



# HEALTHCARE PORTFOLIO

A Division of Pakistan Oxygen

# ABOUT US

Pakistan Oxygen Limited is a market leader in industrial and medical gases, medical engineering and pipeline design services, medical equipment, and welding products along with associated solutions. The company has an 85-years' legacy of trust, quality, and reliability.

With a highly trained workforce, Pakistan Oxygen remains committed to serving more than 1,500 customers in Pakistan and living up to its vision "Oxygen for Life & Sustainable Growth".

Medical gases have transformed modern day medicine and revolutionised patient care. POL Healthcare provides a vital lifeline from anaesthesia to respiratory assistance

We offer solutions and equipment in healthcare including design & installation of pipelines & Medical Engineering Services (MES), as well as construction of on-site PSA plants.

**#POLCARES**

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# MEDICAL GASES

# OUR COMPLETE RANGE OF MEDICAL GASES

We offer a complete portfolio of compressed and bulk medical gases for healthcare applications. Product groups that we offer in the healthcare segment include primarily breathing gases and anaesthetics to meet the requirements of analytical medical research, highly purified gases as well as calibration, carrying, and zero-gases are available in the POL gas portfolio. The gases that we offer include oxygen, nitrogen, carbon dioxide, hydrogen, helium, nitrous oxide and ENTONOX®.

These gases may be used for the following purposes in your hospital.

## Uses of medical gases

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### Medical gases

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### Uses

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Medical compressed oxygen & liquid oxygen

- Essential for human respiration to sustain life
  - As a carrier gas to deliver anaesthetic agents to the tissues of the body
  - In respiratory therapy to increase the amount of oxygen and decrease the amount of other gases circulating in the blood stream
  - As the basis for almost all modern anaesthetic techniques as well as pre-and post-operative management
  - To provide life support by restoring oxygen levels
  - In the management of sudden cardiac and respiratory arrest, whether drug-induced or traumatic
  - In the resuscitation of the critically ill when the circulation is impaired and in neo-natal resuscitation
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Nitrous oxide

- As a base anaesthetic generally supplemented with more potent anaesthetic agents
  - As an effective anxiolytic in low doses
- 

Entonox®

- As an analgesic agent in first aid, emergency services, obstetrics, ambulances, nursing services and in medical and dental surgeries
  - To relieve short-term pain including: acute trauma, dental procedures and other painful procedures such as childbirth, wound and burn dressing, wound debridement and suturing
- 

Specialty gases

- A range of specialty gases such as mixtures and high purity gases are available upon request; these gases are widely used in labs for research, culture preservation and testing purposes
-

Medical Carbon dioxide

- As a pure gas or in special mixtures with other gases
- In liquid form, it is used to freeze tissues in cryosurgery
- To supplement various anaesthetic and oxygenation mixtures under special circumstances such as cardiac pulmonary bypass surgery and management of renal dialysis

Medical air

- For human respiration via breathing apparatus
- Dry grades used to drive surgical air tools
- To replace contaminated atmospheric air
- As a carrier gas for volatile anaesthetic agents
- As a power source for pneumatic equipment
- In ventilators and incubators to provide uncontaminated and controlled air flow

Liquid nitrogen

- In cryosurgery to freeze tissue
- To store biological products such as blood, living tissues and semen for artificial insemination
- In routine equipment maintenance of the cooling magnets in MRI's or NMR's

Heliox

- Mixture of oxygen and helium; used as a vehicle for assisting respiration and gaining access to obstructed pathways



# OTHER THERAPEUTIC INDICATIONS OF MEDICAL GASES

## Medical oxygen

Specific applications of medical oxygen include Normobaric and Hyperbaric therapies. The details of these are provided below:

### Normobaric oxygen therapy

This oxygen therapy is indicated:

- for the treatment or prevention of acute or chronic hypoxia, irrespective of genesis
- as the propellant gas in nebulizer therapy
- as topical treatment of local hypoxia
- as adjunctive treatment in wound care
- for the treatment of acute attack in patients with an established diagnosis of cluster headache

### Hyperbaric oxygen therapy

Hyperbaric oxygen is indicated for the treatment of conditions where it is beneficial to increase the oxygen content of blood and other tissues above that which is attainable under normobaric pressure.

This therapy is used:

- for the treatment of decompression sickness, air/gas emboli of other genesis and carbon monoxide poisoning
- to treat carbon monoxide poisoning in patients that are or have been unconscious, that have shown neurological signs, cardiovascular dysfunction or severe acidosis and in pregnant females all irrespective of COHb
- as an adjunctive treatment for osteoradionecrosis and clostridial myonecrosis (gas gangrene)

## Contraindications, special warnings & precautions for use

- There are no absolute contraindications to the use of medical oxygen, but the inspired concentration should be limited in the case of premature infants and in patients with chronic bronchitis and emphysema
- Special care is needed when medical oxygen is administered:
  - to neonates where the inspired concentration should not exceed 40% because of the risk of retrolenticular fibroplasia
  - to elderly chronic bronchitic patients in whom the inspired concentration should only be raised in stages of 1% and probably should not exceed 30%
  - in hyperbaric chambers in the management of conditions such as carbon monoxide poisoning, anaerobic infections and acute ischaemic disease; convulsions may occur at 3 bar (g) after a few hours
- Careful monitoring of oxygen levels on the breath, blood and tissue is required to ensure that appropriate concentrations are not exceeded
- Oxygen supports combustion; naked flames and smoking are prohibited when medical oxygen is in use
- Under no circumstance should oil or grease be used to lubricate any part of the compressed medical oxygen cylinder or the associated equipment used to deliver the gas to the patient



- Where moisturising creams are required to use with the facemask etc., only an approved cream should be used, and under no circumstances should oil based creams be used; ensure that hands are clean and free from any oils or grease
- Care is needed when handling and using compressed medical oxygen cylinders

## Medical nitrous oxide

Nitrous oxide is used in surgery and dentistry as an anaesthetic and analgesic agent. It is used:

- in the relief of severe pain, usually in emergency situations, by inhalation with 50% oxygen
- in short-term procedures which inevitably involve pain, such as wound and burn dressing, wound debridement and suturing
- in dental work to provide short-term analgesia for tooth extraction and other brief procedures, administered with 50% oxygen
- occasionally as an insufflating agent in laparoscopy
- in cryosurgery as a refrigerant

### Contraindications, special warnings & precautions for use

Nitrous oxide should not be used with any condition where gas is entrapped within a body and where its expansion might be dangerous, such as:

- Head injuries with impairment of consciousness
- Artificial, traumatic or spontaneous pneumothorax
- Air embolism
- Decompression sickness
- Following a recent underwater drive
- Following air encephalography
- Severe bullous emphysema
- During myringoplasty
- Gross abdominal distension
- Intoxication
- Maxillofacial injuries
- In patients having received recent intraocular injection of gas (such as SF<sub>6</sub>)



# QUALITY OF MEDICAL GASES

Medical gases are medication that significantly support human life, reduce pain sensitivity and support other aspects of healthcare. As such they are subject to pharmaceutical traceability and must be delivered in gaseous or liquid form under specific transport conditions by personnel trained to handle these products. Reliability of supply is also critical.

POL realizes the criticality of healthcare supply and has multiple plants across the nation through which to ensure supply reliability as well as a Code of Ethics that always puts Healthcare customers first.

Our production and distribution employees are trained and our processes and equipment ensure pharmaceutical production of the required quality. Our production facilities are also regularly inspected by both the local and the international POL quality teams to ensure that we are fully compliant to the international standards. Because of this stringent focus on quality at all stages of production and distribution, the purity and quality of POL medical gases comply with both the national and international standards.

## Compressed medical oxygen standards

Specifications	Standards	
	European Pharmacopeia 1999	Pakistan Oxygen Standard
Oxygen purity	99.5% (min)	99.5% (min)
Moisture	≤ 67 vpm	< 50 vpm
Carbon dioxide	≤ 300 vpm	< 300 vpm
Carbon monoxide	≤ 5 vpm	< 5 vpm
Odour	None	None

## Compressed nitrous oxide standards

Specifications	Standards	
	European Pharmacopeia 1999	Pakistan Oxygen Standard
N <sub>2</sub> O purity	98.0% (min)	98.0% (min)
Moisture	≤ 67 vpm	< 120 vpm
Carbon dioxide	≤ 300 vpm	< 300 vpm
Carbon monoxide	≤ 5 vpm	< 10 vpm
Nitric Oxide	≤ 2 vpm	< 2 vpm

# OUR SUPPLY OPTIONS

## Bulk Distribution System

The medical oxygen supply to a hospital is of critical importance. To ensure that you, the customer, have reliable and continuous oxygen supply that is both cost-and space-efficient, you may consider having a Vacuum Insulated Evaporator (VIE) installed.

In this supply mode, medical oxygen is supplied in liquid form by our dedicated fleet of cryogenic tankers into the vacuum insulated bulk storage vessels called VIEs that we usually own and maintain on customer premises.

This method ensures a safe and cost-effective supply of medical oxygen to the customer according to their demand schedule. Oxygen in liquid form occupies less space than in gaseous form and thus space is also efficiently utilized.

If you already have a VIE on-site, perhaps you might consider a re-size to reach the right balance between supply and cost efficiency. Whatever your requirements, you can count on our dedicated medical sales team to advise you accordingly.

### Size availability of oxygen storage vessels

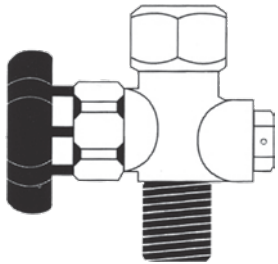
Details	VIE 3,000	VIE 6,000	VIE 11,000	VIE 20,000
Capacity (m <sub>3</sub> )	2526	4210	8420	16840
Height (mm)	3480	4785	7430	9430
Diameter (mm)	1900	1900	1900	2200
Full weight (kg)	6210	10050	16440	33140
Max working pressure (Psi)	1700	1700	1700	1700



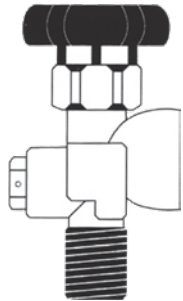
# OUR SUPPLY OPTIONS

## Cylinder Distribution System

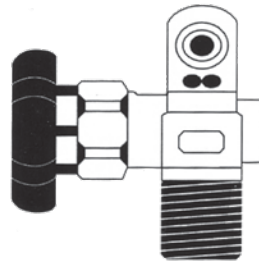
Pin index valve



Side outlet valve






Top outlet valve




POL provides a variety of portable compressed gas cylinders for the hospitals' use. This method satisfies hospitals' demand for flexible delivery of gases. We supply liquid medical oxygen and nitrogen in liquefied gas cylinders known as XLs, and gaseous oxygen, nitrogen, helium, hydrogen, carbon dioxide, special gases and other products in cylinders. The cylinders are supplied in high or low pressure and a range of different sizes, dependent on the properties of the gas and the usage of the customers.

### Range of cylinders provided for compressed medical gases

 Oxygen	5 L water capacity	10 L water capacity	47 L water capacity
Gas capacity in CUM	0.8496	1.699	6.796
Valve operation	Pin index	Side and top outlet	Side and top outlet
Cylinder pressure full (bar)	137	137	137
 Nitrous Oxide	5 L water capacity	10 L water capacity	47 L water capacity
Gas capacity in CUM	0.8496	1.699	6.796
Valve operation	Pin index	Wheel type	Wheel type
Cylinder pressure full (bar)	80	80	80

 Air	5 L water capacity	10 L water capacity	47 L water capacity
Gas capacity in CUM	0.8496	1.699	6.796
Valve operation	Pin index	Side and top outlet	Side and top outlet
Cylinder pressure full (bar)	137	137	137

 ENTONOX® (50% O <sub>2</sub> /50% N <sub>2</sub> O)	5 L water capacity	10 L water capacity	47 L water capacity
Gas capacity in CUM	0.8496	1.699	6.796
Valve operation	Pin index	Pin index	Pin index
Cylinder pressure full (bar)	137	137	137



# MEDICAL ENGINEERING SERVICES

Pakistan Oxygen is offering following engineering services in the Healthcare sector:

**Installation of:**

Medical Gas Pipeline Systems (MGPS)

Medical Air Plant

Medical Vacuum System

Anesthetic Gas Scavenging System (AGSS)

Manifolds and Control System (Medical oxygen, nitrous oxide, medical air etc.)

Medical Gas System Equipment (Valves, flow meters, alarm systems, terminal units etc.)

Facility Management (Maintenance of MGPS – New Focus Area)

Trainings on MGPS System





# OXYMED™ BEDHEAD UNIT

# HORIZONTAL

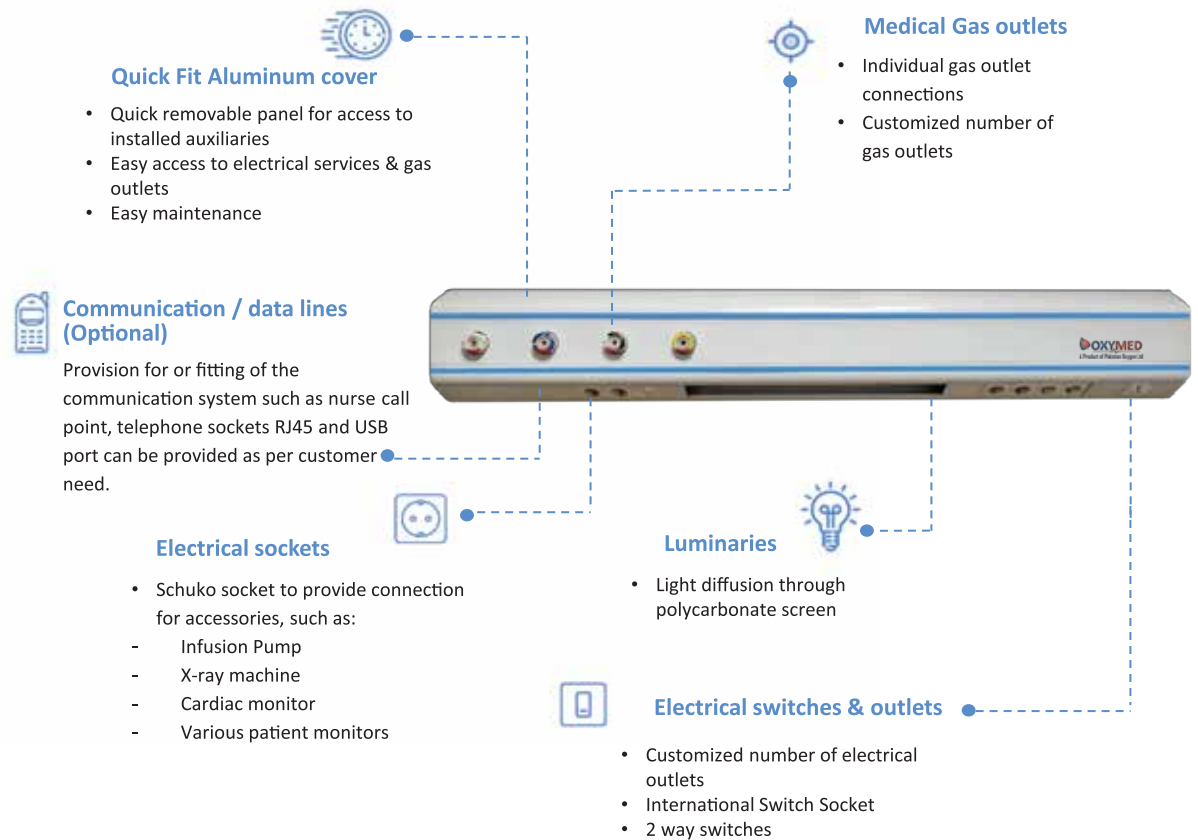
## Bedhead Units

OXYMED™ Bedhead units have been designed in accordance with European standards with aesthetics. They offer a safe way of gas trunking and meet the facility needs of the patient, making it a suitable choice for installation in any general ward, private room, or ICU.

OXYMED™ Bedhead Units have provisions for:

1. Distribution of medical gases and vacuum lines
2. Luminaries and night lighting
3. Distribution of electricity, alarm's reporting, and communication lines

Our exceptional quality bedhead units include multiple accessory rails for equipment management with the provision of modification to meet the future needs. They can be customized with the addition of multiple socket outlets, which are easily integratable to hospital's infrastructure and offer a safe, reliable and attractive workflow solution with our robust design.

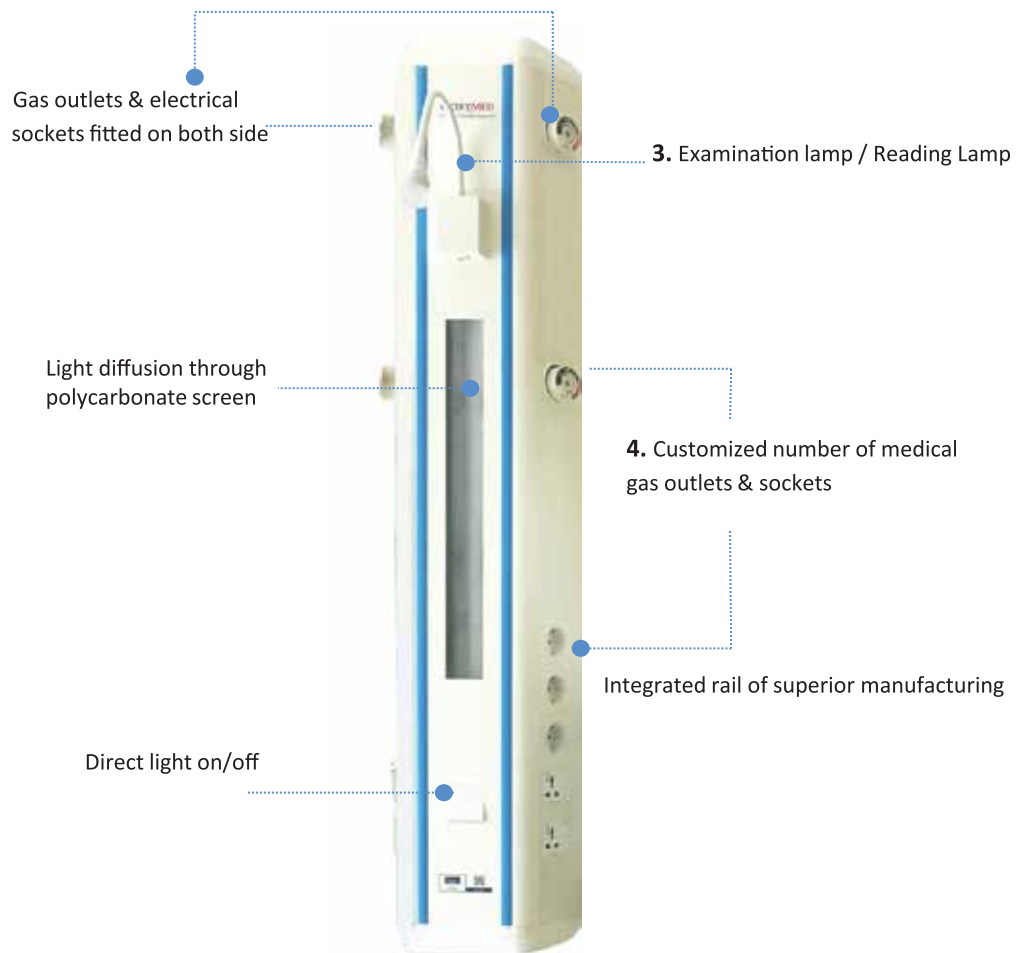




# VERTICAL

## Bedhead Units

One vertical bedhead unit supports two beds with an economical configuration allowing equipment management through a vertical accessory rail.



# ACCESSORIES



**REGULATOR**



**VENTURI  
UNITS**



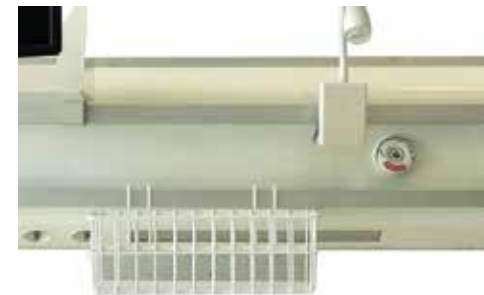
**EXAMINATION  
LAMP**



**PATIENT  
MONITOR STAND**



**THERMAL  
UNITS**



**RAILING  
TRAY**

# TECHNICAL DETAILS

## Bedhead Supply Units

Integrated OXYMED™ units are made of several extruded aluminum profiles to make up the different models. The surface finish is epoxy polyester painted, oven-dried or anodized, including front inspection covers and side covers. Diffusers for lighting modules are made of striated polycarbonate.

OXYMED™ units are intended to equip all kinds of medical premises; consisting of aluminum profiles fixed on the wall and equipped with all necessary elements to fulfil the requirements of its applications.

### Key Features & Benefits

- Medical gas outlets
- A full range of electrical sockets
- Data and communication lines
- Nurse call system
- Superior quality integrated rails with safety locks
- Fully modular and reconfigurable design
- Custom made in accordance with hospital's requirement
- Superior aesthetic design
- Easy to maintain & clean
- Medical grade casework makes infectious control easier & increase durability

## TECHNICAL SPECIFICATION

Material	AA 6063, anodized /powder coated.
Demension	259 x 111 x length (mm)
Linear Density	2.5 kg / ft
Powder Coating	RAL Color Series (70 micron), Jotun Corro Coat PE
Side Cover	Acrylonitrile butadiene styrene (Off-White)
Gas Terminal Standard	BS ISO-9170 (Dia. 50 mm)
Power Supply	220-230 V, 50-60 Hz
Rated Current	13 /20 A
Fluorescent Light	Philips LED (5/10 W)
	Light dimensions (550 / 1000 mm)
Wiring	2.5 / 1.5 mm
Electrical Accessories	International Switch Socket: 13 A Clipsal
	Schuko Socket: 13 A Clipsal
	Gang Switch: Clipsal
	Breaker- 20 A
	Nurse Call point & USB port (Optional)

# LICENSES & CERTIFICATIONS

OXYMED™ units are CE certified and hold ISO 13485 certification. They are manufactured as per health, safety & environmental standards and guarantee a high level of safety for patient and paramedic staff.



OXYMED™ Bedhead Units are fully compliant with EN ISO 13485: 2016 standard for manufacturing of bedhead units and related accessories.



CE Marked, Conformity n' Compliance to Safety, Health and Environment requirements.



For CNC Services

CE Certified



EN ISO 13485: 2016



Government of Pakistan  
Ministry of National Health Services  
Regulation & Coordination  
Drug Regulatory Authority of Pakistan

Sr. No. 3006



**FORM-3**  
*[see rule 5(2)]*  
**LICENCE TO MANUFACTURE MEDICAL DEVICES**

Licence No. ELM-0053  
Date of issue: 19/04/2022  
F.No: 12-02/2021-MD

M/s Pakistan Oxygen Limited, is hereby licensed to manufacture medical devices at the following premises:  
Dockyard Road West Wharf, Karachi

2. This licence permits the manufacture of following medical devices

S.No	Name of Medical Device
1	Hospital Bed Head Unit

3. This licence shall, in addition to the conditions specified in the Medical Devices Rules, 2017 made under the DRAP Act, 2012, be subject to the following conditions namely:-

- (a) The licence shall be in force for a period of five years from the date of issue unless earlier suspended or cancelled.
- (b) The licence authorizes the sale by way of wholesale dealing and storage for sale by the licensee of the products manufactured under this licence, subject to the conditions applicable to licences for sale.
- (c) Name of the approved qualified technical staff.

Mr. Muhammad Adnan Danish, Bachelor of Science in Biomedical Engineering Production Incharge	Mr. Faizan Umair, Bachelor of Science in Biomedical Engineering Quality Control Incharge
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Renewal Date: 18/04/2027

*[Signature]*  
Dr. Ghufranfar Ali Khan  
Additional Director (Medical Devices) Secretary  
Drug Regulatory Authority of Pakistan  
Ministry of National Health Services  
Regulation & Coordination  
Government of Pakistan  
Seal:  
Islamabad



# CERTIFICATE



**Management system as per  
EN ISO 13485:2016**

In accordance with TÜV AUSTRIA CERT procedures, it is hereby certified that

**PAKISTAN OXYGEN LIMITED**

**P.O. Box 4845, Dockyard Road, West Wharf,  
Karachi 74000 - Pakistan**

applies a management system in line with the above standard for the following scope

**manufacturing of bedhead unit and related accessories**

Certificate Registration No. 20105203009835

Valid until 2023-11-12  
Initial certification: 2020-11-13

Certification Body  
at TÜV AUSTRIA CERT GMBH

Vienna, 2020-11-13

This certification was conducted in accordance with TÜV AUSTRIA CERT auditing and certification procedures and is subject to regular surveillance audits.  
TÜV AUSTRIA CERT GMBH Deutschstraße 10 A-1230 Wien www.tuv.at



ZERTIFIKAT | CERTIFICATE | CERTIFICAT | CERTIFICADO | CERTIFIKAAT | شهادة | 證書 | 인증서

www.tuv.austria.com/en/produkte/03009835 The registration of this business is subject to the approval of TÜV AUSTRIA CERT.

Certificate - Zertifikat - Certificat - Certificato



# CERTIFICATE OF COMPLIANCE

This is to certify, that the hereunder described items of Low Voltage Directive 2014/35/EU have proven their conformity to the Safety, Environment and Health requirements.

Manufacturer: **PAKISTAN OXYGEN LIMITED**

Address: P.O. Box 4845, Dockyard Road, West Wharf,  
Karachi 74000, Pakistan

Product: **BED HEAD UNIT**

The manufacturer's technical documentation and the above mentioned product(s) has been assessed and found to be in accordance with the requirements of above Directive in conformity. Internal production control is the conformity assessment procedure whereby the manufacturer fulfils the obligations laid down in Annex III Module A and ensures and declares on his sole responsibility that the electrical equipment concerned satisfy the requirements of this Directive that apply to it.

With drawn up an EC declaration of product conformity, you are therefore licensed to CE mark the product(s) listed above in accordance with article 16 of the Directives.

This certificate shall not be reproduced except in full and remain property of CNC Services to whom must be returned on request. This certificate does not imply assessment of the series-production of the product. The holder must inform CNC Services, of any substantial changes occurred in the product or process in order to examine whether this certificate remains valid. Certificate verification available at <https://www.cncservices.net/verification>



For CNC Services

Project Engineer

Date of Issue: 21<sup>st</sup> December, 2021

Date of Expiry: 20<sup>th</sup> December, 2022

Certificate Number: EC/4892/20

Grosses garten str. 5, 48529 Nordhorn, Germany, T: +49(0)5921-8502065, F: +49(0)5921-8502066  
E: info@cncservices.net, www.cncservices.net







# MEDICAL GAS PIPELINE SUPPLY & PRODUCTS

# PRODUCTS & EQUIPMENT

## Manifold Systems

We understand our customers are concerned about accurate flow, reliable manifold system that ensures safety, no risk of leaks, and is space efficient. Manifold for any medical gas can be installed as well by our team with complete associated equipment, tail pipes, regulators, and valves. The system fits the NFPA and ISO standards.

There are various models and size available as per your choice;

- Manual Manifold
- Digital Manifold System
- Emergency Supply Manifolds (ESMs)



## Digital Manifolds

Digital Manifolds are easy to monitor, they provide visual indication for operating and monitoring the medical gas supply. Porter staff can easily understand the system condition, low reserves, medical gas flow, and duty bank running.

As per your hospital demand, bank size will be advised by our design engineer. Emergency supply manifolds are also available

### Features

- Colorful visual display
- Easy to monitor
- Two stage regulator system
- Color indications and touch display
- Digital pressure indication
- Cylinder gas content visualization
- High reliability



## Medical Vacuum Plant

Range of different sizes vacuum plants with high reliability, fitting both HTM and NFPA standards is offered by us. In collaboration with international suppliers, we bring high quality vacuum and air plants.

Vacuum plant systems work independently and generate required vacuum flow. The system comprises of different types of vacuum pumps, air-coolers, quality filters, and easy controller & monitoring indicators. Digital graphical monitoring display makes it easy for appointed staff to monitor the plant working. Availability of backup supply ensures continuous vacuum flow with no interruptions which could cause component failure.

### Features

- Quality direct vacuum free from contaminants
- Bacteria & oil filters
- Provide easy installation
- Highly reliable, long equipment life
- Graphic display indicators





## Medical Air Plant

Pakistan Oxygen Ltd. in collaboration with international suppliers brings high quality standard medical air plants which include all types of air compressors, various sizes receivers, a complete medical air system designed as per hospital requirements.

### Features

- Oil free air
- Provide both medical and surgical air (4 & 7 bar)
- Inside air purifiers
- No contaminants, inside oil filters



## Anesthetic Gas Scavenging System (AGSS)

Anesthetic Gas Scavenging System removes anesthetic gases and their mixtures from OT and other hospital departments where nitrous oxide is used. The AGSS plant is capable of eliminating hazardous gas mixtures and ensures staff safety.

### Features

- Easy monitoring control panel
- Quality robust pumps
- Provide easy installation
- Remote switches
- Easy maintenance due to duplex pumps



## Terminal Units

We have a wide range of medical gas pipeline equipment & also offer terminal units for all medical gases, vacuum, and AGSS.

- Gas Outlets pass high flow rate, control pressure, and work independently whilst maintaining aesthetics of the patient's room.
- Terminal units manufactured as per US & UK standards.



## Zone Service Units

Zone service units are installed outside hospital wards to shut down medical gas flow in case of emergency.

Partnering with some world-renowned manufacturers, Pakistan Oxygen brings ISO and NFPA standards ZSUs for medical gas and vacuum.

Combine ZSUs set is also provided for OT & ICU rooms.



## Medical Gas Pipes

We supply medical grade degreased copper tubes complying to BS EN 13348 standards.

Special designed copper medical gas tubes and vacuum systems supersede earlier hybridized copper tube standards such as BS EN1057 & BS 2871 Part 1 Table X quoted in HTM 2022 & NHS engineering specification C11.



## Line Valve Assemblies

LVA installation in medical gas pipes is one primary requirement of safety to isolate area in the event of leakage or maintenance. Isolating valves must be capable of restricting the complete flow.

POL provides different types of valve assemblies which suit a particular pipe size.



## Gas Delivery Equipment

We offer high precision flowmeters which enable the required flow of medical gas to patients.

Suction therapy equipment ensure patient & staff safety with

- Early detection of contaminants
- Provide precision suction
- Graphical color label for easy monitoring



## Oxygen Concentrators

Oxygen concentrators produce oxygen for use in healthcare as well as in industrial applications. It uses the Pressure Swing Adsorption (PSA) technology which takes in the ambient air, removes Nitrogen from it and leaves oxygen rich gas for use in applications where oxygen is dangerous or inconvenient.

It is a compact and light weight device which is cost effective and is used in industries, healthcare and home patient care.



## Pendants

Ceiling pendants help to optimize the space inside an operation room and to keep wires and other elements away from interference with the operation table. Columns make medical tasks and procedures safe and easier especially while placing monitoring equipment.



## Oxygizer™

An innovative, portable, and easy-to-use 99% pure Oxygen canister which is safe for consumption by all age groups. It can be used anywhere and anytime to feel the goodness of pure Oxygen.

Oxygizer is helpful in overcoming altitude sickness, fatigue, breathing shortness and helps reenergize the body with increased mental performance and better mood.



## Oxytizer™

An instant hand sanitizer that is tested and certified by Pakistan Drug Testing and Research Centre (PDTRC). It has been formulated to give a non-sticky and rinse free feel to hands without over drying the skin.

Oxytizer is color and fragrance free and therefore, hypoallergenic.

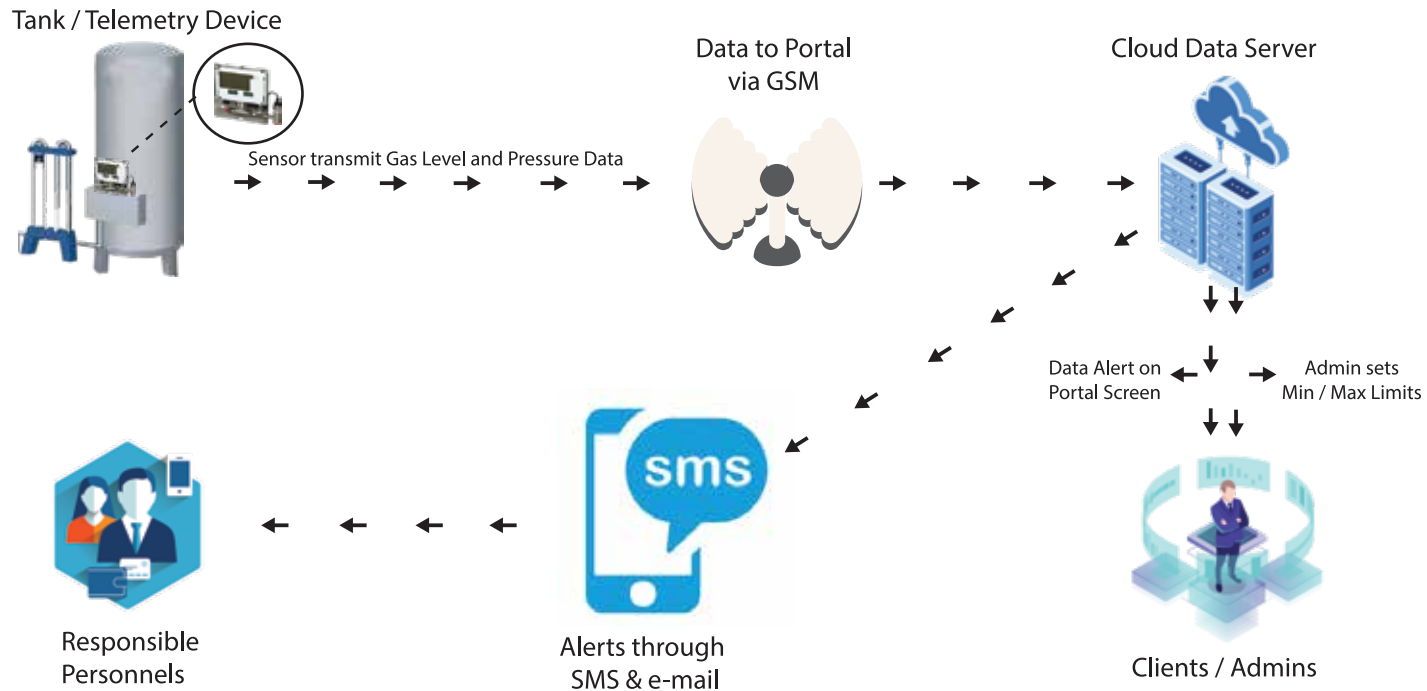


## TeleTel™ (Telemetry Solution)

Teletel™ is a smart telemetry IoT solution to remotely monitor and manage the real time data of storage tanks, tank trucks and other pressure vessels or flowlines. The critical data about inventory level, pressure, temperature & flowrate can be effectively managed through a smart phone or laptop with the help of this device. It has applications in food industry, O&G, refineries, chemicals, power & energy generation.

Continue on next page





## Real Gains with Reliable & Robust Monitoring



### Enhance site safety

Critical data alerts periodically sent to prevent emergency situations and mishaps



### Reduction in supply chain costs

Optimized scheduling, efficient logistics, no wasted journeys, emergency deliveries or part load returns



### Prevention of dryouts

Monitor inventory levels and optimize stock holdings



### Mobile asset monitoring

Monitoring of real time data



### Data analysis and trends prediction

Streamlines the supply with advanced technology



### Ensure customer satisfaction

Uninterrupted product supply to customers

# CUSTOMER PROJECTS



**A Large Public Sector Hospital Karachi**

A complete Medical Gas Pipeline System with integrated products for 3 x different sites of a large public sector hospital in Karachi. It comprised mainly of Medical Air and Vacuum Plants, Manifold Systems, Copper tubes, Zone Services Units, Pendants, and OXYMED™ Bedhead units



**Frontier Works Organization (FWO) Isolation Center, Islamabad.**

A 250 bedded facility in Islamabad completed in the shortest span of 20 days for COVID-19 patients. It is fully equipped with our Medical Engineering Systems, source equipment for medical gases, Medical Oxygen Bulk Tanks, and OXYMED™ Bedhead units.



**Pakistan Kidney and Liver Institute & Research Center Lahore**  
A 500+ bedded facility is equipped with our medical gas source plants, VIE tanks, and Medical Gas Pipeline System.



**A Large Public Sector Hospital Karachi**

# CUSTOMER ENDORSEMENTS TO PAKISTAN OXYGEN SERVICES

*"No words can describe the role of POL in Covid19 and Oxygen crises and their dedicated service to community at large and unprecedented support to hospitals, not compromising on safety, reliability and availability"*

## **South City Hospital**

(171 Bedded)

<https://southcityhospital.org>

*"Pakistan Oxygen gives excellent services, always quality cognizant and offer the most competitive rates. We wish them good luck and expect our partnership to prosper on similar grounds in future as well"*

## **Mukhtar A. Sheikh Hospital**

(500 Bedded)

<http://mashospital.org/>

*"POL support through on-time supply of high purity medical gases, especially during pandemic has been gratifying. On behalf of the Surgimed hospital's team, I thank POL for this contribution and wish to take this old relationship further ahead"*

## **Surgimed Hospital**

(150 Bedded)

<http://surgimedhospital.com/>

*"Pakistan Oxygen is a name we trust for medical gases supply for our patients.*

*Thanks for standing with us in times of need"*

## **Shaikh Zayed Hospital**

(1030 Bedded)

<https://szmc.org.pk/>

*"Pakistan Oxygen is our one and only supplier of liquid and compressed oxygen since day first. Services they are providing in every aspect including medical pipelining, delivery of liquid and compressed oxygen is worth appreciating... we find their team highly professional and trained... They take all safety measures while performing activities at our premises"*

## **Tabba Heart Institute**

(120 Bedded)

<https://tabbaheart.org/>

*"Pakistan Oxygen Limited support through on-time supply of medical gases, especially during pandemic has been gratifying on behalf of the Children's Hospital & The Institute of Child Health Multan's team, I thank POL for this contribution. Our 6 years of collaboration have been truly satisfactory"*

## **The Children's Hospital**

(50 Bedded)

<https://chich.edu.pk/>

*"We appreciate all the hard work and diligent efforts by the team Pakistan Oxygen since the establishment of our hospital.*

*The products & services delivered by Pakistan Oxygen are always excellent"*

## **Hill Park General Hospital**

(100 Bedded)

<http://www.hpgh.com.pk/>

*"We appreciate quality & services standards followed by Pakistan Oxygen and believe that this goes a long way in ensuring safety requirements for our patients. Pakistan Oxygen is an incredible partner and an important stakeholder in the provision of medical services to patients"*

## **Aadil Hospital**

(130 Bedded)

[www.aadilhospital.com](http://www.aadilhospital.com)

# A DEDICATED HEALTHCARE TEAM

Pakistan Oxygen is a leader in the healthcare segment of Pakistan offering medical gas solutions and also provide medical equipment and turnkey engineering solutions of the highest quality standards. A trained and motivated team looks after not only your needs as a customer, but also ensures patient's need for safety, product quality and regulatory compliance.





# CERTIFIED PROFESSIONALS

NFPA-99 / ASSE 6020, HTM 02-01, BTEC Level 4 award in management of MGPS by BOC.



# International Recognition to Pakistan in fighting the Covid-19 Pandemic



The World Health Organisation (WHO) has listed Pakistan among seven countries that it says the world can learn from to fight future pandemics.  
**Tedros Adhanom Ghebreyesus** - Director General, WHO



Islamabad, March 16, 2022: U.S. Embassy Islamabad Chargé d'affaires Angela P. Aggeler visited the National Command and Operation Centre (NCOC) to recognize Pakistan's strong achievements in fighting the COVID-19 pandemic.



Former US treasury secretary and renowned economist Lawrence H Summers praising Pakistan's handling of the coronavirus pandemic.



Pakistan has shown good response in fighting against Covid-19, as 40% of Pakistani population has been vaccinated. I was surprised to see vaccination centres available in the smallest villages. Pakistan has setup 100 testing labs within a duration of three months.  
**World Health Organization (WHO) representative  
Dr. Palitha Gunarathna Mahipala**

# Appreciation Letter from National Command & Operation Center to the Managing Director of Pakistan Oxygen Ltd.

Our greatest asset is the team of people who work round-the-clock and add value to our customers' businesses by providing tailor-made solutions. Through innovation and technology adoption, we create solutions that are efficient, reliable and conform to the highest standards of safety and quality.

This dedicated and professional team contributed towards the national effort to manage the fallout of the COVID-19 pandemic. In the face of many challenges as the virus spread, Pakistan Oxygen ensured a consistent and reliable supply of Oxygen to hospitals across the country. Our people worked tirelessly with the single-minded aim of keeping the plants operational 24/7 and ensuring that life-saving Oxygen was delivered in time to all hospitals serviced by us.

The medical engineering team also worked tirelessly to design and execute project work in collaboration with both the public and private sector healthcare providers to add over 2,700 new hospital beds with Oxygen supply systems.

With innovative Oxygen stock monitoring technology, and efficient scheduling and delivery systems, this team ensured an uninterrupted supply of Oxygen to hospitals that helped save precious lives.



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**#POLCARES**



## **Pakistan Oxygen Limited**

(Formerly Linde Pakistan Ltd)

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Website: [www.pakoxygen.com](http://www.pakoxygen.com)