

DIMENSIONAL DATA

R-4 COMMERCIAL



620 North Post Street • Post Falls, ID 83854 • 208.777.7444 ph 208.777.7445 fax •
www.spunstrand.com

R-4 (Insulated) Duct and Fittings – Shipping Weights

NOMINAL DIAM. (IN)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	STRAIGHT DUCT / FT (lbs)	45° ELBOW (lbs)	90° ELBOW (lbs)	CON. RED. (lbs)	ECC. RED. (lbs)	END CAP (lbs)	TEE (lbs)	SINGLE 45° Y (lbs)	SINGLE 90° Y (lbs)	CROSS (lbs)	DOUBLE 45° Y (lbs)	DOUBLE 90° Y (lbs)	TRUE Y (lbs)	SADDLE TAP (lbs)	TRANSITIO N (lbs)	FLANGE (lbs)
4	2	2	4	2	3	2	2	2	4	2	4	8	2	1	6	2
5	2	2	4	2	3	2	4	4	6	6	6	10	2	1	7	2
6	2	2	4	3	4	2	4	6	8	6	8	12	4	1	8	3
7	3	3	5	4	5	3	4	7	9	7	9	13	4	2	10	3
8	3	4	7	4	5	3	6	8	11	8	11	15	5	2	11	4
9	3	4	8	5	7	3	8	10	15	10	15	23	5	2	12	4
10	4	5	9	5	7	5	9	12	17	11	17	25	7	4	14	5
12	4	7	12	5	7	5	13	16	21	16	21	33	7	4	16	6
14	5	9	16	7	9	6	17	23	28	20	29	39	11	4	19	6
16	6	10	17	8	10	7	18	24	29	22	30	40	12	5	19	6
18	6	12	22	8	11	8	22	31	34	26	37	44	16	5	21	7
20	7	16	28	10	13	11	27	38	47	31	49	56	23	8	26	9
22	8	19	32	13	17	12	31	42	52	36	57	71	25	8	42	14
24	11	23	42	15	20	15	45	65	75	55	80	100	35	11	49	16
26	12	27	48	18	23	15	48	75	90	60	95	115	40	11	53	18
28	13	28	52	20	26	16	52	95	110	65	125	135	48	11	57	19
30	14	32	55	21	27	17	60	105	130	70	130	170	54	12	61	21
32	15	35	79	22	29	18	66	112	142	76	142	183	61	13	66	22
34	17	42	80	24	31	20	81	245	152	94	167	208	71	14	70	24
36	19	49	81	25	33	21	96	152	162	111	192	233	81	15	74	25
38	20	52	89	27	37	24	100	159	173	116	199	251	94	15	77	26
40	22	54	87	29	41	26	104	166	184	121	207	269	107	16	80	27
42	22	59	105	32	41	24	113	180	213	134	222	305	134	16	85	28
44	25	62	111	34	43	25	117	184	217	138	228	310	143	17	88	29
46	27	66	117	35	45	26	121	187	221	141	234	315	151	18	91	30
48	27	72	125	36	47	27	128	194	226	148	246	325	164	18	94	32
54	31	94	170	45	59	31	194	288	329	222	364	461	218	22	100	34
60	39	113	210	50	65	40	246	380	450	280	480	609	240	28	107	36
66	52	175	327	74	96	47	378	603	702	425	759	953	459	34	152	51
70	61	216	406	90	116	52	466	751	870	522	945	1182	605	38	82	61
*72	65	237	445	98	127	55	509	826	954	572	1039	1297	678	39	199	67

**72" and larger diameter ductwork is not included in the ICC-ES listing.*

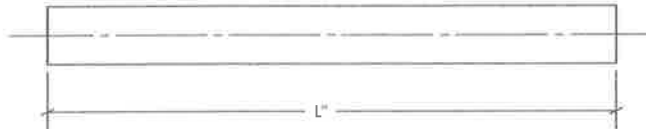
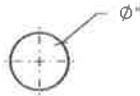
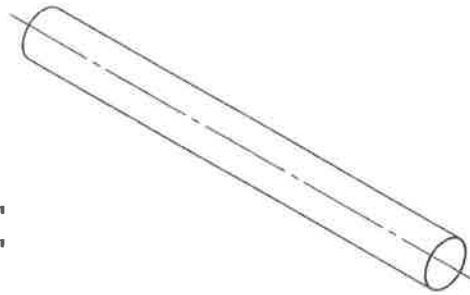
OUTSIDE DIAMETER FOR R-4¹ DUCT
Tolerance +/- 1/4"

NOMINAL INSIDE DIAMETER (Inches)	INNER WALL		OUTER WALL		OUTSIDE DIAMETER
	# of PLIES	NOM. WALL THICKNESS (Inch)	# of PLIES	NOM. WALL THICKNESS (Inch)	
4	2	0.045	3	0.0675	5.5
5	2	0.045	3	0.0675	6.5
6	2	0.045	3	0.0675	7.5
7	2	0.045	3	0.0675	8.5
8	2	0.045	3	0.0675	9.5
9	2	0.045	3	0.0675	10.5
10	2	0.045	3	0.0675	11.5
12	2	0.045	3	0.0675	13.5
14	2	0.045	3	0.0675	15.5
16	2	0.045	3	0.0675	17.5
18	2	0.045	3	0.0675	19.5
20	2	0.045	3	0.0675	21.5
22	2	0.045	3	0.0675	23.5
24	3	0.0675	4	0.09	25.6
26	3	0.0675	4	0.09	27.6
28	3	0.0675	4	0.09	29.6
30	3	0.0675	4	0.09	31.6
32	3	0.0675	4	0.09	33.6
34	3	0.09	4	0.09	35.6
36	4	0.09	4	0.09	37.6
38	4	0.09	4	0.09	39.6
40	4	0.09	4	0.09	41.6
42	4	0.09	4	0.09	43.6
44	4	0.09	4	0.09	45.6
46	4	0.09	4	0.09	47.6
48	4	0.09	4	0.09	49.6
54	4	0.09	5	0.1125	55.7
60	4	0.90	6	0.135	61.7
66	4	0.09	8	0.18	67.8
70	5	0.1125	9	0.2025	71.9

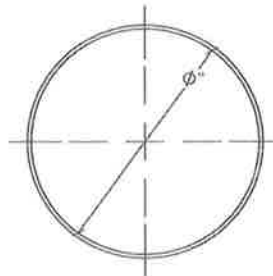
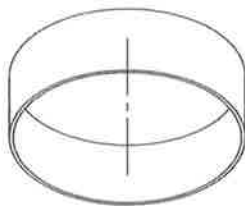
****72" and larger diameter ductwork is not included in the ICC-ES listing.***

Straight Duct

4" ϕ - 48" ϕ L = 20'-0"
 52" ϕ - 72" ϕ L = 10'-0"



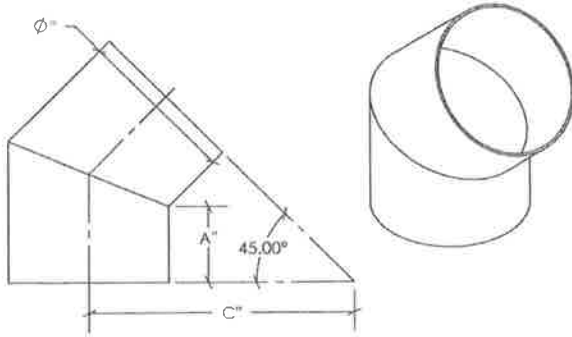
End Cap



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				CHECKED ENG APPR. MFG APPR.				<p>Duct</p>
				MATERIAL FINISH	Q.A. COMMENTS:			
	NEXT ASSY USED ON APPLICATION			DO NOT SCALE DRAWING				SIZE A DWG. NO. Underslab FRP REV.

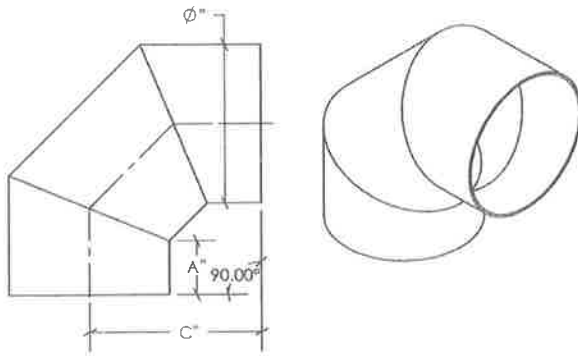
**72" and larger diameter ductwork is not included in ICC-ES listing.*

45° Elbows



Diameter (in)	90° Elbows		45° Elbows
	A (in)	C (in)	C (in)
4	6	12 3/8	16 5/8
5	6	12 7/8	17 1/8
6	6	13 3/8	17 5/8
7	6	13 7/8	18 1/8
8	6	14 3/8	18 5/8
9	6	14 7/8	19 1/8
10	6	15 3/8	19 5/8
12	6	16 3/8	20 5/8
14	6	17 3/8	21 5/8
16	6	18 3/8	22 5/8
18	6	19 3/8	23 5/8
20	6	20 3/8	24 5/8
22	6	21 3/8	25 5/8
24	6	22 3/8	26 5/8
26	6	23 3/8	27 5/8
28	6	24 3/8	28 5/8
30	6	25 3/8	29 5/8
32	6	26 3/8	30 5/8
34	6	27 3/8	31 5/8
36	6	28 3/8	32 5/8
38	6	29 3/8	33 5/8
40	6	30 3/8	34 5/8
42	6	31 3/8	35 5/8
44	6	32 3/8	36 5/8
48	6	34 3/8	38 5/8
52	6	36 3/8	40 5/8
54	6	37 3/8	41 5/8
60	6	40 3/8	44 5/8
72	6	46 3/8	50 5/8

90° Elbows

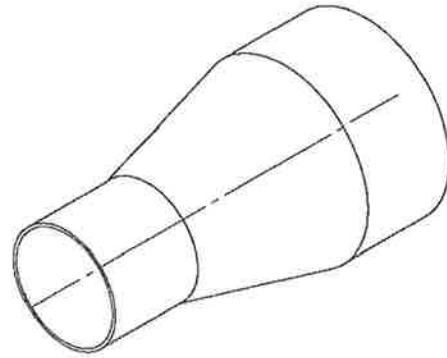


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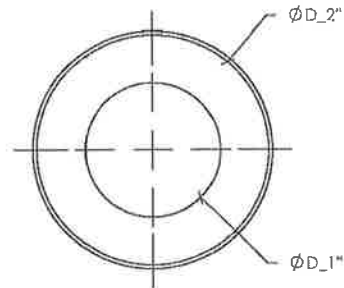
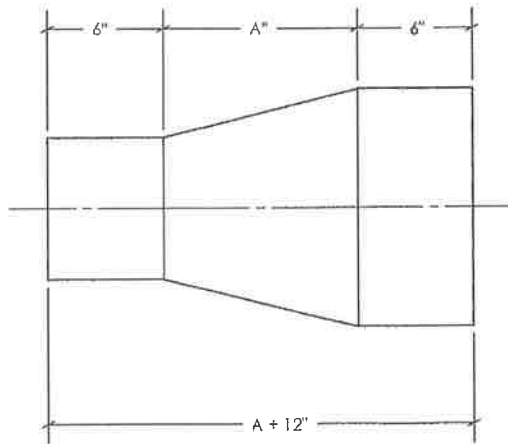
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		MATERIAL		CHECKED		
		FINISH		ENG APPR.		SIZE A DWG. NO. Underslab FRP REV
NEXT ASSY		USED ON		MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING		Q.A.		
				COMMENTS:		

***72" and larger diameter ductwork is not included in ICC-ES listing.**

Inches of Reduction	A
1"	2 1/8"
2"	4
3"	5 7/8"
4"	7 3/4"
5"	9 5/8"
6"	11 1/2"
7"	13 3/8"
8"	15 1/8"
9"	17"
10"	18 7/8"
11"	20 3/4"
12"	22 5/8"
13"	24 1/2"
14"	26 3/8"
15"	28 5/8"
16"	32"
17"	33 7/8"
18"	35 3/4"
19"	36 5/8"
20"	37 5/8"



Inches of Reduction = D₂ - D₁



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		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION	DO NOT SCALE DRAWING	

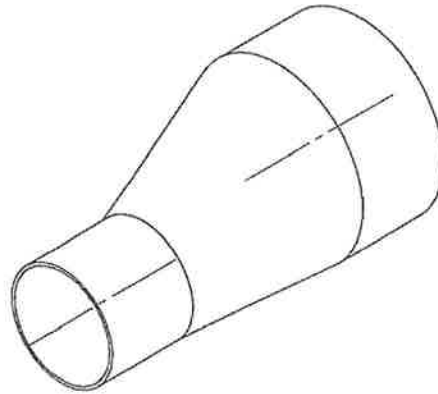
	NAME	DATE
DRAWN	CJS	2009
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

Spunstrand Inc.

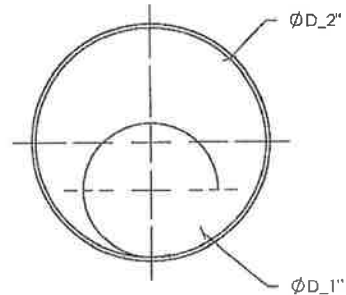
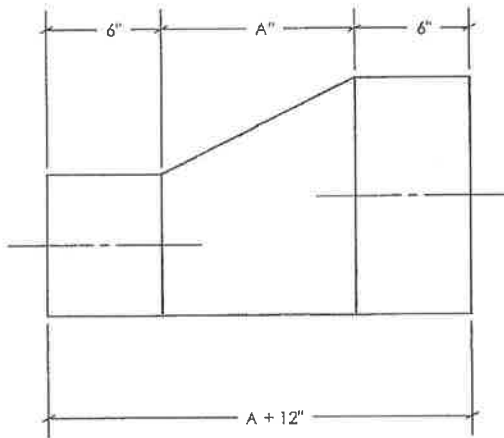
Concentric Reducer

SIZE A	DWG. NO. Underslab FRP	REV.
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Inches of Reduction	A
1"	4 1/4"
2"	8"
3"	11 3/4"
4"	15 1/2"
5"	19 1/4"
6"	23"
7"	26 3/4"
8"	30 1/4"
9"	34"
10"	37 3/4"
11"	41 1/2"
12"	45 1/4"
13"	49"
14"	52 3/4"
15"	57 1/4"
16"	64"
17"	67 3/4"
18"	69 1/4"
19"	71 1/2"
20"	75 1/4"

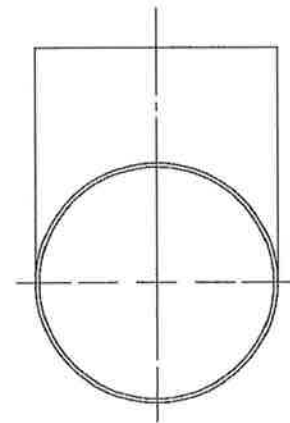
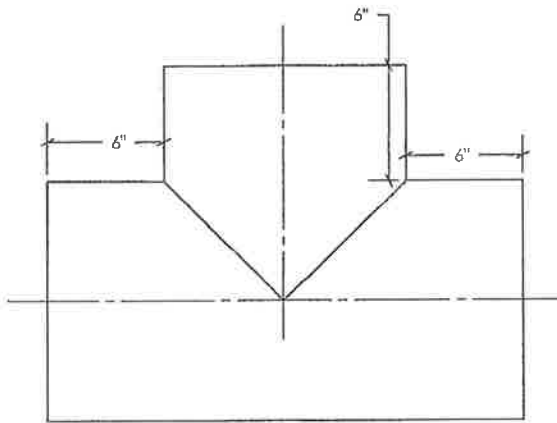
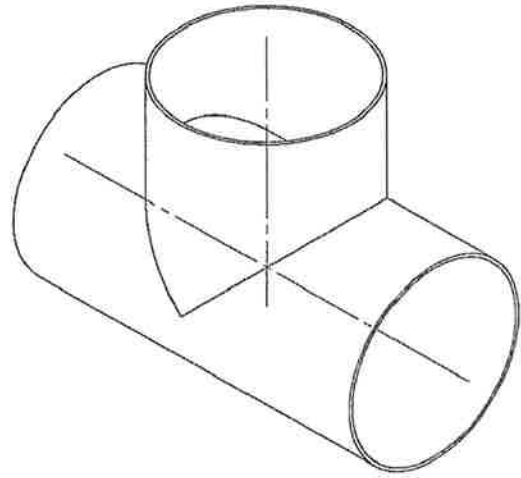
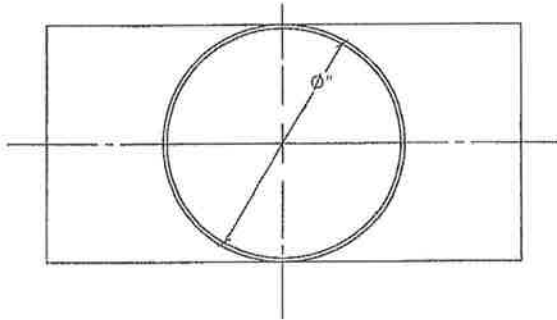


Inches of Reduction = $D_2 - D_1$



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		DIMENSIONS ARE IN INCHES		NAME	DATE	<i>Spunstrand Inc.</i>								
		TOLERANCES:		DRAWN	CJS		2009							
		FRACTIONAL ±		CHECKED		Eccentric Reducer								
		ANGULAR: MACH ± BEND ±		ENG APPR.										
		TWO PLACE DECIMAL ±		MFG APPR.										
		THREE PLACE DECIMAL ±		Q.A.										
		MATERIAL		COMMENTS:		<table border="1"> <tr> <td>SIZE</td> <td>DWG. NO.</td> <td>Underlab FRP</td> <td>REV.</td> </tr> <tr> <td>A</td> <td></td> <td></td> <td></td> </tr> </table>	SIZE	DWG. NO.	Underlab FRP	REV.	A			
SIZE	DWG. NO.	Underlab FRP	REV.											
A														
NEXT ASSY	USED ON	FINISH												
APPLICATION		DO NOT SCALE DRAWING												



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				NAME	DATE
				DRAWN	CJS 2009
				CHECKED	
				ENGR APPR.	
				MFG APPR.	
				Q.A.	
				COMMENTS:	
NEXT ASSY	USED ON				
APPLICATION					

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

MATERIAL

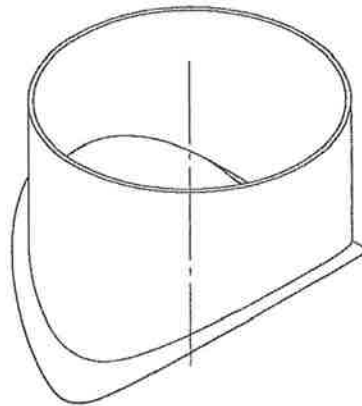
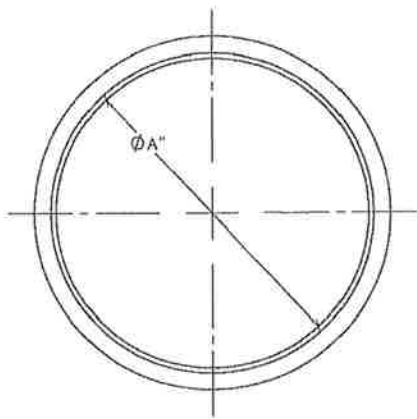
FINISH

DO NOT SCALE DRAWING

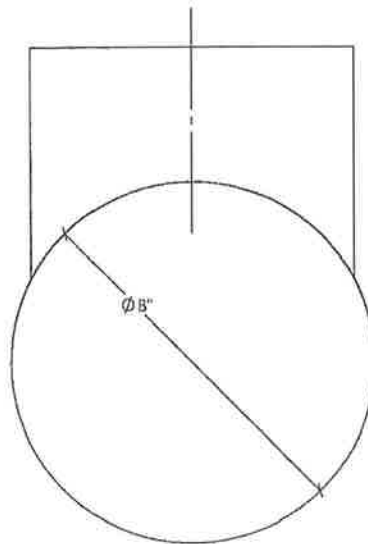
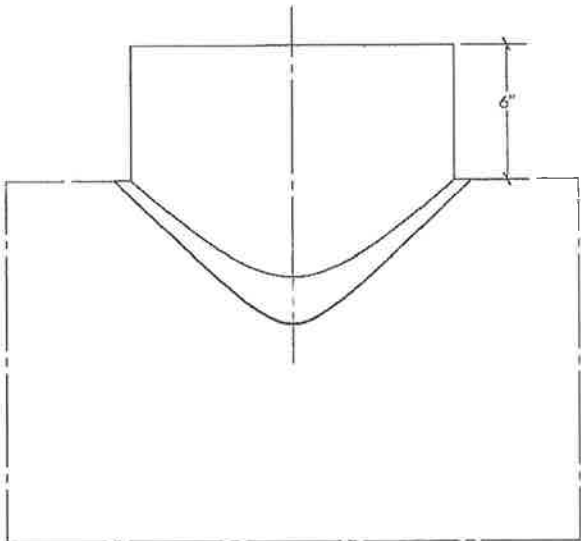
Spunstrand Inc.

TEE

SIZE	DWG. NO.	Underlab FRP	REV.
A			



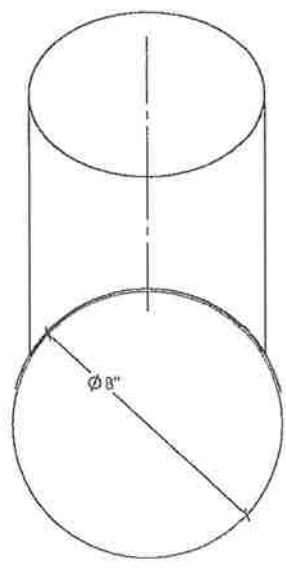
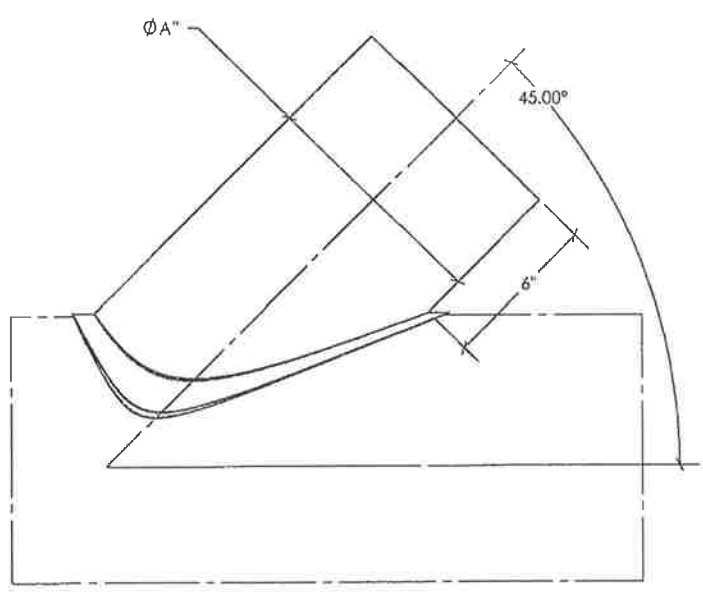
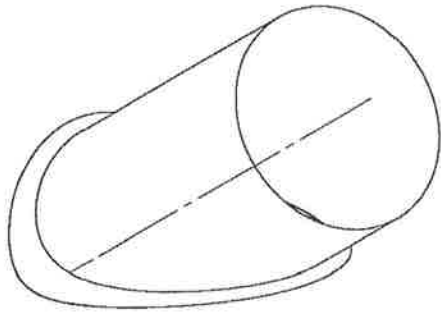
A onto B



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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	NAME	DATE	<i>Spunstrand Inc.</i> 90deg Saddle Tap
			DRAWN	CJS 2009	
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		MATERIAL	Q.A.		
		FINISH	COMMENTS:		
NEXT ASSY	USED ON				SIZE A DWG. NO. Underslab FRP REV.
APPLICATION		DO NOT SCALE DRAWING			

A onto B

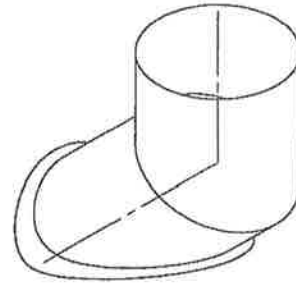
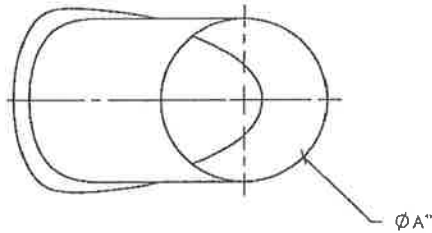


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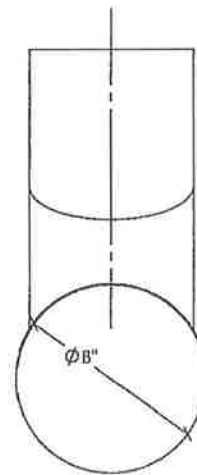
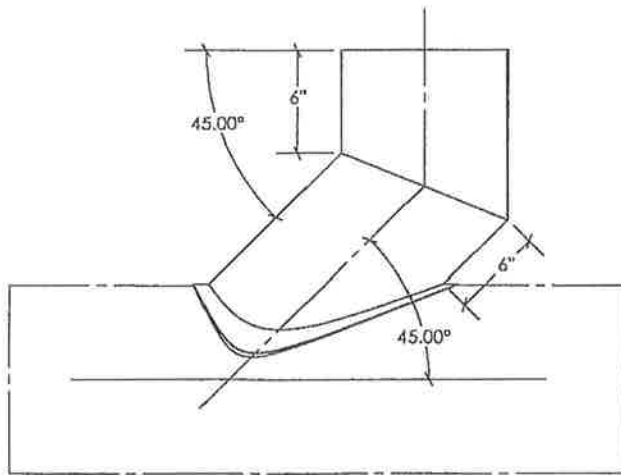
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		TOLERANCES:
		FRACTIONAL ±
		ANGULAR: MACH ± BEND ±
		TWO PLACE DECIMAL ±
		THREE PLACE DECIMAL ±
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN#	CJS	2009
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

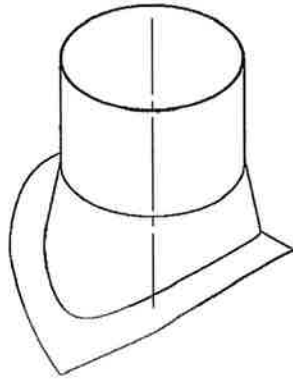
<i>Spunstrand Inc.</i>		
45deg Saddle Tap		
SIZE A	DWG. NO. Underslab FRP	REV.



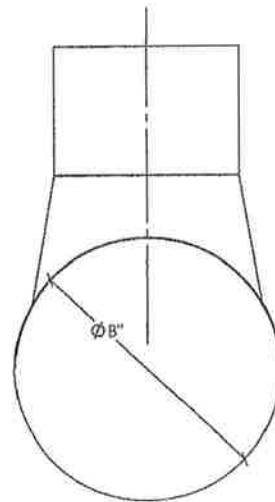
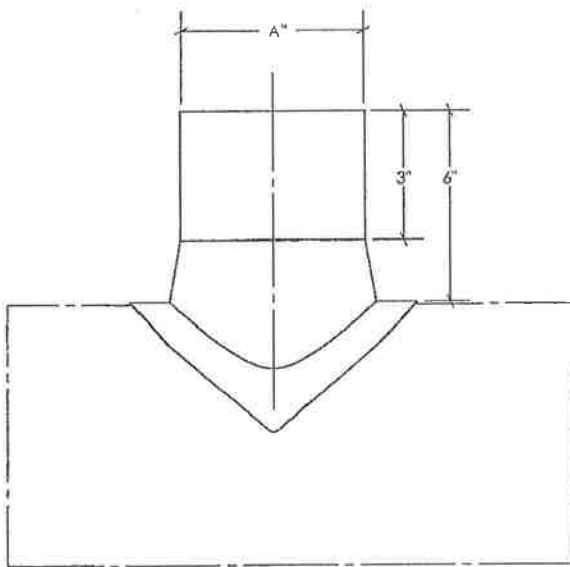
A onto B



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				DRAWN	C.JS		2009
					CHECKED		
					ENG APPR.		
				MFG APPR.			
				Q.A.			
			FINISH	COMMENTS:			
	NEXT ASSY	USED ON				SIZE A DWG. NO. Underslab FRP REV.	
	APPLICATION		DO NOT SCALE DRAWING				

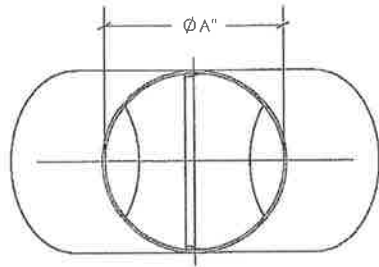
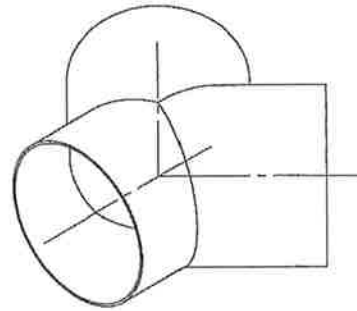
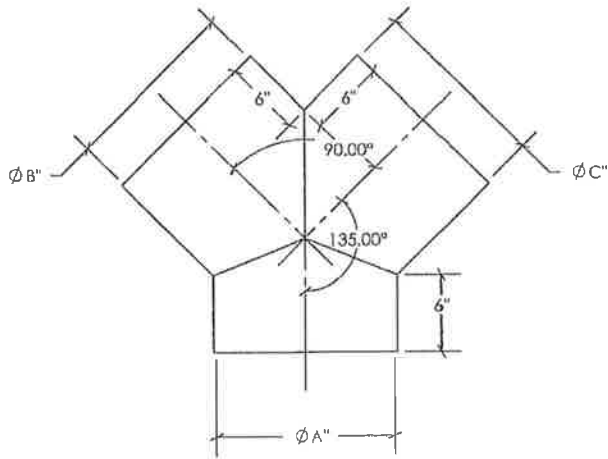


A onto B



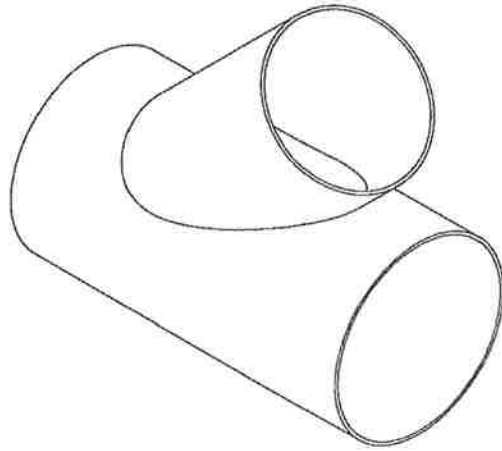
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		DIMENSIONS ARE IN INCHES		NAME	DATE	<i>Spunstrand Inc.</i>
		TOLERANCES:		DRAWN	CJS	
		FRACTIONAL ±		CHECKED		Conical Tap
		ANGULAR: MACH ± BEND ±		ENG APPR.		
		TWO PLACE DECIMAL ±		MFG APPR.		
		THREE PLACE DECIMAL ±		Q.A.		
		MATERIAL		COMMENTS:		SIZE A
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				Underlab FRP
						REV.



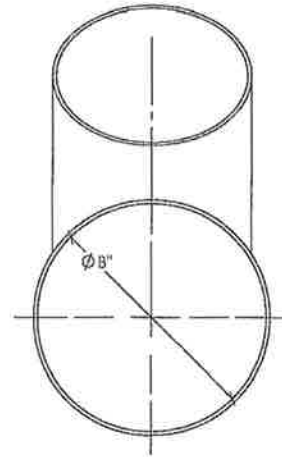
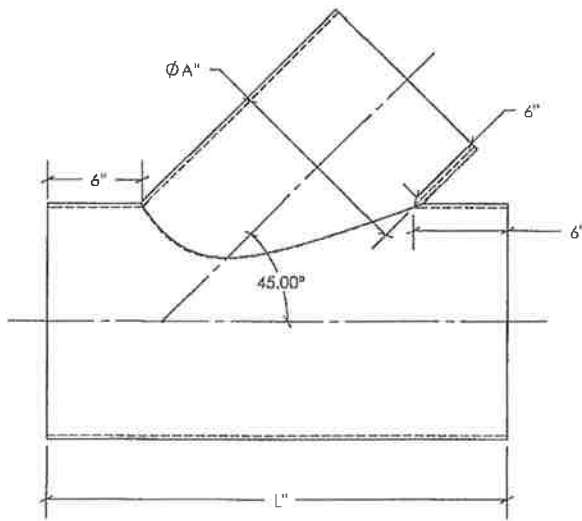
A x B x C

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			TOLERANCES:	DRAWN	CJS		2009
			FRACTIONAL ±	CHECKED			
			ANGULAR: MACH ± BEND ±	ENG APPR.			
			TWO PLACE DECIMAL ±	MFG APPR.			
		THREE PLACE DECIMAL ±	G.A.				
		MATERIAL	COMMENTS:				
	NEXT ASSY	USED ON	FRSH				
	APPLICATION		DO NOT SCALE DRAWING				
				SIZE	DWG. NO.	REV.	
				A	Underslab FRP		



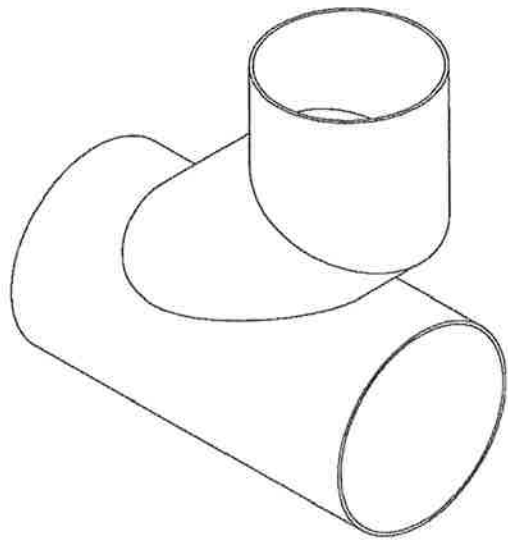
45 DEGREE LATERAL	
"A" DIAMETER	L
4	17 2/3
5	19
6	20 1/2
7	21 8/9
8	23 1/3
9	24 3/4
10	26 1/7
12	29
14	31 7/8
16	34 5/8
18	37 1/2
20	40 1/4
22	43 1/8
24	46
26	48 3/4
28	51 5/8
30	54 1/2
32	57 1/4
34	60
36	63
38	65 3/4
40	68 5/8
42	71 1/4
44	74 1/4
48	79.872
52	85 1/2
54	88 3/8
60	96 7/8
72	113 7/8

A x B

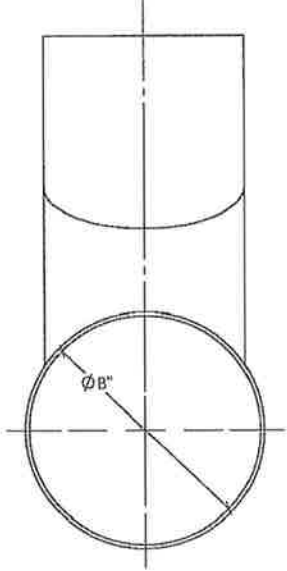
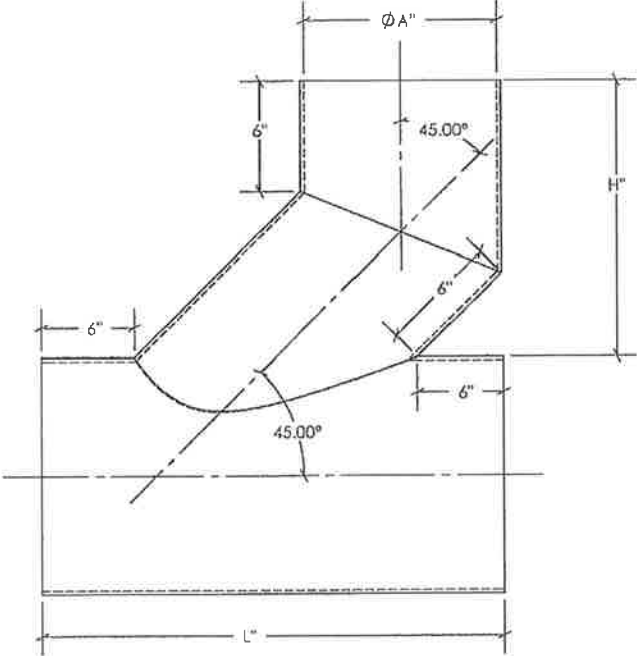


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			MATERIAL	DRAWN	CJS		2009							
			FINISH	CHECKED										
	NEXT ASSY	USED ON		ENG APPR.										
	APPLICATION	DO NOT SCALE DRAWING		MFG APPR.										
				Q.A.										
				COMMENTS:										
						<table border="1"> <tr> <td>SIZE</td> <td>DWG. NO.</td> <td>Underlab FRP</td> <td>REV.</td> </tr> <tr> <td>A</td> <td></td> <td></td> <td></td> </tr> </table>	SIZE	DWG. NO.	Underlab FRP	REV.	A			
SIZE	DWG. NO.	Underlab FRP	REV.											
A														

*72" and larger diameter ductwork is not included in ICC-ES listing.



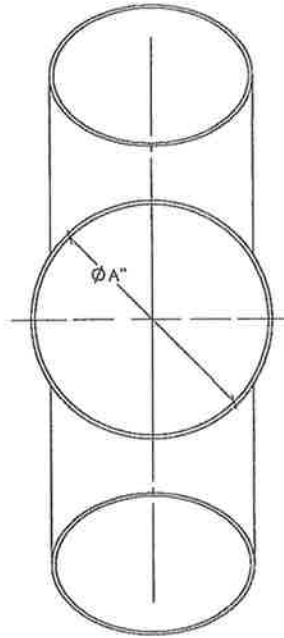
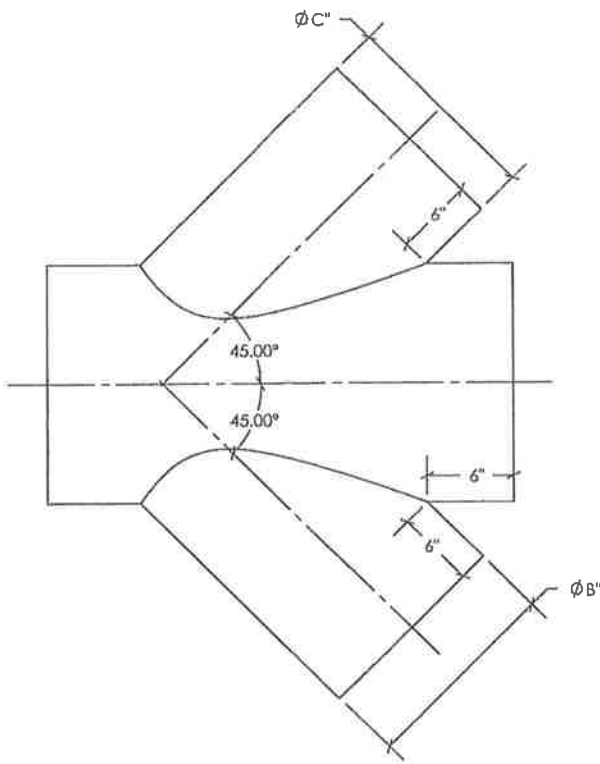
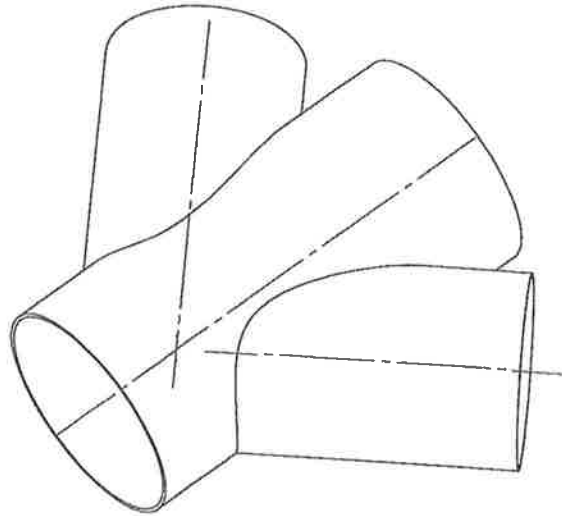
90 DEGREE LATERAL		
"A" DIAMETER	L	H
4	17 2/3	12
5	19	12 1/3
6	20 1/2	12 3/4
7	21 8/9	13 1/7
8	23 1/3	13 4/7
9	24 3/4	14
10	25 1/7	14 2/5
12	29	15 2/9
14	31 7/8	16
16	34 5/8	16 7/8
18	37 1/2	17 5/7
20	40 1/4	18 1/2
22	43 1/8	19 1/3
24	46	20 1/5
26	48 3/4	21
28	51 5/8	21 6/7
30	54 1/2	22 2/3
32	57 1/4	23 1/2
34	60	24 1/3
36	63	25 1/6
38	65 3/4	26
40	68 5/8	26 5/6
42	71 1/4	27 2/3
44	74 1/4	28 1/2
48	79.872	30 1/8
52	85 1/2	31 4/5
54	88 3/8	32 5/8
60	96 7/8	35 1/9
72	113 7/8	40



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			MATERIAL				
			FR-451	Q.A.			
	NEXT ASSY	USED ON		COMMENTS:			
	APPLICATION	DO NOT SCALE DRAWING					
SIZE A DWG. NO. Underslab FRP REV.							

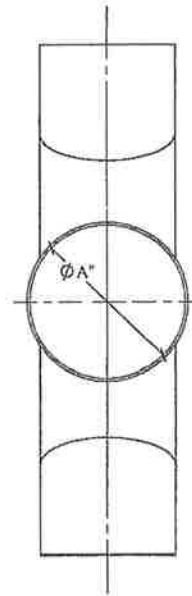
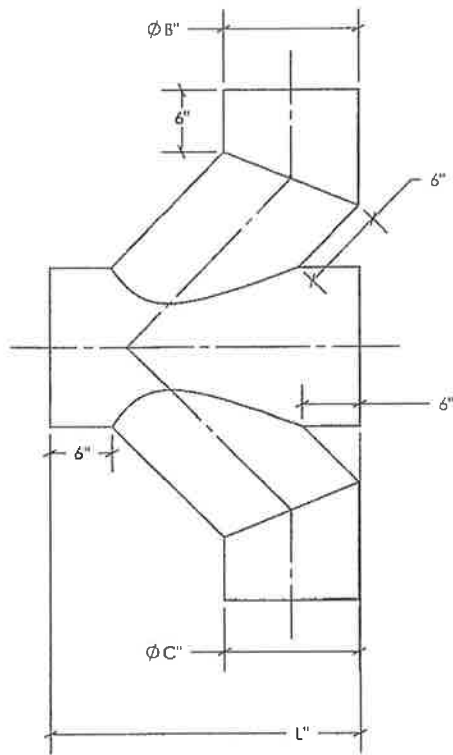
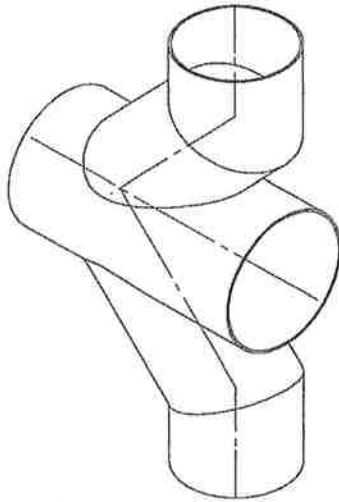
**72" and larger diameter ductwork is not included in ICC-ES listing.*

A x B x C



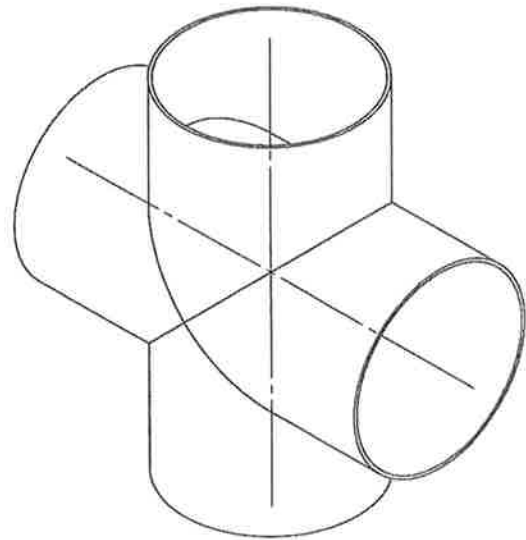
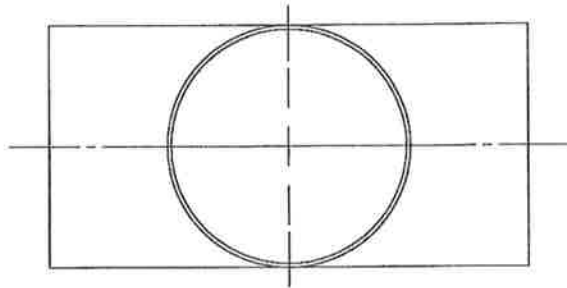
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		DIMENSIONS ARE IN INCHES		NAME	DATE	<i>Spunstrand Inc.</i>	
		TOLERANCES:		DRAWN	CJS		
		FRACTIONAL ±		CHECKED			Double 45deg Lateral
		ANGULAR: MACH ± BEND ±		ENG APPR.			
		TWO PLACE DECIMAL ±		MFG APPR.			
		THREE PLACE DECIMAL ±		Q.A.			
		MATERIAL		COMMENTS:			SIDE A DWG. NO. Underlab FRP REV.
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					



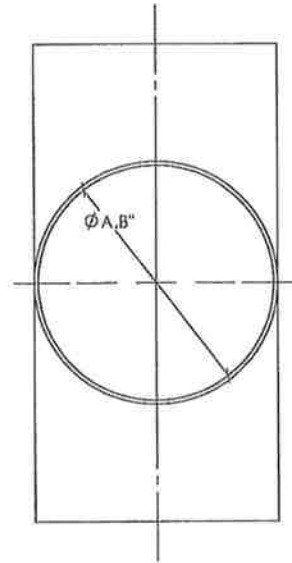
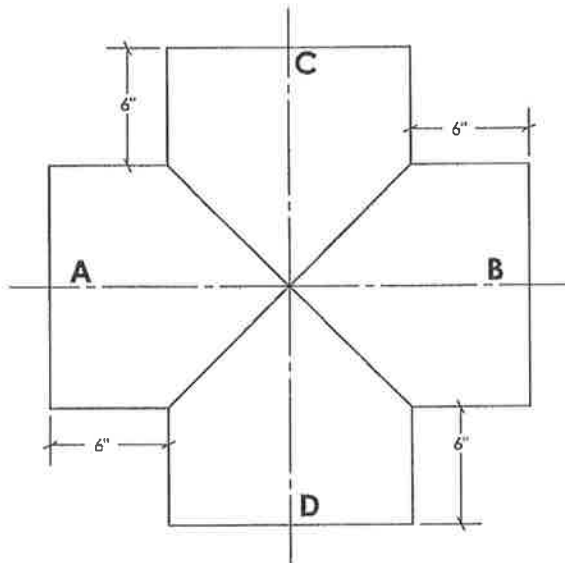
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		DIMENSIONS ARE IN INCHES		NAME	DATE	<i>Spunstrand Inc.</i>
		TOLERANCES:		DRAWN	CJS	
		FRACTIONAL ±		CHECKED		Double 90deg Lateral
		ANGULAR: MACH ± BEND ±		ENG APPR.		
		TWO PLACE DECIMAL ±		MFG APPR.		
		THREE PLACE DECIMAL ±		Q.A.		
		MATERIAL		COMMENTS:		
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				
				SIZE	DWG. NO.	Underlab FRP
						REV.



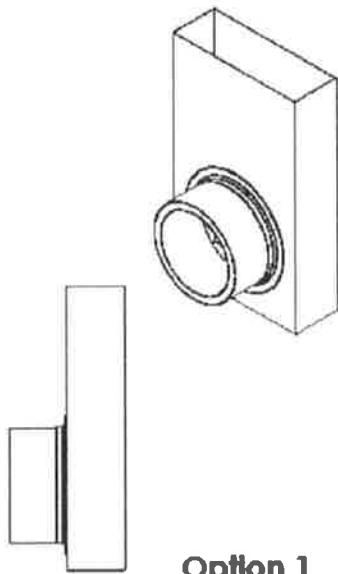
A x B x C x D

A & B must be equal diameter (Primary Air Flow)
C diameter must be equal to or less than A,B
D diameter must be equal to or less than A,B

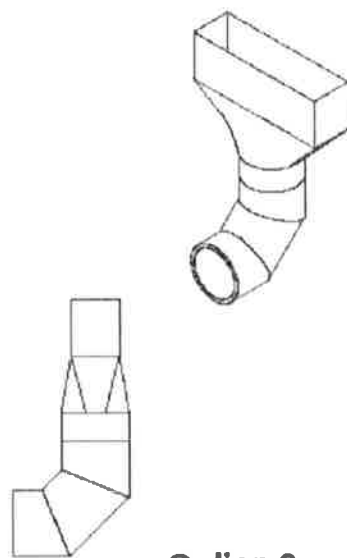


Reducing Crosses Available by Request

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				DRAWN	CJS		2009	
				CHECKED				
				ENG APPR.				
				MFG APPR.				
			G.A.					
			COMMENTS:					
	NEXT ASSY	USED ON	FINISH		SIZE	DWG. NO.	Under slab FRP	REV.
	APPLICATION		DO NOT SCALE DRAWING		A			



Option 1



Option 2

<p>CUSTOMER DRAWING APPROVAL _____ APPROVED _____ APPROVED AS NOTED</p> <p>AUTHORIZED SIGNATURE _____ DATE _____</p> <p>CONTRACT NO. _____</p> <p>THE SIGNATORY HEREBY VERIFIES THIS DRAWING TO BE CORRECT AND AUTHORIZES SPUNSTRAND INC. TO PROCEED WITH MANUFACTURING. THE SIGNATURE ASSUMES RESPONSIBILITY FOR SUBSEQUENT CHANGE REQUESTS & ANY TO THE PRODUCT REPRESENTED. ON THIS DRAWING AFTER COMMENCEMENT OF MANUFACTURING AND RECORDS THAT SAID CHANGES MAY RESULT IN ADDITIONAL CHARGES.</p>		<p>UNLESS OTHERWISE SPECIFIED:</p> <p>DIMENSIONS ARE IN INCHES DECIMALS FRACTIONALS ANGULAR MATCHES: 88ND + TWO PLACE DECIMAL: 2 THREE PLACE DECIMAL: 3</p>		<p>NAME: CJS</p> <p>DATE: 6/29/10</p>	<p>Spunstrand Inc.</p>	
		<p>DESIGNED BY: CJS</p> <p>CHECKED: _____</p> <p>ENG. APPR.: _____</p> <p>QA: _____</p>	<p>TITLE: Spunstrand FRP Register Boot Options</p>			
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