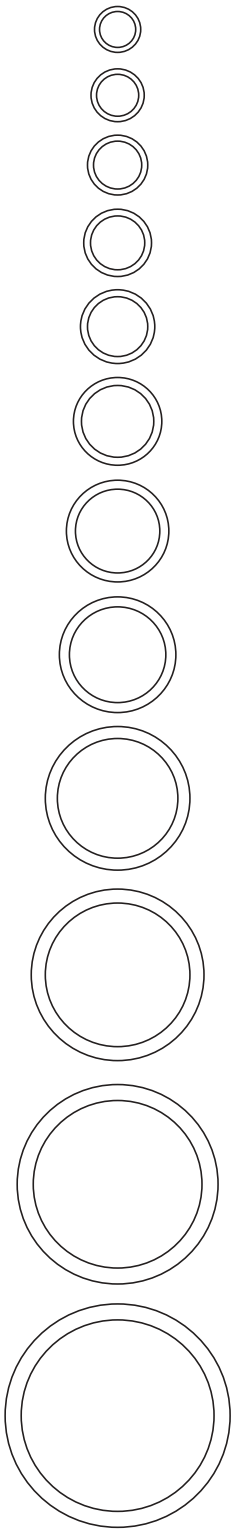
CONCRETE PIPE INDEX



INDEX click mouse on desired subject

CONCRETE PIPE SPECIFICATIONS

CSA SPECIFICATIONS

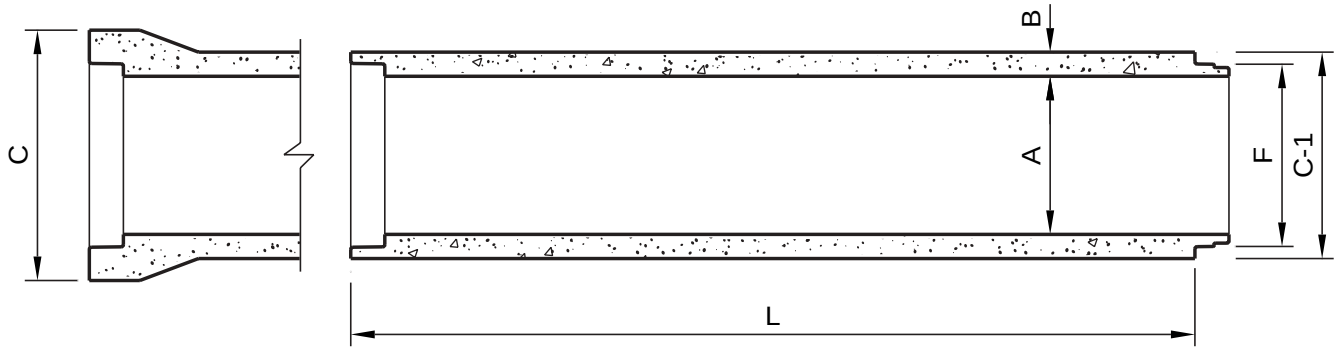
CSA A257.0 ....Methods for Determining Physical Properties of Concrete Pipe
CSA A257.1 ....Non-Reinforced Concrete Pipe
CSA A257.2 ....Reinforced Concrete Pipe
CSA A257.3 ....Joints for Concrete Pipe

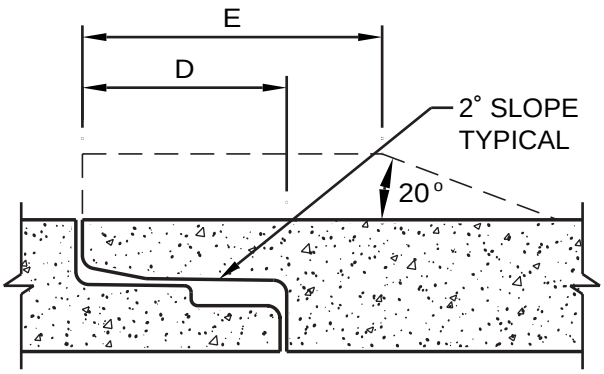
ASTM SPECIFICATIONS

C76 .....Reinforced Concrete Culvert, Storm Drain and Sewer Pipe
C443 .....Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets
C497 .....Testing Concrete Pipe or Tile
C655 .....Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe
C822 .....Definitions of Concrete Pipe and Related Products
C924 .....Concrete Pipe Sewer Lines By Low-Pressure Air Test methods
C969 .....Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines

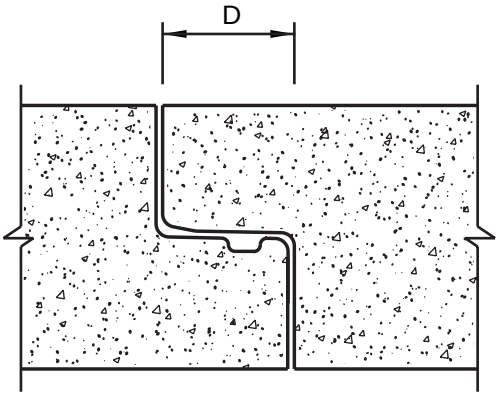
SINGLE OFFSET JOINT PIPE

300 to 3600 DIAMETER





SINGLE OFFSET JOINT
300 to 2400 and 3600 mm Dia.



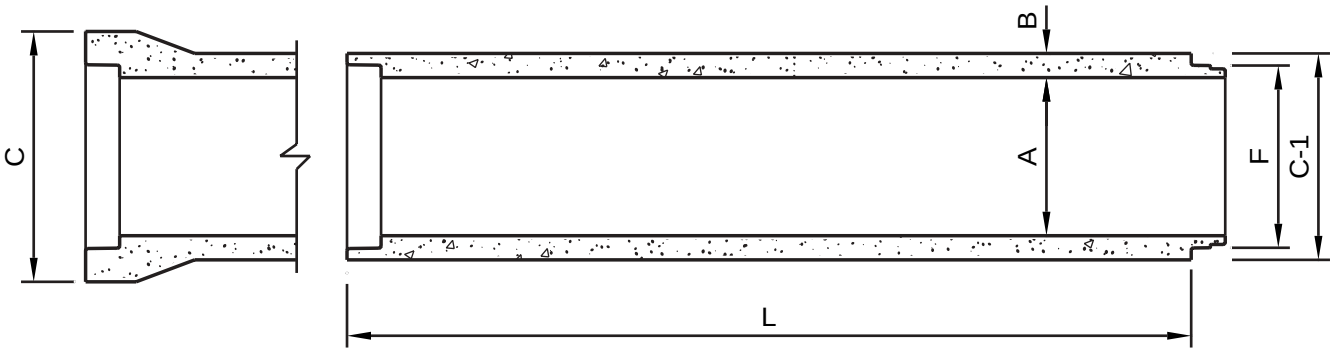
CONFINED "O" RING JOINT
3000 mm Dia.

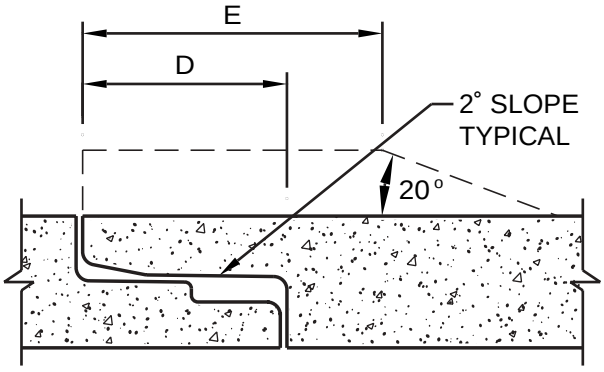
METRIC (mm)

PIPE DIAMETER	A	B	C-1	C	D	E	F	L
300	305	50.80	406.40	490.47	88.90	146.0	387.60	2438
375	381	57.15	495.30	592.07	88.90	146.0	476.48	2438
450	457	63.50	584.20	673.10	88.90	146.0	553.39	2438
525	533	69.85	673.10	752.60	88.90	146.0	631.17	2438
600	610	76.20	762.00	828.80	88.90	143.0	707.37	2438
750	762	88.90	939.80	997.00	88.90	143.0	864.34	2438
900	914	101.60	1117.60	1152.65	88.90	143.0	1016.74	2438
1050	1067	114.30	1295.40	———	114.30	———	1164.64	2438
1200	1219	127.00	1473.20	———	114.30	———	1328.73	2438
1500	1524	152.40	1828.80	———	120.60	———	1654.20	2438
1800	1829	177.80	2184.40	———	127.00	———	1979.63	2438
2100	2134	203.20	2540.00	———	127.00	———	2310.31	2438
2400	2438	228.60	2895.60	———	127.00	———	2640.51	2438
3000	3048	298.00	3644.90	———	152.00	———	3327.40	2438
3600	3658	330.20	4318.00	———	152.00	———	3962.40	2438

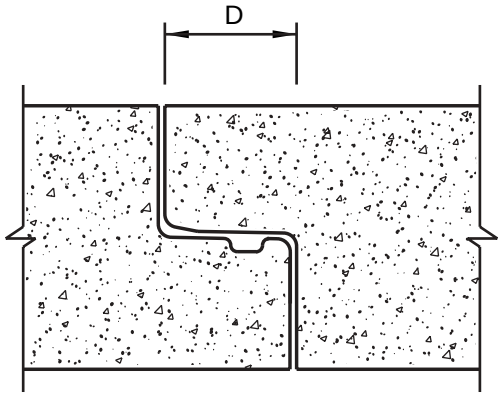
CONFINED "O" RING JOINT PIPE

12 to 144 in. DIAMETER





SINGLE OFFSET JOINT
12 to 96 and 144 in. Dia.



CONFINED "O" RING JOINT
120 in. Dia.

IMPERIAL (in.)

PIPE DIAMETER A	B	C-1	C	D	E	F	L
12	2.00	16.00	19.31	3.50	5.75	15.260	96
15	2.25	19.50	23.31	3.50	5.75	18.759	96
18	2.50	23.00	26.50	3.50	5.75	21.787	96
21	2.75	26.50	29.63	3.50	5.75	24.849	96
24	3.00	30.00	32.63	3.50	5.63	27.849	96
30	3.50	37.00	39.25	3.50	5.63	34.029	96
36	4.00	44.00	45.38	3.50	5.63	40.029	96
42	4.50	51.00	—	4.50	—	45.852	96
48	5.00	58.00	—	4.50	—	52.312	96
60	6.00	72.00	—	4.75	—	65.126	96
72	7.00	86.00	—	5.00	—	77.938	96
84	8.00	100.00	—	5.00	—	90.957	96
96	9.00	114.00	—	5.00	—	103.957	96
120	11.75	143.50	—	6.00	—	131.000	96
144	13.00	170.00	—	6.00	—	156.000	96

CONCRETE PIPE SHIPPING WEIGHTS

Canadian Highways allowable truckload weights

METRIC

PIPE DIAMETER mm	LENGTH mm	MASS IN KILOGRAMS		PIECES PER TRUCKLOAD		
		PER METER	PER LENGTH	TANDEM	TRI-AXLE	OFF-LOADER TRI-AXLE
300	2438	156	382	53	77	72
375	2438	216	527	35	56	50
450	2438	268	653	30	45	39
525	2438	342	835	21	35	32
600	2438	424	1034	20	28	26
750	2438	610	1488	14	20	18
900	2438	818	1996	11	15	13
1050	2438	1071	2613	8	11	10
1200	2438	1361	3321	6	8	--
1500	2438	2008	4900	4	6	--
1800	2438	2828	6900	3	4	--
2100	2438	3720	9077	2	3	--
2400	2438	4762	11620	2	3	--
3000	2438	7813	19051	1	1	--
3600	2438	10343	25220	1	1	--

IMPERIAL

PIPE DIAMETER in.	LENGTH in.	WEIGHT IN POUNDS		PIECES PER TRUCKLOAD		
		PER FOOT	PER LENGTH	TANDEM	TRI-AXLE	OFF-LOADER TRI-AXLE
12	96	105	840	53	77	72
15	96	145	1160	35	56	50
18	96	180	1440	30	45	39
21	96	230	1840	21	35	32
24	96	285	2280	20	28	26
30	96	410	3280	14	20	18
36	96	550	4400	11	15	13
42	96	720	5760	8	11	10
48	96	915	7320	6	8	--
60	96	1350	10800	4	6	--
72	96	1900	15200	3	4	--
84	96	2500	20000	2	3	--
96	96	3200	25600	2	3	--
120	96	5250	42000	1	1	--
144	96	6950	55600	1	1	--

CONCRETE PIPE SHIPPING WEIGHTS

State of Maine allowable truckload weights

METRIC

PIPE DIAMETER mm	LENGTH mm	MASS IN KILOGRAMS		PIECES PER TRUCKLOAD		
		PER METER	PER LENGTH	TANDEM	TRI-AXLE	OFF-LOADER TRI-AXLE
300	2438	156	382	52	71	64
375	2438	216	527	35	52	46
450	2438	268	653	30	41	37
525	2438	342	835	21	32	29
600	2438	424	1034	19	26	23
750	2438	610	1488	13	18	16
900	2438	818	1996	10	13	12
1050	2438	1071	2613	8	10	9
1200	2438	1361	3321	6	8	--
1500	2438	2008	4900	4	5	--
1800	2438	2828	6900	2	3	--
2100	2438	3720	9077	2	3	--
2400	2438	4762	11620	1	2	--
3000	2438	7813	19051	1	1	--
3600	2438	10343	25220	--	1	--

IMPERIAL

PIPE DIAMETER in.	LENGTH in.	WEIGHT IN POUNDS		PIECES PER TRUCKLOAD		
		PER FOOT	PER LENGTH	TANDEM	TRI-AXLE	OFF-LOADER TRI-AXLE
12	96	105	840	52	71	64
15	96	145	1160	35	52	46
18	96	180	1440	30	41	37
21	96	230	1840	21	32	29
24	96	285	2280	19	26	23
30	96	410	3280	13	18	16
36	96	550	4400	10	13	12
42	96	720	5760	8	10	9
48	96	915	7320	6	8	--
60	96	1350	10800	4	5	--
72	96	1900	15200	2	3	--
84	96	2500	20000	2	3	--
96	96	3200	25600	1	2	--
120	96	5250	42000	1	1	--
144	96	6950	55600	--	1	--

ALTERNATE CONCRETE PIPE LENGTHS

METRIC

PIPE DIAMETER mm	MASS PER METER kg	ALTERNATE LENGTHS AVAILABLE (mm)						
		305	610	915	1219	1524	1829	2438
300	156							✘
375	216							✘
450	268							✘
525	342							✘
600	424							✘
750	610							✘
900	818							✘
1050	1071	•	•	•	•	•		✘
1200	1361	•	•	•	•	•	•	✘
1500	2008	•	•	•	•	•	•	✘
1800	2828	•	•	•	•	•	•	✘
2100	3720	•	•	•	•	•	•	✘
2400	4762	•	•	•	•	•	•	✘
3000	7813	•	•	•	•	•	•	✘
3600	10343	•	•	•	•	•	•	✘

• ALTERNATE LENGTHS AVAILABLE
✘ STANDARD LENGTHS AVAILABLE

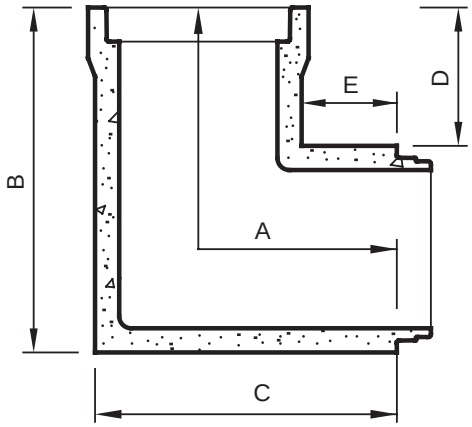
IMPERIAL

PIPE DIAMETER in.	WEIGHT PER FOOT lbs.	ALTERNATE LENGTHS AVAILABLE in.						
		12"	24"	36"	48"	60"	72"	96"
12	105							✘
15	145							✘
18	180							✘
21	230							✘
24	285							✘
30	410							✘
36	550							✘
42	720	•	•	•	•	•		✘
48	915	•	•	•	•	•	•	✘
60	1350	•	•	•	•	•	•	✘
72	1900	•	•	•	•	•	•	✘
84	2500	•	•	•	•	•	•	✘
96	3200	•	•	•	•	•	•	✘
120	5250	•	•	•	•	•	•	✘
144	6950	•	•	•	•	•	•	✘

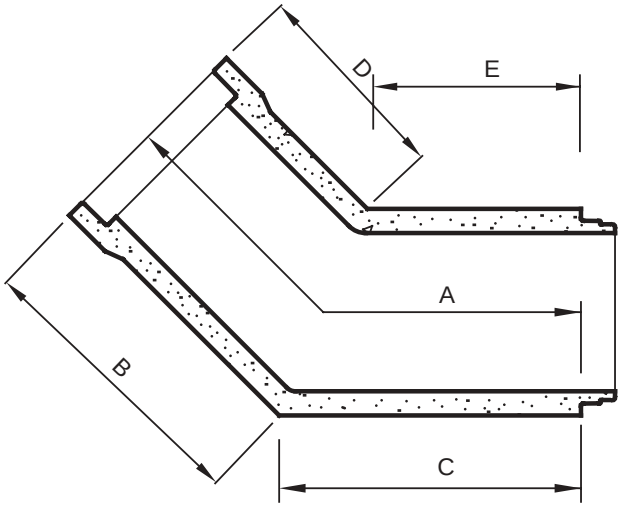
• ALTERNATE LENGTHS AVAILABLE
✘ STANDARD LENGTHS AVAILABLE

PIPE BENDS

45˚ and 90˚



90º BEND



45º BEND

METRIC (mm)

PIPE DIAMETER	A	B	C	D	E
300	1090	785	785	380	380
375	1195	890	890	380	380
450	1220	965	965	380	380
525	1370	1065	1065	380	380
600	1450	1145	1145	380	380
750	1630	1345	1345	405	405
900	1830	1525	1525	405	405
1050	2005	1700	1700	405	405
1200	2185	1880	1880	405	405

A	B	C	D	E
865	560	560	380	380
890	585	585	380	380
940	635	635	380	380
965	660	660	380	380
1015	710	710	380	380
1090	785	785	405	405
1170	865	865	405	405
1245	940	940	405	405
1320	1015	1015	405	405

IMPERIAL (in.)

PIPE DIAMETER	A	B	C	D	E
12	43.50	31.00	31.00	15.00	15.00
15	48.00	35.50	35.50	15.00	15.00
18	50.75	38.50	38.50	15.00	15.00
21	54.75	42.50	42.50	15.00	15.00
24	58.00	45.75	45.75	15.00	15.00
30	66.00	53.75	53.75	16.00	16.00
36	73.00	61.00	61.00	16.00	16.00
42	80.00	68.00	68.00	16.00	16.00
48	87.00	75.00	75.00	16.00	16.00

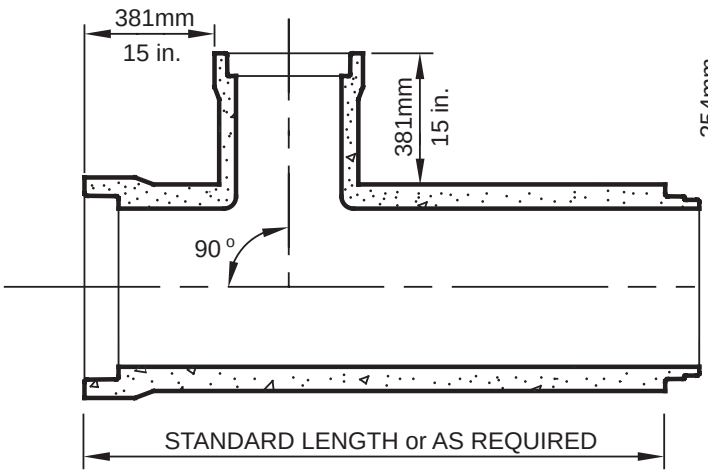
A	B	C	D	E
34.50	22.00	22.00	15.00	15.00
35.50	23.25	23.25	15.00	15.00
37.50	25.25	25.25	15.00	15.00
38.50	26.25	26.25	15.00	15.00
40.50	28.25	28.25	15.00	15.00
43.50	31.25	31.25	16.00	16.00
46.75	34.50	34.50	16.00	16.00
49.75	37.50	37.50	16.00	16.00
52.75	40.50	40.50	16.00	16.00

NOTES: Special angles are available upon request
Dimensions shown are plus or minus 50mm/2 in.

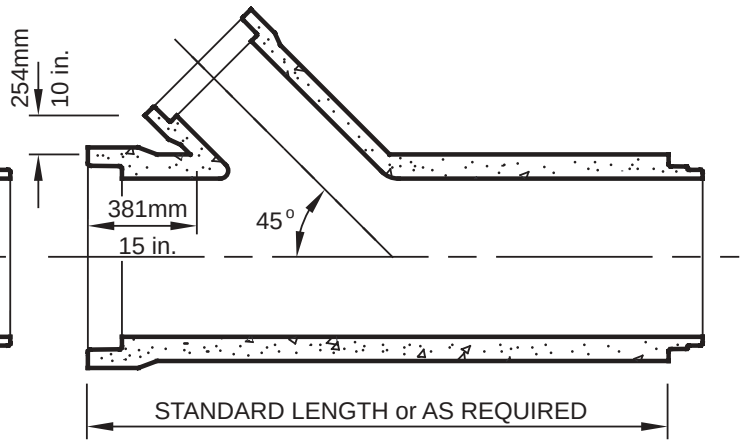
TEE AND WYE CONNECTIONS

CONCRETE-TO-CONCRETE

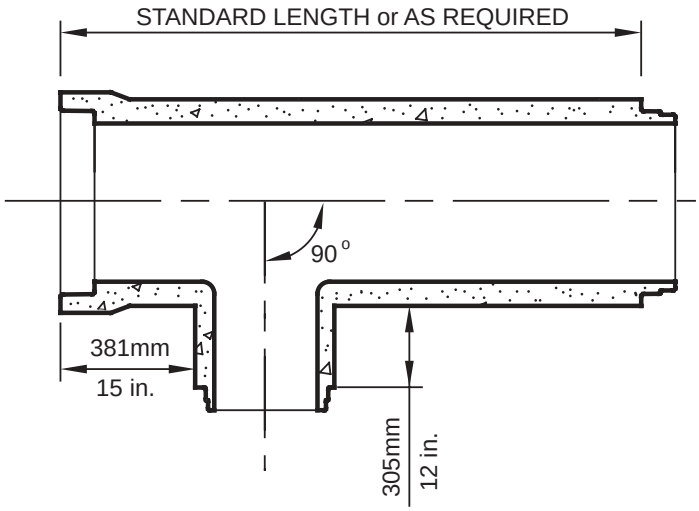
STANDARD TEE



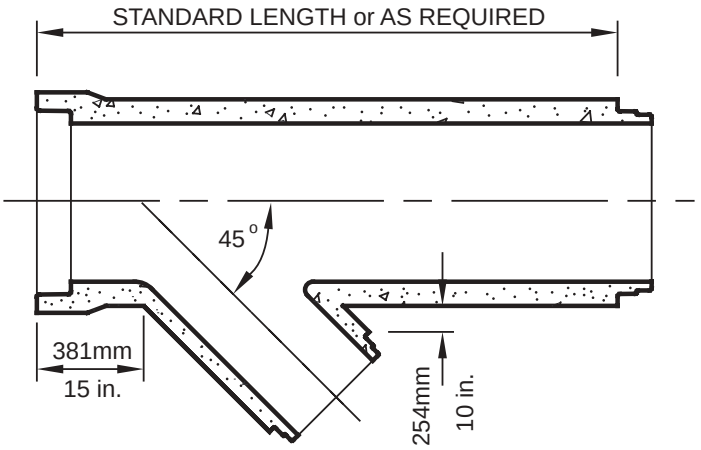
STANDARD WYE



DROP TEE



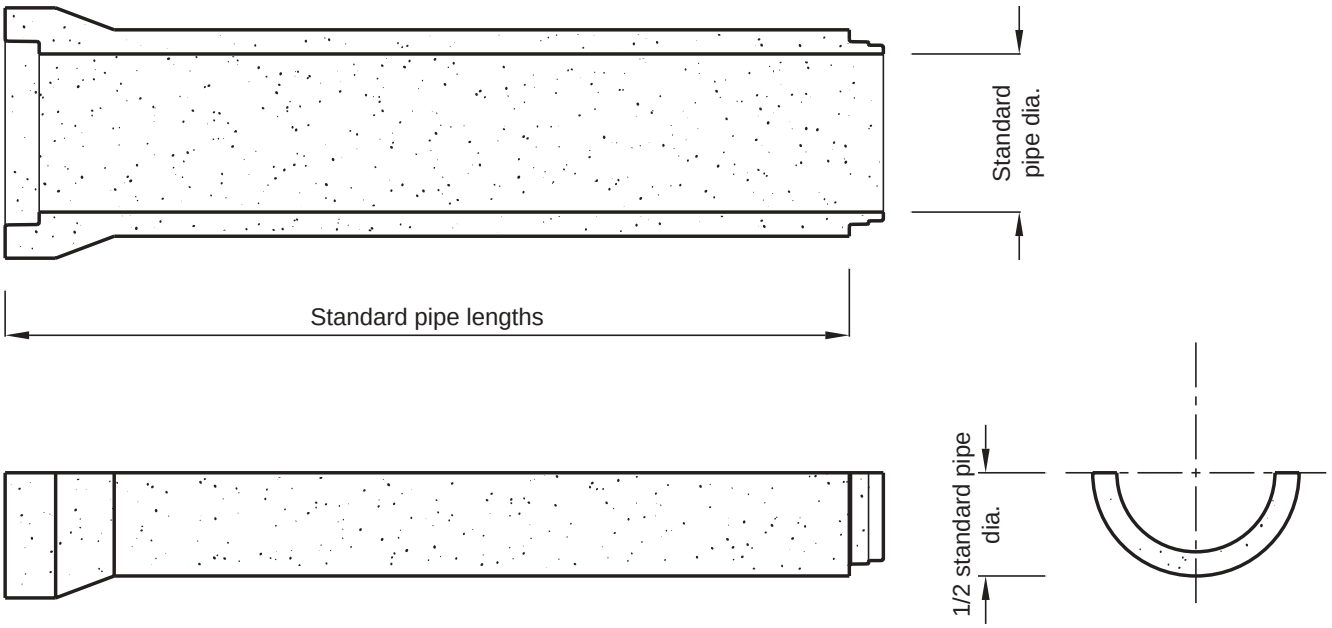
DROP WYE



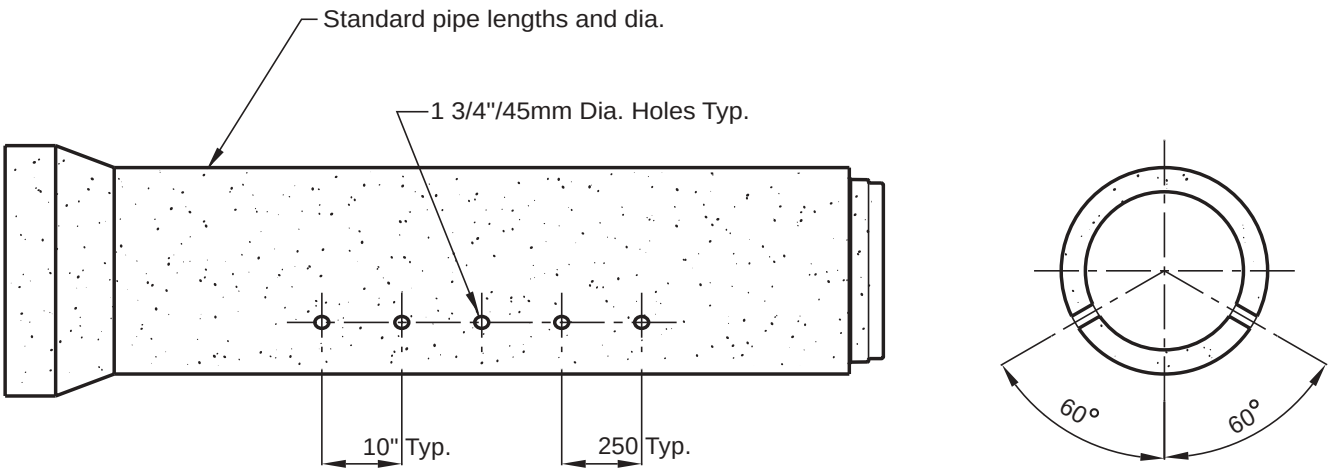
NOTES: Dimensions shown are Plus or Minus 50mm / 2 in.
Special angle junctions having dimensions other than those shown can be manufactured upon request.
Other sizes available, see pages P1, P2, and P3.

PERFORATED and CHANNEL PIPE

300 to 3600 mm DIAMETER
12 to 144 in. DIAMETER

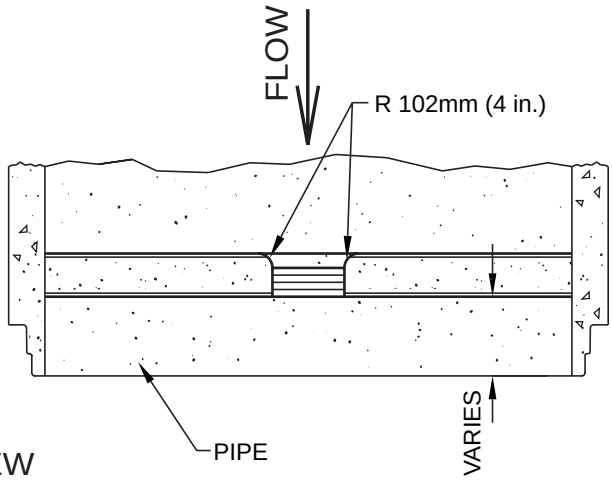


CONCRETE CHANNEL PIPE

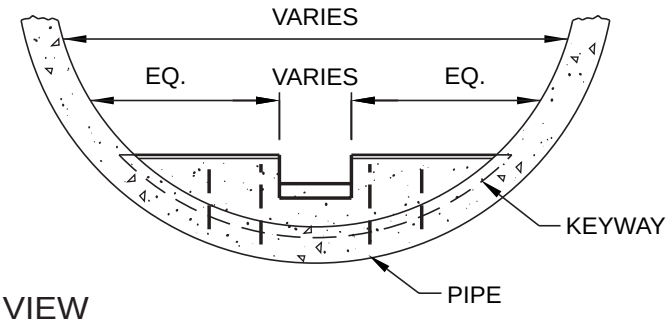


PERFORATED CONCRETE PIPE

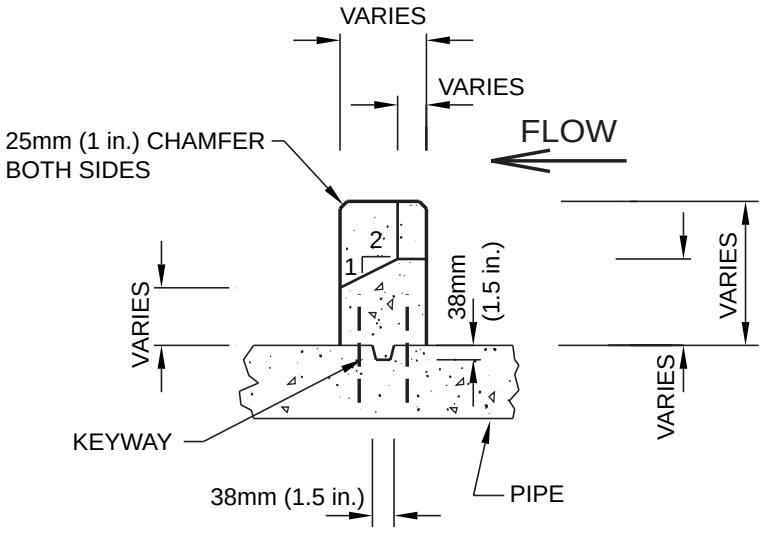
FISH WEIR DETAILS



TOP VIEW



FRONT VIEW

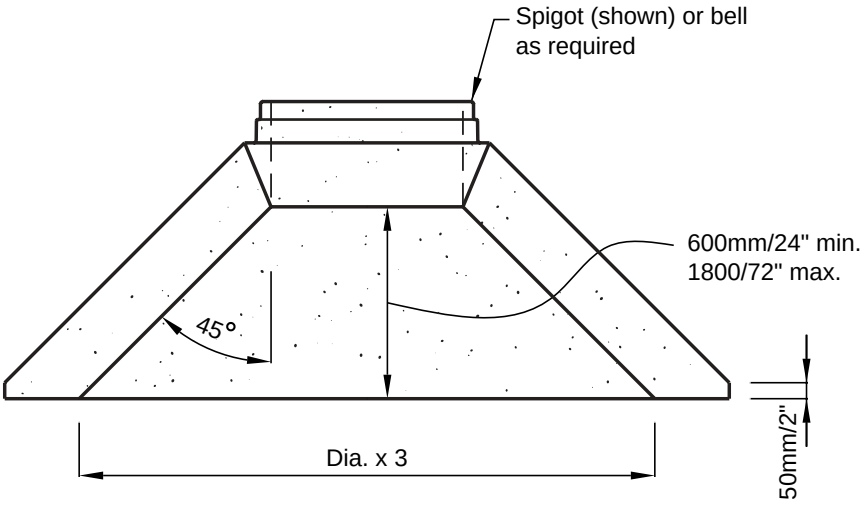


SECTION

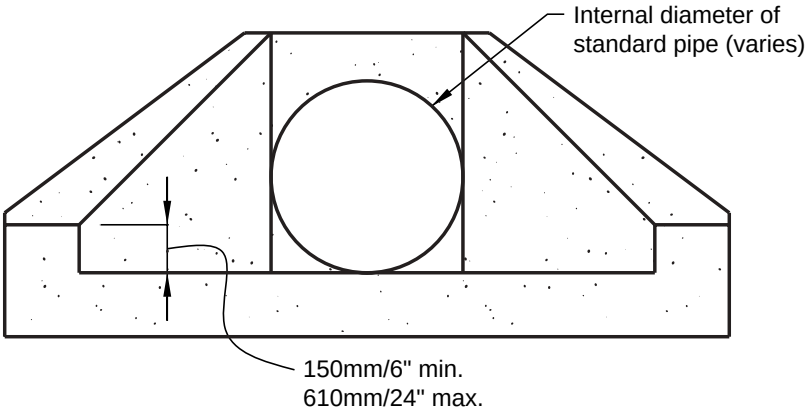
NOTE: The location and size of fish weirs as required by local authorities having jurisdiction.
Pipe sizes for fish weirs from1500mm / 60in. to 3600mm / 144in.

STANDARD HEADWALLS

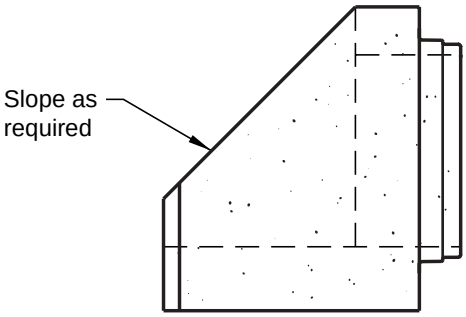
300 to 1800 mm DIAMETER*
12 to 72 in. DIAMETER*



PLAN VIEW



FRONT VIEW



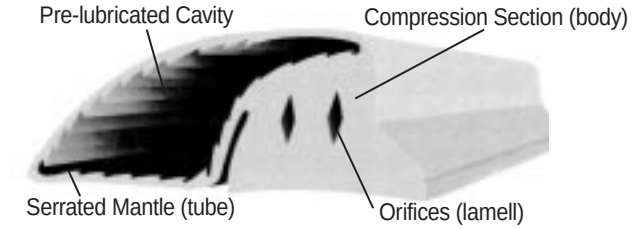
SIDE VIEW

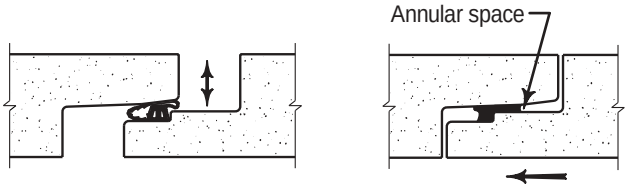
NOTES: - Slab and wall thickness as required

* Units from 300mm/12" to 1800mm/72" will be supplied in 1 piece units.

PIPE JOINTING PROCEDURES

For Single Offset Gaskets





NEW CONCRETE PIPE GASKET SYSTEM

Strescon Limited is pleased to introduce our new concrete pipe joint gasket system. Tylox SupersealTM pre-lubricated gasket is a unique design in the sealing of concrete pipe. This gasket offers a number of benefits over the conventional o-ring gasket joint. The Superseal gasket has silicone lubricant encapsulated in the serrated mantle (tube) which eliminates the need for lubrication and equalization as well as provide a superior watertight seal. This will also save the contractor and owner time and money in the installation process.

ADVANTAGES

Unique Design

- Self contained lubricant
- No special handling or packaging
- No threat of lubricant contamination or deterioration
- Saves time and mess of lubricant application
- No equalization required

FUNCTION

During pipe assembly, the mantle rolls over the compression area of the gasket resulting in a watertight seal. The mantle sections final resting position is in the small annular space, preventing concrete-to-concrete contact.

GASKET SIZES

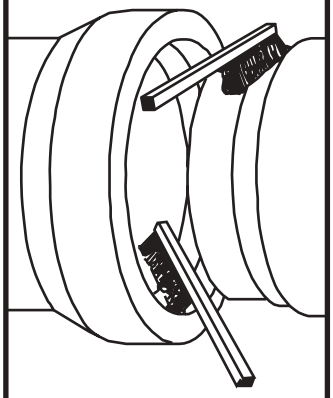
The Superseal gasket is available on our concrete pipe ranging in size from 12" to 96" (300mm to 2400mm). Our 144" (3600mm) diameter concrete pipe will also have a single offset gasket but non-lubricated. The gasket, spigot and bell must be lubricated. Remember the gasket must be equally stretched around the spigot.

MATERIAL SPECIFICATIONS

The Tylox Superseal gasket is manufactured from top quality rubber. All gasket material conforms to or exceeds CSA A-257, ASTM C-443 and C-361 specifications. Special chemical resistant EPDM, Neoprene, and Nitrile rubber are also available upon request.

FOLLOW THESE INSTRUCTIONS

CLEAN JOINT SURFACES

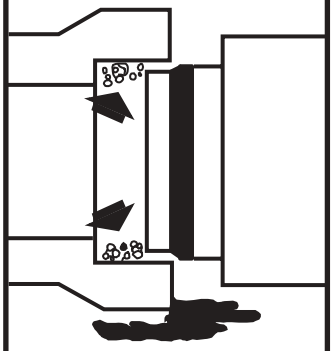


Clean all dirt, dust and foreign matter from the gasket bell and spigot surfaces. Take extra care to clean the spigot shoulder and gasket.

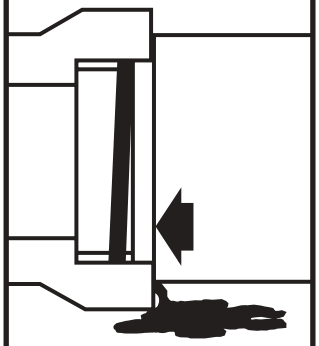
SHOULDER THE GASKET

Place the gasket as per the manufacturer's recommendations around the spigot end of the pipe. The gasket must be placed tight to the spigot shoulder.

TO PREVENT THESE PROBLEMS



Dirt or frozen material on the gasket, bell or spigot surfaces can prevent the gasket from making a tight seal.



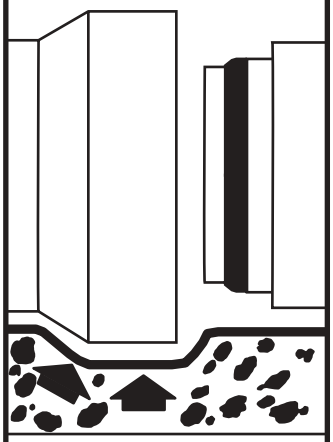
Failure to shoulder the gasket can be a cause for leaks in the joint or for the gasket to twist or break.

PIPE JOINTING PROCEDURES

For Single Offset Gaskets

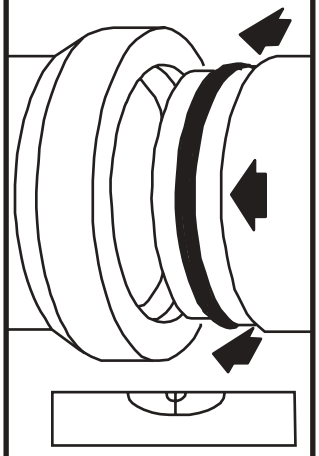
FOLLOW THESE INSTRUCTIONS

DIG BELL HOLE



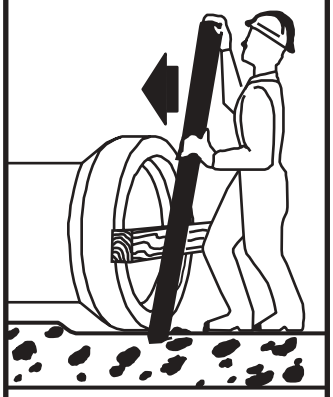
A hole must be dug in the sub-base to accommodate the bell.

ALIGN CAREFULLY



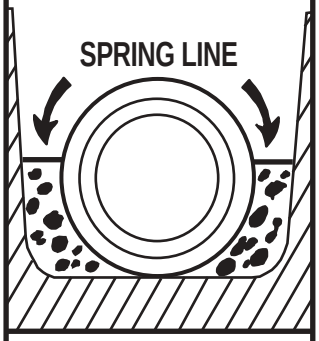
When coupling pipe, align spigot of pipe with bell of pipe previously laid. Pipe should be aligned so the gasket is in contact with the flared bell surface around the entire circumference.

BAR JOINT HOME



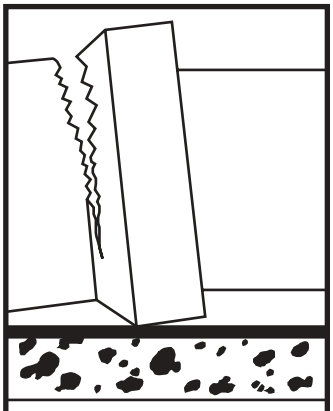
Joints on smaller pipe, up to 24" diameter, usually can be barred home. Place a block of wood across the invert of the pipe to protect the bell. When the subgrade is not firm enough to allow barring, the use of a come-along may be necessary to pull the joint home. This method should be used for larger pipe.

BEDDING AND BACK FILL

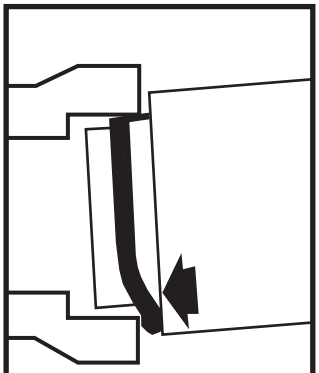


Granular material should be placed up to the spring line over the entire length of the pipe.

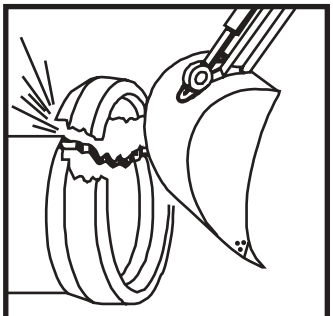
TO PREVENT THESE PROBLEMS



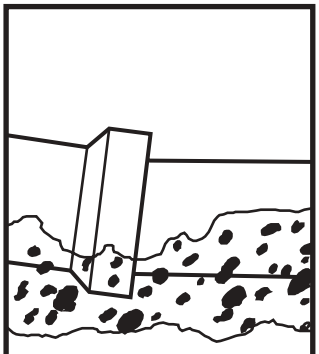
Failure to dig a bell hole can cause beam breaks or cracks in the barrel of the pipe.



If bell and spigot are not level or carefully aligned, the gasket will fish mouth causing a leak or splitting the bell.



Use of a machine to push the pipe home or to push pipe down to grade can put excessive pressure on pipe causing it to break or crack.



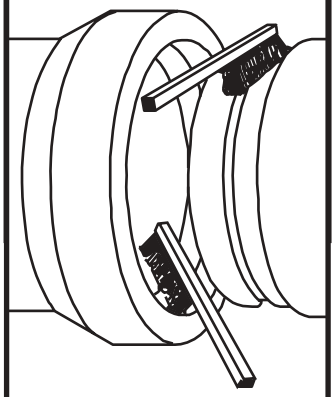
Improper bedding can cause the pipe to be forced out of alignment when backfilled.

ALTERNATE PIPE JOINTING PROCEDURES

For “O” Ring Seals

FOLLOW THESE INSTRUCTIONS

CLEAN JOINT SURFACES

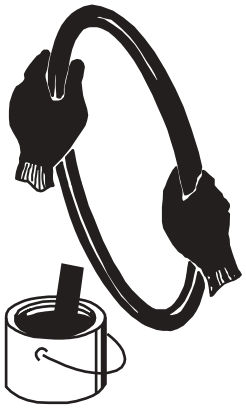


Clean all dirt, dust and foreign matter from bell and spigot surfaces. Take extra care to clean the spigot groove.

LUBE SPIGOT & INSIDE OF BELL

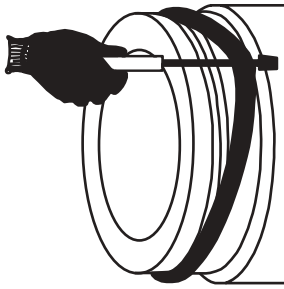
Generously rub lubricant into the flared bell surface over the entire circumference.

LUBE "O" RING



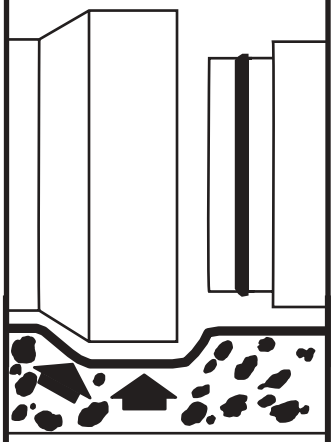
Thoroughly lubricate the gasket BEFORE stretching the gasket around the spigot. Rubber gloves are recommended to protect hands from long exposure to the lubricant.

EQUALIZE STRETCH



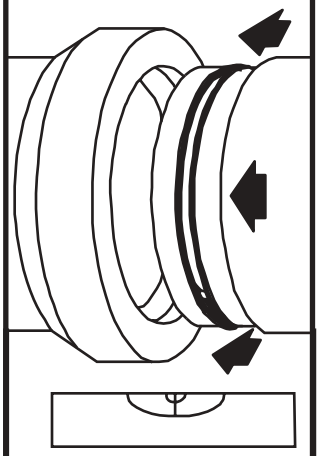
Insert a smooth object such as a screwdriver under the gasket and run it around the circumference two or three times. This equalizes the stretch in the gasket and is very important with larger pipe.

DIG BELL HOLE



A hole must be dug in the sub-base to accommodate the bell.

ALIGN CAREFULLY



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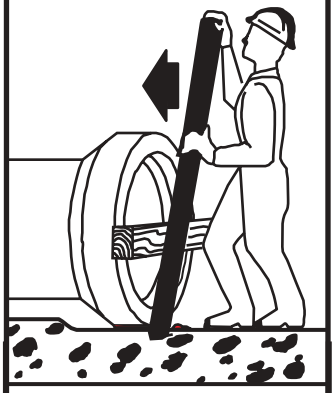
BAR JOINT HOME



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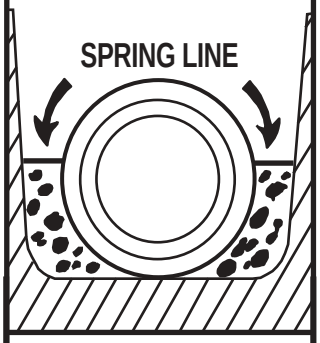
BEDDING AND BACK FILL



Granular material should be placed up to the spring line over the entire length of the pipe.

NOTE: From time to time we may have to revert back to our old gasket system to meet supply and demand conditions.