

SPA>XCO

HIGH PERFORMANCE • RELIABLE



**HRD Series Refrigeration Air Dryer
With Built-in Pre-cooler**

HRD Series

Atmospheric air contains more water vapor at high temperatures and less at lower temperatures. This has an effect on the water concentration when the air is compressed. Problems and disturbances can occur due to water precipitation in the pipes and connected equipment. To avoid this, the compressed air must be dried.

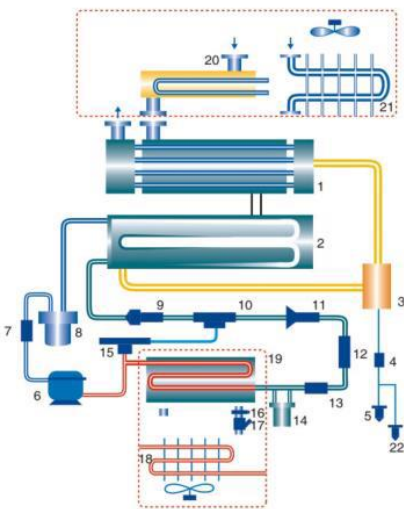
Refrigeration dryer remove this water vapor by cooling the compressed air, condensing the water and effectively drain out from the system.

Numerous Advantages In Details

- With the US advance technology, Spaxco dryers are highly reliable and running at consistent dewpoint.
- New design of the heat exchanger with counter flow configuration, perfectly increase the outlet temperature to prevent condensation occur at outlet pipe.
- Evaporator is made by wave type aluminum fins with diversion plate increase the contact surface of air and refrigerant to achieve higher cooling efficiency.
- Heat exchanger is made by thread type bronze tubes with aluminum and diversion plate design to enhance the heat exchanging efficiency and lower energy consumption.
- Essential components are imported from branded manufacturer to ensure the reliability.
- Gas liquid separated thoroughly by element filtering separation to ensure effective vaporizing.
- Reliable electronic drain ensure the condensate water and oil contaminant are effectively discharged.
- Unique casing and hot air exhaust design, low flow restriction, excellent for heat dissipation and easy for maintenance.

Working Principle

Firstly, the compressed air enter into the Pre-cooler(20,21) for pre-cooling, then follow by the heat exchanger (1) being cooled down to a lower temperature before entering the evaporator. The air to refrigerant heat exchanger (2) reduces the air temperature down to 2-5⁰C (dew point), the moisture will be condensated into liquid, which will be separated by gas/liquid separator (3) and be drained off by the solenoid drain valve (22). Meanwhile, the dry, low temperature compressed air passes through the air to air heat exchanger and then going to dryer's outlet.



- 1, Heat exchanger
- 2, Evaporator
- 3, Gas/Liquid separator
- 4, water filter
- 5, Manual draining valve
- 6, Refrigerated compressor
- 7, Aspirating filter
- 8, Vaporization
- 9, Separator
- 10, Gas/Liquid mixer
- 11, Thermal expansion valve
- 12, View monitor
- 13, Dry filter
- 14, Tank
- 15, Hot gas by-pass valve
- 16, Water adjustable valve
- 17, Water filter
- 18, Condenser(Air-cooling)
- 19, Condenser(Water-cooling)
- 20, Pre-cooler(Water-cooling)
- 21, Pre-cooler(Air-cooling)
- 22, Auto-drainer



Inlet Temperature : $\leq 60^{\circ}\text{C}$
 Refrigerant: R407c
 Ambient Temperature: 35°C
 Pressure Dew Point: 2-10⁰C
 Inlet Pressure: 6-10bar
 Pressure Drop: $\leq 0.2\text{bar}$

Technical Specification

Model	HRD-10	HRD-20	HRD-30	HRD-40	HRD-50	HRD-60	HRD-75	HRD-100	HRD-120	HRD-150	HRD-200	HRD-250	HRD-300
Capacity (Nm ³ /min)	1.5	2.6	4.0	5.2	7.0	8.5	11.0	13.8	16.0	23.0	27.0	35.0	45.0
Voltage (V/Hz)	230V/50Hz									400V/50Hz			
Compressor Power (HP)	1.0	1.0	1.25	2.0	2.0	2.5	3.0	3.6	3.8	5.0	6.0	7.5	10.0
Fan Power (W)	90	120	150	195	195	195	150x2	150x2	180x2	195x2	195x2	240x2	195x3
Air connection	G1"	G1"	G1½"	G1½"	G1½"	G1½"	G2"	G2"	G2"	DN80	DN80	DN80	DN100
Net Weight (kg)	60	80	105	135	190	195	225	260	305	400	520	630	750
Dimension	Length	630	700	850	850	900	900	1180	1180	1180	1360	1650	1810
	Width	450	450	500	500	560	560	670	670	670	710	970	1090
	Height	670	915	970	970	1070	1070	1160	1160	1160	1205	1422	1697

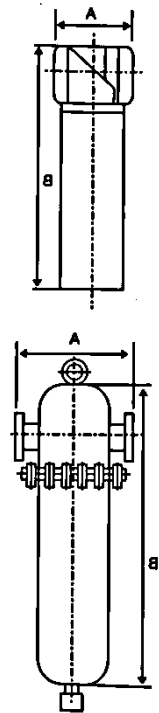
Compressed Air Filter

Product Introduction

- Filter housing is using aluminum alloy die-casting with epoxy resin powder coating internal and externally to improve durability and corrosion resistance.
- The advance design idea for element can make the cartridge filter smaller and compact.
- Easy installation, it can be series connected in order to reduce space.

Technical Specification

Model	Capacity		Element Qty	Dimension (mm)		Port Size	Weight (kg)
	Nm ³ /min	scfm		Width	Height		
F21-	0.6	21	1	105	160	G1"	5
F42-	1.2	42	1	105	210	G1"	5
F85-	2.4	85	1	105	275	G1"	8
F132-	3.8	132	1	133	295	G1½"	10
F175-	5	175	1	133	420	G1½"	10
F245-	7	245	1	164	510	G1½"	15
F300-	8.5	300	1	164	550	G1½"	25
F385-	11	385	1	164	625	G2"	25
F485-	13.8	485	1	194	730	G2"	25
F640-	18	640	1	310	920	G2"/DN80	35
F780-	22	780	1	310	920	DN80	35
F920-	26	920	2	475	1038	DN80	80
F1250-	35	1250	2	475	1038	DN80	85
F1590-	45	1590	2	475	1038	DN100	90
F1900-	54	1900	3	525	1070	DN125	125



Filtration Grade

P – For removal of liquid water and oil; removes solid particles to 1 micron

A – For coalescing fine water and oil aerosols; removes solid particles to 0.01 micron

U – For coalescing ultra-fine oil aerosols; removes solid particles to 0.01 micron

C – For removal of oil and hydrocarbon vapors normally absorbable by activated carbon; removes solid particles to 0.01 micron