

EHG Industrial



Building without barriers

Well-known for our gasketed system, EHG's world-class quality extends to our Industrial Ductwork Division. It is a natural addition for our skilled trades personnel and fabrication facilities.

The ability to use spiral lockseam pipe construction, when the system requirements allow, results in using lighter gauge and delivers superior strength than long seam welded duct. Also, gore lock construction for fittings result in added strength against collapse due to the built-in stiffening rib.

NFPA Standard 91 is widely used for duct systems conveying particulates and removing flammable vapors (including paint-spraying residue), and corrosive fumes. Duct conveying systems are generally classified from Class 1 - 5.

Classification*

Class 1 covers non-particulate applications, including makeup air, general ventilation, and gaseous emission control.

Class 2 is imposed on moderately abrasive particulate in light concentration, such as that produced by buffing and polishing, woodworking, and grain handling.

Class 3 consists of highly abrasive material in low concentration, such as that produced from abrasive cleaning, dryers and kilns, boiler breeching, and sand handling.

Class 4 is composed of highly abrasive particulates in high concentration, including materials conveying high concentrations of particulates listed under Class 3.

Class 5 covers corrosive applications such as acid fumes.

** Information is excerpted from the 2012 ASHRAE handbook for Industrial Duct Construction.*

Materials

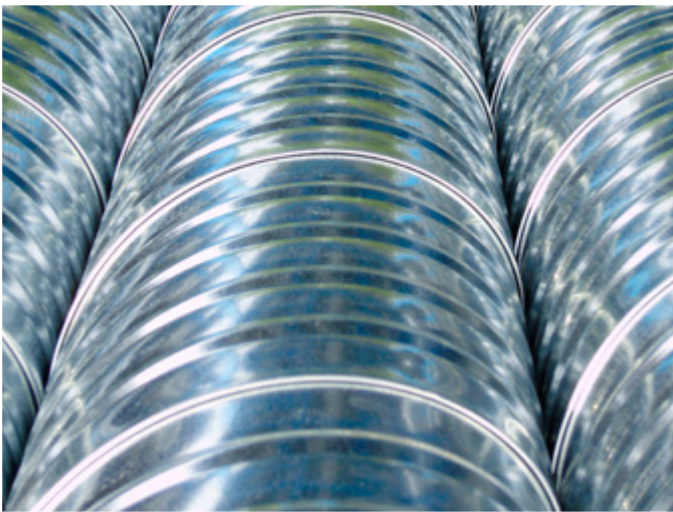
Galvanized steel, uncoated carbon steel, or aluminum are most frequently used for industrial air handling. EHG can also provide 304L and 316L stainless steel in a variety of finishes and aluminized steel for high temperature applications. Aluminum duct should not be used for conveying abrasive materials. When temperatures exceed 400°F (200°C) galvanized steel is not recommended. Please consult EHG for technical assistance in selecting material for handling corrosive gases, vapors, or mists.

Round Ducts

Duct and fittings are available in sizes ranging from 3" diameter to 96" diameter and material thickness from 28 gauge through 10 gauge.

Coordination Drawings

EHG has the in-house capability to generate detailed 3-D drawings to aid in the coordination of the fabrication and installation requirements. In addition, we can assist in manifolding and spooling sections of the ductwork at the factory to minimize field welding or bolted connections.



spiral lockseam duct



longitudinal-seam welded duct

Capabilities

EHG has the capability of producing spiral lockseam duct in diameters from 3" up to 80". Spiral duct can be provided from metal thicknesses ranging from 28 gauge to 16 gauge (galvanized steel) and 24 gauge to 20 gauge (stainless steel).

Longitudinal-seam welded duct products may be made in diameters as large as 96" and up to 10 gauge thicknesses.

Manifolding and spooling options are also available. Our technicians are trained and accomplished in heavy duty sheet metal applications.

In addition to economical stitch welds, tack and seal joints and continuous resistance welds, EHG has extensive welding and lockforming capabilities in MIG, TIG and special finished welds.

We have a number of transverse connection options besides our EHG G-3® gasketed system, including traditional slip fit, flanged, Van Stone, swedged, LAP and butt joints.

A wide range of materials are offered to satisfy your customer's requirements. Each have a specific purpose in the field:

- galvanized steel
- black iron
- paint-grip galvanized
- powder coat and PVC-coated steel
- antimicrobial coatings
- T3003 aluminum
- 304L and 316L stainless steel
- aluminized steel

Availability

Standard Diameters, Thicknesses and Materials

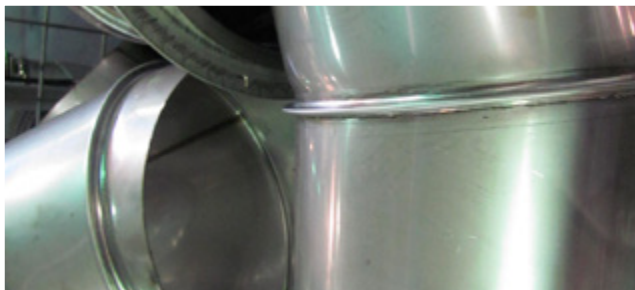
EHG Industrial products are built to your specifications. Industrial round fittings can be manufactured as small as 3" diameter and as large as 96" diameter. The same custom materials available for duct are offered in fittings. Fittings can be delivered loose or manifolded.

Below is a quick reference guide to EHG's capabilities. For projects outside of these parameters, please consult EHG for special assistance.

About the charts

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1. Cells displaying a stiffener type and size represent a stiffening scheme based on 12 ft spacing between stiffeners or flanges.
2. The "plus" symbol (+) represents a stiffening scheme based on a 6 ft spacing between stiffeners.
3. The stiffener size listed is the lightest angle ring that meets the reinforcement requirements for negative pressure.
4. Transverse joint designed for flanges and bolt requirements are in addition to those for negative pressure. Consult EHG for design assistance.
5. The number of welds listed for stiffeners is the total number of stitch welds required around the circumference of the flange. The welds are to be staggered, both toe and heel of the ring, approximately half of the required stitch welds go in front (toe) and the other half in back (heel).
6. Consult EHG for your specific design requirements.



Class 1 - Stiffener/Weld
 Schedule
 -2 to -30 in. wg

Spiral-Carbon & Galv

Negative Pressure, in wg	2			6		
	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type	No./Size of Welds
4 thru 14	22	Unstiffened		22	Unstiffened	
16	20	Unstiffened		20	Unstiffened	
18	22	Unstiffened		18	Unstiffened	
20	22	Unstiffened		18	Unstiffened	
22	20	Unstiffened		18	Unstiffened	
24	20	Unstiffened		16	Unstiffened	
30	18	Unstiffened		20	L 1 × 1 × 1/8	10 - 1.0
36	16	Unstiffened		20	L 1 1/4 × 1 1/4 × 3/16	10 - 1.0
42	16	Unstiffened		20	L 1 1/4 × 1 1/4 × 3/16	11 - 1.0
48	22	L 1 × 1 × 1/8	11 - 1.0	20	L 1 1/4 × 1 1/4 × 3/16	11 - 1.0
54	22	L 1 1/4 × 1 1/4 × 3/16	12 - 1.0	20	L 2 × 2 × 1/8	12 - 1.0
60	20	L 1 1/4 × 1 1/4 × 3/16	12 - 1.0	18	L 2 × 2 × 1/8	12 - 1.0
66	20	L 1 1/4 × 1 1/4 × 3/16	13 - 1.0	18	L 2 × 2 × 1/8	13 - 1.0
72	20	L 1 1/4 × 1 1/4 × 3/16	13 - 1.0	18	L 2 × 2 × 1/8	13 - 1.0
78	20	L 2 × 2 × 1/8	13 - 1.0	16	L 2 × 2 × 3/16	13 - 1.0
84	18	L 2 × 2 × 1/8	14 - 1.0	18	L 2 × 2 × 1/4	14 - 1.0
90	18	L 2 × 2 × 1/8	14 - 1.0	16	L 2 × 2 × 1/8	24 - 1.0
96	18	L 2 × 2 × 1/8	14 - 1.0	16	L 2 × 2 × 3/16	24 - 1.0

Negative Pressure, in wg	15			30		
	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type	No./Size of Welds
4 thru 10	22	Unstiffened		22*	Unstiffened	
12	20	Unstiffened		18	Unstiffened	
14 thru 16	18	Unstiffened		16	Unstiffened	
18	16	Unstiffened		18	L 1 × 1 × 1/8	9 - 2.0
20	16	Unstiffened		18	L 1 × 1 × 1/8	11 - 2.0
22	18	L 1 × 1 × 1/8	9 - 1.5	16	L 1 1/4 × 1 1/4 × 3/16	9 - 2.0
24	18	L 1 × 1 × 1/8	9 - 1.5	16	L 1 1/4 × 1 1/4 × 3/16	10 - 2.0
30	18	L 1 1/4 × 1 1/4 × 3/16	10 - 1.5	18+	L 1 1/4 × 1 1/4 × 3/16	15 - 1.0
36	16	L 1 1/4 × 1 1/4 × 3/16	10 - 1.5	16+	L 1 1/4 × 1 1/4 × 3/16	16 - 1.0
42	16	L 2 × 2 × 1/8	11 - 1.5	16+	L 2 × 2 × 1/8	17 - 1.0
48	18+	L 2 × 2 × 1/8	18 - 1.0	16+	L 2 × 2 × 1/8	18 - 1.0
54	16+	L 2 × 2 × 1/8	19 - 1.0		Consult EHG	
60	16+	L 2 × 2 × 1/8	20 - 1.0			
66	16+	L 2 × 2 × 1/8	21 - 1.0			
72	16+	L 2 × 2 × 1/4	22 - 1.0			

* 10" diameter = 20 gauge

+ Stiffeners @ 6-foot intervals (otherwise 12-foot intervals)



Spiral-Carbon & Galv

Class 2 - Stiffener/Weld
Schedule
-2 to -30 in. wg

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Negative Pressure, in wg	2			6			
	Diameter, in.	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type	No./Size of Welds
4 thru 10	22		Unstiffened		22		Unstiffened
12	22		Unstiffened		20		Unstiffened
14	22		Unstiffened		20		Unstiffened
16	22		Unstiffened		18		Unstiffened
18	20		Unstiffened		18		Unstiffened
20	20		Unstiffened		18		Unstiffened
22	18		Unstiffened		16		Unstiffened
24	18		Unstiffened		16		Unstiffened
30	16		Unstiffened		18	L 1 x 1 x 1/8	10 - 1.0
36	16		Unstiffened		18	L 1 1/4 x 1 1/4 x 3/16	10 - 1.0
42	20	L 1 x 1 x 1/8	11 - 1.0	18	L 1 1/4 x 1 1/4 x 3/16	11 - 1.0	
48	20	L 1 x 1 x 1/8	11 - 1.0	16	L 1 1/4 x 1 1/4 x 3/16	11 - 1.0	
54	20	L 1 1/4 x 1 1/4 x 3/16	12 - 1.0	16	L 2 x 2 x 1/8	12 - 1.0	
60	18	L 1 1/4 x 1 1/4 x 3/16	12 - 1.0	16	L 2 x 2 x 1/8	12 - 1.0	
66	18	L 1 1/4 x 1 1/4 x 3/16	13 - 1.0	16	L 2 x 2 x 1/8	13 - 1.0	
72	18	L 1 1/4 x 1 1/4 x 3/16	13 - 1.0	16	L 2 x 2 x 1/8	13 - 1.0	
78	18	L 2 x 2 x 1/8	13 - 1.0	16+	L 2 x 2 x 3/16	22 - 1.0	
84	18	L 2 x 2 x 1/8	14 - 1.0	16+	L 2 x 2 x 1/4	23 - 1.0	
90	18	L 2 x 2 x 1/8	14 - 1.0	16+	L 2 x 2 x 1/8	24 - 1.0	
96	18	L 2 x 2 x 1/8	14 - 1.0	16+	L 2 x 2 x 3/16	24 - 1.0	

Negative Pressure, in wg	15			30			
	Diameter, in.	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type	No./Size of Welds
4 thru 8	22		Unstiffened		22*		Unstiffened
10	20		Unstiffened		18		Unstiffened
12 thru 14	18		Unstiffened		16		Unstiffened
16	16		Unstiffened		16	L 1 x 1 x 1/8	8 - 2.0
18	16		Unstiffened		16	L 1 x 1 x 1/8	8 - 2.0
20	16	L 1 x 1 x 1/8	9 - 1.0	16	L 1 x 1 x 1/8	9 - 2.0	
22	16	L 1 x 1 x 1/8	9 - 1.0	16	L 1 1/4 x 1 1/4 x 3/16	9 - 2.0	
24	16	L 1 x 1 x 1/8	9 - 1.5	16	L 1 1/4 x 1 1/4 x 3/16	10 - 2.0	
30	16	L 1 1/4 x 1 1/4 x 3/16	10 - 1.5	16+	L 1 1/4 x 1 1/4 x 3/16	15 - 1.0	
36	16	L 1 1/4 x 1 1/4 x 3/16	10 - 1.5	16+	L 1 1/4 x 1 1/4 x 3/16	16 - 1.0	
42	16+	L 2 x 2 x 1/8	17 - 1.0	Consult EHG			
48	16+	L 2 x 2 x 1/8	18 - 1.0				
54	16+	L 2 x 2 x 1/8	19 - 1.0				
60	16+	L 2 x 2 x 1/8	20 - 1.0				

* 8" Diameter is 20 Gauge

+ Stiffeners @ 6-foot intervals (otherwise 12-foot intervals)



Class 5 - Stiffener/Weld
 Schedule
 -2 to -30 in. wg

Spiral-Stainless Steel

Negative Pressure, in wg	2			6		
	Diameter, in.	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type
4 thru 14	22	Unstiffened		22	Unstiffened	
16	22	Unstiffened		20	Unstiffened	
18	22	Unstiffened		18	Unstiffened	
20	22	Unstiffened		18	Unstiffened	
22	20	Unstiffened		18	Unstiffened	
24	20	Unstiffened		16	Unstiffened	
30	18	Unstiffened		20	L 1 x 1 x 1/8	10 - 1.0
36	16	Unstiffened		20	L 1 1/4 x 1 1/4 x 3/16	10 - 1.0
42	16	Unstiffened		18	L 1 1/4 x 1 1/4 x 3/16	11 - 1.0
48	22	L 1 x 1 x 1/8	11 - 1.0	18	L 1 1/4 x 1 1/4 x 3/16	11 - 1.0
54	22	L 1 1/4 x 1 1/4 x 3/16	12 - 1.0	18	L 2 x 2 x 1/8	12 - 1.0
60	20	L 1 1/4 x 1 1/4 x 3/16	12 - 1.0	18	L 2 x 2 x 1/8	12 - 1.0
66	20	L 1 1/4 x 1 1/4 x 3/16	13 - 1.0	16	L 2 x 2 x 1/8	13 - 1.0
72	20	L 1 1/4 x 1 1/4 x 3/16	13 - 1.0	16	L 2 x 2 x 1/8	13 - 1.0
78	20	L 2 x 2 x 1/8	13 - 1.0	16	L 2 x 2 x 3/16	13 - 1.0
84	18	L 2 x 2 x 1/8	14 - 1.0	16	L 2 x 2 x 1/4	14 - 1.0
90	18	L 2 x 2 x 1/8	14 - 1.0	18+	L 2 x 2 x 1/8	24 - 1.0
96	18	L 2 x 2 x 1/8	14 - 1.0	16+	L 2 x 2 x 3/16	24 - 1.0

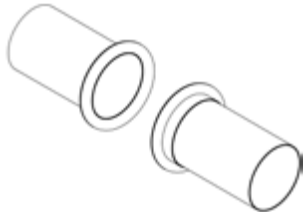
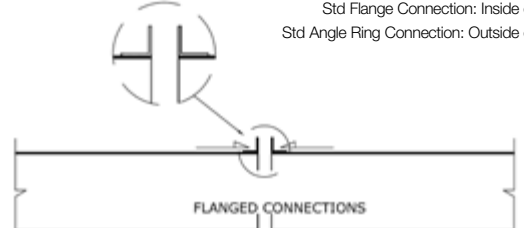
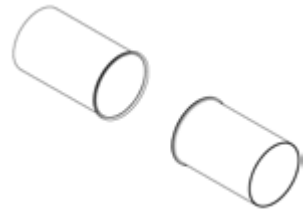
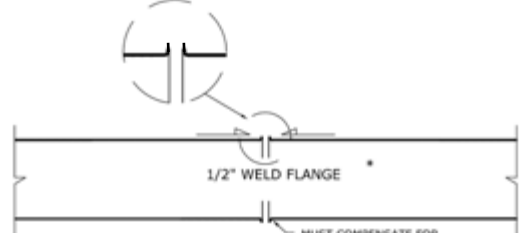

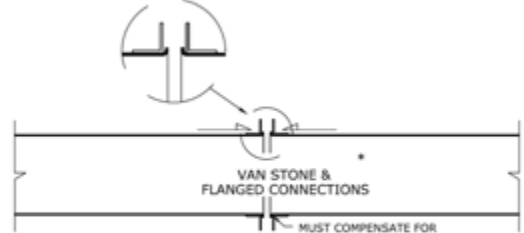

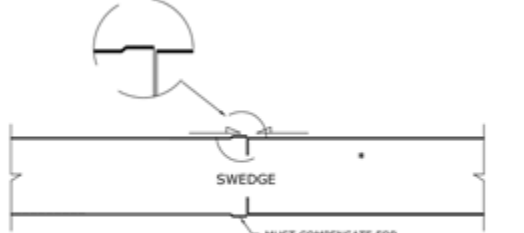
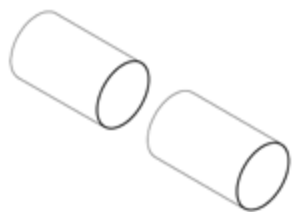
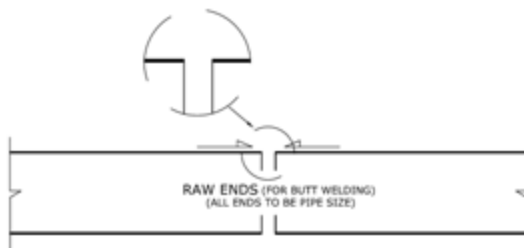

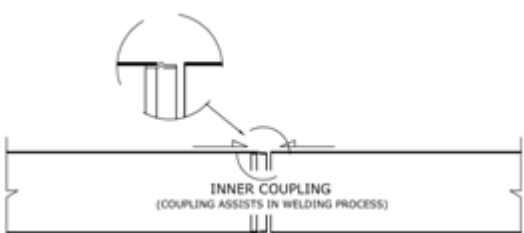
Negative Pressure, in wg	15			30		
	Diameter, in.	Gauge	Stiffener Size/Type	No./Size of Welds	Gauge	Stiffener Size/Type
4 thru 10	22	Unstiffened		22*	Unstiffened	
12	20	Unstiffened		18	Unstiffened	
14 thru 16	18	Unstiffened		16	Unstiffened	
18	16	Unstiffened		18	L 1 x 1 x 1/8	8 - 2.0
20	16	Unstiffened		18	L 1 x 1 x 1/8	9 - 2.0
22	18	L 1 x 1 x 1/8	9 - 1.5	16	L 1 x 1 x 1/8	9 - 1.5
24	18	L 1 x 1 x 1/8	9 - 1.5	16	L 1 1/4 x 1 1/4 x 3/16	9 - 1.5
30	18	L 1 1/4 x 1 1/4 x 3/16	10 - 1.5	18+	L 1 1/4 x 1 1/4 x 3/16	15 - 1.0
36	16	L 1 1/4 x 1 1/4 x 3/16	10 - 1.5	16+	L 1 1/4 x 1 1/4 x 3/16	16 - 1.0
42	16	L 2 x 2 x 1/8	11 - 1.5	16+	L 2 x 2 x 1/8	17 - 1.0
48	18+	L 2 x 2 x 1/8	18 - 1.0	16+	L 2 x 2 x 1/8	18 - 1.0
54	16+	L 2 x 2 x 1/8	19 - 1.0		Consult EHG	
60	16+	L 2 x 2 x 1/8	20 - 1.0			
66	16+	L 2 x 2 x 1/8	21 - 1.0			
72	16+	L 2 x 2 x 1/4	22 - 1.0			

* 10" Diameter is 20 Gauge

+ Stiffeners @ 6-foot intervals (otherwise 12-foot intervals)



End Treatments

TC1	<p>*</p> 	<p>Std Flange Connection: Inside of duct Std Angle Ring Connection: Outside of duct</p>  <p>FLANGED CONNECTIONS</p>
TC2	<p>**</p> 	 <p>1/2" WELD FLANGE *</p> <p>MUST COMPENSATE FOR LENGTH DUE TO TURN UP</p>
TC3	<p>***</p> 	 <p>VAN STONE & FLANGED CONNECTIONS *</p> <p>MUST COMPENSATE FOR LENGTH DUE TO TURN UP</p>
TC4	<p>**</p> 	 <p>SWEDGE *</p> <p>MUST COMPENSATE FOR LENGTH OF SLIP DIMENSION</p>
TC5		 <p>RAW ENDS (FOR BUTT WELDING) (ALL ENDS TO BE PIPE SIZE)</p>
TC6		 <p>INNER COUPLING (COUPLING ASSISTS IN WELDING PROCESS)</p>

* Add 3" per flange plus flange thickness for each end on fittings;
*** When used with spiral duct a vanstone flange coupling is factory installed.

** Not used in spiral duct;

Flanges & Angle Rings

EHG has partnered with angle ring and flange manufacturer's across the country to bring you reliable connections for your heavy-duty applications.

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Standard Pressed

- Black Iron
- Galvanized (hot dipped)
- Aluminum
- Stainless Steel

Standard Rolled

- Galvanized
- Stainless Steel
- Aluminum
- With or Without holes
- Leg-in or Leg-out
- Precise measurements to ensure an easy and tight fit



Bolt Hole Options

- "K" Pattern (standard)
- "H" Pattern
- Special patterns available upon request

