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# 德蒙无油涡旋空气压缩机 Dream Oil Free Scroll Air Compressor

## High-quality compressed air

The quality of compressed air is the key to users. Oil, oil mist, water, and particles are the three major factors affecting the quality of compressed air. ISO8573-1:2010 has made a strict definition of the quality standard of compressed air, especially the oil content standard of compressed air. We are fully aware of the importance of compressed air quality to users, and provide users with zero risk (zero risk of pollution, zero risk of damaged or unsafe products, zero risk of operational interruption) compressed air that meets the Class0 standard to help you success in the competition.

		Solid	oarticles		Water		Oil mist				
Quality level	The number of so 0.1~0.5 micron	olid particles per cu 0.5~1 micron	bic meter of air 1~ micron	Concentratio	n Steam Pressure dew point	Liquid g/m <sup>3</sup>	Total content (oil mist, oil droplets, and steam) mg/m <sup>3</sup>				
0	Developed by users or suppliers										
1	≤20,000	≤400	≤10		≤-70°C	-	0.01				
2	≤400,000	≤6,000	≤100		≤-40°C	_	0.1				
3	_	≤90,000	≤1,000		≤-20°C	-	1				
4	_	_	≤10,000		≤+3°C	-	5				
5	_	_	≤100,000		≤+7°C	-	_				
6	_	_	_	≤5	≤+10°C	_	_				



## Advantages of oil-free scroll air compressor

### **Compression principle**

The compression process of the oil-free scroll is realized by the rotating motion of the fixed scroll and the movable scroll. The air enters from the outside of the air end, and the moving scroll closes the air inlet after the air is sucked in. As the orbiting scroll rotates, the air is continuously compressed, and the compressed oil-free air is discharged from the center of the fixed scroll. This process is continuously repeated to ensure that the discharged compressed air is continuous without fluctuations.



## Advantage

- 100% oil-free: can be used in any industry, especially suitable for users with high oil content requirements in compressed air.
- Quiet operation: The operating noise of the scroll air compressor is extremely low, and the working environment is healthier.
- Easy installation: It occupies a small area and can be installed near the air point, thereby reducing the installation of a compressed air pipe network and effectively reducing the cost of pipe network installation.
- Simple maintenance: No need to replace or add lubricating oil, only a small amount of consumables need to be replaced regularly, and the maintenance cost is low.
- Zero discharge: discharge only condensate water, no discharge of harmful substances, in line with sustainable development goals.





## Innovation Technology

Dream series oil-free scroll air compressors adopt leading technology from Germany, condensing years of industry experience and professional technology, and use excellent design and configuration to ensure the high reliability of our products.

## **Reliable original air end**

The air end adopts a dynamic and static scroll design with three seals to make the compression process more stable. Multi-wing cooling fan, cooling the air end efficiently



The main motor of a well-known brand is adopted, and the energy efficiency level is IE3. The design standard fully meets the requirements of the air compressor for torque and load, so that the main motor can reach the highest working efficiency and power factor at full load and partial load. The TEFC main motor with IP55 protection class has an insulation class of F, which enables it to adapt to a variety of working environments to ensure the reliability of the main motor.



The secondary cooler design is adopted for more sufficient cooling. Each scroll air end has a separate cooler (primary cooler), and the whole machine is equipped with a secondary cooler to further reduce the exhaust temperature. The fan of the secondary cooler can automatically start and

stop according to the exhaust temperature, saving energy.







## Innovation Technology

### Intelligent control system

The Smart Control control system independently developed by Dream can control up to 10 oil-free scroll air ends. When multiple hosts participate in operation, the control system will keep each air end at the same running time to reduce user maintenance costs. The control system will also detect the running time of each air end and unit rotation time. If it is detected that the "rotation time" has expired, the running air end will be automatically switched, the air endwith the longest running time will be shut down, and the air end with the shortest running time will be started.



Each air end is controlled by an independent controller, and the failure of a single controller will not affect the operation of other hosts, with high reliability. The controller complies with CE certification and is powerful. The large-size color screen of the control system can display the temperature of each host, the current of each motor, the running time, the exhaust pressure, and it has multiple functions such as reverse phase protection, maintenance reminder, etc., which is convenient and easy to use.

#### **Reliable transmission system** $\mathbf{b}$

The belt drive system with automatic tensioning function can keep efficient operation during running time. The system is easy to maintain, stable and reliable, and can protect the air end to the greatest extent during startup.





#### Integrated air compressor

Users can choose built-in dryers (refrigeration dryers, adsorption dryers or membrane dryers can be selected), filter and air storage tank models, to provide users with a one-stop high-quality compressed air solution. The integrated air compressor has a small footprint and is easy to install.

### **Centralized controller MC4/MC6**

he centralized controller can control up to 4 (MC4) or 6 (MC6) air compressors and dryers, using Siemens PLC, which can be flexibly configured according to user needs. The centralized controller will automatically control the number of air compressors to be turned on according to the pressure of the main pipe or the gas storage tank, which can save users the most on electricity bills. At the same time, the centralized controller will determine the start sequence of multiple air compressors according to the total operating time of each air compressor, ensuring that the total operating time of each air compressor is basically the same. Of course, the user can also manually set the start sequence. The centralized controller provides the main pipe pressure input channel (standard configuration), dew point temperature input channel (optional), and carbon monoxide concentration input channel (optional).

#### **Skid-mounted system**

We can provide users with tailor-made skid-mounted systems, which can install air compressors, air storage tanks, dryers, filters, and starter cabinets on a skid, eliminating the need for tedious equipment installation and pipeline installation on site.

### **Direct drive**

Direct drive users can choose frequency conversion direct drive mode, which is more convenient for maintenance and lower energy consumption.





Model	Maximum working pressure	Volume flow (FAD)	Rated Power	Numbers of Air end and	Working Pressure	Noise	Lengtn	Width	Height	Outlet diameter	Unit net weight	Remarks
	bar.G	L/min	kW	Motor	MPa	dB(A)	mm	mm	mm		kg	
0MW-02A-8	8	240	2.2	2.2*1	0.8	57 ± 2	550	600	700	1/2″	220	
0MW-02A-10	10	210	2.2	2.2*1	1	57 ± 2	550	600	700	1/2″	220	
0MW-02CA-8	8	240	2.2	2.2*1	0.8	57 ± 2	1290	600	1270	1/2″	240	With 30L air tank
0MW-02CA-10	10	210	2.2	2.2*1	1	57 ± 2	1290	600	1270	1/2″	240	With 30L air tank
MW-02SAT-8	8	240	2.2	2.2*1	0.8	57 ± 2	665	935	1240	1/2″	260	With 30L air tank with cold dryer and 2-stage filter
MW-02SAT-10	10	210	2.2	2.2*1	1	57 ± 2	1290	600	1270	1/2″	260	With 30L air tank with cold dryer and 2-stage filter
MW-04A-8	8	420	3.7	3.7*1	0.8	57 ± 2	550	600	700	1/2″	300	
MW-04A-10	10	350	3.7	3.7*1	1	57 ± 2	550	600	700	1/2″	300	
MW-04CA-8	8	420	3.7	3.7*1	0.8	57 ± 2	1290	600	1270	1/2″	330	With 30L air tank
MW-04CA-10	10	350	3.7	3.7*1	1	57 ± 2	1290	600	1270	1/2″	330	With 30L air tank
MW-04SAT-8	8	420	3.7	3.7*1	0.8	57 ± 2	665	935	1240	1/2″	350	With 30L air tank with cold dryer and 2-stage filter
MW-04SAT-10	10	350	3.7	3.7*1	1	57 ± 2	1290	600	1270	1/2″	350	With 30L air tank with cold dryer and 2-stage filter
MW-05A-8	8	620	5.5	5.5*1	0.8	57 ± 2	750	800	900	1/2″	360	
MW-05CA-8	8	620	5.5	5.5*1	0.8	57 ± 2	1490	800	1470	1/2″	390	With 200L air tank
MW-05SAT-8	8	620	5.5	5.5*1	0.8	57 ± 2	665	935	1240	1/2″	410	With 200L air tank with cold dryer and 2-stage filter
MW-07A-8	8	830	7.5	3.7*2	0.8	58 ± 2	1225	760	1350	3/4″	400	
MW-07A-10	10	700	7.5	3.7*2	1	58 ± 2	1225	760	1350	3/4″	400	
MW-11A-8	10	1250	11	5.5*2	0.8	59 ± 2	1225	760	1350	3/4″	440	
0MW-11AI-8	8	1050	11	3.7*3	0.8	59 ± 2	1225	750	1795	3/4″	520	
MW-11AI-10	10	1050	11	3.7*3	1	59 ± 2	1225	750	1795	3/4″	520	
MW-15A-8	8	1670	15	3.7*4	0.8	62 ± 2	1540	1275	1370	1 ″	650	
MW-15A-10	10	1380	15	3.7*4	1	62 ± 2	1540	1275	1370	1 ″	650	
MW-16A-8	8	1860	16.5	5.5*3	0.8	62 ± 2	1225	750	1795	1 ″	580	
MW-18A-8	8	2080	18.5	3.7*5	0.8	65 ± 2	1540	1275	1815	1 ″	800	
MW-18A-10	10	1725	18.5	3.7*5	1	65 ± 2	1540	1275	1815	1 ″	800	
MW-22A-8	8	2480	22	5.5*4	0.8	65 ± 2	1540	1275	1370	1 ″	730	
MW-22AI-8	8	2070	22	3.7*6	0.8	66 ± 2	1540	1275	1815	1 ″	900	
MW-22A-10	10	2070	22	3.7*6	1	66 ± 2	1540	1275	1815	1 ″	900	

Note: The above parameters are subject to change without notice. The company has the right to explain

## **Technical Parameters**