



## **HRX-812 INSTALLATION PROCEDURE**

1. Choose appropriate elevation. (See appendix A1, A2, OR A3)
2. The first step of the installation process is to hang two “Down-Leg” brackets (**not provided**) for each section of rail from the ceiling structure down to where the top of the rail height will be. The material for the brackets and down legs is typically Unistrut Telespar or similar load bearing channel. (**Check with architectural drawings to see if any are specified.**) The down leg (**not provided**) should be 1  $\frac{3}{4}$ ” x 1  $\frac{3}{4}$ ” O.D. square channel and will slide into Harvey’s Hanger Brackets (HRX-HGRBRKT) that mount directly to the top of the rail. It is important to make certain that the hanging brackets do not align with the rail joints which will be every 12’. It is imperative to the success of the installation to make certain that the hanging brackets are all hung straight, level and vertically true in order to ensure proper alignment of the rail sections. It is recommended that a stringer or laser level be used to ensure the rail is level and straight.
3. Attach the Hanger Brackets (HRX-HGRBRKT) to the down legs (not supplied, recommend Unistrut). (See appendix B).
4. Lay out all the sections of rail, end to end with the opening facing up on the ground below where it is to be hung. The rail connection brackets (HRX-CKT) have already been attached to the rail at the factory (See appendix C). The brackets should be attached to both ends of each section, except for the two extreme ends which will consist of only one side having connection brackets.
5. The connection brackets will need to be moved to the end of the rail. Loosen the 5/16”-18 x  $\frac{1}{2}$ ” bolts and slide the bracket along the slot until the edge of the bracket is 1/4” away from the edge of the rail. Tighten fully and repeat on opposite side.
6. Affix the alignment pins with the provided adhesive on the bottom of the rail. Apply an ample amount of the provided adhesive to both the pins and the round slots on the bottom of the rail (See appendix C). Slide the pins in half way while simultaneously rotating them to ensure even coverage. Allow adhesive to set up. (Heat will speed drying time.)  
NOTE: Decide which end section you are going to hang first and start at the end of that section that will be connected to another section. Alignment pins will be placed in the similar end of each section, so that there are one set of alignment pins per joint.
7. Flip over all sections of the rail.

## **CONNECTING THE RAIL TO SPIRAL DUCT**

8. Determine if the exhaust duct is going to be connected to a central take-off or at the end of the rail (See general contractor's blueprints). If it is going to be attached at the end of the rail skip to step 9. If it is going to be attached at a centrally located take-off follow step 8A.

8-A. Consult the plans to determine the exact location(s) along the rail where the take-off(s) will be installed. Use the take-off as a template by tracing the inside of the opening to mark the slot to be cut on the top of the rail. Use a circular saw or sawzall to cut out the slot. Line the flange of the take-off with a bead of silicone and place it over the slot. Drill six evenly spaced holes through the flange of the take-off into the rail using a 1/8" drill bit. Use the 3/16" self tapping screws (not supplied) to secure the take-off to the rail.

9. Affix the alignment pins on the top of the rail (See appendix C). These pins will be placed in the same ends of rail that the bottom alignment pins were affixed to. These pins will also be affixed in the same manner as the pins on the bottom of the rail, using the provided adhesive.

10. Remove one of the top connection brackets (HRX-CKT) and slide four 3/8" T-nuts into the slot on the top of each section of rail for the two Hanger Brackets (See appendix D).

11. Reattach the rail connection brackets (HRX-CKT) to the top of the rail (See Appendix C). The top rail connection brackets will be attached to all the same ends of the sections that the bottom rail connection brackets are attached. Slide the 5/16" Weld-nut into the slot on the top of the rail. Place the bracket over the nut and loosely attach it with the provided 5/16"- 16 x 3/4" bolt and 5/16" flat washer. Slide the bracket along the slot so that the edge of the bracket is 1/4" away from the edge of the rail. Tighten fully and repeat.

12. Make certain that the ends of each section of rail are free of dirt, oil and/or burrs, and then attach the self adhering rubber gaskets (provided) to the ends of rail that have the alignment pins.

13. Attach the rubber stop kit (HRX-STP) at the end of the rail which you intend to hang first (See appendix D). In order to attach the stop kit you must place the rubber stoppers, centered, on the top of the wheel tracks two inches from the end of the rail. For trolleys with hose reels (HRX-TRL-RHR), position the rubber stop kit (HRX-STP) two feet from the end. Use the holes in the stoppers as a template to mark where you need to drill. Once the locations are marked, drill the holes with a 3/8" drill bit. After the holes have been drilled, attached the stops, one stop on the top and one on the bottom on both sides. Each stop fastens to the rail with the provided fasteners: (1) 3/8"-16 x 2 1/2" bolt, (2) 3/8" flat washers and (1) 3/8" locknut.

## **HANGING THE RAIL**

14. Raise the rail into place and attach the Hanger Brackets to the rail by fastening the 3/8" – 16 x 3/4" bolts and 3/8 flat washers to the four 3/8" T-Nuts which were installed in Step 10. Verify that the section you have hung is straight and level before moving on to the next step.

15. Lift the next section into place. Slide the rail onto the pins, the end of the rail may require to be flexed in order to line up the holes with the pins (the use of a strap wrench or large c-clamp may be helpful in accomplishing this). Place the 5/16"-18 x 1-1/2" bolt (2) 5/16" flat washers and 5/16" locknut through the connection brackets and tighten them. Now finish hanging the section, using the same procedure as in step 14. Verify that every section of rail hung is straight and level before moving onto the next section of rail

16. Repeat step 15 until you are finished hanging all sections of rail.

17. Once all sections of rail are hung, determine if knee bracing is required to assure side to side stability of rail. Refer to "Appendix B" for knee bracing recommendations.

18. Insert rubber into slots (teeth facing the center) on either side of bottom opening of the rail sections (see Appendix C) by starting with the rubber flush at one end and pressing on it firmly using your thumbs or by using a C Channel Vise Clamp for the first foot. Upon request Harvey will supply a rubber insertion tool to help with the installation of the rubber seal. Use the rubber insertion tool to insert the rubber seal. Trim off excess rubber so that it is flush with the other end of the duct rail. (Using soapy water or spraying Armor All on the portion of the rubber that inserts into the rail will ease this process.)

19. Slide the trolley assemblies onto the rail end without the stop kit and attach the hoses with the provided hose clamps.

20. Attach the other stop kit (HRX-STP) using the same procedure explained in step 13.

21. If the take-off is going to be attached at the end follow step 21-A. If the take off was previously attached centrally proceed to step 22.

21-A. In order to attach the end cap (HRX-ECP) to the rail you must first slide the end cap with the opening into the end of the rail nearest the blower. Before sliding the cap all the way in, it is necessary to put a bead of silicone around the cap where it is going to contact the rail. Rotate the cap so that the point is aligned with the rubber (See Appendix E). Using a 1/8" drill bit drill two holes on the top half of the rail and two holes on the bottom half of the rail being certain to drill through the center of the flange that extends inside the rail. Secure the cap using four 3/16" self-tapping screws (not supplied). Attach the opposing end cap (HRX-ECP) at the opposite end of the rail using the same technique as described above.

22. Attach end caps (HRX-ECP) by applying a bead of silicone around the end cap where it is going to make contact with the rail end and proceed to slide the end caps into the ends of the rail. Using a 1/8" drill bit, drill two holes in the top half of the rail and two holes in the bottom half of the rail, making sure to drill through the center of the flange that extends inside the rail. Secure the cap using four 3/16" self tapping screws (not supplied).

23. Install Spiral Duct and Blower as shown on plans.