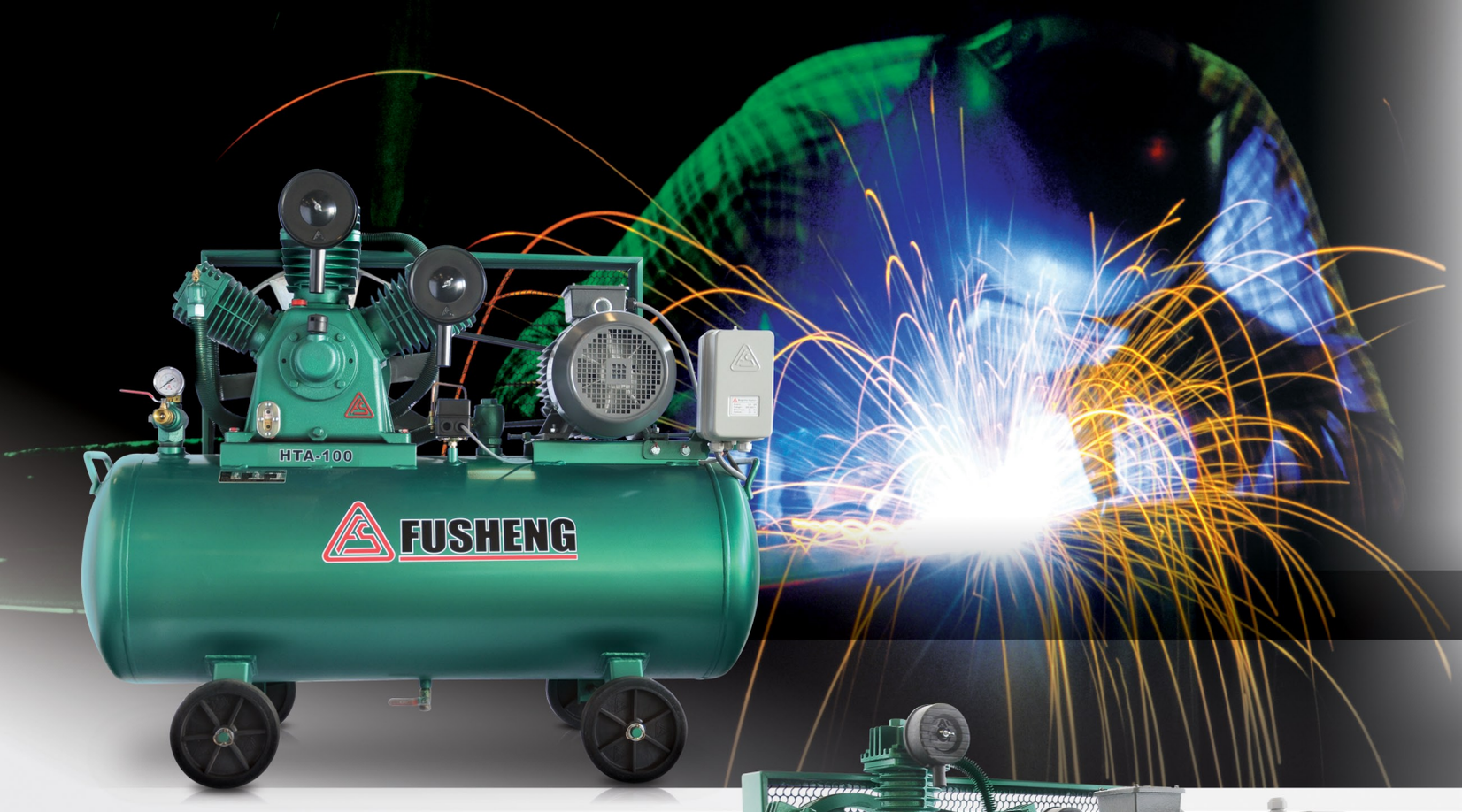
FUSHENG



A SERIES

AIR COMPRESSOR





A SERIES

AIR COMPRESSOR

Heavy-duty, low-speed

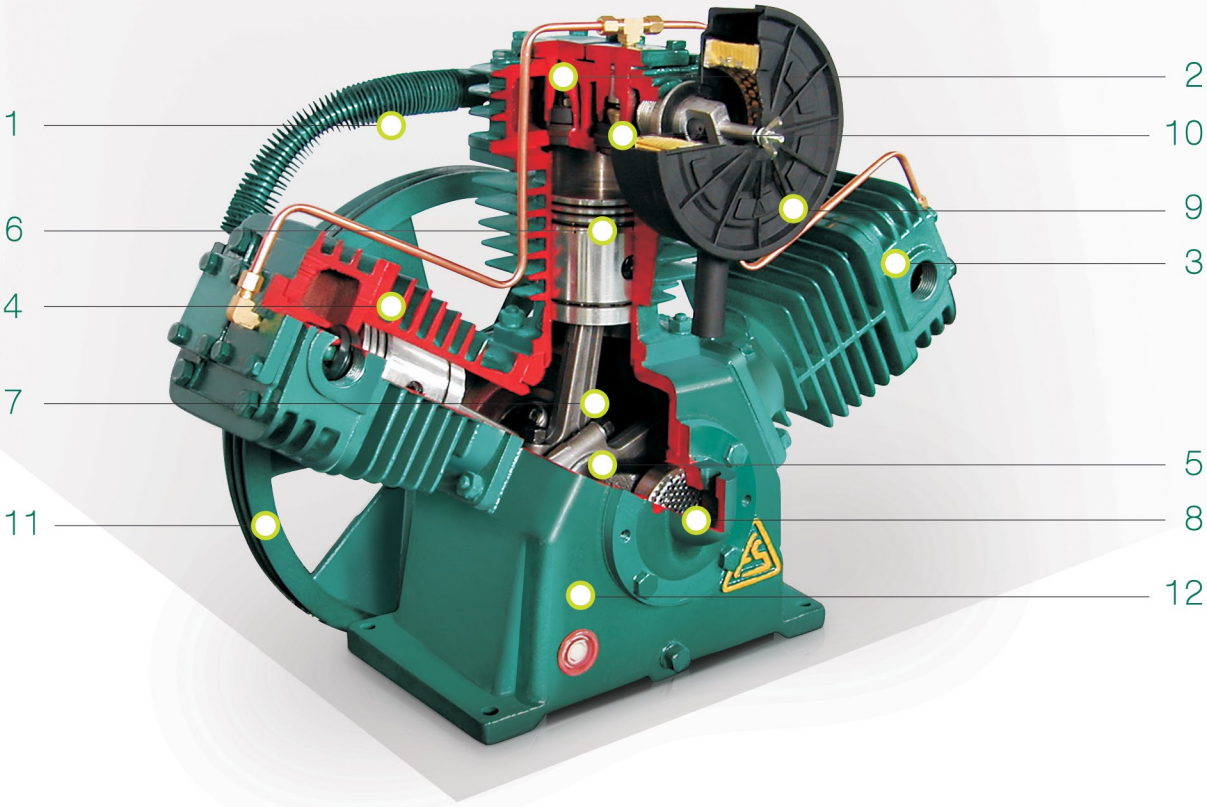
Single-stage air-cooled air compressor

The single-stage air compressor operates at the pressure range between 0-7kg/cm^{2}G. It produces more compressed air per horsepower than a two-stage compressor. However, if the operating pressure goes beyond 7kg/cm^{2}G, a two-stage air compressor produces more compressed air for every horsepower. Therefore, a two-stage air compressor is recommended for operating pressure more than 8 kg/cm^{2}G.

Two-stage air-cooled air compressor

The two-stage air compressor operates at the pressure range between 8-35 kg/cm^{2}G. The compressed air is subject to have proper cooling and compression ratio as it exits from first stage compression and enters into second stage compression. Therefore, the efficiency is better than single-stage compressor, thus more power saving.

Air-cooled reciprocating air compressor
Internal structure



1. Cooling copper tubing
Equipped with highly efficient heat dissipating fins, the copper tubing allows the heat generated to dissipate effectively, thus improving the air compression efficiency.

2. Inlet and outlet valves
The valve disc is made of special steel imported from Sweden. The disc is machined, milled and removed of stress, giving it high strength, ductility and impact resistance in high temperature.

3. Cylinder head
The concentrated, streamlined air flow allows for efficient heat dissipation.

4. Cylinder
The inner diameter is machined and milled using CNC techniques, giving the cylinder good wearing resistance and durability.

5. Crankshaft
Forged with high-quality steel, the crankshaft features high strength. The wearing parts are surface-toughened for extremely high wearing resistance. A counterweight minimizes vibrations.

6. Piston ring
The compression ring and oil ring are precision-machined to minimum lubricant consumption. This feature keeps the valve from carbon deposit or being burned for loss of lubricant.

7. Connecting rod
The links are precision-machined. The boring and alignment are kept within the ideal design requirements, allowing the compressor to run more smoothly and effortlessly.

8. Bearing
High-quality imported bearings are used for longer service life.

9. Air filter
The filter cleans the air sucked in while serving as a muffler to remove excessive noises.

10. Automatic unloading device
The sophisticated design ensures the safety of operations.

11. Belt-driven pulley for the compressor
The pulley is carefully balanced and calibrated for stable operations of the compressor.

12. Crankcase
The center hole and surfaces of the bearing are machined in one run by a single CNC workstation, ensuring the alignment and verticality.



Air compressor choice of models

Determine operating pressure, kg/cm²G

The discharge pressure of an air compressor is based on the actual pressure, the pressure drop that comes from air supply piping and purification system need to be considered.

Determine air demand, l/min

Operating cycle, maximum peak air demand, air storage, possible leaks and future expansion shall be considered when determining the actual air demands. In general, extra 20% is considered in addition to the actual air demands.

Choose the right model

As the two factors above are determined,then can choose the right model from this catalogue. (Special care is advised as the choice should be made based on the “actual displacement” under the operating pressure.) In general, the actual displacement is single stage x 0.65 or two stage x 0.8. Please refer to the specifications of respective models.

Choose the motor

Based on the air compressor model selected and the conditions of environment in operation; for example, 110V single phase, or 220V or 380V 3-phase.

Others

It is recommended to use a 3-phase motor for Fusheng’s air-cooled compressor of 2HP or more. When a 3-phase motor is used, it is recommended to install an electromagnetic switch for a fully automatic model, or there is a risk of motor damage.

Determine how the compressor operates

Semi-automatic



Fully automatic



Choose the appropriate way of operating based on it is used.

Semi-automatic model:

For a semi-automatic model, a pilot valve is used to control the unload and load conditions of the compressor. When the system pressure reaches the upper pressure limit defined (7.0kg/cm²G for example), the pilot valve opens and drives the suction unloader, thus allowing the compressor to run unloading. When the system pressure drops below the lower pressure limit defined (6.0 kg/cm²G for example), the pilot valve closes to allow the compressor to run loading. The semi-automatic model is suitable for where the compressed air is used frequently.

Fully automatic model:

The fully automatic model controls the unload and load conditions of the compressor using a pressure switch. When the system pressure reaches the upper pressure limit defined (7.0kg/cm²G for example), the pressure switch on to cut the motor’s power off, and therefore the motor stops. When the system pressure drops below the lower pressure limit defined (5.0 kg/cm²G for example), the pressure switch turns the motor’s power back on, thus, the compressor start running again. The fully automatic model is suitable for intermittent operations. For the protection of motor and electromagnetic switch, the compressor should not be turn on and off more than 6 times per hour.

We hope the explanation above helps you find the model that fits your needs. For any question, please do not hesitate to call the dealer nearest to you.

Technical specifications — single-stage air-cooled air compressor

Specs / Model	HP needed	Cylinder		Revolution	Piston displacement		Operating pressure	Air tank		Weight
	HP	Bore dia × no. of cylinder mm × pcs	Stroke mm	rpm	l/min	cfm	Kg/cm^{2}G	Dia. x L mm×mm	Capacity l	kg
VA-65	1.0	ψ65x2	44	530	154	5.45	7	ψ300x1050	70	94
TA-65	2.0	ψ65x3	48	635	303	10.70	7	ψ300x1050	70	107
VA-80	3.0	ψ80x2	60	770	464	16.40	7	ψ350x1160	105	156
TA-80	5.0	ψ80x3	60	875	791	27.96	7	ψ390x1410	155	208
VA-100	7.5	ψ100x2	70	950	1045	36.93	7	ψ485x1440	245	265
TA-100	10	ψ100x3	70	900	1484	52.44	7	ψ485x1760	304	360
TA-120	15	ψ120x3	80	800	2171	76.72	7	ψ485x1760	304	470
TA-125	20	ψ125x3	90	860	2850	100.7	7	ψ640x1760	500	500

Technical specifications — two-stage air-cooled air compressor

Specs / Model	HP needed	Cylinder		Revolution	Piston displacement		Operating pressure	Air tank		Weight
	HP	Bore dia × no. of cylinder mm × pcs	Stroke mm	rpm	l/min	cfm	Kg/cm^{2}G	Dia. x L mm×mm	Capacity l	kg
HVA-65	1.0	L: ψ65x1 H: ψ42x1	44	750	110	3.89	12	ψ300x1050	70	106
HTA-65	2.0	L: ψ65x2 H: ψ51x1	48	740	236	8.34	12	ψ300x1050	70	122
HTA-65H	3.0	L: ψ65x2 H: ψ51x1	48	950	303	10.70	12	ψ350x1160	105	133
HTA-80	5.0	L: ψ80x2 H: ψ65x1	60	950	573	20.25	12	ψ390x1410	155	227
HTA-100	7.5	L: ψ100x2 H: ψ 80x1	70	680	747	26.39	12	ψ490x1440	245	318
HTA-100H	10	L: ψ100x2 H: ψ 80x1	70	920	1011	35.72	12	ψ490x1760	304	348
HTA-120	15	L: ψ120x2 H: ψ100x1	80	860	1556	54.98	12	ψ490x1760	304	468
HVA-100S	5.0	L: ψ100x1 H: ψ42x1	70	680	374	13.2	35	ψ450x1770	304	360
HTA-100S	10	L: ψ100x2 H: ψ 51x1	70	710	781	27.6	35	ψ485x1770	304	380

*There are other high-pressure and special models on request. Please call for availability.

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A SERIES

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