600	1020	165
D1050Rs-W	17.5	1050	380/3/50	10%	2.5" BSPT	1010	600	1020	172
D1170Rs-W	19.5	1170	380/3/50	10%	2.5" BSPT	1010	600	1020	183
D1380Rs-W	23	1380	380/3/50	10%	3" FLG	1110	630	1200	212
D1590Rs-W	26.5	1590	380/3/50	10%	3" FLG	1110	630	1200	227
D1740Rs-W	29	1740	380/3/50	10%	3" FLG	1200	660	1230	256
D2100Rs-W	35	2100	380/3/50	10%	3" FLG	1200	660	1120	272
D2340Rs-W	39	2340	380/3/50	10%	4" FLG	1310	960	1500	348
D2700Rs-W	45	2700	380/3/50	10%	4" FLG	1310	960	1500	359
D3090Rs-W	51.5	3090	380/3/50	10%	4" FLG	1310	960	1500	372
D3480Rs-W	58	3480	380/3/50	10%	5" FLG	1360	1020	1550	427
D4080Rs-W	68	4080	380/3/50	10%	5" FLG	1360	1020	1550	456
D4200Rs-W	70	4200	380/3/50	10%	5" FLG	1360	1020	1550	475
D4560Rs-W	76	4560	380/3/50	10%	6" FLG	1560	1200	1550	754
D4800Rs-W	80	4800	380/3/50	10%	6" FLG	1560	1200	1550	772
D5520Rs-W*	92	5520	380/3/50	10%	6" FLG	1560	1480	1550	1117
D5940Rs-W*	99	5940	380/3/50	10%	6" FLG	1560	1480	1550	1136
D7680Rs-W*	128	7680	380/3/50	10%	6" FLG	1660	1580	1600	1569
D8700Rs-W*	145	8700	380/3/50	10%	6" FLG	1760	2060	1650	1796

*Non-standard customization is available. For details, please consult the Market Department of Ingersoll Rand



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