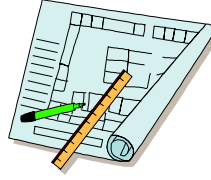


Wm. H. Brady, Inc.

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Last updated: August 26, 2002

Dual wall round duct will be constructed of perforated or solid inner liner, a 1-inch (unless otherwise specified) layer of fiberglass insulation, and an outer pressure shell. Duct will be spiral lockseam construction provided in standard 10 foot lengths. It will be fabricated from galvanized steel meeting ASTM-A527 standards, and in accordance with the following guidelines :

Inner Diameter (inches)	Outer Shell Min. Gauge (2-10+ inches WG)	Inner Gauge	Fitting Gauge
3-8	26	26	24
9-12	26	26	24
13-24	24	22	22
25-34	22	22	20
36-48	20	22	20
49-60	18	22	18
62-82	18	22	16

For 1-inch insulation, the outer shell will be 2 inches larger than the inner liner nominal dimension. When a perforated liner is specified, perforations will be 3/32 inch in diameter on 3/16" staggered centers, with an overall open area of 23 percent. Insulated duct will have a maximum thermal conductivity (k) factor of .27 Btu per hour per square foot per degree Fahrenheit per inch thickness at 75 degree Fahrenheit mean ambient temperature. **All inner wall for fittings will be solid material, not perforated. (unless otherwise specified).**

Internal liner will be tack welded only. All exterior seams will be welded solid. In exposed applications, if specified, all external metal will be Galvanealed (paintable).

As standard, all joints will be slip connection. Only straight duct will have perforated inner liner, all fittings will have a solid inner wall. The perforated liner on the pipe will be the same length as the external metal wall. On the fittings, the inner liner will be three inches longer than the outer metal wall. All fittings will be made to slip inside the round pipe. For pipe to pipe connections, inner couplings are required. The inner wall coupling will be solid metal, not perforated. If other joints are required, please contact our office. For information on Accuflange, Spiralmate or Angle rings, please visit our website at www.wmhbrady.com.

Wm. H. Brady, Inc. - Available Spiral Flat Oval Sizes

Other sizes available as rolled welded

SIZE	
Minor Axis	Major Axis
5	13
5	14.5
5	16
5	17.5
5	19.5
5	21
5	22.5
5	24
5	25.5
5	27
5	29
5	32
5	35
5	38
5	41.5
5	44.5
5	47.5
5	51
5	54
5	57
5	60.5
5	63.5
5	66.5
5	70
5	73
5	76

SIZE	
Minor Axis	Major Axis
6	14
6	15.5
6	17
6	18.5
6	20.5
6	22
6	23.5
6	25
6	26.5
6	28
6	31.5
6	34.5
6	37.5
6	41
6	44
6	47
6	50.5
6	53.5
6	56.5
6	60
6	63
6	66
6	69
6	72.5
6	75.5
6	79

SIZE	
Minor Axis	Major Axis
8	14.5
8	19
8	17.5
8	19
8	20.5
8	22.5
8	24
8	25.5
8	27
8	30
8	33.5
8	36.5
8	39.5
8	43
8	46
8	49
8	52.5
8	55.5
8	58.5
8	62
8	65
8	68
8	71.5
8	74.5
8	77.5
8	81

SIZE	
Minor Axis	Major Axis
10	15
10	16.5
10	18
10	19.5
10	21
10	23
10	24.5
10	26
10	29
10	32
10	35.5
10	38.5
10	41.5
10	45
10	48
10	51
10	54.5
10	57.5
10	60.5
10	64
10	67
10	70
10	73.5
10	76.5
10	79.5
10	83

SIZE	
Minor Axis	Major Axis
12	17
12	18.5
12	20
12	21.5
12	23
12	25
12	28
12	31
12	34.5
12	37.5
12	40.5
12	43.5
12	47
12	50
12	53
12	56.5
12	59.5
12	62.5
12	66
12	69
12	72
12	75.5
12	78.5
12	81.5
12	85

SIZE	
Minor Axis	Major Axis
14	17.5
14	19
14	20.5
14	22
14	23.5
14	27
14	30
14	33
14	36.5
14	39.5
14	42.5
14	46
14	49
14	52
14	55
14	58.5
14	61.5
14	64.5
14	68
14	71
14	74
14	77.5
14	80.5
14	83.5

SIZE	
Minor Axis	Major Axis
16	21
16	22.5
16	25.5
16	29
16	32
16	35
16	38.5
16	41.5
16	44.5
16	47.5
16	51
16	54
16	57
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16	63.5
16	66.5
16	70
16	91
16	76
16	79.5
16	82.5
16	84.5

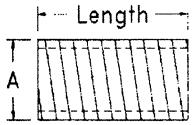
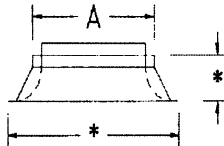
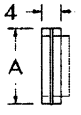
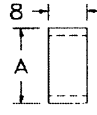

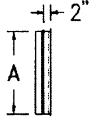
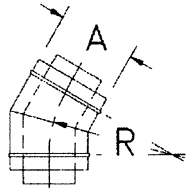
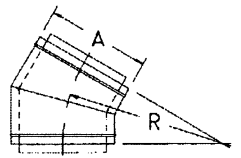
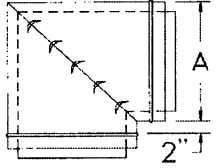
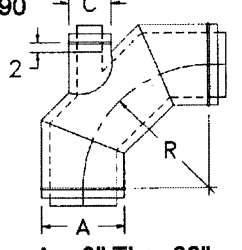
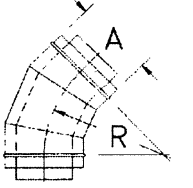
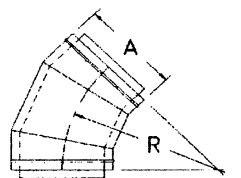
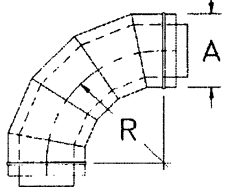
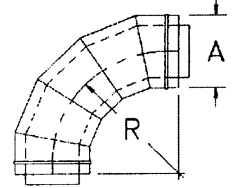
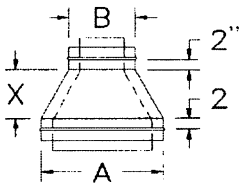
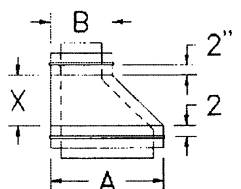
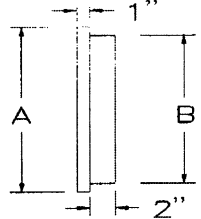
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18	27.5
18	31
18	34
18	37
18	40.5
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18	46.5
18	50
18	53
18	56
18	59
18	62.5
18	65.5
18	69
18	72
18	75
18	78
18	81.5
18	84.5

SIZE	
Minor Axis	Major Axis
20	23.5
20	26.5
20	29.5
20	33
20	36
20	39
20	42.5
20	45
20	48.5
20	52
20	55
20	58
20	61
20	64.5
20	67.5
20	71
20	74
20	77
20	80
20	83.5

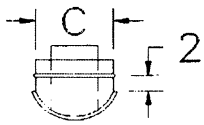
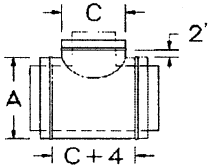
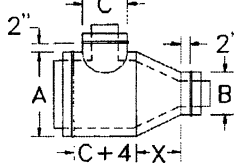
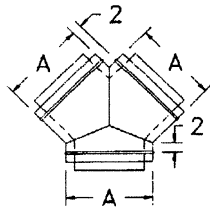
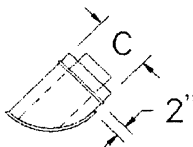
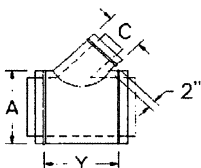
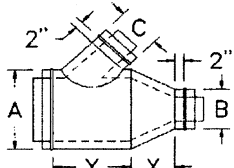
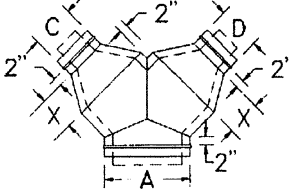
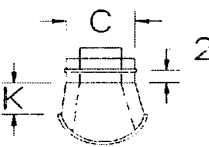
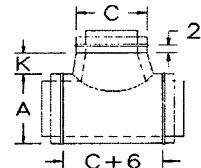
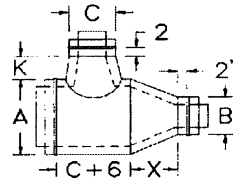
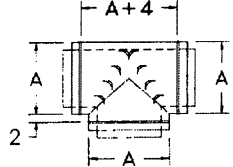
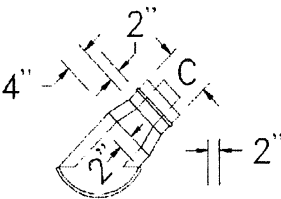
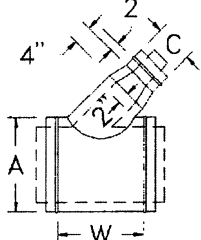
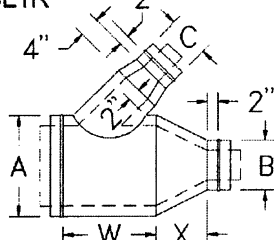
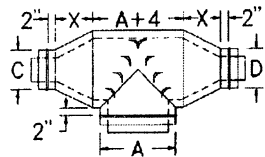
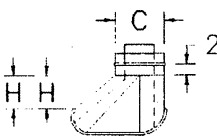
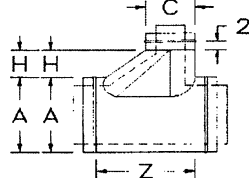
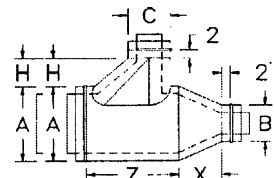
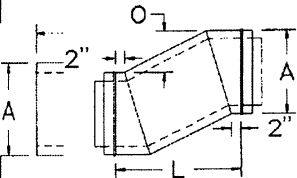
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Minor Axis	Major Axis
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22	28.5
22	31.5
22	35
22	38
22	41
22	44
22	47.5
22	50.5
22	53.5
22	57
22	60
22	63
22	66
22	69.5
22	72.5
22	75.5
22	79
22	82

SIZE	
Minor Axis	Major Axis
24	27.5
24	30.5
24	33.5
24	37
24	40
24	43
24	46.5
24	49.5
24	52.5
24	55.5
24	59
24	62
24	65
24	68
24	71.5
24	74.5
24	77.5
24	81

Double Wall Oval Spiral Pipe and Fitting Standards

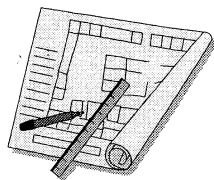
<p>SP</p> 	<p>B1</p> 	<p>PP</p>  <p style="text-align: center;">PIPE TO PIPE</p>	<p>FF</p>  <p style="text-align: center;">FITTING TO FITTING</p>	<p>EC</p>  <p style="text-align: center;">END CAP</p>	<p>EP</p>  <p style="text-align: center;">END PLUG</p>																											
Spiral Pipe	Bellmouth	Couplings		Caps & Plugs																												
<p>E1 Thru E36</p>  <p style="text-align: center;">A = 3" Thru 24"</p>	<p>E37 Thru E71</p>  <p style="text-align: center;">A = Greater than 24"</p>	<p>EV90</p>  <p style="text-align: center;">A = 3" Thru 60"</p>	<p>ET90</p>  <p style="text-align: center;">A = 3" Thru 60"</p>																													
2 Gore Elbows		Mitered Elbow	Elbow w/Tap																													
<p>E37 Thru E71</p>  <p style="text-align: center;">A = 3" Thru 24"</p>	<p>E72 Thru E90</p>  <p style="text-align: center;">A = Greater than 24"</p>	<p>E37 Thru E71</p>  <p style="text-align: center;">A = 3" Thru 24"</p>	<p>E72 Thru E90</p>  <p style="text-align: center;">A = Greater than 24"</p>																													
3 Gore Elbows		5 Gore Elbows																														
<p>R1</p> 	<p>ER1</p> 	<p>SD</p> 																														
Reducers		Stepdown																														
<p>Dimensions:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">A = Inlet (Major x Minor or Minor x Major)</td> <td style="width: 33%;">K = 5 1/4"</td> <td style="width: 33%;">V = (A/2x1.414)+((C+2)/2)+6</td> </tr> <tr> <td>B = Outlet (Major x Minor or Minor x Major)</td> <td>L = Offset Length</td> <td>W = (C+2)x1.414+4</td> </tr> <tr> <td>C = Branch (Major x Minor or Minor x Major)</td> <td>O = Offsetting Amount</td> <td>X = 12" if A - B = 18" or Less</td> </tr> <tr> <td>D = Branch (Major x Minor or Minor x Major)</td> <td>R = 1.5 x A</td> <td>24" if A - B = 19" or Greater</td> </tr> <tr> <td>H = 3" if C = 3" to 8"</td> <td>S = 2</td> <td>Y = (1.414 x C) + 4</td> </tr> <tr> <td>6" if C = 9" to 16"</td> <td>T = A/4+2</td> <td>Z = C+H+4</td> </tr> <tr> <td>9" if C = 17" to 24"</td> <td>U = Ax2+2</td> <td>* = Consult Factory</td> </tr> <tr> <td>12" if C = 25" & Up</td> <td>**Dimension of Liner = O.D. - (2 x Insulation Thickness)</td> <td></td> </tr> <tr> <td></td> <td>**End of Liner Extends 2" Past Ends of Fittings</td> <td></td> </tr> </table>						A = Inlet (Major x Minor or Minor x Major)	K = 5 1/4"	V = (A/2x1.414)+((C+2)/2)+6	B = Outlet (Major x Minor or Minor x Major)	L = Offset Length	W = (C+2)x1.414+4	C = Branch (Major x Minor or Minor x Major)	O = Offsetting Amount	X = 12" if A - B = 18" or Less	D = Branch (Major x Minor or Minor x Major)	R = 1.5 x A	24" if A - B = 19" or Greater	H = 3" if C = 3" to 8"	S = 2	Y = (1.414 x C) + 4	6" if C = 9" to 16"	T = A/4+2	Z = C+H+4	9" if C = 17" to 24"	U = Ax2+2	* = Consult Factory	12" if C = 25" & Up	**Dimension of Liner = O.D. - (2 x Insulation Thickness)			**End of Liner Extends 2" Past Ends of Fittings	
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Double Wall Oval Spiral Pipe and Fitting Standards

<p>LT</p> 	<p>T1</p> 	<p>T1R</p> 	<p>Y2</p> 
Straight 90 Degree Tees			"Y" Fitting
<p>LL</p> 	<p>L1</p> 	<p>L1R</p> 	<p>Y2R</p> 
45 Degree Lateral Tees			Reducing "Y" Fitting
<p>LCT</p> 	<p>CT1</p> 	<p>CT1R</p> 	<p>BT</p> 
Conical 90 Degree Tees			Bullhead Tee
<p>LCL</p> 	<p>CL1</p> 	<p>CL1R</p> 	<p>BTR</p> 
Conical 45 Degree Lateral Tees			Reducing Bullhead
<p>LLL</p> 	<p>LL1</p> 	<p>LL1R</p> 	<p>SET</p> 
Low Loss 90 Degree Tees			Offset

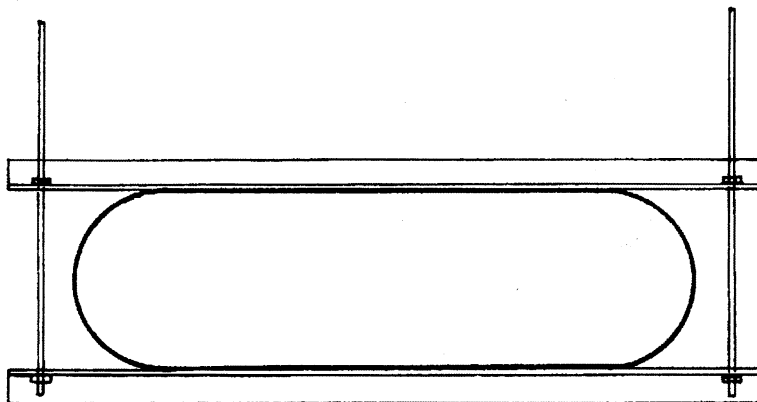
Wm. H. Brady, Inc.

P.O. Box 36
 Elkton, MD 21922-0036
 www.wmhbrady.com



Phone: 410-398-4770
 Fax: 410-392-6165
 e-mail: sales@wmhbrady.com

DOUBLE ANGLE EXTERIOR REINFORCEMENT FOR OVAL DUCT



MAXIMUM WIDTH	LOW PRESSURE to 2" S. P.	MEDIUM PRESSURE to 6" S. P.	HIGH PRESSURE to 10" S. P.
0" to 24"			
24" to 28"			6' Centers (1-1/2 x 1-1/2 x 1/8)
28" to 36"		6' Centers (1-1/2 x 1-1/2 x 1/8)	4' Centers (1-1/2 x 1-1/2 x 1/8)
36" to 40"		4' Centers (1-1/2 x 1-1/2 x 1/8)	3'6" Centers (2 x 2 x 1/8)
40" to 46"	6' Centers (1 x 1 x 1/8)		
		3'6" Centers (1-1/2 x 1-1/2 x 1/8)	3' Centers (2 x 2 x 1/8)
	5' Centers (1-1/2 x 1-1/2 x 1/8)		
46" to 52"	4'6" Centers (1-1/2 x 1-1/2 x 1/8)	3' Centers (2 x 2 x 1/8)	2'6" Centers (2 x 2 x 3/16)
52" to 60"	4' Centers (1-1/2 x 1-1/2 x 1/8)	2'6" Centers (2 x 2 x 1/8)	2' Centers (2-1/2 x 2-1/2 x 3/16)
60" to 72"	3'6" Centers (2 x 2 x 1/8)	2'6" Centers (2 x 2 x 1/4)	2' Centers (3 x 3 x 3/16)