

APM HIGH PRESSURE SERIES

HIGH-EFFICIENCY PERMANENT MAGNET
VSD ROTARY SCREW COMPRESSOR

Advanced Energy Saving Compressed Air Solutions for high pressure Laser Cutting

15-22kw
16 Bar Pressure



WESTAIR PNEUMATIC SYSTEMS PTY LTD

APM SERIES

USING HIGH PRESSURE COMPRESSED AIR WITH YOUR LASER CUTTER CAN GREATLY REDUCE YOUR RUNNING COSTS AND HELP INCREASE YOUR PROFITABILITY

SCR's 16b high pressure screw compressor series are specially designed for laser cutting machines as an alternative to using oxygen or nitrogen. In our high pressure APM range all air receiver and oil/Air separator tanks are AS1210 certified to Australian standards.

USING HIGH PRESSURE COMPRESSED AIR FOR LASER CUTTING CAN SAVE YOU UP TO 75% IN RUNNING COSTS!

Cutting gas (oxygen or nitrogen) is an essential part of laser cutting but it is very expensive to supply and run your laser cutting machine. Depending on the type and the thickness of the material being cut, compressed air can be used as a cutting gas. Compressed air production costs can be as low as 25% compared to supplying your own nitrogen or oxygen gasses.

SCR APM PERMANENT MAGNET VARIABLE SPEED DIRECT DRIVE SERIES








The APM series works by ramping up and down to coincide with your air demands, supplying only the amount of air and constant pressure needed. Unlike fixed-speed compressors, the SCR APM's goal is to keep the compressor continually on load and avoid running time offload. APM compressors have a wide variable range, making them suitable for multiple applications, resulting in significant energy savings and minimising CO2 emissions.

Energy savings of up to 30%!

DUAL VSD ENERGY-SAVING TECHNOLOGY

The Inovance VSD operates both the main permanent magnet motor and the fan motor for optimal energy savings. Setting a constant temperature with the fan motor inverter control ensures the best lubrication performance and prevents high-temperature trips.

Features

- | | |
|--|--|
|  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 | |

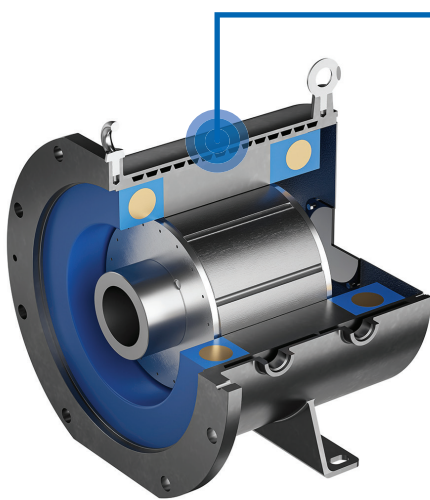


INOVANCE STATE-OF-THE-ART TOUCH DISPLAYER



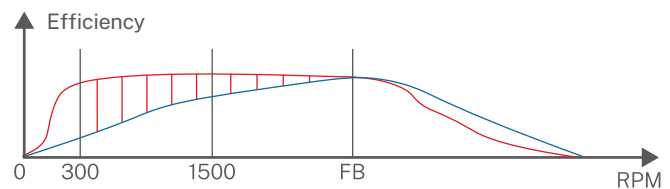
- Seven-inch full-colour LCD touch screen
- Real-time operation/maintenance/running data
- Alarm information and fault logging
- Graphical flow diagram
- 4 energy-saving function modes
- Service alarm and history
- Interface connection: RS485/RS422/SD card/USB/Ethernet
- Pressure/temperature/overload/overcurrent/phase loss/unbalance protection
- Pre-alarm system to avoid sudden failure
- Remote monitoring capability
- Programmable start/stop schedules
- Stop/start remote
- Fault history
- Motor jogging/inching function

SUPER PREMIUM EFFICIENCY APM MOTOR (IE4 EQUIVALENT)



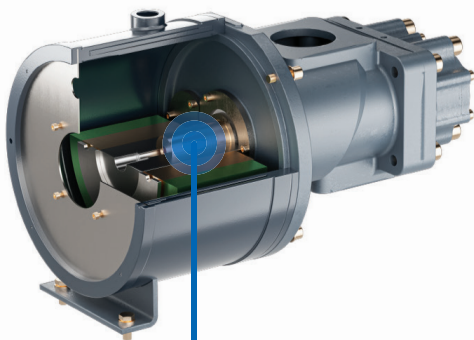
Dual-layer design for optimum lubricant cooling

93.3%(IE3)~**94.5%(IE4)**
Growth of 1.2%



Efficiency Comparison

- Variable speed range from 25 to 100%
- Oil-cooled motor
- Fully enclosed IP65 protection
- Reach IE4 efficiency standard
- Optimal cooling for all speeds and ambient conditions
- Bearing-free motor requires zero maintenance
- UH Permanent magnets resist to 180°C
- F grade insulation and B grade temperature rise assessment
- High-temperature design prevents demagnetisation
- Small compact design



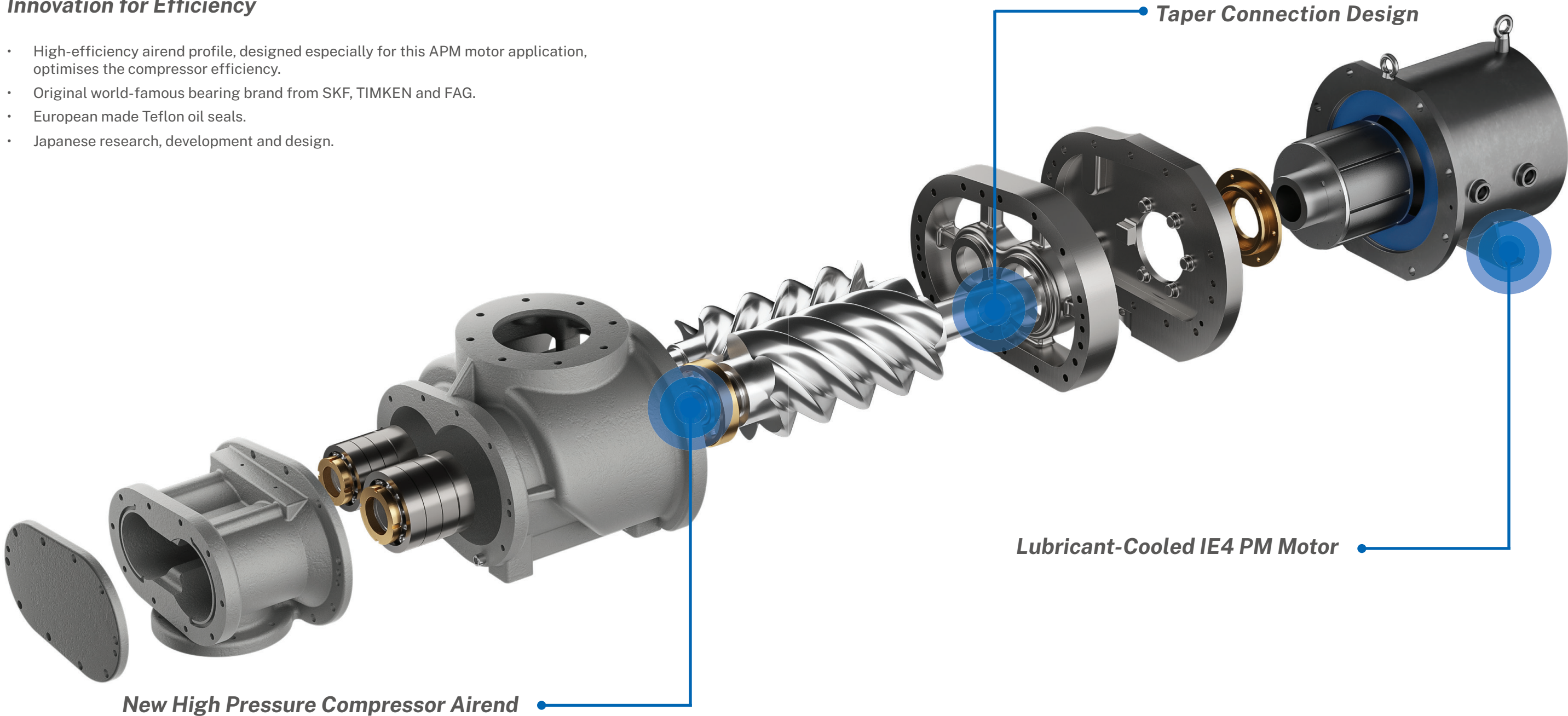
Zero Maintenance

Special taper connection with no bearings, belts, coupling or grease required.

**INNOVATIVE LASOR CUTTING SCREW
COMPRESSOR TECHNOLOGIES**

Innovation for Efficiency

- High-efficiency airend profile, designed especially for this APM motor application, optimises the compressor efficiency.
- Original world-famous bearing brand from SKF, TIMKEN and FAG.
- European made Teflon oil seals.
- Japanese research, development and design.



SCR APM FEATURES



1 Permanent magnet motor

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

2 New improved airend

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

3 Innovative Inovance inverter

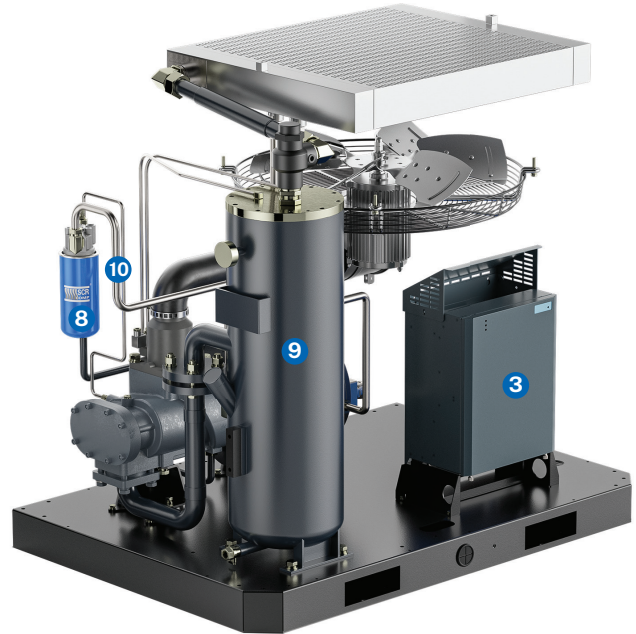
- Wide voltage design
- Meets C3 and C3 EMC requirements
- Built-in DC reactor
- Independent cooling air duct design
- Robust enclosure for trouble-free operation even in the harshest conditions

4 Classic cooler design

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

5 Air inlet filter

- Nanoscale heavy duty
- Filtration accuracy up to 99.9%
- Dust particles below 0.3 micron
- Extends the service life of the lubricating oil and oil filter



6 Inlet valve

- Optimises the inlet flow of the airend
- No blow down losses
- Full aluminium maintenance-free design
- High vacuum degree: 700mmhg
- Large suction area
- Low load energy consumption in unloaded operation
- Fluoro rubber for improved valve seal

7 Cooling fan

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

8 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

9 Gas tank & built-in separation system

- AS1210 designed and certified
- Oversized air and oil tank improves the cyclonic effect, maximising the separation process
- The high-efficiency oil separator ensures that the oil carryover is less than 3ppm
- System pressure loss is less than 0.02mpa

10 All-steel internal pipe system

- All steel internal pipework and compression joints prevent leakage and premature ageing, often seen with flexible pipes
- Reduced air flow friction

SCR APM ALL-IN-ONE HIGH PRESSURE COMPRESSOR DESIGN

Risheng dryer:

- Proven in Australia's harshest environments for over 10 years.
- Compact design with energy-efficient features.
- Ultra-quiet, high-durability refrigeration compressor.
- Stainless steel heat exchanger, water separator, air connection pipes and fittings. This avoids secondary contamination in the compressed air, which makes the dryer suitable for use in the food and pharmaceutical sector.
- Efficient heat transfer capacity and the use of environmentally friendly refrigerant R134a makes it suitable for high-temperature and high-humidity environments.

500L Large capacity air tank:

The use of a large-capacity air tank will minimise the compressor exhaust's periodic pulsing airflow, stabilise the pressure in the compressor air pipe, lower the air compressor's start frequency, protect the air compressor, and reserve air all at once.

Filtration:

Manufactured from high-quality glass fibre and diecast aluminium components, the filter effectively removes any dirt particles and pollutants in the air. The housing has full corrosion protection, and the filter shell surfaces are anodic oxidation treated and coated with epoxy resin. The design is user friendly, making it easy to replace the filter elements.

Australian Standard AS1210:

Oil/Air separator and air tank both AS1210 certified to Australian standards.

The new APM Permanent Magnet Variable Speed can be purchased in an all-in-one configuration. It's a compact design consisting of the compressor, air tank, refrigeration air dryer and pre & post air filtration.

- LARGE-CAPACITY AIR TANK
- SCR20/30APM = 500L
- REFRIGERATION AIR DRYER keeps the dew point down to 3-6°C, removing moisture from the compressed air.
- PRE & POST FILTRATION of particles down to 0.01 micron and oil removal.
- COMPACT FOOTPRINT for more efficient usage of your valuable floor space.



SPECIFICATION

Model	Motor		Capacity		Pressure	Air Outlet	Dimensions	Weight	Noise Level	Tank Size
Base Mount	KW	HP	m³/min	CFM	Bar	Size	L* W* H mm	Kg	@ 1 metre (dBA)	Litres
SCR20APM-16	15	20	0.69-1.2	24-43	16	RC 3/4	900*800*1053	280	67±3	
SCR30APM-16	22	30	0.85-1.8	30-64	16	RC 1"	1200*800*1100	350	70±3	
All in One Unit Option with Tank, Dryer and Filtrations										
SCR20APM-TD-16	15	20	0.69-1.2	24-43	16	RC 3/4	1664*966*1883	566	67±3	500L
SCR30APM-TD-16	22	30	0.85-1.8	30-64	16	RC 1"	1680*966*1930	637	70±3	500L

Warranty

- **Standard 2-year warranty** – covers the complete compressor (terms and conditions apply).



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