

PNEUMATIC RETRACTABLE CEILING COLUMN OPERATION, MAINTENANCE AND INSTALLATION MANUAL



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PRODUCT DESCRIPTION

The pneumatic retractable ceiling column shall be an Amico Alert-1 series.

The pneumatic retractable ceiling column shall be of the pneumatic operated type. The column shall consist of an upper section for rigid mounting at the ceiling level and a telescopic lower section capable of being extended to a maximum of 18 inches.

The lower section of the column is activated by a pneumatic cylinder mounted into the internal shell of the column. With the aid of a wall switch or with a head mounted switch, the column can be raised or lowered to any desired position. With the aid of an internal tracking system, the movement of the telescoping portion will glide freely up or down.

The upper and lower section shrouds are made of 16 gauge stainless steel with a # 4 satin finish and are complete with: Removable access panel, stainless steel ceiling collar and a heavy gauge steel mounting plate, equipped with hose assemblies (gas specific) within the internal shell of the column and brazed outlets for all medical gas connections above the ceiling line.

All electrical and medical gas services are provided to the face of the lower section by means of flexible hoses and conduits. All threaded connections comply with NFPA, CGA and DISS recommendations preventing interchanging of connections. All services are pre-assembled and factory tested. Standard dimensions are 13-9/16" X 13-9/16" for the upper section and 12" X 12" for the lower section.

CLEANING

The Amico Outlets are factory cleaned for oxygen service. Exposed surfaces of the outlet may be cleaned with a mild detergent solution or wiped with a disinfectant commonly used in patient rooms that is compatible with plastics, anodized aluminium and die cast zinc.

INSPECTION AND TESTING

Medical Gas Outlets should be inspected periodically or at least once a year. The test should be in accordance with NFPA 99-93 "*Gas and Vacuum systems*", or CSA Z305.1-92 "*Nonflammable Medical Gas Piping System*".

Test for leaks: Ensure that no leaks exist, with or without the adapter inserted.

Test for Indexing: Only a mating gas specific adapter should insert smoothly into the outlet, latch and be retained.

Test for Flow:

- Gas Outlets: 120 l/min (4.2 scfm) @ 345 kPa (50 psi), maximum allowable pressure drop is 28 kPa (4 psi).
- Nitrogen Outlet: 400 l/min (14.1 scfm) @ 1,250 kPa (180 psi), maximum allowable pressure drop is 70 kPa (10 psi).
- Vacuum Outlet: 30 l/min (1.1 scfm) @ 54 kPa (16 inHg), maximum allowable pressure drop is 13 kPa (4 inHg).

Refer to the appropriate standards for the proper way of performing the flow test.

Note: The Amico medical gas and vacuum outlets meet and exceed these requirements at the time of manufacture. However piping source capacity, sizing and restrictions may prevent outlets from attaining these values.

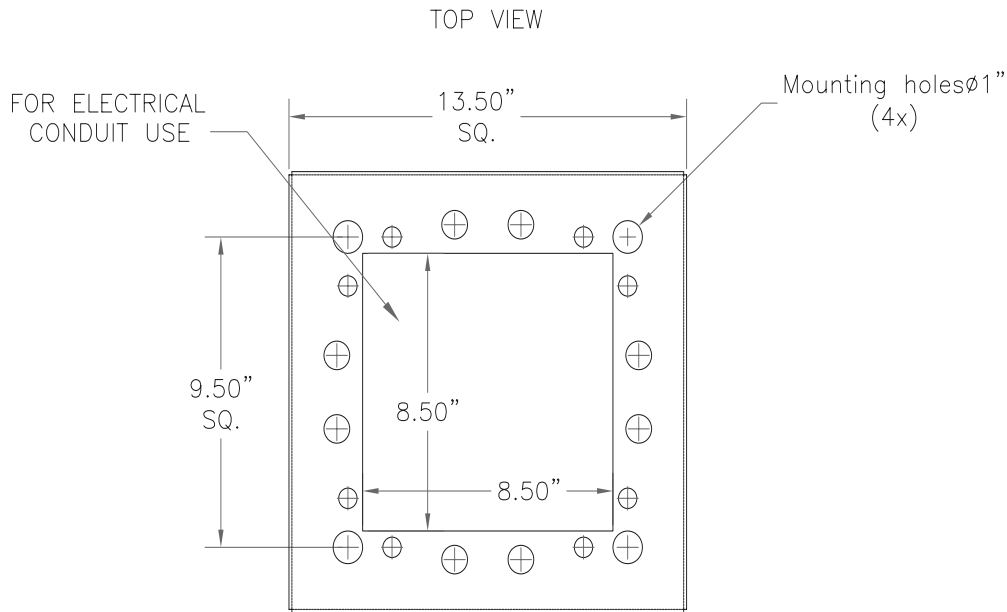
MOUNTING OF THE RISER PLATE

Riser plates are custom made to the design of the purchased ceiling column. Each riser plate comes equipped with gas specific outlets and hardware to attach the ceiling column to the riser plate.

The access panel side of the riser plate is labelled for proper alignment when attaching to the support structure. The assembly of the support structure is done by others.

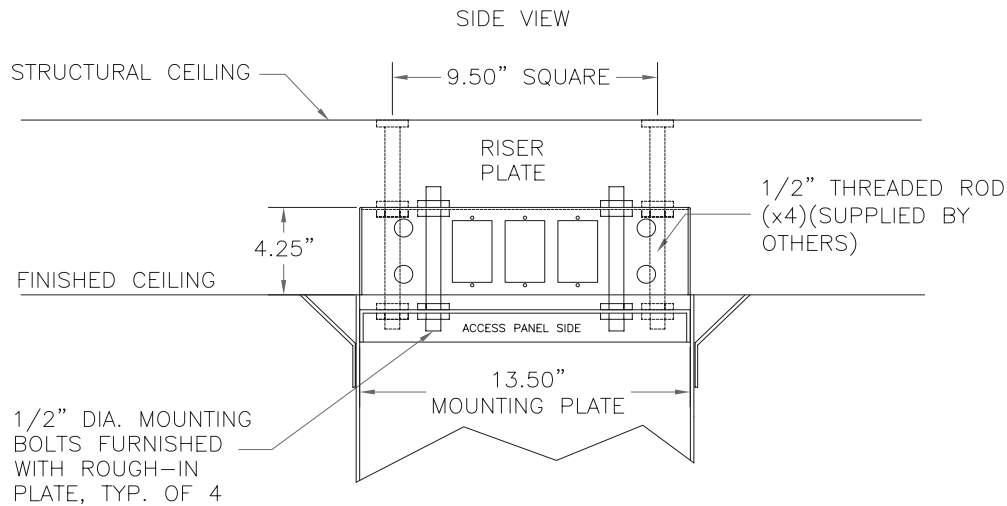
Mounting the riser plate to the support structure is done using the four 1" diameter mounting holes as indicated in Figure 1.

Figure 1



Ensure that the access panel label is positioned in accordance to customer specifications. Ensure the riser plate is orientated as shown in Figure 2.

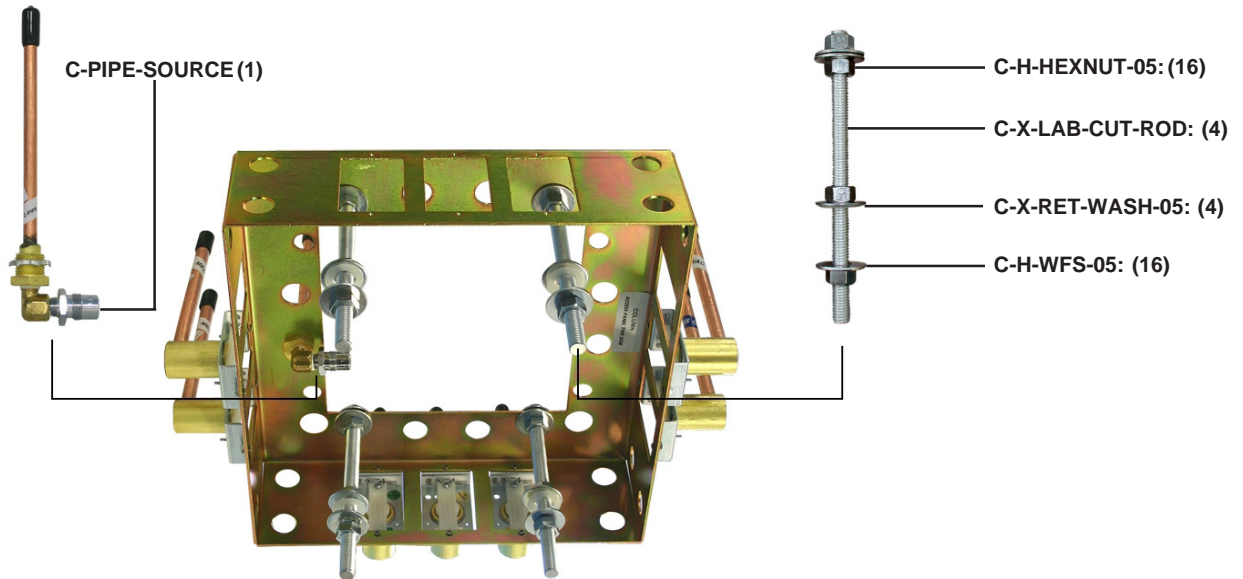
Figure 2



Gas specific outlets should be brazed into the appropriate gas pipelines at this stage. Brazing should comply to regional regulations.

MOUNTING OF THE CEILING COLUMN

There will be four (4) 1/2" - 13 x 8" threaded rods attached to the riser plate. Each rod contains four (4) 1/2" nuts, four (4) 1/2" washers and one (1) nylon retaining washer.



Remove the outer and inner access panels from the ceiling column.

NOTE:

The gas hose(s) and electrical conduit(s) have been wrapped and attached to the top of the ceiling column to maximize the smooth movement of the lower telescopic portion of the ceiling column.

To prevent hose damage - before mounting the column, the hose(s) must be cut from the bulkhead at the top and pulled into the ceiling column. **Do not cut the cable tie(s) for the gas hose(s) and/or electrical conduit (s) inside the ceiling column.** Do not cut the cable tie(s) holding the electrical conduit(s) in place at the top of the ceiling column unless there is absolutely no room for the installer to attach the conduit(s) to the appropriate junction box(es). Cut and remove the excess length of conduit(s) that is not required to attach to the appropriate junction box(es).

NOTE:

The smooth movement of the pneumatic ceiling column will be affected, if the above notes are not followed.

Remove the (4) nuts and flat washers from the bottom of the riser plate and hoist the ceiling column onto the riser plate. Ensure the open access panel of the ceiling column is aligned with the access panel label on the riser plate.

Secure the ceiling column into place with the (4) washers and nuts. Ensure the ceiling column is level.

Attach the conduit(s) to the appropriate junction box(es) with the ceiling column fully extended. Ensure the electrical conduit(s) are coiling around the linear actuator with a little slack as it heads up towards the top of the ceiling column.

Attach the gas hoses to the appropriate outlets in the riser plate. Attach the actuator supply hose to the DISS connection on the riser plate labelled C-PIPE-SOURCE.

NOTE:

The pressure regulator for the linear actuator has been preset, do not adjust. The two (2) bleed valves on the solenoid block, have also been preset, do not adjust otherwise the speed of the extension and the retraction of the ceiling column will be altered.

MOUNTING OF THE CEILING COLUMN - CONT'D

Optional Remote Switch: *(If a remote switch was requested)*

Install the remote switch into place and connect the 3 air lines from the switch to the labeled air lines from the pneumatic retractable ceiling column via the quick couplers. Ensure the labeled air lines are matched, otherwise the switch will not function properly.

Extend and retract the lower telescoping portion of the ceiling column a few times and ensure that the electrical conduit(s) and gas hoses do not get pinched by the linear actuator, the lower telescoping portion itself or the riser plate mounting bolts.

Remove the plastic film from the access panels.

Attach the inner access panel onto the lower telescoping portion of the ceiling column and test the movement of the ceiling column to ensure that the movement is smooth. Attach the outer access panel onto the ceiling column.

Remove the plastic film from the mounted ceiling column.

Attach the (4) ceiling trim plates at the top of the ceiling column.

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