

DHH 1230 30 bar fiber laser compressor



Technical description of high pressure air compressor unit

Model: integrated piston air compressor Flow rate: 1.2m³/min 3.0MPa

Model: dhh1230 Configuration table

number	name	Manufacturer	Company	quantity
1	host	Outstanding worker	platform	1
2	electric machinery	Outstanding worker	platform	1
3	Air filter	Germany dynamic	individual	2
4	Pressure switch	Danfoss	individual	1
5	Solenoid valve	Jock	individual	2
6	AC contactor	Schneider, France	set	1
7	Air tank	Lin Dong / Jia Yu	individual	1
8	Precision filter	Dehaha customization	set	1
9	Freeze dryer	Tianer	individual	1
10	Special oil for piston engine	Dehaha customization	set	1
11	Base and acoustic enclosure	Dehaha customization	set	1
12	Accessories and accessories	Dehaha customization	set	1

Technical parameters of piston air compressor

Serial number	Projects	Company	Numerical value
1	model	DHH1230	
2	Type	Fixed air cooled piston air compressor	
3	Overall dimension (L)×width×(high)	2100×1650×1970mm	
4	Installation method	Fixed installation without foundation	

5	Rated exhaust capacity	m3/min	1.1
6	Rated discharge pressure	MPa	3.0
7	Oil content of exhaust gas	ppm	≤0.003
8	Exhaust pressure dew point	°C	2~10
9	Contraction series	Two levels	
10	Transmission mode	Belt	
11	Compression oil consumption	L	6.0
12	Cooling mode	Air cooling	
13	ambient temperature	°C	0 ~ 45
14	Equipment weight	Kg	1500
15	Motor		
16	model	YE2-180L-4	
17	Rotational speed	r/min	1465r/min
18	Power	kW	22
Serial number	Projects	Company	Numerical value
19	Voltage / frequency	V/HZ	380/50 380/60 220/60
20	Start mode	Y - Δ start	
21	Motor protection level	IP	54
22	Insulation class	F	
23	Diameter of gas outlet	/	G3/4"
24	Volume of air tank	m3	0.6

1、 Unit technical requirements

- a. The equipment is produced by dehaha Compressor Co., Ltd. the unit is of single machine structure. All parts are installed on an independent base, integrating oil circuit, gas circuit, cooling and control. The installation and operation are simple, convenient, and more convenient for installation, repair and maintenance.
- b. The air compressor unit is driven by belt. All cylinders are precision castings, which are durable. Fins are cast on the surface of the cylinder, which is conducive to the heat dissipation of the compressor.

- c. The suction inlet of the main engine is equipped with a 5μTheunit is designed with two intercoolers and one aftercooler. All the coolers are made of copper tube, which has good heatexchange effect.
- d. Safety valve and exhaust pressure gauge are installed on theintercooler and aftercooler

2、 Electrical part

- a. The air compressor is equipped with a set of aircompressor controller. The air compressor is equipped with pressure signal andautomatic shutdown,
- b. Automatic start function.
- c. Automatic protection:
- d. Motor overload shutdown: over high-pressure alarm

3. Parts

- a. The large space between the cylinder and the crankcase is designedto avoid the contact between the connecting rod and other moving parts
- b. Conventional inertia flywheel, driven by two V belts
- c. Removable intake muffler filter, 5 micron precision

4、 Special design features

- a. The two-stage compression can make full use of the advantages ofW-type machine in balancing, cooling and load sharing of each stage.
- b. The suspension type crankshaft and integral connecting rod makethe structure compact. The specially designed flywheel can make the whole motion system of the unit in a completely balanced state. Multiple units can also achieve balanced operation without foundation.
- c. Each stage is equipped with timing automatic drain valve (time adjustable), which eliminates most of the condensate and reducesthe pressure of the follow-up system.

5、 Description of control system for high pressure compressor unit

Control composition: intermediate relay; Contactor; Hot after.

High pressure gas tank equipment

technical parameter

volume	M3/min	0.6
Maximum working pressure	Mpa	3.0
Maximum intake air temperature	°C	<100

High pressure after treatment equipment

1. Model: high pressure cold dryer

Model: 3.6m3/3.0mpa

Technical parameter table

Air handling capacity	4 Nm ³ / min (pressure P = 101325pa, temperature T = 20 °C, relativehumidity ψ=75%)	
Operating conditions	Inlet pressure	0.8-3.0MPa
	Inlet temperature	≤65°C
	Pressure dewpoint	2-10°C
	ambient temperature	<42°C
refrigeration system	Refrigerant compressor	GA086
	Freezingcapacity	2.066Kw
	Refrigeranttype	R410a
	Refrigerantquantity	560g
	condenser	Copper tube fin type
	evaporator	Aluminum alloy high efficiency plate heat exchanger
electrical`	Operation powersupply	AC 1φ 220V/50Hz
	Control system	Microcomputer automatic control, dew point temperature display
	Input power	0.605KW
	Whole machine current	3.5A
	Connecting pipe diameter	compressed air
	drainage	RC1/2"

2. Model: a set of 5 filters

The final filtration accuracy is 0.01um

The oil content of final gas outlet is 0.003ppm

Projects	Specification				
	P	M	S	H	T
Air handling capacity	2.4Nm3/min	2.4Nm3/min	2.4Nm3/min	2.4Nm3/min	2.4Nm3/min
Filtration accuracy	3um	1um	0.1um	0.01um	0.01um
Maximum residual oilcontent	-	0.1ppm	0.05ppm	0.01ppm	0.003ppm
Inlet pressure	≤3.0Mpa	≤3.0Mpa	≤3.0Mpa	≤3.0Mpa	≤3.0Mpa
Inlet temperature	≤80°C	≤80°C	≤80°C	≤80°C	≤80°C
Inlet andoutlet pressure drop	≤0.005Mpa	≤0.008Mpa	≤0.005Mpa	≤0.005Mpa	≤0.005Mpa
Diameter ofinlet and outlet	ZG1 "inner teeth	ZG1 "inner teeth	ZG1 "inner teeth	ZG1 "inner teeth	ZG1 "inner teeth
Weight	2.3kg	2.3kg	2.3kg	2.3kg	2.3kg
Number of filter elements	1branch	1branch	1branch	1branch	1branch
<p>note appended:</p> <p>The service life of the filter element is 6000 - 8000 hours. The filter element must be replacedregularly every year to ensure good filtering effect</p>					