

# iNSPiTAL



MEDICAL GAS SYSTEMS  
2021

**INSPI:ITAL**

**MEDICAL GAS SYSTEMS**

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## INSPITAL MEDICAL GAS STATIONS & CONTROL UNITS

INSPITAL offers complete solution for the medical gas system of hospitals.

All the system consist of medical gas generators, manifolds, pipeline system, area control units, alarm systems, monitoring screens and the final gas outlets in Operating Theatres, ICU's and patient rooms.

## CENTRAL GAS STATIONS & MANIFOLDS

INSPITAL central gas stations are designed to supply continuous medical gas from the cylinders to hospital pipeline.

Electronically controlled manifold system reduces the cylinder pressure to required level.

Each station controls one primary and one back up cylinder racks and switches between them without interrupting the continous flow.



## AREA GAS CONTROL PANELS

INSPITAL Area Gas Control Unit is manufactured to provide isolation of individual floors of medical gases in the hospital.

Area Gas Control Unit includes all features required by the EN ISO 7396-1 and HTM 02-01 standards.

Isolation may be required for installation, maintenance or in case of an emergency.

## VACUUM STATIONS

Vacuum is an essential requirement of the supply system for medical gases in hospitals.

INSPITAL develops and manufactures fully automatic, stable and highly reliable vacuum stations which are used to aspirate airways in the operating theatres, on ICU and on regular patient rooms.

## Central Gas Station for O<sub>2</sub>, N<sub>2</sub>O and CO<sub>2</sub>



INSPIRAL central gas stations are designed to supply continuous medical gases like Oxygen, Nitrous Oxide, Entonox, Medical Air, Carbon Dioxide and Nitrogen from the cylinders to hospital pipeline. Each station controls one primary and one back up cylinder racks.

The two stage regulation system, utilizing separate regulating units for each stage of pressure regulation, offers higher flow rates and smoother flow rate curve.

Station switches to back up system automatically when the pressure of primary rack is dropped.

Station is equipped with non-return valves in order to prevent discharge of the gas in the cylinders during the replacement or in case of leakage from the pipeline.

All pressure data and failure alarms are controlled by the digital control panel.

# Medical Gas Plants

Oxygen Station	Model No	GZ71.01	GZ71.02	GZ71.03	GZ71.04	GZ71.05	GZ71.06	GZ71.07
Nitrous oxide Station	Model No	GZ71.10	GZ71.11	GZ71.12	GZ71.13	GZ71.14	GZ71.15	GZ71.16
High Pressure Reducer 150 m <sup>3</sup> /h		-	-	1 pc	1 pc	1 pc	1 pc	1 pc
High Pressure Reducer 40 m <sup>3</sup> /h		1 pc	1 pc	-	-	-	-	-
Cylinder Fixing Chain, Triple		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Tail pipe & flexible Hose		6 pcs	12 pcs	12 pcs	18 pcs	24 pcs	30 pcs	42 pcs
Flexible Connection		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Ramp Triple			4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Discharge Valve		2 pcs						
Oxygen / Nitrous oxide Station Alarm panel		Including the High Pressure Regulators (1 pc)						
Cylinder Quantity on Station		2x3 pcs	2x6 pcs	2x6 pcs	2x9 pcs	2x12 pcs	2x15 pcs	2x21 pcs
Bed Quantity*		30	50	30-50	40-70	70-100	100-150	150-200
Total Operating Room No.* (N2O Central )		3	5	5 - 6	6 - 7	6 - 9	8-12	10-14
Total Station Weight(~)		35 kg	48 kg	58 kg	85 kg	90 kg	120 kg	150 kg

\* Bed and Operating Room Numbers are given approximately

## Emergency Reserve Manifolds

Oxygen Station	Model No	GZ71.09	GZ71.08
Nitrous oxide Station	Model No	GZ71.18	GZ71.17
High Pressure Reducer 40 m <sup>3</sup> /h		1 pc	1 pc
Cylinder Fixing Chain,		2 pcs	4 pcs
Flexible Connection Pipe		2 pcs	4 pcs
Discharge Valve		1 pc	1 pc
Cylinder Quantity on Station		2 pcs	4 pcs
Bed Quantity		5-10	8-12
Total Station Weight(~)		15 kg	18 kg



GZ71.09 - GZ71.18

INSPITAL emergency reserve manifold includes a two stage regulation system, utilizing separate regulating units for each stage of pressure regulation, offers smooth & continuous flow in case of an emergency.

Isolation valves are included at each manifold header connection to enable one cylinder bank is in use while the other bank is closed off during system operation, in compliance with HTM O2-O1 standards.



Explanation	Model No
W/o alarm 40 m <sup>3</sup> /h	GZ71.20
With alarm 40 m <sup>3</sup> /h	GZ71.21
W/o alarm 150 m <sup>3</sup> /h	GZ71.22
With alarm 150 m <sup>3</sup> /h	GZ71.23

- **Manifold Type** : 2 stage, 2 regulators
- **Inlet dia** : 1/2"
- **Outlet dia** : 22 mm
- **Outlet pressure** : 4-5 bar
- **Automation** : Fully Automatic

## Manifold System with Double Regulator

INSPITAL Automatic Changeover Manifold is designed to provide a continuous supply of Oxygen, Nitrous Oxide, Carbon Dioxide in healthcare facilities. The manifold consists of two banks of cylinders located on each side of the pressure control assembly. These pressured gases are used in Operation Theatres, Intensive Care Units, Neonatal Care Units, Emergency Rooms and Patient Rooms. Automatic Changeover Manifold is designed and manufactured in compliance with HTM O2-01, MDD 93/42/EEC, EN ISO 7396-1 and ISO 13485 standards.

### Features

- Special black ABS cover protection against environmental factors
- Designed to ensure continuous and accurate gas supply
- It is designed according to the principle of continuous transfer functionality. So during exchange of the cylinders, gas supply won't be interrupted.
- Alternative station capacities depending on the type of gas used and the distance
- Fully removable cover for easy access to internal components
- Easy to reach alarm panel connections

### Optional Accessories

- Emergency reserve manifold
- Heater Kits
- Isolation valve and test gas outlet
- Spare cylinder racks



Model No	Description
GZ71.47	Positive Pressure Sensor, Max.10 bar
VK40.01	Vacuum Sensor, -1/0 bar
GZ71.49	High Pressure Reducer Sensor, Max.250 bar

## Pressure Sensor

- Pressure sensors are used in digital alarm panels to detect high and low pressure

### Positive Pressure Transmitter Specs:

- Measurement range : 0 - 250bar
- Signal output : 4 - 20mA
- Mechanical connection : G 1/4 "
- Electrical connection : 2m
- Feeding voltage : 8 - 32V

## High Pressure Reducer, Single Regulator

INSPIITAL High Pressure Reducer provide safe pressure reduction of medical gases between the cylinders and the delivery system. It is designed to regulate line pressure between 5 to 4 bar. All components are degreased for oxygen use.

- Gases : Oxygen, Nitrous Oxide, Carbon Dioxide
- Working Mode : 2 stage, 1 regulator
- Inlet dia : 1/2"
- Outlet dia : 22 mm
- Inlet pressure (max) : 220 bar
- Outlet pressure : 4-5 bar



Explanation	Model No
W/o alarm 100 m <sup>3</sup> /h	GZ70.10
With alarm 100 m <sup>3</sup> /h	GZ70.20
W/o alarm 40 m <sup>3</sup> /h	GZ70.30
With alarm 40 m <sup>3</sup> /h	GZ70.40



GZ71.33



GZ72.01

## Cylinder Ramp

- Alternative models for connection of 1, 2, 3, 4 or 5 cylinders
- Made of galvanized steel, brass headers and copper pipe

Explanation	Length mm	Model No
Single	180 mm	GZ71.29
Double	330 mm	GZ71.30
Triple	630 mm	GZ71.31
Quadruple	930 mm	GZ71.32
Quintuple	1230 mm	GZ71.33
Triple - Block	280 mm	GZ72.01



GZ71.38



GZ72.02

## Cylinder Fixing Chain

- Designed to fix the cylinders safely
- Alternative models for connection of 1, 2, 3, 4 or 5 cylinders

Explanation	Length mm	Model No
Single	180 mm	GZ71.34
Double	330 mm	GZ71.35
Triple	630 mm	GZ71.36
Quadruple	930 mm	GZ71.37
Quintuple	1230 mm	GZ71.38
Triple - Block	580 mm	GZ72.02

## Tail Pipe & Flexible Hose

- Used for connecting the cylinders to cylinder ramp
- Gas specific thread for O<sub>2</sub>, N<sub>2</sub>O, CO<sub>2</sub> and medical gas cylinders
- Nut diameter: 1/2"

Explanation	Gas Type	Cylinder nut dia	Model No
Tail Pipe 140 cm	Oxygen (bull-nose)	5/8 (Male)	GZ71.39
Tail Pipe 140 cm	Carbondioxide	Ø 21.8 mm, 1/14	GZ71.40
Tail Pipe 140 cm	Oxygen	3/4"	GZ71.41
Tail Pipe 140 cm	Nitrousoxide	3/8"	GZ71.42
Flexible Hose 60 cm	Oxygen (bull-nose)	5/8 (Male)	GZ71.43
Flexible Hose 60 cm	Carbondioxide	Ø 21.8 mm, 1/14	GZ71.44
Flexible Hose 60 cm	Oxygen	3/4"	GZ71.45
Flexible Hose 60 cm	Nitrousoxide	3/8"	GZ71.46
Flexible Hose 60 cm	Oxygen (PIN INDEX)	-	GZ71.96
Flexible Hose 60 cm	N <sub>2</sub> O (PIN INDEX)	-	GZ71.97



Flexible Connection  
Model GZ71.94



Discharge Valve  
Model GZ71.95

## Flexible Connection Pipe

- Designed to connect ramp to ramp and ramp to manifold
- Made of chrome plated copper material
- Compatible with O<sub>2</sub> and N<sub>2</sub>O gases

## Discharge Valve

- Designed to be used for the gas discharge of medical gas stations
- Compatible with O<sub>2</sub> and N<sub>2</sub>O gases
- Made of brass

## Medical Gas Ball Valve & Zone Service Unit

- Designed and specially cleaned to use in medical gas system
- Optional lock and nist connection
- %100 corrosion proof design, no painted steel
- Break out plastic window provides safe access in an emergency



Pipe Dia.	Ball Valve With Box Model No	Ball Valve Model No	Working Pressure (bar)
10 mm	GZ71.50	GZ81.50	78
12 mm	GZ71.51	GZ81.51	64
15 mm	GZ71.52	GZ81.52	55
22 mm	GZ71.53	GZ81.53	50
28 mm	GZ71.54	GZ81.54	40
35 mm	GZ71.55	GZ81.55	40
42 mm	GZ71.56	GZ81.56	35
54 mm	GZ71.57	GZ81.57	27
76 mm	GZ81.58	GZ81.59	16



Stainless Steel



Electrostatic Painted

## Area Gas Control Panels

### Description

INSPITAL Area Gas Control Unit is manufactured to provide isolation of individual floors of medical gases in the hospital. Area Gas Control Unit includes all features required by the EN ISO 7396-1 and HTM O2-01 standards. Isolation may be required for installation, maintenance or in the case of an emergency.

### Classification

- Area Gas Control Unit is manufactured HTM O2-01, HTM 2022, EN ISO 7396-1 and BS EN 15908.

### Services

- Oxygen
- Nitrous Oxide
- Medical Air 400 kPa
- Surgical Air 700 kPa
- Medical Vacuum

### Features

- Controls 1 to 5 gases, including vacuum
- Lockable covers with emergency access lock system
- Window on the cover enables the user to monitor the analog manometers without opening the covers
- Under plaster and on plaster types are available

### Alarm Unit

- Local Area Alarm

### Pressure Switches

- Pressure switches can be fitted inside the box to enable local monitoring.

### Electrostatic Painted

Explanation	Under Plaster Version Model No	On Plaster Version Model No
1 gas w/o alarm	GZ71.58	GZ71.68
1 gas with alarm	GZ71.59	GZ71.69
2 gas w/o alarm	GZ71.60	GZ71.70
2 gas with alarm	GZ71.61	GZ71.71
3 gas w/o alarm	GZ71.62	GZ71.72
3 gas with alarm	GZ71.63	GZ71.73
4 gas w/o alarm	GZ71.64	GZ71.74
4 gas with alarm	GZ71.65	GZ71.75
5 gas w/o alarm	GZ71.66	GZ71.76
5 gas with alarm	GZ71.67	GZ71.77

### Stainless Steel

Explanation	Under Plaster Version Model No	On Plaster Version Model No
1 gas with alarm	GZ71.83	GZ71.88
2 gas with alarm	GZ71.84	GZ71.89
3 gas with alarm	GZ71.85	GZ71.90
4 gas with alarm	GZ71.86	GZ71.91
5 gas with alarm	GZ71.87	GZ71.92



## AVSU Module

### Description

INSPITAL Area Valve Service Unit Module is manufactured to provide isolation of individual floors of medical gases in the hospital. AVSU Module Unit includes all features required by the EN ISO 7396-1 and HTM O2-01 standards. Isolation may be required for installation, maintenance or in the case of an emergency.

### Classification

- AVSU Modules Unit is manufactured HTM O2-01, HTM 2022, EN ISO 7396-1 and BS EN 15908.

### Services

- Oxygen
- Nitrous Oxide
- Medical Air 400 kPa
- Surgical Air 700 kPa
- Medical Vacuum

### Features

- Controls 1 to 5 gases, including vacuum
- Lockable covers with emergency access lock system
- Window on the cover enables the user to monitor the analog manometers without opening the covers
- Under plaster and on plaster types are available

### Alarm Unit

- Local Area Alarm

### Pressure Switches

- Pressure switches can be fitted inside the box to enable local monitoring.

### Electrostatic Painted

Explanation	Under Plaster Version Model No	On Plaster Version Model No
3 gas w/o alarm	GZ84.05	GZ84.15
3 gas with alarm	GZ84.06	GZ84.16
4 gas w/o alarm	GZ84.07	GZ84.17
4 gas with alarm	GZ84.08	GZ84.18
5 gas w/o alarm	GZ84.09	GZ84.19
5 gas with alarm	GZ84.10	GZ84.20



## Area Gas Control Panels With Second Stage Regulator

- Second stage pressure reducing from 10 bar to 7 bar/4 bar
- Lockable covers with emergency access lock system
- Stainless steel valve box
- Double or single regulators option
- Under plaster and on plaster types are available

Explanation	Under Plaster Model No	On Plaster Model No
1 gas	GZ71.83F	GZ71.88F
2 gas	GZ71.84F	GZ71.89F
3 gas	GZ71.85F	GZ71.90F
4 gas	GZ71.86F	GZ71.91F
5 gas	GZ71.87F	GZ71.92F

## Digital Alarm Panels

INSPITAL Medical Gas Alarm Panel monitors the medical gas sources and the operating pressure in the pipeline distribution systems. System continuously controls the medical gas lines in critical care areas of the facility to ensure that medical gas and vacuum systems remain safe for patient use.

INSPITAL Digital Alarm Panel is designed and manufactured in compliance with HTM2022, HTM O2-O1, C11, BS EN 60601-1-2 and BS EN ISO 7396-1.

Sensor-mounted alarm panel displays can be monitored on the computer and other panels by RS232



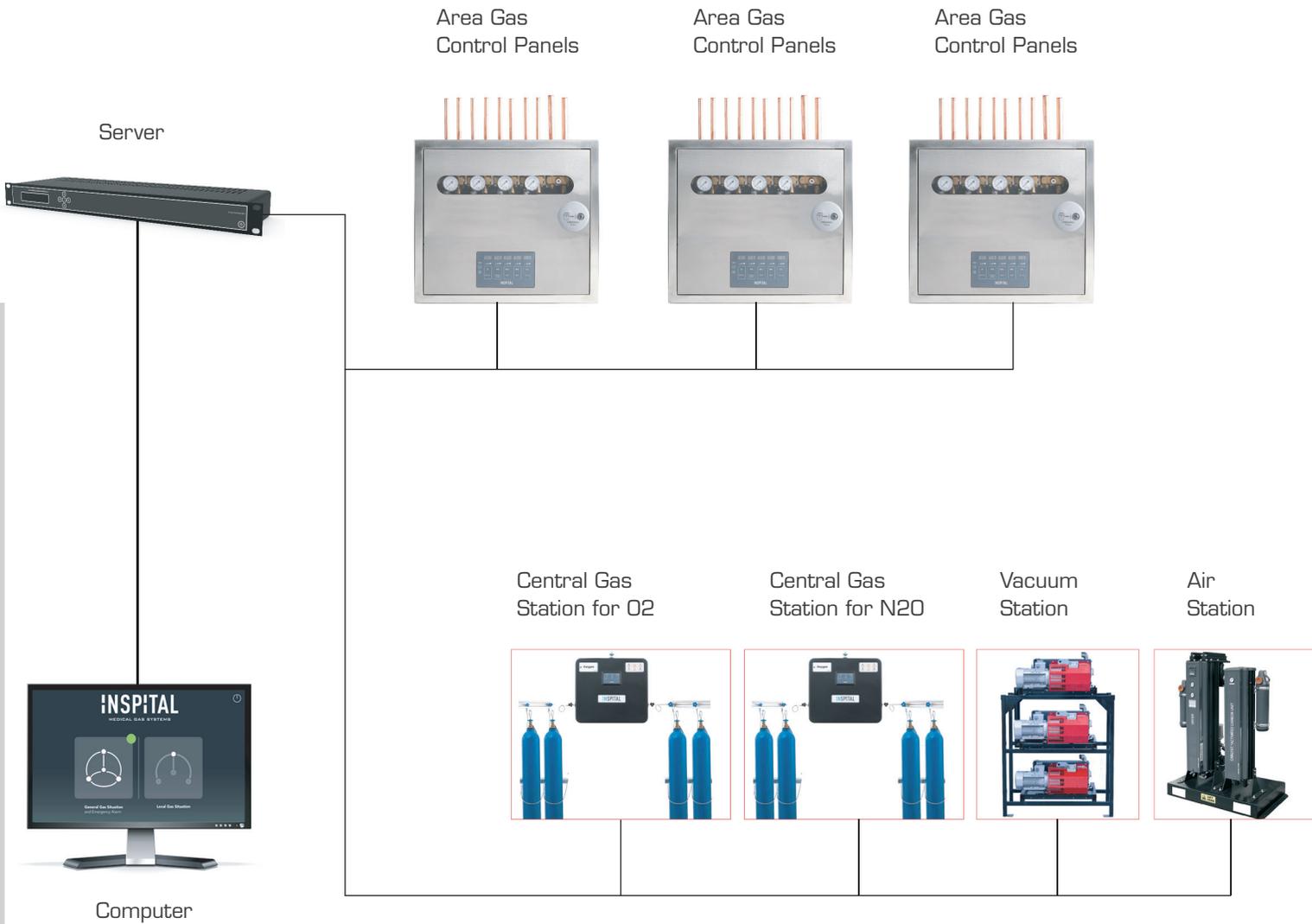
Capacity	Model No
Single Gas	GZ71.78
Double Gas	GZ71.79
Triple Gas	GZ71.80
Four Gas	GZ71.82
Five Gas	GZ71.81



## Central Alarm Panels

- Designed to be used in central gas station manifold systems
- Audible and visual alarms in case of pressure problems
- The panel works with two high pressure switches and one positive pressure sensor to detect pressure changes
- Sensors and switches are not included

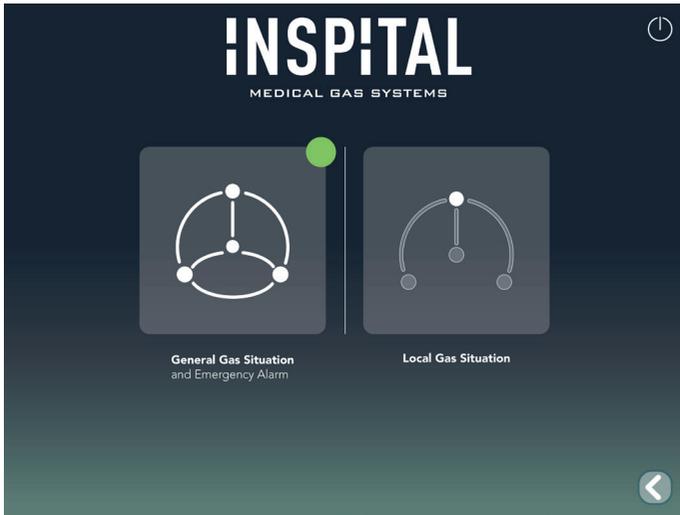
Model: GZ71.93



## MEDICAL GAS ALARM MANAGEMENT SYSTEM

INSPITAL developed an automation system which allows users to monitor all running medical gas system of the hospital. According to ISO 7396-1, medical gas alarms should monitors continuously medical gas supply, alarm conditions, performance and operation of system. The medical gas alarm management system is required for 7/24 monitoring of the medical gas system.

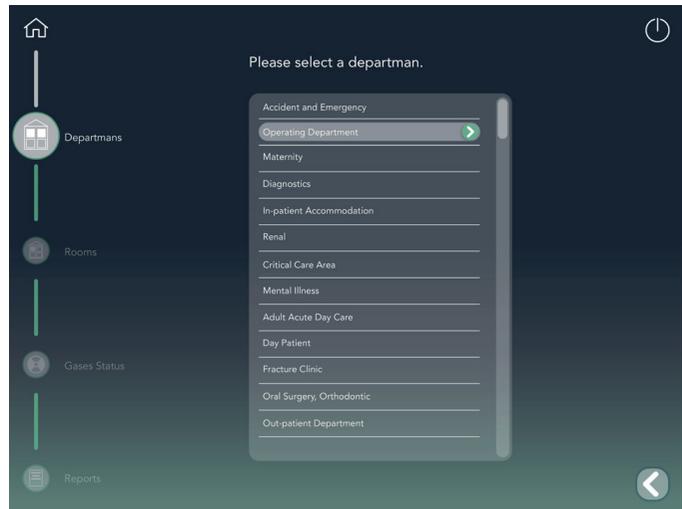
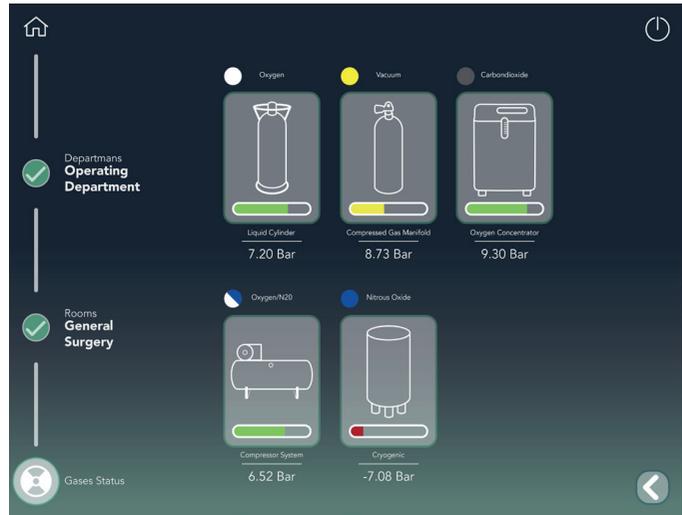
Monitoring system collects all datas from the alarm panel of central vacuum system, medical air system, manifold system and area control panels. All those instant datas can be displayed on specified touch monitor or any computer in related departments by the technicians



All stations or specified stations can be monitored instantly. System records all signals of operating and emergency alarms. Alarms are monitored both visually and audible indicators.

The Alarm Management System makes sure that technical and clinical personnel are kept informed about the status of the central gas supply at all times. Emergency and operational signals are recorded by data collectors and made accessible to the entire network. Data can be displayed either locally or at a central monitoring station.

Due to the decentralised design, new components can be added or existing configurations can be changed at any time. Since a standard data transfer protocol is used, new components will always be able to communicate with the existing system. As each component has a separate function, existing systems can also easily add on and make use of those new functionalities. Thus, your Medical Gas Alarm Management System can be easily brought up to date as required.





## Copper Tubes

### Pipeline solutions for medical installations

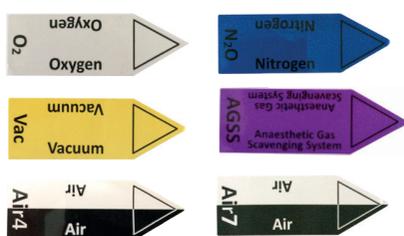
- Medical copper tubes are degreased and marked according to EN 13348 System in accordance with requirement of the medical gas market.
- Straight copper tube is available in 4m lengths and individually red capped.
- Wooden case packing for export deliveries

### Specific Benefits Include:

- Specially cleaned copper tubes for medical gas and vacuum systems. Superseding earlier 'hybridised' copper tube standards such as BS EN1057 & BS 2871 Part 1 quoted in HTM 2022 & NHS engineering spec.
- Tighter limits on cleanliness determination.

## Copper Pipe Label

Model No	Explanation
MB30.01	Oxygen 250 pcs
MB30.02	Vacuum 250 pcs
MB30.03	Air 250 pcs
MB30.04	Nitrogen 250 pcs
MB30.05	Agss 250 pcs



Model No	Explanation	Thickness	Working Pressure	Length
MB10.01	8 mm	1,0 mm	84 bar	4 m
MB10.02	10 mm	0,6 mm	84 bar	4 m
MB10.03	10 mm	1,0 mm	84 bar	4 m
MB10.04	12 mm	0,6 mm	77 bar	4 m
MB10.05	12 mm	1,0 mm	77 bar	4 m
MB10.06	15 mm	0,7 mm	63 bar	4 m
MB10.07	15 mm	1,0 mm	63 bar	4 m
MB10.08	22 mm	1,0 mm	58 bar	4 m
MB10.09	28 mm	1,0 mm	51 bar	4 m
MB10.10	28 mm	1,5 mm	51 bar	4 m
MB10.11	35 mm	1,0 mm	40 bar	4 m
MB10.12	35 mm	1,5 mm	40 bar	4 m
MB10.13	42 mm	1,0 mm	42 bar	4 m
MB10.14	42 mm	1,5 mm	42 bar	4 m
MB10.15	54 mm	1,5 mm	27 bar	4 m
MB10.16	54 mm	2,0 mm	27 bar	4 m
MB10.17	76 mm	1,5 mm	29 bar	4 m
MB10.18	76 mm	2,0 mm	29 bar	4 m
MB10.19	108 mm	2,0 mm	16 bar	4 m
MB10.20	108 mm	2,5 mm	16 bar	4 m

# Copper Tubes And Accessories

## Fittings & Accessories

- INSPITAL's end feed fittings, manufactured according to BS EN 1254-1; 1998 are seamless, monoblock fittings, which makes them stronger and easier to use.
- Biostatic composition of the copper material inhibits bacterial growth on its surface
- End connections: Copper x Copper
- Lightweight, strong and corrosion resistant
- Unaffected by sunlight, has no special storage requirements and does not produce toxic fumes in a fire.
- All fittings supplied contain less than 100mg/m<sup>2</sup> (0.01mg cm<sup>2</sup>) of hydrocarbons on the degreased surface.



				
Diameter	Model No	Model No	Model No	Model No
10 mm	FT50.01	FT50.09	FT50.28	FT50.17 / 12x10 mm
12 mm	FT50.02	FT50.10	FT50.29	FT50.18 / 15x12 mm
15 mm	FT50.03	FT50.11	FT50.30	FT50.19 / 22x12 mm
22 mm	FT50.04	FT50.12	FT50.31	FT50.20 / 15x22 mm
28 mm	FT50.05	FT50.13	FT50.32	FT50.21 / 15x28 mm
35 mm	FT50.06	FT50.14	FT50.33	FT50.22 / 22x28 mm
42 mm	FT50.07	FT50.15	FT50.34	FT50.23 / 22x35 mm
54 mm	FT50.08	FT50.16	FT50.35	FT50.24 / 54x22 mm
76 mm	FT51.09	FT51.17	FT51.36	FT50.25 / 54x28 mm
				FT50.26 / 54x35 mm
				FT50.27 / 76x54 mm
				FT51.28 / 35x28 mm
				FT51.29 / 35x42 mm
				FT51.30 / 54x42 mm

## Copper Pipe Clips

- INSPITAL designed clips used as copper tube supports on ceilings and walls.
- Can be mounted directly on the wall or mounted by rail.
- Single and jointed usage
- Color coded clips compatible with gas standard
- Halogen free, non-flammable material



Explanation	Blue	White	Gray	Yellow
Hook 10 - 12 mm	FT50.39	FT50.46	FT50.53	FT50.60
Hook 15 mm	FT50.40	FT50.47	FT50.54	FT50.61
Hook 22 mm	FT50.41	FT50.48	FT50.55	FT50.62
Hook 28 mm	FT50.42	FT50.49	FT50.56	FT50.63
Hook 35 mm	FT50.43	FT50.50	FT50.57	FT50.64
Hook 42 mm	FT50.44	FT50.51	FT50.58	FT50.65
Hook 54 mm	FT50.45	FT50.52	FT50.59	FT50.66

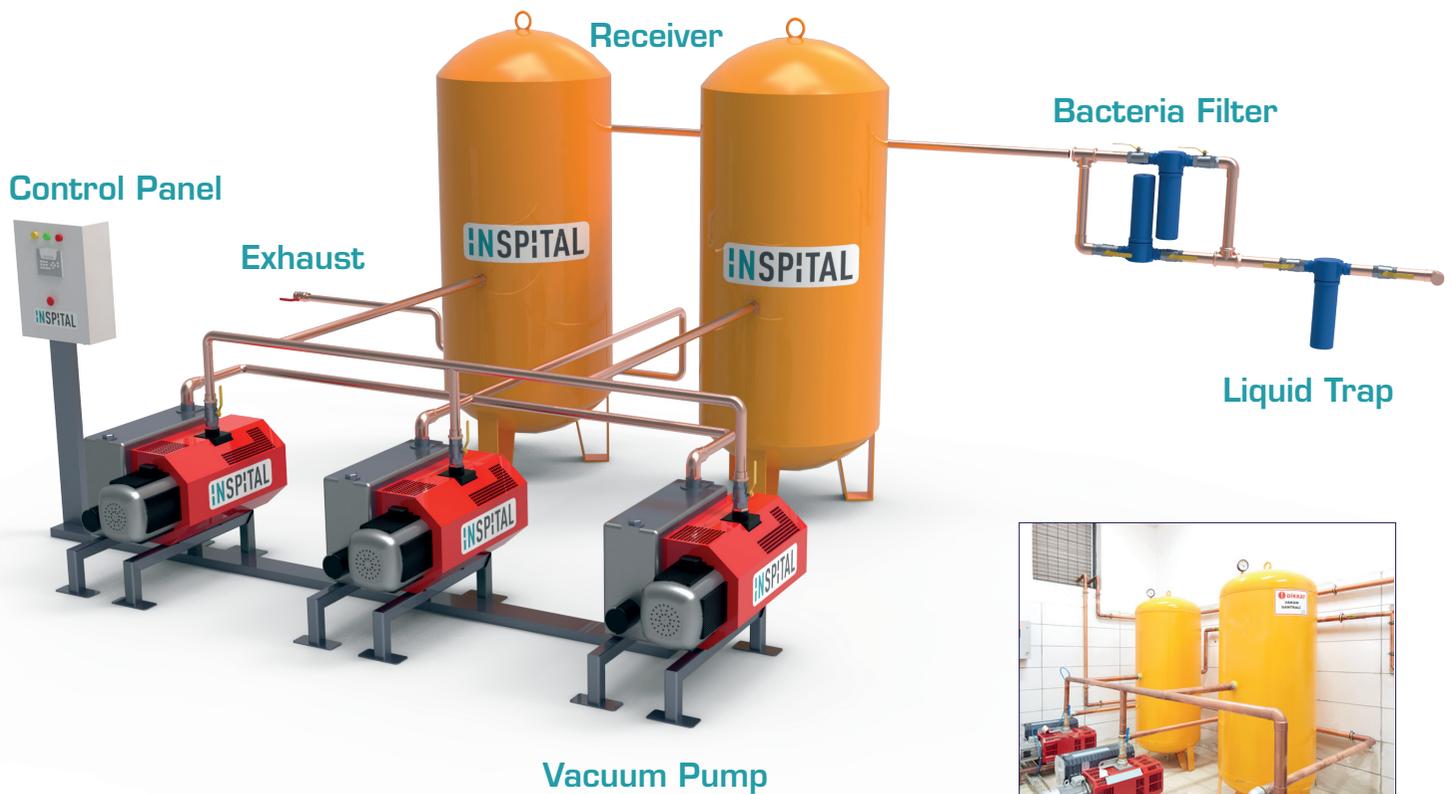
Model No	Explanation
FT50.36	Hook Rail
FT50.37	Stoper
FT50.38	Distance

## Medical Vacuum Station

Medical Vacuum is an essential requirement of the supply system for medical gases in hospitals. INSPITAL develops and manufactures fully automatic, stable and highly reliable vacuum stations which are used to aspirate fluids in the operating theatres, on ICU and on regular patient rooms.

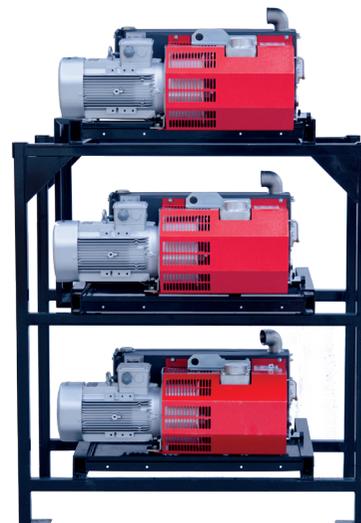
INSPITAL Medical Vacuum Plants are designed and manufactured in compliance with HTM 02-01, HTM 2022, MDD 93/42/EEC EN ISO 7396-1 and C11 standards.

- Station is fully controlled by PLC system. This system enables equal aging of vacuum pumps which means a much longer operating life time
- Protected by bacterial filters
- Equipped with lubricated rotary vane vacuum pumps



## Vertical Type- Central Vacuum Station

- Designed to be used for central vacuum systems in operating theatres, ICUs, emergencies and laboratories of hospitals
- PLC controlled full automatic system
- Compact and modular design
- Medical type high efficiency bacteria filters
- Lubricated rotary vane vacuum pumps
- Sliding shelves enable easy access for maintenance



Model No	VK40.02	VK40.03	VK40.04	VK40.05	VK40.06	VK40.07
System Capacity (m <sup>3</sup> /h) (50 Hz)	47x2	47x3	100x2	100x3	200x2	200x3
Power (kW) (50 Hz)	1,10x2	1,10x3	2,20x2	2,20x3	4,00x2	4,00x2
Pump Qty	2	3	2	3	2	3
Tank Capacity (L)	500	500	1000	1000	1500	1500
Bacteria Filter Qty	1 pc	1 pc	1 pc	2 pc	2 pc	2 pc
Liquid Trap	1 pc	2 pc				
Inlet hose dia.	1"	1"	1"1/4	1"1/4	2"	2"
Outlet hose dia.	1"	1"	1"1/2	1"1/2	2"	2"
Bed Qty	70	50-90	90-180	150-200	160-300	160-350

## Tank Mounted – Central Vacuum Station

- Designed to stand alone assemblies with all components and filters mounted on a single horizontal vessel
- PLC controlled full automatic system
- Compact tank top design
- Suitable for low height medical gas plant rooms
- Specifically designed for ease of installation



Model No	VK40.08	VK40.09	VK40.10	VK40.11	VK40.12	VK40.13
System Capacity (m <sup>3</sup> /h (50Hz))	47x2	47x3	100x2	100x3	200x2	200x3
Power (kW) (50 Hz)	1,10x2	1,10x3	2,20x2	2,20x3	4,8x2	4,8x3
Pump Qty	2	3	2	3	2	3
Tank Capacity (L)	500	500	1000	1000	1000	1000
Bactery Filter Qty	1 pc	1 pc	1 pc	2 pcs	2 pcs	2 pcs
Liquid Trap	1 pc					
PLC Qty	1	1	1	1	1	1
Inlet hose dia.	1"	1"	1"1/4	1"1/4	2"	2"
Outlet hose dia.	1"	1"	1"1/2	1"1/2	2"	2"
Bed Qty	70	50-90	90-180	150-200	160-300	160-350

## PLC Control Panel



- INSPITAL PLC panels are fully automatic digital control units
- They are designed to control multiple vacuum pumps of central vacuum stations.
- It enables equal aging of pumps and longer lifetime for the vacuum stations

Pump Type	Capacity m <sup>3</sup> /h	Dimensions	Model No
Single	25 - 40	350x160x530 mm	VK40.23
Double	65 - 100	350x160x530 mm	VK40.24
Triple	150 - 200	350x160x530 mm	VK40.25

## Bacteria Filter Set



- 100 m<sup>3</sup>/h flow capacity
- Integrated by-pass valves and discharge system
- Bacteria filtration of 30 micron

Pump Type	Model No
Single	VK40.26
Double	VK40.27

## Liquid Trap



- High efficiency trap designed to drain liquids in vacuum pipeline
- 1.5 L capacity
- Inlet and outlet valves included

Model: VK40.28

## Vacuum Tank



- Designed to use in central vacuum stations
- Various capacity options
- Vertical or horizontal types available
- Made of highly durable steel material

Capacity (L)	Wall Thickness	Diameter	Length	Model No
500 L	5 mm	630 mm	1800 mm	VK40.29
750 L	5 mm	750 mm	1800 mm	VK40.30
1000 L	6 mm	850 mm	1920 mm	VK40.31
1500 L	6 mm	1100 mm	2200 mm	VK40.32



### Maintenance Kits

Usual maintenance (EC): 3000 h or 24 months

- Inspection / cleaning
- Oil change
- Oil filter replacement
- Oil separating cartridge(s) change
- Inlet valve overhaul
- Gas ballast filter change

### Vacuum Pumps

The lubricated rotary vane pumps are designed to be used in a wide range of industrial and healthcare applications. They can run continuously from atmospheric pressure to ultimate vacuum.

- Specially designed for medical applications
- Stable and longlife pumps
- Lubricated rotary vane vacuum pumps
- Single stage
- High pumping speed even at low pressure
- Integrated oil mist filter on the exhaust
- Pumps can run continuously from atmospheric pressure to ultimate vacuum
- Silent and very robust pumps
- Options; Oil level switch, PT100 temperature sensor



- Options; Oil level switch, PT100 temperature sensor

### Maintenance Kits

Preventive maintenance (MP): 12 000 hours

- Radial shaft seals change
- Sliding rings change
- Vanes replacement\*
- End cover gaskets replacement
- Automatic drain + gaskets replacement
- Rubber feet replacement
- Coupling ring overhaul

Model No	Nominal Flow		Motor Power		Weight	3 000 hours or 24 months, Maintenance Kits	12 000 hours Maintenance Kits
	m <sup>3</sup> .h <sup>-1</sup>		Kw				
	50 Hz	60 Hz	50 Hz	60 Hz			
VK40.16	30	35.3	0,75	0,9	39	VK40.46	VK40.56
VK40.17	47.7	56	1,1	1,32	52		
VK40.18	64.3	72.2	1,5	1,8	75	VK40.48	VK40.58
VK40.19	96	115	2,2	2,70	85	VK40.49	VK40.59
VK40.20	132	156	3	3,6	154	VK40.50	VK40.60
VK40.21	198	240	4	4,8	140	VK40.51	VK40.61
VK40.22	293	354	5,5	6,6	162	VK40.52	VK40.62



VK40.14



VK40.15

## Mini Vacuum Station

- Compact and independent ready-to-run vacuum plant
- Lubricated rotary vane vacuum pump
- Standard suction network inlet
- Bacteria filter with aspiration (optional)
- Liquid trap (optional)

Model No	VK40.14	VK40.15
Nominal Capacity (m <sup>3</sup> .h-1) 50 Hz	25	2x10
Power (kW) 50 Hz	0,75	2x0,35
Tank Capacity (L)	70	70
Noise Level dB (A)	60	60
Oil Capacity(L)	1,5	1,5
Weight (kg)	85	85



VK50.01  
VK50.02



VK50.03  
VK50.04

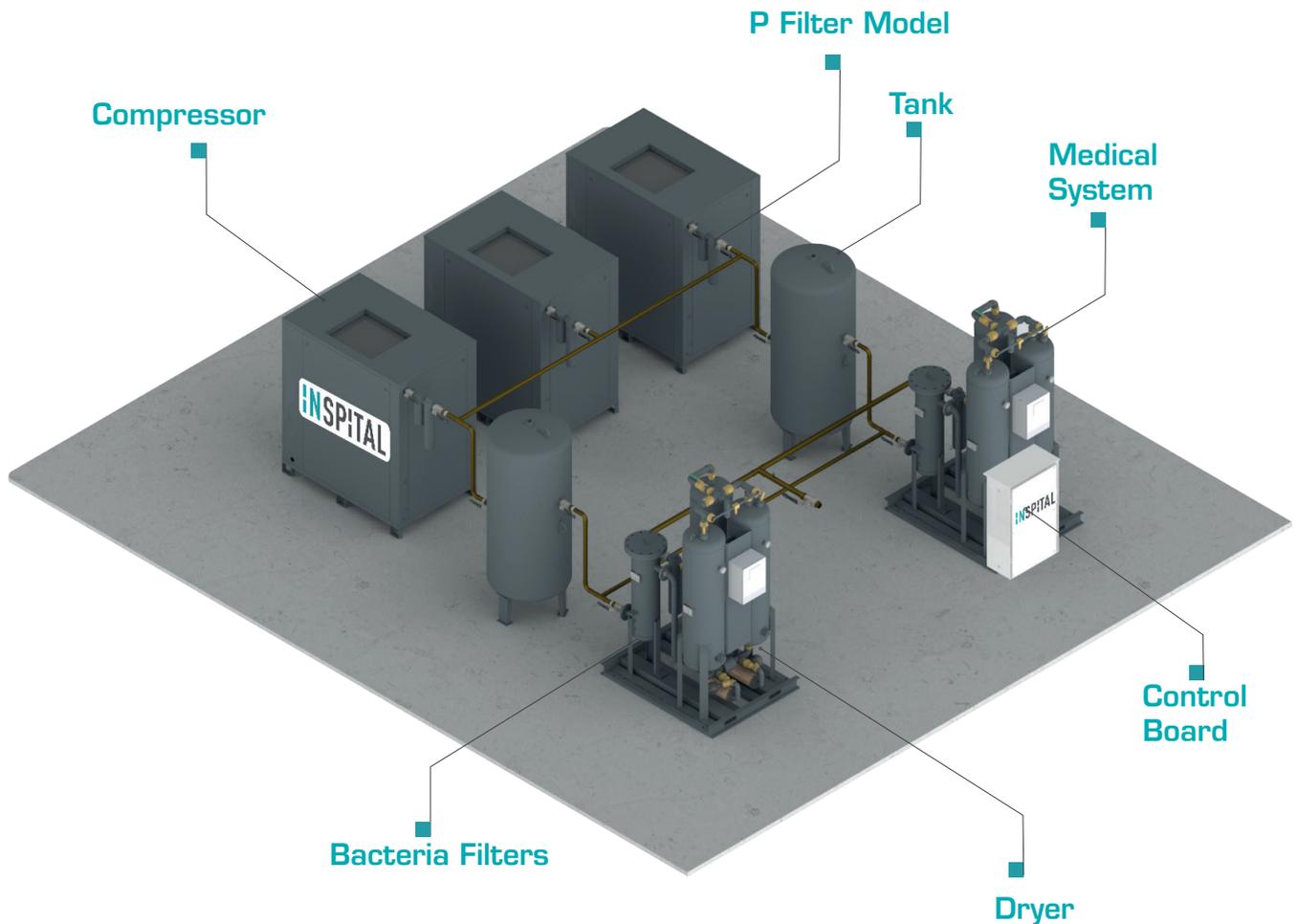
## Anaesthetic Gas Scavenging System, Single and Double

Anaesthetic Gas Scavenging the Systems AGSS are designed to remove anesthetic gas mixture formed in the operating room. INSPITAL AGSS systems are CE marked according to MDD 93/42/EEC and comply with HTM O2-O1. Anaesthetic Gas Scavenging Plant is classified as Class IIa Medical Devices.

Single and duplex blower versions are available. Blowers are oil-free, air cooled side channel regenerative type and suitable for continuous operation.

Model No	VK50.05	VK50.01	VK50.02	VK50.06	VK50.03	VK50.04
Capacity	24m <sup>3</sup> /h	80m <sup>3</sup> /h	130m <sup>3</sup> /h	2x24m <sup>3</sup> /h	2x80m <sup>3</sup> /h	2x130m <sup>3</sup> /h
Power kw	1,3	1,75	3,4	2x0,75	2x1,75	2x3,4
Vacuum	200 mbar	200 mbar	200 mbar	200 mbar	200 mbar	200 mbar
Inlet Dia mm	38	50,8	50,8	31.75	38	50,8
Outlet Dia mm	44	44	60	44	44	60
Weight	40	50	60	100	120	150

## Medical & Surgical Air Plant Systems



### Medical Air

Medical air is mainly supplied via a medical gas pipeline system where the air is manufactured by compressors, dryers and filtration system.

In the hospitals medical air supply is a vital life support service, maintaining respiration of the critically ill patients during mechanical ventilation.

The main uses of medical air in the hospitals are:

- Driving ventilators and incubators, where it provides uncontaminated and controlled air flows helping to reduce high concentration of oxygen exposure,
- As a carrier gas for anaesthetic agents
- As a power source for driving surgical tools in the operating theatre

INSPITAL Medical Air Plants are designed and manufactured according to ISO 13485 Quality Management System and comply with MDD 93/42/EEC.



## Medical Compressed Air

Medical Compressed air is a widely used gas in hospitals. Therefore, the requirements and quality standards are high. Medical compressed air is important for the ventilation of ICU patient. It is the most important medical gas other than oxygen. International standards such as EN ISO 7396-1 and the European Pharmacopoeia guarantee the continuity of medical compressed air and ensure that quality control is carried out regularly. In addition, it defines the limit values that the medical air must have. With INSPITAL Medical Compressed Air Stations, we ensure that you obtain quality air according to EN ISO 7396-1 and European Pharmacopoeia.

Contamination	European Pharmacopoeia
O <sub>2</sub>	20.4% <x<21.4%
CO <sub>2</sub>	<500 ppm
CO	<5 ppm
SO <sub>2</sub>	<1 ppm
NO	<2 ppm
NO <sub>2</sub>	<2 ppm
H <sub>2</sub> O	<67 ppm
Oil vapor	<0.1 mg/m <sup>3</sup>

## Medical Air System

Model No	Compressor Capacity	Compressor Pcs	Compressor Type	Tank Capacity	Filtration and Dryer System	Operating Temperature	Bed Quantity
GZ80.20	3x 39 m <sup>3</sup> /h	3	Screw Type	2x300 L	2	(+10) - (+50) C°	50-100
GZ80.21	3x 57 m <sup>3</sup> /h	3	Screw Type	2x500 L	2	(+10) - (+50) C°	100-150
GZ80.22	3x84 m <sup>3</sup> /h	3	Screw Type	2x1000 L	2	(+10) - (+50) C°	150-200
GZ80.23	3x117 m <sup>3</sup> /h	3	Screw Type	2x1000 L	2	(+10) - (+50) C°	200-250
GZ80.24	3x138 m <sup>3</sup> /h	3	Screw Type	2x1500 L	2	(+10) - (+50) C°	250-300
GZ80.25	3x210 m <sup>3</sup> /h	3	Screw Type	2x2000 L	2	(+10) - (+50) C°	300-500
GZ80.26	3x260 m <sup>3</sup> /h	3	Screw Type	2x2000 L	2	(+10) - (+50) C°	300-500



## Technical Air System

Technical Air Plant is designed to provide a continuous supply of medical quality air. Technical Air is mainly supplied via a medical gas pipeline system where the air is generated by compressors, dryers and filtration system.

INSPITAL Technical Air plant with rotary screw compressors can be used in wide capacity range. Compressor capacities varies from 2.2 kW to 37 kW. High quality screw blocks with perfect lubrication systems enable continuous operation, stability and reliability. At technical air solutions offers compressed air dryers with +3-5 C° dew point temperature.

INSPITAL can offer different capacities according to hospital consumption and bed capacity.

Model No	Compressor Capacity	Compressor Type	Dryer Capacity	Tank Capacity	Operating Temperature	Bed Quantity
GZ80.01	1x39 m <sup>3</sup> /h	Screw Type	1x50 m <sup>3</sup> /h	300 L	(+10) - (+50) C°	20-50
GZ80.02	2x39 m <sup>3</sup> /h	Screw Type	1x50 m <sup>3</sup> /h	300 L	(+10) - (+50) C°	20-50
GZ80.03	1x84 m <sup>3</sup> /h	Screw Type	1x87 m <sup>3</sup> /h	500 L	(+10) - (+50) C°	50-100
GZ80.04	2x84 m <sup>3</sup> /h	Screw Type	1x87 m <sup>3</sup> /h	500 L	(+10) - (+50) C°	50-100
GZ80.05	1x117 m <sup>3</sup> /h	Screw Type	1x130 m <sup>3</sup> /h	1000 L	(+10) - (+50) C°	100-150
GZ80.06	2x117 m <sup>3</sup> /h	Screw Type	2x130 m <sup>3</sup> /h	1000 L	(+10) - (+50) C°	100-150
GZ80.07	1x168 m <sup>3</sup> /h	Screw Type	1x170 m <sup>3</sup> /h	1500 L	(+10) - (+50) C°	150-200
GZ80.08	2x168 m <sup>3</sup> /h	Screw Type	2x170 m <sup>3</sup> /h	1500 L	(+10) - (+50) C°	150-200
GZ80.09	1x210 m <sup>3</sup> /h	Screw Type	1x283 m <sup>3</sup> /h	2X1000 L	(+10) - (+50) C°	200-250
GZ80.10	2x210 m <sup>3</sup> /h	Screw Type	2x283 m <sup>3</sup> /h	2X1000 L	(+10) - (+50) C°	200-250

## Air Compressors



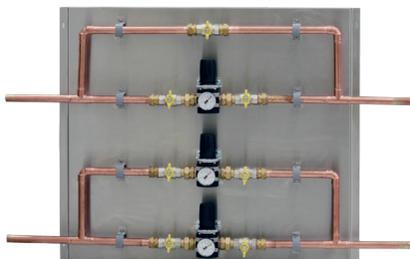
- Quiet and efficient axial fan directly connected to main motor
- Additional axial fan with temperature control
- Compact, small footprint, easy to service.
- Compressor capacity 21 - 324 m<sup>3</sup> / h
- Integrated PLC control until 2 compressor



## Compressed Air Tank

- Made of ST-37 steel
- Operating pressure at 15 atm
- Manufactured and tested according to BS EN 286-1:1998+A2:2005 standards

Model No	GZ82.01	GZ82.02	GZ82.03	GZ82.04	GZ82.08
Capacity (L)	300	500	1000	1500	2000
Trunk (st-37)				(st-37)	
Inlet				1 1/2"	



## Compressed Air Regulator Group

- Air Regulator Group is the final regulation process of the air coming from the compressed air station.
- It is used to regulate the air pressure to required level (4 bar or 7 bar)

Model No	GZ82.05	GZ82.06
Capacity (m <sup>3</sup> /h)	100	200



## Compressed Line Filters

- Four different types;
- Pre Filter (General Purpose)
- Fine Filter (Oil Removal)
- Particle Filter (Particle Removal)
- Activated Carbon Filter (Fine Oil Removal)
- Operation up to 20 bar
- Differential pressure gauge

## Oxygen Production Systems

INSPITAL Oxygen Generators are new generation stations that allows on-site production of oxygen. This helps hospitals to supply oxygen from their own automated system independently. These systems are generally combined with cylinder systems for instant back up.

INSPITAL Oxygen Generators deliver oxygen in a purity up to 95% at flow rate from 3 to 60 m<sup>3</sup>/h. Station delivers constant purity rate independent from the consumption. Ideal system consists of air compressors, dryers, O<sub>2</sub> generator, active carbon tower, tanks and filters.

### Features:

- Oxygen purity level and outlet pressure indicators
- Easy handling from Touch screen
- Automatic operation
- Reducing operation cost
- Return investment in less than 1 year
- Optional oxygen analyzer



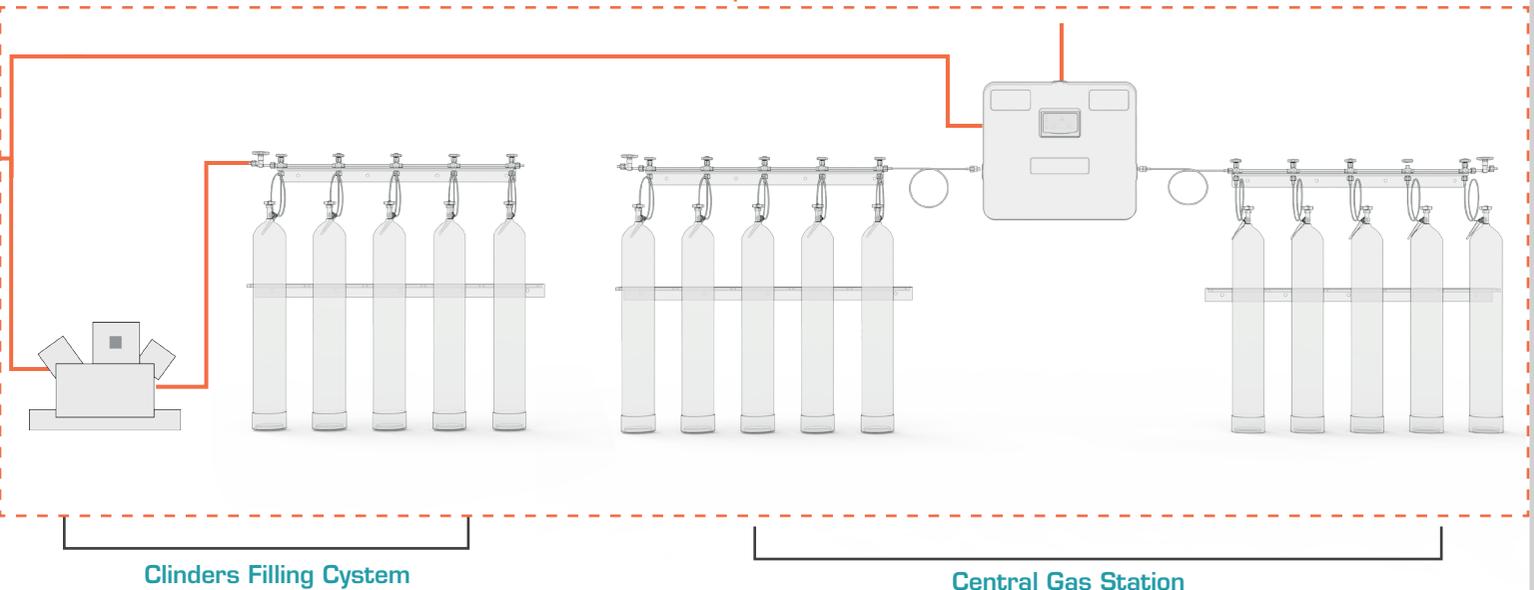
# Medical Gas Plants

Model No	O2 Generator Capacity						Compressor Capacity (m <sup>3</sup> /h)	Dreyer Capacity (m <sup>3</sup> /h)	Air Tank Capacity	Oxygen Tank Capacity
	90% Purity		93% Purity		95% Purity					
	m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min				
GZ81.01	2,60	44	2,32	39	2,17	36	48	50	500 L	500 L
GZ81.02	4,19	70	3,75	63	3,51	58	69	87	500 L	500 L
GZ81.03	5,84	97	5,22	87	4,88	81	102	87	500 L	500 L
GZ81.04	7,33	122	6,56	110	6,13	102	102	87	750 L	750 L
GZ81.05	8,98	150	8,03	135	7,51	125	135	130	750 L	750 L
GZ81.06	10,78	180	9,64	160	9,01	150	162	170	1000 L	1000 L
GZ81.07	13,47	225	12,04	200	11,27	188	198	170	1000 L	1000 L
GZ81.08	21,18	350	18,94	315	17,72	295	276	283	1000 L	1000 L
GZ81.09	25,75	430	23,03	385	21,54	360	384	467	1000 L	1000 L
GZ81.10	31,48	525	28,15	470	26,33	440	510	467	1000 L	1000 L
GZ81.11	42,56	710	38,06	653	35,60	600	588	588	2000 L	2000 L
GZ81.12	49,63	825	44,38	740	41,52	690	756	825	2000 L	2000 L
GZ81.13	59,50	990	53,20	885	49,77	830	972	825	3000 L	3000 L
GZ81.14	73,38	1225	65,62	1095	61,39	1025	1170	110	3000 L	3000 L
GZ81.15	86,00	1435	76,91	1280	71,95	1200	1170	1310	3000 L	3000 L
GZ81.16	100,86	1680	90,19	1500	84,37	1405	1404	1628	5000 L	5000 L

Note:

- Dryer and compressor capacities are given at atmospheric pressure at 20 °C (ISO 1217) in accordance with norms ISO 7183-8573-1 and Pneurop 6611- Class 2 @ 7 bar, 35 °C inlet
- Rightful capacity depends on the quantities and types of the rooms of the hospital.

## Optional



Clinders Filling System

Central Gas Station



## Cryogenic Oxygen Stations

Main components of the Cryogenic Oxygen Stations are liquid oxygen (LOX) storage tanks and evaporation systems.

### Classification

INSPIRAL LOX tanks are specially designed and Manufactured according to 2014/68/EU Pressure Equipment Directive (PED) EN 13445 – Annex C for long term storage of cryogenic liquified gases under pressure.

DESIGN CODE	EN 13458 - PED 97/23/EC
MAX. ALLOWABLE WORKING PRESSURE	16 bar
DESIGN TEMPERATURE	-196°C
INNER VESSEL MATERIAL	Stainless Steel (According to EN 10028-7)
OUTER VESSEL MATERIAL	Carbon Steel (According to EN 10025/EN 10028-3)
INSULATION	Perlite & Vacuum

### Features:

- Optional long-distance control with telemetry
- Standard manual or optional digital level indicator
- TUV Austria approved and CE marked
- Included VIE control panel

## Air Gas Standard Storage Tanks Dimensions

### 16 Bar Cryogenic lin/Lox/Lar Storage Tanks

Model no	Gros Capacity	Net Capacity (%95 Filling)	Daily Evap. Rate (O2)	ØD	L	W	H	Empty Weight
	liters	liters	%/day	mm	mm	mm	mm	kg
GZ90.00	3450	3280	0.34	1830	4020	2050	2120	2500
GZ90.05	6200	5890	0.30	1830	5910	2050	2120	3750
GZ90.10	10450	9930	0.29	2400	5340	2400	2690	5300
GZ90.15	14850	14110	0.28	2400	6830	2400	2690	6950
GZ90.25	24750	23510	0.24	2400	10625	2400	2690	10800
GZ90.30	31300	29735	0.23	2680	10300	2680	3020	11750
GZ90.50	50000	47500	0.19	3050	3050	11300	12000	20500

## Ambient Air Vaporizer

Ambient air vaporisers requires no external source of energy; and enables vaporization through exchange of heat with the surrounding air. The liquefied gas is vaporized, and warmed to almost the surrounding temperature, and finally led to the users in its gaseous state

The vaporisers are for use with liquid:

- Oxygen
- Nitrogen
- Argon
- Carbon Dioxide
- Nitrous Oxide
- LNG

## Design Specifications

INSPIRAL offers a full range of ambient air vaporizers in different versions and for different applications. Our following properties:

- Designed and manufactured according to PED 97/23/EC
- Has CE marking
- Max allowable working pressure 40 bar
- Cleaned for oxygen service
- Seismic requirements acc. to uniform building code-zone 4
- Low pressure drop
- Efficient fin tube desing
- Optimised external and internal surfaces for optimum convection

## Vaporiser options

- Ambient air vopariser options are
- Fin tube vaporisers
- Fan assisted vaporiser

Fin tube vaporisers rely on natural convection while fan assisted models are equipped with an models are equipped with an enhance air flow and increase efficiency.



Model no	Exterior Surface (M2)	Capacity for LOX (Nm <sup>3</sup> /h)
GZ90.00	24	77
GZ90.05	29	93
GZ90.10	59	186
GZ90.15	117	372
GZ90.25	205	650
GZ90.30	292	929
GZ90.50	400	1274

- The evaporator selection is made according to consumption of hospital.
- Evaporator needs to change between reserve at every 8 hours.
- The evaporator capacities to be selected according to the external surface will vary according to the outdoor temperature, working time and fluid type.



### Medical Gas Outlets

**Outlet Dia** : 45 mm  
**Copper Pipe Dia** : 10 mm  
**Production Standard** : BS 5682/EN ISO 9170-1  
**Color Codes** : Oxygen – White  
 Nitrous Oxide – Blue  
 Vacuum – Yellow  
 Compressed Air – Black & White

	Oxygen	Vacuum	Air 4	Air 7	N <sub>2</sub> O	CO <sub>2</sub>	O <sub>2</sub> / N <sub>2</sub> - Mix
<b>DIN</b>	PR80.01	PR80.02	PR80.03	PR80.04	PR80.05	PR82.01	-
<b>BS</b>	PR80.06	PR80.07	PR80.08	PR80.09	PR80.10	-	PR82.30

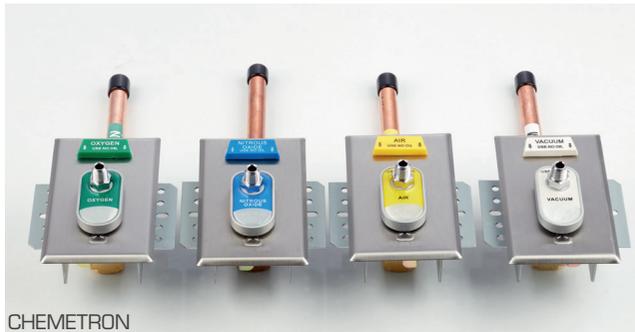


### Medical Gas Outlets

**Outlet Dia** : 43 mm  
**Copper Pipe Dia** : 10 mm  
**Production Standard** : BS 5682/EN ISO 9170-1  
**Color Codes** : Oxygen – White  
 Vacuum – Yellow  
 Nitrous Oxide – Blue  
 Compressed Air – Black & White

	Oxygen	Vacuum	Air 4	Air 7	N <sub>2</sub> O	CO <sub>2</sub>	O <sub>2</sub> N <sub>2</sub> - Mix
<b>DIN-90°</b>	PR80.11	PR80.12	PR80.13	PR80.14	PR80.15	PR82.02	-
<b>BS-90°</b>	PR80.16	PR80.17	PR80.18	PR80.19	PR80.20	-	PR82.31
<b>AFNOR-90°</b>	PR80.21	PR80.22	PR80.23	PR80.24	PR80.25	PR80.26	-
<b>DIN-45°</b>	PR82.11	PR82.12	PR82.13	PR82.14	PR82.15	PR82.03	-
<b>BS-45°</b>	PR82.16	PR82.17	PR82.18	PR82.19	PR82.20	-	PR82.32
<b>AFNOR-45°</b>	PR82.21	PR82.22	PR82.23	PR82.24	PR82.25	PR82.26	-

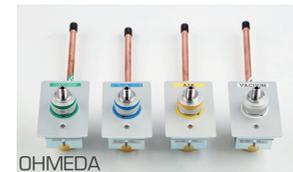
# Medical Gas Outlets and Accessories



## Medical Gas Outlets

- Outlet Size** : 62 X 96 mm
- Copper Pipe Dia** : 10 mm
- Production Standard** : BS 5682/EN ISO 9170-1
- Color Codes** : Oxygen-Green  
Vacuum-White  
Nitrous Oxide – Blue  
Compressed Air – Yellow

				
	Oxygen	Vacuum	Air	N <sub>2</sub> O
<b>DISS</b>	PR80.32	PR80.33	PR80.34	PR80.35
<b>CHEMETRON</b>	PR80.36	PR80.37	PR80.38	PR80.39
<b>OHMEDA</b>	PR80.40	PR80.41	PR80.42	PR80.43



## AGSS Terminal Units

INSPITAL AGSS terminal units are designed according to safety and performance requirements of EN ISO 9170-2 standard

### Technical specifications

- Can be used as under plaster, on plaster or pendant outlet
- Special port to enable safe connection
- Venturi Type Outlet option
- Made of S/S frame and chrome plated brass material

				
Probe Type	BS	BS Probe	DIN (Venturi Type)	DIN Probe
Model No	PR80.26	PR80.27	PR80.30	PR80.31



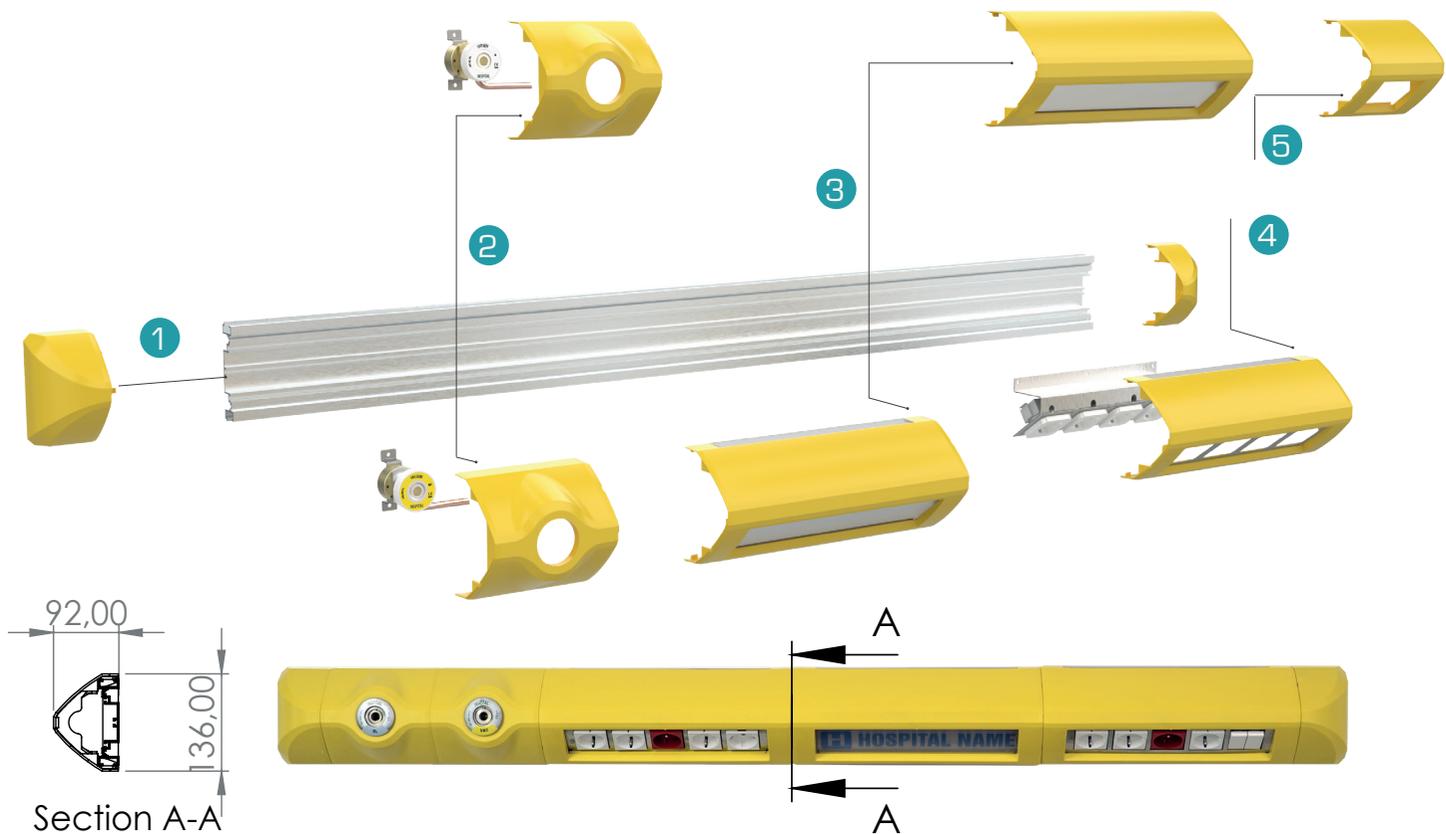
Air Motor  
PR81.32



Air Motor Probe  
PR81.33

## Air Motor

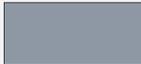
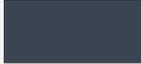
This terminal unit integrates a medical tool drive outlet with a gas scavenging terminal unit.



## Modular Bed Head Units

	① Side Hatch, 75 mm
	② Med. Gas Outlet Module, (Single Port) 150 mm
	③ Led Lighting Module, 350 mm
	④ Electrical Power Module, (3/4/5 Sockets) 350 mm
	⑤ Electrical Power Module, (Single Sockets) 150 mm

### Colour Options

	White RAL9003
	Yellow RAL1018
	Light Grey RAL7040
	Anthracite RAL7015

# Patient Bed Head Units



## Modular Bed Head Units

New generation INSPITAL bed head units are designed for new generation hospitals which requires functional, extendable and modular solutions.

Manufactured according to EN 11197 and fully meets all the standards of this regulation.

Innovative design of modular bed head units offer:

- Modular structure
- Configurable unit according to customer's needs both during the order and after the installation
- Aluminum main frame
- ABS cover (optional anti-bacterial version)
- Wide range of color options
- LED light for reading and ambient lighting (optional fluorescent light)
- Electrical sockets available for different country standards
- Name plate option on lamp module

Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.30
Double bed	3000-3600 mm	GB22.40
ICU Single bed	1500-1800 mm	GB22.50
Double arm vertical type	1500-1800 mm	GB22.60
Single arm vertical type	1500-1800 mm	GB22.90

## Patient Bed Head Unit with Three Channels and Double Lamps



INSPITAL Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas. All INSPITAL Bed Head Units designed and manufactured in compliance with EN 11197 standard. Each unit is custom manufactured to your specific requirements.

### Standard Accessories

- Electrical socket :3 pcs 220 V (BS and DIN)
- Reading lamp :2 pcs
- Power button :1 pc

Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.35
Double bed	3000-3600 mm	GB22.45



GB22.01  
GB22.02

## ICU Type Patient Bed Head Unit with Double Channel and Double Rail

INSPITAL Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas, especially in ICU's. All INSPITAL Bed Head Units are designed and manufactured in compliance with EN 11197 standard.

### Standard Accessories

- Electrical socket 6 pcs (BS and DIN)
- Earth node 4 pcs



GB22.31  
GB22.32

Explanation Wall Type	Length	Model No
Single bed	1500-1800 mm	GB22.01
Double bed	3000-3600 mm	GB22.02
Single bed	1500-1800 mm	GB22.31
Double bed	3000-3600 mm	GB22.32

Ceiling support profiles	Explanation	Model No
	For single BHU	GB52.01
For double BHU	GB52.02	

# Pendants



## Bridge Type ICU Pendant

INSPITAL bridge type pendants are used to provide medical gas outlets, electrical outlet and convenient device positioning around the patient in ICU, recovery and similar departments

### Standard Accessories:

Electrical Socket	: 6 pcs EUR/UK/USA
Equipment shelf	: 3 pcs
IV pole	: 1 pc
Drawer	: 2 pcs

### Optional Accessories:

Medical gas outlets (BS/DIN/NF), data outlet (RJ45), manometer for medical gases

### Technical Specifications

Material	: Main frame: aluminum; Shelves: 1mm steel
Movements	: Shelves move horizontally in the rail and rotate manually
Loading capacity	: 50 kg
Color	: RAL colors are available
Power Input	: 220V AC - 50 Hz
Dimensions	: (WxLxH)350x2200 x1300mm

Model: FX40.50





Model: FX40.25  
Double Joint, Motorised  
Pendant



Model: FX40.20  
Single Joint, Motorised  
Pendant



Model: FX40.15  
Double Joint Pendant  
with Double Shelf



Model: FX40.10  
Single Joint Pendant  
with Double Shelf

# Pendants



## Pendant Systems

INSPIRAL single joint pendants are designed to provide single point service for medical gas, electricity and equipment positioning nearby the patient. Mobility, flexibility and heavy duty design gives a strong support in operating theatres. Every pendant is custom design by our experienced sales support team.

### Features

- High payload capacities up to 1.000 kgs
- Color coded brake buttons and joints
- Optional electromagnetic and pneumatic brake system
- Optional bluetooth sound system
- Visual indicators for movements

### Standard Accessories

- Power Outlet: 8 Number UK, USA, Europe
- Grounding Note: 8 Pcs
- Rail Shelf: 1 Pc
- IV Pole 2 Pcs

### Optional Accessories

- Shelves
- IV Pole
- Drawer
- Data socket (RJ45)
- Pressure gauge for Medical Gases
- Medical gas outlets (BS, DIN, NF)



Model: FX40.05  
Pendant with Monitor Shelf



Model: FX40.20D  
Heavy Duty Double Joint  
Pendant



Model: FX40.15M  
Heavy Duty Motorised  
Pendant



Model: FX40.10S  
Heavy Duty Single Joint  
Pendant

# Pendants



**Infusion Pump Pole,  
Double, Rail Type**

Explanation	Model No
Double	SR10.22



**IV Pole**

Explanation	Model No
With Clamp	SR10.32



**Infusion Pump Pole with  
Connector**

Explanation	Model No
Connector Inclusive	SR10.33



**Basket, Stainless Steel,  
Rail Type**

Explanation	Model No
220x220x240 mm	FX41.01
220x400x240 mm	FX41.02



**Monitor Tray, Rail Type**

Explanation	Model No
Rail Type	FX41.03



**Monitor Tray, Wall Type**

Explanation	Model No
400 mm Height Adjustment	FX41.04



**Drawer for the wall**

Explanation	Model No
540 x 360 mm	FX41.05



**Shelf with Drawer for  
Pendants**

Explanation	Model No
500 x 400 mm Drawer	FX41.06
500 x 400 mm Shelf	FX41.07



**Examination Lamp LED,  
Rail Type**

Explanation	Model No
Rail Type (LED)	LP10.05

# Outlet Boxes



## Outlet Boxes, On Plaster/ Under Plaster

- Made of 304 quality S/S material
- Suitable to install on plaster / under plaster
- Several length and outlet standard alternatives

On Plaster Model	Under Plaster Model	Length	Outlet Qty
PR81.30	PR81.31	260 mm	1
PR81.01	PR81.07	310 mm	2
PR81.02	PR81.08	460 mm	3
PR81.03	PR81.09	610 mm	4
PR81.04	PR81.10	760 mm	5
PR81.05	PR81.11	910 mm	6
PR81.06	PR81.12	1110 mm	7
PR81.28	PR81.29	145 mm	Single AGSS

- Without outlets

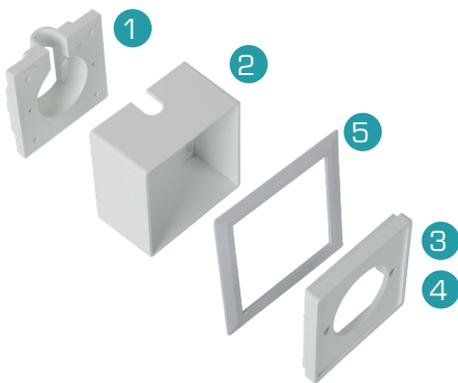


## Plastic Outlet Boxes, Under Plaster

- Made of durable plastic material
- Suitable for under plaster installation
- Several length and outlet standard alternatives

Explanation	Length	Outlet Qty	Model No
Under Plaster	100 mm	1	PR81.17
Under Plaster	250 mm	2	PR81.18
Under Plaster	400 mm	3	PR81.19
On Plaster	100 mm	1	PR81.20

- Without outlets



## Medical Outlet Boxes BS/DIN

- Consist of 4 parts and made of plastic material
- Compatible with BS or DIN standards

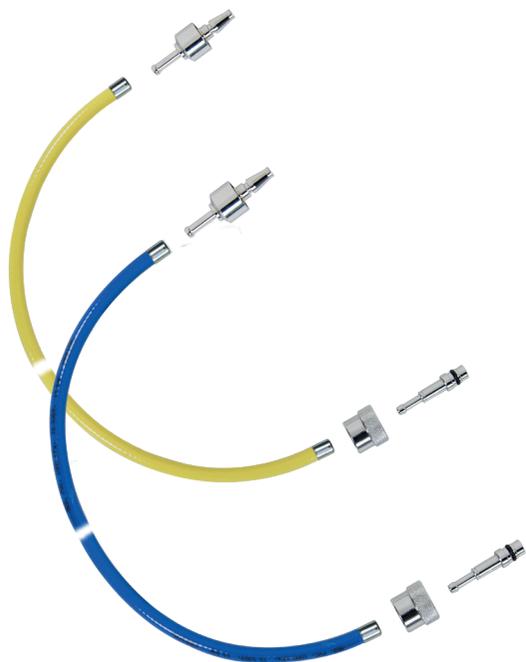
No	Explanation	Dimensions (WxLxH) mm	Model No
1	Base part	82x82x22	PR81.21
2	Main body	86x86x50	PR81.22
3	Cover BS	86x86x12	PR81.23
4	Cover DIN	86x86x12	PR81.24
5	Frame	106x106x12	PR81.25



## Medical Outlet Box AFNOR

- Consist of 2 parts. Main frame is plastic and cover is metal.
- Compatible AFNOR standard

Explanation	Dimensions (WxLxH)	Model No
Main frame	65x65x25 mm	PR81.26
Cover	65x65x25 mm	PR81.27



## Hose Assembly

INSPITAL offers a complete range of Medical Gas Hoses that are fully compatible according to current ISO 5359 for the manufacture of medical gas hose assemblies. All hoses are CE marked. Different hose configuration are possible with direct probe, angle probes, NIST probes, NIST probe with tail, female NIST probe, Schrader outlets, twin Schrader outlets.

### Hose Assembly - 3m

Hose Type	BS	DIN	AFNOR
O2,	PR10.01	PR10.11	PR10.21
N2O	PR10.02	PR10.12	PR10.22
AIR 4	PR10.03	PR10.13	PR10.23
AIR 7	PR10.04	PR10.14	PR10.24
VAC,	PR10.05	PR10.15	PR10.25

### Hose Assembly - 5m

Hose Type	BS	DIN	AFNOR
O2,	PR10.06	PR10.16	PR10.26
N2O	PR10.07	PR10.17	PR10.27
AIR 4	PR10.08	PR10.18	PR10.28
AIR 7	PR10.09	PR10.19	PR10.29
VAC,	PR10.10	PR10.20	PR10.30



Hose Type	Model No
O2, 100 cm	PR81.13
N2O, 100 cm	PR81.14
AIR, 100 cm	PR81.15
VAC, 100 cm	PR81.16

## Medical Gas Hoses

- Special hoses for medical gases
- Made of thermoplastic and rubber material
- Color coding according to EN 739 standard
- Suitable up to 20 bar pressure
- Inner dia: 6,7 mm Outer dia: 12 mm

## Ceiling NIST Blanking Plug

- Universal NIST for blanking pressure gases



Hose Type	Model No
Pressure Gas	PR11.08
AGSS	PR11.09

## NIST Probe

- Stainless steel NIST Probe with 'O' Ring
- Gas specific engraving on NIST Probe and Nut
- Gas specific Indexing
- MRI compatible



Hose Type	Model No
O2	PR11.01
N2O	PR11.02
AIR 4	PR11.03
AIR 7	PR11.04
VAC	PR11.05
CO2	PR11.06
AGSS	PR11.07

## Probes



INSPITAL probes are produced according to international standards by using a special labelling for gases. They are used to supply necessary gases from terminal units to the patient or medical equipments via hose connections or by direct connection to the equipment. INSPITAL Probes are manufactured in compliance with BS 5682:1992, DIN 13260, AFNOR NF S 90-116.

- Manufactured according to BS, DIN & AFNOR standard
- Special connections for O<sub>2</sub>, N<sub>2</sub>O, AIR 4 and AIR 7
- Special labeling for each gas type
- Safe hose connection
- Made of chrome plated brass material or Stainless Steel

							
		BS 90°	DIN 90°	AFNOR 90°	BS 180°	DIN 180°	AFNOR 180°
Oxygen	Stainless Steel	JK90.50	JK90.51	JK90.52	JK92.50	JK92.51	JK92.52
	Brass	JK90.56	JK90.57	JK90.58	JK92.56	JK92.57	JK92.58
Vacuum	Stainless Steel	JK92.60	JK92.61	JK92.62	JK90.60	JK90.61	JK90.62
	Brass	JK92.66	JK92.67	JK92.68	JK90.66	JK90.67	JK90.68
Air 4	Stainless Steel	JK90.70	JK90.71	JK90.72	JK92.70	JK92.71	JK92.72
	Brass	JK90.76	JK90.77	JK90.78	JK92.76	JK92.77	JK92.78
Air 7	Stainless Steel	JK90.80	JK90.81	JK90.82	JK92.80	JK92.81	JK92.82
	Brass	JK90.86	JK90.87	JK90.88	JK92.86	JK92.87	JK92.88
N <sub>2</sub> O	Stainless Steel	JK90.90	JK90.91	JK90.92	JK92.90	JK92.91	JK92.92
	Brass	JK90.96	JK90.97	JK90.98	JK92.96	JK92.97	JK92.98
CO <sub>2</sub>	Stainless Steel	-	JK91.11	JK91.12	-	JK93.17	JK93.11
	Brass	-	JK91.17	JK91.18	-	JK93.18	JK93.12

## Straight Probe

				
		DISS	CHEMETRON	OHMEDA
Oxygen	Brass	JK90.53	JK90.54	JK90.55
Vacuum	Brass	JK90.63	JK90.64	JK90.65
Air 4	Brass	JK90.73	JK90.74	JK90.75
N <sub>2</sub> O	Brass	JK90.93	JK90.94	JK90.95



## Flowmeters

INSPITAL offers different models of flowmeters according to their gas flow scale, connection types and humidity jars that can be used with oxygen.

Flowmeters can be either connected to medical gas outlets directly or attached on rail system and connected to the outlets by flexible hoses.

<b>Size (LxWxH)</b>	: 80 x 48 x 145 mm
<b>Inlet</b>	: Whitworth GAS 1/8"
<b>Pressure</b>	: 4.2 Kgs/cm <sup>2</sup> – 60 psi – 414 kPa
<b>Flow Rate</b>	: 0 - 15 L/min
<b>Humidifier capacity</b>	: 200 ml

Flowmeters L/min	Without Adaptor						
<b>Oxygen</b>							
Wall type	FM20.11	FM20.21	FM20.31	FM20.41	FM20.51	FM20.61	FM20.71
Rail type	FM20.12	FM20.22	FM20.32	FM20.42	FM20.52	FM20.62	FM20.72
Dual wall type	FM20.13	FM20.23	FM20.33	FM20.43	FM20.53	FM20.63	FM20.73
Dual rail type	FM20.14	FM20.24	FM20.34	FM20.44	FM20.54	FM20.64	FM20.74
<b>Air</b>							
Wall type	FM20.15	FM20.25	FM20.35	FM20.45	FM20.55	FM20.65	FM20.75
Rail type	FM20.16	FM20.26	FM20.36	FM20.46	FM20.56	FM20.66	FM20.76
Dual wall type	FM20.17	FM20.27	FM20.37	FM20.47	FM20.57	FM20.67	FM20.77
Dual rail type	FM20.18	FM20.28	FM20.38	FM20.48	FM20.58	FM20.68	FM20.78

# Respiration Equipment



Calibrated  
Flowmeter



Mobile  
Flowmeter

## Flowmeters

INSPITAL flowmeters are instant flow measurement devices regulating the dosage of medical gases particularly suitable in Oxygen therapy.

- Pre-calibrated and measurement tube types
- I/O switch for immediate locking and reactivating
- Large size adjusting knob with soft grip

**Size (LxWxH)** : 61x107x175 mm

**Gas supply pressure** : 280÷600 kPa

**Gas options** : O<sub>2</sub>, Air

**End of scale values** : 15 L/min.

**Flow calibration data** : 1013 mbar 23 °C

Calibrated Flowmeter 15 L/min	Without Adaptor						
		BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Wall type	FM21.11	FM21.21	FM21.31	FM21.41	FM21.51	FM21.61	FM21.71
Rail type	FM21.12	FM21.22	FM21.32	FM21.42	FM21.52	FM21.62	FM21.72
Dual wall type	FM21.13	FM21.23	FM21.33	FM21.43	FM21.53	FM21.63	FM21.73
Dual rail type	FM21.14	FM21.24	FM21.34	FM21.44	FM21.54	FM21.64	FM21.74

Mobile Flowmeter 15 L/min	Without Adaptor						
		BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Wall type	FM21.15	FM21.25	FM21.35	FM21.45	FM21.55	FM21.65	FM21.75
Rail type	FM21.16	FM21.26	FM21.36	FM21.46	FM21.56	FM21.66	FM21.76
Dual wall type	FM21.17	FM21.27	FM21.37	FM21.47	FM21.57	FM21.67	FM21.77
Dual rail type	FM21.18	FM21.28	FM21.38	FM21.48	FM21.58	FM21.68	FM21.78



150 ml

300 ml



150 ml



355 ml

	150 ml	300 ml	150 ml	355 ml
<b>Model No</b>	FM21.81	FM21.84	FM21.80	FM21.83

### Flowmeter Humidifier Bottle

- Designed to humidify oxygen before patient's respiration
- Made of polycarbonate and scaled
- Sterilizable up to 121 °C For 15 min
- 120, 150, 300, 355 ml capacity options
- Connection to Flowmeter : Moving pipe union
- Lid material : Plastic
- Integrated relief valve



### Oxygen Mask and Hose

- Oxygen concentration delivered is 40%-60% depending on the patient's breathing. The masks are connected directly to a compressed air or oxygen supply. The products are intended for single use only.
- 2.1m oxygen tubing
- Mask, oxygen tubing material: Polyvinyl chlorid

Model No	Explanation
AT20.60	Adult
AT20.61	Pediatric
AT20.62	Hose



## 5 Way Flow Selector and Frame

### BS Schrader Input Probe on 2m Hose

- Strong aluminium frame
- Extending hooks for hanging
- 2m supply hose to connect to 4 bar oxygen source
- Folding carrying handle
- Four therapy outlets, each with selectable flows, 1/2, 1, 2, 3, 4, 6, 8, 10 and 15 litres per minute
- Plastic feet to base

Model No	Explanation
FM21.11F	5 Way Flow Selector



## Vacuum Regulators

- On / Off lever for instant vacuum cut
- Autoclavable safety jar to avoid fluid leakage into central vacuum line
- Chrome plated brass trunk
- Easy to read vacuum gauge
- Flow adjustment knob

							
<b>Gas Type</b>	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
<b>Vacuum</b>	FG51.01	FG51.02	FG51.03	FG51.04	FG51.05	FG51.06	FG51.07



## Vacuum Regulator

- The regulator is made of a strong techno-polymer body, with a quick I/O switch-button, a suction adjustment knob and a control vacuum gauge with three possible end-of-scale choices: -250 mbar pediatric and -1000 mbar.
- De-pressure Safety valve included
- Autoclavable safety jar to avoid fluid leakage into central vacuum line
- Max. suction flow - 1000 : 115 L/min at -950 mb
- Max. suction flow - 250 : 50 L/min at -220mbar
- Vacuum gauge : 0 + -1000 mbar
- I/O switch : Quick push switch button

							
<b>Gas Type</b>	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
<b>Vacuum -1000 mbar</b>	FG52.10	FG52.11	FG52.12	FG52.13	FG52.14	FG52.16	FG52.15
<b>Vacuum -250 mbar</b>	FG52.20	FG52.21	FG52.22	FG52.23	FG52.24	FG52.26	FG52.25

# Respiration Equipment



## Probe with Manometer

- Chrome plated brass trunk
- Flow adjustment knob
- Pressure or vacuum gauge
- Gas specific connection port
- Suitable outlet for hose connection

Gas Type	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Oxygen	FG50.10	FG50.11	FG50.12	FG50.13	FG50.14	FG50.15	FG50.16
Nitrous Oxide	FG50.20	FG50.21	FG50.22	FG50.23	FG50.24	FG50.25	FG50.26
Vacuum	FG50.30	FG50.31	FG50.32	FG50.33	FG50.34	FG50.35	FG50.36
Medical Air 4	FG50.40	FG50.41	FG50.42	FG50.43	FG50.44	FG50.45	FG50.46
Medical Air 7	FG50.50	FG50.51	FG50.52	FG50.53	FG50.54	FG50.55	FG50.56



## Portable Oxygen and Vacuum System

- Designed for emergency services, ambulances and examination rooms
- Together with oxygen therapy device, ventury vacuum regulator, portable carrying rack and 1 L vacuum jar
- Regulator Inlet Pressure :200 kg / cm<sup>2</sup>
- Regulator Output Pressure :3,5 - 4 kg / cm<sup>2</sup>
- Pressure Gauge Scale :0 - 315 kg / cm<sup>2</sup>
- Adjustable Flow Rate :0-15 L / min
- Vacuum Capacity :550 mmHg

	With 3 L O <sub>2</sub> Cylinder	Without Cylinder
<b>Model No</b>	RS10.01	RS10.00



### Thoracic Suction Control Unit:

- Designed to use for closed drainage purpose after Thoracic Surgery or Cardiac Surgery.
- Negative pressure: 0 – 20 cmH<sub>2</sub>O (water line) for persistent low pressure suction
- Polycarbonate, scaled and sterilizable bottle
- Transparent tube for easy observation on liquid
- Integrated safety trap to prevent back flow of waste fluid

	Without Adaptor	BS	DIN	AFNOR
<b>Model No</b>	FG54.01	FG54.02	FG54.03	FG54.04



### Venturi Type Vacuum Regulator

- Designed to provide vacuum by using compressed air or oxygen source
- Chrome coated brass trunk
- Available in BS, DIN, AFNOR, DISS and OHMEDA standards
- Max Suction Flow: 25L/min at-775 mbar
- Gas Consumption at max Scution : 60L/min

Gas Type	Without Adaptor						
<b>Medical Air</b>	FG53.01	FG53.02	FG53.03	FG53.04	FG53.05	FG53.07	FG53.06



## Oxygen Therapy Device

INSPIRAL Oxygen Therapy Device is appropriate to use in hospitals, emergency services and homecare units. This device is designed to adjust and control the oxygen flow.

- Chrome plated brass trunk
- High resistant polycarbonate humidifier bottle suitable for sterilization
- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Pressure Gauge Range : 0 - 315 bar
- Sterilization Method : 121 °C

	Bull Nose	DIN	PIN INDEX
<b>Model No</b>	FM21.86	FM21.87	FM21.88



## Oxygen Therapy Device Calibrated

- Max. gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Pressure Gauge Range : 0 - 315 bar
- Pressure reducer assy : Double stage with shutter system
- Flow setting data : 1013 mbar 23 °C
- Side gas outlet connection

Tube	Bull Nose	DIN	PIN INDEX
<b>BS</b>	FM22.01	FM22.02	FM.22.03
<b>DIN</b>	FM22.01D	FM22.02D	FM22.03D
<b>AFNOR</b>	FM22.01A	FM22.02A	FM.22.03A



## Oxygen Therapy Device

INSPIRAL Oxygen Therapy Device is appropriate to use in hospitals, emergency services and homecare units. This device is designed to adjust and control the oxygen flow.

- Chrome plated brass trunk
- High resistant polycarbonate humidifier bottle suitable for sterilization
- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Inlet Pressure Gauge Range : 0 - 315 bar

	Bull Nose	DIN	PIN INDEX
<b>Model No</b>	FM21.96	FM21.97	FM21.98



## Laboratory S/S Regulator

- Line groups with body valve
- Inlet pressure : 0 - 40 bar
- Outlet Connection : R 3/8"
- Adjustable Pressure : 0-10 bar & Argon 1,5 bar
- Stainles diaphragm

Model No	Gas type	Gas flow	Inlet Connetion
GZ70.80	Oxygen	70 m <sup>3</sup> /h	R 1/4 NPT
GZ70.81	Nitrogen	70 m <sup>3</sup> /h	R 1/4 NPT
GZ70.82	N2O	70 m <sup>3</sup> /h	R 1/4 NPT
GZ70.83	Argon 1,5 bar	15 m <sup>3</sup> /h	R 1/4 NPT
GZ70.84	CO2	12 m <sup>3</sup> /h	R 1/4 NPT
GZ70.85	Helium	40 m <sup>3</sup> /h	R 1/4 NPT
GZ70.86	Hydrogen	55 m <sup>3</sup> /h	R 1/4 NPT
GZ70.87	Dyr Air	15 m <sup>3</sup> /h	R 1/4 NPT
GZ70.88	Mixed	60 m <sup>3</sup> /h	R 1/4 NPT



## Pressure Regulators

- Double stage stainless
- Inlet pressure : 0 - 230 bar
- Outlet Connection : R 3/8"
- Adjustable Pressure : 0-10 bar CO2 1,5 bar
- Stainles diaphragm,

Single Model	Double Model	Gas type	Gas flow	Inlet Connetion
GZ70.60	GZ70.70	Oxygen	30 m <sup>3</sup> /h	R 3/8"
GZ70.61	GZ70.71	Nitrogen	30 m <sup>3</sup> /h	R 5/8" Inner
GZ70.62	GZ70.72	Argon	30 m <sup>3</sup> /h	R 5/8" Inner
GZ70.63	GZ70.73	CO2	11 m <sup>3</sup> /h	W21, 80X1/14
GZ70.64	GZ70.74	Helium	70 m <sup>3</sup> /h	R 5/8" Inner
GZ70.65	GZ70.75	Hydrogen	90 m <sup>3</sup> /h	W21, 80X1/14 Left
GZ70.66	GZ70.76	Dyr Air	30 m <sup>3</sup> /h	R 3/8"
GZ70.67	GZ70.77	N2O	30 m <sup>3</sup> /h	R 3/8"

## Ventilator Regulators

Design to use with ventilator and direct oxygen supply at emergency, ICU and ambulances.



- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Pressure Gauge Range : 0 - 315 bar

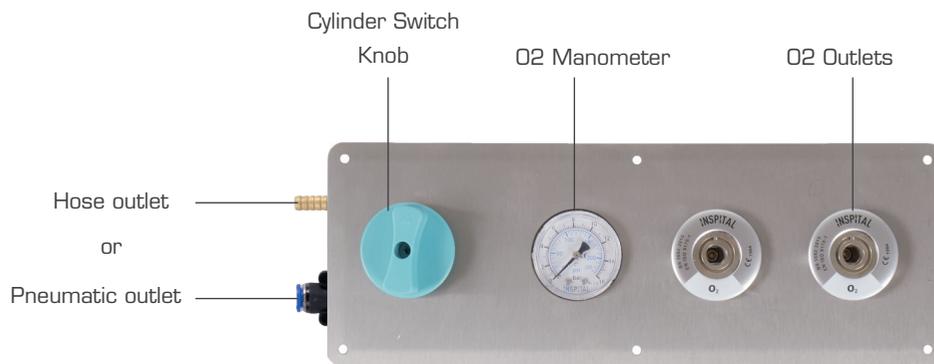
Tube			
Probe	Bull Nose	DIN	PIN INDEX
BS	FM21.91	FM21.92	FM21.93
DIN	FM21.91D	FM21.92D	FM21.93D
AFNOR	FM21.91A	FM21.92A	FM21.93A



## Gas Outlets

- Made of S/S material Frame, bras body material
- Oxygen
- BS 5682 / DIN 13260-2 / Afnor NF 90 -116
- Outles and bard end inlet

On Plaster Model	Under Plaster Model	Length	Outlet Qty	Gas Type
PR80.11A	PR80.01A	90 mm	1	DIN
PR80.11D	PR80.01D	200 mm	2	DIN
PR80.11T	PR80.01T	300 mm	3	DIN
PR80.21A	PR80.44A	90 mm	1	AFNOR
PR80.21D	PR80.44D	200 mm	2	AFNOR
PR80.21T	PR80.44T	300 mm	3	AFNOR
PR80.16A	PR80.06A	90 mm	1	BS
PR80.16T	PR80.06D	200 mm	2	BS
PR80.16D	PR80.06T	300 mm	3	BS

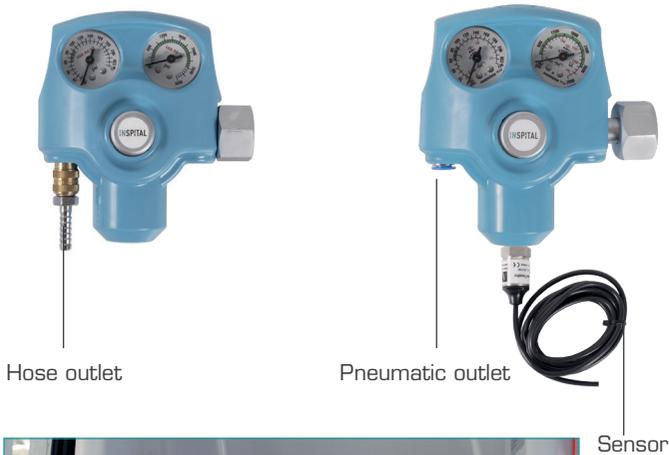


## Ambulance Oxygen Terminal Unit

- Made of 304 quality S/S material
- Several length and outlet standard alternatives
- Modular system fully adaptable to your needs for the most demanding emergency situations
- Quick coupling for any type of hose
- Gas cylinder selector
- Outlet pressure monometer

Hose outlet Model	Pneumatic outlet Model	Length	Outlet Qty	Gas Type
PR41.12H	PR41.12P	360 mm	2	DIN
PR42.12H	PR42.12P	440 mm	3	DIN
PR41.13H	PR41.13P	360 mm	2	AFNOR
PR42.13H	PR42.13P	440 mm	3	AFNOR
PR41.11H	PR41.11P	360 mm	2	BS
PR42.11H	PR42.11P	440 mm	3	BS

# Ambulance Solution



## Oxygen Pressure Regulators

- Designed to be used up to 200 bar, optimizing the O<sub>2</sub> consumption
- Guarantees the the high stability of outlet pressure and precise flow
- Safe and accurate over-pressure valve

Model	Cylinder Fitting	Explanation	Sensor
GZ70.50A	DIN	Hose outlet	w/o
GZ70.50B	DIN	Pneumatic outlet	w/o
GZ70.50C	Bullnose	Hose outlet	w/o
GZ70.50D	Bullnose	Pneumatic outlet	w/o
GZ70.50E	DIN	Hose outlet	With sensor
GZ70.50F	DIN	Pneumatic outlet	With sensor
GZ70.50G	Bullnose	Hose outlet	With sensor
GZ70.50H	Bullnose	Pneumatic outlet	With sensor

## Aluminium Cylinder DIN Type

- Aluminium alloy high pressure cylinders for medical gases
- 5 L and 10 L capacity cylinders tested at 300 bar
- The aluminium alloy medical gas cylinders offer noteworthy advantages such as being lightweight, corrosion-resistant and non-magnetic



Model	Capacity (L)	Diameter (mm)	Length (mm)	Weight (kg)
TP05.00	5	140	525	6,70
TP10.00	10	140	970	11,40





**Reusable Canister**

Model No	Explanation
AT20.01	Canister, 1 L
AT20.02	Canister, 2 L
AT20.03	Canister, 3 L
AT20.04	Reusable lid

- Suitable for high vacuum applications
- New generation easy to use & hygienic system
- Antibacterial & hydrophobic self-sealing filter for extra safety
- Easy connection to central vacuum system

# Suction Accessories



Model No	Explanation
AT80.10	Suction Liner, 1 L
AT80.20	Suction Liner, 2 L
AT80.30	Suction Liner, 3 L
AT80.11	Suction Liner With Antifoam, 1 L
AT80.22	Suction Liner With Antifoam, 2 L
AT80.33	Suction Liner With Antifoam, 3 L
AT80.91	Suction Liner With Solidifying Agents, 1 L
AT80.92	Suction Liner With Solidifying Agents, 2 L
AT80.93	Suction Liner With Solidifying Agents, 3 L

The canisters are made in three sizes, to be used according to the effective requirements about the volumes expected to be suctioned, and they are manufactured in three different versions: suction liner, antifoam, solidifying agents.

Suction liner with solidifying allow us to avoid from liquid decontamination. Suction liner with antifoam finish all foam on liquid and that take advantage to use liner more efficiency.

## Suction Liner

- No contact with patient.
- Liner and lid are made of durable plastic.
- Liners are flexible
- In bags, optionally, disinfectant, foam inhibitor and Solidifying agents are available.



## Suction Liner Manometer Probe

- That allows to open and close to suction from top of suction liner.
- Manometer and without manometer options



### Rail Attachment

Explanation	Model No
For 25 x 5 mm Rail	AT20.37



### Silicone / PVC Tube

Explanation	Model No
8 x 14 mm (silicone)	AT20.47
6 x 11 mm (silicone)	AT20.46
8 x 12 mm (PVC)	AT20.44
10 x 14 mm (PVC)	AT20.45



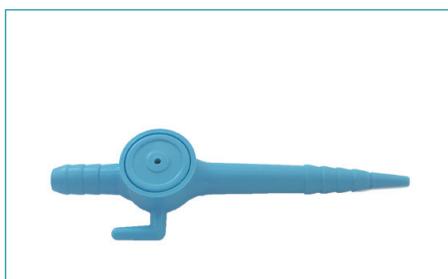
### Yankauer Tipped Hose

Explanation	Model No
1,8 Meter Hose	AT20.40
Suction Cannula tip	AT20.41



### Wall Attachment

Explanation	Model No
Wall Attachment	AT20.50



### Vacuum Control Connector

Explanation	Model No
Control Connector	AT20.54



### Suction Cannula, Plastic

Explanation	Model No
Non-Sterile	AT20.55



### Suction Liner Manometer Probe

Explanation	Model No
Manometer	AT20.78
Without Manometer	AT20.79



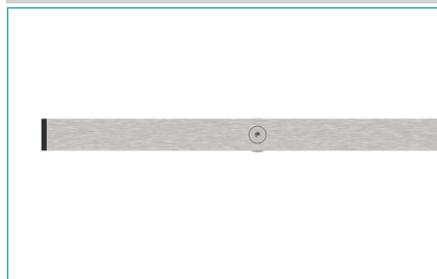
### Tube Connector

Explanation	Model No
Non-Sterile	AT20.52



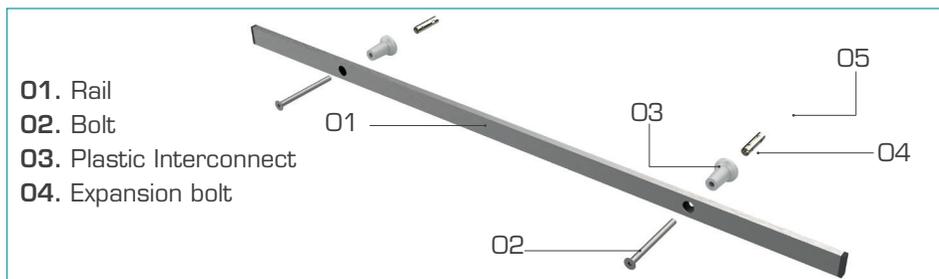
### Kapkon Connector

Explanation	Model No
Kapkon Connector	AT20.53



### Rail

Explanation	Model No
1 meter	AT20.56



- 01. Rail
- 02. Bolt
- 03. Plastic Interconnect
- 04. Expansion bolt

# Suction Accessories



AT20.75



AT20.75P

## Central Vacuum System

- Integrated vacuum regulator
- Liner and lid are made of durable plastic.
- Trolley with 4 pcs vacuum jar capacity
- Polycarbonate, transparent vacuum jars with silicone hoses
- Sterilizable jars at 121°

Model No	Explanation
AT20.75	S/S frame, 4 port
AT20.75C	Powder coating frame, 4 port
AT20.75P	Powder coating frame, 1 port

1. **Patient port** - The patient port allows the suction of fluids and all its content safely
2. **Suction kit** - Inspital suction system has wide range of accessories for different suction applications
3. **Vacuum port** - This port connects to vacuum source coming from surgical suction device or central vacuum station line
4. **Filter** - Inspital suction liners are equipped with hydrophobic filter which work as an overflow valve and antibacterial barrier. It also keeps the electrosurgery smoke in the liner and protects the operation environment



## Surgical Suction Jar

- Made of transparent polycarbonate material
- Sterilizable jars at 121° C
- Adapter for wall connection
- Integrated hydrophobic filter

Model No	Capacity
AT20.85	5 L
AT20.83	3 L
AT20.82	2 L

## Analog System

### Nurse Call Panel



The Nurse Call Panel is an intelligent unit with a microcontroller RTC and E<sup>2</sup>. It can operate by itself or with a connection to a PC. Mode settings are available. It displays up to 5 calls at and displays the time, and date. The system communicates via RS485 modules. Other adjustments can be performed manually through a PC connection.

Model: GB22.70

### Bedside Call Unit



The Bedside Call Unit is used patient rooms. There are backlit call and cancel buttons on the unit. In an emergency, a patient uses the call button to make an emergency call which appears as an alert on the Nurse Control Panel. Typical locations for this unit are on the walls of patient rooms and living areas as needed.

Model: GB22.76

### Basic Handset



The Basic Handset allows the patient's condition to be reported quickly to the hospital staff in an emergency situation. It is easy to use and reinforced with auxiliary visuals. The device works through connection to the Bedside Call Unit. Easy-to-understand images indicate the functions of the buttons. Thanks to LEDs on the unit, the product is easily noticeable in the dark. These LEDs vary according to the last call made.

Model: GB22.72

### Pull-cord Call Unit



The Pull-cord Call Unit is used in patient bathrooms or similar areas. There is a backlit cancel button and an emergency call pull-cord on the unit. In an emergency, a patient pulls the cord making an emergency call. This appears as a WC Emergency Call on the Nurse Control Panel. The system gives priority to WC Emergency calls and they appear before other calls.

Model: GB22.78

### Over Door Light



The Over Door Light is located above the patient room door in the corridor. Its half-sphere shape makes it easily noticeable from any angle of view. If there is an emergency in the room, it can be seen clearly from the corridor. It can warn with four main colors, yellow, red, green, and blue, and combinations of these, depending on the call status of the room.

Model: GB22.80

### Room Control Unit



The Room Control Unit is suitable for surface montage. Can support 3 beds, 1 call reset 1 WC, and 1 bath/shower by default. It can operate without external power supply.

Model: GB22.75

### Light Control Unit



The Light Control Unit is a module that must be added to a system when control of room lighting/reading lamp through patient handsets is requested. This module supports up to 3 beds.

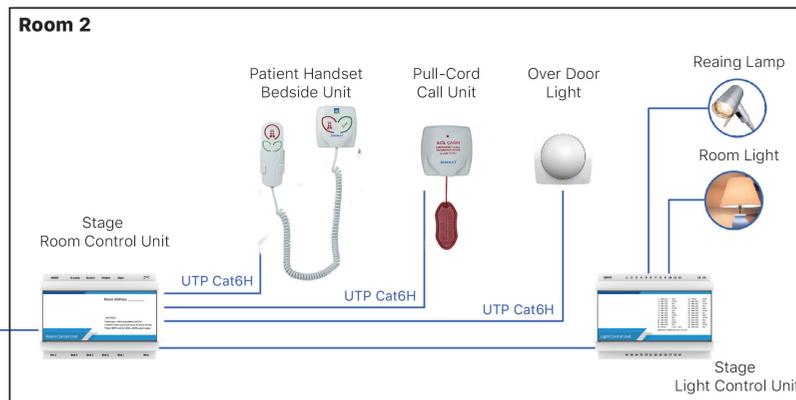
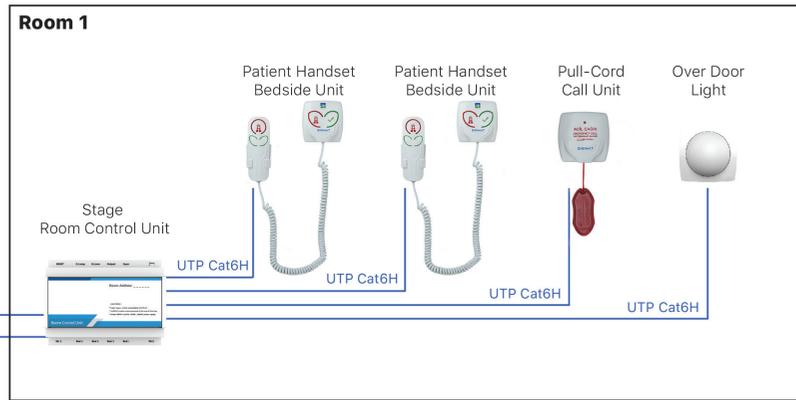
Model: GB22.82

# Nurse Call System

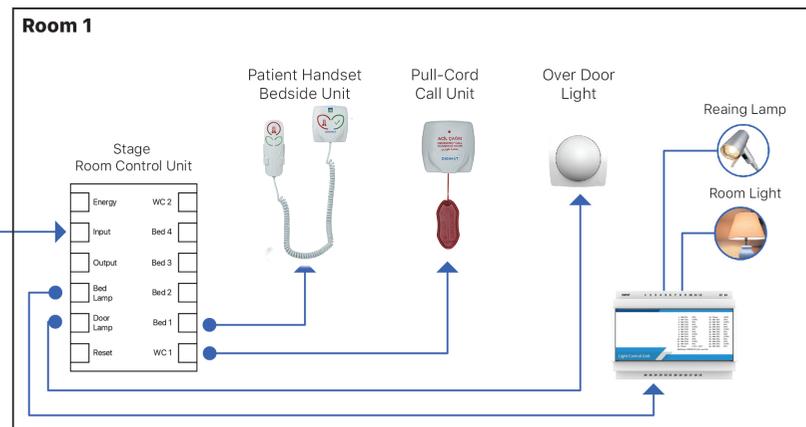
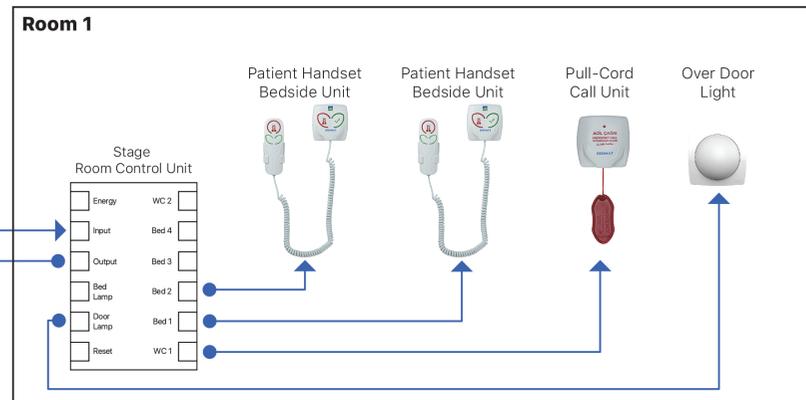


220V

12V5A DC Power Supply



220V





## IP System Room Control Unit 4,3"

This unit ensures communication between the Nurse Control Panel and the call buttons in patient rooms. The Room Control Unit is suitable for both flush and shallow montage. It features a 4,3" touchscreen and a built-in Mifare card reader. Optionally a basic task list can be accessible from the onscreen menu.

**Model: GB22.83**



## Nurse Control Panel

The statuses of all working Room Control Units connected to the panel can be monitored actively. All errors and notifications shall be displayed on the information panel. Emergency codes, WC calls, and normal calls may be monitored. All processes passing through the system are logged.

**Model: GB22.84**



## Bedside Call Unit

The Bedside Call Unit is used patient rooms. There are backlit call and cancel buttons on the unit. In an emergency, a patient uses the call button to make an emergency call which appears as an alert on the Nurse Control Panel. Typical locations for this unit are on the walls of patient rooms and living areas as needed.

**Model: GB22.76**



## Basic Handset

The Basic Handset allows the patient's condition to be reported quickly to the hospital staff in an emergency situation. It is easy to use and reinforced with auxiliary visuals. The device works through connection to the Bedside Call Unit. Easy-to-understand images indicate the functions of the buttons. Thanks to LEDs on the unit, the product is easily noticeable in the dark. These LEDs vary according to the last call made.

**Model: GB22.72**



## Over Door Light

The Over Door Light is located above the patient room door in the corridor. Its half-sphere shape makes it easily noticeable from any angle of view. If there is an emergency in the room, it can be seen clearly from the corridor. It can warn with three main colors, red, green, and blue, and combinations of these, depending on the call status of the room.

**Model: GB22.81**

# Nurse Call System

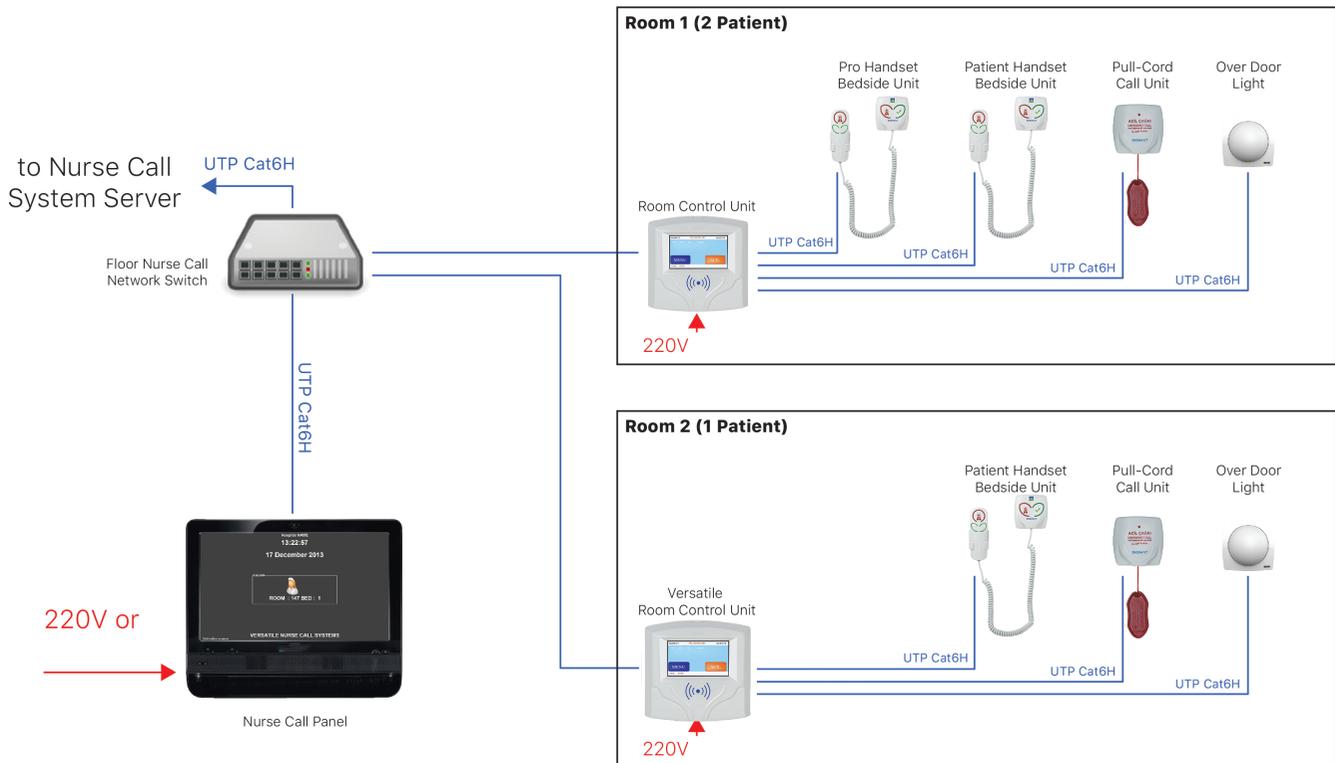
## Reporting and Management Server



This unit, without the need for the operator, is inclusive of Nurse Call, Blue Code White Code and Consultant Doctor system over the local network. It is the unit that can manage, forward, keep records of all calls, run the software program that produces reporting and reporting and statistics. It works in harmony with the telephone Exchange and hospital information management system. Some of the presented reports are: Nurse Calls- Critical Situations / Blue Code -Code Status Statistics -Graphical Reports-Performance Reports- Performance Report -Breakdown of Technical Problems

Model: GB22.87

## System Block diagram





# Medical Gas Test Kits



## Medical Gas Test & Commissioning Kit

- A complete set all in one box to carry out Test & Commissioning
- Includes Digital Pressure & Flow, AGSS Test & Commissioning, Male Anti Confusion NIST, Anti Confusion Probes and Standard Purging test kits
- In compliance with HTMO2-01 and relevant European Standards and all preceding standards.

**Model:GZ75.01**



## Anti Confusion Probes

- Set of six stainless steel gas specific probes
- Gases include O<sub>2</sub>, O<sub>2</sub>/N<sub>2</sub>O, N<sub>2</sub>O, Air-4 Bar, Air-7 Bar, Vacuum
- Calibrated to BS 5682 In compliance with HTMO2-01 and relevant European Standards and all preceding standards

**Model:GZ75.02**

## Anti Confusion NIST Probes

- Set of six or nine stainless steel gas specific NIST probes
- Gases include O<sub>2</sub>, O<sub>2</sub>/N<sub>2</sub>O, N<sub>2</sub>O, Air-4 Bar, Air-7 Bar, Vacuum
- Nine includes CO<sub>2</sub>, N, HE02 (Carbon Dioxide, Nitrogen, Heliox)
- Calibrated and manufactured to current industry standards

**Model:GZ75.03**



Filter

## Standard Particulate and Purging Kit

- 75/150Lpm flow rate jets
- Hydrophobic Membrane 47mm filter papers, 0.45(µm) pore size
- In compliance with HTMO2-01 and relevant European Standards and all preceding standards

**Model:GZ75.04**



## Pressure Drop Test Gun

- Measures pressure losses at NIST or Outlet Point
- Lockable valve to prevent tampering
- Ideal to test at AVSU and Manifold points
- 20054D Digital Pressure Gauge or Conventional Analogue Gauge

**Model:GZ75.05**

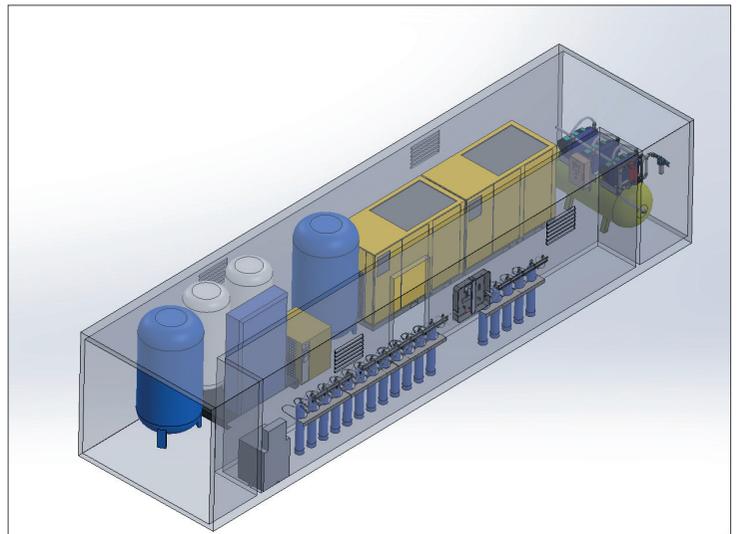
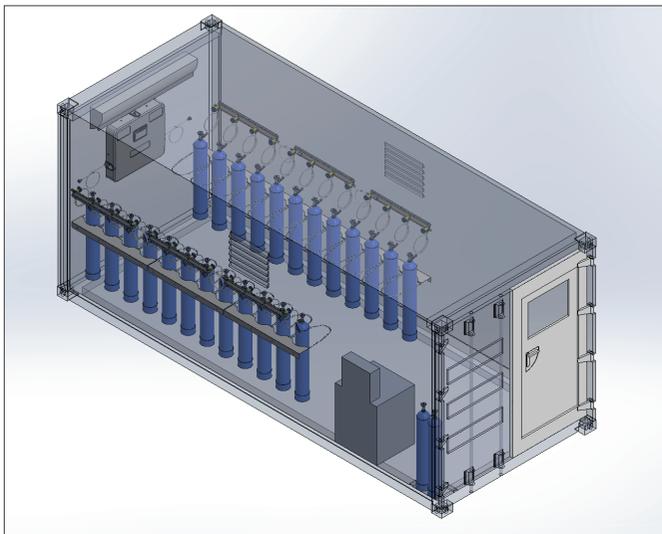
# Medical Gas Container



## Medical Gas Container

Medical gas container can consist of composite material or metal ISO 20 ft or 40 ft size containers.

- To provide the medical gas system regardless of the place.
- Suitable for harsh conditions and space saving
- Easy installation and time saving
- Different gas options that can be divided into different compartments
- Ready-to-use tested system
- Air conditioning and hot air extraction for air compressor





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