Installation Guide
GCX Wall Channel Installation Guide for Seismic and Non-Seismic Applications

Warnings

- Installations must be performed by Qualified Personnel. Failure to follow these Instructions may result in Serious Injury.
- Instructions and the Illustrations covering the specific Instrument to be mounted should be reviewed prior to Installation of Wall Channel.
- It shall be the responsibility of the hospital, its consultants and/or contractors to determine that the wall is adequate to safely mount instrumentation. This includes the selection of appropriate fasteners and the proper installation of the same. In new construction and remodeling work where the wall covering can be entirely or partly removed, a 16 gauge steel stud or a 2 X 6 Doug Fir #1 Stud should be located for the purpose of attaching the wall channel. The following is provided as guideline information only.
- Do not substitute or omit Fasteners.
- Do not position any Mounts or related hardware above a patient.
- Allow clearance on either side of the channel centerline to clear objects such as over-bed lighting, privacy curtains, adjacent walls or columns, door swing arcs, etc. Power and signal outlets should be considered when selecting a channel location. Avoid oxygen, vacuum and air outlets.
- Ensure that the weight being mounted does not exceed the Load Ratings: OSHPD Pre-Approval Compliant: M-Series arms 60lbs (27 kg), VHM arms 40lbs (18 kg) MAX LOAD RATING Over 60lbs (27 kg): Not OSHPD Pre-Approved.
- Although Considerable effort has been made to ensure the safety of the above installation and/or Guidelines, the actual wall construction materials and installation itself is beyond the control of GCX Corporation. Accordingly, GCX Corporation will not be responsible for the failure of any such installations.

OSHPD

The GCX Seismic channel conforms to the California Office of Statewide Health Planning and Development (OSHPD) Seismic Preapproval requirements. The seismic channel and related hardware have been dynamically tested in order to be granted two different OSHPD Anchorage Preapprovals (OPA).

OPA-0079: Preapproval for the GCX 19” Seismic Channel including anchorage of channel to wall surface and the design/configuration of inner wall structure. Four different wall designs (A,B,C,D) are detailed in these Instruction (as well as the preapproval). Inner wall structural design must be verified by Structural Engineer of Record (SEOR), and determined to be adequate as detailed on the preapproval.

OPA-0697: Preapproval for the GCX 19” Seismic Channel including anchorage of channel to wall surface, not including the design/configuration of the inner wall structure. The Structural Engineer of Record (SEOR) must supply all of the inner wall structural details, which are to be designed and verified to support weights and forces in addition to all other loads as detailed on the preapproval.

Locating The Wall Channel

Devices and Wall Mounts may require channel placement outside of these guidelines. Access to device controls, Ergonomic requirements, and the “Range of Motion” that the Wall Mount provides should be considered before mounting the wall channel.

Displays and Patient Monitors: The bottom edge of a 19 inch (48.2 CM) Wall Channel is placed 54 inches (142.2 CM) above the floor, plus or minus 4 inches.

Computer Workstations: When mounting a Computer Workstation with a VHM Series Wall Mount Arm, the bottom edge of a 19 inch (48.2 CM) Wall Channel is placed 37.5 inches (95.2) above the floor. When using M-Series Computer Workstations Wall Mounts, the bottom edge of the 19" (48.2 CM) Wall Channel is placed 26.5 inches (67.3) above the floor.
Seismic Wall Channel

The following Wall Channel Parts Reference Chart lists hardware quantities for the 19" Seismic Wall Channel. Longer Wall Channels are available, and include additional hardware for the additional mounting points.

### Seismic Wall Channel Parts Reference

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>#10 x 2&quot; Oval Head Sheet Metal Screw (OHSMS)</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>#10 x 2&quot; Pan Head Sheet Metal Screw (PHSMS)</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>#12 x 2 3/4&quot; Sheet Metal Screw (SMS)</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>1/4-20 x 3&quot; Pan Head Machine Screw w/Toggle Wings</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Fixed Channel Stop</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>10-32 x 3/8&quot; Flat Head Machine Screw (FHMS)</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Depressible Channel Stop</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Seismic Wall Channel</td>
<td>1</td>
</tr>
</tbody>
</table>

### Installing Seismic Wall Channel

Drill all screw holes in the 16-gauge or Doug Fir anchorage using a 9/64" diameter twist drill bit for the #10 x 2" type "A" sheet metal screws supplied. Do not substitute screws. Install the top, centerline screw first. Level the channel and mark for the remaining 9 screws. The (3) Pan Head Screws are used in the 3 centerline holes. The bottom Fixed Stop, and all others holes use Oval Head Screws. Screws should be started and driven with ball handle drivers or torque limiting screw guns not exceeding 60 inch-pounds (6.7 Nm).

### Channel Placement Recommendation

![Channel Placement Diagram]

See the "Locating the Wall Channel" Section on page 1 for Recommended Mounting Height above floor.

### Hardware Placement

![Hardware Placement Diagram]

Seismic Wall Channel Support Backing Methods

The four anchorage methods illustrated (pages 3 – 4) represent Installations made to comply with California OSHPD requirements for the anchorage and installation of instrument support systems. Load tests were performed on a 10 ft. high wall using methods A, B, C, and D. Compliance with these written instructions is required for the installation of the system.

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**Method-A**

Seismic

- **4" X 1 1/2" 16 Gauge Track** from Floor to Finish Ceiling
- **#10 Sheet Metal Screws** Thru 9/64" Dia. holes or #28 Drill @12" o/c each Side
- **Two 20 Gauge C Studs** from Floor to Finish Ceiling insert between Reg. Wall Studs or add one L. or R. of existing Room Wall Stud to obtain desired location of Channel.
- **5 3/4" Wide X 15 Gauge Steel Plate 24" Long**
- **Connect to Studs with Min. 3 Conn. each side (Top, Bottom, and 12" o/c)**

**Elevation**

**Top Track**

**Bottom Track**

**Plan**

1 3/8" 4" 3 1/2"

**Method-B**

Seismic

- **5 3/4" Wide X 15 Gauge Steel Plate 24" Long**
- **Install One #10 SMS on exact Centerline of Track prior to Gypsum Board cover in order to locate. Same for Installation of Channel as Dimensions Are Critical**
- **19" GCX Channel**

**Elevation**

**Top Track**

**Bottom Track**

**Plan**

1 3/8" 5 3/4" 1/4"

**Connect to Studs with Min. 3 Conn. each side (Top, Bottom, and 12" o/c)**

**For Distance of Support Backing Bottom to Floor**

**Locating the Wall Channel** section on page 1 of this Guide.
**METHODS OF SUPPORT BACKING**

### Method-C  
**Seismic**

- **Plan**:
  - Wall Channel May be Placed at any Point on Anchorage Between Studs.
  - 16" Reg. Wall Studs (20 Gauge Min.)
  - 18" X 24" 14 Gauge Steel Plate

- **Elevation**:
  - GCX Channel
  - Gypsum Board
  - Top Track
  - #10 Sheet Metal Screws Thru 9/64" Dia. Holes or # 28 Drill @ 12" o/c ea. side

- Install one #10 SMS on exact Centerline of Track prior to Gypsum Board cover In order to locate same for Installation of Channel as **Dimensions Are Critical**

- Two 20 Gauge C Studs from Floor to Finish Ceiling insert between Reg. Wall Studs or add one L. or R. of existing Wall Stud layout to obtain desired location of Channel.

### Method-D  
**Seismic**

- **Plan**:
  - Optional Cross Brace
  - 16"

- **Elevation**:
  - GCX Channel
  - Gypsum Board
  - Top Plate
  - 2 X 4 Studs
  - 2 X 6 Doug Fir # 1 from Floor to Finish Ceiling locate at any Points between Studs

- Install One #10 SMS On Exact Centerline Of Track Prior To Gypsum Board Cover In Order to locate. Same for Installation of Channel as **Dimensions Are Critical**

- 19" GCX Channel
  - For locating and recommended Mounting Heights See “Locating the Wall Channel” section on page 1 of this Guide.
  - 18" Wide X 14 Gauge Steel Plate 24" Long

- 74"  

- 50"  
  - For Distance of Support Backing Bottom to Floor

- 2 X 4 Studs

- Bottom Plate

- Channel not shown this view
Standard Wall Channel

The following Wall Channel Parts Reference Chart lists hardware quantities for 19” Standard Wall Channel. Longer Wall Channels are available, and include additional hardware to compensate for additional mounting points.

Standard Wall Channel Part Reference

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
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<tbody>
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<td>#12 x 2 3/4” Sheet Metal Screw (SMS)</td>
<td>4</td>
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<td>4</td>
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<tr>
<td>3</td>
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</tr>
<tr>
<td>6</td>
<td>Standard Wall Channel</td>
<td>1</td>
</tr>
</tbody>
</table>

Installing the Standard Wall Channel

Drill 11/64” (17 mm) diameter holes for #12 X 2-3/4” high tensile Philips Head Screws. Install the top screw and level the channel, then mark and drill the other holes. Screws should be started and driven with ball handle drivers or torque limiting screw guns not exceeding 60 inch-pounds. Screws must pass through Channel, Drywall, and fully engage with Wood Stud or 16 Guage Steel Stud.

Drill a 3/4” (19.5 mm) diameter holes for the 1/4-20 x 3” Pan Head Machine Screws with Toggle Wings. Toggle Wings should be used if Steel Wall Stud is less than 16 Gauge in thickness. **Installation Note:** Seismic Wall Channel can be installed the same as Standard Wall Channel when OSHPD approval is not required.

**Channel Placement Recommendation**

**Hardware Placement**

See the “Locating the Wall Channel” Section on page 1 for Recommended Mounting Height above floor.
This Anchorage will allow for a Quick and Simple installation of the Standard Wall Channel. 16 Gauge Steel will prevent the material from extruding up the Shank of the Screw (Stripping). 11/64” Diameter holes are required for #12 X 2-3/4” High Tensile, Phillips Head Screws (4) installed down the Centerline. (Non-Seismic Applications).

A second Track can be used for Back to Back Installations. A 2” X 4” Wood Stud may be used if allowed by Local Building Codes.
Drywall (Gypsum Board) over 16 Gauge Sheet Metal or Wood Studs:
Locate the exact centerline of the stud. Drive a #4 finishing nail through the drywall to contact the stud. Withdraw and drive again 3/8” (9.5 mm) right and left until the edges of the stud have been located and hence the centerline determined. The wall channel's 4 inch (10.2 CM) width will cover these exploratory holes.
Drill 11/64” (17 mm) diameter holes for #12 X 2-3/4” high tensile Philips head screws in a single 16 gauge stud through Channel Centerline, (4 places). Install the top screw and level the channel, then mark and drill the other holes.

Drywall (Gypsum Board) over Sheet Metal Studs less than 16 Gauge:
Locate the Centerline of the stud per the above instructions. Use 1/4-20 X 3” Pan Head Machine Screws and Toggle Wings.
Drill 3/4” (19.5 mm) diameter holes with a sharp speed bore or twist drill (requires pilot hole). Note that the round stop at the bottom of the channel goes over the shank of the bottom screw. Insert screws through Wall Channel holes then affix the toggle wings to the screws. Insert toggle wings into previously drilled holes. Use a level to make sure the channel is vertical prior to final seating of the screws.

Plaster Coat over Expanded Metal Lath on Steel Studs, Hollow Tile, Hollow Block:
Drill 3/4” (19.5 mm) holes. Broach the holes in hard materials to allow for the toggle wing to pass through. Insert screws through Wall Channel holes then affix the toggle wings to the screws. Insert toggle wings into previously drilled holes. Use a level to make sure the channel is vertical prior to final seating of the screws.

Concrete Walls:
Refer to Structural Engineer.

Through Wall, Back to Back Installations:
Sufficient length 1/4-20 machine screws, nuts, washers and/or back plates must be obtained to mount the channel by drilling all the way through the thin partition wall. A Portalign drill fixture is recommended for this procedure.

Special Applications:
Channels can be attached to a GCX 4” X 4” (10.2 x 10.2 CM), 1/8” (3.2 mm) wall aluminum support column or certain mullions, etc.. Contact GCX to discuss solutions to wall mounting problems for any situation not covered by these guidelines.