MODULAR
SERVICES COMPANY

SPECIFICATIONS

FLATWALL

SEMI-RECESSED HEADWALL

Model #4500-R Series

PRODUCT DESCRIPTION

Overview

The Flatwall 4500-R Series headwall is a UL-listed, configurable medical gas and electric service assembly employing multiple service rows to conveniently locate medical gas, electrical, and communication provisions. Additionally, this product is available with Modular's exclusive NeoTrack® accessory management system, which provides mounting points that direct the accessories out and away from the headwall to maintain easy access to the services provided within the assembly.

These units are made of single vertical sections which mate to a *Fast-Track Template* via a pin and slot system, which ensures that the frame section is secured tightly inside of the template and aligned properly with the adjacent wall sections.

Fast-Track Templates are provided, which have junction boxes for normal power, emergency power, low-voltage wiring, and lighting circuits, as well as pass-throughs and termination markings for med gas and vacuum service risers. The templates easily install onto king studs (provided by others with a required clear space equal to that of the unit width), which make up the framed opening for the product. Upon installation of the *Fast-Track Template*, all other trades at the jobsite can continue with their work (e.g. MEP installation, insulation, drywall, etc.).

The typical headwall will consist of 2 panels. The lower panel will be pre-installed on the headwall frame prior to delivery, with the upper panel being loose for access to junction boxes and med-gas connections. The mechanical installation of the headwall consists of inserting the frame into the *Fast-Track Template* so that the frame assembly rests in slots of the template. Then, electrical and med-gas connections are made and the upper panel installed.

Options

The Flatwall 4500-R Series headwall is available in widths of 23.5", 28.5" or 33.5" to allow for a wide range of service provisions, depending on the acuity level required. The typical configuration originates at 15" AFF; however, there is an optional 9" AFF origination which provides an additional row of services near the bottom of the headwall. The headwall projects 1.06" off of the finished wall surface on which it is installed.

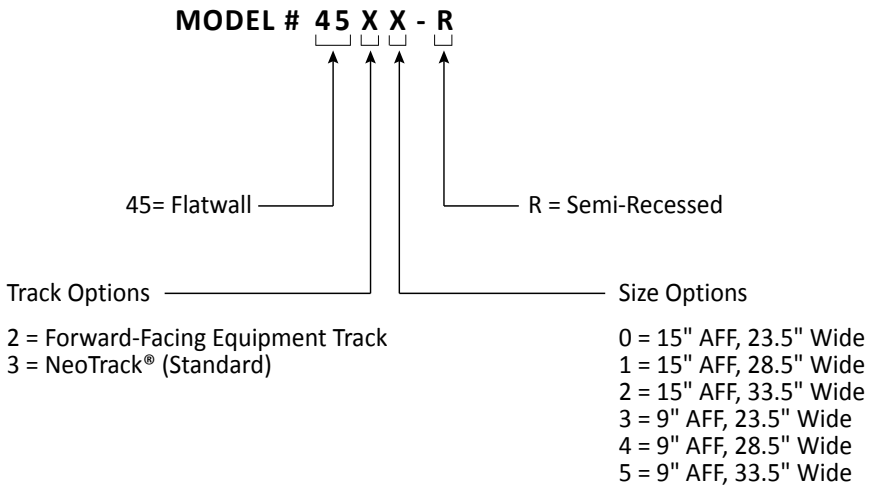
The fascia of the Flatwall 4500-R Series headwall is constructed of precision cut 16 gauge steel. Modular offers 3D laminate selections in standard options from manufacturers such as Renolit, Surface Source International, Omnova, and Ambtra. PET options are also available from Ambtra. If a material with a higher impact resistance is required, Renolit Armouren is available. See table below to find which type is available in each brand. Each of these brands and types of 3D laminate have been tested per ASTM E-84 and assigned a flame spread index (FSI) and a smoke developed index (SDI). Section 803.1.1 of the International Building Code uses the FSI and SDI to group interior finishes into one of three classes; A, B, or C. The results of each test are listed below along with the interior finish classification according to IBC.

Laminate Brand	Type	Class
Renolit	Standard PVC	A
SSI	Standard PVC	A
Omnova	Standard PVC	B
Ambtra	PET	A

Chassis extrusions are powder coated in a neutral "Surf" or "Platinum Grey" finish option to coordinate with the selected laminate.

Monitor channels, with provisions for electric service and data connections, can be provided near the top of the headwall. Additionally, touchdown stations can be added to provide a mounting point for patient charting and are typically located at 26" AFF. Monitor channels and touchdown stations are heavy gauge aluminum extrusion with a clear anodized finish.

Model # Designation



CONSTRUCTION

Structure

The main chassis of the units are constructed of 16-gauge steel and heavy-gauge aluminum.

The monitor channels are heavy-gauge aluminum and are attached to the chassis by means of mechanical fasteners. The vertical equipment management tracks are also heavy gauge aluminum.

MEDICAL GAS SYSTEM

General

Modular Services Company manufactures headwalls in compliance with all applicable sections of the latest edition of NFPA 99 *Health Care Facilities Code*.

Brazer Qualification

All brazers are qualified under the requirements of NFPA 99 5.1.10.11.10 and are licensed ASSE 6010 Medical Gas System Installers.

Medical Gas Manifolds

Medical gas outlets are pre-manifolded to provide a single connection point per gas service using hard-drawn Type L seamless copper tubing per ASTM B819 with fittings that are wrought copper per ASME B16.22 and/or ASME B16.50. Prior to brazing, all tubing and fittings are cleaned in accordance with CGA G4.1. All joints are made with a silver brazing alloy per ANSI/AWS A5.8 with a melting temperature of at least 538°C (1000°F). During brazing a continuous purge is maintained using oil-free dry nitrogen NF per NFPA 99 5.1.10.4.5.

All manifolds undergo the following tests at the factory by Modular Services prior to arrival at the installation site.

1. Initial blowdown test per NFPA 99 5.1.12.2.2
2. Initial pressure test per NFPA 99 5.1.12.2.3
3. Piping purge test per NFPA 99 5.1.12.2.5
4. Standing pressure test per NFPA 99 5.1.12.2.6 or 5.1.12.2.7, except as permitted under 5.1.6.2

The med gas manifolds terminate near the top of the unit, behind the upper panel to provide a convenient point of connection to the med gas pipeline. Tubing ends are securely capped and properly identified. To prevent galvanic corrosion, all copper tubing is protected from contact with dissimilar metals.

Medical Gas Outlets

Outlets are manufacturer's standard brand. Type and style are as called for on the approved submittal drawings.

ELECTRICAL SYSTEMS

Wiring Line Voltage

Each headwall is completely pre-wired with service connections terminating in the junction boxes located behind the upper panel. All wiring is installed in compliance with all applicable sections of the latest edition of NFPA 70 *National Electrical Code* and Underwriters Laboratory headwall requirements (UL category KEZR).

Devices

Hospital-grade power receptacles, ground jacks, switches, etc. are to be installed as indicated on the approved submittal drawings.

Low-Voltage Provisions

Provisions for low-voltage communication devices consist of backboxes or barriered compartments with flex running to junction boxes located behind the upper panel. Communications devices and wiring are to be supplied and installed by others. These devices include nurse call, television, code blue, telephone, monitor jacks, etc.

INSTALLATION

Installation of the product includes receiving, storage, erection, blocking within the partition wall on which the product will be installed, clean-up, touch-up, carton disposal, etc. All necessary installation materials are to be supplied by the installing contractor to include such items as tools, fasteners, caulking and electric lamps not supplied by the manufacturer.

The electrical contractor is responsible for all electrical hook-up at service connection locations. All hard-wired light fixtures are installed, wired and lamped by this contractor. After the installation is complete, the electrical contractor is to test equipment function, including electrical receptacles and grounding, in accordance with NFPA requirements.

The medical gas contractor is responsible for piping and connection of all medical gas services which terminate near the top of each vertical frame section. The medical gas contractor is also responsible for purging, pressure testing, gas identification and system certification in accordance with NFPA 99.

Accessory items are to be installed in accordance with the manufacturer's instructions and under the direction of the hospital.

MODULAR
SERVICES COMPANY
500 E. Britton Rd. • Oklahoma City, OK 73114
Tel: 800.687.0938 • Fax: 405.528.0368
www.modularservices.com
info@modularservices.com

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