



NATIONAL INDUSTRIAL GASES

AL MANAA GROUP OF COMPANIES

www.nigc-fuj.com



ISO 9001:2015



CB-020-MS





LIQUID SUPPLY



**COMPRESSED
GAS CYLINDERS**



RACKS



DURA & DEWARS



DRY ICE



**WELDING & CUTTING
EQUIPMENT**

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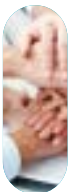
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COMPANY PROFILE

National Industrial Gases (NIG) belongs to Al Manaa Group of Companies. It started its business in Sharjah in 2004. NIG manufactures and distributes industrial and medical gases such as: Nitrogen, Oxygen, Medical Oxygen, Argon, Argon Mixture Carbon di-oxide, Nitrous Oxide, dissolved acetylene, Dry Ice and Specialty Gases. It caters to the needs of diverse industries like, Oil & Gas, Hospitals & Laboratories, Food & Beverages, Shipping, Steel & Fabrication, Fiber Optic Plants, Lamps & Bulbs Manufacturing, and other areas where gas application is prevalent.

Primary activities are as follows:

- Production, marketing and supply of industrial, medical, mixtures and specialty gases.
- Refilling of gases.
- Trading of gas related accessories, liquid storage tanks, cylinders, and providing gas related services.

During the past three years, we have expanded our base, and established a filling station and operations in Fujairah to supply our products to the customers in Northern part of the UAE.

Under the guidance of professional top management, we are dedicated and committed to provide continuous quality products and services, build long-term relationships with customers and suppliers, and contribute to the welfare of society.

NATIONAL INDUSTRIAL GASES was granted the ISO 9001:2008 Certificate in May 2014 on account of its commitment to achieve and perfect the product quality and services through the implementation and adherence to the laid down Quality System, Procedures and Organization Objectives.

OUR MISSION



To supply industrial-medical gases products and services of superior quality and value that will meet all our customers' requirements

OUR VISION



We strive to become a market leader in providing the industrial and medical gases products and Equipment. Through our commitment to products quality and service, we aim to exceed the expectations of our customers.



OUR VALUES

Commitment towards our customers:

Our adopted policy, from top to the bottom is concerned with responding to the needs of our customers and their satisfaction noting their needs on the short, medium and long runs. Hence, to become ready to serve and assist them at all times.

Quality:

Our Products are of High quality with the best specifications according to the adopted international standards. The granted ISO 9001-2008 ensures that we consistently provide products and services that meet customer requirements.

Safety:

Is a core value at NIG. To carry out all operations in a safe manner, we implement Tools like hazard identification, consequence evaluation and risk assessment. We train all our staff on procedures and skills of occupational and preventive safety to maintain zero accident.

Teamwork:

All staff contribute their fair share to the workload so that the company can accomplish its goals in a timely and satisfactory manner.

Accountability:

We are responsible that our products and operations are in the interests of the community and not harmful to the environment.

Trust:

Building trust is vital when bringing products and services to the market. It's the relationship that we forge with our customers and the trust we create that matters to our success.



OUR ASSETS



AIR SEPARATION PLANT:

This plant is manufactured by Air Cryo, USA, and it works by liquefying the air by fractional and distillation process. The production capacity of the plant is 13 tons/hr

ACETYLENE PLANT:

The inter-reaction between Calcium Carbide and water produces Acetylene with purity of 970/0. The plant has production capacity 100 m³/hr. The plant operation runs by technicians with relevant experience and skills.



HYDROGEN PLANT:

Electrolysis operation of water produces Hydrogen gas (H₂) with purity of 99.999%. The plant has production capacity of 1440 m³/day.



COMPRESSED FILLING FACILITIES:

A set up of Cryogenic vertical storage tank, HP cylinder filling pump, vaporizers and manifold system to bottle gases.

- Industrial Oxygen Filling Station
- Medical Oxygen Filling Station
- Nitrogen Filling Station
- Argon & Argon Mixture Filling Station
- Carbon Dioxide Filling Station
- Hydrogen Filling Station

HYDRO-TESTING & CYLINDER REPAIR WORKSHOP:

The workshop is equipped with the necessary machineries needed for cylinders testing, valves replacement, and painting.



DRY ICE MACHINE:

This machine makes dry ice pellets of liquid CO₂. The production capacity is 50kg/hour with dry ice size 10mm, 16 mm diameter.

TRANSPORTATION FLEET:

The company owns a number of delivery vehicles with different capacities that are suitable and capable to carry our products to all our customers through UAE at any time.





OUR PRODUCTS

INDUSTRIAL GASES

Acetylene (C₂H₂)

Acetylene is a colorless, invisible, slightly lighter than air, non-toxic and does not support life; it can cause asphyxiation. As Industrial acetylene is slightly impure, it smells like garlic. We offer Acetylene gas with purity 99.5%.

- Approximately 80% of the annual acetylene production of the worldwide is used for chemical syntheses.
- Acetylene has become increasingly prominent as a raw material for a whole series of organic compounds, among them acetaldehyde, acetic acid, and acetic anhydride
- The remaining 20% of the acetylene production is principally used for oxyacetylene cutting, heat treating, and welding.
- High purity grades are used in the laboratories

Oxygen (O₂)

We offer Oxygen with purity of 99.8%. Oxygen is a colorless, odorless, non-flammable and tasteless gas, slightly heavier than air. Oxygen is essential for life, and can be used as forging, plasma cutting and laser cutting gas. It can be used to increase the production capacity of oxidation processes, increase performance and efficiency in many industries, and enhance combustion in furnaces. Oxygen is critical

for cell growth applications and frequently used in the treatment and prevention of hypoxemia and hypoxia. In addition, Oxygen is used to maximize wastewater treatment capacity.

Nitrogen (N₂)

Nitrogen is a non-flammable, colorless, odorless and tasteless gas slightly lighter than air. It is non-toxic but do not support life and can act as asphyxiant. We offer liquid nitrogen and compressed nitrogen gas of purity 99.999 %. Nitrogen can be used as an agent in cooling, chilling and food freezing. It can be used to freeze and preserve blood tissues and other biological specimens.

- As an inert gas, nitrogen is used as a blanketing agent to separate sensitive products and processes from air, and as a purging agent in piping and equipment to prevent contamination.
- As a pressurizing gas, nitrogen can help propel liquids through pipelines. It is also used to shield oxygen-sensitive materials from the air.

OUR PRODUCTS

- Another use of Nitrogen is to prevent oxidation in heat-treating processes and in welding and metal fabrication.
- In addition to the above, it is also used to increase reservoir reserves and fracture hydrocarbon-bearing formation in oil production.

Argon (Ar)

Argon is a non-flammable, colorless, odorless and tasteless gas slightly heavier than air. It is non-toxic but do not support life and can act as asphyxiant. We offer argon gas and liquid argon of purity 99.999%. It can be mixed with other gases to create specialty blends as needed. Argon gas is used in welding applications such as the welding of specialty alloys, and in the production of light bulbs and lasers. It can also be used as an inert shield gas to enhance arc stability of gas metal arc welding.

In metal production, argon is used to prevent oxidation during processing.

Carbon Dioxide (CO₂)

Carbon dioxide is a colorless, odorless and non-flammable gas. We offer compressed carbon dioxide and liquid carbon dioxide of purity 99.99%. It is used as an agent in cooling, chilling and freezing applications, extinguishing fire, preventing canned food from being spoiled, and welding some metals. It is also used as a pressure gas in perfumes and insect killer bottles. CO₂ is an important component of photosynthesis. It is used in greenhouses as it increases the productivity through improved plant growth.

Helium (He)

Helium is an inert and non-flammable gas with high



thermal conductivity, low molecular weight and size, and lowest boiling point known. It is also tasteless, odorless and colorless gas with purity reaches up to 99.9999%.

Helium is mostly used for welding purposes as it can create an inert atmosphere that prevents metals from oxidation. It is used in the manufacturing of semi-conductors, neon tube lights and electronic lamps. Helium is used in diving as a breathing gas where it is mixed with oxygen, also as a medical anesthetic in some psychological cases. Because it is lighter than air, Helium is used to inflate balloons and airships.

Hydrogen (H₂)

Hydrogen is a colorless and highly flammable gas. We offer Hydrogen gas of purity 99.999%. Hydrogen is used to enhance plasma welding and cutting operations, upgrading heavy crude oils into refined fuels, fuel cells, and as a heat-treating furnace atmosphere for parts manufacturing.

Dry Ice (solid form of carbon dioxide- CO₂)

we offer solid carbon dioxide (CO₂) dry ice. It is used in the food distribution industry, pharmaceutical, meat processing, blast cleaning, medical & clinical products shipping, research and airline catering.

EQUIPMENTS & TOOLS

We offer:

- Pressure Regulators: Oxygen, Nitrogen, Argon, Carbon Dioxide, Air, LPG, Helium Balloon, Nitrous Oxide regulators as well as single and double stage Acetylene regulators.
- Flow Meters: To measure the flow of gases or mixtures. We offer Electrical Y heated flow meters and Economical flow meters.
- Welding and Cutting Kits: That includes the cutting torch, hose, two regulators, and welding set.
- Valves: We offer Oxygen, Nitrogen, Argon, Carbon Dioxide, Air, Helium Balloon, Nitrous Oxide as well as Acetylene valves.



Gas Welders



Argon Regulator co2



Helium Regulator



Regulator



Air/Nitrogen Regulator n2

OUR PRODUCTS

MEDICAL GASES



Oxygen is one of the most important elements required to sustain life. Without it, our health begins to suffer and we die. Therefore, Oxygen importance in the field of healthcare cannot be underestimated.

Medical grade oxygen is an odorless, colorless and tasteless gas and is used:

- To provide life support for artificially ventilated patients

- As aid resuscitation of asphyxiated newborns

To relief the acute cardiovascular disease

In low concentrations when there are breathing difficulties due to conditions such as chronic obstructive airways disease (COAD/COPD)

In the treatment of acute and severe asthma, sleep apnea (a sleep disorder in which a person has irregular breathing at night and is excessively sleepy during the day). Cluster headaches (attacks of severe, one-sided headaches over several weeks). Shock (a dramatic reduction in blood flow that, if left untreated, can lead to collapse, coma and even death) and in other situations where localized blood supply is poor.

For resuscitation purposes by trained persons, where oxygen supply to the body is reduced due to medical emergency.

When the oxygen capability of the blood is reduced such as in carbon monoxide poisoning or severe anemia (a condition that occurs when there is a reduced number of red blood cells or hemoglobin concentration).

As a carrier gas or as a diluent for anesthetic gases or vapors.

When gas is trapped in body spaces such as in pneumothorax (air that is trapped next to a lung resulting in collapse of the lung) or air embolism or other gas disturbances such as decompression sickness (associated with diving)

All cylinders used for the storage of compressed medical oxygen are manufactured from either high tensile steel or aluminum.

The color-coding of the shoulders of compressed medical oxygen cylinders is white

Aluminum Medical oxygen cylinders are seamless and about 40% lighter than steel

Compressed Air

Medical compressed Air is a medicinal gas, supplied

in cylinders filled to a high pressure. Medical Air Contains Oxygen 21%, Nitrogen 79% and is used:

- As a carrier for some anaesthetic agents.
- To provide clean air in ventilators and incubators.
- To power air driven medical equipment such as resuscitators.

Nitrous oxide N2O

commonly known as laughing gas is a colorless, odorless non-flammable gas, with a slightly sweet taste, and it is used in surgery and dentistry for its anaesthetic and analgesic effects.

Nitrous oxide (N₂O) on its own can be used safely for only a short period (because the lack of oxygen in pure N₂O can lead to unconsciousness and even death). Hence, the “laughing gas” used now is called N₂O-O₂, and contains at least 30% oxygen (that’s all the machines used nowadays will permit). Usually, the mix is about 70% oxygen to 30% nitrous oxide. Nitrous oxide, sometimes called “laughing gas,” is one option your dentist may offer to help make you more comfortable during certain procedures. It is not intended to put you to sleep. You will be able to hear and respond to any requests or directions the dentist may have.

ENTONOX

(medical nitrous oxide and oxygen mixture)

ENTONOX is a ready-to-use medical gas mixture consisting of 50% nitrous oxide and 50% oxygen for use in all situations when seeking analgesia and sedation with rapid onset and offset.

ENTONOX nitrous oxide/oxygen mixture provides the pain relieving properties of nitrous oxide with the benefits of additional oxygen without producing unconsciousness. It is a widely used analgesic for acute, short-term pain relief in a diverse range of clinical situations, from painful procedures to childbirth.

It is used exclusively for short-term procedures inevitably involving pain, including (but not limited to):

- Acute trauma
- Tooth extraction and other brief procedures in dental work
- Wound and burn dressing, wound debridement and suturing
- Fracture and joint manipulation
- Colonoscopy
- Venopuncture
- Labour



Valves:

Chrome plated, Pin index or Hand wheel type



Regulators

Trolleys



PRODUCTS SUPPLY OPTIONS

- Cylinders
Different sizes from 5 Liters to 50 Liters water capacity
- Packaged gases
Variety of Racks Sizes: 1x8, 1x12, 1x16, 1x30, 1x36
- Liquid Dewars:
Variety of Sizes: 2 Lts, 5, 10, 25, 30, 50, 200, 230, and 240 Lts
- Liquid Bulk.

INDUSTRIES WE SERVE

- Welding and Metal Fabrication
- Healthcare
- Oil and Gas
- Food and Beverage
- Electronics & Electrical
- Construction
- Marine

SAFETY AND ENVIRONMENT

- NIG reflects a good image and gets client good impression on safety and quality of supplied products.
- We ensure that employees conduct their work in a way that reflects the safety principles that prevent accidents and injuries.
- We ensure a safe workplace by good housekeeping and clearing all the unwanted stuff such as waste materials, oil, grease, and spillage of chemicals
- Contractors working at NIG premises must respect the Safety, Health and Environment Protection rules and requirements.
- Delivering our products safely is extremely important to NIG. To keep our products safe, we emphasize driver and safety training.
- We implement Preventive maintenance program on our fleet to ensure safely running on the roads and avoid breakdowns.





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