

coregas 

*Specialty gases
and equipment*

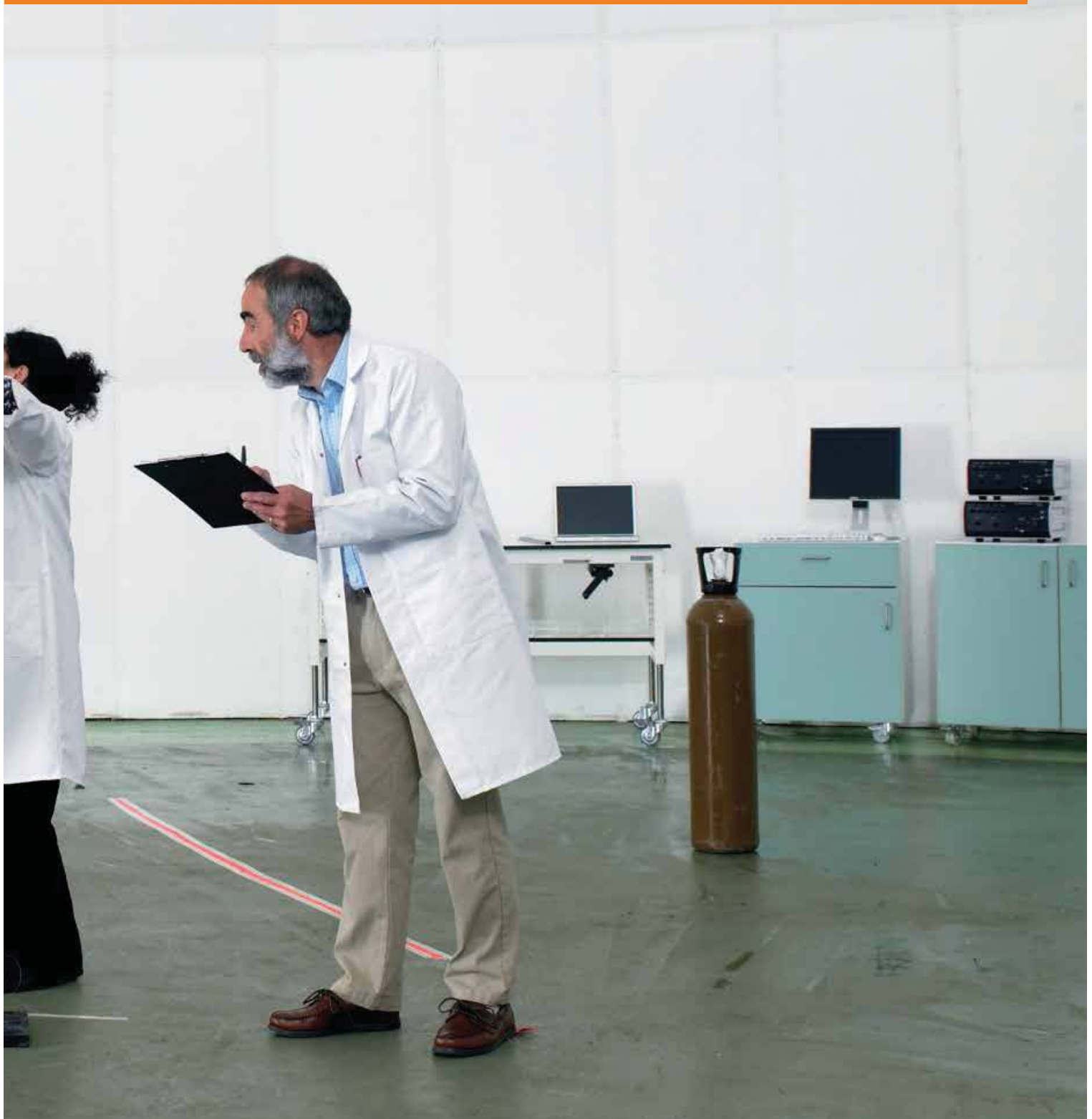


ABOUT COREGAS



Coregas is a gases specialist that has been supplying a range of industries with specialty, industrial and medical gases and services since 1974. As part of Wesfarmers, we are Australian owned, manufacturing locally and distributing across Australia and New Zealand.

From single cylinders to on-site delivery systems, we provide the right gas in the volume and frequency you require, plus the equipment to work with it.



WHY CHOOSE US AS YOUR GASES SPECIALIST

Reliability of supply

With large manufacturing and storage capacities throughout Australasia plus a multi-national distribution network, variety of local storage vessels and a fleet of delivery trucks, you can see why we are confident we can meet your needs. Even for rarer gases that we do not manufacture, we manage their importation and storage to ensure you never run out of gas.

Coregas facilities include: a large NSW-based production facility and a smaller plant in Queensland producing bulk quantities of oxygen, nitrogen, argon and hydrogen; Australia's largest acetylene plant; a liquid helium storage and filling facility; and our NATA-accredited gas laboratory.

Short lead times

You need gas quickly sometimes, we understand. For that reason, we have tailored our production and ordering processes to minimise the time you have to wait for delivery. Take a look at the list of standard lead times on page 11 to see how quick we can be.

Purity, accuracy, customisation

All our gases and equipment will be optimised as far as possible for your needs, including:

- Gases in a range of purities up to ultra-high purity 7.0 (99.99999%)
- Gas mixtures carefully mixed, tested and certified to accurately meet your specifications
- High quality laboratory grade regulators and control panels
- Complete gas delivery systems custom engineered to your exact requirements

Customer service and technical support

Our sales engineers focus on specialty gases, so you can contact them for everything from a simple sales enquiry to in depth technical advice. They are backed up by our customer service team and technical teams, so you can be confident of fast, accurate answers to your queries.





INDUSTRIES AND APPLICATIONS THAT USE SPECIALTY GASES



Industry / location	Gases	Applications
Laboratories eg minerals, life science, energy and industrial	<ul style="list-style-type: none"> Ultra-high purity gases 	<ul style="list-style-type: none"> carrier, purge and detector applications running instrumentation <i>eg mass spectrometers, spectrophotometers, electron capture devices</i>
Environmental monitoring eg factories, manufacturing	<ul style="list-style-type: none"> Calibration gases <i>eg CO, CO₂, H₂S, NH₃, SO₂, NO_x</i> 	<ul style="list-style-type: none"> calibration of gas detectors to ensure compliance with gas emission protocols
Natural gas networks	<ul style="list-style-type: none"> Calibration gases <i>eg C₆₊, C₉₊, gas mixtures of up to 20 components, heaviest being decane (C₁₀H₂₂)</i> 	<ul style="list-style-type: none"> calibration of instruments that measure calorific value of natural gas
LNG plants (liquefied natural gas)	<ul style="list-style-type: none"> Refrigerants Calibration gases 	<ul style="list-style-type: none"> natural refrigerants used in liquefiers that liquefy natural gas at LNG plants calibration gas used for the compliance, process control and safe operations of the LNG plants
NMR and MRI (nuclear magnetic resonance and magnetic resonance imaging)	<ul style="list-style-type: none"> Liquid helium 	<ul style="list-style-type: none"> operating superconducting magnets found in NMR and MRI equipment
Pharmaceuticals	<ul style="list-style-type: none"> High purity gases <i>that meet European, American, Japanese and Chinese pharmacopoeia standards</i> 	<ul style="list-style-type: none"> inerting, blanketing, freezing and packaging in manufacturing
Semiconductors	<ul style="list-style-type: none"> Electronic gases 	<ul style="list-style-type: none"> inerting, cleaning, etching and deposition in manufacturing



GASES AND GAS MIXTURES AVAILABLE





Ultra-high purity gases

- Range available at up to 7.0 purity (99.99999%).
- Include common gases such as nitrogen, oxygen, argon, hydrogen, helium, carbon dioxide, instrument air and instrument acetylene.
- Strict quality assurance processes mean you can be confident that you have the highest purity gases to undertake your work with precision.

Electronic gases, rare gases, isotopes

- Electronic gases: huge range eg silanes, ammonia, nitrogen trifluoride, chlorines and halocarbons.
- Rare gases, eg neon, krypton and xenon.
- Isotopes, eg He-3 and Xe-129.

Cryogenic gases

- Range includes nitrogen, argon, oxygen, carbon dioxide and helium.

Calibration gases

- Large range of customised mixtures available, from simple inert gas mixtures to the most challenging moisture test gases, such as low parts per million H₂O in CH₄ or H₂O in N₂.
- Reactive gas mixture range includes CO, NO, NO₂, SO₂, NH₃, H₂S and Mercaptans in low parts per million or percentage levels.
- Whatever your requirement, our knowledgeable team can advise on the most achievable and stable gas mixture for your application.



QUALITY YOU CAN TRUST

To demonstrate why you can rely on our product quality, the following examples detail how careful preparation and testing ensure our calibration gas mixtures are highly accurate and have the best shelf life on the market.

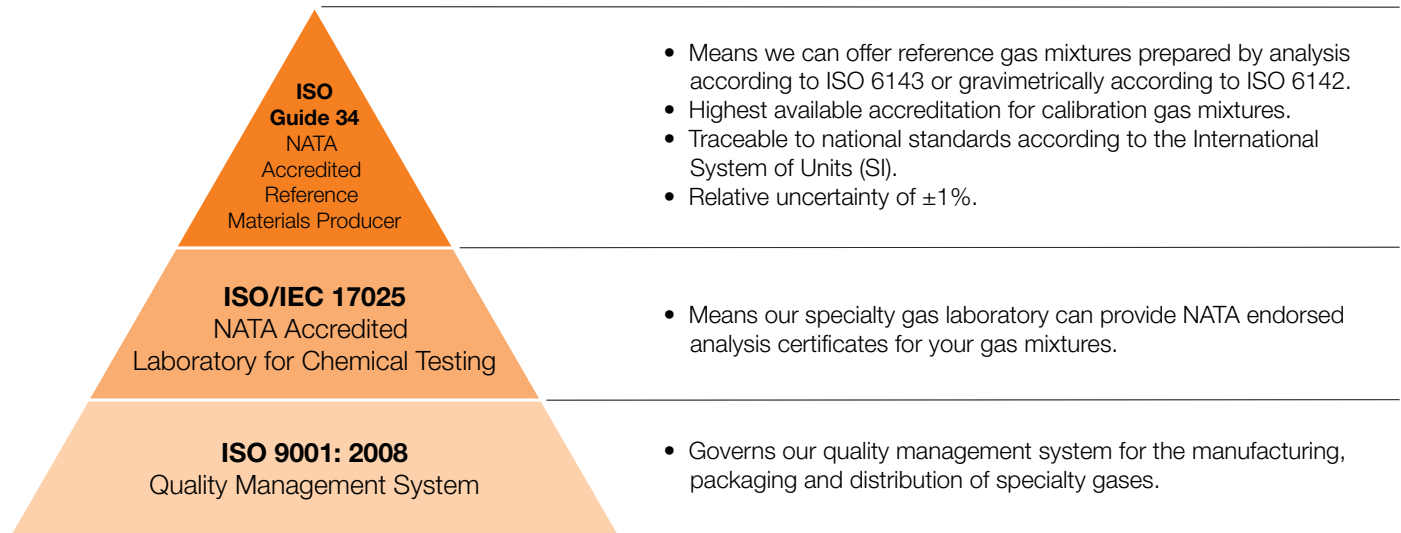




Ensuring stability and accuracy

- **Suitable packaging:** we carefully select and pre-treat gas cylinders before filling to ensure the material is suitable for the intended contents.
- **Pure raw materials:** we use only ultra-high purity gases for production so your final gas mixture has the highest accuracy.
- **Precise filling techniques:** we calculate gas composition using advanced thermodynamic techniques and fill cylinders using gravimetric techniques. During gravimetric filling, gas concentrations are not affected by the rising temperature caused by adiabatic compression inside the gas cylinder. It is superior to volumetric filling as it produces more accurate calibration gas standards.
- **Testing over time:** chemical testing for stability over a period of time ensures the finished product meets your requirements.
- **Certification:** your products each come with a NATA certificate of analysis which details the exact composition and test results of your gas.

Working to internationally recognised accreditations



QUALITY YOU CAN TRUST

(cont.)



Working to fine tolerances

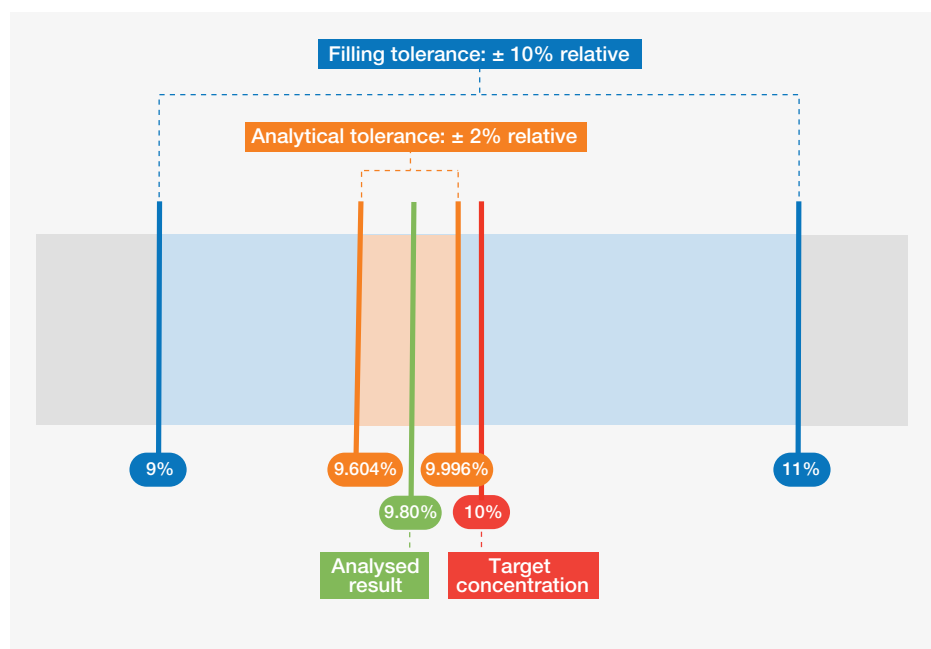
Calibration gas standards commonly mention two types of tolerance, filling tolerance and analytical tolerance. The latter is more important and is stated as the relative uncertainty on the certificate of analysis that comes with your calibration gases.

Filling tolerance is the gas concentration range deemed acceptable according to what is reasonably achievable using current filling techniques and equipment.

Analytical tolerance is the combined uncertainty resulting from the analytical method employed and the uncertainty in the reference gas standard used to calibrate the analytical instrument.

Working example

Mixture requested	10% O ₂ , Balance N ₂
Analysed result	9.8% O ₂
Filling tolerance	± 10% relative
Analytical tolerance	± 2% relative




The tolerances and analysed results are detailed in the certificate of analysis.

CERTIFICATE OF ANALYSIS

Component	Required concentration	Actual concentration	Concentration Unit of Measure	Measurement Uncertainty	Method
Oxygen	10	9.80	% mol	2% relative	7067 Paramagnetic
Nitrogen	Balance				

Measurement Uncertainty is calculated using a coverage factor K=2, which gives a 95% Confidence Interval.



Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements are traceable to Australian/national standards.

Example only

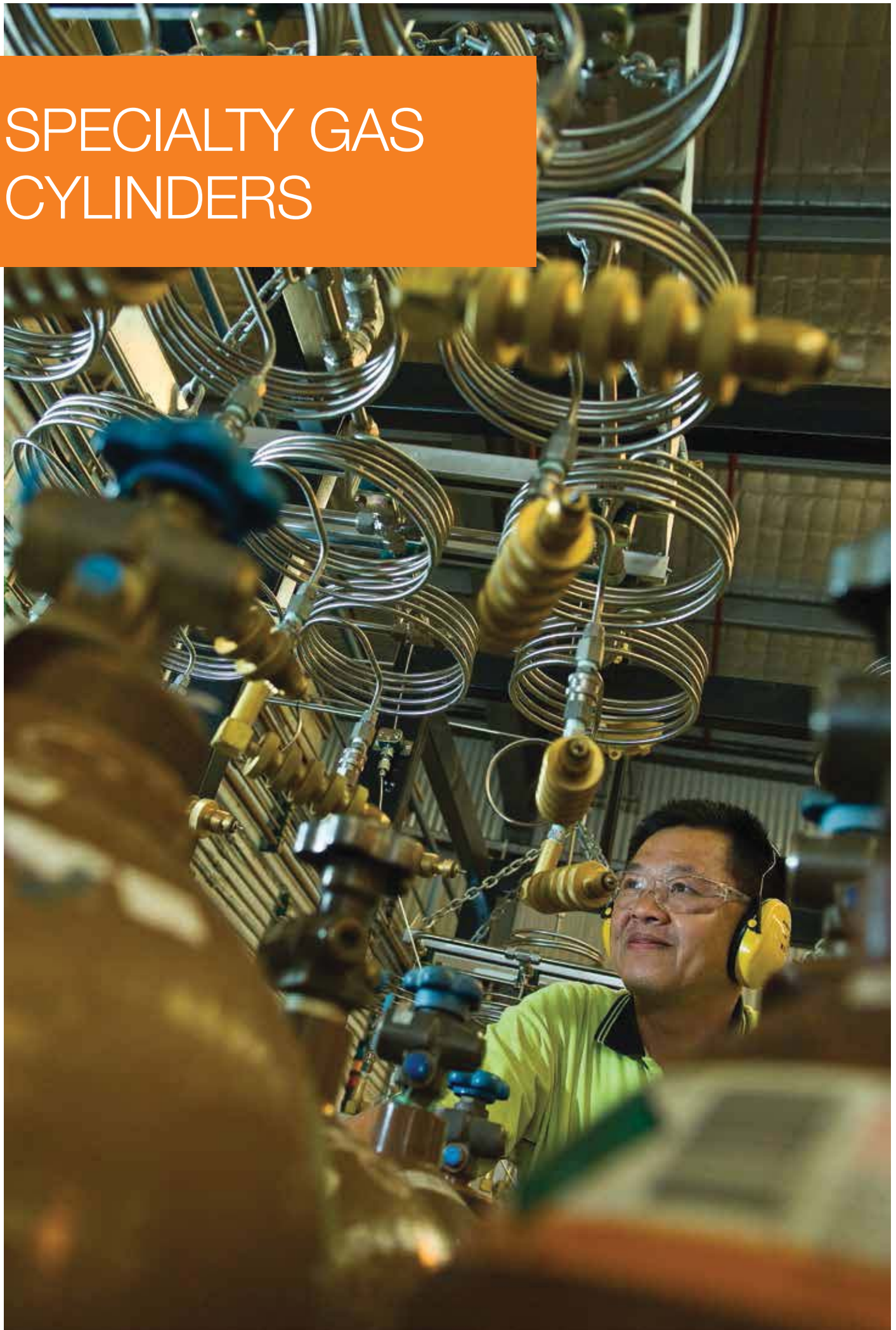
Delivering short lead times

Calibration gas mixtures	Production lead time in working days
Up to 3 part % (non-reactive components)	5
4-7 part % (non-reactive components)	10
> 7 part % (non-reactive components)	15
Up to 3 part ppm (non-reactive components)	10
> 3 part ppm (non-reactive components)	15
Reactive gas 10 ppm to %	30-40
Reactive gas < 10 ppm	40
Hydrocarbon gas (eg C ₆₊ , C ₉₊)	20
Hydrocarbon liquids	25
Mercaptan mixtures (gas only)	45
Critical mixtures (eg C ₁₄₊ , > 20 part mix)	50

Shipment and delivery lead times are 3 to 5 weeks, for an accurate time frame please contact your local Sales Engineer.

These products may be carried as a stock item, where available our standard delivery time frame applies.

SPECIALTY GAS CYLINDERS





High capacity cylinders

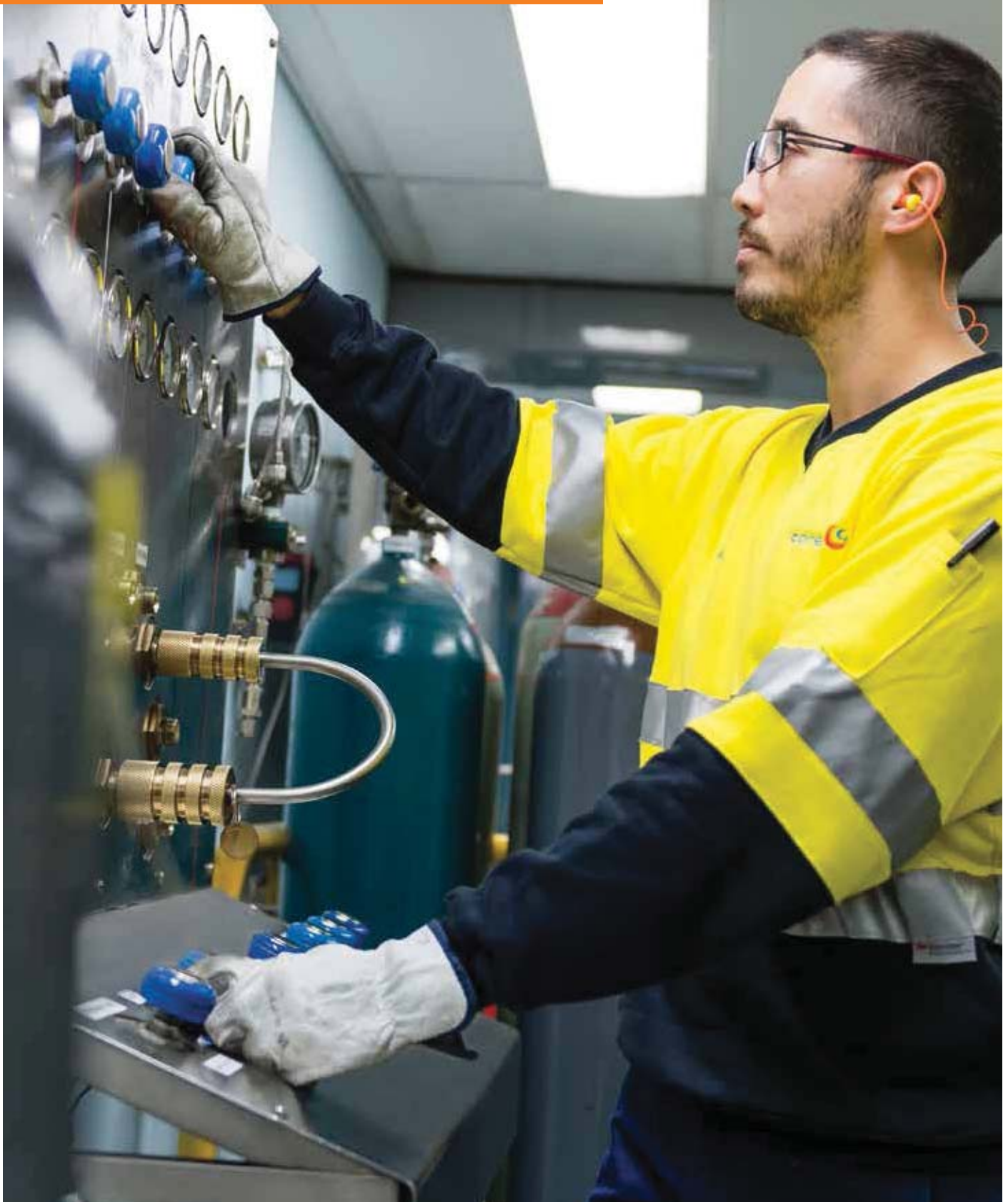
- At up to 300 bar filling pressure, our high capacity cylinders and packs enable you to reduce cylinder holding costs whilst maintaining the same volume of gas stored on site.

Portable calibration cylinders

- Easy-to-use, easy to carry, reusable alternative to standard gas cylinders.
- Cost-effective for low volume calibration uses such as air monitoring, hygiene and food packaging.
- Lightweight, aluminium material makes it ideal to use in remote areas.



SPECIALTY GAS EQUIPMENT





Cylinder pressure regulator



Auto changeover gas panel



Electronic gas cabinet

Ultra-high purity gases require a high quality, laboratory grade gas distribution system to maintain the purity of your gases to the point of use. Industrial grade regulators incur a risk of air entering the gas stream through the regulator and lowering the purity of the gas before it enters your analysers.

Laboratory grade regulators: made by Spectron in Germany, our range includes stainless steel and chromed brass single stage, dual stage, semi-automatic changeover panels, point-of-use line regulators, purge blocks and flow meters. All regulators come with a Hasteloy diaphragm, which offers a high leak tightness compatible with gases up to 7.0 (99.99999%) purity.

Corrosive gas regulators: specially designed to prevent reactions between the gas and the regulator material, with the dual benefit of maintaining the quality of the gas and prolonging the life of the regulator.

Electronic grade regulators: many electronic gases are toxic, so these regulators have special purging mechanisms that minimise the chance of gas exposure during cylinder changeovers. In addition, the system will shut down at the cylinder source once a leak is detected to keep you safe.

Complete gas supply systems: we provide and install electronic gas cabinets, gas leak detectors and auxiliary equipment such as digital scales, burst disc monitors, purge blocks with pneumatic actuators and programmable logic controllers.



Bench mounted line regulator

SERVICES





Cylinder tracking

All Coregas cylinders are barcoded and tracked through production and delivery to make it easier for you to reorder gas, trace the remaining shelf life of calibration gases and request additional copies of your certificate of analysis. Cylinder tracking is not only an integral part of our quality assurance, it also ensures you receive accurate cylinder rental invoices.

Bulk installations

For bulk applications and installations of on-site vessels, our team of engineers will work closely with you to understand your requirements and ensure we supply gases and equipment in the most suitable and economical form.

Gas supply management

With our gas supply management service, you never need worry about running out of gas. The system includes gas ordering, automatic gas monitoring and gas/liquid delivery from our qualified transport personnel.

Support

If you need expert advice on gases, gas reticulation line installations or other equipment we supply or install, our experienced technical team will be happy to help. We also offer training on the proper handling of gas and cryogenic liquids and will keep you updated on any legislative requirements to ensure your safety. Simply contact your sales engineer direct or call our Customer Service team on 0508 267 342 to get started.

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Wesfarmers

Coregas – a Wesfarmers company