

Installation, Operation and Maintenance Instructions



Wall Mount Gas Control Panels

Part number 4107 9027 48.00

March 16, 2020



BEACONMEDÆS[®]

Part of the Atlas Copco Group



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Installation, Operation and Maintenance Manual **Wall Mount Gas Control Panel**

This unit is purchased from: _____

Date purchased: _____

Model number: _____

Option(s) included: _____

Any information, service or spare parts requests should include the unit model number and be directed to:

BeaconMedæS
1059 Paragon Way,
Rock Hill, SC 29730
Phone: (803) 817-5600
Fax: (803) 817-5750
www.beaconmedaes.com

BeaconMedæS reserves the right to make changes and improvements to update products sold previously without notice or obligation.

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05 March 2020

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1. Introduction

1.1 Audience

This manual provides information related to the installation and operation of the Wall Mount Gas Control Panel system manufactured by BeaconMedæS. Service information contained in this manual is intended for use by technicians or personnel qualified to repair and service medical gas equipment.

1.2 Abbreviations

CGA	Compressed Gas Association
FNPT	Female National Pipe Thread
MNPT	Male National Pipe Thread
PSIG	Pounds Per Square Inch- Gauge
DISS	Diameter-Index Safety System

1.3 Definition of Statements

Statements in this manual preceded by following words are of special significance.

⚠ WARNING: Means there is a possibility of injury or death to yourself or others.

⚠ CAUTION: Means there is a possibility of damage to unit or other property.

NOTE: Indicates points of particular interest for more efficient and convenient operation.

1.4 Environmental Declarations

General

When developing products and services, BeaconMedæS tries to understand, address, and minimize the negative environmental effects that the products and services may have, when being manufactured, distributed, and used, as well as at their disposal.

Recycling and disposal policies are part of the development of all BeaconMedæS products. BeaconMedæS company standards determine strict requirements.

When selecting materials, the substantial recyclability, the disassembly possibilities and the separability of the materials and assemblies are considered as well as the environmental perils and dangers to health during the recycling and disposal of the unavoidable rates of non-recyclable materials.

BeaconMedæS products for the most part consist of metallic materials that can be remelted in steelworks and smelting works and that is therefore almost infinitely recyclable. The plastic use is labeled; sorting and fractioning of the materials for recycling in the future is foreseen.

Disposal of Materials

Dispose contaminated substances and materials separately, according to local applicable environmental legislations.

Dispose all components according to the applicable disposal regulations.

NOTE:

This concept can only succeed with your help. Support us by disposing professionally.

By assuring a correct disposal of the product you help to prevent possible negative consequences for environment and health that can occur with inappropriate waste handling.

Recycling and re-usage of materials helps to preserve natural resources.

Wall Mount Gas Control Panel

1.5 About Gas Control Panels

BeaconMedaes Wall Mount Panels

The BeaconMedaes gas control panel is designed to deliver gas to surgical tools at pressure regulated at the panel. The gas control panel consists of an adjustable pressure regulator, outlet pressure gage, panel outlet connection and remote outlet connection. The panel outlet connections are Diameter-Index Safety System (DISS).

DISS connections are Compressed Gas Association (CGA) No., 1120 for Nitrogen, CGA No. 2080 for Instrument Air and CGA No. 1080 for Carbon Dioxide.

The gas control panel has been cleaned, tested and prepared for gas service in accordance with recommendations set forth in the National Fire Protection Association (NFPA 99), "Standard for Health Care Facilities."

2. Installation

2.1 Wall Box Rough-in Assembly

The control panel rough-in assembly must be installed before walls are finished. The gas control panel is designed to supply a remote outlet if required.

1. Provide rough wall opening of 5" x 10" x 3-3/4" deep to accommodate the mounting box. The bottom of the mounting box shall be five feet from the floor and parallel to the floor (Figure 1). Secure box mounting brackets to vertical wall members or to rigid interconnecting bracing as required. Verify box is firmly anchored in the wall. Position box so front edge will be recessed a minimum of 1/8" below the finished wall surface.

2. Referring to Figure 1, mount inlet extension tube and, if required, remote outlet extension tube into mounting box with provided lock nut
3. Silver solder inlet drop to inlet extension tube located on the left side of the mounting box. Use techniques required by applicable standards specified in NFPA 99.



CAUTION:

Use heat sink techniques appropriate for protection of sealing material in inlet/outlet connectors. Excessive heat may destroy connector sealing material. If damage occurs to connector, a new connector must be installed.

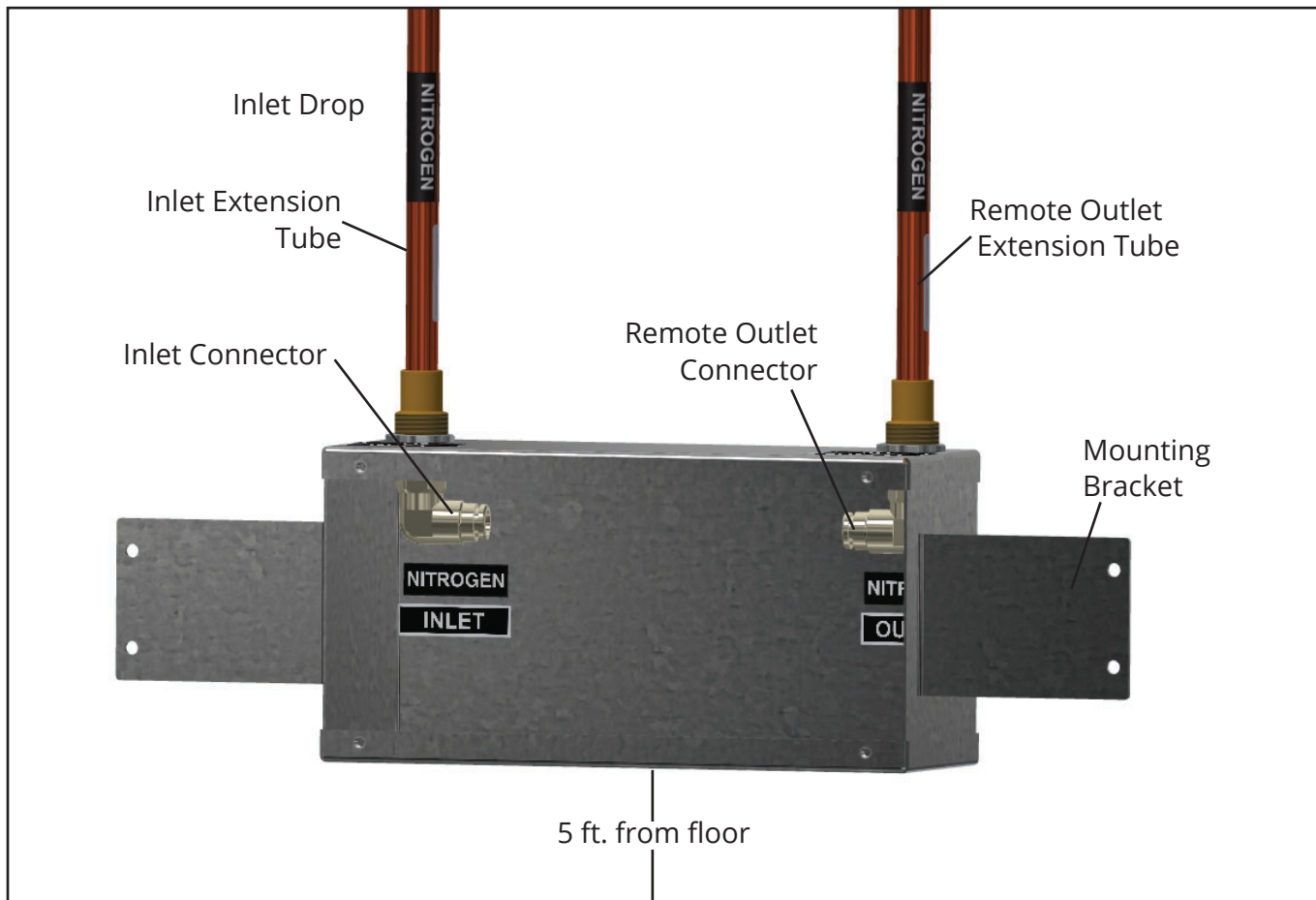


Figure 1

Wall Mount Gas Control Panel

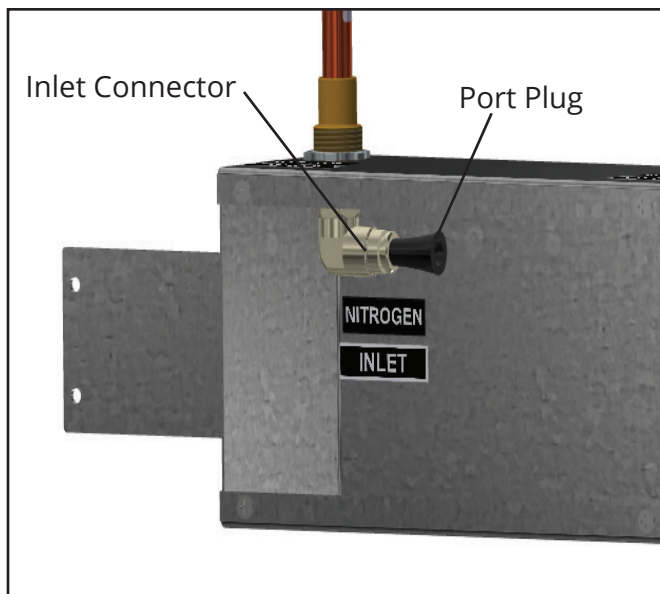


Figure 2

7. Perform pipeline standing pressure test and blowdown test in accordance with requirements specified in NFPA 99.
8. Install protective dust cover on mounting box and leave in place until wall has been finished (Figure 4)



Figure 4

4. If remote outlet is used, silver solder remote outlet riser to extension tube located on the right side of the mounting box. Use same soldering procedure as described in step 3.
5. If remote outlet is not used, install port plug into left inlet connector (Figure 2). Proceed to step 7.
6. For Panels with remote outlet, install nylon jumper tube between inlet and outlet connectors (Figure 3)

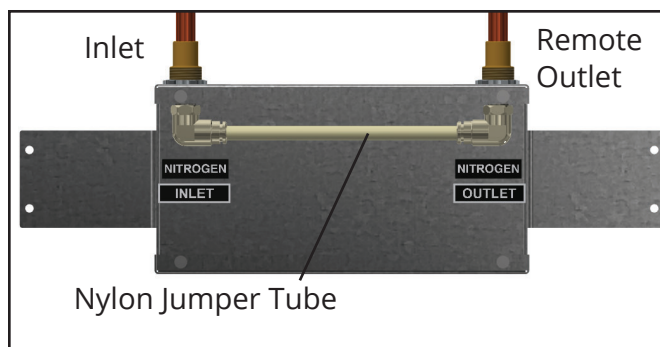


Figure 3

Wall Mount Gas Control Panels

2.2 Front Panel Assembly

Front panel assembly must be installed after walls have been finished. Do not remove protective bag until ready for installation.

1. Remove protective dust cover from mounting box and discard.
2. Remove port plug from left inlet connector and front panel assembly inlet. To remove, push port plug into connector until it bottoms out. Then, while holding down collet, withdraw plug (Figure 5)

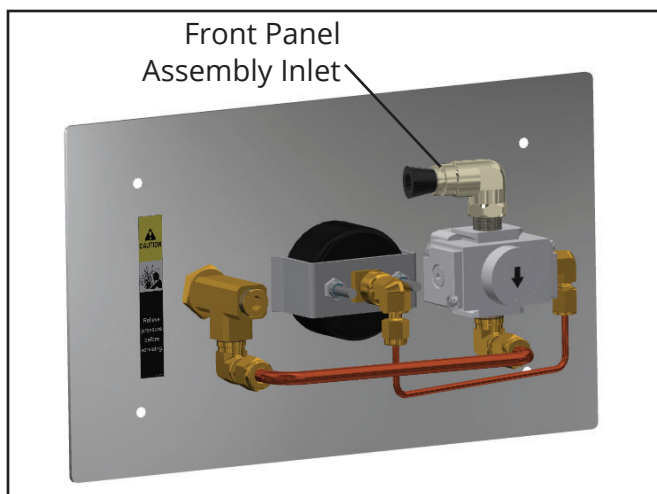


Figure 5

3. If remote outlet is used, remove nylon jumper tube from inlet/outlet connectors and discard. To remove, push tube into connector until it bottoms on tube stop. Then, while holding down collet, withdraw the tube.

4. If remote outlet is used, remove pipe plug from outlet tee fitting and install provided 1/4" MNPT male X 3/8" OD tube swivel elbow into outlet tee fitting (Figure 6).

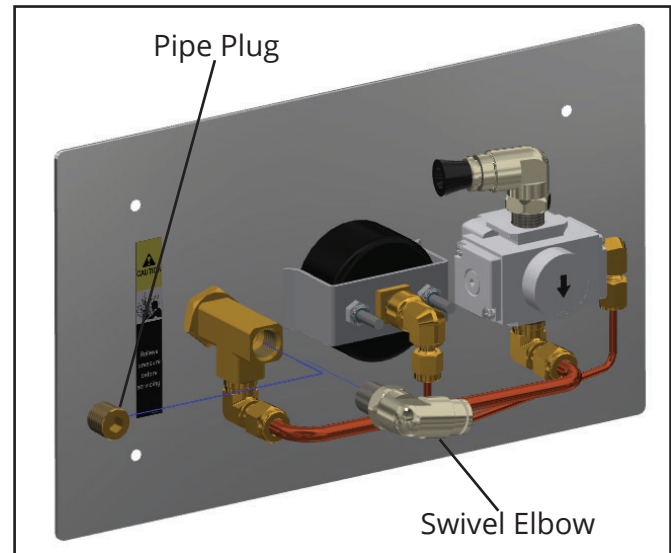


Figure 6

5. Remove protective dust caps from provided hose assemblies.
6. Insert hose assembly end into left inlet connector inside mounting box. Push hose adapter through collet into connector until it bottoms out. Pull back on hose assembly to verify proper attachment. Using same installation procedure, connect other hose end to front panel's inlet connector (Figure 7).

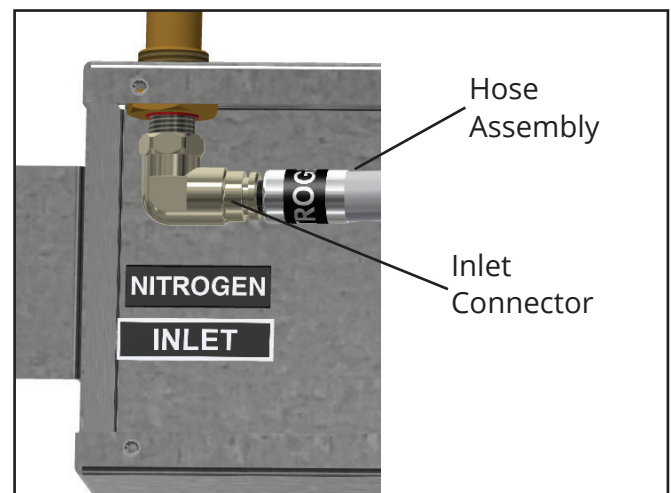


Figure 7

Wall Mount Gas Control Panel

- When remote outlet is used, insert hose assembly end into right remote outlet connector inside mounting box. Push hose adapter through collet into connector until it bottoms out. Pull back on hose assembly to verify proper attachment. Using same installation procedure, connect other hose end to front panel's remote outlet connector.
- Position front panel assembly into mounting box and secure with four mounting screws. Insert screw through front panel while aligning with holes on the mounting box. Tighten screws until panel is flush with finished wall (Figure 8)



Figure 8

2.3 Functional Test

- Turn pressure adjustment knob clockwise until reading of 160 psig is shown on the outlet pressure gage. Pressure will increase correspondingly with adjustment.
- Listen at panel for sound of escaping gas which would indicate leaks.
- Turn pressure adjustment knob completely counterclockwise until off. Gas venting inside the panel shall be heard. Gas is being vented through the self-relieving pressure control regulator. Observe outlet pressure gage, it shall drop to zero and flow of gas shall terminate.

2.4 Operating Instructions

- Connect surgical tool supply hose to outlet connection on control panel or remote outlet served by control panel.
- Adjust surgical tool operating pressure turning pressure adjustment knob clockwise to increase or counterclockwise to decrease pressure, as indicated on outlet pressure gage. For proper operating pressure, consult tool manufacturer's recommendations.

NOTE:

It is best to adjust pressure while gas is flowing through tool.

3. Maintenance

3.1 Maintenance Instructions

Leak testing internal parts of panel shall be made without disconnecting panel from piping system.

⚠ CAUTION:

If leaks are heard inside panel, locate zone valve for room and turn it off. Release pressure from system before removing mounting screws.

1. Remove front panel from wall mounting box by removing four mounting screws located on front panel.
2. Carefully pull front panel, with control assembly, out of mounting box. Support control assembly in position which allows full view of all connections.
3. Adjust control pressure to 160 psig. Leak test all connection using oxygen compatible leak detection solution. Look for bubbles indicating leaks. Wipe remaining leak detection solution from all connections after testing.

NOTE:

Correct leaks using appropriate procedures.

4. Place control panel in mounting box and secure in place with four mounting screws.
5. Perform Functional Test according to section 2.3.

Wall Mount Gas Control Panel

Notes:

Dotted lines for notes.



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