



PROFESSIONAL AIR COMPRESSOR MANUFACTURER

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## POST TREATMENT EQUIPMENT FOR AIR COMPRESSOR

WE TAKE CARE OF YOUR COMPRESSED AIR

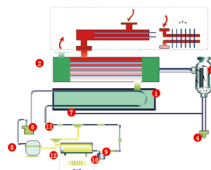
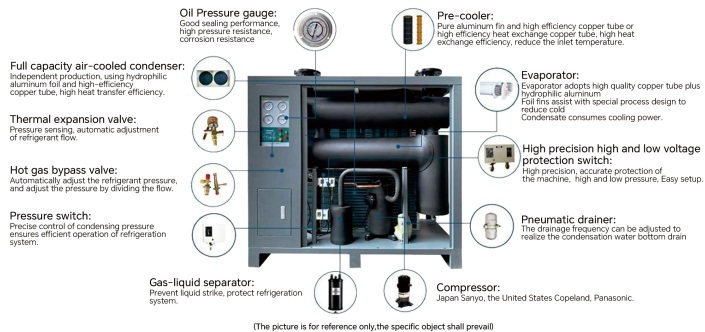


## VRD Series Refrigerated Air Dryer For Compressed Air



### Working Principle Of Refrigerated Dyer

The amount of water vapor in compressed air is determined by the temperature of the compressed air. Lowering the temperature while maintaining the same pressure can reduce the content of water vapor decreases, and excess water vapor condenses into a liquid. Freeze drying air dryer uses a refrigeration type device to cool compressed air to a certain dew point temperature, precipitation of water, discharge of water, thus drying compressed air.



1. Evaporator
2. Heat exchanger
3. Cyclone separator
4. Automatic drain
5. Compressor
6. Air-liquid separator
7. Expansion valve
8. Air pre-cooler
9. Windows
10. Drying filter
11. Thermal bypass valve
12. Condenser

### Working pressure and temperature correction coefficient (V1)

Working pressure Mpa	Inlet temperature °C	45	50	55	60	70	80
0.4	1.06	0.87	0.77	0.71	0.67	0.61	
0.5	1.12	0.92	0.82	0.75	0.71	0.64	
0.6	1.17	0.96	0.85	0.79	0.74	0.67	
0.7	1.22	1.00	0.89	0.82	0.77	0.70	
0.8	1.24	1.02	0.90	0.84	0.79	0.71	
1.0	1.29	1.06	0.94	0.87	0.82	0.74	

### Environmental temperature correction coefficient (V2)

Environmental temperature °C/W	30	32	35	40
V2	1.03	1.00	0.96	0.90

When selecting a dryer, it is necessary to consider the pressure correction coefficient and temperature correction coefficient. The standard operating conditions for refrigerated dryers:

1. Inlet pressure: 0.70Mpa
2. Inlet temperature: 50°C
3. Environmental temperature: 32°C

When selecting the model, it is necessary to consider the coefficients corresponding to the actual working conditions for correction. If you need detailed technical support, please contact our company directly

### VRD Series Refrigerated Air Dryer Parameter Table

Type	Air Capacity		Working Pressure	Power	Max. Inlet Temperature	Inlet/Outlet	Pressure Dew Point	Dimension (mm)	Weight
	m <sup>3</sup> /min	cfm	bar	Kw/V	°C		°C	L * W * H	kg
VRD010	1.2	42.4	7-16	0.54/220	≤65	G3/4	-2-8	617 * 440 * 825	37
VRD015	1.8	63.6	7-16	0.6/220	≤65	G1	-2-8	617 * 440 * 830	43
VRD020	2.6	91.8	7-16	0.86/220	≤65	G1	-2-8	697 * 490 * 790	50
VRD038	4.0	141.3	7-16	0.96/220	≤65	G1 1/2	-2-8	752 * 500 * 915	57.5
VRD065	7.0	247.2	7-16	1.97/220	≤65	G1 1/2	-2-8	767 * 550 * 985	80.5
VRD085	9.0	317.8	7-16	3.3/220	≤65	G2	-2-8	958 * 650 * 1080	124
VRD115	12	423.8	7-16	3.45/380	≤65	G2	-2-8	1060 * 660 * 1080	126
VRD135	14	494.4	7-16	3.8/380	≤65	G2	-2-8	1130 * 660 * 1132	141
VRD185	18.5	653.3	7-16	4.99/380	≤65	G2 1/2	-2-8	1310 * 818 * 1392	240
VRD205	21	741.6	7-16	5.37/380	≤65	G2 1/2	-2-8	1300 * 870 * 1441	256
VRD255	25	882.9	7-16	6.2/380	≤65	G3	-2-8	1420 * 920 * 1586	292
VRD350	38	1342.0	7-16	6.56/380	≤65	DN100	-2-8	1420 * 920 * 1586	332
VRD450	45	1589.2	7-16	7.43/380	≤65	DN100	-2-8	1420 * 920 * 1586	353ss

### Professional design for compressed air dryer

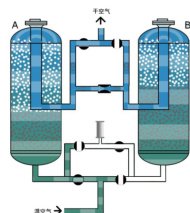
- Heavy load design layout, compact structure, and no foundation installation
- Low pressure loss, more energy-efficient
- The heat exchanger adopts a countercurrent design, with high heat exchange efficiency and small volume;
- The air-liquid separator adopts a multi-stage separation method to ensure the quality of compressed air after drying;
- Easy to understand and operate control panel
- Adopting high-quality refrigeration compressors, reliable performance, energy-saving and efficient;

## VAD Series Adsorption Air Dryer For Compressed Air



### Working principle of heatless adsorption dryer

The heat free regeneration adsorption dryer utilizes gas and solid particles, especially when in contact with certain porous particles water molecules in compressed air become enriched characteristics in particles. The amount of water adsorbed on the adsorbent at a certain temperature increasing with the increase of water vapor partial pressure. At a certain partial pressure of water vapor, the adsorption capacity of water decreases with increasing temperature. Water content is easy under low temperature and high pressure being adsorbed. Water is easily desorbed at high or low temperatures. The vacuum dryer is beneficial using this characteristic of adsorbent to achieve the transition between adsorption regeneration adsorption to achieve continuous drying of compressed air through conversion.



### High quality components

- 1 Adopting imported single-chip microcontrollers to form a multi functional electronic control core, with multiple operation modes available
- 2 High quality muffler ensures low noise
- 3 Reliable pneumatic control components with a design lifespan up to 2 million times
- 4 Highly efficient adsorbent with high strength and wear resistance, with long service life

### Pressure Correction Factor (CFP)

intake pressure	Mpa	0.6	0.7	0.8	0.9	1.0
CFP		0.88	1.0	1.13	1.25	1.38

### Temperature correction coefficient (CFT)

intake temperature	°C	20	25	30	35	40	45
CFT		1.2	1.1	1.0	1.0	1.0	0.75

### Dew point correction factor (CFD)

point Dew requirement °C	PDP	-20	-40
CFD		1.1	1.0

- 1 select the minimum inlet corrected pressure coefficient (CFP) for the dryer (when determining the minimum working pressure of the dryer, the pressure loss of the front-end equipment in the system must be considered)
- 2 Select the maximum inlet temperature correction factor (CFT) or the dryer.
- 3 Select the dew point correction factor (CFD).

$CFP \times CFT \times CFD$  The minimum processing air volume of the dryer = intake air flow rate /  $CFP \times CFT \times CFD$

Select the model in the table based on the minimum flow rate at the dryer should meet.



### Professional design for compressed air drying

- The perfect dual adsorption tower structure design, high-performance and reliable valve components, ensure reliable operation and long service life.
- Efficient molecular sieve combination, with a larger adsorption surface area and stronger adsorption effect.
- Low noise, low vibration.
- Microcomputer control and user-friendly operation interface, achieving unmanned operation

### VAD Series Heatless Adsorption Air Dryer Parameter

Type	Air Capacity		Voltage	Power	Connection	Pressure Dew Point °C	Dimension mm	Weight
	m³/min	cfm	V	kw			L * W * H	
VAD-1	1.5	53	220	<0.1	G1	-20 ~ -40	880 * 350 * 1100	80
VAD-2	2.5	88	220	<0.1	G1	-20 ~ -40	800 * 350 * 1290	90
VAD-3	3.8	134	220	<0.1	G1	-20 ~ -40	820 * 380 * 1580	135
VAD-6	6.8	240	220	<0.1	G1-1/2	-20 ~ -40	940 * 450 * 1810	255
VAD-11	11	388	220	<0.1	G2	-20 ~ -40	1040 * 550 * 1920	400
VAD-14	14	494	220	<0.1	G2	-20 ~ -40	1150 * 600 * 1970	460
VAD-17	17	600	220	<0.1	DN65	-20 ~ -40	1200 * 700 * 2030	515
VAD-22	22	777	220	<0.1	DN65	-20 ~ -40	1300 * 700 * 2100	645
VAD-27	27	953	220	<0.1	DN80	-20 ~ -40	1300 * 700 * 2300	720
VAD-32	32	1130	220	<0.1	DN80	-20 ~ -40	1400 * 800 * 2430	905
VAD-45	45	1589	220	<0.1	DN100	-20 ~ -40	1500 * 860 * 2600	1285
VAD-56	56	1978	220	<0.1	DN100	-20 ~ -40	1600 * 900 * 2700	1680
VAD-66	66	2331	220	<0.1	DN125	-20 ~ -40	1700 * 1000 * 2700	2100
VAD-85	85	3002	220	<0.1	DN125	-20 ~ -40	1900 * 1200 * 2800	2660
VAD-110	110	3885	220	<0.1	DN125	-20 ~ -40	1900 * 1200 * 3100	3400

\*The company keeps improving the products and reserves the right to change the design. Parameters are subject to change without notice. Models with dew point < -60°C can be customized.

## VDF Series Precision Air Filter For Compressed Air



### Working principle of pipe line filter

The shell is generally made of aluminum alloy, carbon steel, and stainless steel materials, and the interior is made of using a tubular filter element as a filtering element, according to different filtering media and designs choose different filtering elements for the process to meet the requirements of compressed air quality. Utilizing physical blocking techniques (using direct interception, inertial capture, and Brownian transport) a device that uses the principle of dynamic air filtration to separate other components in a medium. Filter aerosol impurities such as solid particles, water droplets, and oil mist in the air to the main equipment for obtaining air purification.

### Professional design for compressed air purification

- Effectively collect and filter aerosol impurities such as oil mist, dust, solid particles, water droplets, and oil mist in the air using air filtration principles such as direct interception, inertial capture, and Brownian motion
- The shell is made of aviation grade aluminum alloy and high-quality carbon steel material
- The aluminum alloy shell has undergone anodizing treatment and epoxy resin dry powder anti-corrosion and rust prevention treatment
- High quality carbon steel shell undergoes epoxy resin dry powder anti-corrosion and rust prevention treatment
- Humanized indication of replacement time for pressure difference indicator
- The water level window is convenient for monitoring the liquid level and reminding preventive maintenance situations
- Automatic sewage discharge device effectively discharges pollutants
- Manual pressure relief valve with extra protection

### VDF Serise Pipe Line Air Filter

Type	Air Capacity			Connection	Dimension (mm)		
	m <sup>3</sup> /min	L/s	cfm		High (H)	Wide(W)	Weight(KG)
VDF010	1.5	25.0	53.0	Rc3/4"	245	100	1.29
VDF020	2.0	33.3	70.6	Rc3/4"	301	100	1.58
VDF030	3.0	50.0	105.9	Rc1"	320	130	2.93
VDF040	4.0	66.7	141.3	Rc1-1/2"	395	130	2.93
VDF070	7.0	116.7	247.2	Rc1-1/2"	550	130	3.46
VDF100	11.0	183.3	388.5	Rc2"	550	160	6.53
VDF140	14.0	233.3	494.4	Rc2-1/2"	590	160	6.6
VDF180	18.0	300.0	635.7	Rc2-1/2"	590	215	8.6
VDF220	22.0	366.7	776.9	Rc3"	590	215	8.75
VDF280	28.0	466.7	998.8	Rc3"	590	215	35
VDF330	33.0	550	1165.4	DN80	1050	513	40
VDF380	38.0	633.3	1342.0	DN100	1120	513	45
VDF460	46.0	766.7	1624.5	DN100	1270	513	60
VDF550	55.0	916.7	1942.3	DN125	1100	565	65
VDF670	67.0	1116.7	2366.1	DN125	1225	565	75
VDF750	75.0	1250.0	2648.6	DN125	1200	657	85
VDF850	85.0	1416.7	3001.7	DN150	1350	657	96
VDF950	95.0	1583.3	3554.9	DN150	1290	657	145

#### Remarks :

- Filter element accuracy based on ISO8573
- The processing capacity under different pressure states should be corrected according to the correction coefficient, and it should be noted when ordering

