MODULAR
SERVICES COMPANY

INSTALLATION MANUAL

ARTWORKS®
LARGE-OPENING

OVERVIEW

The Large-Opening ArtWorks® is a single-sided, recessed assembly that allows multiple medical gas outlets and electrical devices to be discretely hidden behind a moveable picture. Vertical movement of this assembly is counterbalanced and moves on precision ball bearing slides. The attached artwork (by others) slides up to completely reveal the interior of the unit, providing maximum access to the components within. See table below for unit widths:

Rough-In Widths of Large-Opening ArtWorks® Units

Model #	Description	Width
6830	Standard Large-Opening ArtWorks®	34"
6830-W	Wide Large-Opening ArtWorks®	45"

Units allow for the use of detachable flowmeters, suction regulators and vacuum bottle slide brackets for concealed bedside storage. An optional lower electrical console may be included if indicated on the project drawings.

A downward-facing interior light is included with the unit, which comes on automatically to illuminate the interior when the artwork is raised to its open position. The light may also be switched on and off while the unit is open.

The unit's vertical side frames are constructed of 16-gauge galvanized steel (90" tall) with horizontal steel drywall support members. Units include sound-dampening material on the back of the recessed compartment. Large-Opening ArtWorks® assemblies are UL listed and NFPA 99 compliant.

Figures 1 and 2 identify components of the Large-Opening ArtWorks® assembly.

Figure 1.

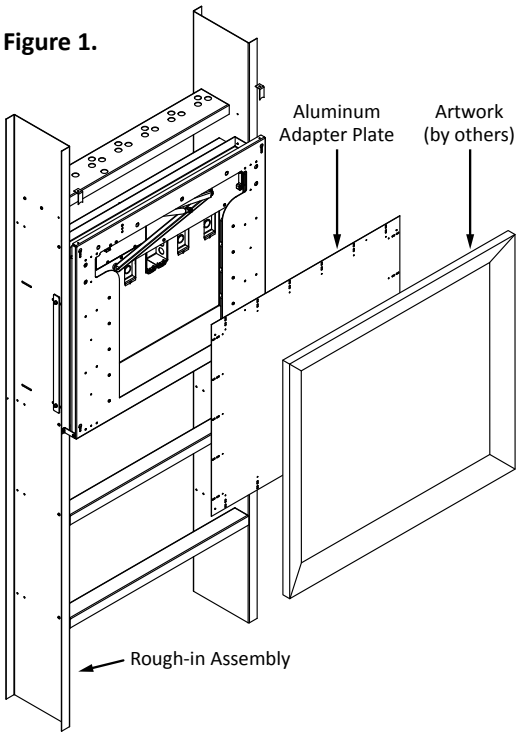
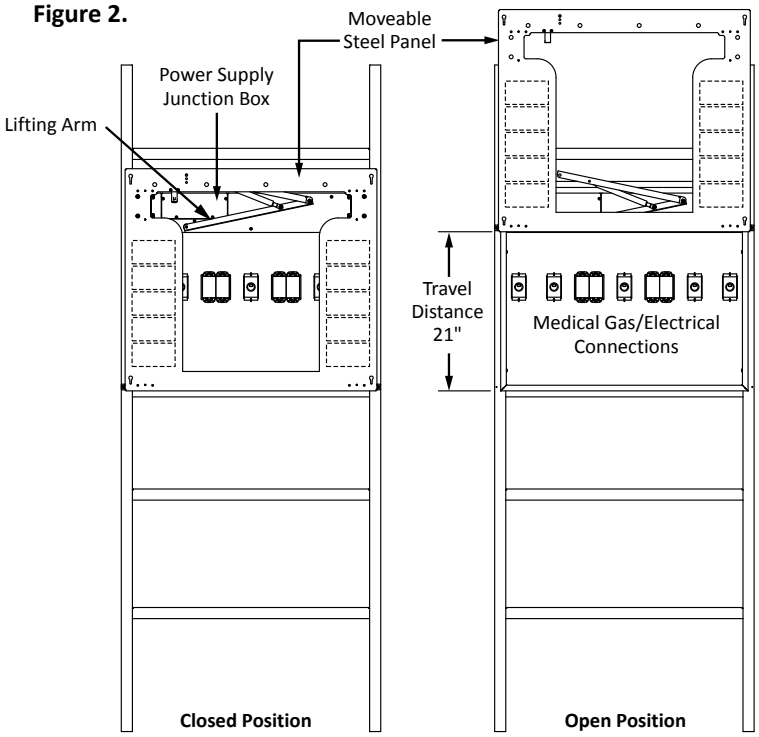


Figure 2.



UNPACKING AND INSPECTION

1. Upon receipt of ArtWorks® units and prior to unpacking, inspect shipping containers for damage. Document any damage found and notify the carrier and Modular Services Company.
2. Locate the carton for the unit you wish to install. Labels at each end of the carton identify the unit type and general description of contents, as well as the room number or area of installation (if applicable).

3. Unpack unit from shipping containers, taking care not to damage unit.
4. Inspect units for defects in materials or workmanship prior to installation. It is the responsibility of the customer to report any damage or deficiencies to Modular Services immediately upon discovery.

PREPARATION

Review the final approved shop drawings and the submittal booklet, which will provide you with technical details specific to your installation, such as:

- Equipment types and quantities
- Room numbers and location in the building (if applicable)
- Electrical requirements

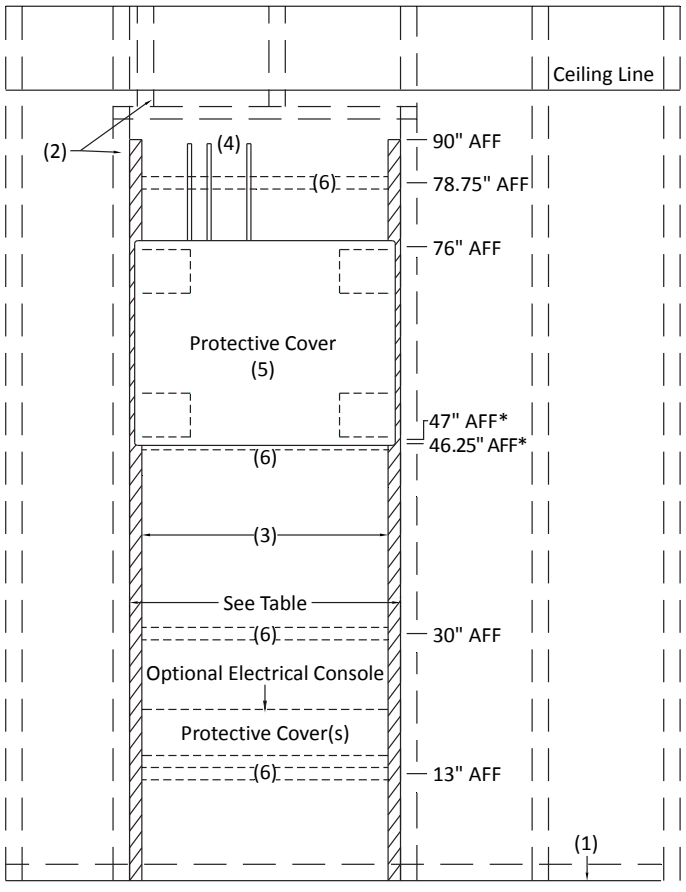
UNIT INSTALLATION

The minimum finished ceiling height for installation of the Large-Opening ArtWorks® unit is 8'6" with 4" crown molding. Ceilings of lesser height will not allow the artwork to be raised to the fully open position.

The minimum depth requirement is 9" for the section of the stud wall where the unit will be installed. If this wall section is constructed of two adjacent standard-depth walls, care should be taken to assure there is no physical contact between the ArtWorks® assembly and adjacent wall. The interior framing (Figure 3, item 2) should be positioned to allow the width of the ArtWorks® side frames (item 3) to be placed between two studs at the location required for the service locations, according to architectural requirements.

Set the ArtWorks® rough-in assembly into place with the vertical side frames (item 3) flush with the building interior framing (item 2). Securely attach the ArtWorks® side frames (item 3) to the interior framing (item 2) with standard framing fasteners (not included). Ensure that the recessed compartment is level before unit is attached so that when the finish frame assembly is installed, the slide assembly will work properly.

Figure 3.



Mounting Rough-in Assembly

(1) Metal Floor Track (by others)
(2) Interior Framing (by others)
(3) Vertical Side Frames
(4) Medical Gas Piping/Electrical Conduit
(5) Plaster Shields
(6) Drywall Supports (nailers)

*46.25" AFF to bottom edge of flange around pan, 47" AFF to inside bottom of pan. Bottom of art will be same as bottom edge of flange around pan.

MEDICAL GAS SERVICE CONNECTIONS

1. Single-service termination points are provided for each gas service. Medical gas piping connections are to be made in accordance with NFPA 99 before installation of the drywall.
2. Prior to brazing the pipes together, the component housing should be inspected to ensure that it is set for proper drywall installation. Brazing pipes together with the component housing out of position could create additional stresses on the piping when adjusted for drywall finish.

Medical gas systems provided by Modular Services have been cleaned, purged, brazed, blown down, labeled, and tested for cross connections and leaks in accordance with the most recent edition of NFPA 99. They are certified to be compliant to all of these requirements and to be leak free. The medical gas system installer is responsible for connecting this manufactured assembly to the pipeline in compliance with all applicable sections of the latest edition of NFPA 99.

During the process of connection to the pipeline there are multiple potential sources of contamination or damage to seals which could result in leaks. First, although Modular Services takes care to protect the ends of our piping system and the openings of station inlets/outlets to avoid contamination, it is at this point that these contamination prevention measures must be removed which exposes the system to the construction environment. Secondly, instrumentation must be inserted into the station inlets/outlets to properly purge the system while it is being brazed in accordance with the requirements of NFPA 99. Lastly, station inlet/outlet front body assemblies (if product is shipped with them installed), which are only rated to a maximum of 100 PSI, must be removed to conduct the initial pressure test which is required to be conducted at a minimum of 150 PSI. After this test is complete the front bodies must be reinstalled to conduct the standing pressure test.

In accordance with NFPA 99 section 5.1.12.2, the installer is required to test the distribution piping in its entirety, which includes the medical gas manifolds provided by Modular even though they have been pretested at the factory. Because of the multiple potential sources of contamination or damage to seals listed above, the installer is to be held responsible for repairing or replacing any seals which have been contaminated or damaged as a result of the process of connecting to the pipeline. The installer shall also be responsible for protecting the station inlets/outlets against contamination after the factory protection has been removed.

Modular Services warrants all defects in piping materials, brazed joints, and workmanship but cannot warrant leaking seals once the factory provided contamination prevention materials are removed from either the end of the piping or the station inlet/outlet.

ELECTRICAL SERVICE CONNECTIONS

1. Ensure all electrical power circuits are locked off prior to hook-up.
2. Review wiring diagram or shop drawing.
3. Electrical devices are factory-installed. Wiring and connections to power supply are to be made in the field.
4. **IMPORTANT:** Service connections are to be made in accordance with applicable National Electrical Codes, in addition to state and local codes.

DRYWALL INSTALLATION

In order to install the drywall behind the perimeter flange of the Large-Opening ArtWorks® unit, the four panel mounting screws (Figure 4) will need to be loosened to allow the panels to be moved away from the wall to provide clearance for easy placement of the drywall material.

For installation around the medical services compartment, cut drywall to a size that will allow the material to slip under the lip of the panel trim (a seam will be required in the location of the unit). For installation around the optional electric console assembly, a square opening should be cut in the drywall so that it fits over the backbox (the trim cover will conceal any small gaps between the console and drywall). Attachment of the drywall can be accomplished using standard drywall fasteners directly to the framing members and drywall supports of the

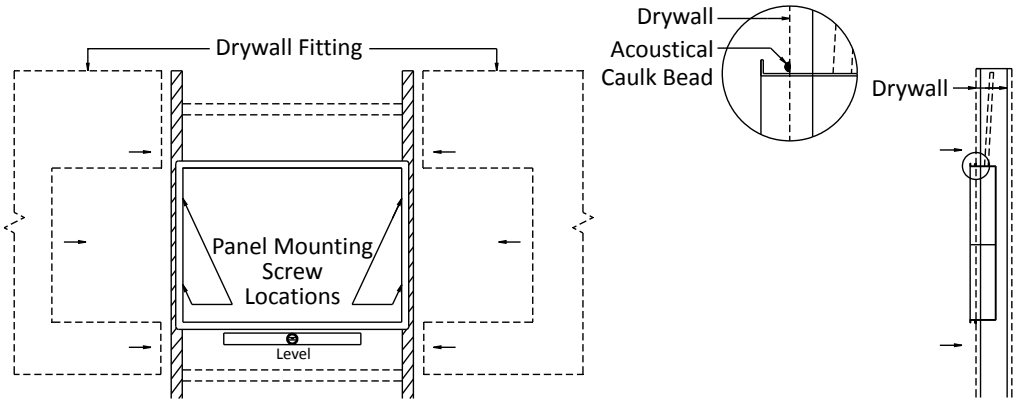
ArtWorks® unit (use extreme care with screws that are close to medical gas piping or electrical conduits). Perform all taping, joining, texturing and painting before resetting the panel trim back to its original position. Any additional wall coverings may also be installed at this time.

IMPORTANT: Wainscoting should not be installed under the perimeter flange of the ArtWorks® unit. If the coverings are to be installed before the tub housing, terminate 0.25" from the outer edge of the perimeter flange.

Once the wall materials are completed, caulk the perimeter of the panel trim with an acoustical sealant and position it back against the finished wall (Figure 4). This should be the same location that the medical gas brazing was performed to remove any tension on the brazed connections made.

Should the optional electrical console be used, the backbox will need to be adjusted approximately 1/8" under flush with the finished wall surface. This is accomplished by adjusting the four screws (two on each side) located on the ends of the backbox assembly. This will allow the fascia trim to be seated properly around the component coverplates and rest firmly against the finished wall surface.

Figure 4.



ARTWORK INSTALLATION

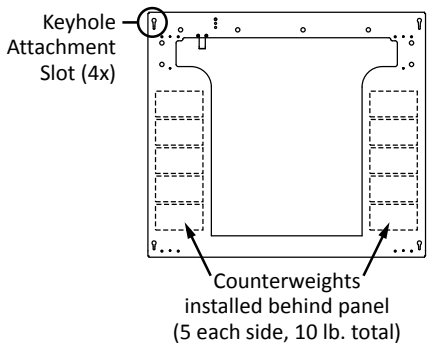
The outside dimensions of the framed artwork (supplied by others) are to be 30"H x 34"W. Also, the use of Plexiglas® glazing is required in order to limit any problems with the weight of the artwork and frame.

Attach the back of the artwork to the aluminum adapter plate, using screws provided. The total allowable weight for the framed artwork and adapter plate is 14 pounds. The adapter plate weighs 4 pounds, so framed artwork can weigh up to 10 pounds. A wide range of framing options is accommodated by the addition or removal of counterweights (1 lb. each) located on the back side of the movable steel panel (Figure 5).

For example, if the combined weight of the framed artwork and aluminum adapter plate is 8 pounds, remove all but 6 of the counterweights (leaving 3 on each side). If the weight of the artwork and adapter plate is 14 pounds, remove all of the counterweights.

The lifting mechanism is under compression when the artwork is in the lowered position and assists to counterbalance the weight. If the compression is too great, the picture will have a tendency to ride up without assistance; if it is too low, operation of the mechanism will be more difficult.

Figure 5.



The back side of the adapter plate has four shoulder rivets, one at each corner. To attach the artwork assembly to the moveable steel panel, tilt the top of the artwork back slightly and engage the upper shoulder rivets on the adapter plate into the upper keyhole attachment slots on the steel panel (Figure 5). Slide the artwork assembly down into the keyhole slots, engaging the lower shoulder rivets into the lower keyhole slots as the artwork is lowered into position. Check to see that the artwork is level and secure it in place by installing two locking

brackets (provided) at the top corners of the moveable panel.

INSTALLATION TERMS AND CONDITIONS

Each Modular Services unit, or unit section, shall be completely pre-wired for normal, emergency and low voltage according to the approved submittal. Communication devices and wiring shall be supplied by others. These devices include nurse call, television, code blue, telephone, monitor jacks, etc.

The customer shall be responsible for all electrical conduits, wiring hook-up of electrical services, and if applicable, interconnect wiring between sections. All hardware light fixtures shall be installed, wired and lamped by contractor. After installation is complete, the customer shall test equipment functions, as well as electrical receptacles and ground, in accordance with the National Electrical Code.

Medical gas contractor shall be responsible for piping and hook-up of all medical gas services. The medical gas contractor shall be responsible for purging, pressure testing, gas identification, and system certification in accordance with NFPA 99.

Modular Services Company shall have no responsibility or liability for delays, however caused. Owner shall hold Modular Services harmless from damages or injury related to any failure or neglect of owner, its employees, agents or licensees. Modular Services shall not be liable for consequential damages; makes no warranties, expressed or implied; and assumes no obligation other than those expressly contained herein.

WARRANTY

Modular Services Company warrants that all equipment assemblies shall be free from defects in material and workmanship for a period of 12 months from date of the owner's acceptance to the installing contractor or the date the equipment is put into service, whichever comes first. Warranty excludes electric lamps and/or any material not furnished by Modular Services. Warranty does not cover damage due to improper installation and/or abuse.

It is the responsibility of the customer to report any noted product deficiencies to Modular Services immediately upon discovery. It is the responsibility of Modular Services to expediently resolve the discrepancy. Any modification made to the product without the written authorization from Modular Services will void this warranty.

Also, in the event product modifications or repairs are made without the written consent of Modular Services, Modular Services shall not be held liable for any cost associated with the modification or repair.

There are no warranties of fitness which extend beyond the description on the face hereof.

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