



TWO-STAGE SCREW AIR COMPRESSOR 15 kW-315 kW

More Free Air Delivery , Energy Saving

PROFESSIONAL AIR COMPRESSOR MANUFACTURER



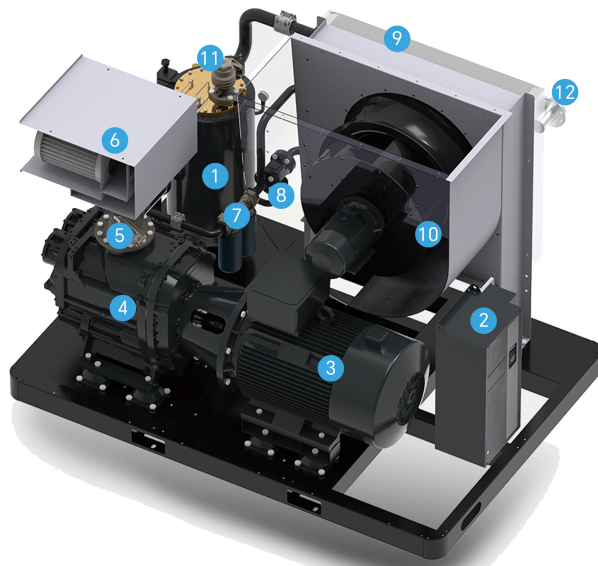
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15-315KW

DISCLAIMER: This parameter list is for reference only. We may adjust the related parameter. If there is any change, we will not inform you otherwise. If you do not know, please call us.

VDSP SERIES TWO STAGE SCREW AIR COMPRESSOR (15-315 kW)



1 Oil And Gas Separation System

- Large volume oil and cylinder, reducing the generation of lubricating oil foam
- The increased design of the oil fine separator reduces pressure drop, resulting in higher efficiency of the entire air compression system

2 Inverter

- Proportional motor speed control as per variable air pressure, Saving energy
- Advanced control technology for PM motor driver
- Industrial grade electrical / electronic components

3 Permanent Magnet Motor

- Integrated efficiency permanent magnet motor with high-performance neodymium iron boron (NdFeB) magnets
- IP55 dust/water resistance, and Class F insulation it operates reliably in extreme temperatures from -30°C to 60°C,
- Integrated power train design, reduce transmission loss for 100% efficiency

4 Two-stage air-end

- More free air delivery volume with same HP
- Low-speed screw ensures stable operation, even under continuous operation the screw maintains stable and efficient optimal clearance values
- The tooth profile accuracy can reach ± 0.005 mm and the surface roughness can reach Ra 0.1-0.2 μ m

5 Heavy Duty Intake Valve

- The specialized design of integrated air intake valve with adjustment range from 0 to 100%
- Integrating anti reverse, oil cut-off, capacity adjustment

6 Efficient Air Filter

- Independent air inlet duct design improves suction sensitivity and overall compression efficiency
- Adopting special filter materials and reasonable folding process, the service life is long. Filter dust in the air with high precision

7 Oil Filter

- External design for easy replacement
- By incorporating high-quality filter elements contaminants and lubricant degradation products in the lubricating oil are effectively removed, thereby prolonging the service life of the air compressor's moving components.

8 Temperature Control Valve

- Built-in temperature sensing enables adaptive adjustment to ensure precise control of oil temperature
- Equipped with superior overtemperature and overpressure protection mechanisms, ensuring safe operation under extreme conditions

9 Temperature Control Valve

- The enlarged cooler features an expanded heat exchange area with 30% excess heat exchange capacity, ensuring reliable thermal management under peak loads
- Maintains stable operation in high-temperature environments

10 Centrifugal Fan

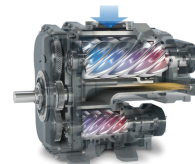
- Delivers higher airflow capacity with 30% lower energy consumption compared to conventional axial fans under identical operating conditions
- Cold air (suction) and hot air (exhaust) are divided into zones for better cooling effect

11 Pressure Valve

- Stable pressure valve to establish the lowest operating pressure

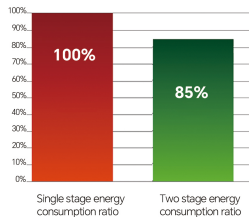
12 Outlet

- Flange exceeds industry standards with enhanced pressure rating and material thickness for superior sealing integrity.



WHY CHOOSE TWO STAGE COMPRESSION?

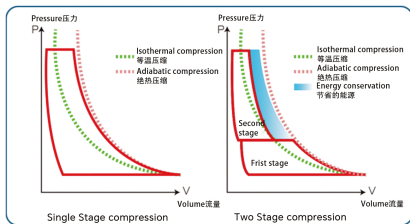
- For the same power, two-stage compression can increase efficiency **15%** compared to single-stage compression, save about **15%** of energy consumption



- VERDES two-stage compression energy efficiency exceeds **class 1 level**.
- For example, 90kW, air-cooled, 0.8Mpa model, significant improvement in exhaust volume and energy efficiency

VDS125	VDSP125	Increased displacement
Discharge	Discharge	%
m ³ /min	m ³ /min	
15.2	19.5	28.28
Input specific power	Input specific power	Energy efficiency improvement
kW/(m ³ /min)	kW/(m ³ /min)	%
2 Level, 6.9	1 level, 5.5	25.45

- The entire compression process approaches isothermal compression, reducing compression power consumption.
- Two-stage compression can increase efficiency by up to 8-15%



Technical Parameter

VDSP Series Two-Stage Permanent Magnet VSD Screw Air Compressor

Type	Power		Max. Working Pressure		F.A.D		Noise dB(A)	Connection	Dimension (mm) L*W*H	Weight kg
	kw	hp	bar	psi	m ³ /min	cfm				
VDSP20	15	20	8 10	116 145	2.7 -	95.3 -	68±2	Rp1	1300*900*1220	500
VDSP25	18.5	25	8 10	116 145	3.4 2.8	120.1 98.9	68±2	Rp1	1300*900*1220	550
VDSP30	22	30	8 10	116 145	4.1 3.5	144.8 123.6	68±2	Rp1	1300*900*1220	560
VDSP40	30	40	8 10	116 145	5.9 -	208.4 -	70±2	Rp1 1/2	1400*1100*1450	800
VDSP50	37	50	8 10	116 145	7.2 6.3	254.3 222.5	70±2	Rp1 1/2	1400*1100*1450	850
VDSP60	45	60	8 10	116 145	9.5 8.0	335.5 282.5	72±2	Rp2 1/2	2100*1440*1650	1500
VDSP75	55	75	8 10	116 145	12.5 9.5	441.4 335.5	72±2	Rp2 1/2	2100*1400*1650	1700
VDSP100	75	100	8 10	116 145	15.2 13.0	536.8 459.1	75±2	Rp2 1/2	2100*1400*1650	1800
VDSP120	90	120	8 10	116 145	19.5 16.5	688.6 582.7	75±2	DN65	2450*1700*1760	2400
VDSP150	110	150	8 10	116 145	23.0 20.0	812.2 706.3	79±2	DN80	2600*1900*1890	2800
VDSP180	132	175	8 10	116 145	27.0 23.7	953.5 837.0	79±2	DN80	2600*1900*1890	3000
VDSP220	160	220	8 10	116 145	33.5 30.6	1183.0 1080.6	79±2	DN100	3250*2100*2200	4300
VDSP250	185	250	8 10	116 145	38.0 34.5	1342.0 1218.4	82±2	DN125	3250*2100*2200	4500
VDSP270	200	270	8 10	116 145	42.0 38.0	1483.2 1342.0	82±2	DN125	3800*2300*2200	6000
VDSP300	220	300	8 10	116 145	46.0 41.0	1624.5 1447.9	82±2	DN125	3800*2300*2200	6500
VDSP350	250	350	8 10	116 145	53.0 45.8	1871.7 1617.4	82±2	DN125	3800*2300*2200	7000
VDSP380	280	380	8 10	116 145	60.0 52.0	2118.9 1836.4	82±2	DN125	3800*2300*2200	7500
VDSP420	315	420	8 10	116 145	67.0 59.0	2366.1 2083.6	82±2	DN125	4300*2300*2430	8500

-According to the standard of GB 19153-2009

-Standard power supply: 380V/50Hz/3Ph

-Please contact us for any specification that is not within the above mentioned standards.

-Compressor stage: Two stage compression

-Exhaust temperature: Ambient Temperature+15