

# **Capability Statement**

**KAESER Compressors Australia** We have your back.

# YOUR PARTNER IN COMPRESSED AIR.

# How can we help?

At KAESER Compressors Australia, we are dedicated to delivering innovative, reliable, and sustainable compressed air solutions that empower businesses to thrive. Whether it's through advanced technology, dependable service, or a customer-first approach, Kaeser stands as a trusted partner in powering success.

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# INTRODUCING KAESER COMPRESSORS.

# About us.

KAESER is one of the world's leading suppliers of compressed air systems and ancilliary services. The company is still owned and operated by the Kaeser family and today employs over 8,000 dedicated people.

# The Global Compressed Air Systems Provider

Carl Kaeser Sr. established the company as a machine workshop on the 27th of June, 1919. He started out by manufacturing spare parts for motor vehicles and engines, especially gears. KAESER's expertise in engine manufacturing, coupled with strong demand, resulted in compressors being added to the product range.

With over 100 years of engineering experience and technical know-how, KAESER Compressors ranks amongst the world's largest and most enduring compressor manufacturers.



# **Made in Germany**

From the state-of-the-art production facility in Coburg, Germany, KAESER is proud to manufacture its extensive range of; compressors, blowers and compressed air systems, which are exported globally through a comprehensive network of branches, subsidiaries and authorised distribution partners in over 140 countries.

# **Future Oriented**

By offering innovative, efficient and reliable products and services, KAESER's experienced consultants and engineers work in close partnership with customers to enhance their competitive edge and to develop progressive system concepts that continuously push the boundaries of performance and technology.

Efficiency, reliability, maximum availability and exceptional user-friendliness are long-standing trademarks of KAESER products.

The company's state-of-the-art Research and Development Centre in Coburg houses the very latest equipment, and is designed to provide the research engineers with unrivalled working conditions, to deliver continuous product innovation.

# Here for the long term.

With a nationwide network, KAESER Compressors Australia ensures you can rely on tailored, responsive support to keep your operations running smoothly. In short, "we have your back."

# **Local branches, international backing**

We focus on uptime, to ensure businesses experience uninterrupted performance, allowing them to focus on what they do best.

Our global network strengthens our ability to deliver cuttingedge technology and innovative solutions while focussing on your needs. These efforts reflect our unwavering commitment to supporting businesses, fostering partnerships built on trust, and contributing to a sustainable and prosperous future for the broader community.

# **Accreditations & Certifications**

ISO 9001:2015 KAESER Kompressoren SE, KAESER Compressors Australia Pty Ltd

ISO 14001:2015 KAESER Kompressoren SE, KAESER Compressors Australia Pty Ltd

ISO 50001:2018 KAESER Kompressoren SE ISO 45001:2018 KAESER Kompressoren SE

Australian Trusted Trader

KAESER Compressors Australia Pty Ltd

Great Place to Work™

KAESER Compressors Australia Pty Ltd

# **Corporate Memberships**

Austmine

Australian Manufacturing Technology Institute Limited (AMTIL)

Australian Processing & Packaging Machinery Association (APPMA)

Australian Water Association (AWA)

Australian Woodworking Industry Suppliers Association (AWISA)

Compressed Air Association of Australasia (CAAA)
German-Australian Chamber of Industry and Commerce
(AHK)

Hire & Rental Industry Association of Australia (HRIA) Institute of Healthcare Engineering Australia (IHEA) Water Industry Operators Association of Australia (WIOA)

# **Reference Projects**

You can read our Australian and international case studies and reference projects at:

au.kaeser.com/solutions/reference-projects/





# **Legal Information**

Company Name:

KAESER COMPRESSORS Australia Pty. Ltd.

Managing Director: Jarno Manzke, Ph.D.

ACN: 050 198 895; ABN: 28 050 198 895

Incorporation Date: 23rd November 1990

Registered Company Address:

45 Zenith Road, Dandenong South, VIC 3175

Postal Address:

Locked Bag 1406, Dandenong South, VIC 3164

Terms & Conditions of Sale:

au.kaeser.com/general-terms-and-conditions/

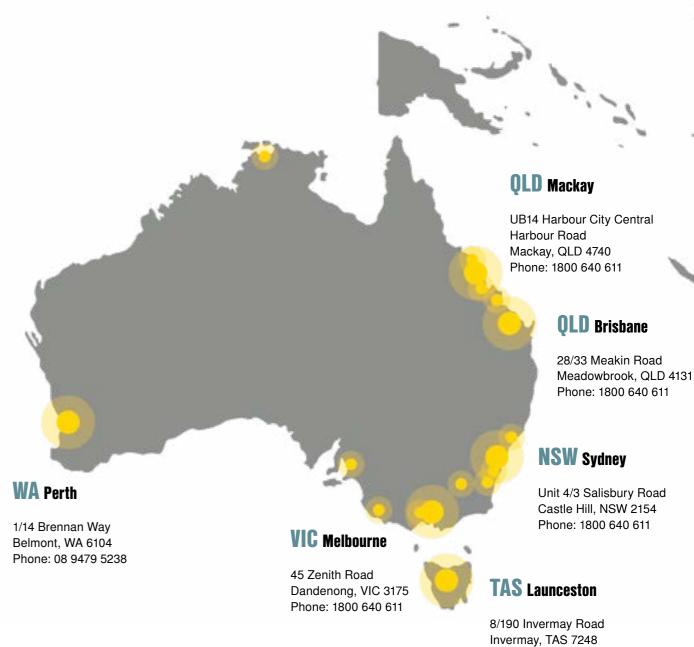




# WE HAVE YOU COVERED, NATION-WIDE

# **Locations.**

KAESER Compressors Australia provides comprehensive sales and service throughout Australia, New Caledonia and the Pacific region, from its purpose built facility in Victoria, alongside an extensive network of Sales and Service Centres and authorised partners.



KAESER Sales & Service Centres



KAESER Partners

Phone: 1800 640 611

# CARING FOR THE PLANET AND ITS PEOPLE.

# **Sustainability and Responsibility.**

At KAESER, sustainability is integral to our operations and corporate strategy. We are committed to reducing our carbon footprint by enhancing energy efficiency, utilising renewable energy sources, and implementing environmentally friendly production processes.

## **Our commitment**

Thoughtful action today means a better tomorrow. Aligning with the UN Sustainable Development Goals and the Paris Climate Agreement, KAESER has five strategic focus areas: energy efficiency, CO<sup>2</sup> neutrality, environmental protection, resource conservation and fair working conditions.



From product manufacture through to system function and maintenance, KAESER is bringing modern solutions to energy efficiency and climate care. We're aiming to reduce carbon emissions by 80% by 2030 based on 2019 levels – and we're well on our way.

# **Manufacture**

KAESER's manufacturing facilities demonstrate our commitment to green energy. Electricity at our Coburg site in Germany is 100% renewably sourced, using our own solar power system and local waste-to-energy incinerators. CO<sup>2</sup>-neutral district heating and exhaust heat reuse are also helping us on our journey to net-zero.

One of KAESER's core goals is to reduce consumption by focusing on intelligent use of resources and efficient management, and ensuring each new product we design is more energy efficient than the one before. We also develop strategies for an effective circular economy.

# **Packaging and supply**

Petrochemical-based packaging materials put microplastics into the environment, emit greenhouse gases in their manufacture, and add to landfill. Plastic packaging can also pollute waterways and damage ecosystems.

That's why KAESER has swapped polystyrene foam for honeycomb cardboard, plastic bubble wrap for biodegradable alternatives, and conventional packing tape for paper-based adhesives.

KAESER is working towards a fully electric delivery fleet, and we aim to power our vehicles with renewable energy. Where fully carbon-neutral transport is not feasible, we purchase carbon credits from certified providers to offset emissions.

# **Maintenance and supply**

When maintenance is required, KAESER's quality parts provide greater functionality and a longer product lifespan, keeping energy costs and breakdowns to a minimum. Oil changes can also be reduced through sample testing, and we engage EPA-approved recycling companies for safe oil disposal.

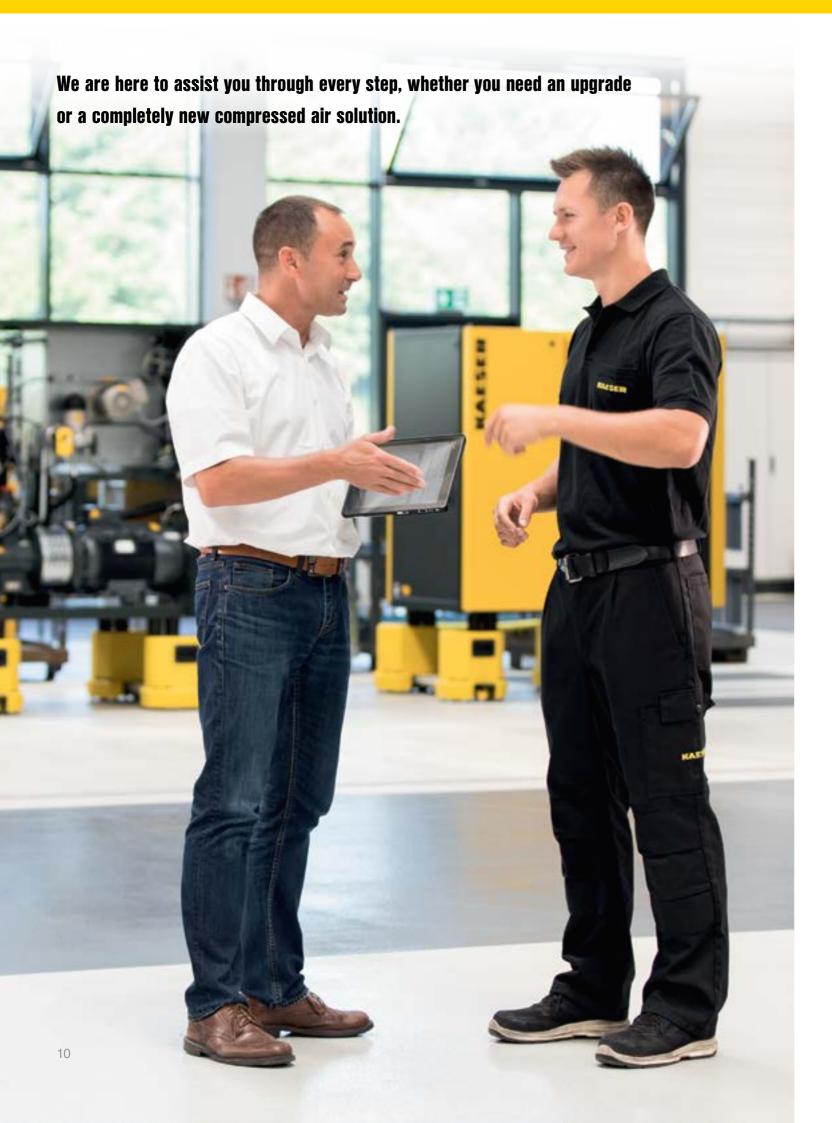
Carbon emissions can therefore be reduced by not only maximising efficiency but also reducing the need for production, supply and delivery of parts and by recycling waste products.

# **Social Responsibility**

At KAESER, we care about people as well as carbon emissions. The health and wellbeing of our staff is paramount, and our stringent work health and safety systems protect them against accident or injury. We promote healthy lifestyles for our staff by providing on-site exercise equipment, annual health checks and a range of events to boost job satisfaction and morale.

We want our staff to have satisfying and fulfilling careers and to reach their full potential. KAESER provides quality education and training for staff, including enrolment in Design Thinking at the Hasso Plattner Institut for select employees. Further training enables our staff to think big, innovate and grow into leadership. We also ensure equal pay and career opportunities for all genders.





HELPING YOU MEET YOUR GOALS.

# Designed for your benefit.

Guided by our "More compressed air for less energy" philosophy, we prioritise energy efficiency and resource conservation throughout the product lifecycle. This commitment ensures that you benefit from reduced operational costs and a lower carbon footprint, contributing to a more sustainable future.

# **Optimal product selection**

Optimal functionality is essential for sustainability. With KAESER's ADA (Air Demand Analysis) and KESS (KAESER Energy Saving System), our air compression experts can plan a customised system for maximum efficiency, identify issues and provide specialised recommendations to ensure your system is fit for purpose.

ADA is highly recommended before any upgrades, as analysis often finds inefficiencies that can be rectified without the need for expansion or replacement. For example, enabling consistent pressure and optimised run time can prevent systems being over-specified and using more energy than needed.

When evaluating the total cost of ownership for a compressed air system, it's crucial to recognise that the initial purchase price represents only a small fraction of the overall expenses. In fact, energy costs can account for up to 75% of a compressor's lifetime expenses, while maintenance and other operational costs comprise a significant portion as well.

Therefore, investing in energy-efficient and reliable equipment is essential, as it can lead to substantial savings over time, far outweighing any initial cost considerations. These considerations can be daunting, but KAESER's compressed air experts are here to help you choose the most sustainable and efficient system for your needs.

# **Conscious compressed air drying**

If compressed air is not dried, condensation can accumulate in the system and reduce its lifespan. Drying is an energy-intense process, but thankfully, new technologies in refrigeration drying allow better moisture control with less impact on the environment.

Modern dryers, use the more climate-friendly R-513A refrigerant. Modern refrigeration dryers also include cycling control, adapting energy usage according to changing operating conditions so you're not using any more energy that you need to.

A combination system, such as KAESER's Hybritec, uses refrigeration to cool the pressure dew point to 3°C, then desiccants to cool to around -40°C. The air is therefore predried, reducing the energy demand.

In oil-free compressors, air can be dried without any additional energy. KAESER's i.HOC rotary dryer uses the compressor's own heat for drying. Using 100% of the heat of compression from the second compressor stage, i.HOC therefore eliminates the need for any electrical heating or cooling.

# Minimising leakage and pressure drop

Leakages and drops in pressure don't just lower your system's performance, they also cause more environmental harm through wasted energy. Here are some things to consider:

Pipe diameter: Pressure drop changes significantly according to pipe diameter. For example, at 1m³ per minute from a 7.5kW compressor, the pressure drop through 100 metres of straight pipe of 20mm diameter would be 0.5 bar. In the same conditions with a 25mm diameter, pressure drop would be only 0.13 bar. Pipe diameter matters!

Material quality and maintenance: Plastic piping materials are more susceptible to breakage, increasing the likelihood of leakages. Additionally, interior surfaces can deteriorate and abrade, which increases pressure drop. More durable piping materials are recommended for sustainability of the system and to minimise leakage.

System design: An efficient system will have minimal turns, sufficient bracing for piping that hangs from walls or ceilings, and flexible fittings between components to minimise vibration. A well-designed system will also take future expansion into account by using the largest feasible piping diameter at the time of installation: upgrading an existing system is much more resource-efficient than replacing a system when your needs increase.

# **Exhaust heat re-use**

Exhaust heat can be sent directly into ducts for heating nearby rooms, with thermostatic control providing consistent temperatures. It can also be used for drying processes, hot air curtains, or preheating burner combustion air for heating systems. With up to 96 percent of the drive energy supplied to a compressor available for reuse, the investment costs of exhaust heat reuse can be paid off within a year.

Compressor heat can also be fed into hot water systems using plate heat exchangers. Using these heat exchangers, 70 to 80 percent of the installed compressor power can be used for heating purposes without using any additional energy.

# SMART TECHNOLOGY TO MAXIMISE EFFICIENCY

# The future is here.

As your compressed air partner, we can offer you smart solutions with unprecedented efficiency that can be seamlessly incorporated into your production and energy management systems.

# **Industrie 4.0**

Smart technology systems can substantially increase energy efficiency. A smart control system can optimise the air compressor to find the energy/efficiency 'sweet spot,' facilitating more compressor activity at peak periods and conserving energy when it is not required.

Using real-time analysis, an Al-powered remote monitoring system can identify leaks, faults and inefficiencies. This allows for timely maintenance to avoid unscheduled downtime. It also ensures that the user is not bound to pre-existing part replacement schedules: parts are replaced only when needed, thus minimising unnecessary waste.

An optimised compressor system can reduce CO<sup>2</sup> emissions by up to 73 percent compared with a non-optimised one, amounting to an annual saving of 139.7 tons of CO<sup>2</sup>. With energy costs accounting for up to 70 percent of total expenses, an efficient system also significantly reduces the lifetime costs of the system.

# **Maximise efficiency, minimise costs**

The combination of remote diagnostics and demand-oriented predictive maintenance ensures maximum compressed air supply availability and complete system effectiveness;

- Prevent unplanned and planned downtime; through evaluation of operating parameters, such as load operating hours and temperatures
- Increase energy efficiency; through monitoring key operating parameters
- Reduce service costs; by up to 30% through optimised servicing and repair avoidance
- Demand-optimise your compressed air system; throughout the system's entire life cycle.

# **SIGMA AIR MANAGER 4.0**

Adaptive, efficient and networked: demand-oriented compressed air management takes on a whole new meaning with the SIGMA AIR MANAGER 4.0. This advanced master controller coordinates operation of multiple compressors, as well as dryers or filters, with exceptional efficiency.

The patented, simulation-based optimisation process calculates future demand based on past compressed air consumption profiles. Decisions are no longer dictated by a narrow pressure range, but rather by comprehensive energy efficiency optimisation. Saving energy has never been so easy!

# **KAESER SIGMA NETWORK**

The SIGMA AIR MANAGER 4.0 connects every component within the compressed air station – including external components – via the secure, IP-based KAESER SIGMA NETWORK.

As the central node point, it gathers the individual operating data and forwards them to mobile phones, laptops or tablets for browser-based viewing via KAESER CONNECT.

Comprehensive monitoring, energy management and predictive maintenance are therefore all possible. This not only minimises downtime, but also maximises manufacturing efficiency.

## Kair Console

Capturing energy metrics and calculating compressor efficiency. To allow KAESER AIR SERVICE rapid insight into a compressor's operating state, KAESER offers a modem with the compressor. The SIGMA CONTROL 2 compressor controller transmits operating data to the modem via the KAESER SIGMA NETWORK.

The collated data provide you with information regarding system performance trends and any possible deviations. Moreover, the values can be viewed remotely, downloaded for further analysis and archived for later use. This enables preventive compressor maintenance and smarter operation, with no effort required!

# **KAESER 4.0 - offering real time adjustment and** predictive maintenance using Artificial Intelligence

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# Our primary goal is to provide exceptional customer service with innovative products and compressed air expertise.



# **BESPOKE SOLUTIONS**

# **Engineering Solutions**

From our dedicated in-house Engineering Department at KAESER Compressors Australia, we can deliver a range of bespoke solutions including turn-key compressed air systems.

# **Turn-Key Compressed Air Systems**

Engineered solutions in the form of skid systems or containerised solutions are geared towards remote sites or sites that provide challenges to get trades persons to.

Having a complete turn-key compressed air system designed, manufactured and tested in house prior to dispatch greatly reduces on site installation time and also avoids incorrect installation of the various components that make up a compressed air system.

KAESER Compressors Australia is equipped to provide turnkey solutions.

# Australian Mine Spec and Oil & Gas Compressed Air Equipment

KAESER can cater for all mine or specialty site requirements with the below listed special options, just to name a few:

- 24 volt control voltage
- Australian standards AS 3000 electrical conversions
- Specialised power supply voltages: 690 volt, 1000 volt etc.
- Climate Zone weather kits
- Modulation control
- 3<sup>rd</sup> party certified equipment performance testing
- · High ambient versions

# **On-Site Compressed Air Assessments**

KAESER has highly effective tools for the planning of new compressed air supply systems and for the optimisation of existing ones.

Through our in-house Engineering Department we can provide full on-site compressed air assessments.

The KAESER ADA 4.0 (Air Demand Analysis) is one of the industry's most comprehensive air analysis systems, providing the following graphical information:

- Air usage on a 24 hour basis showing exact consumption
- Pressure indication on a 24 hour basis
- Air production of individual compressors in a multiple bank set up.

KAESER can also assess plant layout which includes examining and reporting on;

- · Air supply distribution
- Pressure drops within systems, pipe layout and restrictions
- Correct sequencing of compressors
- Compressor plant layout; correct ventilation, disposal of condensate waste, connection for portable compressors as well as correct in-line filtration set-up.

Based on the resulting air consumption profiles, KAESER's Energy Saving System (KESS 4.0) can then help determine the best system solution for the individual air application.





# QUALITY, MADE IN GERMANY.

# **Product Portfolio**

The KAESER product range meets and exceeds Australian conditions and regulations. In addition, the standard machines are suitable for continuous operation at ambient conditions up to 45°C and higher.

# **Rotary Screw Compressors - Oil Lubricated**

From 2.2 to 515 kW Fixed speed or with Sigma Frequency Control With integrated refrigeration dryer

Rotary Screw Vacuum Pumps Intake capacity: 4.75 to 15.7 m³/min - 99% final vacuum

# **Rotary Screw Compressors - OIL.FREE**

Two-stage oil-free compression rotary screw compressors Flow rate: up to 51 m³/min Pressure: 4 to 10 bar

# **Reciprocating Compressors**

Portable reciprocating compressors
Displacement between: 130 to 660 l/min
Pressure: 10 to 25 bar

Stationary reciprocating compressors
Displacement between: 59 to 1400 l/min
Pressure 7, 10, 15 or 35 bar

Complete packages Flow rates from 0.25 to 0.90 m³/min Pressure 7, 10 or 12.5 bar

# Boosters

For constant high pressure up to 45 bar

# Compressed Air Treatment & Condensate Technology

Centrifugal Separators

Drying; refrigeration, membrane, heatless desiccant and hybritec dryers

Filtration; compressed air filters, high pressure filters, activated carbon adsorbers, fluid separators

Condensate Technology; condensate drains, condensate treatment systems

# **Compressed Air Storage & Pressure Maintenance**

Compressed Air Storage; vertical and horizontal air receivers. Volume: 90 to 10,000 litres.

Air-main Charging Systems; for reliable system pressure at all times

# Controllers

Integral and stand alone compressor controllers and compressed air management systems able to control and manage up to 16 compressors in a compressed air station

## Blowers

Rotary lobe blowers - single blocks Rotary blowers up to 250 kW Rotary screw blowers up to 250 kW Turbo blowers up to 300 kW

# **MOBILAIR Portable Compressors**

Delivery: 0.75 to 45.0 m³/min Motor power: 7.5 to 429 kW Pressure: 7 to 15 bar

# **PET Air Systems & Turnkey Container Solutions**

Air delivery up to 2772 m<sup>3</sup>/h Blow air up to 45 bar



# PREMIUM SERVICE SUPPORT

# **Service Portfolio**

From our strategically located Service Centres, our dedicated network of highly skilled factory trained Service Technicians provide comprehensive service and backup, including emergency 24/7 service support.

# **KAESER AIR SERVICE**

KAESER AIR SERVICE ensures continuous end-to-end care of all compressed air systems from its strategically located Service Centres. As a total compressed air system solutions provider, KAESER AIR SERVICE is able to look after all of your compressed air systems - whatever the make or model.

# **Service Structure**

All service is primarily coordinated locally by the Service Centres, which are located in the following major cities;

- NSW; Sydney
- · QLD; Brisbane & Mackay
- · TAS; Launceston
- VIC; Melbourne
- · WA; Perth

# **Highly skilled Service Technicians**

All KAESER Service Technicians are factory trained at the Australian head office. Additional training at KAESER Germany also takes place periodically. Technicians receive regular practical and hands-on training such as hard soldering and fault finding in mechatronic systems.

# **Fully Equipped**

Our Service Technicians' vehicles are fully equipped with genuine KAESER service and maintenance parts for efficient service and fast repair, ensuring that you can enjoy a reliable supply of compressed air on demand.

# **24/7 Emergency Service**

Compressed air needs to be available all day, every day. That's why our replacement parts and Service Technicians are on standby to provide emergency support 24/7.

# **Preventive Maintenance Agreements**

KAESER AIR SERVICE offers a number of service agreements. Opting to take out an agreement with KAESER ensures that all the on-going maintenance requirements of your compressed air system are covered.

# **Regional Spare Parts Warehouse**

KAESER carries a large stock of spare parts at its head office in Victoria, as well as at the state branches. This ensures rapid dispatch of maintenance and spare parts required to meet your service requirements.

# **Global Networking**

KAESER products can be diagnosed remotely and maintained as required thanks to our advanced global networking and data communications system. This leads to increased compressed air availability, maximising the overall cost-effectiveness of your compressed air supply.

# **Customer Training**

KAESER offers online, on-site and in-house training dependent on customer requirements, covering all aspects of a compressed air installation and its comprehensive product range



# The world is our home

As one of the world's largest manufacturers of compressors, blowers and compressed air systems, KAESER COMPRESSORS is represented throughout the world by a comprehensive network of branches, subsidiaries and authorised distribution partners in over 140 countries.

By offering innovative, efficient and reliable products and services, KAESER COMPRESSOR's experienced consultants and engineers work in close partnership with customers to enhance their competitive edge and to develop progressive system concepts that continuously push the boundaries of performance and technology. Moreover, decades of knowledge and expertise from this industry leading systems provider are made available to each and every customer via the KAESER group's advanced global IT network. These advantages, coupled with KAESER's worldwide service organisation, ensure that every product operates at peak performance at all times, whilst providing maximum availability.

KAESER COMPRESSORS Australia was established in 1990 and serves the Australian, New Caledonian and Pacific region from its 4,500 m² purpose-built facility in Victoria. KAESER has Sales and Service Centres and a dedicated network of authorised partners strategically located throughout the region.

