

INSPI TAL



MEDICAL GAS SYSTEMS
2019



INSPIRAL Medical Gas Stations & Control Units

INSPIRAL 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

Contents

Respiration Equipment	
Flowmeters	06
Regulators	09
Venturi System Suction Units	11
Suction Accessories	
Reusable Canister	12
Central Vacuum System	14
Medical Gas Outlets and Accessories	
Medical Gas Outlets	15
Probes	17
Outlet Boxes	18
Patient Bed Head Units, Nurse Calling Systems and Pendants	
Patient Bed Head Units	19
Nurse Calling Systems	24
Pendants	27
Copper Pipes And Accessories	
Copper Tubes	30
Fittings	31
Medical Gas Outlets	31
Medical Gas Plants	
Central Gas Stations	32
Manifold System with Double Regulator	34
Area Gas Control Panels	37
Alarm Panels	38
Medical Gas Alarm Management System	39
Medical Vacuum Station	40
Mini Vacuum Station	43
Anaesthetic Gas Scavenging System	43
Vacuum Pumps	45
Medical Air	47
Oxygen Production Systems	50
Cryogenic Oxygen Stations	51



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



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.

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

Flowmeters L/min	Without Adaptor						
Oxygen							
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
Air							
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



Variable Area
Flowmeters

Calibrated Orifice
Flowmeters

Variable Area Flowmeters

- Nipple with double thread, interchangeable by the end user
- I/O switch. Quick push switch button
- Graduate scale reading, measurement tube with "lens effect"
- Adjusting knob. Big size, with Push&Lock position set system and Soft Grip inserts for easy handling

Size (LxWxH): :61x107x175 mm
 Gas supply pressure : :280÷600 kPa
 Gas options: :O₂ , Air
 End of scale values : :5 L/min. , 10 L/min. , 15 L/min.
 :30 L/min. , 40 L/min.
 Flow calibration data: :1013 mbar 23 °C

Variable Area Flowmeters L/min	Without Adaptor						
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

Calibrated Orifice Flowmeters L/min	Without Adaptor						
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



Flowmeter Humidifier Bottle

- Designed to humidify oxygen before patient's respiration
- Made of polycarbonate and scaled
- Sterilizable up to 121 °C
- 120 ml and 355 ml capacity options
- Connection to Flowmeter : Moving pipe union
- Lid material : Plastic

	120 ml	355 ml
Model No	FM21.82	FM21.83



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
- Regulator Inlet Pressure : 200 kg/cm²
- Regulator Outlet Pressure : 3.5-4 kg/cm²
- Adjustable Flow : 0-15 L/min
- Pressure Gauge Range : 0-315 kg/cm²
- Sterilization Method : 121 °C

	Without Adaptor	Bull Nose	DIN	PIN INDEX
Model No	FM21.85	FM21.86	FM21.87	FM21.88

Respiration Equipment



Regulators

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

Gas Type	Without Adaptor						
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



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

Gas Type	Without Adaptor						
Vacuum	FG51.01	FG51.02	FG51.03	FG51.04	FG51.05	FG51.06	FG51.07



Vacuum Regulator

- Max. suction flow : 115 L/min
- Max. available negative : -950 mbar pressure effective value
- Vacuum gauge : 0 + -1000 mbar
- I/O switch : Quick push switch button

Gas Type	Without Adaptor						
Vacuum	FG52.01	FG52.02	FG52.03	FG52.04	FG52.05	FG52.07	FG52.06



Vacuum Regulator

- Max. suction flow : 115 L/min
- Max. available negative : -950 mbar pressure effective value
- Vacuum gauge : 0 + -1000 mbar
- I/O switch : Quick push switch button

Gas Type	Without Adaptor						
Vacuum - 1000 mbar	FG52.10	FG52.11	FG52.12	FG52.13	FG52.14	FG52.16	FG52.15
Vacuum - 250 mbar	FG52.20	FG52.21	FG52.22	FG52.23	FG52.24	FG52.26	FG52.25



Venturi System Suction Units

- Max. suction flow : 27 L/min
- Max. adjustable depression : -800 mbar
- Gas and supply pressure : Compressed air, 400 kPa (4.0 bar)
- Vacuum gauge scale : 0 + -1000 mbar
- Max. air consumption : 60 L/min

							
Gas Type	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Medical Air	FG53.10	FG53.11	FG53.12	FG53.13	FG53.14	FG53.16	FG53.15



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

							
Gas Type	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Medical Air	FG53.01	FG53.02	FG53.03	FG53.04	FG53.05	FG53.07	FG53.06



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 Liner

Model No	Explanation
AT20.10	Suction Liner, 1 L
AT20.20	Suction Liner, 2 L
AT20.30	Suction Liner, 3 L
AT20.11	Suction Liner With Antifoam, 1 L
AT20.22	Suction Liner With Antifoam, 2 L
AT20.33	Suction Liner With Antifoam, 3 L
AT20.91	Suction Liner With Solidifying Agents, 1 L
AT20.92	Suction Liner With Solidifying Agents, 2 L
AT20.93	Suction Liner With Solidifying Agents, 3 L

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

Suction Accessories



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 20.5001	AT20.40



Wall Attachment

Explanation	Model No
Wall Attachment	AT20.50



Vacuum Control Connector

Explanation	Model No
Control Connector	AT20.54



Tube Connector

Explanation	Model No
Non-Sterile	AT20.52



Suction Cannula, Plastic

Explanation	Model No
Non-Sterile	AT20.55



Kapkon Connector

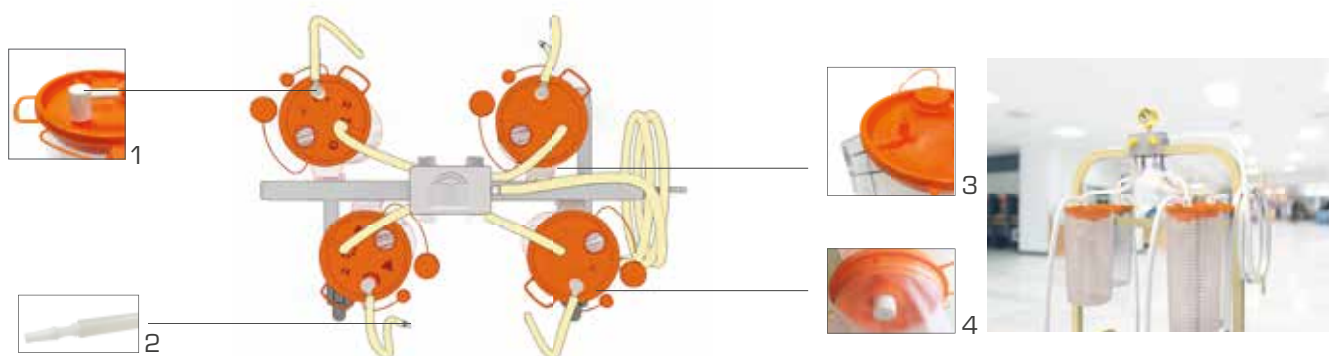
Explanation	Model No
Kapkon Connector	AT20.53



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
AT20.76	Powder coating frame, 4 port
AT20.77	Powder coating frame, 1 port



1. **Patient port** - The patient port allows the suction of fluids and all its content safely
2. **Suction kit** - Hospital 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** - Hospital 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



Vacuum Jar

- Made of transparent polycarbonate material
- 1L and 2 L carrying capacity alternatives
- Sterilizable jars at 121° C
- Adapter for wall connection
- Integrated hydrophobic filter

Model No	Capacity
AT20.73	3 L
AT20.72	2 L
AT20.71	1 L

Medical Gas Outlets and Accessories



Medical Gas Outlets

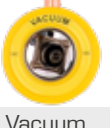
Outlet Dia : 45 mm
Copper Pipe Dia : 10 mm
Production Standard : BS 5682/EN ISO 9170-1
Color Codes : Oxygen – White
 Vacuum – Yellow
 Nitrous Oxide – Blue
 Compressed Air – Black & White

					
	Oxygen	Vacuum	Air 4	Air 7	N ₂ O
DIN	PR80.01	PR80.02	PR80.03	PR80.04	PR80.05
BS	PR80.06	PR80.07	PR80.08	PR80.09	PR80.10



Medical Gas Outlets

Outlet Dia : 50 mm
Copper Pipe Dia : 8 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 ₂ O
DIN-90°	PR80.11	PR80.12	PR80.13	PR80.14	PR80.15
BS-90°	PR80.16	PR80.17	PR80.18	PR80.19	PR80.20
AFNOR-90°	PR80.21	PR80.22	PR80.23	PR80.24	PR80.25
DIN-45°	PR82.11	PR82.12	PR82.13	PR82.14	PR82.15
BS-45°	PR82.16	PR82.17	PR82.18	PR82.19	PR82.20
AFNOR-45°	PR82.21	PR82.22	PR82.23	PR82.24	PR82.25



AGSS Terminal Units

Hospital 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	DIN (Venturi Type)			DIN	Air Motor	Air Motor Probe
Model No	PR80.26	PR80.27	PR80.28	PR80.29	PR80.30	PR80.31	PR81.32	PR81.33



Medical Gas Outlets

Outlet Dia	: 50 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	N ₂ O
DISS	PR80.32	PR80.33	PR80.34	PR80.35
CHEMETRON	PR80.36	PR80.37	PR80.38	PR80.39
OHMEDA	PR80.40	PR80.41	PR80.42	PR80.43



Medical Gas Outlets and Accessories

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 O₂, N₂O, AIR 4 and AIR 7
- Special labeling for each gas type
- Safe hose connection
- Made of chrome plated brass material



							
		BS	DIN	AFNOR	DISS	CHEMETRON	OHMEDA
Oxygen	Stainless Steel	JK90.50	JK90.51	JK90.52	JK90.53	JK90.54	JK90.55
	Brass	JK90.56	JK90.57	JK90.58	—	—	—
Vacuum	Stainless Steel	JK90.60	JK90.61	JK90.62	JK90.63	JK90.64	JK90.65
	Brass	JK90.66	JK90.67	JK90.68	—	—	—
Air 4	Stainless Steel	JK90.70	JK90.71	JK90.72	JK90.73	JK90.74	JK90.75
	Brass	JK90.76	JK90.77	JK90.78	—	—	—
Air 7	Stainless Steel	JK90.80	JK90.81	JK90.82	JK90.83	JK90.84	JK90.85
	Brass	JK90.86	JK90.87	JK90.88	—	—	—
N ₂ O	Stainless Steel	JK90.90	JK90.91	JK90.92	JK90.93	JK90.94	JK90.95
	Brass	JK90.96	JK90.97	JK90.98	—	—	—
CO ₂	Stainless Steel	JK91.10	JK91.11	JK91.12	JK91.13	JK91.14	JK91.15
	Brass	JK91.16	JK91.17	JK91.18	—	—	—
AGSS	Stainless Steel	JK91.20	JK91.21	JK91.22	JK91.23	JK91.24	JK91.25
	Brass	JK91.26	JK91.27	JK91.28	—	—	—



Outlet Boxes, On Plaster

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

Explanation	Length	Outlet Qty	Model No
On Plaster	310 mm	2	PR81.01
On Plaster	460 mm	3	PR81.02
On Plaster	610 mm	4	PR81.03
On Plaster	760 mm	5	PR81.04
On Plaster	910 mm	6	PR81.05
On Plaster	1110 mm	7	PR81.06



Outlet Boxes, Under Plaster

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

Explanation	Length	Outlet Qty	Model No
Under Plaster	310 mm	2	PR81.07
Under Plaster	460 mm	3	PR81.08
Under Plaster	610 mm	4	PR81.09
Under Plaster	760 mm	5	PR81.10
Under Plaster	910 mm	6	PR81.11
Under Plaster	1110 mm	7	PR81.12



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



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

Hose Type	Model No
O2, 250 cm	PR81.13
N2O, 250 cm	PR81.14
AIR, 250 cm	PR81.15
VAC, 250 cm	PR81.16

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 bed head units.

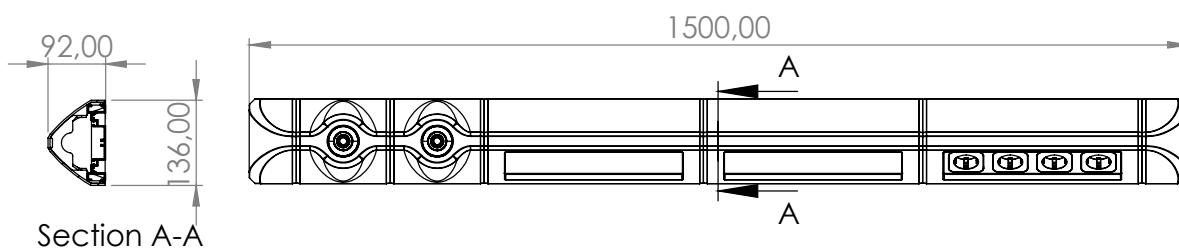
Manufactured according to EN 11197 and fully meets all the standards of this regulation.

Innovative design of modular bed head units offer:

- Modular structure
- Configurable unit according to customer's needs
- Configurable both during the order and after the installation
- Extendable and addible modules
- 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



Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.30
Double bed	3000-3600 mm	GB22.40





Patient Bed Head Unit, Three Channels

Inspital Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas.

Our Bedhead Units are designed and manufactured in compliance with EN 11197 standard.

- All electrical installation is carried out in accordance with IEE regulations.
- Bed Head Units are made from impact-resistant materials which can be cleaned easily with hospital disinfectants
- Alternative lengths for single, double and triple patient beds

Explanation	Length	Model No
Single bed	1500-1800 mm	G822.15
Double bed	3000-3600 mm	G822.25

Standard Accessories

- Medical gas sockets :2 pcs (O₂ and Vac)
- Electrical socket :3 pcs 220 V (BS and DIN)

Optional Accessories

- Phone
- UPS
- Data socket
- Nurse call socket

Technical Specifications

Package dimension :260x1550x120 mm

Material specifications :Electrostatic Painted
Extruded Aluminum

Total weight :12 kg

Inlet voltage :220V 50 Hz



Patient Bed Head Units



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.

Our Bedhead Units are designed and manufactured in compliance with EN 11197 standard.

- All electrical installation is carried out in accordance with IEE regulations.
- Bed Head Units are made from impact-resistant materials which can be cleaned easily with hospital disinfectants
- Alternative lengths for single, double and triple patient beds
- Integrated reading and ambient lighting
- Electrical sockets and switches can be installed on the front panel or on the bottom panel

Standard Accessories

- Medical gas sockets :2 pcs (O₂ and Vac)
- Electrical socket :3 pcs 220 V (BS and DIN)
- Reading lamp :2 pcs
- Power button :1 pc

Optional Accessories

- Phone
- UPS
- Data socket
- Nurse call socket

Technical Specifications

Package dimension :260x1550x120 mm

Material specifications :Electrostatic Painted Extruded Aluminum

Total weight :12 kg

Inlet voltage :220V 50 Hz

Explanation	Length	Model No
Single bed	1500-1800 mm	G822.35
Double bed	3000-3600 mm	G822.45





Patient Bed Head Unit with Three Channels and Double Lamps,

Hospital Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas.

Our Bedhead Units are designed and manufactured in compliance with EN 11197 standard.

- All electrical installation is carried out in accordance with IEE regulations.
- Bed Head Units are made from impact-resistant materials which can be cleaned easily with hospital disinfectants
- Alternative lengths for single, double and triple patient beds
- Integrated reading and ambient lighting
- Electrical sockets and switches can be installed on the front panel or on the bottom panel

Standard Accessories

- Medical gas sockets :2 pcs (O₂ and Vac)
- Electrical socket :3 pcs 220 V (BS and DIN)
- Reading lamp :2 pcs
- Power button :1 pc

Optional Accessories

- Phone
- UPS
- Data socket
- Nurse call socket

Technical Specifications

- Package dimension :260x1550x120 mm
- Material specifications :Electrostatic Painted Extruded Aluminum
- Total weight :12 kg
- Inlet voltage :220V 50 Hz

Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.10
Double bed	3000-3600 mm	GB22.20

Patient Bed Head Units



GB22.01
GB22.02



GB22.11
GB22.22



GB22.31
GB22.42

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. Our Bedhead Units are designed and manufactured in compliance with EN 11197 standard.

- Durable double rail to install all necessary ICU equipment
- All electrical installation is carried out in accordance with IEE regulations.
- Bed Head Units are made from impact-resistant materials and they are suitable for cleaning with hospital disinfectants.
- Alternative lengths for single, double and triple patient beds

Standard Accessories

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

Optional Accessories

- Telephone
- UPS
- Data socket
- Nurse call socket
- Monitor tray
- Height adjustable IV rod
- Examination lamp

Technical Specifications

Package dimensions	:300x1550x130 mm
Material specifications	:Anodized or static painted extruded aluminium
Total weight	:14 kg
Color	:Eloxal
Inlet voltage	:220v 50 hz

Ceiling support profiles Technical Specifications

Aluminum profile	:300x1550x155mm
Steel profile	:200x1350x200 mm
Flange	:300x300x240 mm
Material Specifications	:Anodized or static painted extruded aluminium

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	GB22.11
Double bed	3000-3600 mm	GB22.22
Single bed	1500-1800 mm	GB22.31
Double bed	3000-3600 mm	GB22.32

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



Analog Wired and Wireless System Components

Nurse Call Panel

- 4 Digits time and temperature display.
- 4 Digits are used to as the main indicator for the last call.
- 4 digits and 4 lines used to indicate previous incoming calls.
- Emergency case and nurse is in room cases displayed by LED's.
- Events are announced by voice event buzzer as different voices depending on type of event.
- Can manage 256 patient rooms.

Model: GB22.70



Wireless Nurse Call Panel

- Linux Based System - 99.9% Stable and well secured.
- Oracle MySQL database
- Showing 5 calls at the same time.
- Call queue system
- Priority system for emergency calls.
- Texting between panels.
- Call orientation - Away from service

Model: GB22.71



Patient Handset (Wired/Wireless)

- Provides patients more facilities to send emergency request emergency request easily. It's easy to use, and it has been further strengthened with visual help logos. Intuitive visual aids are directed according to the needs of the patient and LED's on confirmed sending call to the nurse.

Model: GB22.72 Wired

Model: GB22.73 Wireless



Repeater (Wireless)

- This unit is used to increase the range between nurse panel and nurse calling units. It works with 5V power supply. It should be used each.

Model: GB22.74

Nurse Calling Systems



Room Control Unit

- It supports 4 bed, 1 WC and 1 bathroom
- Can operate without power input
- It is easy to address with dip switches

Model: GB22.75



Patient Unit (Wired/Wireless)

- Console is mounted on the patient headboard. Bed Set unit is connected to the headboard unit via RJ45 socket.
- High quality ABS raw materials.
- Call and Reset buttons are lighted with LEDs, so that it is easy to notice them.

Model: GB22.76 Wired

Model: GB22.77 Wireless



WC Call Unit (Wired/Wireless)

- WC Call Unit is used in the bathrooms of patient rooms. In an emergency, patient pulls the rope making an emergency call. Appears as a WC Emergency call on nurse console. System gives priority to WC Emergency calls and appears before other calls. There is a call reset button and emergency call rope on the unit.

Model: GB22.78 Wired

Model: GB22.79 Wireless



Room Signal Lamps(Wired/Wireless)

- Overdoor Corridor Lamp is located above room door in the corridor.
- Maintenance-technical support free plug and play architecture.
- 3 different main colors (blue, green, red)
- Very low energy consumption and environment friendly thanks to its LED design

Model: GB22.80 Wired

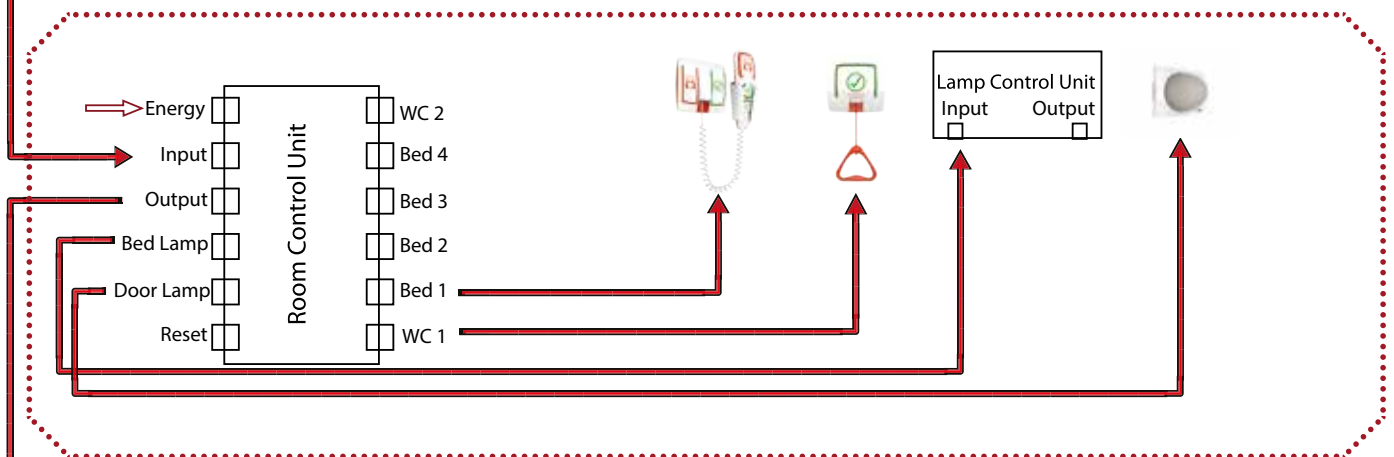
Model: GB22.81 Wireless

Nurse Calling Systems

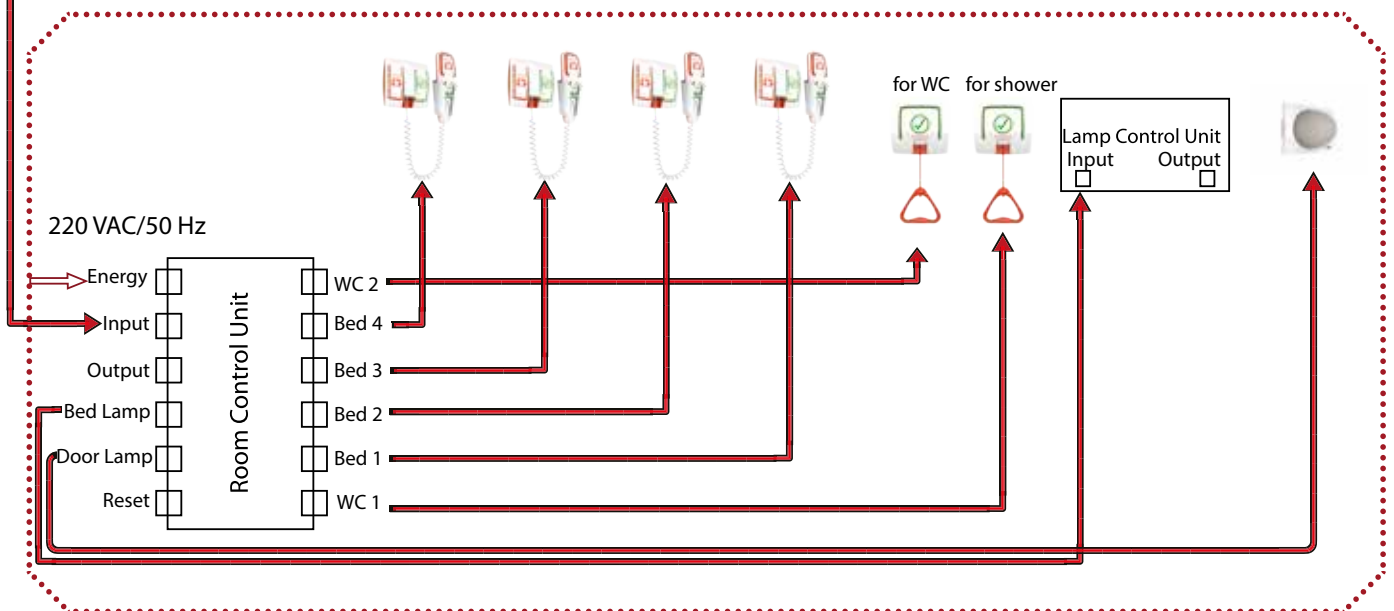


Nurse Call Scheme

Patient Room (1 Bed)



Patient Room (4 Bed)



Pendants



Bridge Type ICU Pendant

Hospital 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



Motor controlled up and down movement

Horizontal movement arms

350° rotation

Medical outlet

Electric socket

Support rails

Drawer



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

Model: FX40.05
Pendant with Monitor Shelf

Pendants



Single Joint Pendant with Double Shelf

Inspital 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.

Standard Accessories

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

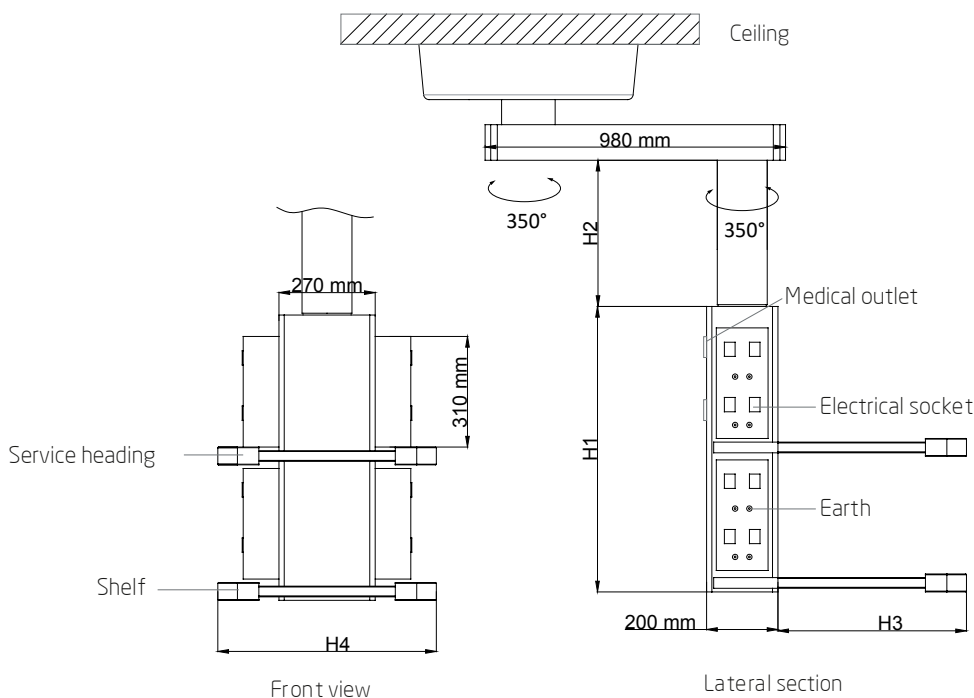
Optional Accessories

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

Technical Specifications

Movement control	:Manual
Direction of movement	:Horizontal
Carrying capacity	:50 kg
Material Specifications	:Hood (plastic)
	Vertical arm (steel profile)
	Body (aluminium)
	Tray (steel sheet 1mm)
Total weight	:90 kg
Color	:RAL 9002
Inlet voltage	:220V 50 Hz

H1 dimensions	H2 dimensions	H3, H4 dimensions
500 mm	100 mm	495x467
800 mm	300 mm	395x367
1200 mm	500 mm	
	700 mm	
	900 mm	
	1100 mm	





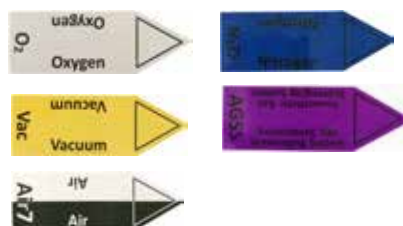
Copper Tubes

- Pipeline solutions for medical gas installations
- Medical copper tubes are degreased and marked according to EN 13348 System in accordance with requirement of the medical gas market
- Supplied in 5 m length and individually capped

Model No	Explanation	Thickness	Working Pressure	Length
MB10.01	8 mm	1,0 mm	84 bar	5 m
MB10.02	10 mm	0,6 mm	84 bar	5 m
MB10.03	10 mm	1,0 mm	84 bar	5 m
MB10.04	12 mm	0,6 mm	77 bar	5 m
MB10.05	12 mm	1,0 mm	77 bar	5 m
MB10.06	15 mm	0,7 mm	63 bar	5 m
MB10.07	15 mm	1,0 mm	63 bar	5 m
MB10.08	22 mm	1,0 mm	58 bar	5 m
MB10.09	28 mm	1,0 mm	51 bar	5 m
MB10.10	28 mm	1,5 mm	51 bar	5 m
MB10.11	35 mm	1,0 mm	40 bar	5 m
MB10.12	35 mm	1,5 mm	40 bar	5 m
MB10.13	42 mm	1,0 mm	42 bar	5 m
MB10.14	42 mm	1,5 mm	42 bar	5 m
MB10.15	54 mm	1,5 mm	27 bar	5 m
MB10.16	54 mm	2,0 mm	27 bar	5 m
MB10.17	76 mm	1,5 mm	29 bar	5 m
MB10.18	76 mm	2,0 mm	29 bar	5 m
MB10.19	108 mm	2,0 mm	16 bar	5 m
MB10.20	108 mm	2.5 mm	16 bar	5 m

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



Copper Tubes And Accessories



Fittings

- Biostatic composition of the copper material inhibits bacterial growth on its surface
- End connections: Copper x Copper
- Lightweight, strong and corrosion resistant
- Nonflammable
- Unaffected by sunlight, has no special storage requirements and cannot produce toxic fumes in a fire

				
	Elbow 90	Equal T	Coupling	Reducer
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
				FT50.25 / 54x28 mm
				FT50.26 / 54x35 mm
				FT50.27 / 76x54 mm

Copper Pipe Clips

- Rail type, directly connectable and color coded
- Single and jointed usage
- Compatible with gas standard



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	Stopper
FT50.38	Distance

Central Gas Station for O₂, N₂O and CO₂



INSPITAL central gas stations are designed to supply continuous medical gas from the cylinders to hospital pipeline. Each station controls one primary and one back up cylinder racks.

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.

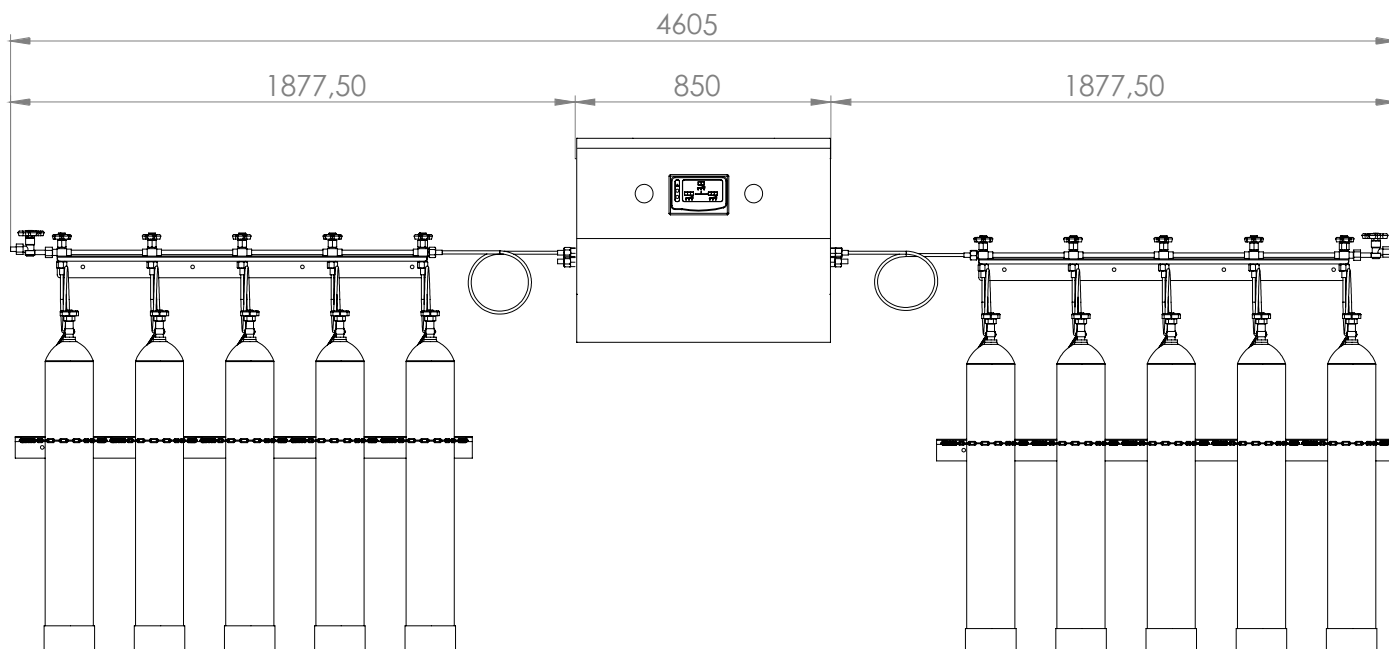
All pressure data and failure alarms are controlled by the digital control panel.



Medical Gas Plants

Oxygen Station	Model No	GZ71.01	GZ71.02	GZ71.03	GZ71.04	GZ71.05	GZ71.06	GZ71.07	GZ71.08	GZ71.09
Nitrous oxide Station	Model No	GZ71.10	GZ71.11	GZ71.12	GZ71.13	GZ71.14	GZ71.15	GZ71.16	GZ71.17	GZ71.18
High Pressure Reducer 150 m ³ /h		-	-	-	1 pc	1 pc	1 pc	1 pc	1 pc	-
High Pressure Reducer 40 m ³ /h		1 pc	1 pc	1 pc	-	-	-	-	-	1 pc
Cylinder Fixing Chain, Double		2 Ad								-
Cylinder Fixing Chain, Triple			2 pcs						-	-
Cylinder Fixing Chain, Four						4 pcs			-	-
Cylinder Fixing Chain, Five				2 pcs	2 pcs		4 pcs	6 pcs	8 pcs	-
Flexible Connection Pipe		4 pcs	6 pcs	10 pcs	10 pcs	16 pcs	20 pcs	30 pcs	40 pcs	2 pcs
Flexible Connection		2 pcs	2 pcs	2 pcs	2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	1 pc
Ramp Double		2 pcs								1 pc
Ramp Triple			2 pcs							-
Ramp Four						4 pcs				-
Ramp Five				2 pcs	2 pcs		4 pcs	6 pcs	8 pcs.	
Discharge Valve		2 pcs								1 pc
Oxygen / Nitrous oxide Station Alarm panel		Including the High Pressure Regulators (1 pc)								
Cylinder Quantity on Station		2x2 pcs	2x3 pcs	2x5 pcs	2x5 pcs	2x8 pcs	4x5 pcs	6x5 pcs	8x5 pcs	2 pcs
Bed Quantity		30	30	50	30-50	40-70	70-100	100-150	150-200	5-10
Total Operating Theatre No. (N2O Central)		3	3	5	5 - 6	6 - 7	6 - 9	8-12	10-14	---
Total Station Weight(~)		227 kg	325 kg	520 kg	545 kg	840 kg	1040 kg	1350 kg	1995 kg	127 kg

Bed and Operating Room Numbers are given approximately



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 are designed and manufactured in compliance with HTM 02-01, MDD 93/42/EEC, EN ISO 7396-1 and ISO 13485 standards

Features

- Designed to ensure continuous gas supply
- It is designed according to the principle of continuous transfer functionality. So during exchange of the tubes, gas supply won't be interrupted.
- Station capacities depending on the type of gas used and the distance

Services

- Oxygen 400 kPa
- Nitrous Oxide 400 kPa
- Carbon dioxide 400 kPa
- O₂/N₂O 400 kPa

Flow Rate

- 400 kPa System 1650 L/min

Pressure Reduction Capacity

- Maximum inlet pressure: 22 000 kPa (220 Bar)
- Outlet pressure : 400 kPa (4 Bar) and 600 kPa (6 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



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

- **Working Mode** : 2 stage, 2 regulators
- **Inlet dia** : 1/2"
- **Outlet dia** : 22 mm
- **Outlet pressure** : 4-6 bar
- **Automation** : Fully Automatic



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



High Pressure Reducer, Single Regulator

Inspital 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 6 to 4 bar. All components are degreased for oxygen use.

- Oxygen
- Nitrous Oxide
- Carbon dioxide
- Working Mode : 1 stage, 1 regulator
- Inlet dia : 1/2"
- Outlet dia : 22 mm
- Inlet pressure (max) : 220 bar
- Outlet pressure : 4-6 bar

Explanation	Model No
W/o alarm 100 m ³ /h	GZ70.10
With alarm 100 m ³ /h	GZ70.20
W/o alarm 35-40 m ³ /h	GZ70.30
With alarm 35-40 m ³ /h	GZ70.40



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



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



Tail Pipe & Flexible Hose

- Used for connecting the cylinders to cylinder ramp
- Gas specific thread for O₂, N₂O, CO₂ 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 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 O₂ and N₂O gases

Discharge Valve

- Designed to be used for the gas discharge of medical gas stations
- Compatible with O₂ and N₂O gases
- Made of brass

Medical Gas Ball Valve:

- Designed and specially cleaned to use in medical gas system
- 16 bar pressure resistance



Pipe Dia.	Model No
10 mm	GZ71.50
12 mm	GZ71.51
15 mm	GZ71.52
22 mm	GZ71.53
28 mm	GZ71.54
35 mm	GZ71.55
42 mm	GZ71.56
54 mm	GZ71.57



Stainless Steel



Electrostatic Painted

Electrostatic Painted

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

Stainless Steel

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

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 02-01 standards. Isolation may be required for installation, maintenance or in the case of an emergency

Classification

- Area Gas Control Unit is manufactured HTM 02-01, HTM 2022, EN ISO 7396-1 and BS EN 15908.

Services

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

Area Gas Control Unit

- 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.



Digital Alarm Panels

Inspital Medical Gas Alarm panel monitor the medical gas source equipment and the operating pressures in the pipeline distribution system, as well as, the critical care areas of the facility to ensure that the medical gas and vacuum systems remain safe for patient use.

Inspital Digital Alarm Panel is designed and manufactured in compliance with HTM2022, HTM 02-01, 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 without sensor by RS232 communication protocol.

Capacity	Model No
Single Gas (P/V)	GZ71.78
Double Gas (P/V), (P/P)	GZ71.79
Triple Gas (P/P/V), (P/P/P)	GZ71.80
Five Gas	GZ71.81

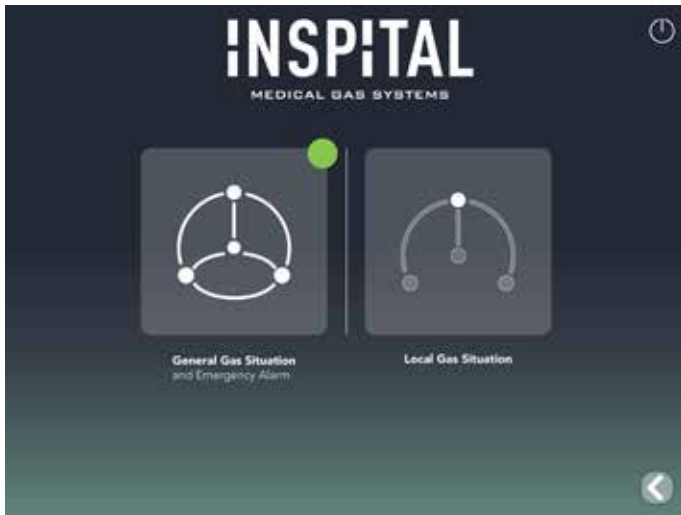


Central Alarm Panels

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 Plants

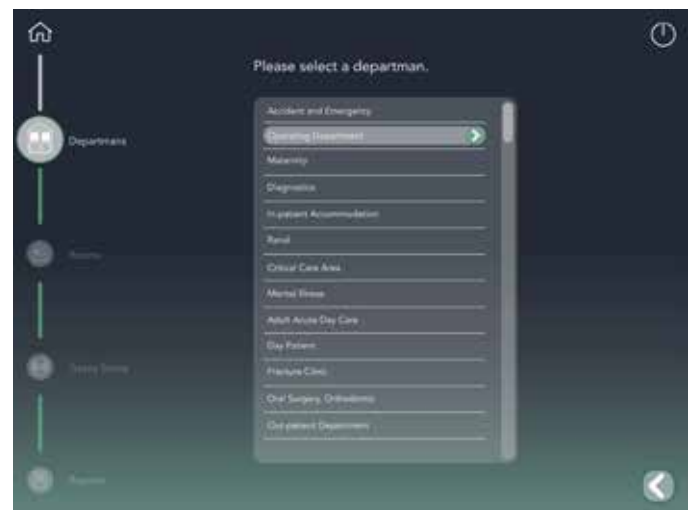
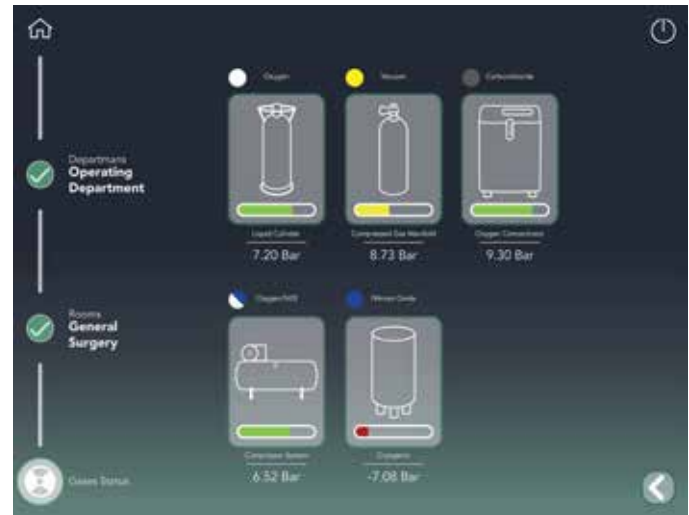


MEDICAL GAS ALARM MANAGEMENT SYSTEM

INSPIRAL developed an automation system which allows users to monitor all running medical gas system of the hospital.

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 displays it on specified touch monitor, any computer in related departments or 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.

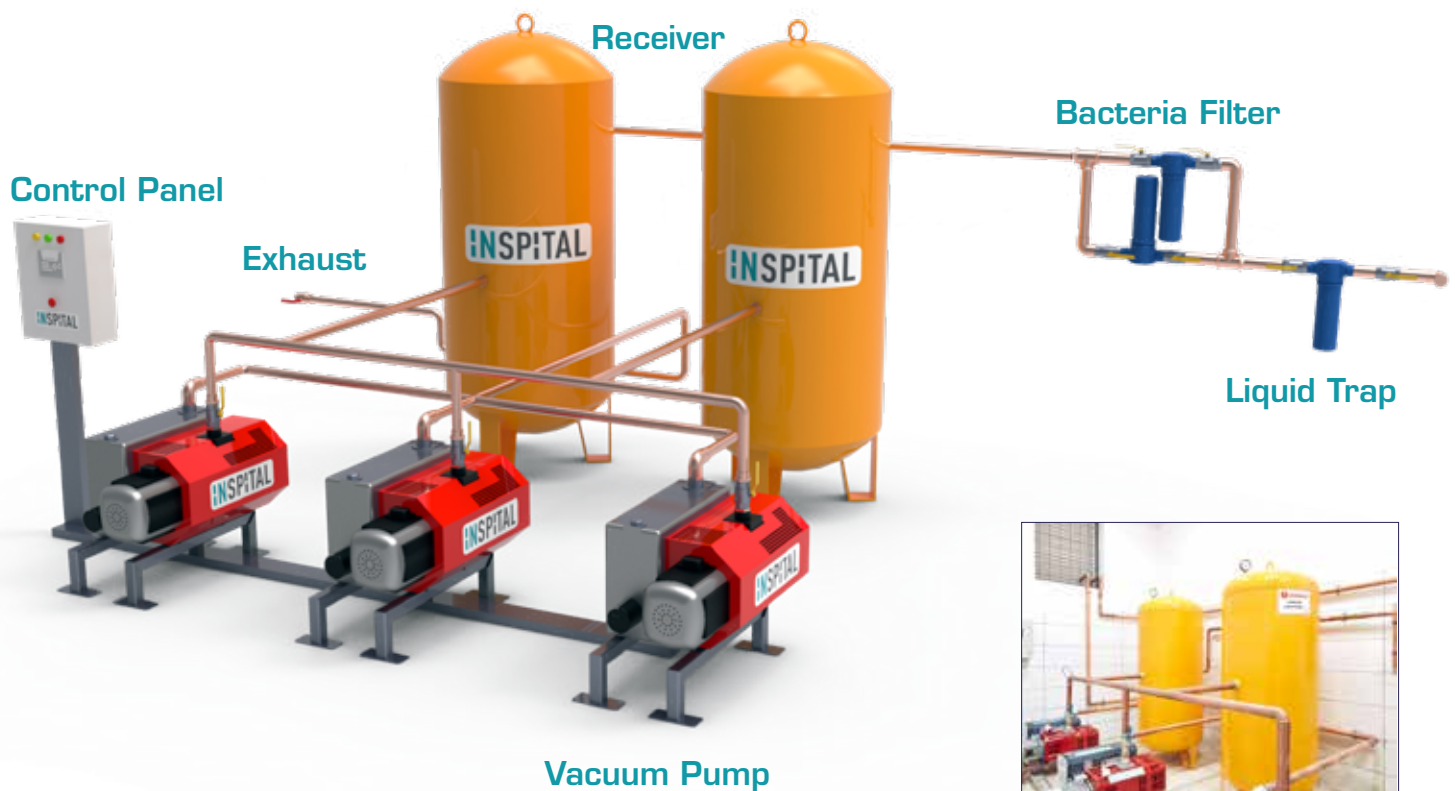


Medical Vacuum Station

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.

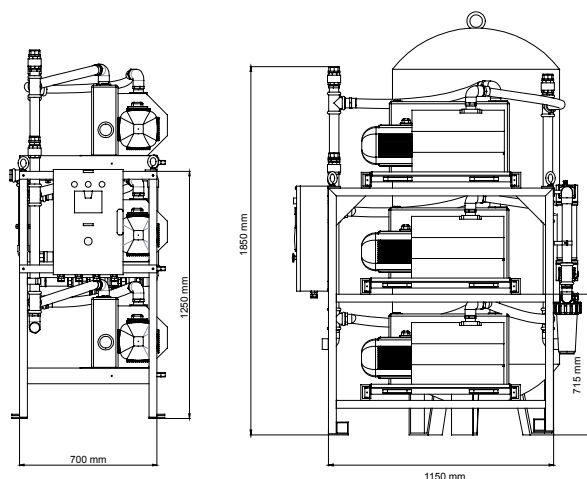
Inspital Medical Vacuum Plants are designed and manufactured in compliance with HTM 02-01, HTM 2022, MDD 93/42/EEC EN ISO 7396-1 and C11 standards.

- 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 ³ /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	500	500	1000	1000	1500	1500
Bactery Filter Qty	1 pc	1 pc	1 pc	2 pc	2 pc	2 pc
Liquid Trap	1 pc	1 pc	1 pc	1 pc	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 be used for central vacuum systems in operating theatres, ICU's, emergencies and laboratories of hospitals
- PLC controlled full automatic system
- Compact tank top design
- Suitable for low height medical gas plant rooms
- Medical type high efficiency bacteria filters
- Lubricated rotary vane vacuum pumps



Model No	VK40.08	VK40.09	VK40.10	VK40.11	VK40.12	VK40.13
System Capacity (m ³ /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	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	1 pc	1 pc	1 pc	1 pc	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



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)
- Bacteria box discharge (optional)

Model No	VK40.14	VK40.15
Nominal Capacity (m ³ .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. The AGSS shall comply with HTM 02-01, Inspital Anaesthetic Gas Scavenging Systems are CE marked according to the Medical Device Directive 93/42/EEC. 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.

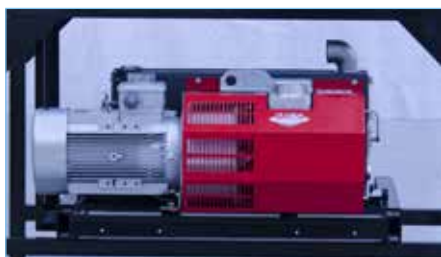
Capacity	68 m ³ /h	120 m ³ /h	2x68 m ³ /h	2x120 m ³ /h
Power	0,76 kW	1,3 kW	2x0,76 kW	2x1,3 kW
Noise Level	63 dB (A)	66 dB (A)	63 dB (A)	66 dB (A)
Inlet dia	1"	1/22"	1" 1/2	2"
Outlet dia	Ø 44	Ø 60	Ø 44	Ø 60
Weight	45 kg	55 kg	120 kg	140 kg
Model No	VK50.01	VK50.02	VK50.03	VK50.04



Vacuum Pumps

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

- Specially designed for medical applications
- Stable and longlife pumps
- Lubricated rotary vane vacuum pumps
- Single stage vacuum pump
- 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



Model No	Nominal Flow		Maximum Pressure				Motor Power		Rotation Speed		Noise Level	Oil Capacity	Weight
	m³.h ⁻¹		W/o Ballast		W/o Ballast		Kw		Rpm				
	50 Hz	60 Hz	mbar	kPa	mbar	kPa	50 Hz	60 Hz	50 Hz	60 Hz			
VK40.16	30	35.3	0,5	0,05	1,5	0,15	0,75	0,9	1435	1690	60	1,5	39
VK40.17	47.7	56	0,5	0,05	1,5	0,15	1,1	1,32	1430	1715	62	1,5	52
VK40.18	64.3	72.2	0,5	0,05	1,5	0,15	1,5	1,8	1420	1705	64	4	75
VK40.19	96	115	0,5	0,05	1,5	0,15	2,2	2,70	1440	1730	65	4	85
VK40.20	132	156	0,1	0,01	1,2	0,12	3	3,6	970	1150	66	5	154
VK40.21	198	240	0,1	0,01	1,2	0,12	4	4,8	1455	1765	67	5	140
VK40.22	293	354	0,1	0,01	1,2	0,12	5,5	6,6	1450	1740	69	5	162



PLC Control Panel

- Hospital 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 ³ /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 m³/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

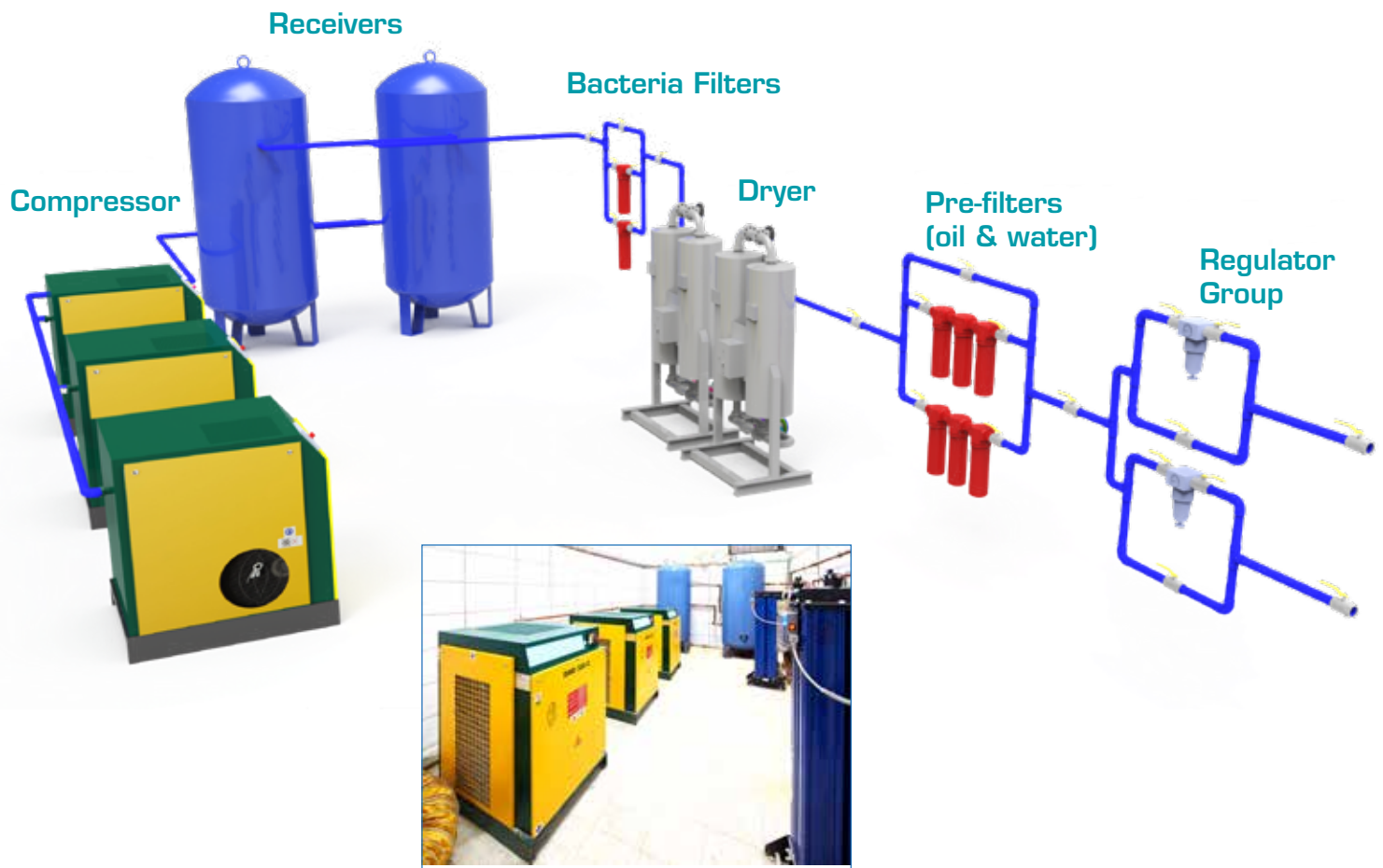
Model: VK40.28



Vacuum Tank

- Designed to use in central vacuum stations
- Different capacities for different stations
- 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



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

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



Medical Air Plant with Rotary Screw Compressors

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

Inspital Medical Air plant with rotary screw compressors can be used in wide capacity range. Compressor capacities varies from 4 kW to 22 kW. High quality screw blocks with perfect lubrication systems enable continuous operation, stability and reliability. Inspital can offer different capacities according to hospital consumption and bed capacity.

Inspital Medical Air Plants are designed and manufactured in compliance with HTM 02-01, HTM 2022, MDD 93/42/EEC, EN ISO 7396-1, ISO 13485 and C11 standards.



Model No	Compressor qty x capacity	Compressor Type	Dryer qty x capacity	Tank Capacity
GZ80.01	1x33 m ³ /h	Screw Type	53 m ³ /h	300 L
GZ80.02	2X33 m ³ /h	Screw Type	53 m ³ /h	500 L
GZ80.03	1X72 m ³ /h	Screw Type	100 m ³ /h	500 L
GZ80.04	2X72 m ³ /h	Screw Type	100 m ³ /h	1000 L
GZ80.05	2X110 m ³ /h	Screw Type	100 m ³ /h	1000 L
GZ80.06	3X110 m ³ /h	Screw Type	2x100 m ³ /h	1500 L
GZ80.07	2X147 m ³ /h	Screw Type	155 m ³ /h	2X1000 L
GZ80.08	3x147 m ³ /h	Screw Type	2x155 m ³ /h	2X1000 L
GZ80.09	2X216 m ³ /h	Screw Type	210 m ³ /h	2X1000 L
GZ80.10	3X216 m ³ /h	Screw Type	2x210 m ³ /h	2X1000 L

Medical Air Plant with Oil-Free Compressors

Inspital allows medical air plants with high technology oil-free compressors.

These new generation compressors are reliable compact, silent and delivers of producing oil free compressed air. As compressors are designed for continuous operation, it is very reliable and efficient with low maintenance cost. Because of its compact design, installation is easy and air evacuation is smooth as it doesn't include any oil.



Model No	Compressor qty x capacity	Compressor Type	Dryer qty x capacity	Tank Capacity
GZ80.11	1X109 m ³ /h	Oil Free	1X100 m ³ /h	1500 L
GZ80.12	2x109 m ³ /h	Oil Free	1X100 m ³ /h	1500 L
GZ80.13	3x109 m ³ /h	Oil Free	2X100 m ³ /h	2x1000 L
GZ80.14	1x158 m ³ /h	Oil Free	1x190 m ³ /h	2x1000 L
GZ80.15	2x158 m ³ /h	Oil Free	1x190 m ³ /h	2x1000 L
GZ80.16	3x158 m ³ /h	Oil Free	2x190 m ³ /h	2x1500 L
GZ80.17	1x213 m ³ /h	Oil Free	1x210 m ³ /h	2x1000 L
GZ80.18	2X213 m ³ /h	Oil Free	1x210 m ³ /h	2x1500 L
GZ80.19	3X213 m ³ /h	Oil Free	2x210 m ³ /h	2x1500 L

OIL FREE 

Oil-free system provides 100% oil-free air and it has low noise level for hospital environment.

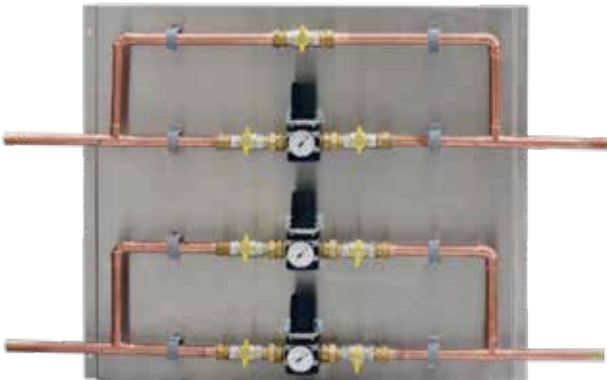
As there is no oil injected to the air, there is no need to invest for the purification of waste water. This is the best way to protect the environment.



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
Capacity (L)	300	500	1000	1500
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(m3/h)	100	200

Oxygen Production Systems

Hospital 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.

Hospital Oxygen Generators deliver oxygen in a purity up to 95% at flow rate from 3 to 50 m³/h. Station delivers constant purity rate independent from the consumption. Ideal system consists of air compressors, dryers, O₂ generator, active carbon tower, tanks and filters.



Model No	O ₂ Generator Capacity	Compressor Capacity (m ³ /h)	Compressor Type	Air Tank Capacity	Tank Capacity	Dryer Capacity
GZ81.01	3 m ³ /h	7,5 kw/(0,92 m ³ /h)	Screw Type	500 L	500 L	CAD 30
GZ81.02	6 m ³ /h	11 kw/(1,40 m ³ /h)	Screw Type	500 L	500 L	CAD 52
GZ81.03	9 m ³ /h	22 kw/(3,2 m ³ /h)	Screw Type	1000 L	1000 L	CAD 61
GZ81.04	12 m ³ /h	22 kw/(3,2 m ³ /h)	Screw Type	1000 L	1000 L	CAD 61
GZ81.05	15 m ³ /h	30 kw/(4,4 m ³ /h)	Screw Type	1000 L	1000 L	CAD 110
GZ81.06	18 m ³ /h	30 kw/(4,4 m ³ /h)	Screw Type	1000 L	1000 L	CAD 110
GZ81.07	20 m ³ /h	30 kw/(4,4 m ³ /h)	Screw Type	1000 L	1000 L	CAD 110
GZ81.08	25 m ³ /h	30 kw/(4,4 m ³ /h)	Screw Type	1000 L	1000 L	CAD 110
GZ81.09	30 m ³ /h	45 kw/(6,2 m ³ /h)	Screw Type	1000 L	1000 L	CAD 170
GZ81.10	40 m ³ /h	55 kw/(9,2 m ³ /h)	Screw Type	2000 L	1500 L	CAD 200
GZ81.11	50 m ³ /h	75 kw/(10,6 m ³ /h)	Screw Type	2000 L	1500 L	CAD 250



Cryogenic Oxygen Stations

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

LOX tanks are specially designed according to EN 13458-2 Annex C for long term storage of cryogenic liquified gases under pressure.

- Manufactured according to 2014/68/EU Pressure Equipment Directive (PED) , EN 13458-2, AD 2000 Code, ASME (U STAMP) and GOST
- Designed to ensure stability
- High quality painting
- Max Working Pressure : 22 - 24 bar
- Design Temperature : -40 °C / +60 °C
- Inner Vessel Material : Carbon, Stainless Steel in accordance with design codes
- External Vessel Material : Carbon, Stainless Steel or Aluminum in accordance with design codes

Model No	Storage Capacity	Sizes (Lxwxh)
GZ90.05	5M ³	4780 x 2220 x 2400 mm
GZ90.10	10M ³	7245 x 2350 x 2310 mm
GZ90.15	15M ³	6950 x 2750 x 2795 mm
GZ90.30	30M ³	12360 x 2400 x 2850 mm
GZ90.50	50M ³	13500 x 3000 x 3000 mm

INSPIRAL

Turkey Factory

Karaöğlan Mahallesi Küme Evleri
No: 745 Gölbaşı /
ANKARA, TÜRKİYE
Tel: +90 312 619 02 22
Fax: +90 312 619 02 25
www.inspiral.com.tr
info@inspiral.com

İstanbul Region Hq

Oruç Reis Mah. Tekstilkent Cad.
Tekstilkent Ticaret Merkezi
10-AN NO: 209 (A7 BLOK NO: 19)
Esenler-İSTANBUL, TÜRKİYE

Germany Hq

Kalkumer Str.125
40468-Düsseldorf
Tel: +49 211 680 20 53-54
Fax: +49 211 680 20 55