Flexmaster® Platinum-Flow™ Submittal Data

Project Name: _____

Project #: _____

Location: _____

Date: _____

Contractor: _____

Engineer: _____

Flexmaster Contact: _____

Comments _____

07.2019

IN CANADA

Richmond Hill, Ontario
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tel (905)731-9411 fax (905)905-731-7086

FLEXMASTER CANADA
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Ductwork System

❑ Single Wall Round ❑ Double Wall Round

Construction

Unless otherwise noted, the gauge for all ductwork will be constructed in accordance with the latest SMACNA HVAC Duct Construction Standard to +10 iwg.

Air Leakage Performance

Flexmaster guarantees to meet SMACNA's Leakage Class 3 and complies with ASHRAE 90.1-2004 section 6.4.4.2.2 Platinum-Flow without the application of external sealants or the use of flanges.

Spiral Pipe

All round spiral pipe is certified to Flexmaster's shop standards
Spiral pipe seam slippage is prevented by means of a flat seam (SMACNA type RL1) and mechanically formed indentation evenly spaced along the spiral seam.

Fittings

Manufactured using one or more of the following construction methods:
Overlapped edges are stitched or spot welded along the entire length of the fitting
Standing seam gore locked and internally sealed
Button punched and internally sealed
Elbows 5 inch through 12 inch diameter will be die stamped and continuously stitched welded.

Material - Ductwork will be fabricated from:

❑ Standard galvanized steel meeting ASTM A653 and A924*

❑ Optional 304L stainless steel conforming to ASTM A240 2B finish*

❑ Optional 316L stainless steel conforming to ASTM A240 2B finish*

End Connection

- Platinum-Flow "self-sealing" (single wall and double wall round only):
- All spiral pipe and fitting ends, up to and including 50 inch diameter, is certified to Flexmaster's shop standards
- All fitting ends from 5 inch to 50 inch diameter have rolled edges for added strength and rigidity
- All fitting ends have factory installed double Fail Safe™ gasket
- Gasket is mechanically attached to the fitting using 180° hemmed edge
- Flame Spread = 0 and Smoke Developed = 5 in accordance with ASTM std. E84-91a EPDM gasket rated -20°F to +212°F continuous (-30°C to 100°C)

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Single Wall Round Assembly Instructions

Preparations for assembly

- Check that all ductwork to be used in the system is Flexmaster Platinum-Flow and is undamaged. All Flexmaster Platinum-Flow fittings must be used with approved spiral pipe certified by Flexmaster Canada Limited.
- Do not use any ductwork that has been damaged in such a way that it may jeopardize the air tightness or structural strength of the system.
- Store all ductwork in a well organized and weather proof storage area to minimize the risk of damage.
- Cut all spiral pipe at right angles and carefully remove any burrs from the cut edges. Installation is easier and the risk of damaging the gasket is reduced if there are no burrs.

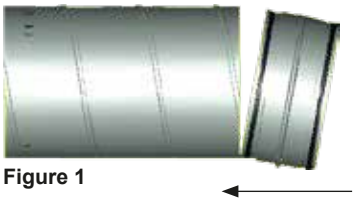
Figure 1

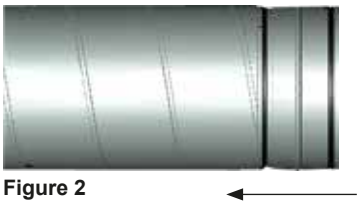
Figure 2

Assembly

1. Start by inserting the gasketed end of the fitting into the spiral pipe (figure 1).
2. Check that the gasket is in full contact with the inside of the spiral pipe all the way around so that the lip is not twisted in one direction or the other. (figure 2).
3. Fully insert to the bead the gasketed end of the fitting into the spiral pipe. Turning the fitting slightly aids insertion. Removal, if necessary, is also aided by turning (figure 3).
4. Secure the fitting in the spiral pipe using self-tapping screws or airtight pop rivets. Recommended quantities and sizes to be used are shown in the table below.

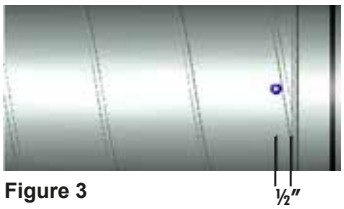

Figure 3

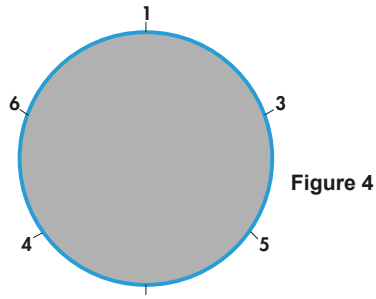

Figure 4

Spiral Pipe Dia (in)	Screw Size	Quantity
5-10	⅛ x ½	3
12-24	⅛ x ½	4
26-50	⅛ x ½	6

Do not use more fasteners than specified.

5. Fasteners should be positioned ½ inch from the bead to prevent damage to the gasket (figure 3).
6. Placement of the fastening screws should be opposite from one another evenly spaced around the circumference, much like the procedure for tightening lug nuts on a tire.

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Double Wall Construction

Standard thermal double wall ductwork construction consists of a solid inner liner on the spiral pipe, a solid inner liner on the fittings, a layer of glass fiber insulation, and a solid outer pressure shell. Optional perforated inner liner available for acoustical applications. For standard 1 inch insulation, the outer pressure shell diameter will be 2 inches larger than the inner liner. For the optional 2 inch insulation, the outer pressure shell diameter will be 4 inches larger than the inner liner.

For both double wall round and double wall flat oval, all ductwork size dimensions refer to the airside. In addition, the ductwork pressure seal is always on the outer shell.

Materials:

- Solid inner liner is used for spiral pipe and fittings
- Perforated inner liner has ⅛ inch perforations on ¼ inch staggered centers corresponding to an overall open area of 23%
- Standard 1 inch glass fiber insulation has a maximum conductivity factor (k) of 0.29 BTU-in/hr x ft^2 x °F at 75°F mean ambient temperature (R = 4.2)
- Retaining fabric is 0.008 inch thick, 15.6 lb/ft^3 density non-woven polyester with an air permeability rate of 9.2 ft^3/ft^2 x s
- Insulation stop is a closed-cell elastomeric foam with a maximum conductivity factor (k) of 0.23 BTU-in/hr x ft^2 x 5°F and an operating temperature of -90°F to +180°F. (Available in 1 inch and 2 inch Double Wall Round).

Flexmaster Platinum-Flow Double Wall Round: Inner and outer spiral pipe will be of spiral lock seam construction and furnished with a recessed inner liner and insulation stop. The inner liner will be flushed with the outer shell and will utilize an insulation stop for thermal integrity and to simplify installation. The outer shell connection will be a Platinum-Flow™ connection meeting all of the same leakage criteria as Flexmaster's Platinum Flow™ single wall round ductwork system.

Options:

Insulation: ❑ 1 inch standard (R = 4) ❑ 2 inch (R = 8)

Inner Liner: ❑ Solid Spiral Pipe ❑ Solid Fitting

❑ Perforated Spiral Pipe ❑ Perforated Fittings

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Double Wall Round Assembly Instructions

Preparations for assembly

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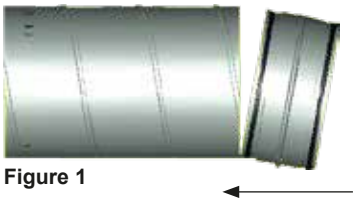
- Do not use any ductwork that has been damaged in such a way that it may jeopardize the air tightness or structural strength of the system.
- Store all ductwork in a well organized and weather proof storage area to minimize the risk of damage.
- Cut all spiral pipe at right angles and carefully remove any burrs from the cut edges. Installation is easier and the risk of damaging the gasket is reduced if there are no burrs.
- For preparing field cut double wall duct for connection with a fitting, use a field cut adapter. (PFDA)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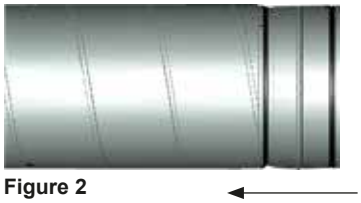
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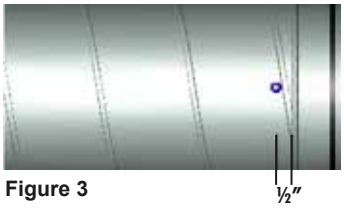

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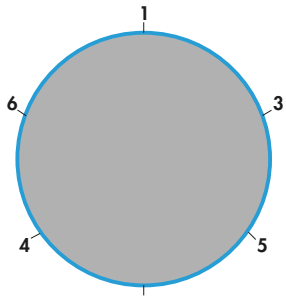

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