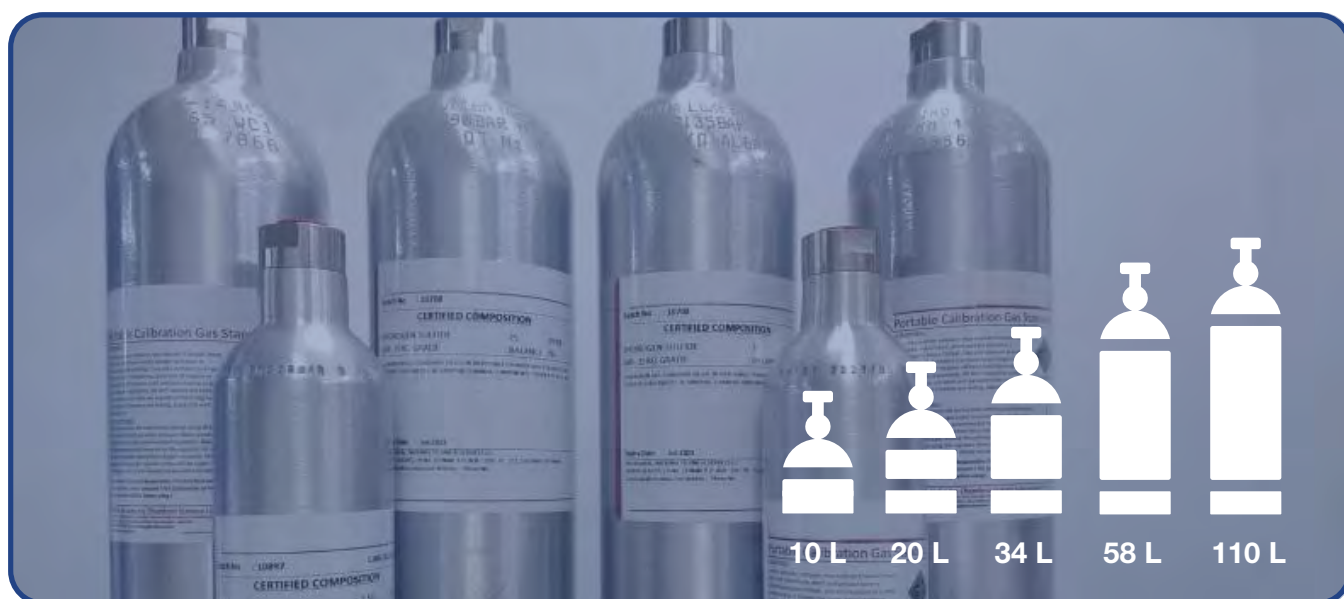


UNIMARINE GROUP

SPANGASES & SPECIALTY GASES

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SPANGASES & SPECIALTY GASES

Overview - Our Span Gas Range

Unimarine offers a comprehensive range of portable calibration gases & accessories specifically designed to support accurate and efficient onboard testing.

Our services & products are developed to meet the demands of the maritime industry, ensuring reliability, usability and compliance and across a wide range of applications.



Multiple gas detection
system suitability



Wide selection of
Gas Compositions



Reliable & consistent
performance

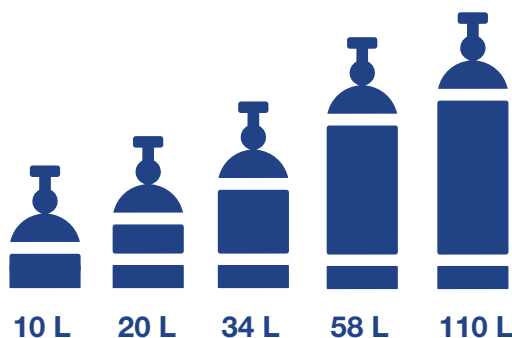


Designed for easy
transport & onboard use

Portable Gas Cylinders

Available in a full range of sizes to
meet operational requirements.

Other sizes are available upon request.



Vast Composition Range

- ✓ Single Gas mixtures
- ✓ Quad Gas mixtures
- ✓ Reactive gases
- ✓ Toxic gas compositions

Span Gas terminology

Span gases are **high-purity, precisely formulated gas mixtures** used to test and **calibrate gas detection equipment**, ensuring accurate performance of the instruments. This is especially important for **ENS** calibration requirements, as **SOLAS** regulations mandate that equipment must be calibrated before each use.

Gas mixtures are typically produced using either **gravimetric methods or volumetric methods**. The exact process may vary depending on the laboratory, supplier, or country of manufacture, but the resulting gas mixtures are always **certified for quality and accuracy**.

One of the most critical steps in the production process is ensuring that the cylinder is properly prepared. Cylinders must be thoroughly cleaned and purged with high-purity nitrogen, followed by a vacuum procedure, to eliminate contaminants and guarantee the integrity of the final gas mixture.

Specialty Gases terminology

Specialty gases are high-purity, precisely formulated gas mixtures, often reaching 99.999% purity, designed to meet the specific requirements of semiconductor manufacturing, laboratory analysis, and environmental monitoring.

Types of Span Gases



Flammable gases

C1 = Methane
C2 = Ethane
C3 = Propane
C4 = Butane



Toxic gases

CO = Carbon Monoxide
H₂S = Hydrogen sulfite
Cl₂ = Chlorine
SO₂ = Sulfur dioxide
NH₃ = Nitric Oxide
And more



Mixed gases

- LEL – H₂s – O (Gas mixtures)
- Hydrocarbon & Air or Nitrogen mixtures
- Any 4 gas mixtures



Pure gases

- Nitrogen 99.999%
- Propane
- Methane

Cylinder types

Unimarine supplies lightweight ISO certified cylinders.

Cylinders can also fly worldwide using the proper packaging as per IATA request upon proper notice.

- Non-refillable (NRC)
- Refillable (HRC)
- Racks (Pressure 500-1000)

10 Ltr. / 20 Ltr. / 34 Ltr. / 58 Ltr. / 110 Ltr.

Other sizes are available upon request.



Regulators

Specialized regulators are to be supplied based on cylinder size and availability.



Fixed Flow Regulator

Available for portable detectors with no pump or hand pump. Also ideal for fixed head detectors. Flow rate 0.5 liters per minute or 1.0 liters per minute.



Demand Flow Regulator

Especially designed for Gas Detectors with internal electric sample pump. Important: gas is supplied at the sample pump working flow rate, ensuring testing and calibration are similar to true operating conditions.



58 Litre with regulator and case

58 litre with either fixed flow or demand flow regulator (shown in carry case also suitable for 110 litre cylinders)



110 Litre with regulators

110 litre with either either fixede flow or demand flow regulator. Carry case as above available.

Technical Specifications

Type:	58 LITRE	110 LITRE
Size:	ø 360 x 88 mm	ø 360 x 88 mm
Weight:	0,7 kg	0,8 kg
Material:	Aluminium Alloy	Aluminium Alloy
Water Capacity:	1,72 litres	1,72 litres
Fill Pressure:	up to 500 psi (34 Barg)	up to 500 psi (34 Barg)
Usable Gas:	58 litres	110 litres
Connection:	5/8" - 18 UNF (C10)	5/8" - 18 UNF (C10)
Filling Tolerance:	5-49 ppm +/- 10%	50-500 ppm +/- 5%
	> 500 ppm +/- 2%	5-49 ppm +/- 10%
	50-500 ppm +/- 5%	> 500 ppm +/- 2%
Transport:	UN 1956 Class 2	UN 1956 Class 2
Mixtures:	Flammable, reactive & non-reactive gases	

Regulators:

Fixed or varies flow control.

Spray Test:

Spray Nozzle for quick testing, bump testing or filling sample bags.

Sample Bags:

1 Litre gas bags, can be used with fixed equipment or pumped instruments.

Our cylinders provide a more economical solution for you field calibration gas requirements, since they are compact, handy and lightweight. We recommend that you choose a concentration according to your requirements, or which most closely matches the operational range and gas type of your instruments.

Quotation:

Each quotation contains all technical specifications including Regulator Connectors and delivery costs or airfreight costs when needed.

Quality Control

Unimarine ensures that all span gases supplied are strictly checked and their composition is tested and certified. Span gases can often easily be used for up to 3 Years with proper storage.

A certification document is always provided with the cylinders upon delivery.

Ports of Delivery

Unimarine can supply chemicals, gases, refrigerants and welding equipment worldwide.

For span gases due non-standard mixtures, the below options are available:

- Ports wherein Unimarine frequently has stock available of all commonly used mixtures
- Ports worldwide where we can transport the span gases with a proper notice.
Our operations & sales support teams are always is ready to support you. (info@unimarine-services.com)

Ports with Stock



EUROPE

- Rotterdam, NL
- London, UK
- Greece
- Germany
- Belgium
- Poland



NORTH AMERICA

- Houston, USA
- New Orleans, USA



ASIA

- Singapore
- Malaysia



MIDDLE EAST

- Dubai, UAE
- Doha, Qatar
- Istanbul, Turkey

Product List

Product	Description
LEL MIXTURES	
211212111	Span Gas Cylinder: 5.25% (35% LEL) Ammonia (NH3) in Balance Air, 10ltr
211212224	Span Gas Cylinder: 0.74% (35% LEL) Propane in N2 Balance, 10Ltr
5234	Span Gas Cylinder: 2.5% (50% LEL) Methane in Balance Air, 10Ltr
211212120	Span Gas Cylinder: Methane 30% LEL in Air, 10ltrs
7165	Span Gas Cylinder: 8% Butane, 15% Carbon Dioxide (CO2) in Balance Nitrogen, 10ltr
211212143	Span Gas Cylinder: 3% Methane (60% LEL) in Balance Air, 10Ltr
5940	Span Gas Cylinder: 3% Methane (CH4) (60% LEL) in Balance Nitrogen, 10ltr
211212124	Span Gas Cylinder: Methane (CH4) - 1.5% (30% LEL) Nitrogen (N2) - balance-SG-10 Filling
211212261	Span Gas Cylinder: 50% Methane in Balance Nitrogen, 10Ltr
5538	Span Gas Cylinder: Methane 99.995% 10Ltr
6211	Span Gas Cylinder: 4% Methane (80% LEL) in Balance Nitrogen, 10ltr
5722	Span Gas Cylinder: 80% Methane in Balance Nitrogen, 10ltr
NITROGEN MIXTURES	
211212211	Span Gas Cylinder: O2 2% in N2 98%, 10Ltr
211212212	Span Gas Cylinder: O2 1% IN N2 99%, 10ltr SG10
211212215	Span Gas Cylinder 5% CO2 in Balance Nitrogen, 10ltrs
211212214	Span Gas Cylinder 8% O2 in Balance Nitrogen, 10ltrs
211212261	Span Gas Cylinder: 50% Methane in Balance Nitrogen, 10Ltr
211212216	Span Gas Cylinder 5% O2 in Balance Nitrogen, 10ltrs
211212225	Span gas cylinder: O2 0.5% IN N2 99.5% SG10
DISPOSABLES	
211212311	Span Gas Cylinder: 0.9% (50% LEL) Iso-butane (I-C4H10) in Balance Air, 34Ltrs
211212314	Disposable CO2 2% in Nitrogen
211212315	Disposable 8% Butane 15% CO2
211212138	Span Gas Cylinder: 25ppm H2S in Balance Nitrogen, 58 Ltrs
211212324	Span Gas Cylinder: 100ppm CO, 15ppm H2S, 2.2% CH4, 18% Oxygen in Balance Nitrogen, 34ltrs
6838	Span Gas Cylinder: 15ppm H2S, 100ppm CO, 2.5% (50%LEL) Methane, 18% O2 in Balance Nitrogen, 34ltr
REGULATORS	
211213111	Span Gases Regulator R21 Series
211213112	Regulator Fitting on the Span Gases Cyl 17 Cyl
211213113	Regulator 510 N2 For Span Gases Flow 0-1.3 L/MIN

CLEAN SHIPS, CLEAN SEAS


Quality Products


Environmentally friendly


Customer-first


24/7 Support



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