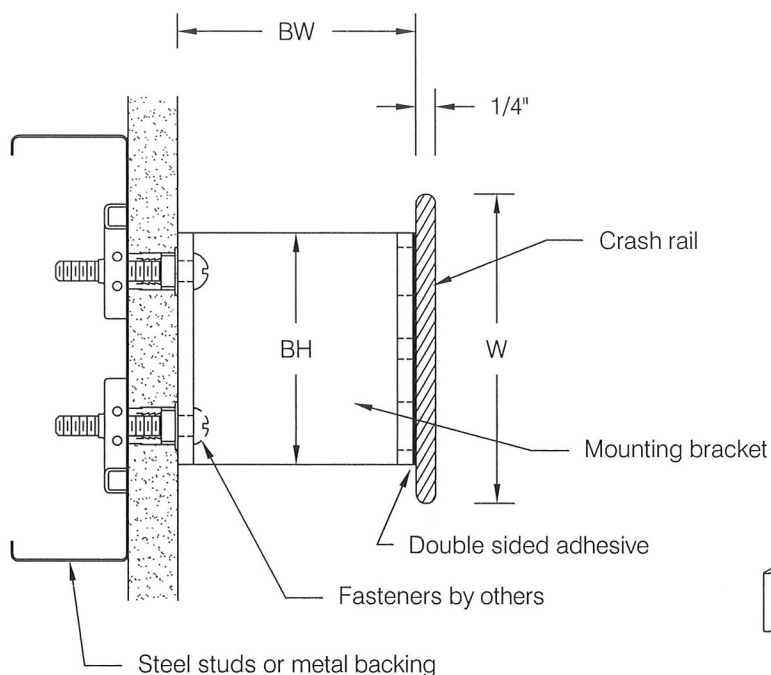


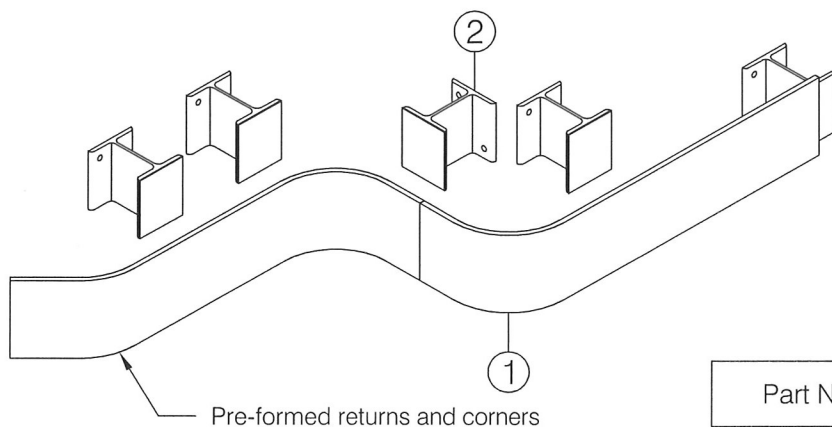
CRT-100 Series Steri-Guard™



This installation instruction is applicable to:

CRAT-100 Aluminum crash rail
 CRST-100 Stainless steel crash rail

In multiple rail widths (W), bracket heights (BH), and bracket widths (BW)



Mounting Brackets

Part Number	Bracket Width "BW"	Bracket Height "BH"
CRAT-104-2.5-403	1 1/2"	2 1/2"
CRAT-104-3.0-403	1 1/2"	3"
CRAT-104-5.0-403	1 1/2"	5"
CRAT-105-2.5-403	2"	2 1/2"
CRAT-105-3.0-403	2"	3"
CRAT-105-5.0-403	2"	5"
CRAT-106-2.5-403	3"	2 1/2"
CRAT-106-3.0-403	3"	3"
CRAT-106-5.0-403	3"	5"

Component Part Numbers:

- 1) CRST-100 stainless steel crash rail or CRAT-100 aluminum crash rail
- 2) CRAT-104, CRAT-105 or CRAT-106 bracket, dimensions as noted in schedule
- 3) VHB Adhesive pad

Note: bracket part numbers include adhesive pad for mounting brackets to the crash rail

Caution: Steps 7, 8, 9, and 10 are Critical Please Read!!!

- Step 1:** Determine top of crash rail height and obtain the bracket offset from table in **fig 1a**. Snap a chalk line at the desired overall height minus the bracket offset, see **fig 1b**.
- Important:** Store material in a clean dry place where the temperature is maintained above 50°F (10°C). Walls and rooms should be maintained at a minimum of 65°F (18°C) for at least 48 hours prior to installation. Acclimate materials to normal building conditions for at least 24 hours before cutting and installing.
- Step 2:** All crash rail is pre-cut, and pre-formed at the factory and should require no further modification. Contact factory if it is necessary to make adjustments.
- Step 3:** Layout crash rail according to location drawings provided with shipment. The location drawings indicate a number and letter "identifier" for each section of material. The identifier is stamped or otherwise marked on the rear surface of each section of crash rail, see **fig 2b**. Remove peel-off protective film from the rear surface of crash rails.
Note: On aluminum rails the rear surface is opposite the brushed finish, see **fig 2a**.
- Step 4:** Locate brackets on the wall using the chalk line provided in **step 1** as a height indicator. Brackets should be spaced at 32" on center. Bracket spacing may be varied to obtain even spacing and should not be allowed to exceed 38". The flange of the bracket with larger access holes must face outward, see **fig 3**. Hold bracket temporarily in place and mark mounting hole locations on wall construction through holes in bracket, see **fig 3**.
- Important:** A bracket must be located at each butt joint. Measure carefully to ensure all butt joints will be centered over a bracket. Use bracket location at butt joints to assist in calculating center-to-center spacing of adjacent brackets. Even spacing may not be practical in all situations, see **fig 4**.
- Step 5:** Pre-drill wall construction to receive the suggested hardware. Mount brackets to wall using the hardware appropriate to the construction.
Suggested hardware:
- Drywall: Toggler® brand toggle bolts
 - Masonry: Plastic Alligator® insert
- Step 6:** Check bracket alignment by stretching a line across the outward face of the brackets along each section of rail. Brackets that are out of line should be brought into alignment by shimming the affected bracket.
- Note:** Any condition that requires more than light finger pressure to mate crash rail to bracket should be shimmed or otherwise repaired to bring the affected bracket flush with the rail.
- Step 7:** For best results, scrub the exposed face of each bracket with a solvent saturated mild abrasive pad (e.g. Scotchbrite Brand surface preparation products) then wipe the surface with a clean cloth to remove solvent and contaminants. Isopropyl alcohol (91%) used at full strength or diluted with no more than an equal volume of water is the recommended solvent. Apply VHB adhesive pads to each bracket by removing the non-extended paper liner and pressing the adhesive against the exposed face of the bracket, leaving the extended liner in place and facing outward.
- Important:** Bond strength is dependent on the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact and therefore greater bond strength. After applying the adhesive, wipe down the entire surface area of the adhesive with a very firm squeegee or rigid roller. Application of the adhesive tape should take place at temperatures recommended in **step 1**. Tape application at temperatures below 50°F is not recommended.
- Step 8:** Clean the rear surface of the crash rail using isopropyl alcohol as described in **step 7**, at all locations that will contact a bracket.
- Note:** Test fitting of material by holding it in place should be done during this step, prior to removal of the adhesive liner in **step 9**, to ensure brackets and rail align properly.
- Step 9:** Remove the extended liner from only those brackets required for the section of rail being installed. Do not peel off additional liners and leave them exposed to dust and debris. Using Pawling optional alignment tool see **fig 5**, or similar field constructed fixture, align crash rail at proper height and seat firmly against exposed adhesive. Alignment tool should be used in enough locations to hold crash rail at proper height. When installing rail with a corner condition, use an additional alignment tool around the corner to ensure the rail is held upright.
- Important:** When installing a rail that incorporates a corner bend and brackets on adjoining perpendicular walls, use caution to ensure rail makes contact on both sides of the corner simultaneously.
- Step 10:** Seat the rail firmly against all brackets. Clamp the rail to the bracket at all bracket locations, moderate clamp pressure such as developed by a squeeze clamp is sufficient. Leave the clamps in place for no less than 30 minutes. If possible, allow the clamps to remain in place over night. While the clamps can be removed after 30 minutes, ultimate bond strength develops in approximately 72 hours.
- Step 11:** Remove peel-off protective film from front surface of crash rail.

Guidelines For Field Measurement

Step 1: CRT-100 series crash rail is manufactured in accordance with field dimensions provided by the customer. All crash rail is pre-cut and pre-formed at the factory and should require no further modification. Accuracy of field measurements is crucial to the success of final installation. Adhere to the following guidelines when field measuring for CRT-100 series crash rail.

Step 2: All dimensions must represent actual field conditions from wall to wall, wall to obstruction, or obstruction to obstruction as noted below and pictured in the figures on this page. Do not adjust field measurements for clearance purposes. The factory will adjust dimensions to allow a 1" nominal clearance at all wall returns.

Important: All dimensions must be taken at the intended height of installation, see **fig C**. All dimensions must be rounded up to the nearest 1/16".

Step 3: The figures below represent situations commonly encountered when field measuring. These figures are not intended to represent all possible field conditions. Use these figures as a guideline for measuring to door openings, from corner to corner, from obstruction to obstruction, or for any combination of the above.

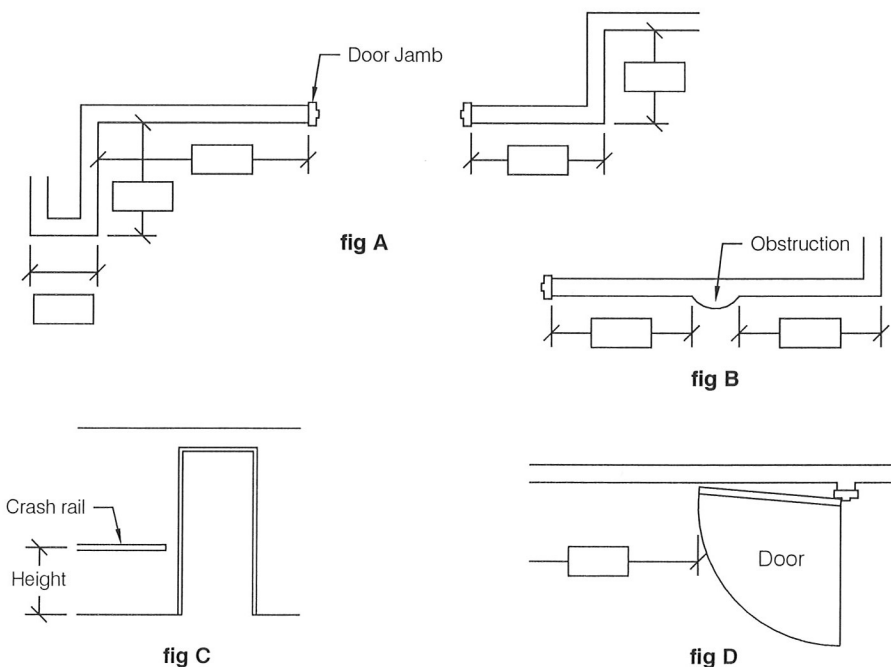
Important: Some dimensional limitations exist. For example, the shortest length of crash rail is limited by the dimensional combination of two brackets and two wall return bends. It is best to supply dimensions for all areas where crash rail is desired and allow the factory to advise if any feasibility issues exist.

Fig A: Dimensions taken from door jambs to corners and from corners to corners.

Fig B: Dimensions taken to an obstruction that is intended to interrupt the crash rail.

Fig C: Dimensions taken at the proper height above the floor.

Fig D: Dimensions taken at a condition where the crash rail is to be terminated short of the available wall space.



CRT-100 Series Steri-Guard Installation Instructions

Bracket Offset

Rail Width	Offset
3"	1/4"
4"	1/2"
6"	1/2"

fig 1a

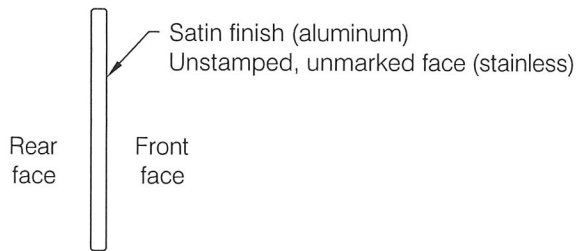


fig 2a

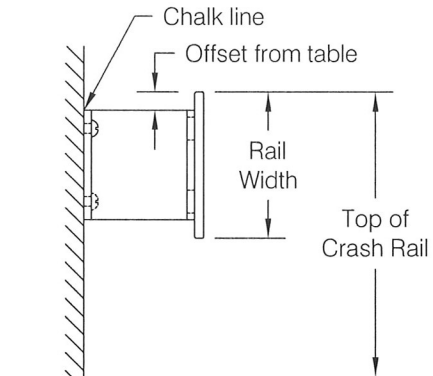


fig 1b

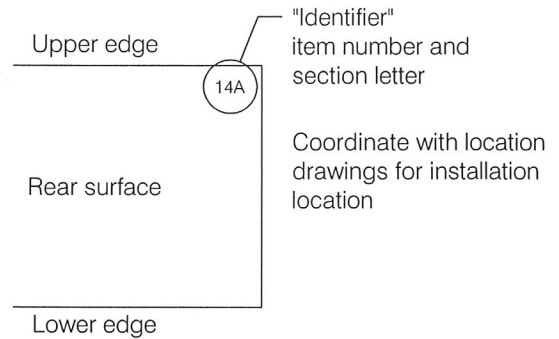


fig 2b

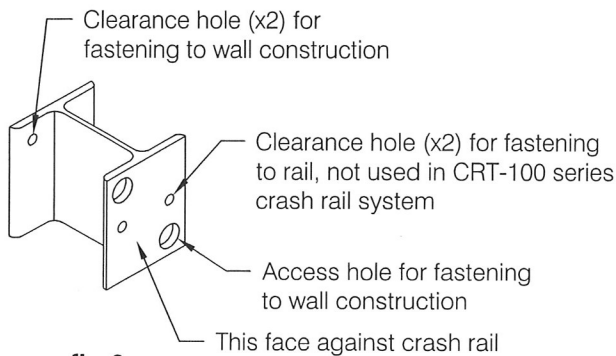


fig 3

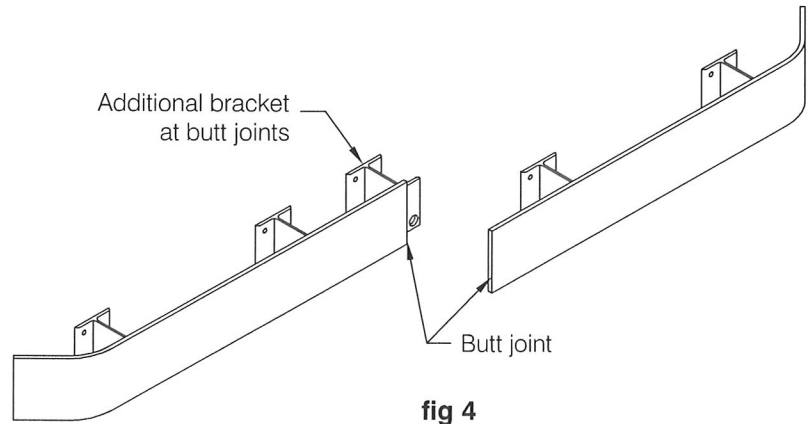
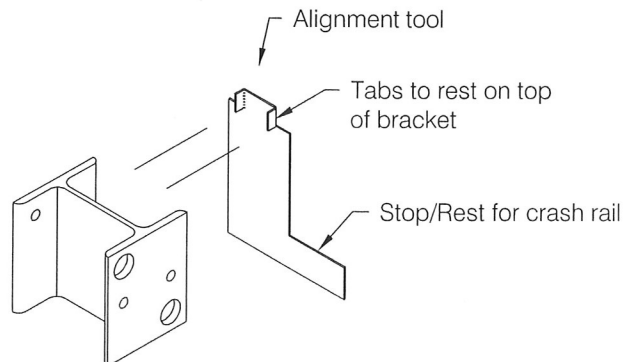


fig 4



Clamp alignment tool to bracket while installing crash rail

fig 5