SYC Cylinders

SYC CATALOGUE

High Pressure Gas Cylinders | Blocks | Accessories and More

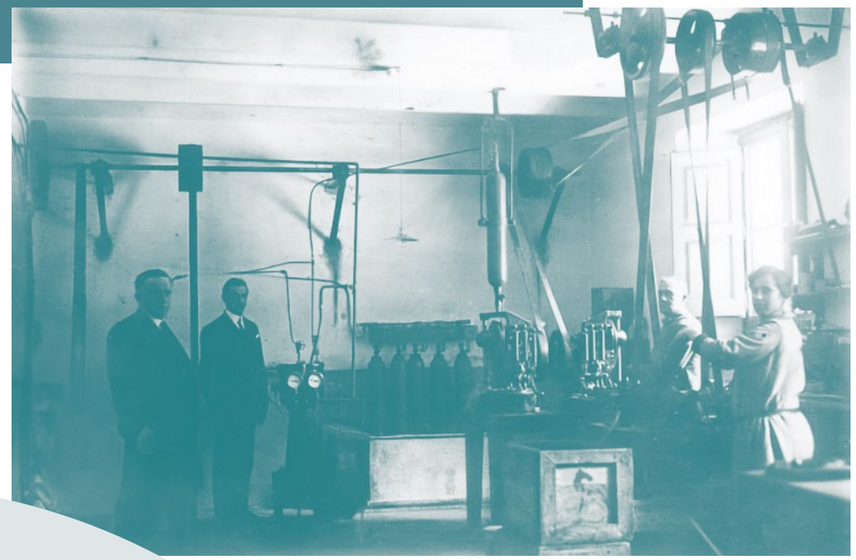


INDEX

Explore the innovation and quality of SYC Cylinders, leaders in gas cylinders. Discover our philosophy, history, and advanced products.

- Our Company 4
- SYC History 6
- Our Factory 8
- Products
  - ▸ Small-format steel and specifications 10
  - ▸ Large-format steel and specifications 12
  - ▸ Aluminium and specifications 14
  - ▸ Warhead colours 16
  - ▸ Markings 18
  - ▸ Screen printing 20
  - ▸ Screen printing on protection guards 22
  - ▸ Protection guards 24
  - ▸ Valves 26
  - ▸ Blocks and specifications 28
- SYC Philosophy 30

OUR COMPANY



Verdi workshop by CASALS Y DEL RIO S.L. Barcelona, 1930



Preparation of cylinders for packaging

Since 1955, SYC Cylinders is a family-owned company based in Barcelona, Spain. Nationally, we are leaders and a significant player in Europe in the manufacturing of high-pressure gas cylinders.
For more than 60 years, we have supplied our cylinders to key sectors such as food, medicine, and industry.

The trust of our customers has been the foundation of our success and motivates us to continue growing together.

FACILITIES

At Sant Boi de Llobregat, we have spacious facilities to store a large quantity of steel cylinders, specifically without gas, along with our central offices. This location allows us to store and manage large orders and offer a more convenient and faster service thanks to our loading docks.

Additionally, in Cornellà de Llobregat, we have a physical shop specialising in gas refills and cylinder maintenance. Our team ensures that the cylinders are always ready, offering a direct and convenient service for our customers.

Warehouse and Offices Exterior







SYC HISTORY

A look back at our history and achievements



DECADES OF INNOVATION AND GROWTH

1930

CASALS Y DEL RIO SL

JM Casals Ros founded the company in Barcelona, developing projects such as the Magic Fountain of Montjuic.

1941

UNIÓN TÉCNICA SL

First manufacturing of pressure cylinders at the Aribau facilities.

1955

MECÁNICA Y TRANSFORMACIÓN SL

Creation of the METRANS brand and manufacturing of the first high-pressure gas cylinders.

1976

SINTAS Y CASALS SA

The SYC brand is born with new products for the food and industrial sectors.

1980

FOUNDATION OF GASYSOL

GASYSOL is founded for the commercialization of industrial gas and development of welding equipment.

1985

EVEREST EXPEDITION

SYC sponsors the second Spanish expedition to Everest with portable oxygen cylinders.

1989

NEW SYC FACTORY

Opening of a new factory in L'Hospitalet de Llobregat with technological advancements.

1995

ADAPTATION TO EUROPEAN STANDARDS

Implementation of the ISO9001 quality system and technological improvements in production.

2000

SYC CYLINDERS SA

Company name change and shift of focus toward the European market.

2003

NEW GAS REFILLING FACILITIES

Inauguration of the gas refilling center in Cornellà de Llobregat.

2010

NEW PRODUCTION PLANT

Expansion of production capacity and product range with new technology.

2013

INSPECTION CENTER

Establishment of a technical inspection center for cylinders in Sant Boi.

2016

60 YEARS OF MANUFACTURING

Celebration of the company's 60th anniversary.

2018

300-450 BAR CERTIFICATION

Approved production of cylinders with pressure from 300 to 450 bar.

2020

6061 ALUMINUM CERTIFICATION

Approval of the 6061 aluminum cylinder production line, lighter and easier to transport.

2023

NEW FACILITIES IN SANT BOI

Expansion of our capacity to meet the growing market demand.

2025

ULTRASONIC TEST IN THE CONTROL QUALITY

Advanced ultrasonic testing is performed as part of quality control.

OUR FACTORY

SYC Cylinders manages all stages of the process, including cylinder manufacturing, the implementation of rigorous quality controls, and the final installation to ensure optimal performance.



High-pressure bottle testing in ultrasonic inspection

PRODUCTION PROCESS

SYC Cylinders applies a rigorous production process to ensure the manufacture of top-quality high-pressure cylinders. The process starts with cutting steel tubes or aluminium bars to shape the cylinders. The bottom of the bottle is shaped through forging for steel bottles and deep drawing for aluminium ones. After cold stretching, the neck is forged to close the bottle.

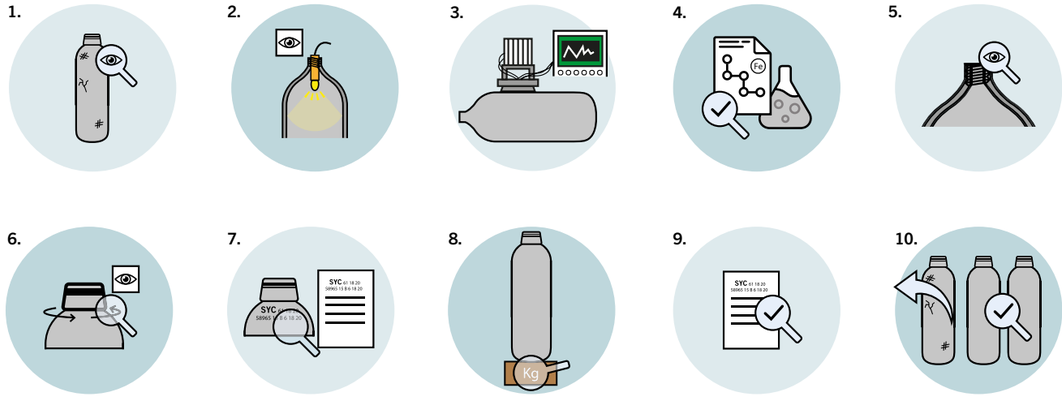
After heat treatment, material hardness verification and ultrasonic inspection, the cylinders are machined to create the thread and subjected to a hydraulic test to verify their integrity. Afterwards the interior is cleaned, and abrasive blasting is performed inside and outside to improve paint adhesion and remove imperfections. The neckring is placed on the top, the weight is verified, and each cylinder is marked with relevant information. Finally, they are painted according to the standard.
This process guarantees excellence in each cylinder produced by SYC Cylinders.

Factory of the cylinders



QUALITY CONTROL

We carry out a highly meticulous control process to check even the smallest detail:



1. Exterior inspection
2. Interior inspection
3. Ultrasonic inspection
4. Material analysis
5. Thread review
6. Neckring inspection
7. Marking check
8. Weight and height verification
9. Report creation
10. Discarding defectives

INSTALLATION PROCESS

Depending on the client's specifications, the process may vary. In the following diagrams, we will show an installation with all components and customisations.



1. Screen printing
2. Client marking
3. Valve assembly
4. Protection guard assembly
5. Quality control
6. Packaging

Technician placing protection guards



SMALL-FORMAT STEEL

Explore our selection of bottles up to 11L, where small-format steel ensures exceptional durability and strength

SMALL FORMATS < 11L

Small formats, less than 11L, offer compact and versatile solutions for a variety of applications.
These bottles are ideal where space is limited, but efficiency is crucial.
We have the following formats available:



5L 11L 10L 7L 5L 2L

Diameter (mm)	Volume (L)	Pressure (bar) (WP/TP)	Thread	Height	Weight (kg)	Norm	Gas
102	2	200 - 300	25E	350	3.3	9809-1	
102	2.5	200 - 300	25E	418	3.9	9809-1	
102	3	200 - 300	25E	485	4.54	9809-1	
116	2	200 - 300	25E	285	2.6	9809-1	
116	2.5	200 - 300	25E	418	4.06	9809-1	
116	3	200 - 300	25E	385	4.6	9809-1	Industrial
140	5	200 - 300	25E	460	7.3	9809-1	
140	7	200 - 300	25E	625	9.3	9809-1	
178	8	200 - 300	25E	465	12.1	9809-1	
140	10	200 - 300	25E	850	12	9809-1	
178	11	200 - 300	25E	602	14	9809-1	
140	5	18 - 60	25E	460	7.3	9809-1	Acetylene

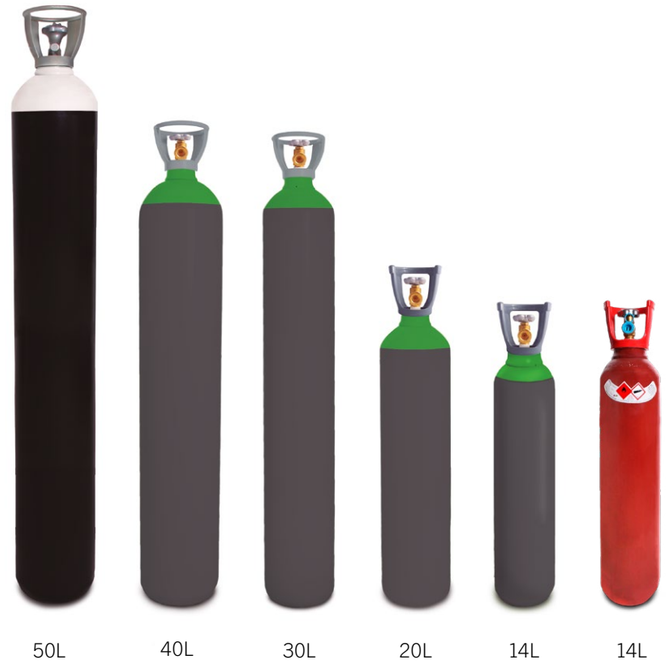


LARGE-FORMAT STEEL

Discover the unmatched robustness of our bottles starting at 11L, with our distinctive large-format steel—synonymous with strength and reliability

LARGE FORMATS > 11L

Large formats, ideal for applications that require higher capacity, offer robust and reliable solutions. From gas storage in industrial environments to their application in manufacturing and material treatment processes, these bottles are the perfect choice where increased capacity is needed. Below you will find the available options in this category.



50L 40L 30L 20L 14L 14L

Diameter (mm)	Volume (L)	Pressure (bar) (WP/TP)	Thread	Height	Weight (kg)	Norm	Gas
178	14	200 - 300	25E	740	18	9809-1	Industrial
200	14	200 - 300	25E	600	19	9809-1	
200	20	200 - 300	25E	820	23	9809-1	
200	30	200 - 300	25E	1205	32.2	9809-1	
230	30	200 - 300	25E	925	30	9809-2	
230	40	200 - 300	25E	1190	37	9809-2	
230	50	200 - 300	25E	1500	44	9809-2	
230	30	300 - 450	25E	1205	43	9809-2	
230	33	300 - 450	25E	1040	47.5	9809-2	
230	50	300 - 450	25E	1500	66	9809-2	
178	14	18 - 60	25E	740	19	9809-1	Acetylene

ALUMINIUM

Lightweight for efficient and safe transport

LIGHTWEIGHT

Discover innovation in gas storage with SYC Cylinders aluminium bottles. Designed to offer the perfect balance between lightness and strength, our aluminium bottles are ideal for a wide variety of applications. From the medical industry to the food industry and beyond, our bottles provide a reliable and efficient solution for the transport and storage of gases.

Diameter (mm)	Volume (L)	Pressure (bar) (WP/TP)	Thread	Height	Weight (kg)	Norm
102	2	200 - 300	25E	360	1.8	ISO 7866
140	5	200 - 300	25E	475	4.6	ISO 7866
140	7	200 - 300	25E	635	5.7	ISO 7866
140	10	200 - 300	25E	870	7.5	ISO 7866



* Samples of aluminium cylinders

Made with high-quality materials and using cutting-edge technology, our aluminium bottles ensure the safety and integrity of the gas contained within. Additionally, their lightweight design facilitates transport and handling, making them the preferred choice for applications where mobility is key.

Aluminium cylinders ready for packaging

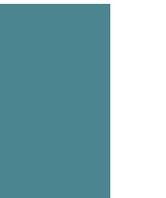
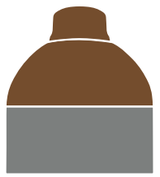
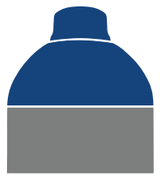
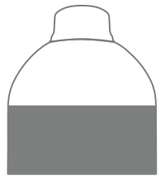


WARHEAD COLOURS

Colour codes for gas cylinder warheads

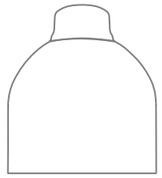
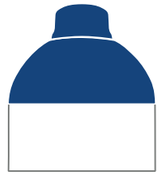
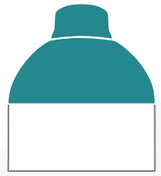
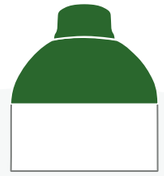
INDUSTRIAL GAS

Below are the colours that, according to the standard, must be applied to the warheads, with RAL 840 HR registration.

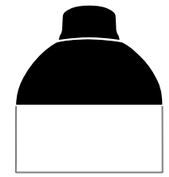
Base Cylinder	Special Colour for Contained Gas		
			
Yellow green RAL 6018	*Dusty grey* RAL 7037	*Jet black* RAL 9005	*Emerald Green* RAL 6001
All Inert Gases	Carbon Dioxide (CO_2)	Nitrogen	Argon
			
Olive Brown RAL 8008	*Gentian Blue* RAL 5010	*Oxide Red* RAL 3009	*Pure White* RAL 9010
Helium	Nitrous Oxide	Acetylene	Oxygen

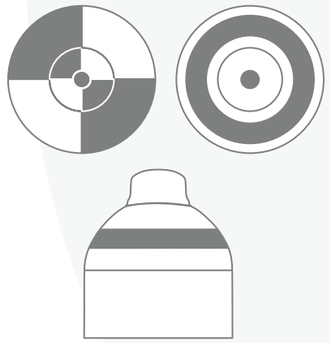
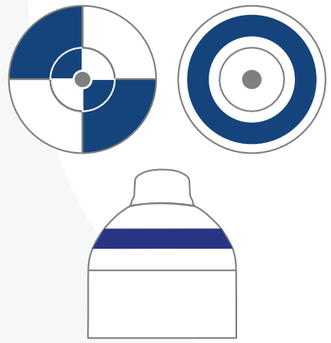
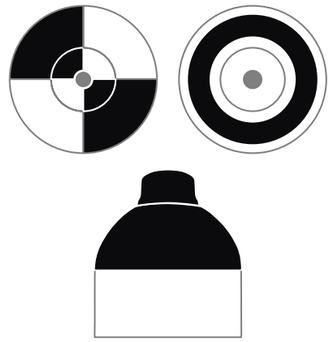
MEDICAL GAS

Special Colour for Contained Gas

			
Pure White RAL 9010	*Gentian Blue* RAL 5010	*Turquoise Blue* RAL 5018	*Emerald Green* RAL 6001
Medical Oxygen	Medical Nitrous Oxide	Medical Nitrogen / N_2 + Nitric Oxide	Medical Argon

SYC Cylinders

	
Dusty grey RAL 7037	*Jet Black* RAL 9005
Medical Carbon Dioxide	Medical Nitrogen

		
Dusty grey RAL 7037	*Gentian Blue* RAL 5010	*Jet Black* RAL 9005
Medical CO_2 Mixture / Medical Oxygen Mixtures	Medical Nitrous Oxide / Medical Oxygen Mixture	Medical Compressed Air / Medical Synthetic Air

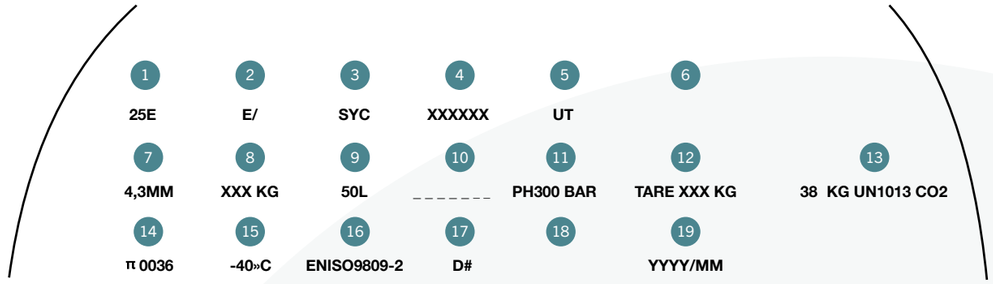


MARKING

Custom cylinders: unique solutions for your specific needs

CUSTOM MARKING

We personalize cylinders with engraving, including thread identification, country of manufacture, manufacturer's mark, serial number, and more.



1. Thread identification of the cylinder
2. Letter identifying the country of manufacture
3. Manufacturer's mark
4. Serial number assigned by the manufacturer
5. Ultrasound test indicator
6. Special customer markings
7. Minimum wall thickness
8. Weight of empty cylinder (3 significant numbers)
9. Capacity
10. Leave 7 blanks (working pressure gas change space)
11. Test pressure
12. Tare: Weight in point (8) + (standard valve and protection guard), 3 significant figures +1,6 Kg
13. Maximum CO2 filling
14. π mark followed by the identification number of the control organism
15. Temperature range
16. Manufacturing standard
17. Characters identifying the country of approval
18. Inspection mark
19. Manufacturing date (YYYY/MM)

REQUIREMENTS

Cylinder Diameter	Letter Height on the Cylinder	Max Characters Allowed	Max No. of Lines
102	5 mm	7 characters	1 line
116	6 mm	20 characters	1 line
140	6 mm	20 characters	2 lines
178 a 230	7 mm	20 characters	2 lines
230	7 - 10 mm	20 characters	2 lines

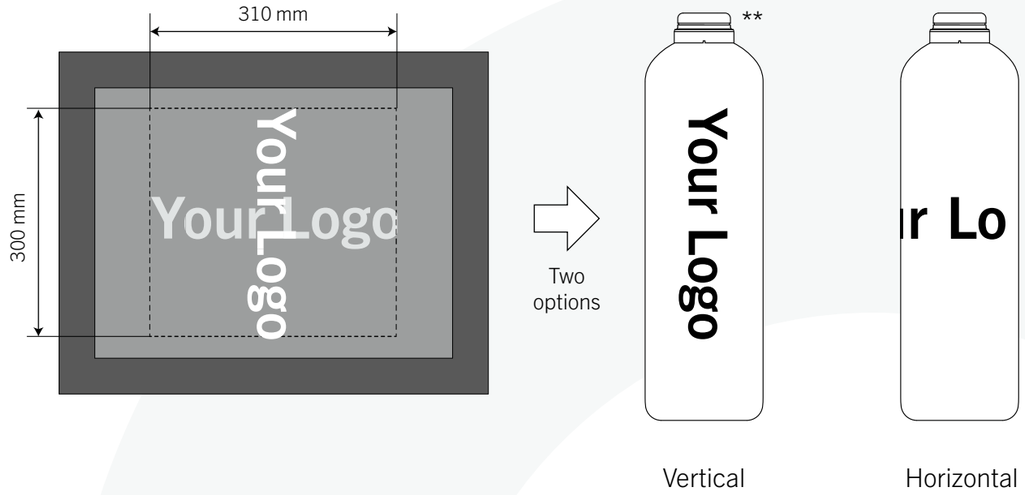


SCREEN PRINTING

Screen printing solutions for precise and professional visual identification of the brand

BRAND CUSTOMISATION

We understand the importance of highlighting your brand. With our custom cylinders, not only do you get a high-quality product, but also the opportunity to effectively promote your brand. Our customisation process ensures that your logo is clearly and professionally displayed on each cylinder.
Below are the requirements:



* Sample 8L - Diameter ∅178

REQUIREMENTS

- Available cylinders
  - 20L
  - Diameter ∅200
- Formato del archivo
  - Logo traced in PDF (the best choice
  - High-resolution JPG/PNG
- MOQ: 25 units
- Colours

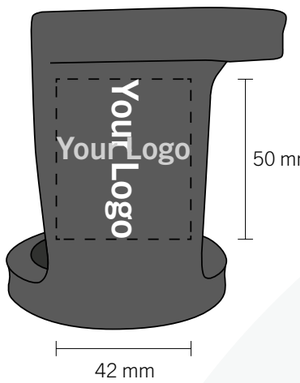
White	Lemon Yellow	Light Yellow	Golden Yellow	Light Green	Light Red	Black
AC 083	AC 035	AC 033	AC 031	AC 040	AC 024	ST 11

SCREEN PRINTING ON PROTECTION GUARDS

A solution to make your brand stand out even more

VARIETY OF GUARDS

These are the protection guards available at SYC. If you can't find what you're looking for, feel free to ask us.







*Sample: Grey Protection Guard

REQUIREMENTS

- Maximum dimensions per face (50 x 42 mm)
- File format for screen printing
  - Logo traced in PDF
  - High-resolution JPG/PNG
- Colours (Pantone Solid Coated and RAL classic)*
- SYC standard protection guards made of PP and ABS:



81678
Black Polypropylene Protection Guard (50kg)



80214
Black Protection Guard RAL 9005 - ABS (40 kg)



80213
White Protection Guard RAL 9010 - ABS (40 kg)



80340
Grey Protection Guard RAL 7001 - ABS (40 kg)

*The colours of the protection guards can be customised, and the colour of the screen printing may vary when applied to black or grey protection guards.

PROTECTION GUARDS

More variety of protection guards for superior protection of large-sized cylinders

PLASTIC AND METAL PROTECTION

Plastic and metal protection guards for even more demanding requirements and larger sizes.

Plastic Protection Guards



81367
IVC Grey Protection Guard for Compact Valve
130 kg



81201
Dark Grey Nylon Protection Guard (4 Faces) 110kg

Metal Protection Guards



80426
Galvanised Standard Approved Cap
160 kg



80416
Galvanised Metal Protection Guard
140 kg

Special Protection Guards



81007
Metal Handle 17E

VALVES

Precision valves for efficient and safe control in every application

WHICH VALVE DO YOU NEED?

These are some of the valves available at SYC. If you can't find the one you're looking for, contact us to explore our wide variety.



81202
CO_2 Biphasic Valve 1S
VPR NF 16-20 mm



81008
CO_2 Valve 17E STD
DIN 6



80363
CO_2 Valve 25E VPR
DIN 6 INL 5-9 mm



80240
O_2 Industrial Valve
25E STD NF



80236
CO_2 Valve 25E STD
NF



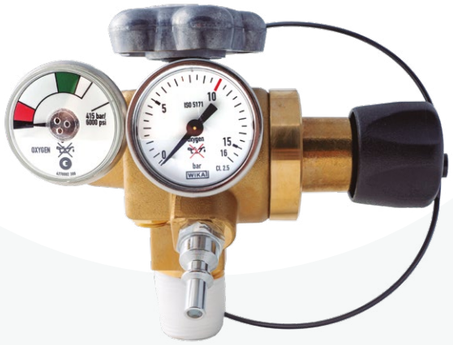
80232
Inert Gas Valve
25E STD NF



80244
O_2 Industrial Valve
NF 215-25 mm



80228
O_2 Medical Valve
25E STD NF



81365
Compact Inert Gas
Valve 300 bars



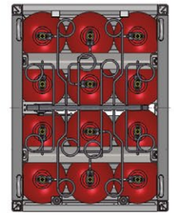
BLOCKS

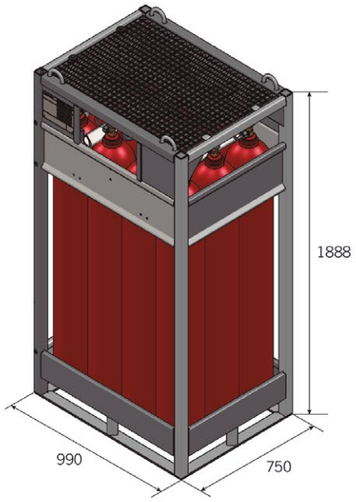
Robust structures to maximise gas storage efficiency

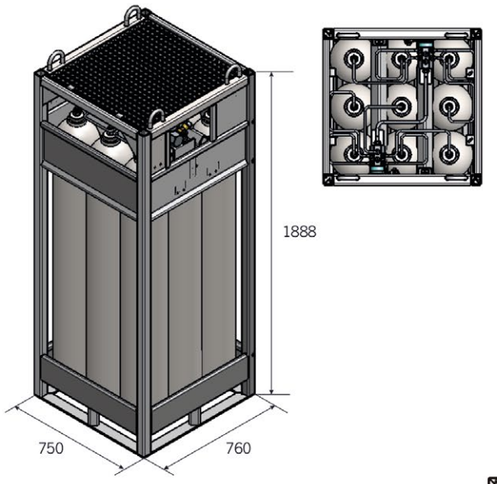
BLOCKS

12-BOTTLE BLOCK

Capacity: 12 cylinders of 50 L
Block weight (including bottles): 197 kg
Max Gas Output: 200 / 300 bars
Reinforced design: Galvanized structure according to EN ISO 1461 standard
Level indicator: Provides a clear view of the cylinder contents.
Higher efficiency: The blocks reduce cylinder movement, interruptions, and residual content.





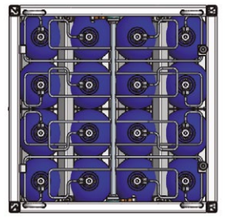


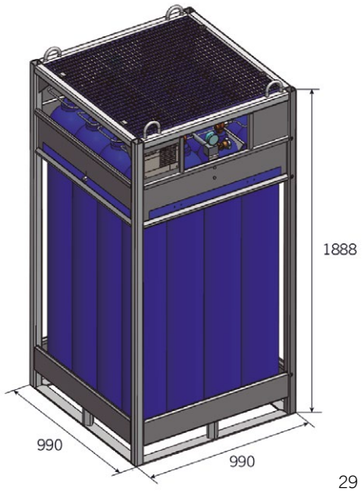
9-BOTTLE BLOCK

Capacity: 9 cylinders of 50 L
Robust construction: These blocks are made from durable and resistant materials, ensuring longevity and the ability to withstand harsh conditions.
Secure holding system: Each bottle is firmly and stably secured inside the block, minimizing the risk of movement or accidental falls.

16-BOTTLE BLOCK

Capacity: 16 cylinders of 50 L
Block weight (including bottles): 240 kg
Max Gas Output: 200 / 300 bar
Robust construction: Galvanized steel frame with stainless steel manifolds
Regulatory compliance: The blocks comply with applicable safety regulations and standards, ensuring safe and reliable handling.







SYC PHILOSOPHY

Innovation, Quality, and Commitment

VALUES

At the heart of our company, with over 60 years of experience, are essential values that not only define our identity but also serve as a guide for our daily operations. From a firm commitment to safety and quality to the constant pursuit of innovation and sustainability, these core values shape SYC's essence, influencing its business practices and contributions to society.



1 SAFETY
Commitment to safety in all operations related to pressurised gases, both for employees, customers, and surrounding communities.

2 QUALITY
Commitment to excellence in the production, storage, and distribution of pressurised gases, ensuring compliance with applicable quality standards and regulations.

3 IMPROVEMENT
We constantly seek ways to improve operational efficiency, minimising costs and maximising productivity.

4 INTEGRITY
Acting with honesty and ethics in all business transactions, relationships with customers and suppliers, and complying with applicable regulations and laws.

5 TRAINING AND DEVELOPMENT
We invest in the professional and personal development of our employees, providing them with the tools and knowledge necessary to perform their duties effectively.

6 CUSTOMER COMMITMENT
We prioritise customer needs and satisfaction by providing safe and reliable solutions that meet their requirements.

SYC Cylinders

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