



TELETOM®
PREINSTALLATION MANUAL

CONTENTS

SECTION 1—INTRODUCTION..... 1-1

- DESCRIPTION 1-1
- PRE-INSTALLATION RESPONSIBILITIES 1-2
 - BERCHTOLD RESPONSIBILITIES..... 1-2
 - OWNER RESPONSIBILITIES..... 1-3
 - STIFFNESS 1-3
 - SUPERSTRUCTURE DESIGN AND CONSTRUCTION RECOMMENDATIONS 1-4
 - WIRING..... 1-4
 - MEDICAL (AND OTHER) GASES..... 1-4
 - OPTIONAL TELEVAC[®] SMOKE EVACUATION SYSTEM 1-5
 - TESTING..... 1-5
- STORAGE AND HANDLING..... 1-5
 - PRE-INSTALLATION COMPONENTS..... 1-5
 - TELETOM[®] EQUIPMENT MANAGEMENT SYSTEM COMPONENTS..... 1-6

SECTION 2—PRE-INSTALLATION STRUCTURAL REQUIREMENTS 2-1

- INTRODUCTION..... 2-1
- GENERAL SUPERSTRUCTURE DESIGN AND CONSTRUCTION RECOMMENDATIONS 2-1
 - GENERAL NOTES ON SUPERSTRUCTURE DESIGN 2-2
- SINGLE MOUNT EQUIPMENT MANAGEMENT SYSTEMS..... 2-3
 - IDENTIFICATION 2-3
 - SUPERSTRUCTURE DESIGN LOADS 2-3
 - TYPICAL DESIGN AND CONSTRUCTION FOR TELETOM[®] SINGLE MOUNT SUPERSTRUCTURE 2-4
 - MOUNTING MATERIALS AND DETAILS..... 2-6
 - CEILING OPENING AND SOFFIT ENVELOPE..... 2-8
- TANDEM MOUNT EQUIPMENT MANAGEMENT SYSTEMS..... 2-11
 - IDENTIFICATION 2-11
 - SUPERSTRUCTURE DESIGN LOADS..... 2-11
 - TYPICAL TANDEM MOUNT SUPERSTRUCTURE DESIGN AND CONSTRUCTION 2-11
 - MOUNTING MATERIALS AND DETAILS..... 2-12
 - CEILING OPENING AND SOFFIT ENVELOPE..... 2-15

SECTION 3—PRE-INSTALLATION WIRING REQUIREMENTS..... 3-18

- BERCHTOLD SUPPLIED ELECTRICAL COMPONENTS (STANDARD) 3-1
 - ELECTRICAL JUNCTION BOX 3-1
 - ELECTRICAL POWER OUTLETS 3-2
 - ADDITIONAL ELECTRICAL POWER SUPPLIES..... 3-3
- OWNER PRE-INSTALLATION WIRING REQUIREMENTS (STANDARD) 3-3
 - WIRING RUNS..... 3-3
 - ELECTRICAL JUNCTION BOX INSTALLATION 3-3
 - WIRING CONNECTIONS 3-5
 - HIGH VOLTAGE CONDUIT..... 3-5
- LOW VOLTAGE ELECTRICAL REQUIREMENTS 3-5
- COMBINATION BOOM & LIGHT / FLAT PANEL 3-6

SECTION 4—PRE-INSTALLATION REQUIREMENTS FOR MEDICAL GASES.....4-1

- BERCHTOLD SUPPLIED MEDICAL GAS RISER4-1
- PNEUMATIC BRAKE GAS SPECIFICATIONS.....4-1
- OWNER PRE-INSTALLATION MEDICAL GAS RISER REQUIREMENTS4-1
 - MEDICAL GAS PIPING4-2
 - MEDICAL GAS RISER INSTALLATION4-2

SECTION 5—PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES.....5-2

- TELEVAC[®] SMOKE EVACUATION SYSTEM5-2
 - BERCHTOLD SUPPLIED TELEVAC[®] MOTOR.....5-2
 - OWNER PRE-INSTALLATION TELEVAC[®] PRE-INSTALLATION REQUIREMENTS5-2
 - TELEVAC[®] VACUUM MOTOR INSTALLATION5-3
- VIDEO EQUIPMENT5-4
 - OWNER PRE-INSTALLATION VIDEO REQUIREMENTS5-4



400/600 Series Anesthesia Boom

- e. Test equipment is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.

SINGLE MOUNT EQUIPMENT MANAGEMENT SYSTEMS (TS)



The owner or the owner's contractor has the final responsibility for the strength and rigidity of the superstructure. BERCHTOLD Corporation does not warrant or certify superstructure designs. An inadequate superstructure will affect the ability of the TELETOM® unit to perform in the manner intended. An inadequate superstructure design can also result in damage to the equipment. Equipment warranty service charges related to an inadequate superstructure design or installation are at the customer's expense.



Refer to "Owner Responsibilities" on page 1-3 for a description of the owner's design and construction responsibilities.

Identification

TELETOM® single mount units are identified by a 500-series or 700-series model number and a TS prefix. TELETOM® units with integrated light(s) or monitor arms have a TC prefix.

The 500 Series units have zero, one, or two fixed arms. The 700 Series models have either one articulating arm or one fixed arm above one articulating arm

Superstructure Design Loads

Table 2-1 shows the weight and moment for TELETOM® single mount Equipment Management Systems. The data shown are for the heaviest unit and the highest rotational moment. Designing for the heaviest model with the highest torque will provide adequate support for the heaviest unit, but will not significantly add to the cost of the installation of the lightest unit. This design margin also increases flexibility for future product upgrades.



The installed weights and moments shown in Table 2-1 include both the weight of the TELETOM® components and the maximum equipment load.

Table 2-1. Single Mount TELETOM® Weights and Moments

Static Standard	
Weight Lb (Kg)	Moment Ft Lb (N•M)
801 (363)	4071 (5520)

The superstructure must be strong enough to support the weight and rigid enough to constrain rotation to less than 0.1° at the mounting plate.

SECTION 2

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

Typical Design and Construction for TELETOM® Single Mount Superstructure

FIGURE 2-1 shows the design and the construction materials recommended for a successful TELETOM® Equipment Management System single mount Installation. Other constructions are possible. However, the use of other designs and construction materials should be considered only after consultation with a structural engineer.

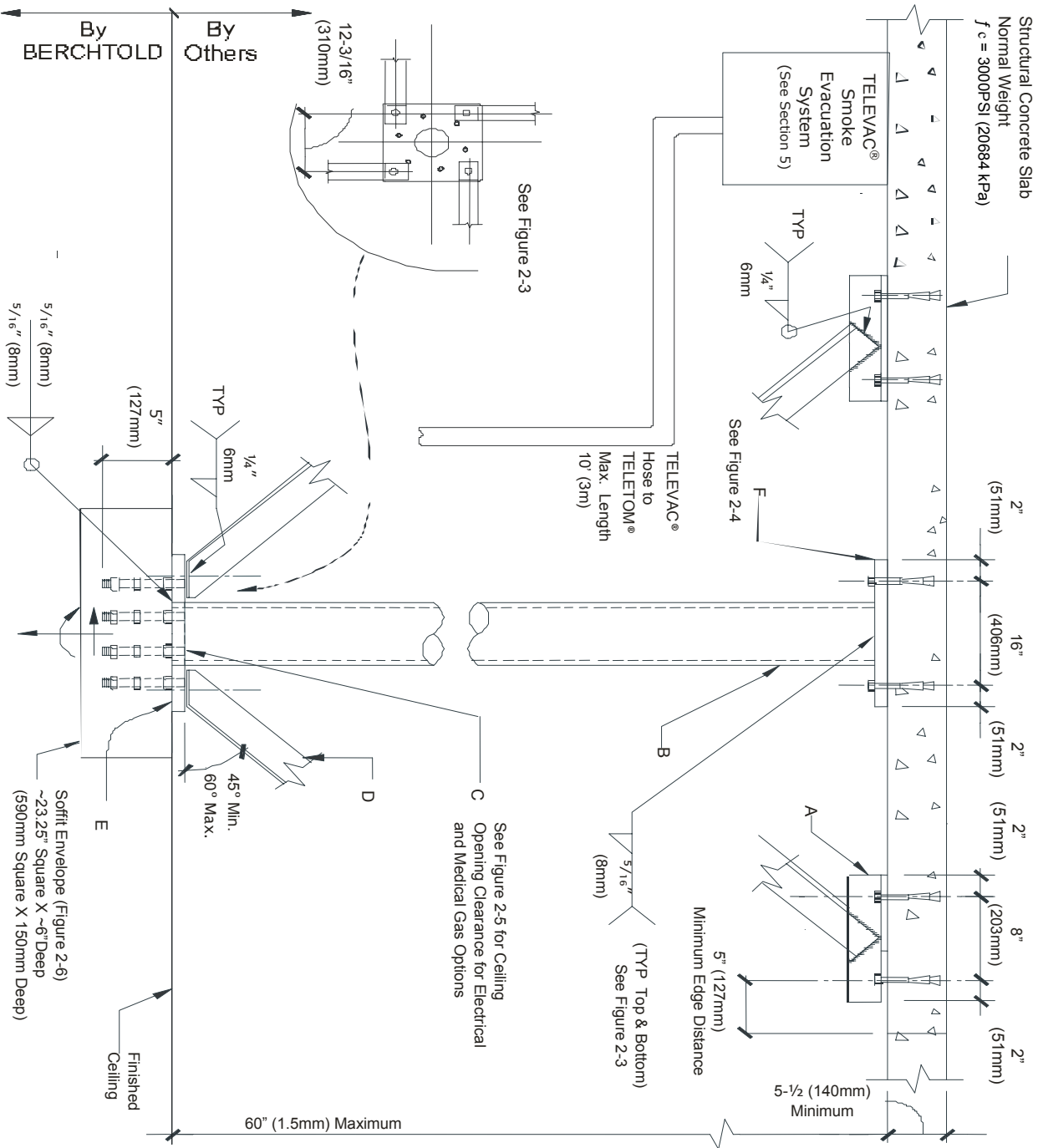


FIGURE 2-1 Recommended TELETOM® Single Mount Superstructure Design and Construction Materials

FIGURE 2-2 shows the design and the construction materials recommended for a successful installation of a TELETOM® Equipment Management System with lights and monitor arms installed. Other constructions are possible. However, the use of other designs and construction materials should be considered only after consultation with a structural engineer.

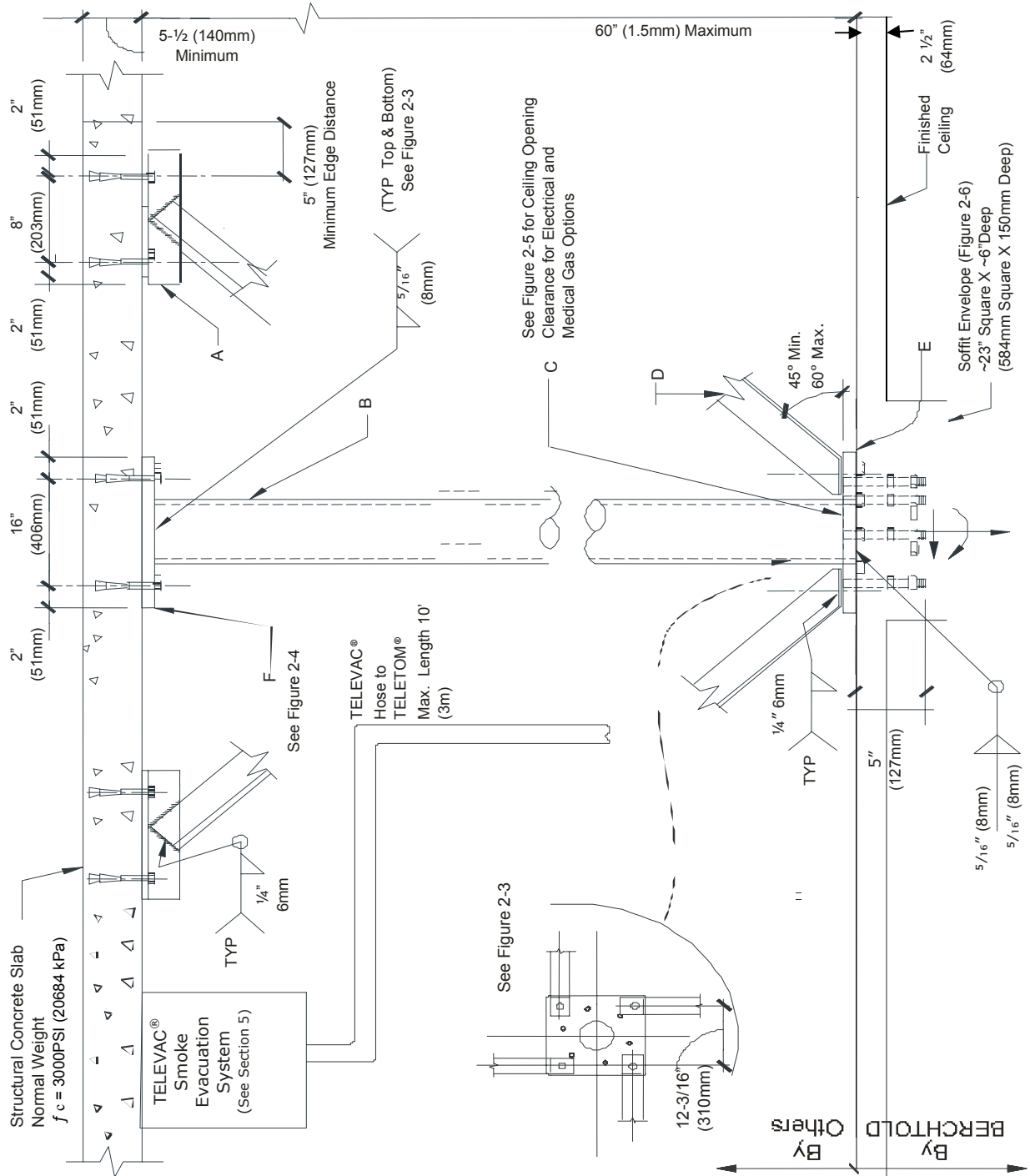


FIGURE 2-2 Recommended Super Structure Design and Construction Materials for TELETOM® Units with Light(s) or Monitor Arm(s)

SECTION 2

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

Mounting Materials and Details

The following information describes the materials used and provides important details on installation techniques and processes.



NOTE:

See “General Notes on Superstructure Design” on page 2-2 for materials specifications and testing recommendations.

- A. L-angle Superstructure Brackets (4 required)
4” x 4” x 3/8” X 12” (102mm x 102mm x 10mm x 305mm) long with two Ø1/2” x 4” (Ø13mm x 102mm) embedded expansion anchors
Leave 5” (127mm) from the center of each mounting bolt clear for wrenching.
- B. Standard pipe Ø6” (Ø152mm)
 - 1. The pipe must be welded to the BERCHTOLD supplied TELETOM[®] mounting plate (C) and to the owner supplied superstructure mounting plate (F).



WARNING

Do not attach supplemental supports to the pipe. The supports will not constrain the rotational forces when attached to the pipe. This could lead to a failure of the Equipment Management System to operate as intended. Drifting of the Equipment Management System could result in injury to personnel.

- 2. Do not attach any supplemental supports to the pipe. The supports will not constrain the rotational force when attached to the pipe.



NOTE:

Refer to FIGURE 2-3 for important details on the support of the TELETOM[®] mounting plate.

- C. TELETOM[®] Mounting Plate (Supplied by BERCHTOLD, and installed by the owner or the owner’s contractor)
1” x 15” x 15” (25mm x 381mm x 381mm) with six Ø7/8” (Ø22mm) threaded rods spaced in a 10” (252mm) bolt circle
- D. L-angle Support Braces (4 required)
3” x 3” x 1/4” (76mm x 76mm x 6mm)
 - 1. BERCHTOLD recommends that the L-angle support braces be welded to both the superstructure brackets (A-FIGURE 2-1 or FIGURE 2-2) and to the TELETOM[®] mounting plate (C).
 - 2. Support braces (D) must be welded to the TELETOM[®] mounting plate (C).
 - 3. Support braces or kickers must be attached only at the corners, and they must be at 90° angles to one another (see FIGURE 2-3).

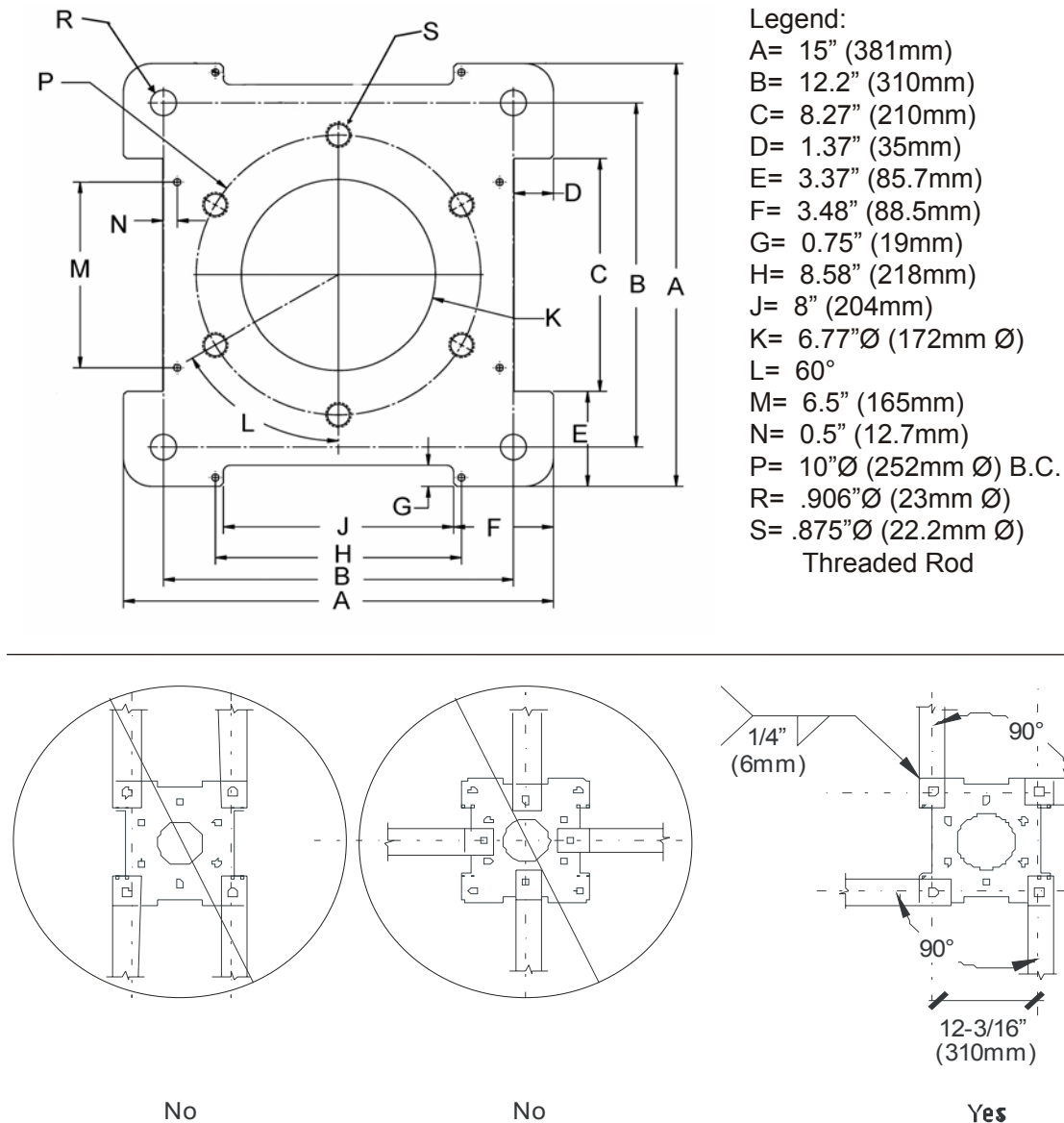


FIGURE 2-3 TELETOM® Mounting Plate and Support Attachments

4. The installed TELETOM® mounting plate must be level to within 0.1°.
- E. The bottom of the TELETOM® mounting plate (C) must be installed as shown in FIGURE 2-1 or FIGURE 2-2
- For typical single mount installations as shown in FIGURE 2-1, the bottom of the TELETOM® mounting plate must be flush with the bottom of the finished ceiling
 - For single mount installations with light(s) or monitor arms shown in FIGURE 2-2, the bottom of the TELETOM® mounting plate must be 2-1/2" (64mm) above the underside of the finished ceiling.

SECTION 2

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

F. Base plate (see FIGURE 2-4)

1/2" x 20" x 20" (13mm x 406mm x 406mm) with four Ø1/2" x 4" (Ø13mm x 102mm) embedded expansion anchors

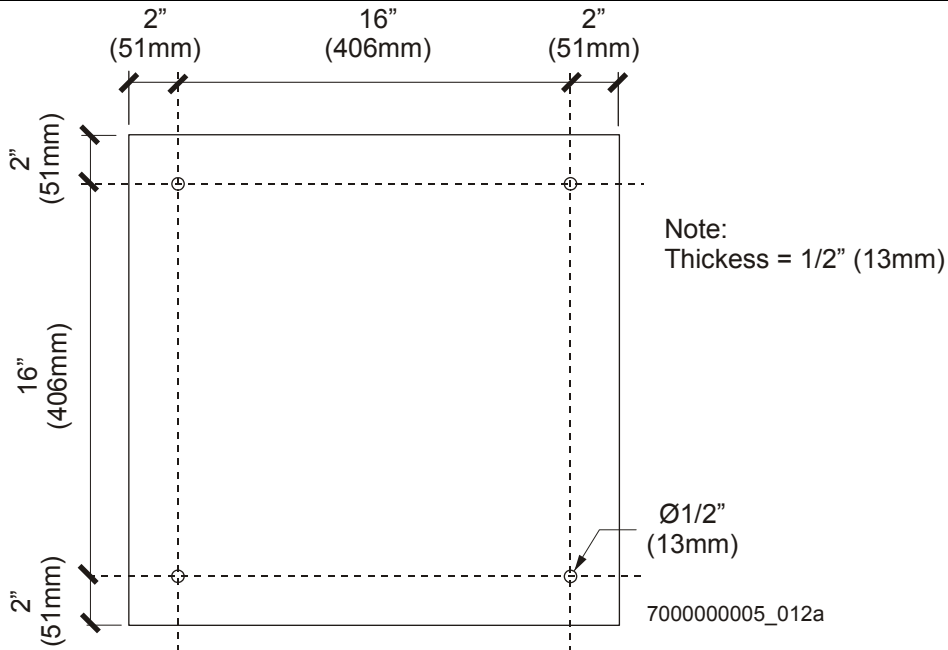


FIGURE 2-4 Typical Superstructure Base Plate

Ceiling Opening and Soffit Envelope

The TELETOM® Equipment Management System owner or the owner's contractor must ensure that the ceiling opening will accommodate the mounting plate and any and all accessories installed on it. FIGURE 2-5 shows the dimensions of various combinations of optional components that might be involved. Consult the customer drawings to determine which accessories will be included with your unit.



NOTE:

Customers typically order multiple TELETOM® Equipment Management Systems to be installed in different rooms/areas for different purposes. Each of these booms may be equipped differently and, thus, require different numbers and types of optional components. It is important that the mounting requirements for each different installation be evaluated individually.

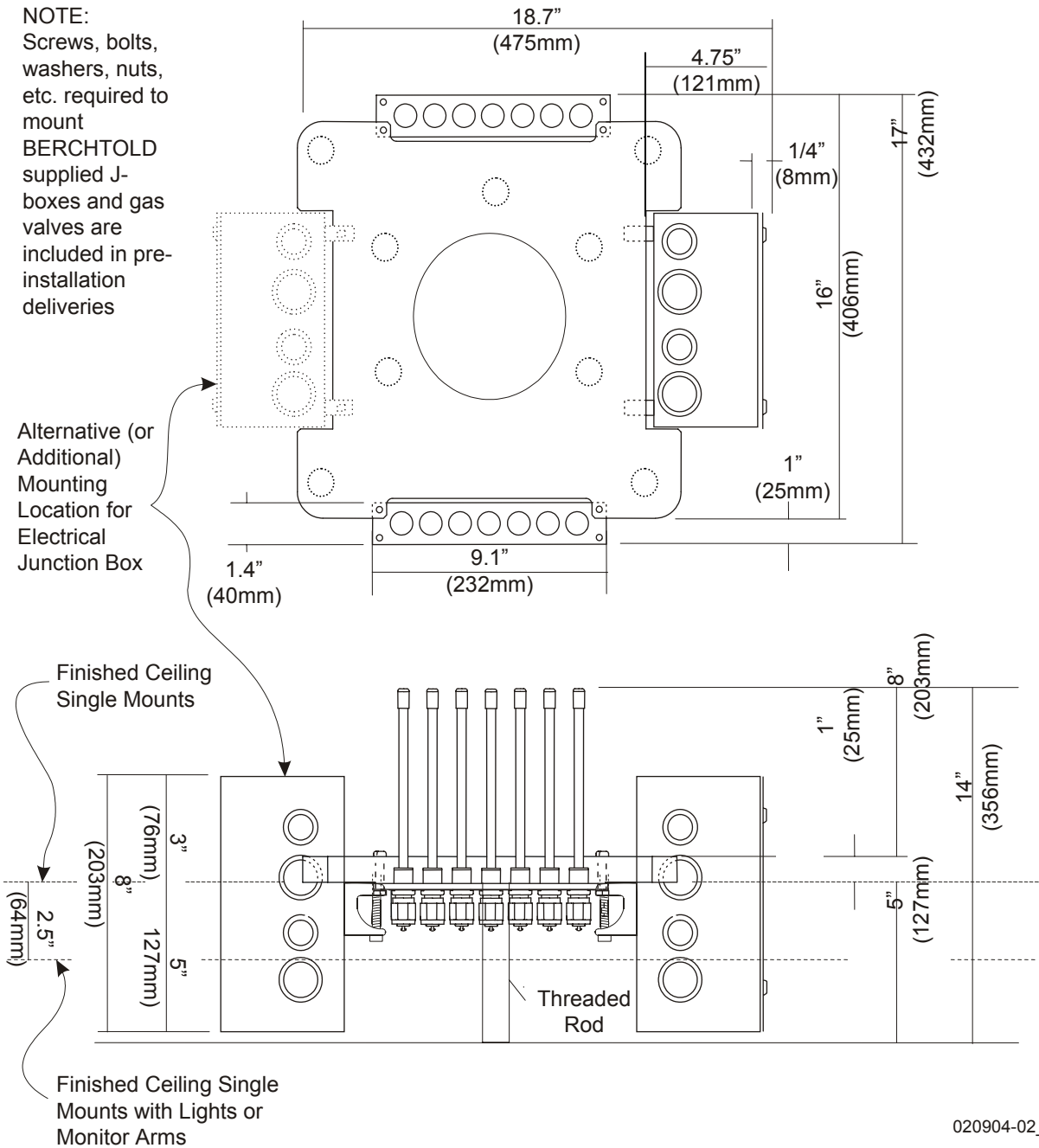


FIGURE 2-5 TELETOM® Equipment Management System Mounting Plate and Accessory Dimensional Information

BERCHTOLD provides a soffit cover to provide a finished look at the ceiling above the TELETOM® Equipment Management System. The soffit is 23” square and, thus, will cover an envelope approximately 3.5” (90mm) outside of each edge of the mounting plate (FIGURE 2-6).

SECTION 2

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

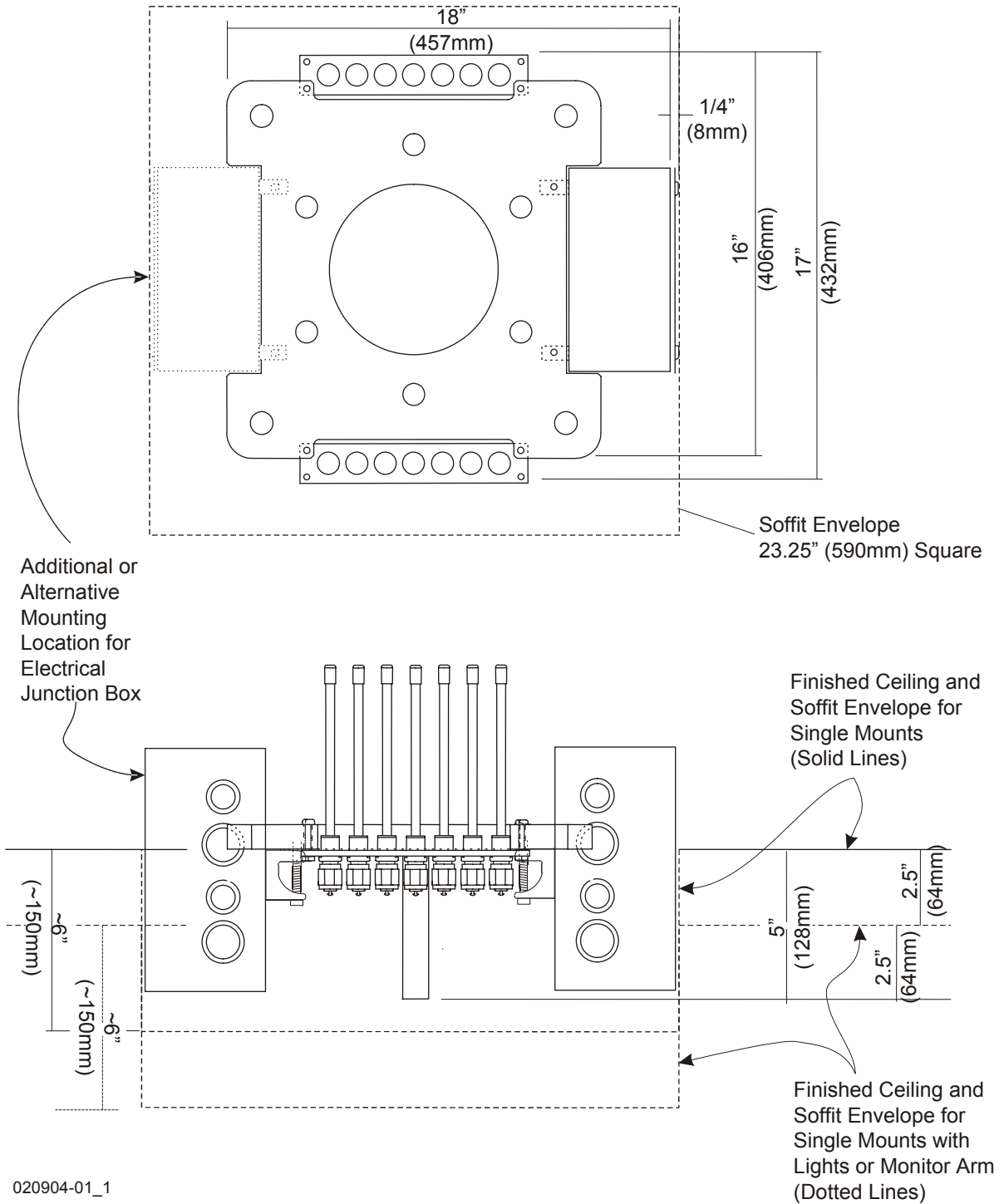


FIGURE 2-6 TELETOM® Equipment Management System Soffit Envelope

The owner or the owner's contractor should take care not to include any non-Equipment Management System equipment or systems within the soffit envelope.

A pre-installation inspection (before the finished ceiling is installed) may help detect interference potentials while they can be most easily resolved.

TANDEM MOUNT EQUIPMENT MANAGEMENT SYSTEMS (TT OR TB)



The owner or the owner's contractor has the final responsibility for the strength and rigidity of the superstructure. BERCHTOLD Corporation does not warrant or certify superstructure designs. An inadequate superstructure will affect the ability of the TELETOM® unit to perform in the manner intended. An inadequate superstructure design can also result in damage to the equipment. Equipment warranty service charges related to an inadequate superstructure design or installation are at the customer's expense.



Refer to "Owner Responsibilities" on page 1-3 for a description of the owner's design and construction responsibilities.

Identification

TELETOM® tandem mount units are identified by a 500 or 700 series model number with at TT or TB prefix.

Superstructure Design Loads

Table 2-2 shows the weight and moment for TELETOM® tandem mount Equipment Management Systems. The data shown are for the heaviest unit and the highest rotational moment. Designing for the heaviest model with the highest torque will provide adequate support for the heaviest unit, but will not significantly add to the cost of the installation of the lightest unit. This design margin also increases flexibility for future product upgrades.



The installed weights and moments shown in Table 2-2 include the weight of the TELETOM®, any CHROMOPHARE® or monitor arm components, and the maximum equipment load.

Table 2-2. Tandem Mount TELETOM® Weights and Moments

Standard	
Weight Lb (Kg)	Moment Ft Lb (N•M)
1108 (503)	6240 (8460)

The superstructure must be strong enough to support the weight and rigid enough to constrain rotation to less than 0.1° at the mounting plate.

Typical Tandem Mount Superstructure Design and Construction

FIGURE 2-7 shows the design and the construction materials recommended for a successful TELETOM® Equipment Management System tandem mount Installation. Other constructions are

**NOTE:**

See “General Notes on Superstructure Design” on page 2-2 for materials specifications and testing recommendations.

- A. L-angle Superstructure Brackets (4 required)
 - 4” x 4” x 3/8” X 12” (102mm x 102mm x 10mm x 305mm) long with two Ø5/8” x 4” (Ø16mm x 102mm) embedded expansion anchors
 - Leave 5” (127mm) from the center of each mounting bolt clear for wrenching.
- B. Standard pipe Ø6” (Ø152mm)
 - 1. The pipe must be welded to the BERCHTOLD supplied TELETOM[®] mounting plate (C) and to the owner supplier superstructure top plate (F).

**WARNING**

Do not attach supplemental supports to the pipe. The supports will not constrain the rotational forces when attached to the pipe. This could lead to a failure of the Equipment Management System to operate as intended. Drifting of the Equipment Management System could result in injury to personnel.

- 2. Do not attach any supplemental supports to the pipe. The supports will not constrain the rotational force when attached to the pipe.

**NOTE:**

Refer to FIGURE 2-8 for important details on the support of the TELETOM[®] mounting plate.

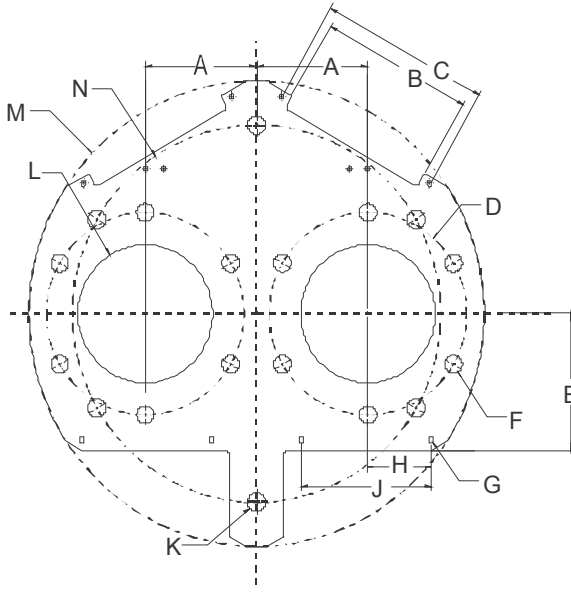
**CAUTION**

Orientation of the TELETOM[®] Tandem Mounting Plate is critical for installation and operation. Refer to your layout drawings for the proper orientation.

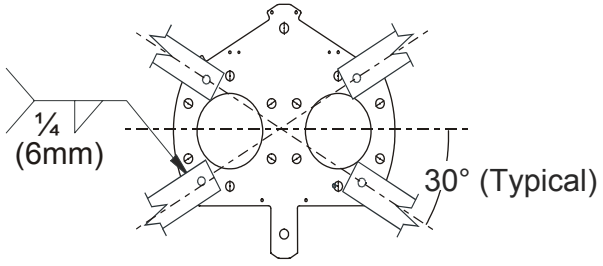
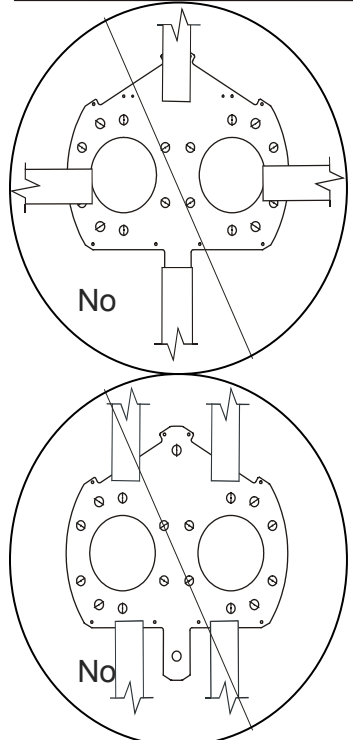
- C. TELETOM[®] Tandem Mounting Plate (Supplied by BERCHTOLD, and installed by the owner or the owner’s contractor).
 - 1” x approximately Ø22-7/8” (25mm x approximately Ø580mm) with twelve 7/8” (22mm) threaded rods in two Ø 10” (Ø 252mm) bolt circles (6 rods per circle—see FIGURE 2-8).
- D. L-angle Support Braces (4 required)
 - 4” x 4” x 3/8” (102mm x 102mm x 10mm)
 - 1. BERCHTOLD recommends that the L-angle support braces be welded to both the superstructure brackets (A-FIGURE 2-8) and to the mounting plate (C).
 - 2. Support braces (D) must be welded to the mounting plate (C).
 - 3. Support braces must be attached near the support pipes, and they must be at 30° angles to a centerline drawn through both pipe mount locations on the plate (see FIGURE 2-8).

SECTION 2

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES



- Legend:
- A = 5.6" (142mm)
 - B = 7.67" (195mm)
 - C = 8.58" (218mm)
 - D = Ø 10" (Ø 252mm) B.C
 - E = 6.69" (170mm)
 - F = Ø .75" (Ø 19.4mm) with all thread rods and bolts installed.
 - G = Ø .25" (Ø 6.35mm)
 - H = 3.15" (80.5mm)
 - J = 6.5" (165mm)
 - K = Ø .91" (Ø 23mm)
 - L = Ø 6.77" (Ø 172mm)
 - M = Ø 22.83" (Ø 580mm) Mounting Plate Envelope
 - N = Ø 18.50" (Ø 470mm) B.C.



Yes

FIGURE 2-8 TELETOM® Tandem Mounting Plate and Support Attachments

4. The installed TELETOM® mounting plate must be level to within $\pm 0.1^\circ$.
- E. The bottom of the TELETOM® mounting plate (C-FIGURE 2-7) must be flush with finished ceiling.
- F. Superstructure base plate furnished by the owner (see FIGURE 2-9)
 - 1/2" x 20" x 30" (13mm x 508mm x 762mm) with six Ø1/2" x 6" (Ø13mm x 152mm) embedded expansion anchors.

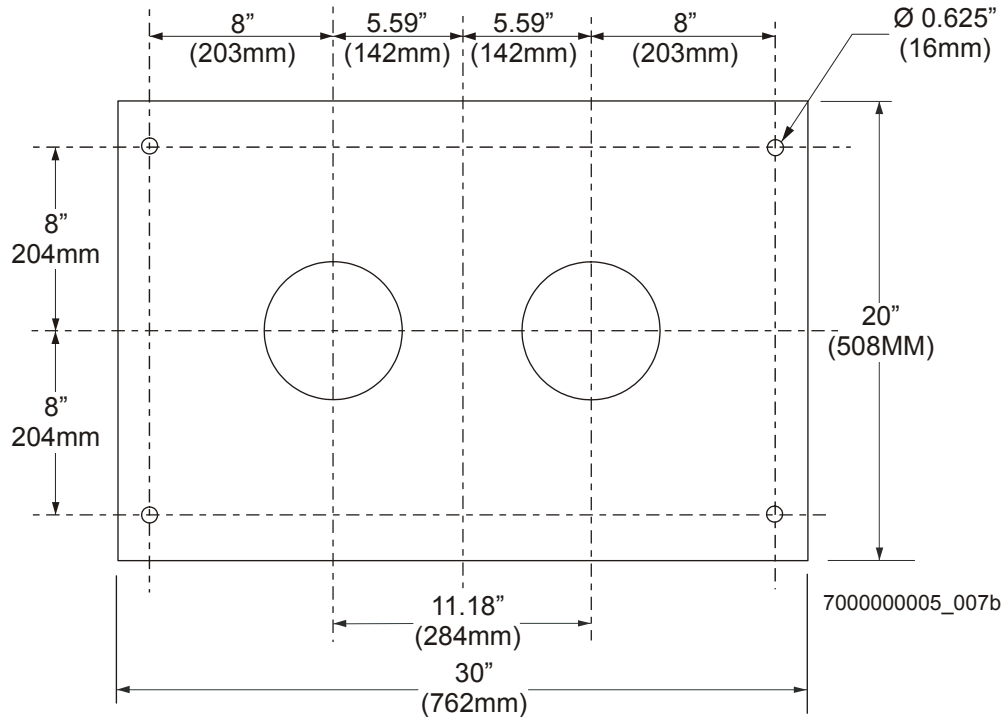


FIGURE 2-9 Typical Tandem Superstructure Base Plate

Ceiling Opening and Soffit Envelope

The TELETOM[®] Equipment Management System owner or the owner's contractor must ensure that the ceiling opening will accommodate the tandem mounting plate and any and all accessories installed on it. FIGURE 2-10 shows the dimensions of various combinations of optional components that might be involved. Consult the customer drawings to determine which accessories will be included with your unit.



NOTE:

Customers typically order multiple TELETOM[®] Equipment Management Systems to be installed in different rooms/areas for different purposes. Each of these booms may be equipped differently and, thus, require different numbers and types of optional components. It is important that the mounting requirements for each different installation be evaluated individually.

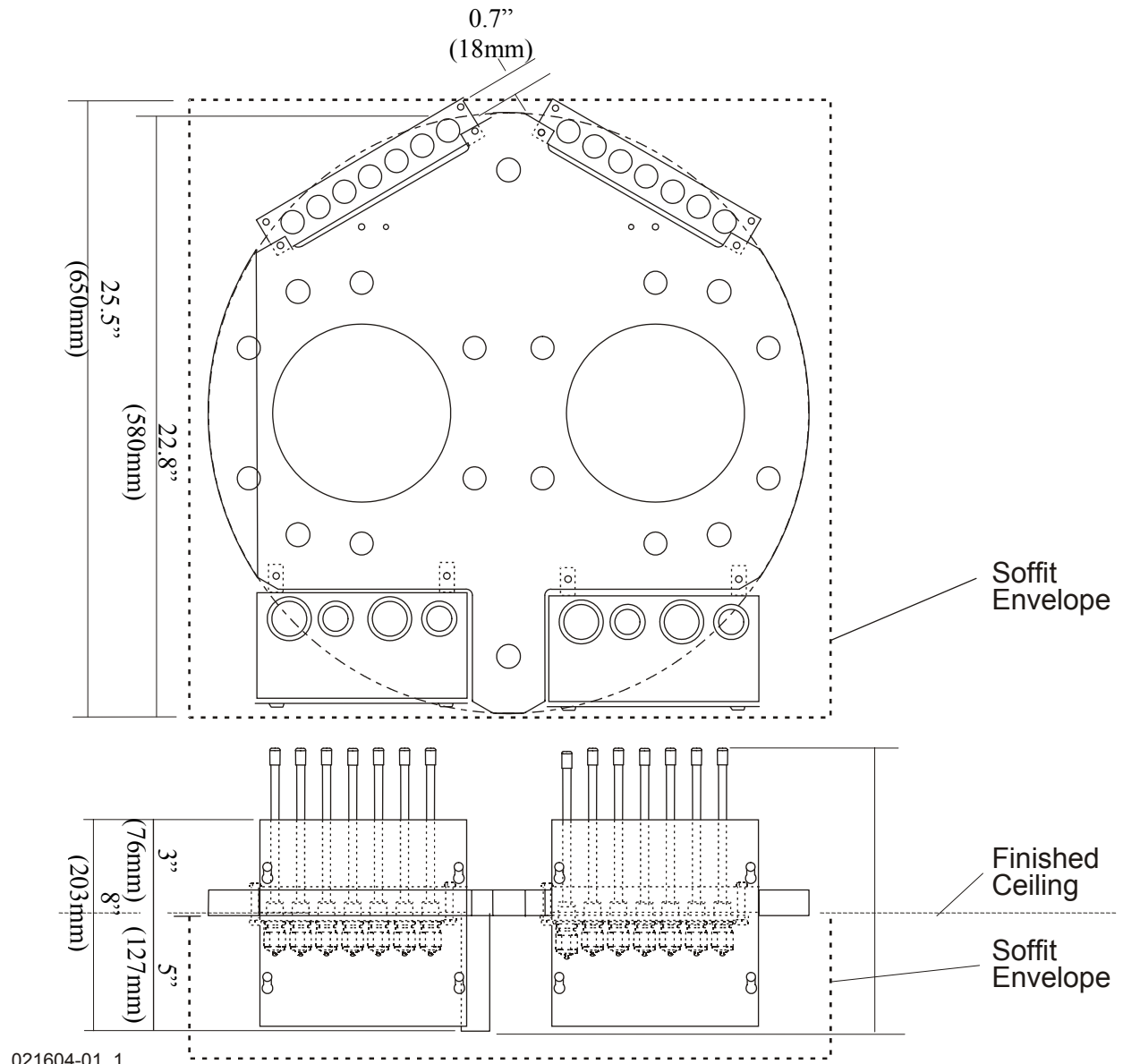


FIGURE 2-11 TELETOM® Tandem Mount Equipment Management System Soffit Envelope

The owner or the owner's contractor should take care not to include any non-Equipment Management System equipment or systems within the soffit envelope. This includes:

- Lighting fixtures
- HVAC delivery weirs
- Air return grills
- Sprinkler system heads
- Speakers
- Fire/smoke detector sensors

A pre-installation inspection (before the finished ceiling is installed) may help detect potential interference while it can be most easily resolved.

SECTION 3—PRE-INSTALLATION WIRING REQUIREMENTS

This section describes the wiring and electrical components used in a standard TELETOM[®] Equipment Management System installation. Optional equipment and accessories have additional electrical capacity and pre-installation requirements. These additional requirements are described under the individual options and accessories in Section 5 of this manual.



NOTE:

Refer to the order specifications to determine the TELETOM[®] electrical components and options supplied for your unit(s).

BERCHTOLD SUPPLIED ELECTRICAL COMPONENTS (STANDARD)

BERCHTOLD supplies an electrical junction box for installation on the TELETOM[®] mounting plate. Each TELETOM[®] Equipment Management System may also include one or more power outlets. Refer to the owner's configuration drawings (provided by BERCHTOLD) for the type and quantity of circuits required.

Electrical Junction Box

BERCHTOLD supplies the electrical junction box that must be used for the TELETOM[®] installation. The junction box includes field wirable terminal blocks for up to six circuits. It also has a built in grounding stud (FIGURE 3-1).

The mounting plate has through holes to accept the junction box mounting screws at the correct position. The junction box will be sent prior to the shipment of the TELETOM[®] unit. The box may arrive with the TELETOM[®] mounting plate or as a separate delivery.

SECTION 3

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

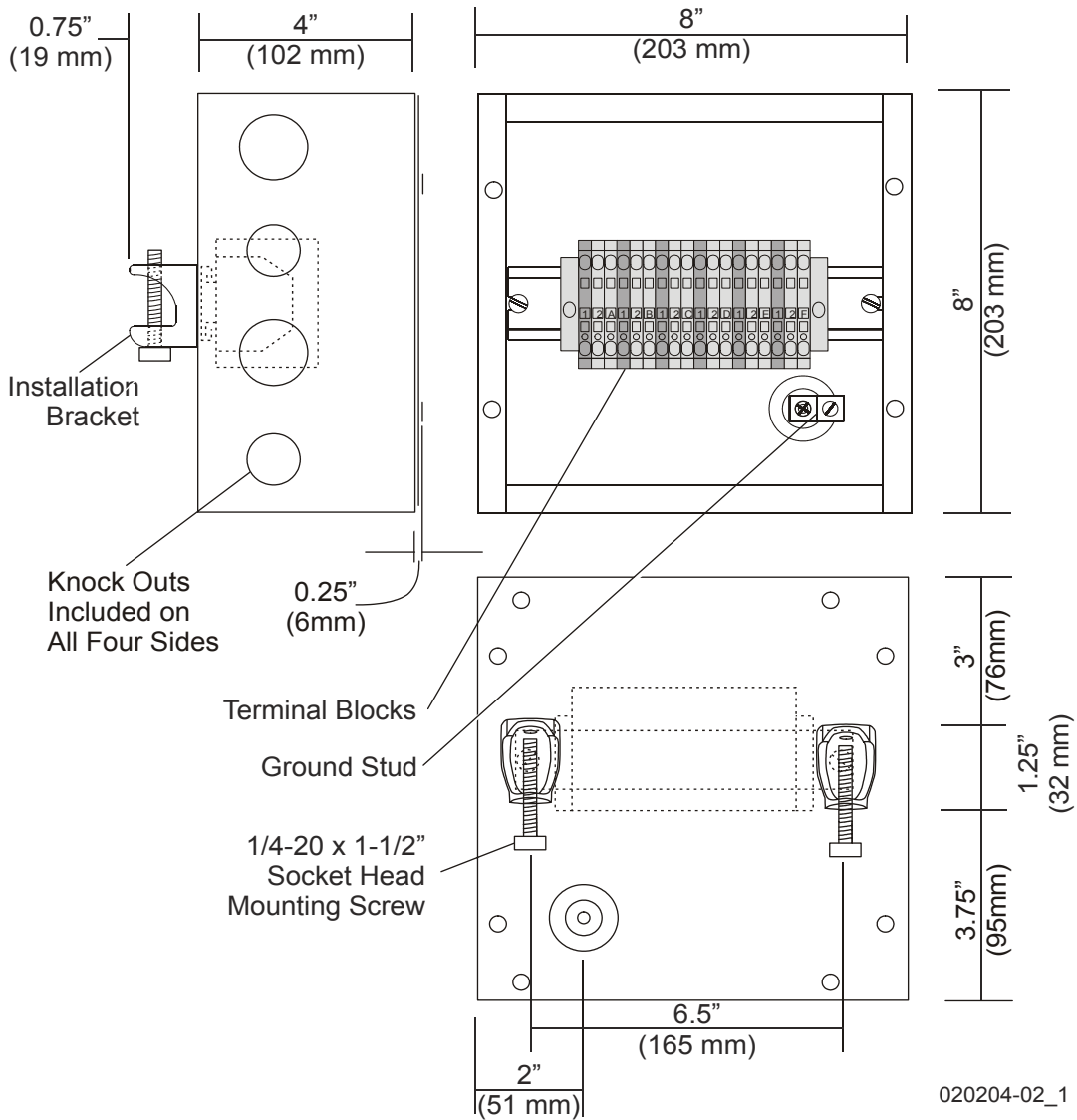


FIGURE 3-1 TELETOM® Junction Box

Electrical Power Outlets

The TELETOM® Equipment Management System service column may carry multiple hospital grade receptacles. Standard receptacles are rated at 20 Amps, but other ratings can be supplied if specified. Receptacles are wired together in groups. There are a maximum of 3 receptacles per circuit and a maximum of 6 circuits per Equipment Management System.

When the maximum number of circuits is ordered, two junction boxes are required to handle the house-to-boom wiring connections. When a more standard three or four circuits (for up to 12 outlets), only one junction box is required.

Power for the receptacles is provided by UL approved 12 AWG, type XHHW, 3-wire cables inside the boom. Each group of three receptacles requires a separate 120 VAC, 50/60 Hz power supply line.

Additional Electrical Power Supplies

TELETOM[®] Equipment Management System shelves can include two simplex receptacles per shelf. Up to three shelves on a single boom can include outlets (for a total of 6 shelving outlets). All of the shelf outlets are powered from a single 20 Amp, 120VAC, 50/60Hz supply on a single, dedicated circuit.

TELETOM[®] model 520 and all 700 series models include an electronic brake and/or an integral motor, which requires a single separate 120 VAC, 50/60 Hz power supply line capable of supplying 8.3 Amps.

The TELEVAC[®] Smoke Evacuation System, if ordered, requires a separate 12 Amp, 120 VAC, 50/60Hz power supply. However, this power supply is routed directly to the TELEVAC[®] motor; it does not go through the junction box installed on the TELETOM[®] Equipment Management System mounting plate.

Each option or accessory may require a separate power supply line. Refer to the owner's configuration drawings (provided by BERCHTOLD) for the type and quantity of circuits required.

OWNER PRE-INSTALLATION WIRING REQUIREMENTS (STANDARD)

The owner must supply power to the TELETOM[®]:

1. Power must be 120 VAC 56/60 Hz from a dedicated source.
2. The owner or the owner's contractor must complete all wiring and conduit runs before the TELETOM[®] Equipment Management System can be installed.
3. Power must be able to be turned on at the time the equipment is installed so that electrical systems can be tested.

The owner must make the electrical connections from the hospital power supply to the TELETOM[®] Equipment Management System and any optional and accessory equipment.

Wiring Runs

The owner must run the wiring from the mains supply to the junction box on the TELETOM[®] mounting plate. Wiring runs must comply with local electrical codes.



WARNING

Live electrical circuits can cause injury or death. Lock out and tag out power supplies to prevent work on live electrical circuits.

Electrical Junction Box Installation

The owner must install the BERCHTOLD supplied junction box on the TELETOM[®] mounting plate. The junction box includes internal terminal blocks for wiring connections and exterior conduit guides on all four sides (FIGURE 3-2).

SECTION 3

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

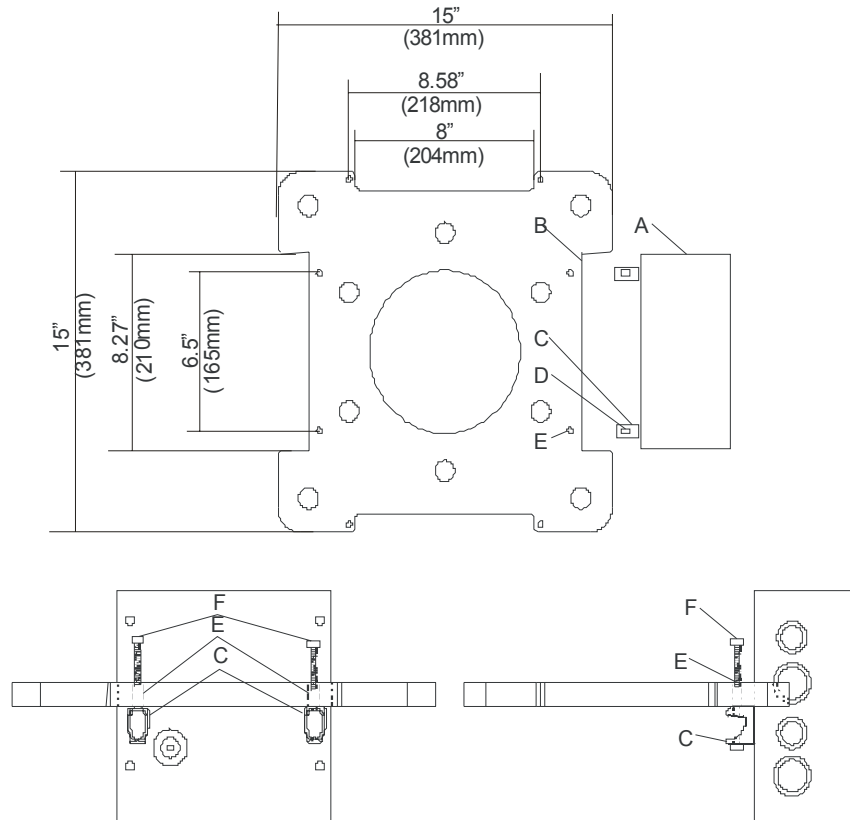


FIGURE 3-2 Electrical Junction Box Installation on Single Mounting Plate



NOTE:

The single mounting plate is shown, but the principle for installing the junction box on the tandem mounting plate is identical. As with the single mounting plate, the tandem mounting plate provides spaces for the installation of two junction boxes. See FIGURE 2-10 for the junction box mounting locations on the tandem mounting plate.

Do this to attach the junction box to the mounting plate:

1. Align the junction box (A) with the opening on the mounting plate (B).
Note that the mounting plate indents and mounting holes are sized differently for the electrical junction box and the gas valve bridge.
The electrical junction box must be mounted in the area intended in order to insure a secure attachment.
2. Slide the mounting brackets (C) under the mounting plate until the holes in the brackets (D) align with the holes in the plate (E).
3. Insert ¼-20 x 1½” socket head screws (F) into the mounting plate, and tighten securely.
4. If necessary, repeat steps 1 through 3 and install the second electrical junction box on the opposite side of the mounting plate.

Wiring Connections

Terminal block illustrated below is provided by BERCHTOLD Corporation. Any code compliant connector can be substituted by customer.

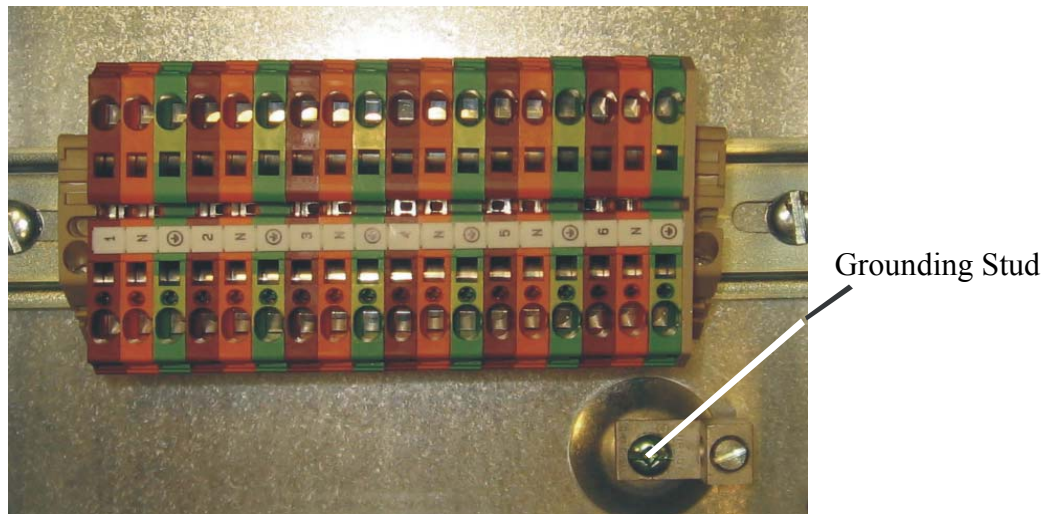


FIGURE 3-3 Terminal Block Connectors in Electrical Junction Box

High Voltage Conduit

The contractor is responsible for running code compliant conduit between the mains supply and the TELETOM[®] Equipment Management System junction box. The sizing and number of conduits is dependant on the number of cables involved. Cable information is included in the customer order file. Refer to local codes for conduit sizing and installation specifications.

LOW VOLTAGE ELECTRICAL REQUIREMENTS

TELETOM[®] Equipment Management Systems can provide connectivity for low voltage applications such as telephone, data cables, video signals, and other applications. The cabling for the low voltage devices and connections is routed through an electrically isolated compartment in the electrical pod.

Depending on the order configuration, some of the low voltage cables may be in place and only need termination at the site. For applications where low voltage cables will be installed in the field, BERCHTOLD will include flexible chase within the TELETOM[®] Equipment Management System if the owner stipulates a requirement in the order documentation.

The owner or the owner's contractor or a low voltage component supplier is responsible for terminating all low voltage applications. In addition, the owner or the owner's contractor is responsible for running code compliant conduit between the TELETOM[®] Equipment Management System and the low voltage cable destination.

COMBINATION BOOM & LIGHT/FLAT PANEL

Please see the Chromophare Pre-Installation Guide. If a light is purchased, and an SK Box is provided. The contractor should route conduit from the mounting plate to the SK Box, to the wall control unit as described in the Chromophare Pre-Installation Guide.

SECTION 4—PRE-INSTALLATION REQUIREMENTS FOR MEDICAL GASES

Both single mount and tandem mount TELETOM[®] Equipment Management Systems can supply medical gases through the service column(s).

BERCHTOLD SUPPLIED MEDICAL GAS RISER

BERCHTOLD supplies a medical gas riser for installation on the TELETOM[®] mounting plate. Each riser is specially fabricated to the owner's medical gas specifications. The riser includes a valve bridge, DISS gas risers with single check valves, and testing caps.

**NOTE:**

A compressed gas riser with an NTP fitting is available for installation on the valve bridge. However, because compressed air is not a medical gas, check local codes and regulation to determine if a compressed air riser can be mounted adjacent to medical gas risers.

Medical gas is delivered through the service column via medical grade hoses. These hoses support working pressures of 200 PSI (1379 kPa). Hoses are rated for a maximum continuous operating temperature of 165° F (74° C), and they have a low temperature brittle point of -40° F (-40° C).

Medical gas risers comply with NFPA 5.1.10.1.1 (2002). They are shipped in advance of the TELETOM[®] equipment, and they must be attached to the mounting plate before installation of the equipment can begin.

Oxygen outlets are cleaned for oxygen service per G-41 CGA pamphlet. This cleanliness should be maintained through installation.

PNEUMATIC BRAKE GAS SPECIFICATIONS

The customer must identify the gas to be used to operate the pneumatic braking system if one is included in the TELETOM[®] Equipment Management System specifications. The gas can be N₂ or compressed air. The pneumatic brake system consumes 0.45 ft³ (0.013 m³) per cycle.

When the Equipment Management System includes a pneumatic brake, it is delivered with a regulator installed and factory set for 100 psi (690 kPa) air. Air supplied to the regulator must be between 100 and 300 psi (690 and 2070 kPa).

If compressed air is used, the owner or the owner's contractor is responsible for supplying the tubing and fittings to deliver the air from the gas riser to the regulator.

N₂ operated pneumatic brakes must be piped to high side line pressure. Pneumatic brakes cannot be operated by air supplies routed through a wall regulator.

OWNER PRE-INSTALLATION MEDICAL GAS RISER REQUIREMENTS

The owner must plumb the medical gases to the TELETOM[®] Equipment Management System location, install the medical gas riser on the TELETOM[®] mounting plate, and make the connections between the medical gas riser and the service column supply lines.

Medical Gas Piping

The owner must pipe the medical gases from the building supply to the TELETOM[®] Equipment Management System prior to installation of the equipment.

SECTION 5

PRE-INSTALLATION REQUIREMENTS FOR OPTIONS AND ACCESSORIES

1. Piping must be completed according to local and national code requirements.
2. An NFPA compliant blow down test must be performed.
3. Piping must be pressurized and leak tested per NFPA 99C (CSA Z305.1) Medical Gas Piping Systems.
4. Test results must be made available to BERCHTOLD installers for comparison testing.

Medical Gas Riser Installation

The owner must install the medical gas riser on the bottom of the TELETOM[®] mounting plate. FIGURE 4-1 shows the medical gas mounting positions for single mount and tandem mount installations. Where only one valve bridge is needed, it can be mounted in either position. Where two valve bridges are needed, they must be mounted as shown. The gas valve bridge cannot be mounted in the positions reserved for the electrical junction box, even if no junction box is included.

BERCHTOLD ships the installation screws, washers, and nuts along with the valve bridge(s).



NOTE:

Medical gas risers are 8" high. The risers for vacuum lines are 1/2" OD. All pressure risers are 3/8" OD.

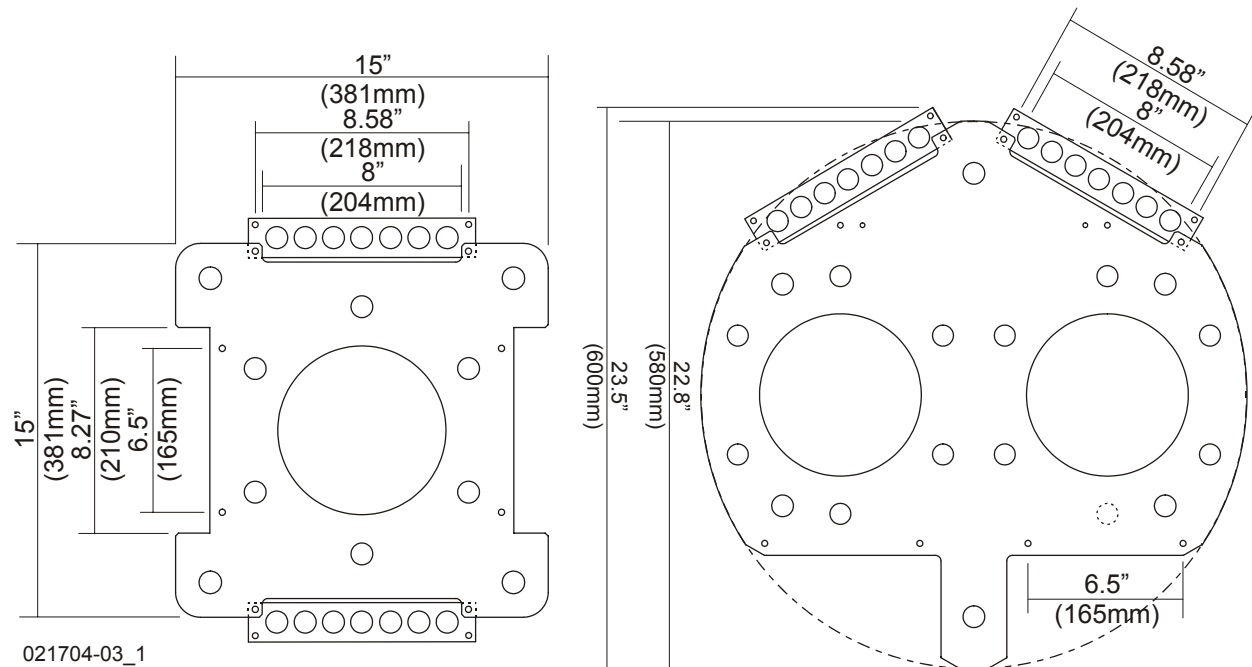


FIGURE 4-1. Medical Gas Valve Bridge Mounting Positions

Do this to attach the medical gas riser to the mounting plate:



NOTE:

The following description uses the single mounting plate for illustration. The parts and procedures are identical for the tandem mounting plate.

1. Place the bridge (A) under the mounting plate (B), and align the holes (FIGURE 4-2).

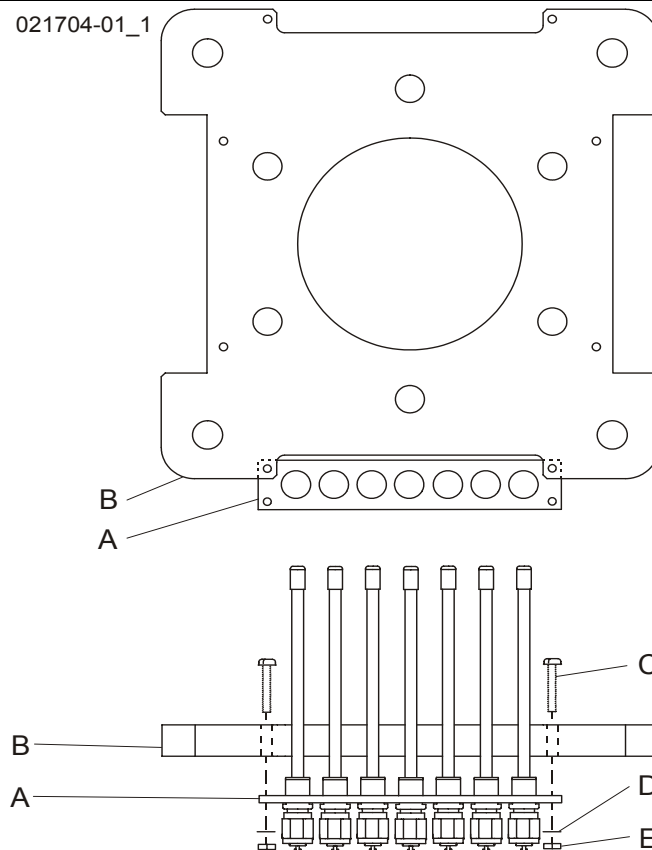


FIGURE 4-2. Installing the Gas Riser on the Mounting Plate

Note that the mounting plate indents and mounting holes are sized differently for the electrical junction box and the gas valve bridge.

The medical gas valve bridge must be mounted in the area intended in order to insure an accurate fit and secure attachment.

2. Insert a bolt (C) through each mounting hole, and secure it with a washer (D) and nut (E).
3. Connect the appropriate house gas supply to the top of each riser.
4. Purge the gas lines and perform the leak test at least 24 hours prior to the scheduled beginning of the BERCHTOLD installation activities.

BERCHTOLD installation personnel will connect the flexible tubing from the TELETOM[®] Equipment Management System to the bottom of each riser.