OIL FREE Scroll Air Compressor (1.5–33kW)

Low Noise, Low Vibration, High Reliability.
Space Saving, Energy Saving with Multi-Drive Control.

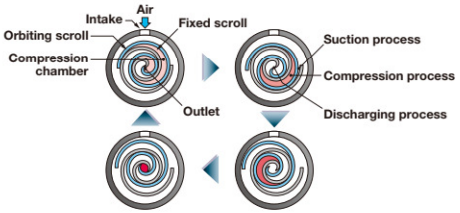
Model Nomenclature

SRL – 5.5 D MN 5
- OIL FREE SCROLL
- Frequency (5: 50Hz, 6: 60Hz)
- NEXT II series (with IE3 motor)
- Built-in Air Dryer
- Motor Nominal Output (kW)

SRL – 5.5ME 5 A
- OIL FREE SCROLL
- for Asia
- Frequency (5: 50Hz, 6: 60Hz)
- ME type
- Motor Nominal Output (kW)

Scroll Compression Principle

1. Compressor sucks air through air inlet located at outer scroll.
2. Compression chamber goes smaller with rotary movement and trapped air is compressed.
3. Compression chamber becomes minimum volume at the center of the scroll and air is pumped out through air outlet located at the center of scroll.
4. These, suction, compression & discharging, process is repeated continuously.



Low Noise, Low Vibration

● Noise level is only 45dB [A] that is like in the library (1.5kW)

● For example : Pencil on the top roof keeps standing during operation.

Easy to Use

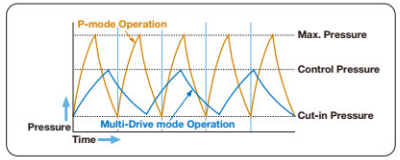
Few Daily Check items and Easy to Check, Total Cost Saving

① No need to change oil and separate the oil from drain. No need to install oil mist filter as well.*
② Well-designed structure utilizes easy maintenance of draining and cleaning of suction filters.

* In case that the suction air is thought to contain oil, it is necessary to install oil mist filter.

Energy-Saving with Multi-Drive Control

Multi-Drive control method is added to the conventional Pressure Switch Control method. It is also possible to easily change between Multi-Drive control and Pressure Switch control by operation of switch button.
Under Multi-Drive control mode, the operation of SRL heads is modified automatically responding to the need of air. Optimized operation which can keep the necessary pressure is possible.



P-Mode:
Same as conventional Pressure Switch Control method, if the pressure reaches max pressure, the operation of compressor will stop. When the pressure decreases to the cut-in pressure, the operation of compressor will restart.

Multi-Drive Mode:
The operation of compressor is automatically controlled to keep the pressure around necessary pressure (control pressure). Unnecessary power consumption is prevented by avoiding the pressure to reach max pressure. So, energy-saving is possible.

Specifications (Built-in Air Dryer Model)

Control Method		P-Mode				Multi-Drive Mode / P-Mode			
Model		SRL-1.5DMN5	SRL-2.2DMN5	SRL-3.7DMN5	SRL-5.5DMN5	SRL-7.5DMN5	SRL-11DMN5	SRL-15DMN5	SRL-22DMN5
Item · Unit		SRL-1.5DMN6	SRL-2.2DMN6	SRL-3.7DMN6	SRL-5.5DMN6	SRL-7.5DMN6	SRL-11DMN6	SRL-15DMN6	SRL-22DMN6
Motor Nominal Output	kW	1.5	2.2	3.7	5.5	7.7	11	16.5	22
Max. Discharge Pressure	MPa	0.8	0.8(1.0)	0.8(1.0)	0.8(1.0)				
ON-OFF Control Pressure	MPa	0.65 – 0.8 (0.8 – 1.0)							
Air Capacity	L/min	170	255(200)	425(345)	640(500)	890(700)	1,280(1,000)	1,920(1,500)	2,560(2,000)
Dew Point of Outlet Air	℃	15 or below (under pressure)				10 or below (under pressure)			
Ambient Temperature	℃	5 – 40							
Starting Method	—	Full-Voltage Starting							
Air Tank Volume	L	18		24	24 (necessary for extra air receiver tank)	—*6			
Air Outlet	—	Rc3/8 (stop Valve) ×1				Rc3/4×1		Rc1×1	
External Dimensions (W×D×H)	mm	680×620×1,030		750×715×1,150		980×660×1,450		1,280×770×1,450	1,360×925×1,930
Weight	kg	135	149	191	225	353(350)	397(391)	576(567)	799(787)
Noise Level	dB[A]	45	46	47	50	53	56	58	61

Without Air Dryer Model

Control Method		P-Mode				Multi-Drive Mode / P-Mode				
Model		SRL-1.5ME5A	SRL-2.2ME5A	SRL-3.7ME5A	SRL-5.5ME5A	SRL-7.5ME5A	SRL-11ME5A	SRL-15ME5A	SRL-22ME5A	SRL-33ME5A
Item · Unit		SRL-1.5ME6A	SRL-2.2ME6A	SRL-3.7ME6A	SRL-5.5ME6A	SRL-7.5ME6A	SRL-11ME6A	SRL-15ME6A	SRL-22ME6A	SRL-33ME6A
Motor Nominal Output	kW	1.5	2.2	3.7	5.5	7.7	11	16.5	22	33
Max. Discharge Pressure	MPa	0.85	0.85(1.0)	0.85	0.85(1.0)	0.80(1.0)				
ON-OFF Control Pressure	MPa	0.65 – 0.85 (0.8 – 1.0)				0.65 – 0.8 (0.8 – 1.0)				
Air Capacity	L/min	160	240(200)	400	600(500)	880(700)	1,260(1,000)	1,890(1,500)	2,520(2,000)	3,780(3,000)
Ambient Temperature	℃	0 – 40								
Starting Method	—	Full-Voltage Starting								
Air Tank Volume	L	18		24	24 (necessary for extra air receiver tank)	—*6				
Air Outlet	—	Rc3/8 (stop Valve) ×1				Rc3/4×1		Rc1×1		Rc1 1/2×1
External Dimensions (W×D×H)	mm	680×640×1,030		750×715×1,070		980×660×1,190		1,280×770×1,450	1,330×880×1,900	1,360×1,030×1,670
Weight	kg	119	129	175	184	315(312)	350(344)	515(506)	720(708)	1,000
Noise Level	dB[A]	45	46	47	50	57	59	61	61	63

Note: 1. Air capacity is converted value at its inlet condition. For guaranteed values, contact your nearest dealer or Hitachi local representative office.
2. Air capacity from the air dryer is about 3% to 5% less than the one from the compressor due to the drain condensation.
3. Noise level is measured at 1.5m front under full-load operation in an anechoic room. Noise level might be increased due to different operating conditions and / or environments with echo of actual field installations.
4. If the air dryer operates at the same time, the noise level may be enlarged by 1 to 2 dB [A].
5. It is necessary to install an air receiver tank for 5.5kW or above models to reduce ON-OFF frequency. For 3.7kW or lower models, it is also recommended to install a separate air receiver tank.
6. It is necessary to install an air receiver tank with volume of 150L or above (7.7/11/16.5kW model), 230L or above (22kW model), or 500L or above (33kW model). When using P-mode, it is also recommended to install an air receiver with volume of 230L or above (7.7/11/16.5kW model), 430L or above (22kW model), or 700L or above (33kW model).
7. External dimensions indicate the package panel ONLY, NOT including protruding objects as discharge outlet.
8. Outlet air dew point is measured under the ambient temperature of 30℃.
9. Ambient temperature must be between 0 (at which there is no freeze of drain water) and 40℃.
10. 1.0MPa model is optional.
11. Some of the models may NOT be available in Singapore, Malaysia and China (Mainland) due to the pressure vessel regulations.
For details, contact your nearest dealer or Hitachi local representative office.
12. Hitachi air compressors are not designed, intended or approved for breathing air applications.