



Gustafsons HV2

High Velocity Duct for Residential Properties



Specifications



I. GENERAL

All round supply, return, and exhaust ductwork shall be HV2 as manufactured by Gustafson or approved equal. The duct system shall consist of fittings that are factory fitted with a sealing gasket and spiral duct which, when installed according to the manufacturers' instructions, will seal the duct joints without the use of duct sealer.

II. MATERIALS

Unless otherwise noted, all duct and fittings shall be G-60 galvanized steel in accordance with ASTM A-653 and A-924.

III. CONSTRUCTION

A. Unless otherwise noted, all duct and fittings shall be constructed per SMACNA's HVAC Duct Construction Standards (+10 iwg) and Residential Sheet Metal Guidelines shown below:

| <u>Diameter (inches)</u> | <u>Galvanized Spiral Duct</u> | <u>Galvanized Fittings</u> |
|--------------------------|-------------------------------|----------------------------|
| 6, 7, 8, 9, 10 | 28ga | 26ga |

B. FITTINGS

- All fitting ends shall come factory equipped with a double-lipped, U-profile, EPDM gasket. Gasket shall be manufactured to gauge and flexibility so as to ensure that system will meet all of the performance criteria set forth in the manufacturer's literature. Gasket shall be classified by an internationally recognized laboratory authority to conform to ASTM E84-91a and NFPA 90A flame and smoke developed ratings of 25/50.
- All fittings ends shall be calibrated to manufacturer's published dimensional tolerance standard and associated spiral duct.
- All fitting ends shall have rolled over edges for added strength and rigidity.
- All elbows shall be 2-piece die stamped and continuously stitch welded.
- The radius of all 90° and 45° elbows shall be 1.5 times the elbow diameter, unless otherwise noted on the contract documents to be 1.0 times the elbow diameter.
- All fittings that are of either spot-welded or button punched construction shall be internally sealed. When contract documents require divided flow fittings, only full body fittings will be accepted. The use of duct taps is unacceptable except for retrofit installations.

C. SPIRAL DUCT

- Spiral seam slippage shall be prevented by means of a flat seam and a mechanically formed indentation evenly spaced along the spiral seam.
- The spiral duct is pre-insulated with R8 eight-foot sections on a six-foot duct giving the contractor enough insulation to wrap the fitting.



IV. PERFORMANCE

Duct system performance shall meet SMACNA's Leakage Class 3 requirements at the system design static pressure as indicated on the contract documents not to exceed -20" W.G. or +12" W.G.

V. PRESSURE CLASS

HV2 components are constructed per SMACNA's Duct Construction Standards for +10 iwg.

VI. CONNECTIONS

HV2 fittings are sized to slip-fit into spiral duct of the same nominal size. Fitting to fitting connections can be made by duct size couplings (MF). Duct to duct connections require fitting size couplings (HVC).

VII. EPDM GASKET

The gasket is located in a groove at the end of the fittings and is securely fastened by means of an aluminum-zinc coated steel strip. In order to achieve optimum sealing for all diameters, different size gaskets are used. The gasket is classified by Underwriters Laboratories for flame spread and smoke developed in accordance with ASTM-E84-91a.

VIII. U.L. RATINGS

- Flame spread- 0
- Smoke developed- 5

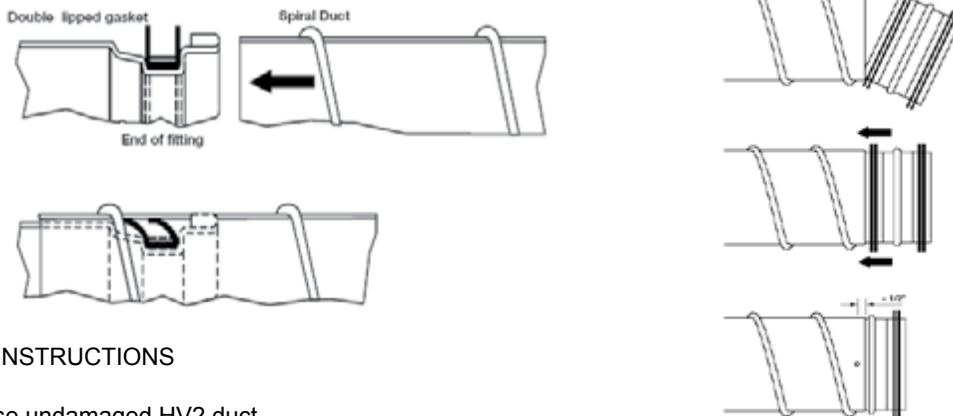
IX. GASKET TEMPERATURE TOLERANCES

Our EPDM gasket has a continuous rating of -94°F to 212°F.

X. JOINT SEALING

HV2 fitting ends are equipped with factory installed, double-lipped, EPDM U-profile gaskets. When a fitting is installed in spiral duct as described in Gustafson's installation instructions, the gasket creates a seal against the interior of the spiral duct. The HV2 system meets SMACNA's Leakage Class 3 performance (as defined in SMANCA's HVAC Duct Design Manual) from -20 to +12 iwg.

XI. DETAIL



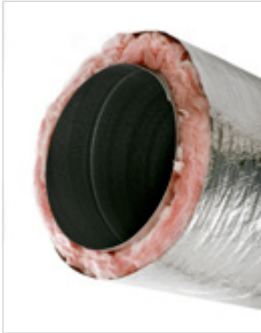
XII. ASSEMBLY INSTRUCTIONS

- Only use undamaged HV2 duct.
- Duct must be cut at a right angle and carefully deburred.
- Slip the fitting into the spiral duct. Rotating the fitting slightly makes insertion easier.
- Fasten the duct and fitting together with self-tapping sheet metal screws or pressure proof pop rivets. Use 3/8" diameter screws, evenly spaced.
- Screws should be placed approximately 1/2" from the bead in order to avoid damaging the HV2 gasket.
- In the event of incorrect installation, holes caused by screws or pop rivets must be sealed before reassembly.

GUSTAFSON HV2™

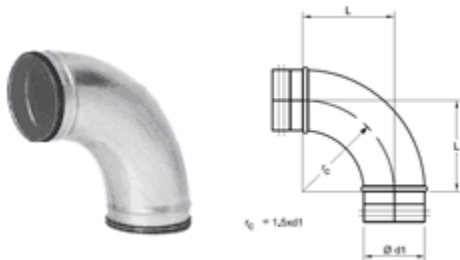
High Velocity Self-Sealing Ductwork

Installing or replacing HVAC ductwork in your home can be a headache. HV2 spiral ductwork is intended to reduce your concerns. The appearance of HV2 is clean. It is sealed at its connection points by internal rubber gaskets, not external tape and sealant. Best of all, HV2 requires less space than rectangular.

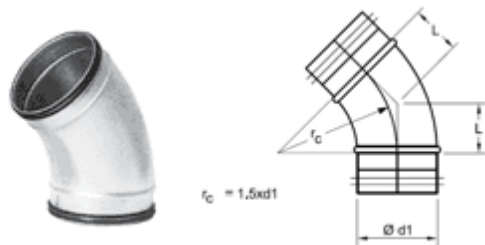


| SPIRAL DUCT | DIA X LENGTH | WEIGHT | GAUGE | QTY/BOX |
|---------------|--------------|--------|-------|---------|
| HVSPI-10-72-4 | 10" X 72" | 2.7 | 26 | 4 |
| HVSPI-9-72-4 | 9" X 72" | 2.4 | 26 | 4 |
| HVSPI-8-72-4 | 8" X 72" | 2.1 | 26 | 4 |
| HVSPI-7-72-4 | 7" X 72" | 1.9 | 26 | 4 |
| HVSPI-6-72-4 | 6" X 72" | 1.7 | 26 | 4 |

Spiral duct is pre-insulated with R8 eight-foot sections on a six-foot duct giving the contractor enough insulation to wrap the fitting.



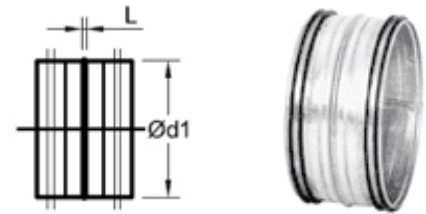
| PRESSED 90° ELBOW | DIA | LENGTH | WEIGHT | QTY/BOX |
|-------------------|-----|--------|--------|---------|
| HVEL90-10-4 | 10" | 15 | 10.3 | 4 |
| HVEL90-9-4 | 9" | 13 1/2 | 8.2 | 4 |
| HVEL90-8-4 | 8" | 12 | 3.4 | 4 |
| HVEL90-7-4 | 7" | 10 1/2 | 2.4 | 4 |
| HVEL90-6-4 | 6" | 9 | 1.9 | 4 |



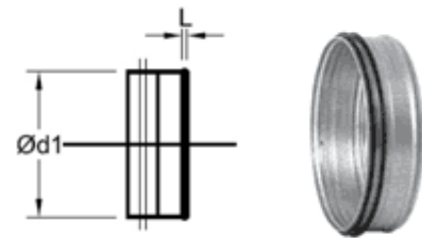
| PRESSED 45° ELBOW | DIA | LENGTH | WEIGHT | QTY/BOX |
|-------------------|-----|--------|--------|---------|
| HVEL45-10-4 | 10" | 5 3/4 | 3.4 | 4 |
| HVEL45-9-4 | 9" | 5 1/8 | 2.8 | 4 |
| HVEL45-8-4 | 8" | 5 | 1.7 | 4 |
| HVEL45-7-4 | 7" | 4 3/8 | 1.7 | 4 |
| HVEL45-6-4 | 6" | 3 3/4 | 0.9 | 4 |



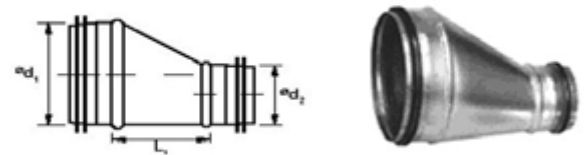
| DUCT COUPLING | DIA | LENGTH | WEIGHT | QTY/BOX |
|---------------|-----|--------|--------|---------|
| HVC-10-4 | 10" | 3/8 | 0.7 | 4 |
| HVC-9-4 | 9" | 3/8 | 0.6 | 4 |
| HVC-8-4 | 8" | 3/8 | 0.5 | 4 |
| HVC-7-4 | 7" | 3/8 | 0.5 | 4 |
| HVC-6-4 | 6" | 3/8 | 0.3 | 4 |



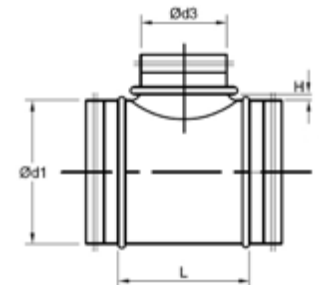
| END CAP | DIA | LENGTH | WEIGHT | QTY/BOX |
|------------|-----|--------|--------|---------|
| HVEND-10-4 | 10" | 3/8 | 0.7 | 4 |
| HVEND-9-4 | 9" | 3/8 | 0.5 | 4 |
| HVEND-8-4 | 8" | 3/8 | 0.5 | 4 |
| HVEND-7-4 | 7" | 3/8 | 0.3 | 4 |
| HVEND-6-4 | 6" | 3/8 | 0.3 | 4 |



| REDUCER | DIA 1 x DIA 2 | LENGTH | WEIGHT | QTY/BOX |
|------------|---------------|--------|--------|---------|
| HVR-10-9-4 | 10" X 9" | 2 1/8 | 1.0 | 4 |
| HVR-10-8-4 | 10" X 8" | 3 1/2 | 1.1 | 4 |
| HVR-9-7-4 | 9" X 7" | 3 3/8 | 0.9 | 4 |
| HVR-8-6-4 | 8" X 6" | 3 5/8 | 0.7 | 4 |



| TEE* | DIA 1 x DIA 3 | LENGTH | HEIGHT | WEIGHT | QTY/BOX |
|---------------|----------------|--------|--------|--------|---------|
| HVTEE-10-10-4 | 10" X 10" | 15 | 7 3/8 | 3.6 | 4 |
| HVTEE-9-10-4 | 9" X 10" X 10" | 15 1/2 | 7 1/4 | 3.2 | 4 |
| HVTEE-9-9-4 | 9" X 9" X 9" | 14 | 7 | 3.0 | 4 |
| HVTEE-9-7-4 | 9" X 7" X 7" | 11 1/2 | 6 3/4 | 2.4 | 4 |
| HVTEE-8-8-4 | 8" X 8" X 8" | 13 | 8 | 2.4 | 4 |
| HVTEE-7-9-7 | 7" X 9" X 9" | 14 | 6 1/8 | 2.1 | 4 |
| HVTEE-7-7-4 | 7" X 7" X 7" | 11 5/8 | 5 7/8 | 1.8 | 4 |



* HVTEE IS PRESSED CONSTRUCTION WHERE POSSIBLE. FABRICATED WHEN EXPANDED BASE SIZING IS ORDERED.



Gustafson HV2 Products Warranty

Gustafson warrants that the HV2 System will satisfy Leakage Class 3 requirements as defined by ASHRAE and SMACNA provided that the following conditions are met:

1. Only HV2 Products shall have been used as fittings in such HVAC Duct System and no such HV2 Products shall have been damaged after delivery.
2. Only straight duct manufactured by Gustafson shall have been used and no such duct shall have been damaged after delivery.
3. The Gustafson Installation Instructions shall have been strictly complied with in all respects by the person performing the installation of the HVAC duct system.
4. The HV2 Products and the HVAC Duct System shall have been used only for the purposes for which they have each been designed.
5. Claims under this warranty shall have been filed with Gustafson within 60 days from when warranty failure has been discovered or should reasonably have been discovered.

Gustafson will for a period of 10 years from and after the date of installation repair or replace, at its expense, any and all defective HV2 Products which do not meet Leakage Class 3 requirements provided that the warranty conditions contained herein have been met. HV2 Products replaced or repaired under this warranty are covered for the remainder of the warranty period, calculated from the date of the original HV2 Products installation. This HV2 System and HV2 Products Warranty shall apply only to HV2 Products and duct manufactured by Gustafson, not to any other Gustafson Products or any other products forming part of an HVAC duct system.

OTHER THAN AS HERIN EXPRESSLY SET FORTH, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ANY SUCH WARRANTIES OTHERWISE IMPOSED BY LAW BEING HEREBY EXPRESSLY DISCLAIMED.

GUSTAFSON, ITS DIVISIONS, AND LINDAB, INC ARE NOT AND SHALL UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, OR EXPENSES ARISING FROM A CLAIMED OR ACTUAL DEFECT IN ANY OF THE PRODUCTS, HV2 PRODUCTS, SYSTEM AND/OR THE INSTALLATION OR USE THEREOF OR FROM ANY OTHER CAUSE WHATSOEVER, INCLUDING, BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF REVENUES AND ANY OTHER ECONOMIC LOSS.



GUSTAFSON

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