MODULAR
SERVICES COMPANY

INSTALLATION MANUAL

ARTWORKS®

OVERVIEW

ArtWorks® is a medical gas services assembly which allows connectors to be discretely hidden behind a moveable picture. Units are available as either single- or double-sided assemblies with three or five gas outlets, and may be ordered as flush-mounted or recessed models. See table below:

Rough-In Widths of ArtWorks® Units

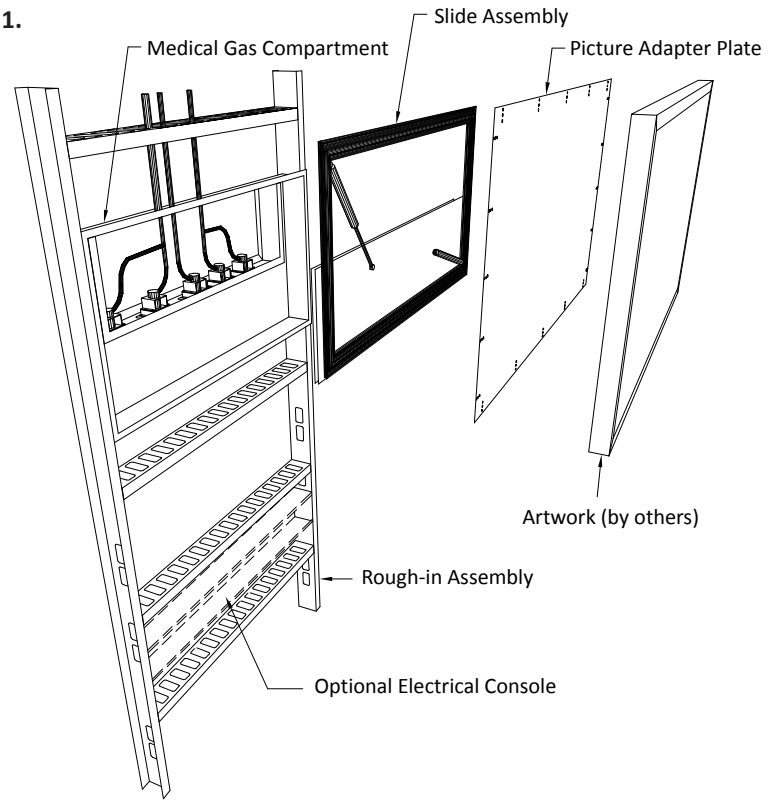
Model #	Description	Width
6813-F	Flush-mount, single-sided, 3 gas	24.900"
6823-F	Flush-mount, double-sided, 3 gas	
6815-F	Flush-mount, single-sided, 5 gas	34.400"
6825-F	Flush-mount, double-sided, 5 gas	
6813-R	Recessed, single-sided, 3 gas	32.938"
6823-R	Recessed, double-sided, 3 gas	
6815-R	Recessed, single-sided, 5 gas	45.750"
6825-R	Recessed, double-sided, 5 gas	

Recessed models allow for the use of detachable swiveling flowmeters, suction regulators and fold-down vacuum bottle slide brackets for concealed bedside storage. An optional lower electrical console may be included if indicated on the contract drawings. Vertical movement of this assembly (to expose gas outlets) is counterbalanced and moves on precision ball bearing slides. Horizontal movement is also incorporated to expose a blood pressure manometer or storage compartment.

The unit's vertical side frames are constructed of 16-gauge galvanized steel (90" tall) with horizontal steel drywall support members. Recessed units include sound dampening material on the back of the recessed compartment. ArtWorks® assemblies are UL listed and NFPA 99 compliant, and are constructed so that there is no change to existing STC (Sound Transmission Class) rating.

Figure 1 identifies the components of the ArtWorks® assembly.

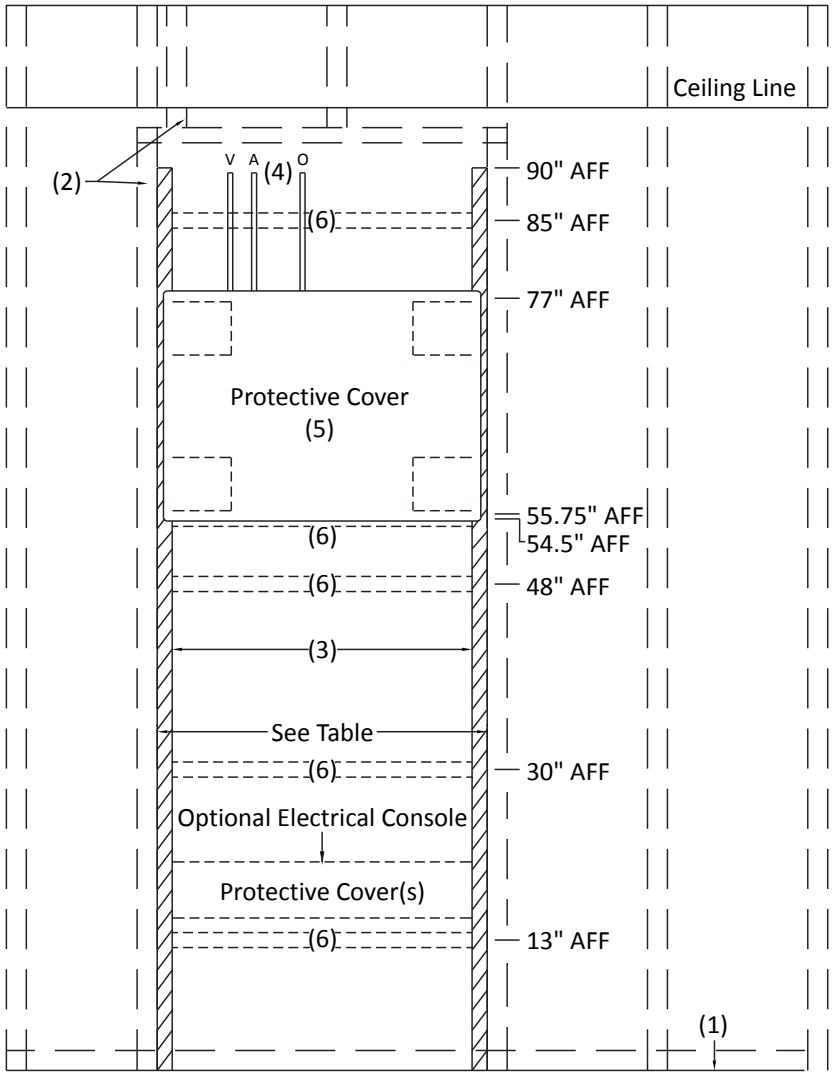
Figure 1.



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.
5. Additional cartons may be shipped with the rough-in assemblies that contain the slide mechanism and artwork mounting kit. These cartons should remain sealed until all finish work (drywall installation, painting, wall coverings, etc.) has been completed. When ready, locate the cartons tagged specifically for the type of ArtWorks® rough-in to ensure a completed ArtWorks® module.

Figure 2.



Mounting Rough-in Assembly

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

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 (for the optional electrical component console)

UNIT INSTALLATION

The stud wall where the unit will be installed should have the interior framing (Figure 2, item 2) 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 medical gas compartment is level before unit is attached so that when the finish frame assembly is installed, the slide assembly will work properly.

MEDICAL GAS SERVICE CONNECTIONS

Medical gas piping connections should be made before the installation of the drywall material, in accordance with NFPA 99. Single-point termination for each gas type is provided. For double-sided units, there is a termination point for each gas service on each side, which will require the mechanical contractor to join the termination points for the common services (Figure 3). The medical gas piping service location trim plate (flush-mount units) or trim tub (recessed units) should be set to the thickness required for the drywall thickness and/or other wall coverings being used before actual brazing is performed.

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

Connection of conduit runs and wiring to the electrical service console is to be made before drywall installation is performed. Auxiliary service openings are provided in the side framing members of the ArtWorks® rough-in assembly to facilitate the routing of conduits through the side framing members to the electrical service console (Figure 4). Once the above steps are performed, drywall installation may proceed.

Figure 3.

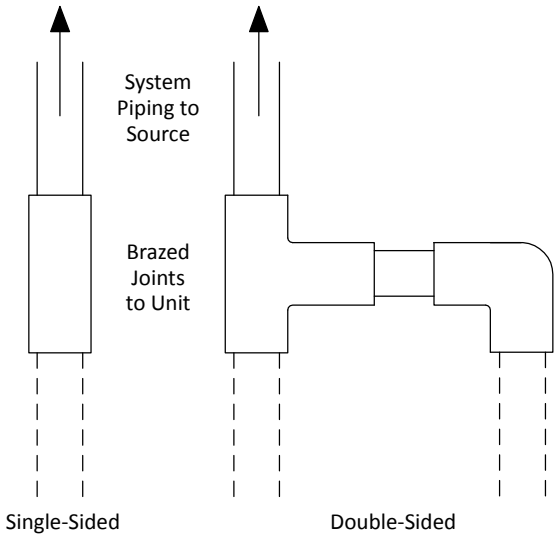
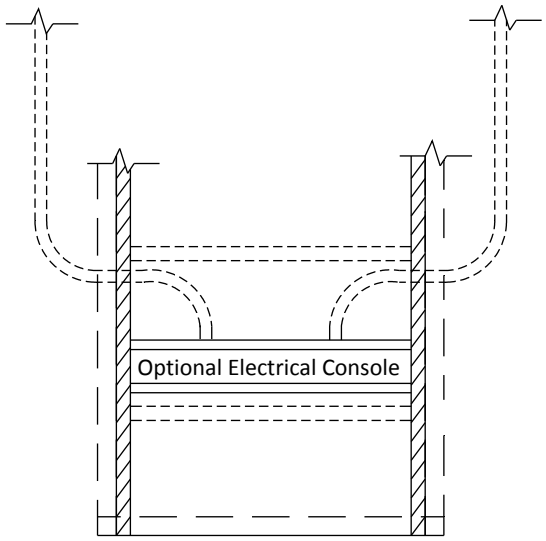


Figure 4.



DRYWALL INSTALLATION

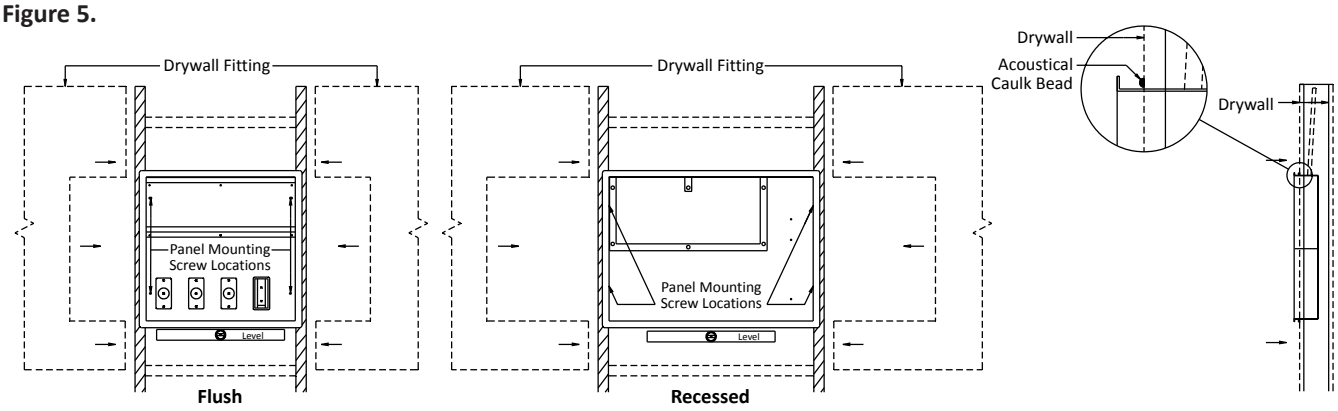
In order to install the drywall behind the perimeter flange of the flush-mount or recessed gas panels, the four panel mounting screws (Figure 5) will need to be loosened to allow the panels to be moved away from the wall to provide clearance for easy placement of the drywall material.

For installation around the medical gas 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.

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 5). 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 5.



INSTALLATION OF THE SLIDE MECHANISM

To install the artwork slide mechanism, loosen the three bolts located on top of the ArtWorks® rough-in near the top perimeter panel trim to allow clearance for the three keyhole slots in the slide mechanism to slip through and behind the mounting plate (Figure 6). Remove the three screws located at the bottom of the slide mechanism mounting location (directly below the location of the bolts that were previously loosened). Locate the sliding mechanism and place the keyhole opening over the three upper bolts and slide down into place. Before tightening the bolts, replace and tighten the three screws that were previously removed, through the mounting plate of the sliding mechanism. Tighten the upper bolts to secure the mechanism to the rough-in assembly. Movement of the mechanism may be required in order to access the bolts for tightening.

Before attachment of the artwork to the slide assembly, check for proper operation of the mechanism, which should travel up and down approximately 11.7" and side-to-side approximately 8.25" (for recessed ArtWorks® models). The slide mechanism should always return to the raised position without the weight of the artwork to counterbalance the support mechanism. Also, ensure that the slide assembly is level (Figure 7). Minor leveling adjustments may be made by loosening the three bolts and the three screws just used to attach the mounting plate, adjusting for level, and retightening.

Figure 6.

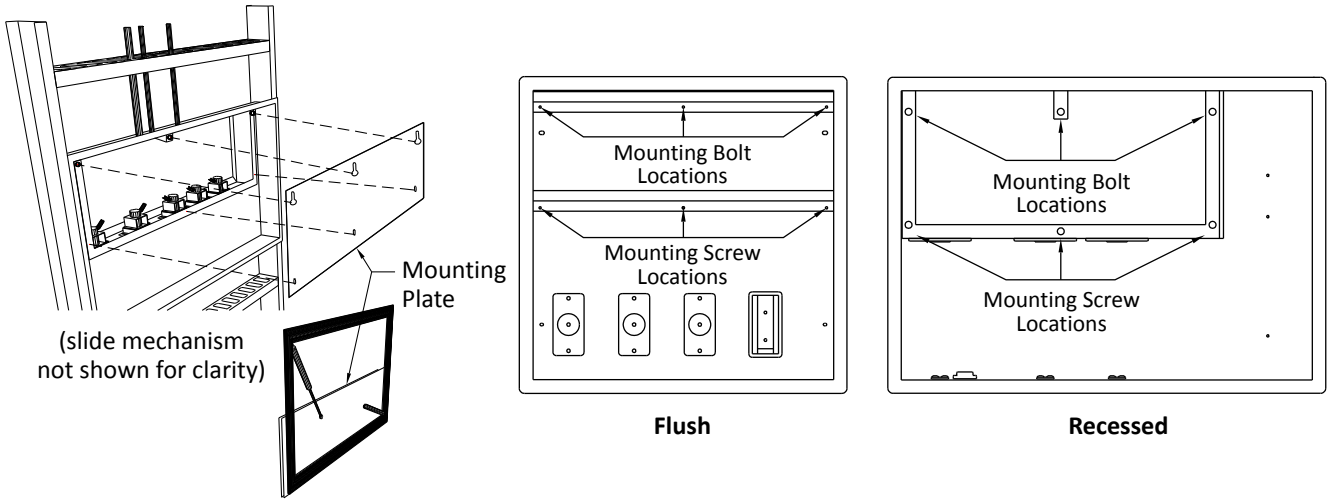
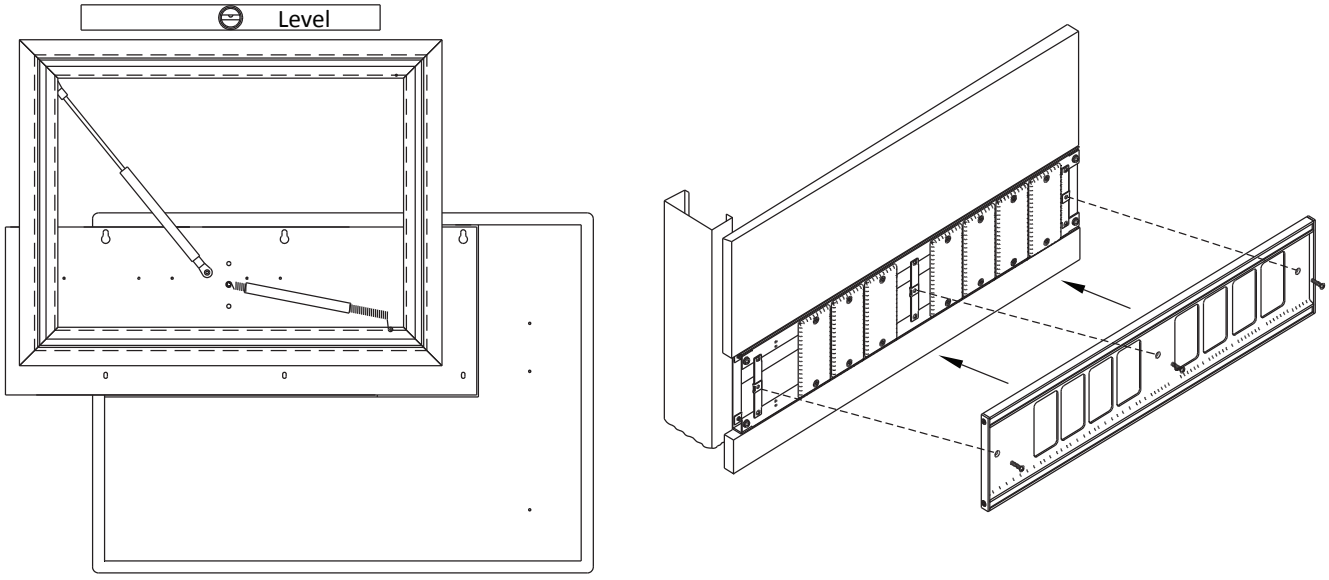


Figure 7.



ARTWORK INSTALLATION

Before consideration of the artwork and frame, the following information should be observed prior to making selections. Also, the use of Plexiglas® glazing is required in order to limit any problems with the weight of the artwork and frame. Three bolts located on the slide assembly are used to attach the spring for a specific weight requirement. The spring is in tension when the artwork is in the lowered position and assists to counterbalance the weight. If the tension 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. Allowable weights for the different models are listed in the following table, with the preset weight utilizing the center of the three bolts. Should the artwork and frame weigh more than the preset rating, the spring can be moved to the bolt above the preset location; if lighter, the spring can be moved to the bolt below the preset location.

The total weight of the artwork, frame, mat and glazing must not exceed the maximum weight listed on the next page or the gas cylinder which supports it in the raised position will not function properly. The weight of the mounting kit has been accounted for in the design of the slide mechanism.

Model	Preset weight for Artwork & Frame*	Minimum Adjustable Weight	Maximum Adjustable Weight
6813/6823-F	3 lbs.	1 to 2 lbs.	3 to 5 lbs.
6815/6825-F	3-1/2 lbs.	1 to 3 lbs.	4 to 6 lbs.
6813/6823-R	3-1/2 lbs.	1 to 3 lbs.	4 to 6 lbs.
6815/6825-R	5-1/2 lbs.	3 to 5 lbs.	6 to 8 lbs.

*These weights are for the artwork, glazing and framing **ONLY**. If these items have already been attached to the mounting plate, weigh the entire assembly and subtract the weight of the mounting plate to determine the weight of the framed artwork. Allow 4.4 lbs. for the 6813/6823-F mounting plate, 5.4 lbs. for the 6815/6825-F and 6813/6823-R mounting plates, and 7 lbs. for the 6815/6825-R mounting plate.

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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