ROTARY SCREW AIR COMPRESSORS

Fixed speed, variable speed, oil free & More

COMPLETE AIR & POWER SOLUTIONS

CAPS

COMPLETE AIR & POWER SOLUTIONS

CAPS Australia is a leading provider of power generation, compressed air and gas generation solutions, boasting an extensive portfolio of products and brands.

WHO IS CAPS AUSTRALIA?

- More than **four decades of experience** in the Australian market.
- **10 branches** around Australia with **over 200 employees**.
- **60 service technicians** covering the full national footprint, with a **24/7 service** offering.
- A vast inventory of **spare parts**.
- The flexibility to search globally for the best products and technologies that serve the **Australian market's needs**.
- World-renowned partner brands such as Ingersoll Rand, AIRMAN, Mitsubishi Generator Series and more.
- Custom design, engineering, manufacturing, supply and service.
- Operating under an ISO 9001 accredited quality system.

WHO DO WE SERVE?

- Mining
- Manufacturing
- Industrial
- Commercial
- Data centres
- Public and private utilities
- Waste & water treatment plants

GLOBAL NETWORKS

BACKED BY LOCAL KNOWLEDGE & EXPERIENCE

Founded in Western Australia in 1980, CAPS joined the Ingersoll Rand family in 2024. Ingersoll Rand is a global market leader offering a broad range of innovative and mission-critical air, fluid, energy, and medical technologies, enhancing industrial productivity and efficiency. By utilising quality products with proven reliability where and when they are needed, CAPS' extensive range of industrial equipment features world-renowned brands and means customers have full access to the latest technology, suited to Australian operating environments.

WHY CHOOSE A ROTARY SCREW COMPRESSOR?

Rotary screw air compressors have many benefits over piston compressors. You'll find rotary screw air compressors in industries such as, Mining, Automotive, Mining, Construction, as well as in metal Processing Plants. All of where high-quality equipment is required with a continuous flow.

Rotary screw compressors come in two main classifications: Oil-lubricated (also known as oil-injected or oil-flooded) and Oil-free (Class Zero). Deciding which one is suitable for you depends on the application.

Oil injected compressors use specific compressor oil to aid the compression process, provide lubrication to the air end bearings and assist to maintain a constant discharge air temperature.

Oil-free compressors offer a cleaner alternative for industries that require no contamination at all, like the medical or food manufacturing industries.

Because rotary screw air compressors can run continuously, there's no need to wait for an air receiver tank to fill before you can start using the air.

The benefits of rotary screw air compressors over other compressor types is:

- Continuous airflow / 100% duty cycle
- Larger quantities of air
- Higher CFM per horse power
- Longer lifespan
- Quieter
- Energy efficient

WHAT SHOULD YOU CONSIDER BEFORE CHOOSING YOUR COMPRESSOR?

- What are you going to be using it for?
- What are you going to be running off it (tools, equipment)?
- What power do you have?
- Have you got the correct piping system in place?
- What's important to you? i.e. energy efficiency?

CAPS ROTARY SCREW COMPRESSOR RANGE

Nominal kW	Drive		Motor			Drive Speed		Airend Type		Pressure Range bar(g)	Flow Range (cfm)	
	Belt	Gear	Induction IE3	HRM IE5	PM-Oil Cooled	Fixed	Vari-able	Single Stage	Two Stage		cfm	(m^3/min)
OIL FLOODED COMPRESSORS												
5 - 22	✔	✔	✔	✔	✔	✔	✔	✔	X	7 - 14	24.7~155	0.7~4.4
30 - 75	X	✔	✔	✔	✔	✔	✔	✔	X	7 - 14	167~544	0.7~4.4
90 - 355	X	✔	✔	✔	✔	✔	✔	✔	✔	7 - 14	362~2507	10.25~71

✔ **Available** x **Not available**

DIFFERENT TECHNOLOGIES DIFFERENT BENEFITS

In the world of rotary screw air compressors, different technologies apply to the electric motors, air-end and other components. They all impact on the life of the compressor, energy consumption and required maintenance.

Depending on your compressed air needs and your investment priorities, CAPS has a comprehensive range of rotary screw compressors to perfectly complement the scale and requirements of your operation.

HYBRID RELUCTANCE MOTOR (HRM)

Limitless starts and stops

HRM motors are designed to start and stop limitlessly to meet your compressed air demands. They are fitted with Ferrite magnets which are 100% recyclable.
The added advantage is that the HRM has optimal efficiency at all operating points and one of the few IE5 products currently on the market today. This technology also has unmatched efficiency throughout the turn-down range, providing savings no matter what your demand profile requires.

No wasted energy

HRM motor requires less power at start-up, never operates at more than full-load amps, and shuts down immediately at minimum speed to avoid wasted energy. It ensures constant pressure throughout the entire operating range. At start-up, induction motors require a power surge of up to twice full-load current in order to overcome initial inertia. They also run unloaded when demand is below minimum, reducing efficiency and driving up energy costs.

LEADER IN EFFICIENCY

The name ECO is derived from the combination of **Environment**, **Conservation** and **Optimisation**. It takes environmental protection, energy conservation and economy as the basic concept of design and development. These three performance have also become the quality that ECO permanent magnet motor always pursues. In line with Ingersoll Rand's Life+ strategy and the objectives of the Paris Agreement.

	FEATURES	BENEFITS
Environment	• Maintenance-free motor design (‹RM75n) • Fewer maintenance times, longer maintenance cycles (‹RM75ne) • Aluminum allow casing • Environment friendly Ultra coolant with 4000 hours (‹=RM45kW)	• More environmentally friendly maintenance to meet the needs of users who have re-quirements • Reduce the environmental pollution caused by spraying in the process of painting • Reduced maintenance costs (materials and labour)
Conservation	• Motor efficiency IE5 motor • Integrated drive system design, no gear box, improve transmission efficiency • Less heat dissipation: reduce the unit heat, unit internal environment temperature reduction	• Improve the operating efficiency of air com-pressor and reduce operating costs
Optimisation	• Cast iron housing, optimised cooling flow • Designed for RM series, the hardware and software fit perfectly with specially designed Luminance controller • Small size, higher power density • The connection structure of motor and main engine is optimised for easy installation	• Lower operating temperature and longer motor life • Better stability than most stretched shells on the market, while allowing for complex cooling channels • Achieve the highest operating efficiency of the machine • More maintenance/repair space • Easy to install and disassemble • Reduced maintenance costs (labour)

ECO-PM MOTOR

RM15-160n features an IP66/IE5 ECO - PM motor

DESIGN POINT	HRM	ECO - PM
Frame IEC rating	IP55	IP66
Cooling type	Air cooling	Lubricated cooling
Torque production	70% Reluctance 30% Ferrite magnets	70% NdFeB 30% Reluctance
Environmental foot print	Clean	Clean
Material availability	Readily available	Readily available
Efficiency	IE5	IE5
Stator rewinds	Standard induction type	Standard induction type

	FEATURES	BENEFITS
Efficiency	Optimised custom motor exclusive to IR for air compressor application	Long life, aluminum frame, lubricant cooled, low starting power consumption and matched specifically for our airend design
	E5 efficiency per IEC 60034-30-2	Optimal efficiency at normal operating points. Low bearing temperature, longer life and maintain interval
	Zero power at zero flow	No unnecessary power consumption at 0 demand conditions
Reliability	Perfect matched with PID control of frequency converter	Capable of continuous operation to meet rapidly changing air requirements
	IP66 protection class/TEFC (fully enclosed, liquid cooled)	Protects against dust and water jets Reduce failure probability
	Aluminum casting shell and special structure design	
Maintenance	Compact design	Internal extra space to meet requirements, easy maintenance
	NdFeB material	Less attraction with HRM means it's a lot easier to pull apart than a HPM using rare earth magnets
Environment friendly	NdFeB material	100% recyclable
	More compact design	Less raw materials

FIXED SPEED VS VSD - WHICH OPTION IS BEST FOR YOUR NEED?

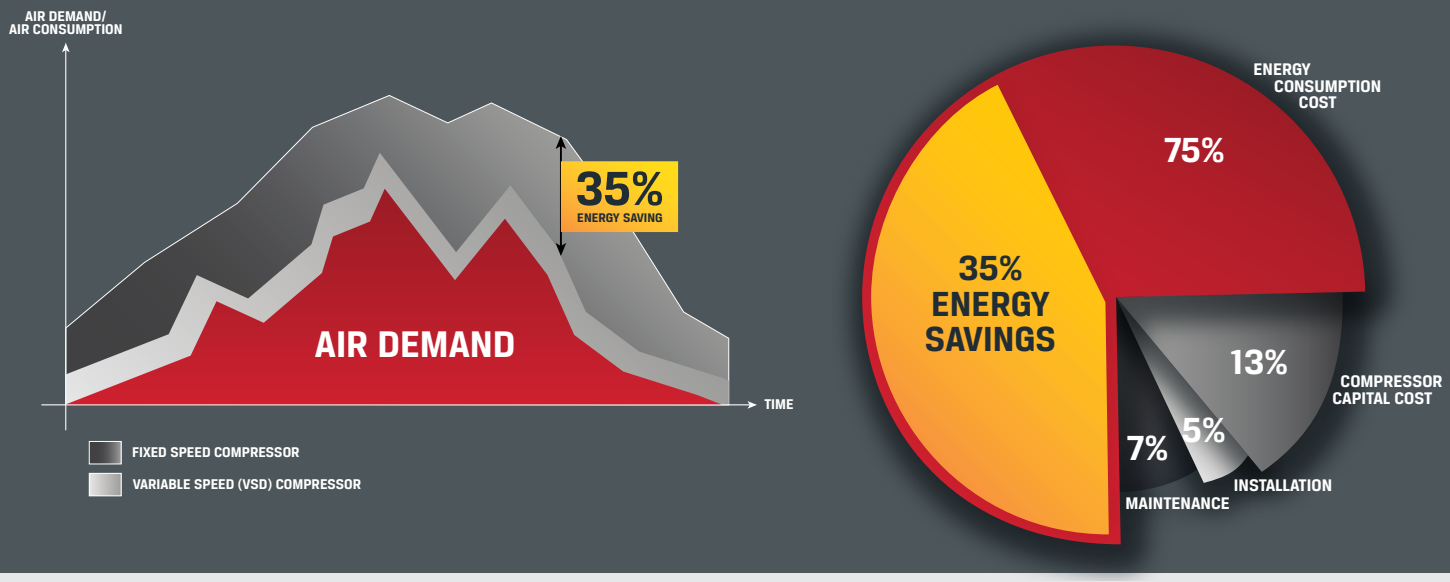
Both kinds of compressors have differences in how they operate. On a fixed speed air compressor, the motor will run at one constant speed/fixed RPM. When air demand is placed on the system, the inlet valve will open, and then close again once the demand is removed. Therefore, due to the motor only running at one fixed speed, it will maintain a pressure of 0.7 bar above the air demand at all time.

A Variable Speed Drive compressor will use a variable speed, or VFD drive, which allows the motor to actually ramp up and down, allowing for power consumption savings. Properly sized for the same end use, a VSD compressor can yield power savings upwards of 35% in some cases.

Energy is always a significant cost to any business and reducing energy consumption can yield large savings. Aside from the variable motor speed when in operation, the inverter in the VSD system performs a "soft" start operation by ramping up the motor speed slowly, which reduce the high draw peaks that are typical when a fixed speed motor is started. This also helps protect electrical and mechanical components from the starting mechanical stresses that can shorten the life of an air compressor.

So, overtime, choosing the variable speed option will save you up to 35% in power cost but will also make your installation last longer and avoid downtime.

FIXED SPEED VS VSD - UP TO 35% ENERGY SAVINGS



BELT OR GEAR DRIVE?

Every machine requires a source of energy to perform a certain task. For air compressors, this is typically an electric motor or a diesel engine. This source of energy is connected to the air-end by either friction force (belt drive) or direct drive (gear drive). Each drive has certain advantages over the other.

This difference often comes down to cost, as a gear drive system will require more integrated componentry with much higher precision required. Belt drives allow for more variation and distance from the motor to the air-end but are limited by the frictional characteristics of the contact surfaces. Typically gear drives translate approximately 99% of their energy through and are suited to very high power and torque applications. Belt drives typically transmit around 92-96% of the power, so are less efficient due to energy loss via friction.
In terms of maintenance, gear drives require full lubrication and initial cost and maintenance costs can be marginally higher.

So depending on the power and torque ratings of the compressor, our manufacturers will have chosen the right drive technology, or in some ranges you will have the choice between the two.

OIL FLOODED ROTARY SCREW AIR COMPRESSORS

CAPS' range of rotary screw air compressors deliver reliability, efficiency, and productivity. With a comprehensive selection, ranging from 5.5 To 350 kw, CAPS has the suitable compressor for you.

Ingersoll Rand oil-flooded rotary screw air compressors offer businesses a combination of time-proven designs and technologies, advanced features that ensure the highest levels of reliability, efficiency, and productivity available.

Created using Ingersoll Rand design expertise, many of our screw compressors are available with variable speed drives and an intuitive user interface.

THE RS SERIES

Keep ahead of your competition with Next Generation R-Series air compressors that boost productivity, lower operating expenses and extend equipment life. And with a variable speed drive (VSD), the compressor automatically adjusts its compressed air output to achieve the highest efficiency for your operation, minimizing energy use at any load.

THE RM SERIES

The RM-Series oil-flooded screw air compressors leverage an advanced compressor core to achieve exceptional performance and reliability standards. The optimized rotor profile and standard IE3 premium efficiency motor provide efficiency gains of up to 16%, resulting in lower energy costs and reduced operational spend. Equipped with a Luminance Series intelligent controller with powerful remote management capabilities, the RM-Series air compressors increase your productivity.

CAPS PRODUCT RANGE

Nominal kW	Belt Drive	Gear Drive	HRM Motor	Fixed Speed	Variable Speed	Single Stage	Two Stage	Pressure Range bar(g)	Flow Range (cfm)	Flow Range (m3/min)
OIL FLOODED COMPRESSORS										
2 - 4	✓	X	X	✓	X	✓	X	7 - 13	9 - 20	0.25 - 0.57
5 - 22	✓	✓	X	✓	✓	✓	X	7 - 14	27 - 141	0.76 - 3.99
30 - 75	X	✓	✓	✓	✓	✓	X	7 - 14	184 - 683	5.21 - 19.34
90 - 355	X	✓	✓	✓	✓	✓	✓	7 - 14	644 - 2,507	18.24 - 70.99

✓ **Available** x **Not available**

INTEGRATED SOLUTIONS

Integrated solutions rotary screw compressors include a dryer and air receiver and are an ideal choice for a wide range of workshop, industrial and commercial applications.

Mounted on a massive air receiver, they provide many benefits; this includes cooler air to improve air quality, extra storage capacity to lessen spikes in air demand, and longer cycle times to reduce power and wear from frequent stop/starts.

TAS – The Total Package

To provide the most comprehensive air solution, the Ingersoll Rand R-Series compressors are available with a Total Air System (TAS) option. These complete compressor and dryer systems come with integrated controls, water separators, drain ports and filters.

- General purpose and high-efficiency filters with integrated dryer deliver class-leading ISO 1-5-1 quality air
- 3-in-1 heat exchanger provides increased reliability and efficiency
- All new dryer design with unprecedented reliability minimizes installation costs with a single-point power connection

Total Air System – Dryer Operation

The onboard dryer controller is integrated into the TAS package such that the dryer cycling is controlled by the compressor operation, and dryer alarms are fed back to the compressor controller. The dryer controller also allows for adjustment of critical operating parameters, saving you time and ensuring peace of mind.

UNDERGROUND MINERS PACK

CAPS assembles all the underground miners pack in house at our Perth manufacturing and assembly plant.

THE PREMIUM HARDWARE USED IN OUR ASSEMBLIES TO DELIVER OUR MINERS PACK CONSIST OF:

- INGERSOLL RAND air compressor (M160KT) modified to comply with typical mine regulations.
- Standard operation at 415/3/50Hz or optionally configured for 1,000V/3/50Hz power supply.
- A generous CAPS 2,400L air receiver, fabricated to the latest AS1210 standard inclusive of statutory design documentation and manufacturer's data report (MDR).
- Package includes all pressure safety valves with AS1271 test certificate, pressure gauge, discharge isolation valve and auto-drains on all condensate lines.
- Skid frame and roof fully welded to a high quality fabrication standard, complete with accompanying Material Data Report (MDR).

Every single miners pack goes through a two hour factory acceptance test in our state-of-the-art test bay, be it in a 415V or 1000V configuration.

PRODUCT RANGE

- **Capacity:** 5.6m³/m (198cfm) to 54m³/m (1,911cfm)
- **Pressure:** 7 bar to 14 bar (100psi to 203psi)
- **Voltage:** 415V or 1,000V

THE OPTIONS THAT CAN BE FITTED TO THE MINERS SKID INCLUDE:

- Operation at 415V/3/50Hz or conversion to 1,000V/3/50Hz
- High dust filtration
- IP65 marine window on compressor control panel
- Reinforced earthing
- Residual current breaker with over-current on control circuit.
- Isolator switch
- Automatic Detection Fire Suppression system with or without automatic stop

OIL FREE ROTARY SCREW AIR COMPRESSORS

Our Range Of 100% Oil Free Industrial Compressors Are Ideal For High-Quality Air Applications, Including Dental, Medical, Painting, Food Processing And Pharmaceutical Manufacturing.

Caps Provide A Range Of Oil Free Air Compressors Which Offer Flexibility For Varying Air Demand Conditions, Whilst Helping You Save On Energy Costs. The Oilless Air Compressors Provide Pure And Clean Oil Free Air For A Broad Range Of Critical Applications.

OIL FREE AIR, A NECESSITY FOR SOME INDUSTRIES

Our range of 100% oil free industrial compressors are ideal for high-quality air applications, including dental, medical, painting, food processing and pharmaceutical manufacturing.

CAPS provide a range of oil free scroll air compressors which offer flexibility for varying air demand conditions, whilst helping you save on energy costs. The oilless air compressors provide pure and clean oil free air for a broad range of critical applications including:

- Food & beverage processing
- Printing
- Medical & dental
- Electronic
- Spray painting & more.
- Laboratory

Having exclusive access to a diverse portfolio of air quality solutions means that our expert team will only ever recommend oil-free industrial air compressors based on what you really need.

CAPS PRODUCT RANGE

Nominal kW	Belt Drive	Gear Drive	HPM Motor	Fixed Speed	Variable Speed	Single Stage	Two Stage	Pressure Range bar(g)	Flow Range (cfm)	Flow Range (m3/min)
37 - 355	X	✔	X	✔	✔	X	✔	7 - 10	88 - 1,882	2.5 - 53.3
37 - 160	X	✔	✔	✔	✔	X	✔	7 - 10	88 - 901	2.5 - 25.6

TECHNICALLY OIL FREE COMPRESSORS

Some applications don't require an oil free compressor but still need a very clean air with really limited oil contamination. This can be achieved by using a set of accessories such as filtration and dryers.

HOW PURE DOES YOUR AIR NEED TO BE?

One of the keys to ensuring you achieve and maintain acceptable air quality for your critical application is to know industry air quality standards and their allowable levels of contaminants. The lower the particular class rating, the purer the air should be.

ISO 8573.1 PURITY CLASSES

Developed by the International Standards Organisation (ISO), compressed air purity classes (as defined by ISO 8573-1), classify what levels of solid particle, water and oil are acceptable in each given class.

Class	Solid Particle Maximum number of particles per m^3			Water Pressure Dewpoint (^0C)	Oil Inc. vapour mg/m^3
	0.1-0.5 micron	0.5-1.0 micron	1.0-5.0 micron		
0	As specified by the equipment, user or supplier and more stringent than Class 1				
1	100	1	0	-70	0.01
2	100,000	1,000	10	-40	0.1
3	-	10,000	500	-20	1
4	-	-	1,000	3	5
5	-	-	20,000	7	-
6	-	-	-	10	-
X	-	-	-	>10	>10

Depending on the purity class needed for your installation, different combination of air treatment products will be necessary. The drawing below shows you the most common scenario. Our CAPS expert will be able to help you to select the best solution for your need.

ENGINEERING EXCELLENCE

CAPS' extensive industry experience means the team can accurately assess your needs and provide the right power generation and air solutions.

We understand that reliability is crucial - that's why CAPS can custom engineer anything, anywhere, to relevant specifications, in required timeframes and in adherence to Australian industry standards.

EXPERIENCED & DELIVERING QUALITY

Drawing upon our expertise and global partners, we have worked closely with many customers to design and deliver complex project packages.
We're very proud of our unrivalled project experience and capability to manage all aspects of the end-to-end design as well as the engineering, supply, installation and commissioning.

Our access to the widest portfolio of leading global brands and unlimited options allows us to offer precision engineered, robust and rugged industrial solutions that meet your technical, quality and documentation requirements. This is overseen by our in-house engineering department and testing facility, certified ISO9001:2015 quality assurance system.

SUPPLYING & INSTALLING INDUSTRIAL SOLUTIONS

CAPS' in-house Engineering team can customise any air compressor or generator solution to suit operational needs and meet even the strictest requirements.

Our team is skilled in the installation and commissioning of equipment in an extensive range of environments including, commercial, industrial and resources, as both new constructions or retrofitting to existing operations

After-market service and support is backed by CAPS dedicated parts and logistics function that holds relevant equipment in stock, to ensure timely responses to your operational needs.

24/7 NATIONWIDE SUPPORT

PREVENTATIVE MAINTENANCE

CAPS is always aiming to help you to reduce operating costs and interruptions to your production. Our factory-authorised programs include routine inspections, condition monitoring and the use of specialised diagnostic equipment to identify any potential problems before they impact you.

SAFETY COMPLIANCE

Safety is a core value of CAPS and our goal is to never put people, plant or the environment at risk. You can be confident that our technicians will be compliant to any site specific safety requirements you have.

HIGHLY TRAINED TECHNICIANS

CAPS' technicians' knowledge is continually updated. So whether you have one generator or have complex systems with multiple pieces of equipment, our technicians will give you the advice you need to ensure continuous operation.

CAPS CARE

MAXIMISE YOUR OPERATION

CAPS Care takes care of your equipment, allowing you to focus on optimising your operation while we ensure it runs smoothly.

It consists of a range of diagnostic and service maintenance programs called Planned Care, Package Care, Parts Care and Performance Care.

Each program delivers specific features, from extended warranty and scheduled maintenance to providing a consistent supply of parts, as they are required. Each programs puts your operation in a position to succeed, because when you succeed, we do too.

CAPS RENTAL

LONG & SHORT TERM RENTALS

Competitively priced, turnkey solutions that keep your operations running smoothly.

We offer short and long-term rental across Australia, ideal for your projects, seasonal demand and any breakdown requirements. And provide flexibility to suit your needs.

With vast experience in renting equipment to contracting, industrial and mining companies, CAPS has a large fleet of units available. The site ready solutions satisfy a wide range of applications and ensure quality equipment is available, backed with a high standard of customer service.

SOLVING YOUR AIR AND POWER CHALLENGES

10 BRANCHES SERVICING ALL OF AUSTRALIA

Inquiries: 1800 800 878
Service & 24/7 Support: 1800 802 697
Website: caps.com.au
Shop: capsshop.com.au
Email: info@caps.com.au

BRANCH LOCATIONS

PERTH (HEAD OFFICE) | KALGOORLIE | DARWIN | MACKAY | BRISBANE | NEWCASTLE | SYDNEY | LAUNCESTON | MELBOURNE | ADELAIDE |

CAPS