

# EXCEPTIONAL CYLINDERS FOR EXCEPTIONAL ENERGY





### 5+ MILLION LPG CYLINDERS

Annual capacity, customizable & of various sizes & shapes



### 1,000+ EMPLOYEES

And continuously growing to offer opportunities in all local communities



23+ YEARS

Leading the industry



17+ Nationalities

Expertise from around the world



4 ISO CERTIFICATIONS

Processes that comply with all norms and standards



#### STRATEGIC LOCATIONS

Strategic locations in Africa & the Middle East





### VISION

To manufacture and promote LPG cylinders as a safe and clean energy vehicle, caring about the environment and catering to the energy needs of our communities.



### MISSION

To facilitate the environmental shift towards clean energy through creating awareness, manufacturing LPG cylinders domestically, disrupting the supply chain, innovating in safety and quality and sustaining the Planet, People and Profits



### VALUES

We value Operational Excellence. We are committed. We cater for all.



# IN 1998, A GROUND BREAKING LEBANESE DREAMWAS BORN

taking root in the historic Beqaa valley. Sigma Cylinders has since become one of the largest LPG cylinder manufacturers in the Middle East and the African Continent.

The company name is inspired by Six Sigma, a set of techniques for process improvement and defect minimization that are at the core of Sigma Cylinders' mission statement and process.

With more than 23 years of experience and an ISO certified manufacturing process (ISO X 4) that complies with all norms and standards, Sigma Cylinders is found in four key locations: Lebanon, Iraq, Ghana and Ivory Coast. It now boasts one of the biggest worldwide manufacturing capacities of 5,000,000 cylinders per year.

A team of highly qualified specialists of 17 different nationalities is at the heart of Sigma Cylinders 'success. Together, they are determined to meet and exceed the highest benchmarks of quality, safety and environmental awareness, while continuously improving the client's supply chain. To that end, Sigma's ambitious objectives for the near future include setting up new factories and representative offices around the world.

With rigorous regard to quality, innovation and continuous growth, Sigma Cylinders is setting an unprecedented standard in the industry.



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CÔTE D'IVOIR

GHANA

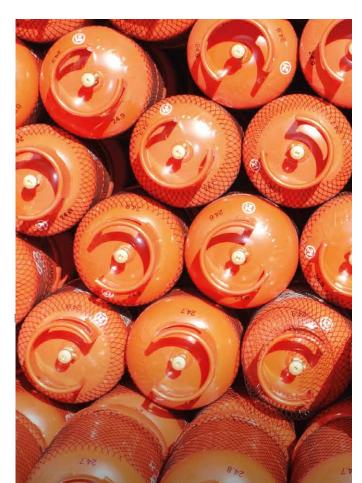


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LEBANON

# WHY SIGMA CYLINDERS

## TURNKEY SOLUTIONS.



### WHY SIGMA

AT SIGMA CYLINDERS, WE VALUE QUALITY, INNOVATION AND CONTINUOUS GROWTH. WE AIM TO SET AN UNPRECEDENTED STANDARD IN THE INDUSTRY WITH ALL OUR SERVICES AND PRODUCTS; THIS INCLUDES OUR LATEST TURNKEY SOLUTIONS.

- **1.** Awareness campaigns: Sigma Cylinders organizes and provides workshops in selected rural areas, raising awareness on the local competition, the benefits of LPG cylinders, advertising approaches, and the economic and social impacts.
- 2. Regulations and norms: Companies in many nations or states require legislative assistance to set working standards for their businesses. In Yemen, for example, the Sigma team was able to enforce regulations while in Uganda, a workshop was organized with UNOC.
- 3. Distribution network: Sigma Cylinders is able to set up distribution networks for our clients including network design, installation, commission and support. This occurs through skid plants within a specified radius of condensed population.
- Procurement of LPG vehicles: LPG cylinder vehicles are necessary to provide for a distribution network, safely and effectively. Sigma can procure these vehicles for our clients at their request.
- 5. Regulating LPG cylinders and their accessories: Sigma has set high-quality standards for all cylinders and their complementary accessories to ensure safety and efficiency. Regulating regularly is thus a vital part of our process.

### WHAT DISTINGUISH THE SIGMA CYLINDERS PROCESSES ARE AS FOLLOW:



EVERY SIGMA CYLINDER IS A TESTAMENT TO THE COMMITMENT AND EXPERTISE OF THE SIGMA TEAM.

### **MECHANICAL PROCESS**

- Design & Customization
- Increased Efficiency
- Defect Reduction
- Inspection & Safety
- Quality Control

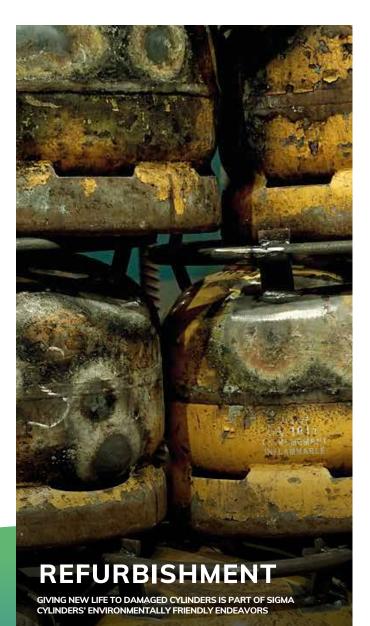
### WELDING PROCESS

- Certified Welders
- Comprehensive Logging of Steel Source
- Welding Traceability
- Equipment Inspection & Maintenance

### **FINISHING PROCESS**

- Quality Control & Testing
- LPG Cylinders treatment with heat, tested with hydrostatic pressure, painted and later on customized with silkscreen printing.

### BY RE-QUALIFYING CYLINDERS, THE COMPANY TAKES AN ACTIVE ROLE IN WASTE REDUCTION AND ENERGY EFFICIENCY.



Quality control and testing become even more gruelling in the refurbishment department, requiring increased steps in the procedures and even more monitoring and inspections.

Aside from the visual inspection, Sigma conducts various lab tests, and monitor the interior of the cylinder through a borescope camera. Following safety ISO specifications, all cylinders are de-gazed and cleaned.

Only then do repairs take place with all the necessary quality controls and inspections.

### **QUALITY**



ISO 3834 International standard for the fusion welding of metallic materials

**ISO 14001** Effective environmental management system (EMS) **ISO 9001** Quality management system

**ISO 45001** Management system of occupational health & safety (OH&S)

### QUALITY IS AN INVESTMENT IN THE FUTURE

Sigma Cylinders' unwavering commitment to quality has become its trademark in a highly competitive industry, catapulting the company to the highest ranks. Sigma can guarantee every cylinder, providing pre-and post-sale assistance for the smoothest customer experience possible.

# ISO CERTIFICATIONS & QUALITY RECORDS

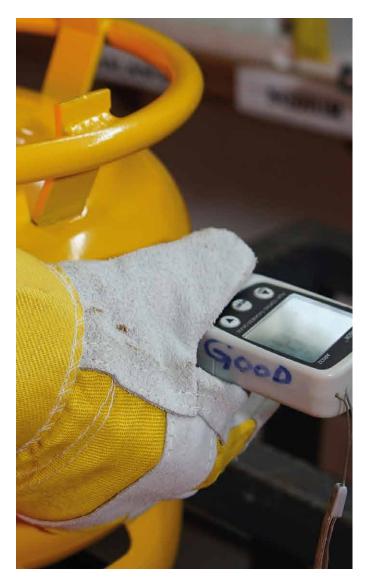
At Sigma Cylinders, comprehensive quality records are kept using a methodical system and following ISO 9001 standards. This allows the company to keep a clear register of performance, test results and reports for easy access and improved output. The records include documentation procedures, production and testing facilities, material marking, and personnel qualifications.

The precision with which these records are kept has allowed Sigma Cylinders to obtain various ISO certifications that both guide its process and vouch for its commitment to quality.









### LAB

In the world of LPG cylinder manufacturing, nothing is more vital than safety. Thus testing is important at every stage of the process and ensures the leading quality of the Sigma product line.

All our four labs in each country are officially approved and certified by governmental related entities. Our in-house, state of the art facility can perform destructive and non-destructive lab tests on raw material and in-production batch samples. All the machinery is calibrated and certified to guarantee consistency. Quality Control officers inspect the process and also perform batch sample tests in the lab on raw material. Sample cylinders are produced and tested as well to ensure consistency and quality based on specifications of the client and standards, before proceeding to production. In total, there are 18 tests performed, divided into two categories; destructive and non-destructive tests.

### SIGMA SPECIALISTS

DESIGNERS & ENGINEERS are responsible for precise calculations and designs based on the initial client drawings briefing. CERTIFIED QUALITY OFFICERS & ENGINEERS dispersed throughout the factory, inspecting, testing, and detecting even the most minute of imperfections.

THIRD-PARTY INDEPENDENT & GOVERNMENT INSPECTION BODIES regularly monitoring and inspecting every single aspect of the process to make sure Sigma Cylinders remains perfectly in line with their specifications and guidelines.

### WELDING SAFETY PROCEDURE & TRACEABILITY

As part of the continuous quality control, inspections are rigorously performed before, during and after welding. This is particularly important to maintain detailed logs for traceability purposes.



### PRODUCTS



### FROM PORTABLE, SMALL CYLINDERS TO LARGE HOUSEHOLD OR COMMERCIAL UNITS

Sigma Cylinders product line is extensive and highly adaptable to client requirements and requisite standards and norms. Sigma's LPG cylinder sizes range from 3Kg to 50Kg.

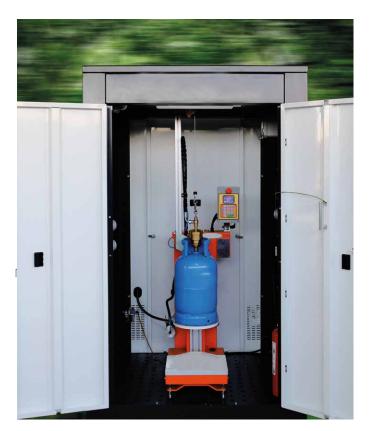
Based on the client's preferences, the type of handle, foot, valve, final coat colour and silk printing can be customized.

Requiring less steel, less heating and less crude oil, the low-weight products fall within the framework of Sigma's commitment to environmental action.



## OTHER SERVICES.

IN ITS CONTINUOUS QUEST TO PROVIDE CLIENTS WITH A FULL RANGE OF PRODUCTS & SERVICES.



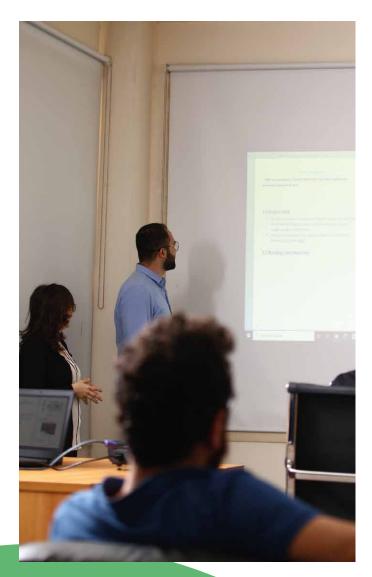
Sigma Cylinders has partnered with the market's best to offer accessories and services that complement LPG cylinders including LPG Cylinders accessories and filling stations.

Vetted for the best features, highest durability and the most practical functionality, the Sigma Cylinders range of accessories represent the same quality standards they have come to be known for.

- 1. Burners
- 2. Stoves
- 3. Regulators
- 4. Hoses
- 5. Iron Sitters

# SIGMA ACADEMY.

CONTINUOUS LEARNING LEADING TO GUARANTEED GROWTH.



From customer relations workshops through to the most technical of seminars, Sigma continuously invests in its team and their personal and professional development.

The objective is to create the safest product with the highest quality standards while catering to clients' specific requirements and assisting them through the entire process.



### **EXCEPTIONAL CYLINDERS FOR EXCEPTIONAL ENERGY**



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