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NON-CORRUGATED DUCT INSTALLATION INSTRUCTIONS

WARNING

- A.) APPLY DUCT ONLY ON HORIZONTAL FLOOR INSTALLATIONS, UP TO A GRAIN DEPTH OF 30' MAXIMUM. **DO NOT USE IN HOPPER BOTTOM APPLICATIONS.**
- B.) THE MAXIMUM GRAIN DEPTH RECOMMENDATION IS FOR STATIC LOADS AND FOR FUNNEL FLOW UNLOADING. THE RECOMMENDATION ON GRAIN DEPTH DOES NOT INCLUDE PROVISIONS FOR THE DYNAMIC LOAD FROM FROZEN OR BRIDGING GRAIN DROPPING ON THE DUCT OR FOR THE DYNAMIC LOADS ENCOUNTERED IN PLUG FLOW UNLOADING. **DO NOT USE THE DUCT WHEN PLUG FLOW UNLOADING WILL OCCUR.**

Note: Read all directions and study illustration carefully before installing.

SHIPPING

Aeration Duct is shipped in 4ft lengths and nested (less reinforcement rings).

ASSEMBLY OF FOUR FOOT LONG DUCT PIECE

Step 1. Make seam connection on Aeration Duct.

The two components to be individually assembled are the solid and perforated duct. Place the aeration duct on a horizontal surface and hook the two lock seams together as shown in **Figure 1**. Once the seams have been locked together the duct will be formed.

Step 2. Place Reinforcement Rings on Aeration Duct.

The reinforcement rings are placed around the aeration duct to lock the seam connection in place and retain the duct in its cylindrical shape. The duct is tapered slightly, thus producing a male and female end. The male end is marked by the word "**MALE**" stamped on the duct. The reinforcement rings must be slipped into position by starting them over the smaller "**MALE**" end. Position the foot of the reinforcing ring centered on the duct seam. The duct is stamped with locators for the reinforcing rings. Position each reinforcement ring between an arrow locator set as illustrated in **Figure 2** for 12" aeration duct and **Figure 3** for 18" aeration duct. **IMPORTANT: Install rings for 18" duct in color sequence shown in Figure 3.**

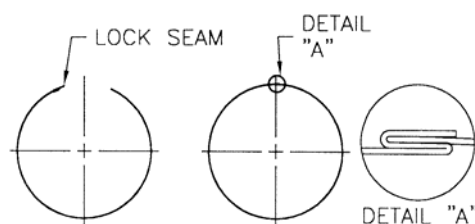


Figure 1. Seam Connection

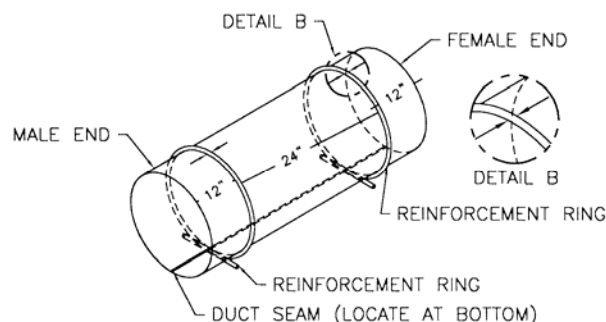


Figure 2. Reinforcement Ring Placement for 12" Duct

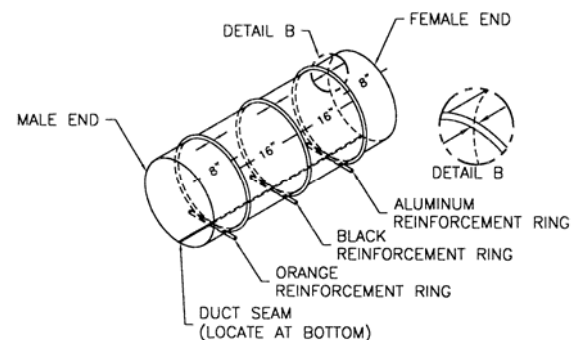


Figure 3. Reinforcement Ring Placement for 18" Duct

INSTALLING AERATION SYSTEM

Step 1. Install Inlet Adaptor

Select the desired location where the aeration duct is to go through the wall. **WARNING: Contact the storage structure manufacturer and reinforce the wall to their specifications.** The hole is located such that the base of the duct, with the reinforcing rings in place, will be supported by the floor, and the Caldwell Fan when slipped over the "MALE" end of the wall adaptor will be supported on its legs. See **Figure 4** for 12" wall adaptor placement or **Figure 5** for 18" wall adaptor placement. **WARNING:** when galvanized material is cut with a cutting torch or when welded, the possibility of developing toxic fumes will exist. **Provide adequate ventilation and respiratory protection when using a cutting torch or welding on galvanized material.**

A. Placement of 12" Wall Adaptor

Cut a hole 12 1/2" in diameter through the wall, as shown. Keep the end of the tube marked "INSIDE" to the inside of the structure and the "MALE" end outside the structure. The inlet adaptor should be placed through the wall such that the flange is inside the structure. Refer to **Figure 4** for typical installation. The adaptor flange can be either bolted or welded to the wall and sealed with a sealing compound (not furnished). It is recommended that the solid endcap be placed over the male end of the inlet adaptor to hold the inlet tube in its cylindrical shape when bolting or welding the inlet adaptor flange to the wall.

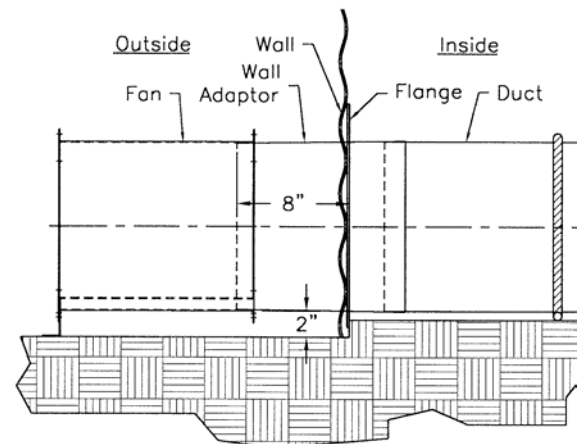


Figure 4. 12" Wall Inlet Adaptor Installation.

B. Placement of 18" Wall Adaptor

Cut a hole 18 9/32" in diameter through the wall, as shown. Keep the end of the tube marked "INSIDE" to the inside of the structure and the "MALE" end outside the structure. The inlet adaptor should be placed through the wall such that the flange is outside the structure. Refer to **Figure 5** for typical installation. The adaptor flange can be either bolted or welded to the wall and sealed with a sealing compound (not furnished). It is recommended that the solid endcap be placed over the male end of the inlet adaptor to hold the inlet tube in its cylindrical shape when bolting or welding the inlet adaptor flange to the wall.

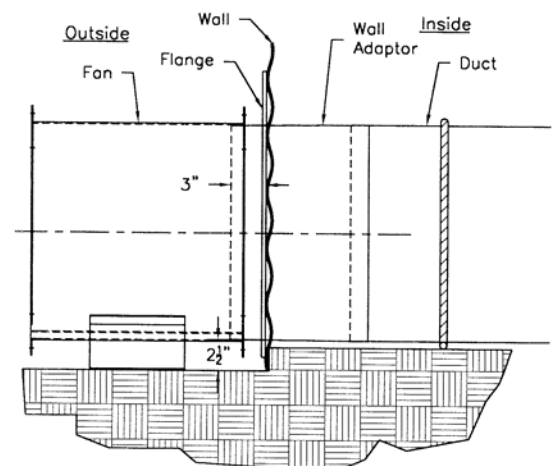


Figure 5. 18" Wall Inlet Adaptor Installation.

Step 2. Layout Aeration Duct

The formed duct is connected together by slipping the "MALE" end of one duct into the "FEMALE" end of the other duct overlapping the pieces 1 1/2", as shown in **Figure 7**. Keeping the duct seam at the bottom position the reinforcing rings such that the full length of the foot of each ring sets squarely on the floor (2 rings on 12" duct, 3 rings on 18" ducts). Using this procedure, start at the inlet adaptor and place the required number of solid duct then follow with the required number of perforated duct. Refer to **Figure 6** for a simple method of locking duct joints together using the two (#12x3/4") self-drilling sheet metal screws provided. Position the sheet metal screws on each side of the duct 180° from each other as shown in **Figure 6**. To complete installation, place the solid and perforated endcaps on the duct as illustrated in **Figure 7**. Secure the perforated endcap to the duct with #12x3/4" sheet metal screws (not provided).

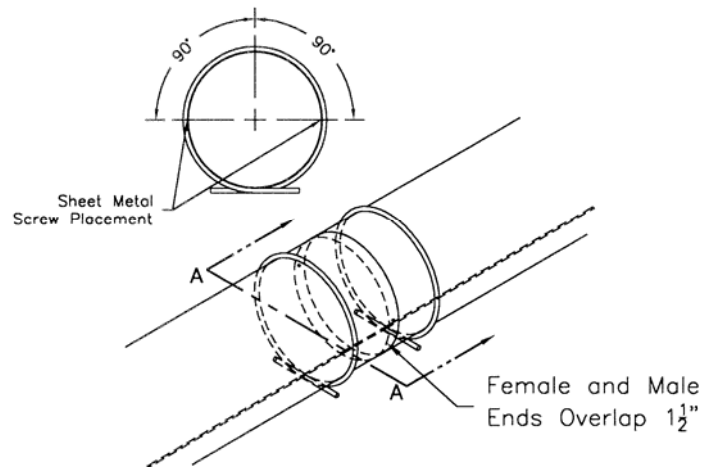


Figure 6. Locking Duct Joints

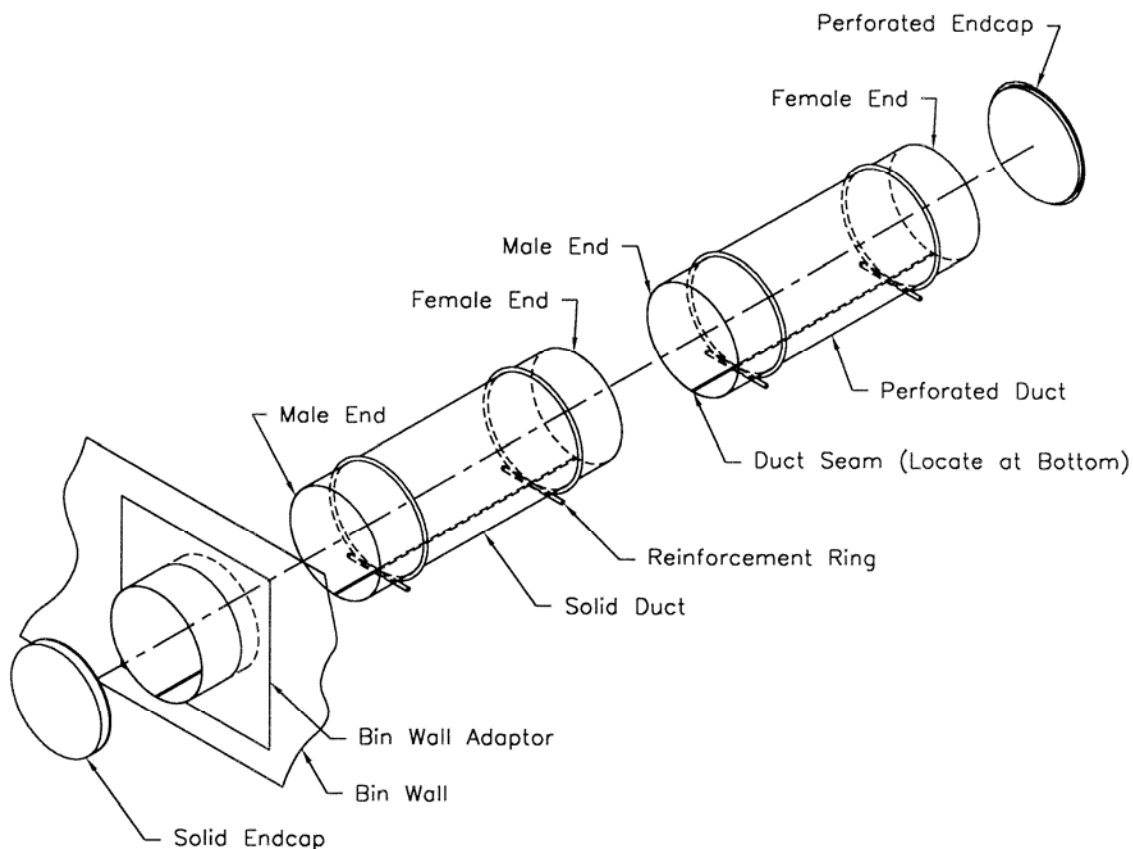


Figure 7. Basic Duct Run Layout

PRODUCT SERVICE: Our top priority is to assure customer satisfaction on all Caldwell products. If a dealer requires assistance from Caldwell, contact our Service Department. The dealer purchasing a product from Caldwell will be responsible for the installation, operation, and service in accordance with Caldwell Service Policy. The dealer will also be responsible for all Standard Limited Warranty procedures in accordance with Caldwell Service Policy.

SERVICE POLICY

CALDWELL STANDARD LIMITED WARRANTY: DEALERS HAVE THE RESPONSIBILITY OF CALLING TO THE ATTENTION OF THEIR CUSTOMERS THE FOLLOWING LIMITED WARRANTY, PRIOR TO ACCEPTANCE OF AN ORDER FROM THE CUSTOMER FOR ANY CALDWELL PRODUCTS.

Caldwell warrants to the purchaser for use that if any part of the product is proven to be defective in material or workmanship with **2 years** from date of original invoice from factory, and Caldwell is notified within 15 days after such defect is discovered, Caldwell, will (at company option) either replace or repair said part. This standard limited warranty does not apply to damage resulting from misuse, neglect, material wear, accident or improper installation or maintenance. Said part will not be considered defective if it substantially fulfills performance specifications. **THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESSED OR IMPLIED.** Caldwell neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part and will not be liable for incidental or consequential damages. **THE REMEDIES STATED HEREIN SHALL BE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THIS STANDARD LIMITED WARRANTY. CLAIMS UNDER THIS STANDARD LIMITED WARRANTY SHALL BE HANDLED UNDER THE STANDARD SERVICE POLICY.** Caldwell will not be responsible for any charges incurred in repairing or servicing any Caldwell products except as such repairs are made at Caldwell or by Caldwell Field Service Personnel or as approved in writing from Caldwell Customer Service.

IN WARRANTY REPLACEMENT: The Caldwell Standard Limited Warranty Policy will cover any defective part of the product covered by the Standard Limited Warranty. Equipment involved in a warranty claim under the above Standard Limited Warranty shall have the ORIGINAL WARRANTY REGISTRATION CARD on file in Kearney, Nebraska, and have been properly installed, maintained and operated according to the instructions provided by Caldwell.

WARRANTY CLAIM PROCEDURES: When a part failure occurs, that in your judgment meets the conditions of the above Standard Limited Warranty, contact your dealer to make arrangements for the shipment of a replacement item and the return of the defective equipment.

ELECTRIC MOTOR WARRANTY: The Manufacturers of all electric motors used by Caldwell carry a warranty for these items. If the motor fails under the conditions of the Caldwell Standard Limited Warranty Policy, and provided it was protected by the proper protective device, the motor manufacturer's nearest authorized service center will repair it. See catalog for motor manufacturers service centers. Any in warranty replacement motors not satisfactorily handled by motor manufacturer service centers and within the Standard Limited Warranty period and policy will be covered by Caldwell, Kearney, Nebraska. Contact Caldwell if you have any problems or questions.

OUT OF WARRANTY SERVICE: Products requiring Caldwell repair work will be repaired at the standard repair charge plus hourly charges after the first hour. Field service work will require a field service charge plus travel expenses. The repaired part will carry a 30 day limited warranty.

Your dealer will be responsible for warranty procedures in accordance with the Caldwell Service Policy. (See Dealer Policy.)