



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

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REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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### ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION (mm)	PIPE SIZE (mm)	W OR A (mm)	PIPE WALL THICKNESS		BAND THICKNESS		BAR AND STRAP (CSP ONLY)				ANGLE								
				CSP (mm)	CAP (mm)	CSP (mm)	CAP (mm)	STRAP THICKNESS (mm)	BOLTS (mm ø)	BAR Dia (mm)	BAR YIELD STRENGTH (MPa)	DIMENSIONS		BOLTS (No.-mm ø)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND		
												CSP (mm)	CAP (mm)	CSP	CAP	CSP	CAP	CSP		
TWO PIECE INTEGRAL FLANGE	38 x 6.5	150 - 250	178	1.32 - 2.01	1.22 - 1.52	1.32	1.52							2-10	2-10					
	68 x 13	300 - 450	178	1.32 - 2.01		1.63								2-13						
UNIVERSAL	68 x 13	THROUGH 900	305	1.32 - 3.51	1.52 - 3.43	1.32	1.52							51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	3-15 mm
		1050 - 1500	305	1.32 - 4.27	1.91 - 4.17	1.32	1.52							51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		THROUGH 1800	305	1.32 - 4.27	4.17	1.32	2.67	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm		
		1950 - 2100	413	4.27		2.01		DOUBLE 2.01	13	22	220									
ANNULAR	68 x 13	THROUGH 900	178	1.63 - 3.51	1.52 - 3.43	1.32	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	2-13	2-13	3-9.5 mm	3-9.5 mm	3-15 mm		
		1050 - 1800	305	1.63 - 4.27	1.91 - 4.17	1.32	2.67	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm		
		1950 - 2100	305	4.27		2.01		2.77	13	22	310	51 x 51 x 4.8		3-13		3-9.5 mm		5-15 mm		
	75 x 25	1200 - 2250	355	1.63 - 2.77		1.32		2.01	13	22	220	51 x 51 x 4.8		3-13		3-9.5 mm		5-15 mm		
		2400 - 3000	355	2.01 - 2.77		1.32		2.77	13	22	310	51 x 51 x 4.8		3-13		4-9.5 mm				
		1050 - 2700	355		1.52 - 3.43		1.52						51 x 51 x 4.8		3-13		3-9.5 mm			
HELICAL	68 x 13	THROUGH 900	305	1.32 - 3.51	1.52 - 3.43	1.32	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	3-15 mm		
		1050 - 1800	305	1.32 - 4.27	1.91 - 4.17	1.32	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm		
		1950 - 2100	305	4.27		2.01		2.77	13	22	310	51 x 51 x 4.8		3-13		3-9.5 mm		5-15 mm		
	75 x 25	1200 - 2250	355	1.63 - 2.77		1.32		2.01	13	22	220	51 x 51 x 4.8		3-13		3-9.5 mm				
		2400 - 3000	355	2.01 - 2.77		1.32		2.77	13	22	310	51 x 51 x 4.8		3-13		4-9.5 mm				
		1050 - 2700	355		1.52 - 3.43		1.52						51 x 51 x 4.8		3-13		3-9.5 mm			
HUGGER	68 x 13	300 - 1350	100	1.32 - 2.77		1.32						64 x 38 x 4.8	64 x 38 x 4.8	1-13				3-15 mm		
		1500 - 1650	100	2.77		1.63							64 x 38 x 4.8	64 x 38 x 4.8	1-13			3-15 mm		
		900 - 1200	100	3.51		1.63							64 x 38 x 4.8	64 x 38 x 4.8	1-13			3-15 mm		
		THROUGH 1800	267	1.32 - 4.27		1.32		2.01	13	22	220									
		1950 - 2100	267	4.27		2.01		2.77	13	22	310									
		THROUGH 1800	267	1.32 - 4.27		1.32		2.01	13	22	220									
	75 x 25	1200 - 2250	267	1.63 - 2.77		1.32		2.01	13	22	220									
		2400 - 3000	267	2.01 - 2.77		1.32		2.77	13	22	310									
		1200 - 1650	190	1.63 - 2.77		1.63		2.01	13	22	220	64 x 38 x 4.8	64 x 38 x 4.8	1-13				3-15 mm		
		1800 - 2250	190	1.63 - 2.01		1.63		2.01	13	22	220	64 x 38 x 4.8	64 x 38 x 4.8	1-13				3-15 mm		
		1200 - 2250	190	1.63 - 3.51		1.63		2.01	13	22	220									
		1200 - 3000	305 SEE NOTE	1.63 - 2.77		1.63		2.01	13	22	220									
125 x 25	1200 - 2100	305 NOTE	3.51		1.63		2.01	13	22	220										
	2250 - 3000	305 11	3.51		1.63		DOUBLE 2.01	13	22	220										

### NOTES

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 32 mm gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
  - 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
  - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 1.5 mm for Corrugated Aluminum Pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 68 mm x 13 mm annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 68 mm x 13 mm corrugations.
- In the case of H-305 huggerbands, two piece bands are required for diameters through 2400 mm and three piece bands are required for diameters 2550 mm through 3000 mm.
- Two piece bands are required for pipes greater than 1050 mm diameter.
- The 57 mm x 51 mm x 2.8 mm thick galvanized die-formed angle connector may be used in lieu of the 51 mm x 51 mm 4.8 mm angle connector for standard joints only on pipes through 1800 mm diameter.

### SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION (mm)	PIPE SIZE (mm)	W (mm)	PIPE WALL THICKNESS		BAND THICKNESS		BAR AND STRAP (SSRP ONLY)				ANGLE						
				SSRP (mm)	ASRP (mm)	SSRP (mm)	ASRP (mm)	STRAP THICKNESS (mm)	BOLTS (mm ø)	BAR Dia (mm)	BAR YIELD STRENGTH (MPa)	DIMENSIONS		BOLTS (No.-mm ø)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP (mm)	ASRP (mm)	SSRP (mm)	ASRP (mm)					SSRP (mm)	ASRP (mm)	SSRP	ASRP	SSRP	ASRP	SSRP
ANNULAR	68 x 13 * REROLLED END	600 - 900	305	1.63 - 2.77	1.52 - 2.67	1.32	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		1050 - 1500	305	1.63 - 2.77	1.91 - 2.67	1.32	2.67	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		1650 - 1800	305	1.63 - 2.77		1.32		2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		1950 - 2900	305	2.01 - 2.77		2.01		2.77	13	22	310	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
HUGGER	68 x 13 * REROLLED END	600 - 1800	267	1.63 - 2.77		1.32		2.01	13	22	220							
		1950 - 2100	267	2.77		2.01		2.77	13	22	310							

\* See Note 14.

14. All profiles of Spiral Rib Pipe (19 mm x 19 mm ribs at 191mm pitch and 19 mm x 25 mm ribs at 292 mm pitch in both steel and aluminum and 19 mm x 25 mm ribs at 216 mm pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 68 mm x 13 mm annual corrugations with a minimum of two full corrugations at each end.

## CORRUGATED METAL PIPE COUPLING DETAILS No. 5 STANDARD JOINT

NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E DATED July 1, 2004 - PAGE 187 OF THE STANDARD PLANS BOOK DATED July 2004.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

## REVISED STANDARD PLAN RSP D97E

2004 REVISED Std PLAN RSP D97E