



Submittal For Double Wall Spiral Oval Ductwork

Project Name: _____

HRANEC CORP.



SUBMITTAL **Double Wall Spiral Oval**

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SPECIAL NOTES:

- **SUBMITAL** = INCLUDES ALL AVAILABLE MATERIALS, CONNECTIONS AND PRESSURE CLASSES REFFERANCE OUR FABRICATION FORM FOR PROJECT SPECIFIC DUCTWORK INFORMATION. LISTED AS PAGE 1
- **FABRICATION** = ALL DUCTWORK IS FABRICATED PER SMACNA STANDARDS AND / PROJECT SPECIFICATIONS
- **MATERIALS FOR PAINTING** = RECOMMENDED MATERIAL FOR PAINTED SPIRAL DUCT = PAINT GRIP, HOWEVER GALVANIZED G90 CAN EASILY BE PAINTED WITH EXTRA PREP WORK.
- **PREP BEFORE PAINTING** = WE RECOMMENDED WIPING DOWN MINIMAL EXCESS LUBRICANT TWICE BEFORE PAINTING WITH DRY RAGS. IN ADDITION, WIPE DOWN WITH NO RINSE PREPAINT CLEANER #13158 (SHERWIN WILLIAMS) BEFORE APPLYING TWO COATS METAL PRIMER.
- **PAINT AND PRIMER** = ALL PRIMER AND PAINT SHOULD BE LABELED TO ADHERE TO METAL PAINTING APPLICATIONS. FOLLOW PAINT MANUFACTURERS APPLICATION PROCEDURES, TEMERATURE, HUMIDITY, SURFACE PREP WORK, ETC.
- **CAUTION** = IF A STEEL CABLE HANGING SYSTEM IS USED TO SUSPEND DUCT WORK, DO NOT APPLY PAINT, LUBRICANTS, OR OTHER COATINGS TO THE HANGING SYSTEM. FOLLOW HANING SYSTEM MANUFACTURERS INSTRUCTIONS
- **TESTING** = OUR SPIRAL OVAL DUCTWORK HAS BEEN EXTENSIVELY AIR TESTED FOR LOW, MEDIUM, & HIGH PRESSURES.
- **SEAMS** = LONGITUDINAL SEAMS ARE ALL BUTTON LOCK AND SEALED ON FITTINGS.
- **GAUGES** = METAL GAUGES ARE PRESSURE CLASS DRIVEN FROM LATEST SMACNA STANDARDS
- **SEALANT** = PROPER SEALING OF ALL COMPONENTS ESSPECIALLY CONNECTIONS. IS REQUIRED TO AVOID DARK AIR STREAKS AFTER INSTALLATION.
- **MATERIAL** = GALVANIZED, PAINT GRIP, SS304, SS316, PVC 4X4, ALUMINUM
- **WATER PROOF** = SPIRAL SEAM DUCT WORK IS NOT CONSTRUCTED TO BE WATER PROOF



OVAL REINFORCEMENT CHART

Flat Oval Duct Reinforcement Schedule and Standard Gauges on Pipe and Fittings

▲ Flat Oval Duct Gauge for (+) Pressure up to 10 in. wg

Major Dimension	Spiral Seam Gauge	Fitting Gauge
To 24	24 ga.	20 ga.
25-30	22 ga.	20 ga.
31-36	22 ga.	20 ga.
37-42	22 ga.	18 ga.
43-48	22 ga.	18 ga.
49-54	20 ga.	18 ga.
55-60	20 ga.	18 ga.
61-66	20 ga.	16 ga.
71 and up	18 ga.	16 ga.

*per SMACNA HVAC Duct Construction Standards Metal and Flexible - 3rd Edition 2005

*all duct will meet or exceed specified gauges for all flat oval duct construction

Flat Oval Reinforcement Schedule

Flat Span	None Required	16 ga.	18 ga.	20 ga.	22 ga.	24 ga.
8" under	22 ga.					C - 5 ft.
9"-10"	20 ga.					C - 4 ft.
11"-12"	18 ga.	Not Required		C - 8 ft.	D - 5 ft.	D - 5 ft.
13"-14"	18 ga.			D - 8 ft.	D - 4 ft.	D - 3 ft.
15"-16"	16 ga.	E - 10 ft.		E - 5 ft.	N/A	E - 3 ft.
17"-18"	16 ga.	F - 10 ft.		F - 5 ft.	N/A	E - 3 ft.
19"-20"		G - 10 ft.	G - 8 ft.	F - 4 ft.	F - 3 ft.	E - 2.5 ft.
21"-22"		H - 10 ft.	H - 8 ft.	G - 4 ft.	F - 3 ft.	F - 2.5 ft.
23"-24"		I - 10 ft.	I - 8 ft.	H - 4 ft.	G - 3 ft.	F - 2.5 ft.
25"-26"		J - 8 ft.	H - 5 ft.	H - 4 ft.	G - 3 ft.	F - 2.5 ft.
27"-28"		I - 6 ft.	I - 5 ft.	N/A	H - 3 ft.	G - 2.5 ft.
29"-30"		J - 6 ft.	I - 5 ft.	N/A	H - 3 ft.	H - 2.5 ft.
31"-36"		J - 5 ft.	I - 4 ft.	1 - 3 ft.	H - 2.5 ft.	H - 2 ft.
37"-42"		J - 5 ft.	J - 4 ft.	1 - 2.5 ft.	I - 2 ft.	N/A
43"-48"		J - 4 ft.	J - 3 ft.	N/A	I - 2 ft.	N/A
49"-50"		L - 4 ft.	K - 3 ft.	1 - 2 ft.	N/A	N/A

- ALL GAUGE AND SIZE PIPE WILL BE SPIRAL SEAM
- ALL FITTINGS TO HAVE BUTTON LOCK AND SEAL TRANSVERSE SEAM
- ALL FITTINGS TO HAVE TACK WELD AND SEAL LONGITUDINAL SEAM



HRANEC OVAL SIZING CHART

**Ovaler
Oval Size & Gauge Chart**

Minor Axis	6	8	10	12	14	16	18	20	22	24	
	Major Axis										
	18.7	17.5	16.3								24 gauge
	21.8	20.7	19.5	18.3							
	25.0	23.8	22.7	21.5	20.3						
	28.1	27.0	25.8	24.7	23.5	22.3					
	31.3	30.1	29.0	27.8	26.7	25.5	24.3				
	34.5	33.3	32.1	31.0	29.8	28.7	27.5	26.3			
	37.6	36.5	35.3	34.1	33.0	31.8	30.7	29.5	28.3		
	40.8	39.6	38.5	37.3	36.1	35.0	33.8	32.7	31.5	30.3	
	44.0	42.8	41.6	40.5	39.3	38.1	37.0	35.8	34.7	33.5	22 gauge
	47.1	46.0	44.8	43.6	42.5	41.3	40.1	39.0	37.8	36.7	
	50.3	49.1	48.0	46.8	45.6	44.5	43.3	42.1	41.0	39.8	
	53.5	52.3	51.1	50.0	48.8	47.6	46.5	45.3	44.1	43.0	
	56.6	55.5	54.3	53.1	52.0	50.8	49.6	48.5	47.3	46.1	20 gauge
	59.8	58.6	57.5	56.3	55.1	54.0	52.8	51.6	50.5	49.3	
	62.9	61.8	60.6	59.5	58.3	57.1	56.0	54.8	53.6	52.5	
	66.1	64.9	63.8	62.6	61.5	60.3	59.1	58.0	56.8	55.6	
	69.3	68.1	66.9	65.8	64.6	63.5	62.3	61.1	60.0	58.5	
	72.4	71.3	70.1	68.9	67.8	66.6	65.5	64.3	63.1	62.0	
	75.6	74.4	73.3	72.1	70.9	69.8	68.6	67.5	66.3	65.1	18 gauge
	78.8	77.6	76.4	75.3	74.1	72.9	71.8	70.6	69.5	68.3	
	81.9	80.8	79.6	78.4	77.3	76.1	74.9	73.8	72.6	71.5	
	85.2	84.2	82.8	81.6	80.4	79.3	78.1	76.9	75.8	74.6	
			86.2	85.1	83.9	82.4	81.3	80.1	78.9	77.8	
					87.1	85.9	84.8	83.3	82.1	80.9	
						89.1	88.0	86.8	85.0	84.5	
							91.1	90.0	88.8	87.7	
								93.1	92.0	90.9	
									95.2	94.0	
										97.2	

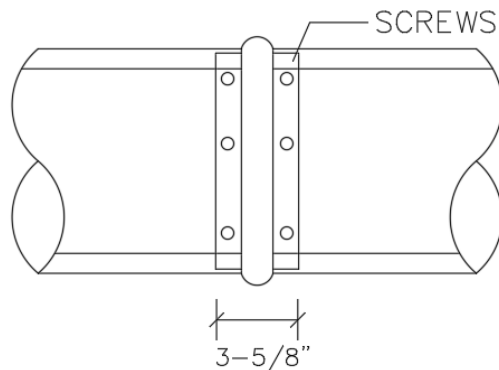
**Fitting
Gauges**

Major	Gauge
UP to 36"	20
37" to 60"	18
61" and UP	16

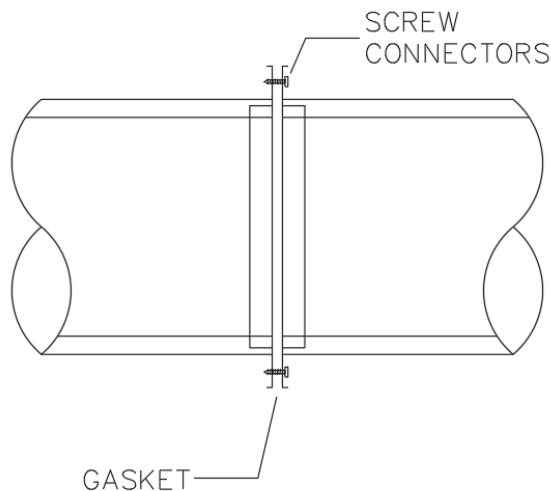


CONNECTIONS AVAILABLE FOR OVAL DUCT AND FITTINGS

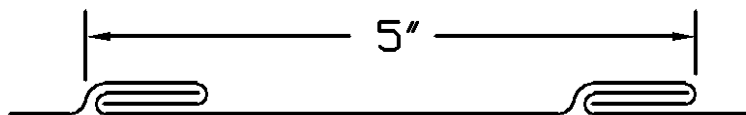
1. **SLIP FIT** = RECOMMENDED INSTALLATION = FITTINGS WILL SLIP INTO TO SPIRAL PIPE. FITTINGS WILL HAVE A 1 INCH EXTENSION ON THE INNER WALL THAT SHOULD BE INSERTED FIRST. THE OUTER WALL WILL BE INSERTED AFTER THE INNER WALL. CAULKING SHOULD BE USED TO SEAL THE CONNECTION. SCREWS MUST BE USED TO SECURE THE CONNECTION. SCREWS SHOULD BE PLACED EVERY 10 INCHES AROUND THE DIAMETER.



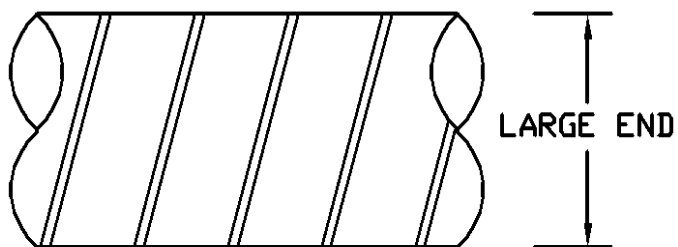
2. **SINGLE - WALL FLANGE** = RECOMMENDED INSTALLATION = FLANGED CONNECTION TO BE GASKETED OR CAULKED AND SCREWED EVERY 10"



SPIRAL DUCT



LATERAL SECTION OF 4-PLY PRESSURE PROOF SPIRAL SEAM



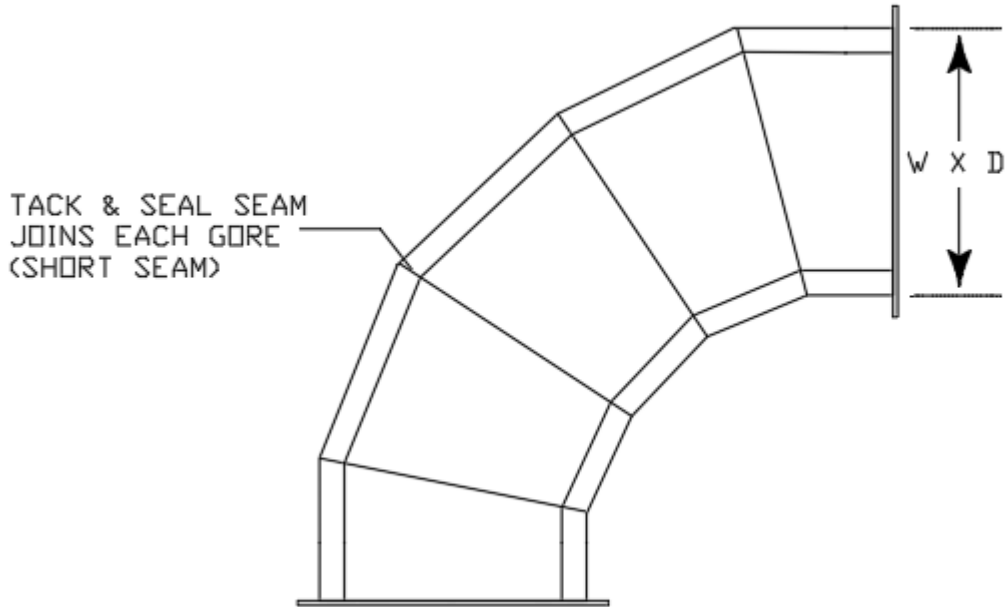
NOTES:

A. LENGTHS - 6" THROUGH 120"

B. REFFERANCE SIZE CHART ON PAGE 4 FOR OVAL DUCT SIZING



ELBOW



- AVAILABLE IN 5° THROUGH 120°
- SHORT RADIUS ELBOWS ARE CONSIDERED 1 X WIDTH AND IS CENTERLINE
- OTHER RADIUS ELBOWS ARE AVAILABLE

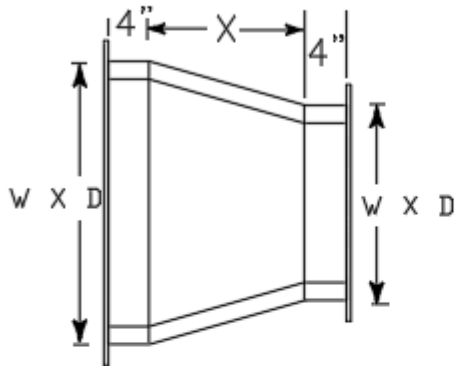


REDUCERS

CONCENTRIC REDUCER

$$X = \frac{D_1 - D_2}{2} \times 3$$

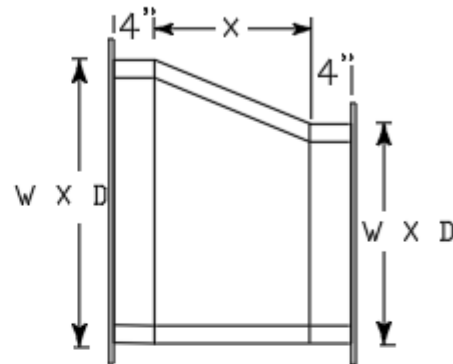
4" Minimum



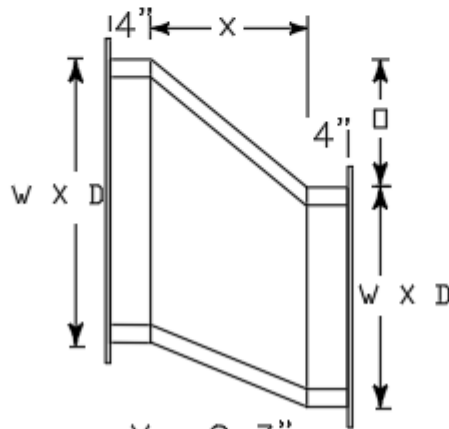
ECCENTRIC REDUCER

$$X = \frac{D_1 - D_2}{2} \times 3$$

4" Minimum



OFFSETTING REDUCER



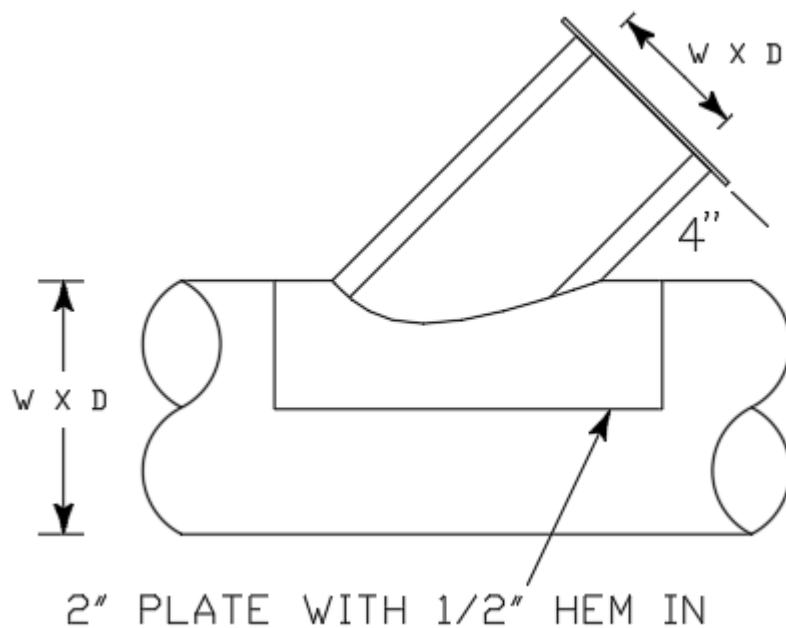
$$X = O \times 3$$

4" Minimum

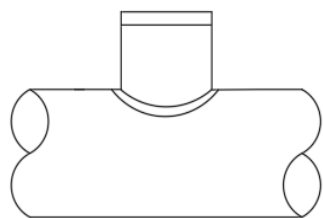
- **REDUCERS CAN TRANSITION TO ROUND SIZES**



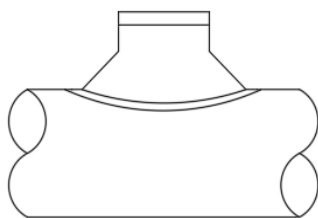
OVAL OR ROUND END SADDLE TAPS



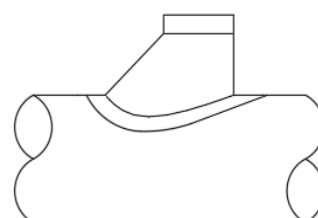
- **STANDARD 45 DEGREE&90 DEGREE ANGLES. ALTERNATE ANGLES AVAILABLE.**
- **90 DEGREE CONICAL AVAILABLE.**
- **HIGH EFFICIENCY SHOE STYLE AVAILABLE**
- **SADDLE TAPS CAN ALSO TRANSITION TO ROUND DUCT**



90 DEGREE SADDLE



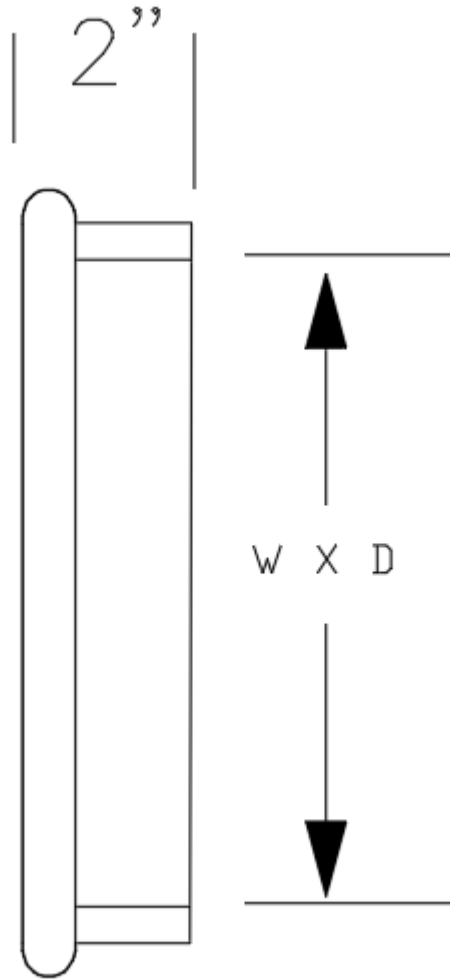
CONICAL SADDLE



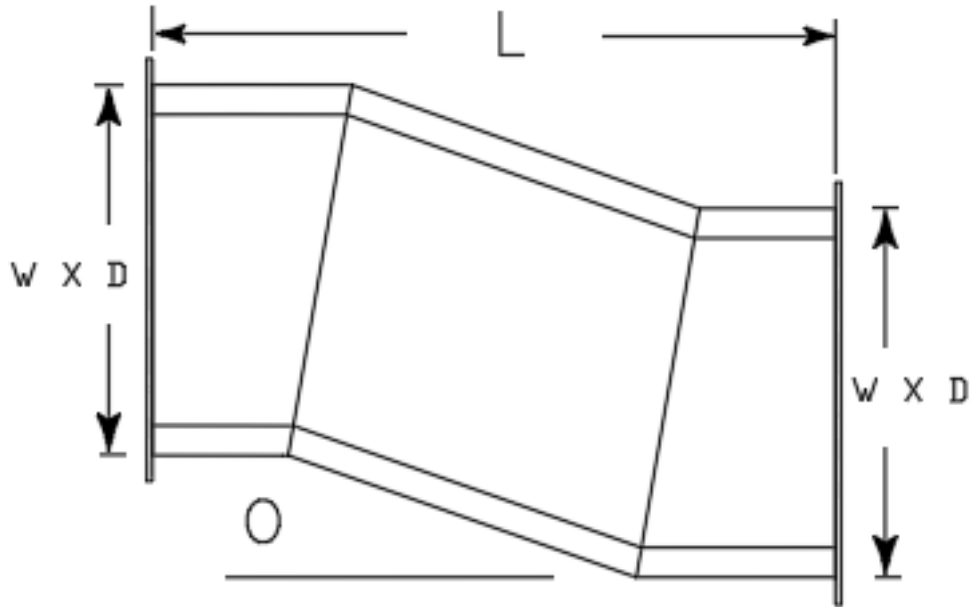
SHOE STYLE SADDLE



END CAPS



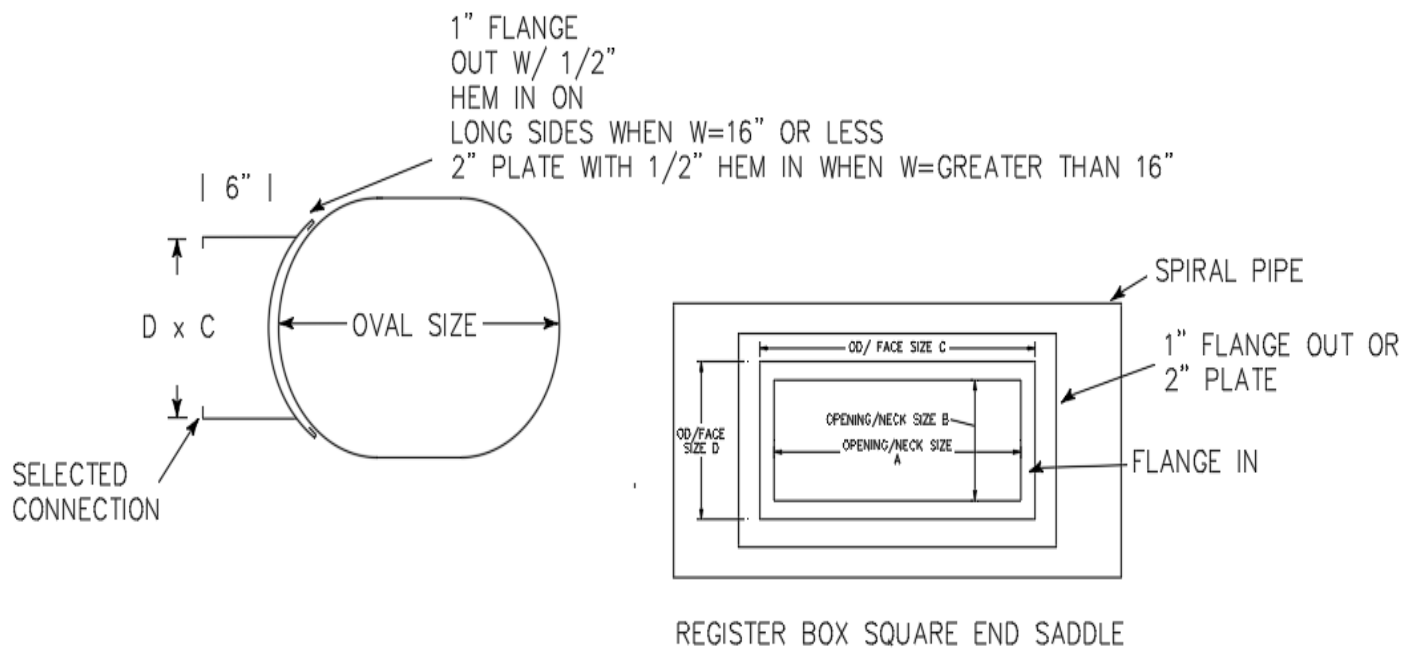
OFFSETS



- LENGTH TWO OR THREE TIMES THE OFFSET



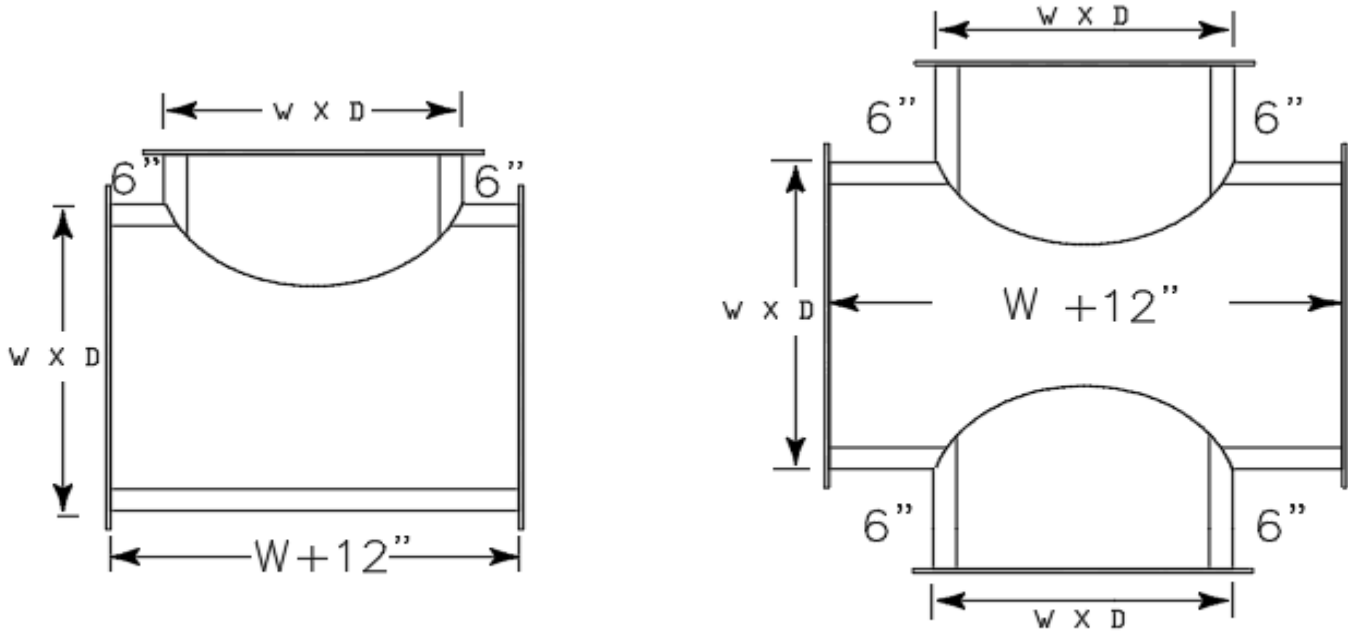
RECTANGULAR END SADDLE TAPS



- **SPOT WELDED SEAMS USED ON BOXES**
- **STANDARD RECTANGULAR CONNECTION IS FLANGE IN**
- **ALTERNATE CONNECTIONS AVAILABLE: SLIP AND DRIVE, TDC, OR PREMANUFACTURED FLANGE FOR RECTANGULAR END**



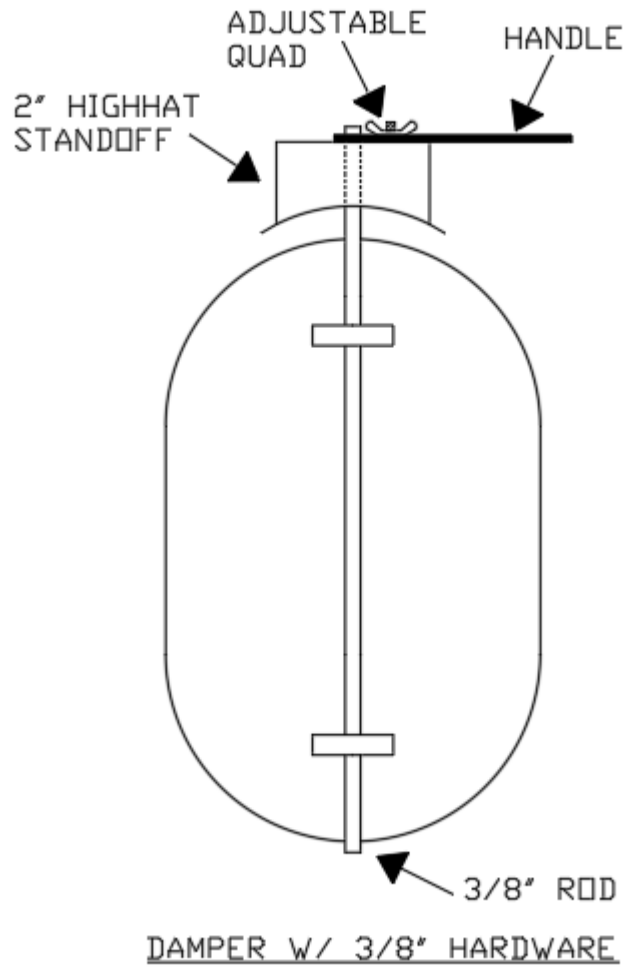
TEES AND CROSSES



- SEALED, TACK WELDED SEAMS, STITCH WELDED LONGITUDINAL SEAMS
- CONICAL, SHOE STYLE, 45 DEGREE LATERAL TEES AND CROSSES AVAILABLE
- REDUCING TEES AND LATERALS ALSO AVAILABLE
- TEE AND CROSSES CAN ALSO TRANSITION TO ROUND DUCT



OVAL DAMPERS



- **DAMPER AVAILABLE IN SLEEVES, LOOSE, OR INSTALLED IN SPIRAL PIPE AND FITTINGS**



