REANIMED HEALTHCARE SYSTEMS



Medical Gas Manifold

Medical Gas Plants

Medical Gas Manifold is a modular gas distribution system designed to provide a continuous gas supply in healthcare facilities. It combines control, pressure regulation, monitoring, and distribution functions within a single system.
Compatible with all medical and mixed gases, it delivers stable performance under varying demand conditions.

In addition to new installations, the system is also suitable for projects involving the expansion or modernization of existing medical gas infrastructures.

Standard capacities are available in **40 m^3/h and 150 m^3/h** configurations.
Custom-designed systems with capacities **up to 300 m^3/h** can be manufactured to meet specific project requirements.



Medical Gas Manifold

Gas supply automatically switches to the secondary cylinder bank when the active bank pressure drops.

All gas-contacting components are compatible with all medical gases, including oxygen.

The two-stage regulation system reduces high-pressure gas to the required outlet pressure.

The by-pass system maintains continuous gas supply by routing the flow through an alternative line during maintenance and service operations.

Automatic Change-Over
Continuous gas supply

High Flow Capacity
40-300 m^3/h range

Modular Configuration
Project-specific design

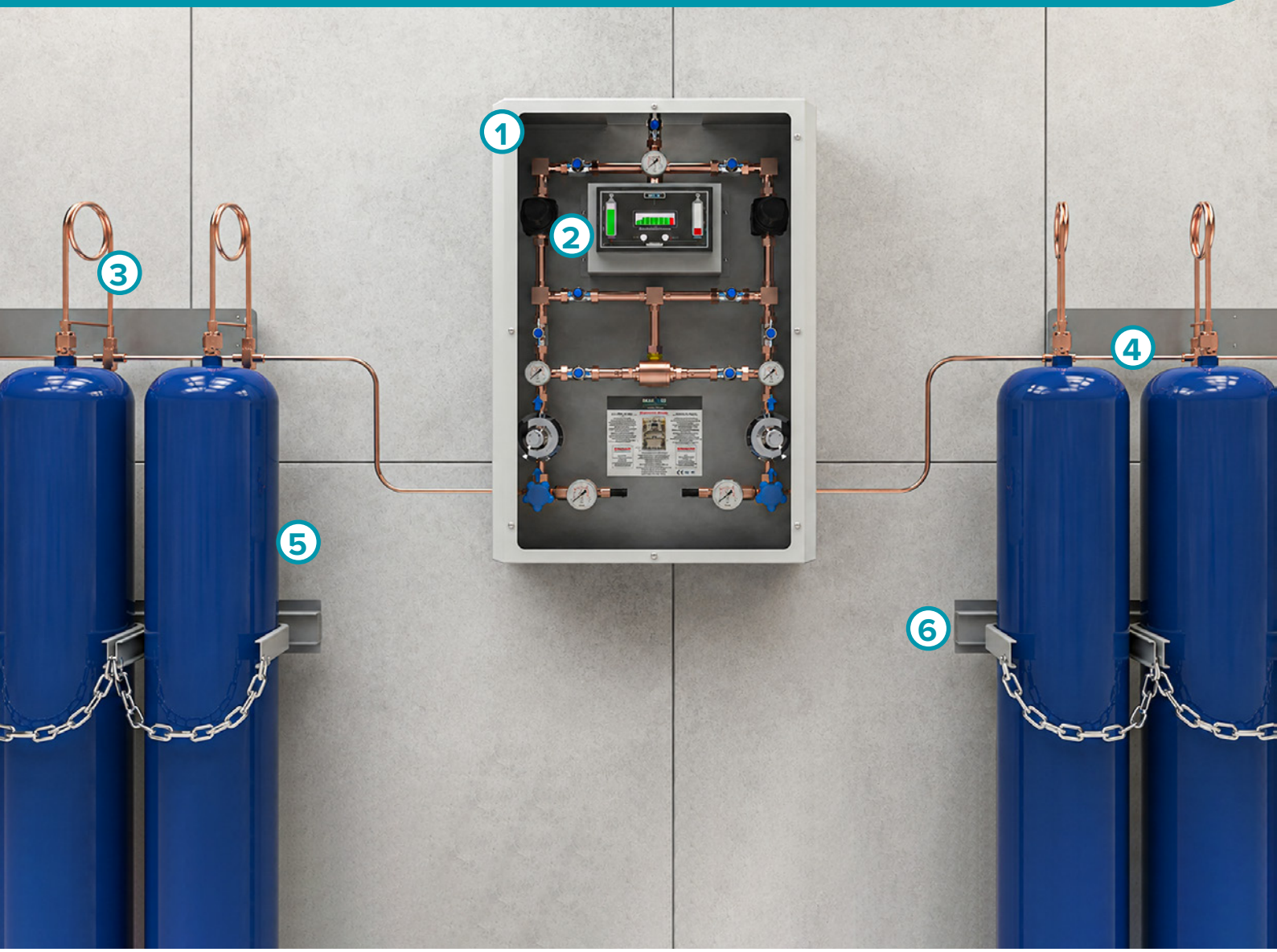
By-Pass System
Uninterrupted maintenance

Two-Stage Regulation
Stable outlet pressure

Alarm Options
Digital or Touchscreen

System Layout

- The manifold system consists of two cylinder banks located on either side of the control panel. Gas from the cylinders is routed through the header bars for regulation and distribution.
- Featuring a modular design, the system allows flexible configurations, simplified maintenance, project and project -specific arrangements. Components can also be supplied separately.



1 · Control & Distribution Unit

The main unit responsible for control, regulation monitoring, and gas distribution.

2 · Alarm Unit

Monitors system pressure, provides alarms, and communicates with the master alarm system.

3 · Connection Components

Provide gas flow between the cylinders and the header system.

4 · Cylinder Ramp

Collects gas from the cylinders and transfers it to the control panel.

5 · Gas Cylinders

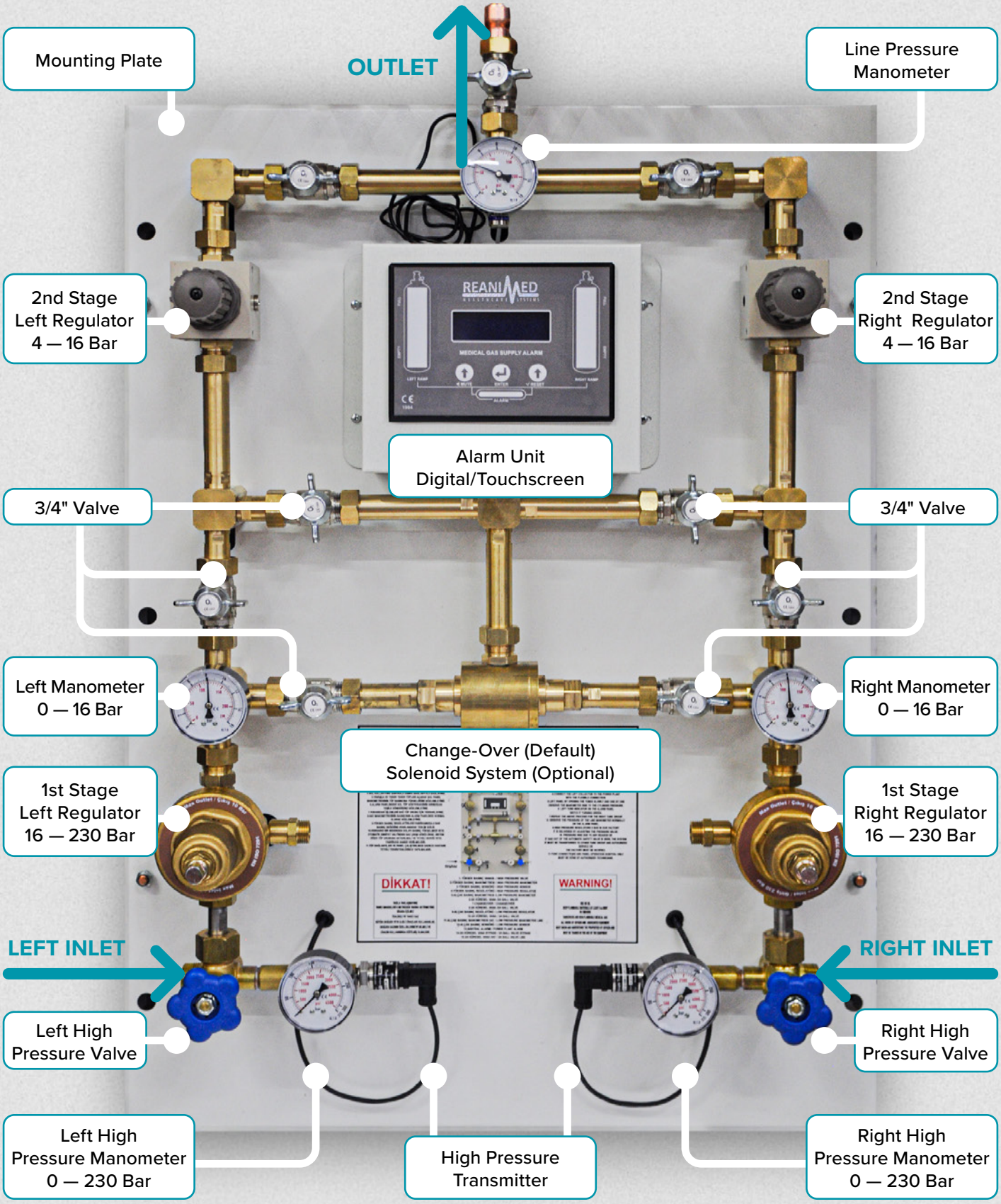
Medical and mixed gas cylinders used as the system supply source

6 · Cylinder Securing Chain

Safety components used to secure cylinders in position.

Control & Distribution System

- Gas supplied from the cylinders at approximately 230 bar is reduced to 16 bar by the first-stage regulators and to a final line pressure of 4–7 bar by the second-stage regulators.
- In the event of a pressure drop, the system automatically switches to the reserve cylinder bank. It can be configured with either a mechanical change-over or a solenoid-controlled electronic system.



Alarm Unit

- Continuously monitors inlet, outlet, and cylinder pressures, generates audible and visual alarms in case of deviations, and provides real-time data transmission to the master alarm panel.
- Offers two version options: digital display and 7" touchscreen display.



Digital Alarm Unit *7" Touchscreen Alarm Unit*

- Right and left cylinder group pressures are continuously monitored and fill levels are displayed.
- Line pressure is displayed in real time, allowing constant system monitoring.
- Alarm data is transmitted to the master alarm system for central monitoring, while audible and visual alerts notify the user.
- Alarm thresholds can be adjusted by authorized users, enabling secure management of system parameters.
- Green, yellow, and red indicators visually indicate normal, warning, and alarm status.

Dimensions (H×W×D)	128 × 178 × 68 mm
Control Interface	Digital / 7" Touchscreen
Parameters	Right/Left Bank Fill Level, Line Pressure
Alarm Limits	Adjustable
Communication	Modbus

Audible & Visual Alarm
Real-time status indication

Master Alarm Connection
Central monitoring support

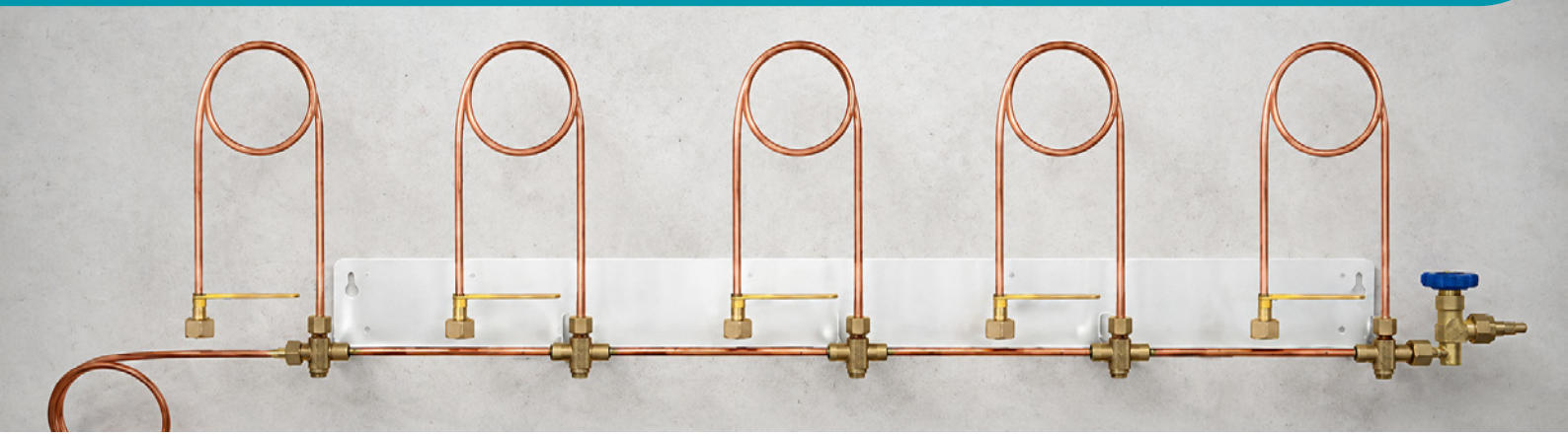
Display Options
Digital or Touchscreen

Cylinder Bank Monitoring
Right and left bank control

Adjustable Limits
Customizable thresholds

High-Pressure Gas Cylinder Ramps

Cylinder ramps are system components that provide safe distribution in high-pressure gas lines and can be modularly configured according to project requirements. Materials and seals are selected for gas purity.

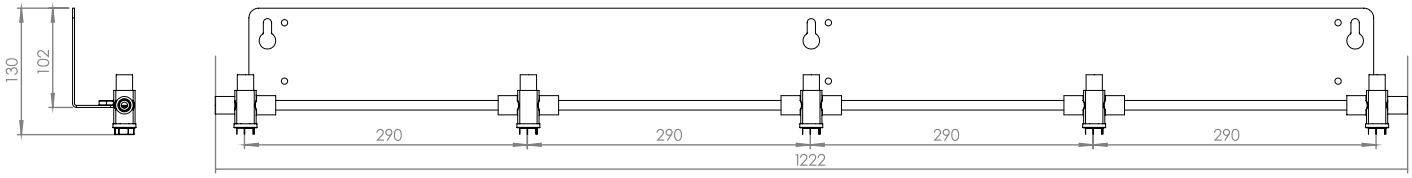


General Features

Material	Electrostatic powder-coated over mild steel
Control Type	Check-Valve (automatic) / Valve (manual) (independent for each cylinder)
Safety	Emergency vent valves on right and left sides
Mounting	Suitable for wall or frame mounting
Connection	Ramp–Cylinder Ramp–Ramp
Maximum Cylinder Capacity	5 cylinders per ramp
System Scalability	Expandable via Ramp–Ramp connection

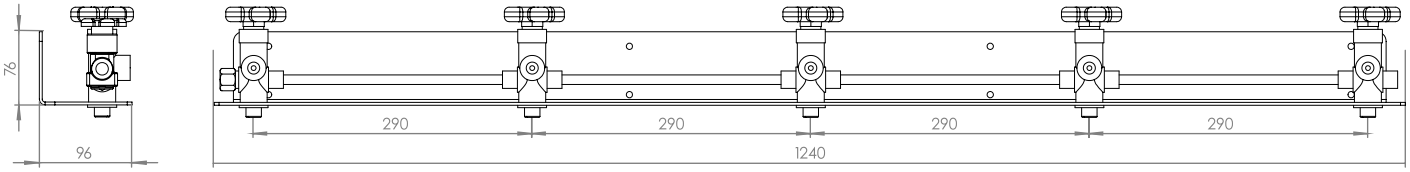
Check-Valve Ramp

Automatically prevents backflow and ensures leak-tight, continuous and simultaneous operation of all lines.



Valve Ramp

Cylinders are individually isolated via manual control, enabling leak-tight line management and backup gas usage.



Dimensions

Configuration	Cylinder Capacity	Check-Valve Ramp	Valve Ramp
Single	1 Cylinder	80 mm	62 mm
Double	2 Cylinders	370 mm	352 mm
Triple	3 Cylinders	660 mm	642 mm
Quadruple	4 Cylinders	950 mm	932 mm
Quintuple	5 Cylinders	1240 mm	1222 mm

** Clamps are not included and are selected according to gas type.*

*** For higher capacity requirements, ramps can be modularly interconnected.*

Connection and Supporting Components

Components used in medical gas systems to ensure safe connection, flow control, and mechanical stability, and can be modularly configured according to project requirements.

Copper Pigtail (Ramp — Cylinder)

Material	High-Purity Flexible Copper
Operating Pressure	250–260 bar (max.)
Length	80 cm *(adjustable length)*
Inlet Dimensions	3/4"
Outlet Dimensions	3/8", 1/2", 5/8", 3/4", Bullnose
Pipe Diameter	Ø8 mm
Pipe Wall Thickness	2.50 mm



Flexible Stainless Braided Pigtails (Ramp — Cylinder)

Material	Stainless Steel
Operating Pressure	300 bar (max.)
Length	80 cm (project-dependent)
Inlet Dimensions	3/4"
Outlet Dimensions	3/8", 1/2", 5/8", 3/4", Bullnose
Pipe Diameter	Ø12 mm
Pipe Wall Thickness	2 mm



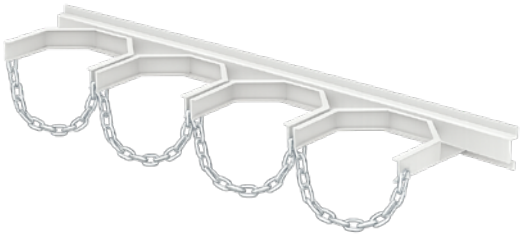
Evacuation Valve

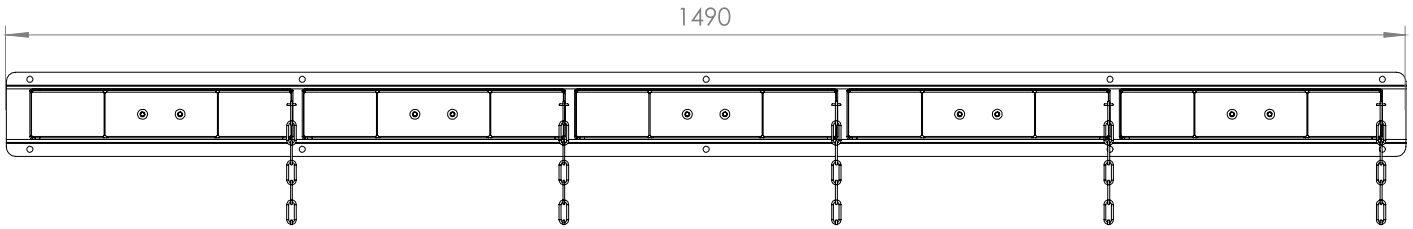
Material	Brass
Function	Manifold Line Pressure Relief
Outlet Type	Single Gas Outlet
Operation Type	Manual
Mounting Position	Separate on Right and Left Lines



Cylinder Securing Chain

Body Material	2.5 mm Galvanized Steel
Surface Coating	Electrostatic Powder Coating (RAL Options)
Mounting Type	Wall Mounting
Fixing	Chain-Supported Compartmental Structure
Cylinder Capacity	Max. 5 Cylinders per Module
Modular Structure	Expandable with Multiple Modules
Access	Independent Access to Each Cylinder





Dimensions				
Single	Double	Triple	Quadruple	Quintuple
330 mm	620 mm	910 mm	1200 mm	1490 mm

General Features

Supply Voltage	220 V, 50 Hz
Operating Temperature	(+10) – (+45) °C
Relative Humidity	10–95%
Capacity	40 m^3/h and 150 m^3/h (up to 300 m^3/h *according to project requirements*)
Inlet Pressure	Max. 230 bar
Outlet Pressure	4–12 bar *(adjustable)*
Regulation	Two-Stage Pressure Regulation
Automatic Change-Over	Mechanical Change-over / Electronic Solenoid Valve
Medical Gases	Oxygen (O_2) – Nitrous Oxide (N_2O) Medical Air (MA4) – Surgical Air (SA7) Carbon Dioxide (CO_2) – Nitrogen (N_2) Argon (Ar) – Helium (He) – MIX (Mixed Gases)

** *Each manifold system is designed for a single gas type and configured accordingly.*

Technical Features

Inlet Lines	Right and Left Cylinder Banks
Outlet Line	Single Outlet Line
Ramp Options	Valve / Check-Valve
Evacuation System	Separate on Right and Left Lines
Maintenance / Continuous Operation	By-Pass Line
1st Stage Regulator	Inlet/Outlet: 230–16 bar
2nd Stage Regulator	Inlet/Outlet: 16–4 bar
High Pressure Gauge	0–230 bar (2 pcs)
Intermediate Pressure Gauge	0–16 bar (2 pcs)
Line Pressure Gauge	0–16 bar (1 pc)

Mechanical Features

Control Unit Dimensions (H×W×D)	900 × 640 × 232 mm
Control Unit Housing	Electrostatic Powder-Coated Mild Steel
Protective Cover	Removable Mild Steel Construction with Viewing Window
Access	Full Access to All Components Through the Front Cover
Mounting Type	Wall or Frame Mounting

System Configurations

Cylinder Arrangement	From 1+1 to 30+30 *(Project-Specific Configurations Available)*
Module Options	Single, Double, Triple, Quad, and Quintuple Ramp and Cylinder Holder Modules
System Structure	Modular and Expandable

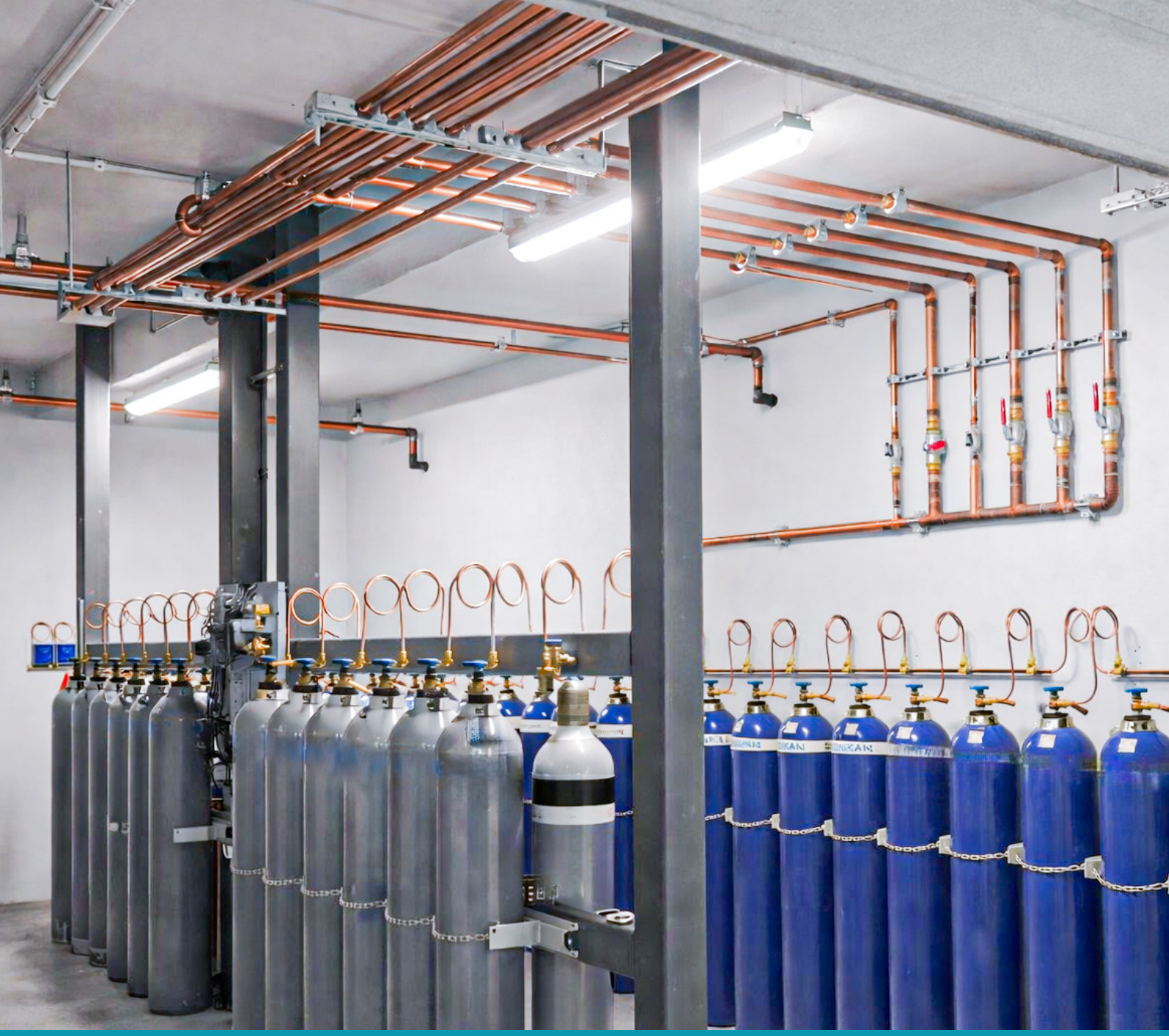
Standards

Quality	EN ISO 9001:2015 — EN ISO 13485:2016
Technical and Safety	EN ISO 7396-1 — EN ISO 7396-2 — EN ISO 9170-1 EN ISO 11197 — EN ISO 15001 — EN 837-1
Electrical Safety	EN 60601-1-2
Labeling	EN ISO 15223-1 — EN 1041
Risk Management	EN ISO 14971

** Ordering Information

Gas type, alarm option, connection equipment, and system configuration preferences must be specified at the time of ordering.

Technical specifications are subject to change without prior notice. Images are for illustrative purposes only and may vary by model.



REANIMED
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CONTACT

+90 532 227 91 72
www.reanimed.com
sales@reanimed.com
linkedin.com/company/reanimed/
Köşklü Çeşme Mh. Yeni Bağdat Cd. No:126 Gebze / Kocaeli / TÜRKİYE