



INNOVATIVE ENERGY SAVING SCREW COMPRESSOR

SHANGHAI SCREW COMPRESSOR CO., LTD.

A: No.1555.Tingfeng Rd.North Jinshan Industrial Zone,Shanghai.P.R.China
T:+86-21-5738 3073
F:+86-21-5738 2222
E-mail:info@scrcompressor.com
Web:www.scrcompressor.com

SCR 2024.12

APM SERIES

SUPER EFFICIENCY SCREW AIR COMPRESSOR

7.5KW-75KW



SHANGHAI SCREW COMPRESSOR CO., LTD.

ABOUT SCR



■ CHINA HEADQUARTER

SHANGHAI SCREW COMPRESSOR CO.,LTD is a high tech Japanese joint venture with independent intellectual property, founded in 2000. SCR together with Anest Iwata focus on air compressor research and development, covering all aspects from manufacturing through to sales, service and technical support. SCR supply a complete range of products such as high efficiency permanent magnet variable speed air compressors, oil free screw compressors, oil free scroll compressors, bearing free and magnetic centrifugal blowers. The global sales and service network provide our customers with high-quality, energy efficient and environmentally friendly compressed air solutions.

SCR's statement of "Inspire Infinite Power" signifies the close relationship with their global partners, and suppliers. SCR is committed to building an industrial world with continuous improvement for both its customers, the environment and its employees.



■ JAPAN YOKOHAMA HEADQUARTERS

 **100000m²**
Square meters factory

 **83**
Country exported

 **50000**
Global customers

 **158**
National patents

 **35**
Professional certifications

 **500**
Global sales and service agents

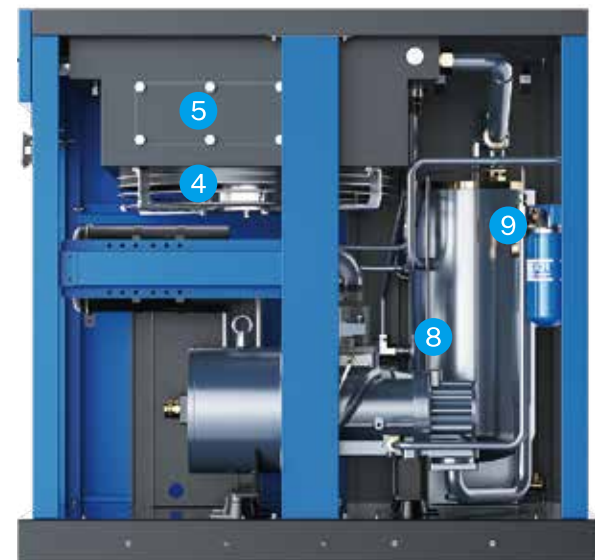
 **8%**
Annual sales re-invested into R&D

 **23**
Industry standards

 **140000**
Production volume from 2000



■ JAPAN FUKUSHIMA FACTORY



APM SERIES

EVEN MORE EFFICIENT

01-Permanent magnet motor

- Reach IE4 efficiency standard
- Lubricant-cooled motor
- VSD: variable speed drive
- IP65 protection

02-New compressor airend

- New improved rotor profile
- R&D in Japan
- Designed to give many years of reliable operation

03-Inlet filter

- Nano scale Heavy duty
- Filtration accuracy up to 99.9%
- Dust particles below 0.3 micron
- Pressure drop indicator
- 2,000 hours service intervals
- Make the main rotor bearing free from attrition
- Extend the service life for the lubricating oil and oil filter

04-VSD fan

- VSD control
- Compact
- Low noise level
- High capacity for optimized cooling
- Low power consumption

05-Classic cooler design

- Easy access for maintenance
- Paint anti-corrosion coating on surface
- 30% oversized cooler design

06-Innovative flux vector inverter

- Wide voltage design
- Meets C3 and C3 EMC requirements
- Built-in DC reactor
- Independent cooling air duct design
- Robust enclosure for trouble-free operation
- Even in the harshest of conditions

07-IT 6000 touch PLC

- 7.0 inch full color touch screen
- Real-time operation/ maintenance/ alarm information
- Full graphical flow diagram
- Operation record/ chart display
- Multiple languages
- Weekly and daily scheduling, service history and planning
- On board RS485 interface

08-Inlet valve

- Optimizes the inlet flow of the air end
- No blow down losses
- Full aluminum maintenance free design
- High vacuum degree: 700mmHg
- Large suction area
- Low load energy consumption in unloaded operation
- Fast check: prevent unloading and shut-down oil injection
- Fluoro rubber for improved valve seal

09-Oil filter

- High efficiency oil filter removes contaminants from the oil
- Oil particles can be controlled at 0.1 micron
- Ensures a smooth and well-lubricated oil system

10-Oil tank

- Oversized air and oil tank improves the cyclone effect maximising the separation process
- The high efficiency oil separator ensures that the oil carry over is less than 3ppm
- System pressure loss is less than 0.02mpa
- The rotating oil tank lid makes maintenance convenient and straight forward reducing maintenance down time (75/100HP)

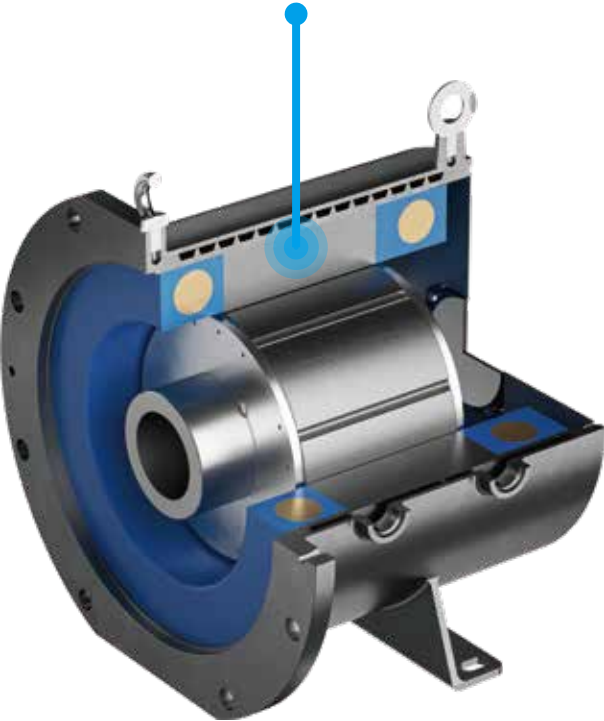
11-All-steel internal pipe system

- All steel internal pipe work and compression joints are used to prevent leakage and premature ageing often seen with flexible pipes
- Less pipe friction loss

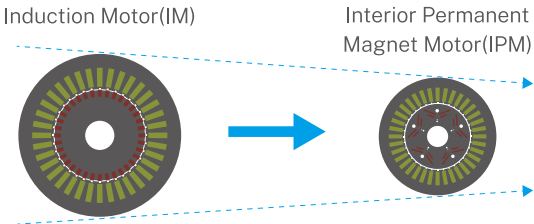
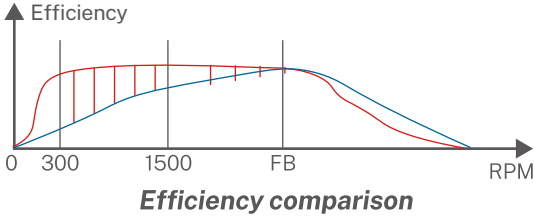
HIGH PERFORMANCE

Super premium efficiency PM motor (IE4 equivalent)

Dual layer design for optimum lubricant cooling



93.3%~**94.5%**
Growth of 1.2%



Example: 75KW 380V | Volume 37% | Weight 26%

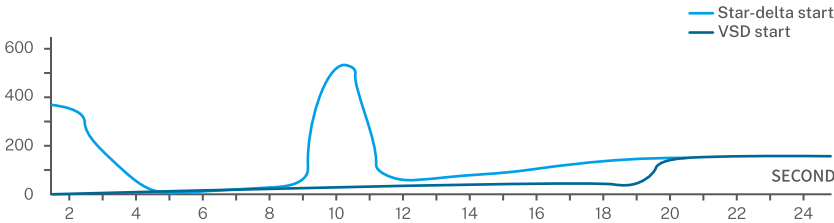
Oil-cooled motor	Reach IE4 efficiency standard
VSD: variable speed drive	Bearing free motor requires zero maintenance
UH series Permanent magnets resist to 180 °C	Fully enclosed IP65 protection
Optimal cooling for all speeds and ambient conditions	F grade insulation and B grade temperature rise assessment
High temperature design prevents demagnetization	

ENERGY SAVING TECHNOLOGY

Pure soft-start system as standard

Soft start system reduces the electric current during start up

SCR APM Series adopts a soft start system for its start-up. The Inovance VSD maintains full load current on start up to 1.5 times FLC-Traditional motor starters such as direct on line starters and star delta starters burden the power supply due to the high peak start up current which can typically be 8-10 times FLC. With variable speed soft start system, the starting current never exceeds the rated value.



Seven major characteristics

- On board RS485 communication
- Intelligent PID flow regulation mode
- Accurate torque control
- Fast response speed for system pressure
- Fast acceleration and deceleration characteristics
- Closed loop dynamic control and high precision control
- Constant pressure control avoids over generating site air pressure





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SCR OIL-COOLED PERMANENT MAGNET ALL IN ONE COMPRESSOR

High quality reliable dryer



The high heat exchange efficiency design of the inlet and outlet temperature difference of 5 °C reduces the demand of cooling capacity to a low level and achieves a high energy efficiency ratio. The stainless plate heat exchanger is used to prevent the dryer itself from becoming a source of pollution and to achieve high quality compressed air.

Efficient heat transfer capacity and the use of environmentally friendly refrigerant R134a makes it especially be suitable for high temperature and high humidity environment.

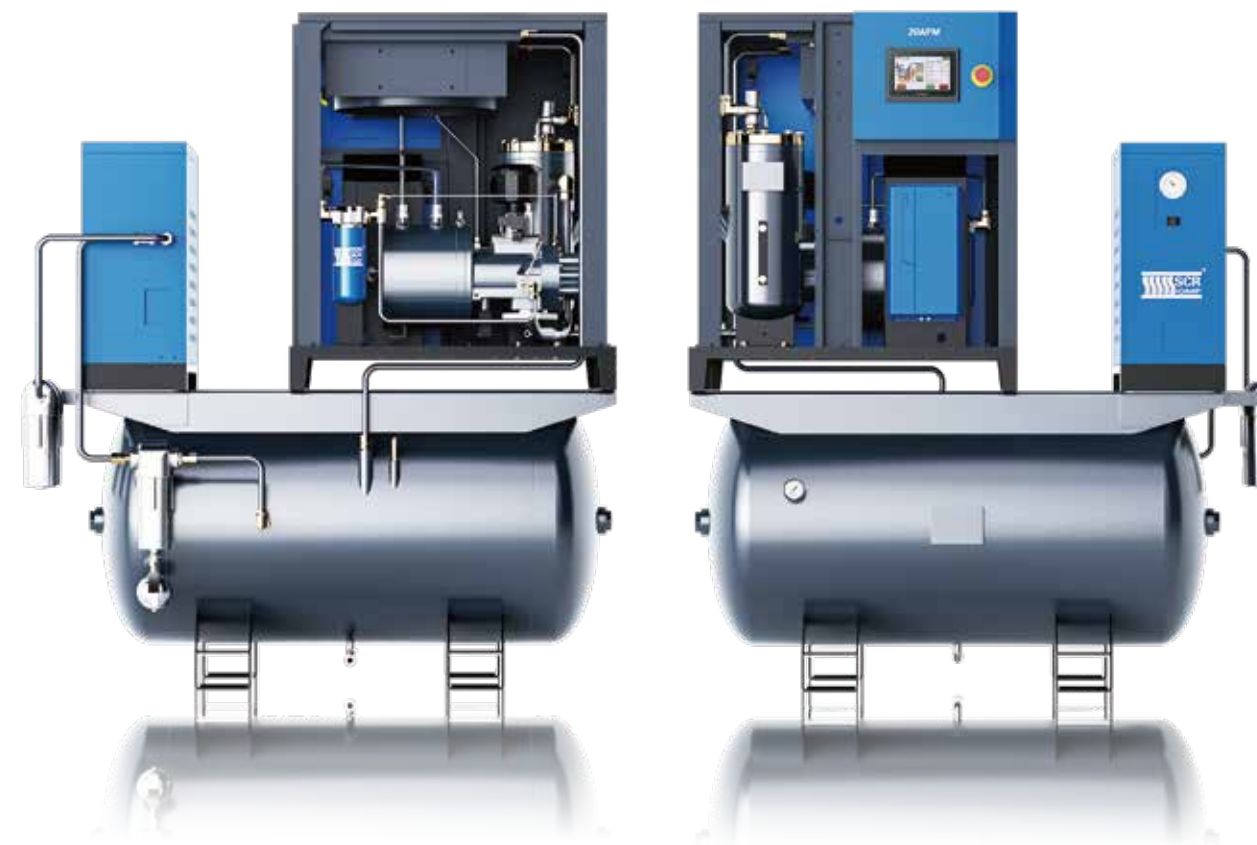
High-efficiency (99.9%) air-water separation structure is combined with a highly reliable automatic drainage device, to ensure that the condensate water was drained from the compressed air system timely and efficiently.

Ultra-quiet refrigeration compressor, high reliability and long service life.

The wind condenser uses nano anti-corrosion coating to improve heat-transfer performance.

➤ High precision triple filter

Remove solid particles down to 0.01m, reach the maximum residual oil content of 0.01ppm and provide high quality compressed air.



Air dryer, filters, air tank is optional for 10~20HP

➤ Large capacity air tank

SCR10APM 300L SCR15/20APM 500L

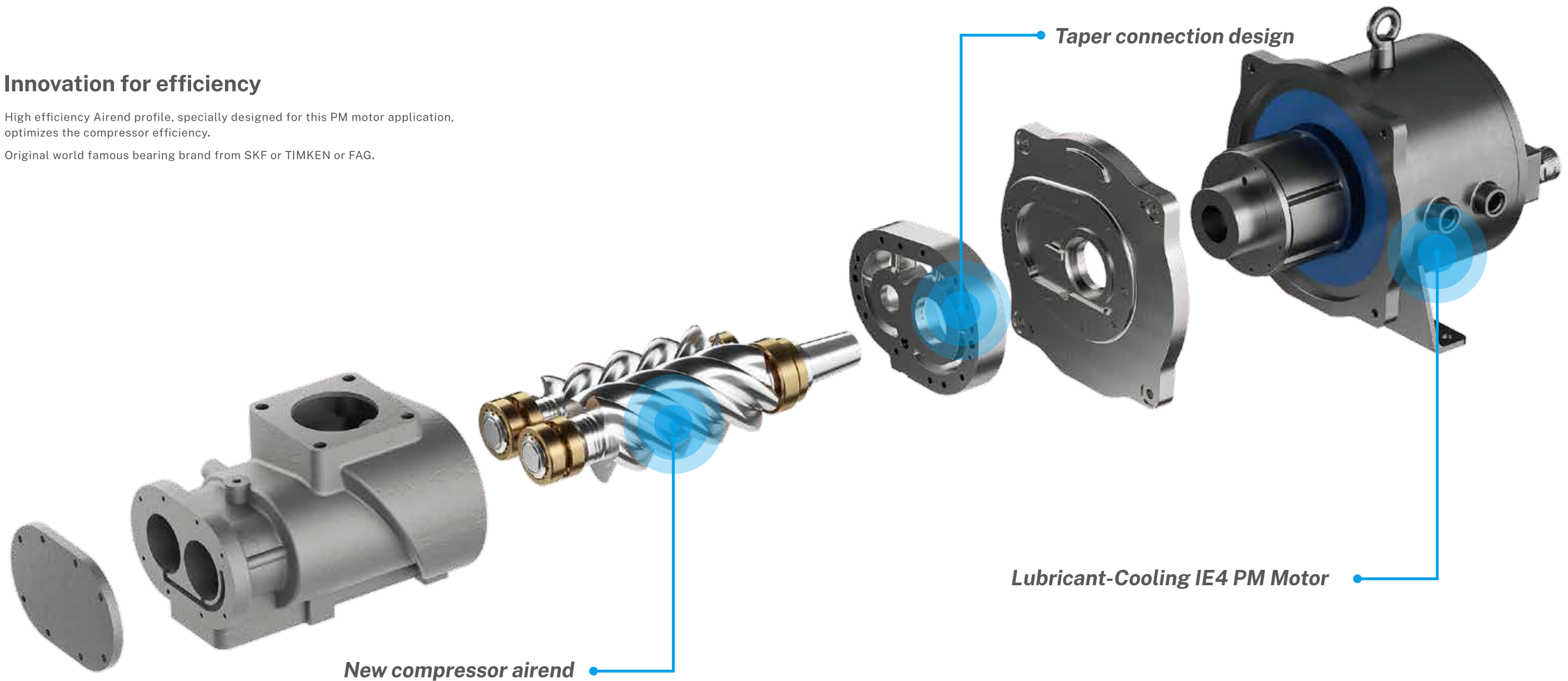
The use of a large-capacity air tank can reduce the periodic pulsating airflow of the compressor exhaust, stabilize the pressure in the compressor air pipe, reduce the start frequency of the air compressor, protect the air compressor, and reserve air at the same time.

INNOVATIVE SCREW COMPRESSOR TECHNOLOGIES

Innovation for efficiency

High efficiency Airend profile, specially designed for this PM motor application, optimizes the compressor efficiency.

Original world famous bearing brand from SKF or TIMKEN or FAG.



MAIN COMPONENTS

> SCR Heavy Duty Air Filter

The heavy-duty air filter is carefully designed to be suitable for medium and heavy dust load environmental conditions.



On the basis of the ordinary air filter, it adds a centrifugal separation structure design on the one hand, so that the air entering the air filter element is pre-separated to remove larger particles of dust, thereby effectively extending the service life and maintenance cycle of the filter element.

On the other hand, the structure of the filter paper is improved to increase its ash capacity, and there is a special design between the fold layers to prevent damage to the bond. It can effectively filter dust and impurities in harsh operating environments such as high dust and high impurities, extend the service life of the air filter element, and protect the host and the oil and gas pipeline system.

> 30% Oversized Cooler design

Oversize cooler makes sure the compressor can run max up to 46 degrees without any problem



> Permanent magnet motor screw air compressor custom PLC

A customized controller specially developed for permanent magnet motors, which is more in line with compressor needs



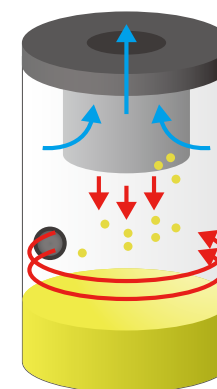
> Cyclone oil tank design ensures the high separation efficiency

The first stage is mechanical centrifugal separation

The second stage is high efficiency oil separator

4000hours life-span of oil separator

The oil content is lower than 3PPM



> Gas tank & built-in separation system

The flow guide plate changes flow direction, and the cross collision makes the small oil particles combine into large oil particles to separate, reduce the burden on the oil-gas separator layer, and extend the life of oil separator

Reserved more than 30% margin of oil-separator

Efficiency is increased by 1~2%

Vertical tangential structure separator



Model	KW	HP	Capacity (m³/min)	Pressure (BAR)	Dimension (mm)	Weight (KG)	Size
SCR4APM-7	3.6	4	0.43-3.6	7	650*600*860	180	R1/2
SCR4APM-8			0.42-3.7	8			
SCR4APM-10			0.32-3.8	10			
SCR5.5APM-7	4.7	5.5	0.69-5.05	7	650*600*860	180	R1/2
SCR5.5APM-8			0.68-5.12	8			
SCR5.5APM-10			0.51-5.3	10			
SCR7.5APM-7	5.8	7.5	0.88-6.7	7	650*600*860	180	R1/2
SCR7.5APM-8			0.86-6.8	8			
SCR7.5APM-10			0.69-7.0	10			
SCR10APM-7	7.5	10	0.45-1.15	7	800*700*900	230	Rc 1/2
SCR10APM-8			0.43-1.1	8			
SCR10APM-10			0.57-0.95	10			
SCR15APM-7	11	15	0.72-1.75	7	900*820*1040	270	Rc 3/4
SCR15APM-8			0.69-1.7	8			
SCR15APM-10			0.75-1.5	10			
SCR15APM-13			0.65-1.2	13			
SCR15APM-15			0.56-1.0	15			
SCR20APM-7	15	20	0.9-2.4	7	900*820*1040	280	Rc 3/4
SCR20APM-8			0.85-2.3	8			
SCR20APM-10			1.0-2.0	10			
SCR20APM-13			0.72-1.6	13			
SCR20APM-15			0.7-1.3	15			
SCR20APM-16			0.69-1.2	16			
SCR10APM-T-D-7	7.5	10	0.45-1.15	7	1490*788*1721	350	Rc 1/2
SCR10APM-T-D-8			0.43-1.1	8			
SCR10APM-T-D-10			0.57-0.95	10			
SCR15APM-T-D-7	11	15	0.72-1.75	7	1480*800*1883	380	Rc 3/4
SCR15APM-T-D-8			0.69-1.7	8			
SCR15APM-T-D-10			0.75-1.5	10			
SCR15APM-T-D-13			0.65-1.2	13			
SCR15APM-T-D-15			0.56-1.0	15			
SCR20APM-T-D-7	15	20	0.9-2.4	7	1480*800*1883	410	Rc 3/4
SCR20APM-T-D-8			0.85-2.3	8			
SCR20APM-T-D-10			1.0-2.0	10			
SCR20APM-T-D-13			0.72-1.6	13			
SCR20APM-T-D-15			0.7-1.3	15			
SCR20APM-T-D-16			0.69-1.2	16			

Model	KW	HP	Capacity (m³/min)	Pressure (BAR)	Dimension (mm)	Weight (KG)	Size
SCR30APM-7	22	30	0.9-3.45	7	1180×800×1110	350	Rc1
SCR30APM-8			0.85-3.4	8			
SCR30APM-10			0.7-3	10			
SCR30APM-12.5			0.65-2.7	12.5			
SCR30APM-15			0.9-1.9	15			
SCR30APM-16	30	40	0.85-1.8	16	1180×800×1110	390	Rc1
SCR40APM-7			1.15-4.7	7			
SCR40APM-8			1.1-4.6	8			
SCR40APM-10	37	50	1.0-4.2	10	1320×975×1250	520	R1 1/2
SCR50APM-7			1.5-6.2	7			
SCR50APM-8			1.5-6.1	8			
SCR50APM-10			1.3-5.6	10			
SCR50APM-12.5			1.0-4.5	12.5			
SCR60APM-7	45	60	1.85-7.4	7	1320×975×1250	620	R1 1/2
SCR60APM-8			1.85-7.3	8			
SCR60APM-10			1.65-6.8	10			
SCR60APM-12.5			1.6-6	12.5			
SCR75APM-7	55	75	2.4-10.2	7	1800*1300*1550	1000	Rc 2
SCR75APM-8			2.3-10.1	8			
SCR75APM-10			2.1-8.5	10			
SCR75APM-12.5			1.8-7.5	12.5			
SCR100APM-7	75	100	3-12.2	7	1800*1300*1550	1100	Rc 2
SCR100APM-8			2.9-12	8			
SCR100APM-10			2.6-11	10			
SCR100APM-12.5			2.3-10.1	12.5			

NOTE:

- The capacity is measured as GB3853 standard.(equivalent to ISO1217 Annex C)
- Standard voltage is 380V/50HZ/3P, other voltage is available.
- The recommended best capacity range is 60%-100%.
- Alpine/high altitude, high temperature, high humidity, high dust loads or other adverse working conditions will require specialized custom designs. These are available on special request.
- We reserve the right to make changes and improvements to the design and appearance.
- Specifications may change without prior notice.



WORLDWIDE DISTRIBUTION CHANNELS

- LEGEND:
- Headquarters
 - Major global sales outlets

