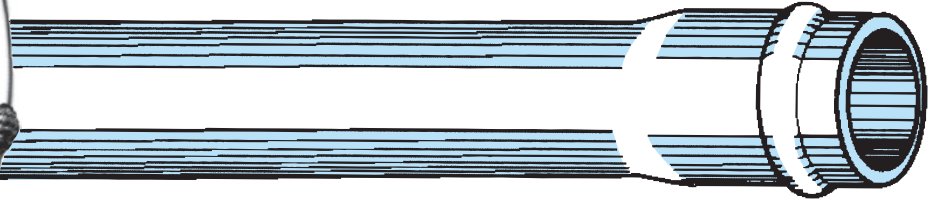




VULCAN PLASTICS
CORPORATION

Division
of 



PVC

PRESSURE & SEWER PIPE

with *Secure-Seal* Joint

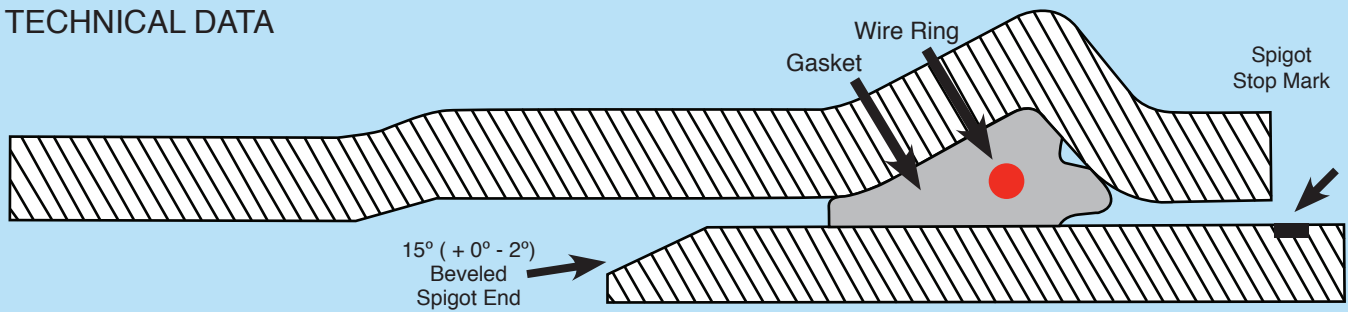
**PLANT-207 DURHAM DRIVE
BREEDING INDUSTRIAL PARK
ATHENS, AL 35611
256-233-3520 (Phone)
256-233-2495 (Fax)**

**CONSOLIDATED PIPE & SUPPLY
1205 HILLTOP AVENUE
BIRMINGHAM, AL 35204
205-323-7261 (Phone)
205-251-7838 (Fax)**

CERTIFICATION OF COMPLIANCE

DESCRIP-	ASTM D1785	ASTM D2241	ASTM D3034	ASTM F679	C-900	C-905
F-477 - STANDARD SPECIFICATION FOR ELASTOMERIC SEALS (GASKETS) FOR JOINING PIPE		X	X	X	X	X
D-618 - STANDARD METHOD OF CONDITIONING PLASTICS AND ELECTRICAL INSULATING MATERIALS FOR TESTING	X	X	X	X		X
D-638 - TEST METHOD FOR TENSILE PROPERTIES OF PLASTIC					X	X
D-1598 - TEST METHOD FOR TIME-TO-FAILURE OF PLASTIC PIPE UNDER CONSTANT INTERNAL PRESSURE	X	X			X	X
D-1599 - TEST METHOD FOR SHORT TERM HYDRAULIC FAILURE PRESSURE OF PLASTIC PIPE AND FITTINGS	X	X			X	X
D-1784 - STANDARD SPECIFICATION FOR RIGID PVC (POLY VINYL CHLORIDE) COMPOUNDS	X	X	X	X	X	X
D-1785 - STANDARD SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PIPE SCH 40-80-120	X					
D-2122 - STANDARD METHOD OF DETERMINING DIMENSIONS OF THERMOPLASTIC PIPE AND FITTINGS	X	X	X	X	X	X
D-2152 - STANDARD TEST FOR THE DEGREE OF FUSION OF EXTRUDED PVC (POLY VINYL CHLORIDE) PIPE AND MOLDED FITTINGS BY ACETONE IMMERSION	X	X	X	X	X	X
D-2241 - STAND SPECIFICATION FOR POLY VINYL CHLORIDE (PVC) PRESSURE RATED PIPE (SDR SERIES)		X			X	X
D-2290 - TEST FOR APPARENT TENSILE STRENGTH OF RING OR TUBULAR PLASTIC BY SPLIT DISK METHOD					X	X
D-2412 - TEST METHOD FOR EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATES		X	X	X	X	X
D-2444 - TEST METHOD FOR IMPACT RESISTANCE OF THERMO-PLASTIC PIPE AND FITTINGS BY MEANS OF A TUP (FREE FALLING WEIGHT)		X	X	X	X	X
D-2672 - STANDARD SPECIFICATION FOR JOINTS FOR IPS PVC USING SOLVENT CEMENT	X	X				
D-2837 - STANDARD METHOD OF OBTAINING HYDROSTATIC DESIGN BASIS FOR THERMOPLASTIC PIPE MATERIALS	X	X			X	X
D-3034 - SPECIFICATION FOR TYPE PSM POLY (VINYL CHLORIDE) (PVC) SEWER PIPE			X			
D-3139 - STANDARD SPECIFICATIONS FOR JOINTS FOR PLASTIC PRESSURE PIPES USING FLEXIBLE ELASTOMERIC SEALS		X			X	X
D-3212 - SPECIFICATION FOR SEWER PLASTIC PIPE USING FLEXIBLE ELASTOMERIC SEALS			X	X		
F-679 - STANDARD SPECIFICATION FOR TYPE PVC POLY (VINYL CHLORIDE) (PVC) SEWER PIPE AND FITTINGS				X		
NSF STANDARD #14 - COMPLIANCE FOR NSF SEAL OR APPROVAL UNDERWRITERS LABORATORIES (UL)-1285 (LISTED AND APPROVED)	X	X			X	X
FACTORY MUTUAL (FM)-1612 (LISTED AND APPROVED) SEE PRESSURE RATINGS					X	
NSF-61	X	X			X	X
AWWA C-900 - 07 4" - 12" MANUFACTURING STANDARD					X	
AWA C-905 - 88 14" - 36" MANUFACTURING STANDARD						X

TECHNICAL DATA



PRESSURE PIPE

PR160* (SDR 26) Conforming to ASTM D 2241 and D 3139

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.091	2.375	3.100	.006	.434
2-1/2	.110	2.875	3.875	.007	.640
3	.135	3.500	4.510	.008	.947
4	.173	4.500	5.690	.009	1.564
6	.255	6.625	8.075	.011	3.412
8	.332	8.625	10.310	.015	5.801
10	.413	10.750	12.890	.015	9.023
12	.490	12.750	15.105	.015	12.737

PR200* (SDR 21) Conforming to ASTM D 2241 and D 3139

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.113	2.375	3.125	.006	.533
2-1/2	.137	2.875	3.940	.007	.789
3	.167	3.500	4.650	.008	1.162
4	.214	4.500	5.805	.009	1.920
6	.316	6.625	8.232	.011	4.195
8	.410	8.625	10.505	.015	7.124
10	.511	10.750	12.920	.015	11.080
12	.606	12.750	15.350	.015	15.637

PR250* (SDR 17) Conforming to ASTM D 2241 and D 3139

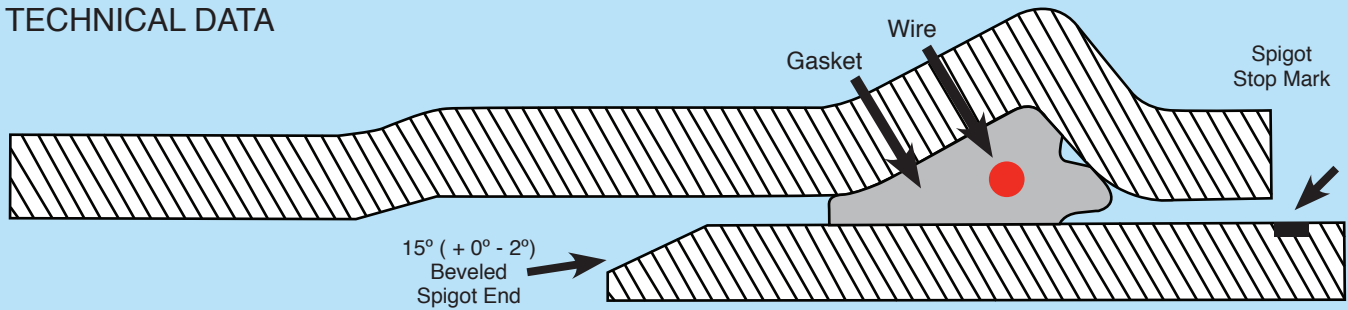
Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.140	2.375	3.370	.006	.653
2-1/2	.169	2.875	4.157	.007	.961
3	.206	3.500	4.710	.008	1.412
4	.265	4.500	5.955	.009	2.347
6	.390	6.625	8.470	.011	5.117
8	.508	8.625	10.780	.015	8.685
10	.632	10.750	13.100	.015	13.535
12	.750	12.750	15.575	.015	19.110

* Pressure Rating At 73.4° F

Vulcan Pressure Pipe is furnished in 20' lengths.
40' lengths are available in sizes 2" through 6".
Gaskets are manufactured by Hultec and are NSF approved.

NSF - PW

TECHNICAL DATA



PRESSURE PIPE

PR315* (SDR 13.5) Conforming to ASTM D 2241 and D 3139

Nominal Size Inches	Minimum Wall Thickness	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.176	2.375	3.160	.006	.806
2-1/2	.176	2.875	4.260	.007	1.149
3	.259	3.500	4.530	.008	1.753
4	.333	4.500	6.075	.009	2.899
6	.491	6.625	8.650	0.11	6.346

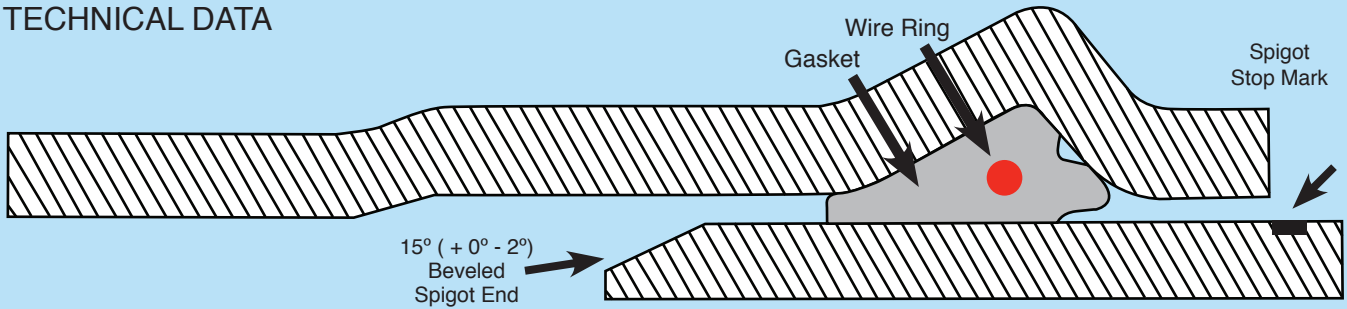
* Pressure Rating At 73.4° F

Gaskets are manufactured by Hultec and are NSF approved.

Vulcan Pressure Pipe is manufactured in 20' lengths. 40' lengths are available in sizes 2" through 6".

NSF - PW

TECHNICAL DATA



GRAVITY SEWER PIPE

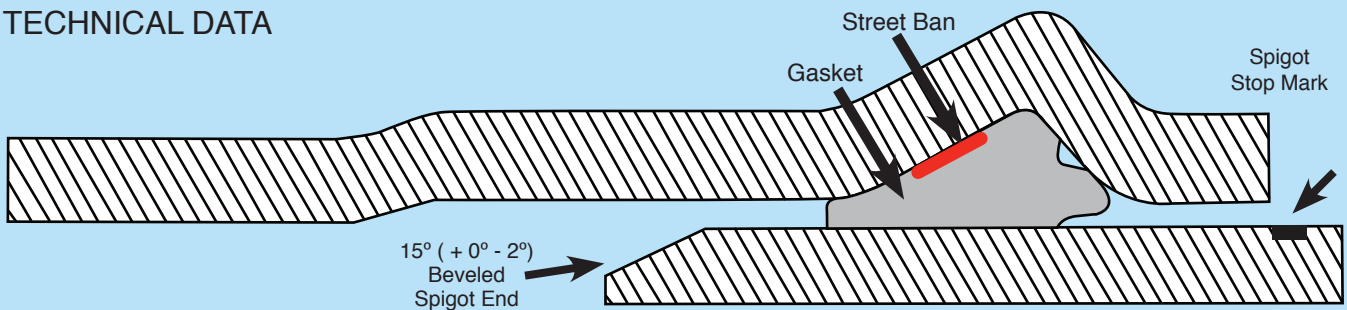
SDR 35 Conforming to ASTM D 3034 and D 3212 PSI-46

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight/Foot 20' Lengths	Approximate Weight/Foot 14' Lengths
4	.120	4.215	5.175	.009	N/A	1.022
6	.180	6.275	7.400	.011	N/A	2.292
8	.240	8.400	9.825	.012	N/A	4.512
10	.300	10.500	12.175	.015	N/A	7.037
12	.360	12.500	14.425	.018	N/A	10.076
15	.437	15.300	17.914	.023	N/A	15.04

SDR 26 Conforming to ASTM D 3034 and D 3212 PSI-115

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight/Foot 20' Lengths	Approximate Weight/Foot 14' Lengths
4	.162	4.215	5.250	.009	N/A	1.365
6	.241	6.275	7.495	.011	N/A	3.037
8	.323	8.400	9.935	.012	N/A	6.024
10	.403	10.500	12.375	.015	N/A	9.358
12	.480	12.500	14.965	.018	N/A	13.303
15	.588	15.300	18.275	.023	N/A	20.031

TECHNICAL DATA



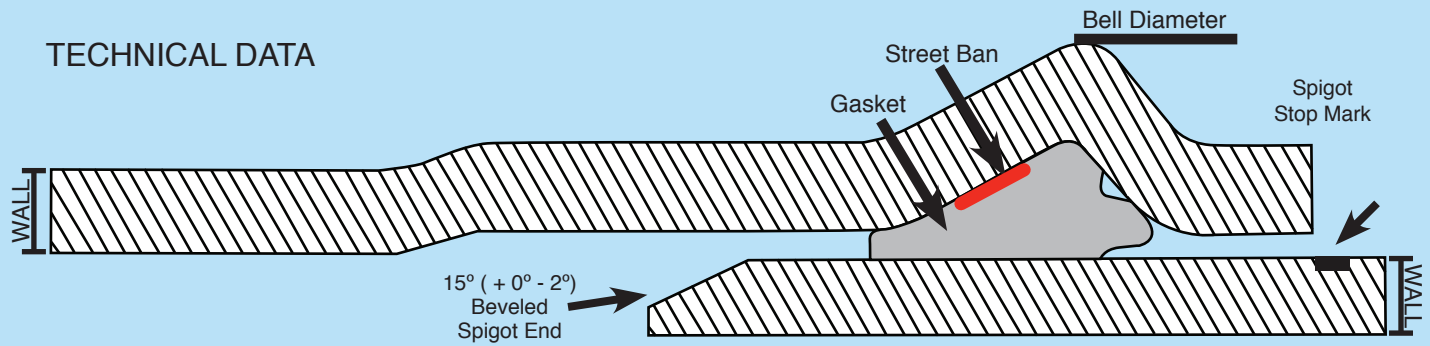
Conforming to ASTM F-679 and D 3212 PSI-46

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches (Approximate)	Outside Diameter Tolerance ± Inches	Approximate Weight/Foot 20' Lengths	Approximate Weight/Foot 14' Lengths
18"	.499	18.701	19.884	±.028	N/A	19.459
21"	.588	22.047	23.651	±.033	N/A	27.033

Conforming to ASTM-F679 and D 3212 PSI-115

18"	.671	18.701	20.158	±.028	N/A	25.919
21"	.791	22.047	23.955	±.033	N/A	36.021

Vulcan Sewer Pipe is manufactured in 14' lengths.
Pipe gasket manufactured by Hultec.



AWWA C-900-07 PIPE

Dimensions and Pressure Classes for All Pipe Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

Size - Class PSI	DR	Minimum Wall Thickness Inches (TI)	Pipe Outside Diameter Inches (OD)	Outside Diameter Tolerance ±Inches	Bell Outside Diameter Inches Approximate	Approximate Weight/Foot	Product Approval		
							UL	FM	PSI
4"-165	25	.192	4.800	.009	6.080	1.851	X	165	
6"-165	25	.276	6.900	.011	6.435	3.836	X	165	
8"-165	25	.362	9.050	.015	10.875	6.646	X	165	
10"-165	25	.444	11.100	.015	13.300	10.046	X	165	
12"-165	25	.528	13.200	.015	15.775	14.267	X	165	
4"-235	18	.267	4.800	.009	6.6160	2.528	X	235	X 150 psi
6"-235	18	.383	6.900	.011	8.600	5.246	X	235	X 150 psi
8"-235	18	.503	9.050	.015	11.100	9.062	X	235	X 150 psi
10"-235	18	.617	11.100	.015	13.500	13.714	X	235	X 150 psi
12"-235	18	.733	13.200	.015	16.010	19.220	X	235	X 150 psi
4"-305	14	.343	4.800	.009	6.290	3.271	X	305	X 200 psi
6"-305	14	.493	6.900	.011	8.800	6.634	X	305	X 200 psi
8"-305	14	.646	9.050	.015	11.395	11.454	X	305	X 200 psi
10"-305	14	.793	11.100	.015	13.915	17.380	X	305	X 200 psi
12"-305	14	.943	13.200	.015	16.425	24.645	X	305	X 200 psi

* Pressure Rating At 73.4° F

Vulcan C-900 Pipe Manufactured In 20' Lengths

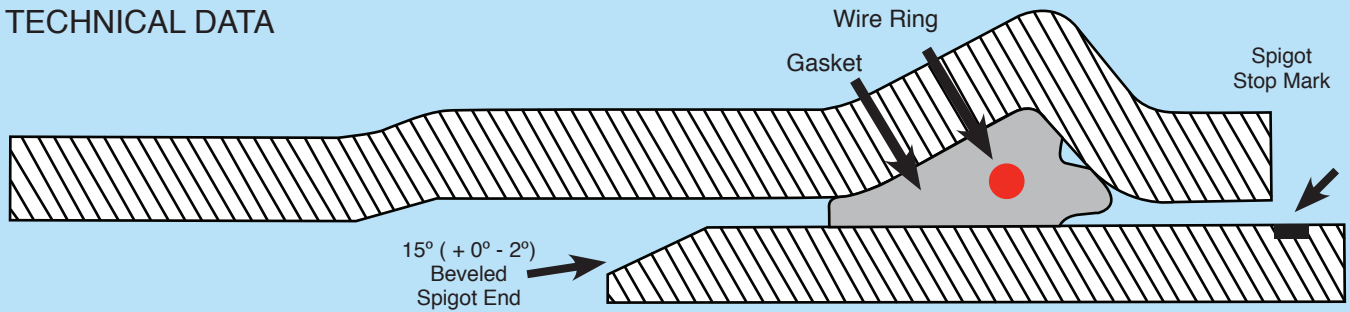
Pipe gaskets are manufactured by Hueltec and NSF – UL-1285 – FM-1612 approved.

AWWA C-905 PIPE

Dimensions and Pressure Classes for Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

Size - Class PSI	DR	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Outside Diameter Tolerance ±Inches	Bell Outside Diameter Inches	Approximate Weight/Foot	Product Approval	
							UL	FM
14" - 165	25	.612	15.300	±.015	17.300	18.795		
14" - 235	18	.850	15.300	±.015	17.300	25.987		
16" - 100	41	.424	17.400	±.020	19.696	15.631		
16" - 165	25	.696	17.400	±.020	20.240	25.083		
16" - 200	21	.829	17.400	±.020	20.458	27.701		
16" - 235	18	.967	17.400	±.020	20.675	34.283		X 235
18" - 165	25	.780	19.500	±.020	21.784	30.964		
18" - 235	18	1.083	19.500	±.020	21.784	42.304		

TECHNICAL DATA



PRESSURE PIPE - SEWER FORCE MAIN: GREEN NON NSF NON POTABLE

PR160* (SDR 26) Conforming to ASTM D 2241 and D 3139

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.091	2.375	3.100	.006	.434
2-1/2	.110	2.875	3.875	.007	.640
3	.135	3.500	4.510	.008	.947
4	.173	4.500	5.690	.009	1.564
6	.255	6.625	8.075	.011	3.412
8	.332	8.625	10.310	.015	5.801
10	.413	10.750	12.890	.015	9.023
12	.490	12.750	15.105	.015	12.737

PR200* (SDR 21) Conforming to ASTM D 2241 and D 3139

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.113	2.375	3.125	.006	.533
2-1/2	.137	2.875	3.940	.007	.789
3	.167	3.500	4.650	.008	1.162
4	.214	4.500	5.805	.009	1.920
6	.316	6.625	8.232	.011	4.195
8	.410	8.625	10.505	.015	7.124
10	.511	10.750	12.920	.015	11.080
12	.606	12.750	15.350	.015	15.637

PR250* (SDR 17) Conforming to ASTM D 2241 and D 3139

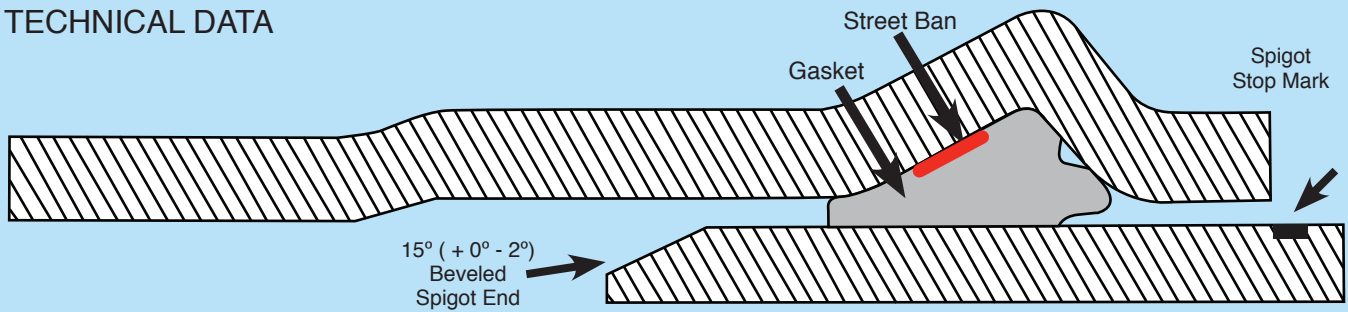
Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.140	2.375	3.370	.006	.653
2-1/2	.169	2.875	4.157	.007	.961
3	.206	3.500	4.710	.008	1.412
4	.265	4.500	5.955	.009	2.347
6	.390	6.625	8.470	.011	5.117
8	.508	8.625	10.780	.015	8.685
10	.632	10.750	13.100	.015	13.535
12	.750	12.750	15.575	.015	19.110

* Pressure Rating At 73.4° F

Vulcan Pressure Pipe is manufactured in 20' lengths.

NON NSF

TECHNICAL DATA



AWWA C-900-07 PIPE - SEWER FORCE MAIN: GREEN NON NSF NON POTABLE

Dimensions and Pressure Classes for Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

Size - Class PSI	DR	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ±Inches	Approximate Weight/Foot
4"-165	25	.192	4.800	6.080	.009	1.851
6"-165	25	.276	6.900	8.435	.011	3.836
8"-165	25	.362	9.050	10.875	.015	6.646
10"-165	25	.444	11.100	13.300	.015	10.046
12"-165	25	.528	13.200	15.775	.015	14.267
4"-235	18	.267	4.800	6.160	.009	2.528
6"-235	18	.383	6.900	8.600	.011	5.246
8"-235	18	.503	9.050	11.100	.015	9.062
10"-235	18	.617	11.100	13.500	.015	13.714
12"-235	18	.733	13.200	16.010	.015	19.220
4"-305	14	.343	4.800	6.290	.009	3.271
6"-305	14	.493	6.900	8.800	.011	6.634
8"-305	14	.646	9.050	11.395	.015	11.454
10"-305	14	.793	11.100	13.915	.015	17.380
12"-305	14	.943	13.200	16.425	.015	24.645

AWWA C-905 PIPE GREEN NON NSF NON POTABLE

Dimensions and Pressure Classes for Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

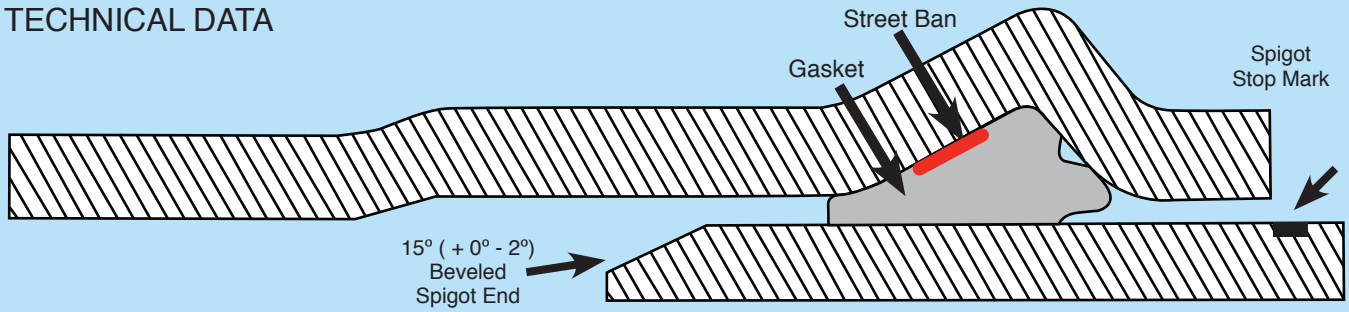
Size - Class PSI	DR	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Outside Diameter Tolerance ±Inches	Bell Outside Diameter Inches	Approximate Weight/Foot
14" - 165	25	.612	15.300	±.015	17.300	18.795
14" - 235	18	.850	15.300	±.015	17.300	25.987
16" - 100	41	.424	17.400	±.020	19.696	15.631
16" - 165	25	.696	17.400	±.020	20.240	25.083
16" - 200	21	.829	17.400	±.020	20.458	27.701
16" - 235	18	.967	17.400	±.020	20.675	34.283
18" - 165	25	.780	19.500	±.020	21.784	30.964
18" - 235	18	1.083	19.500	±.020	21.784	42.304

* Pressure Rating At 73.4° F

Vulcan C-900 SFM Pipe Manufactured In 20' Lengths

NON NSF UL FM

TECHNICAL DATA



AWWA C-900 PIPE - RECLAIMED WATER: PURPLE NON NSF NON POTABLE

Dimensions and Pressure Classes for Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

Size - Class PSI	DR	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ±Inches	Approximate Weight/Foot
4"-165	25	.192	4.800	6.080	.009	1.851
6"-165	25	.276	6.900	8.435	.011	3.836
8"-165	25	.362	9.050	10.875	.015	6.646
10"-165	25	.444	11.100	13.300	.015	10.046
12"-165	25	.528	13.200	15.775	.015	14.267
4"-235	18	.267	4.800	6.160	.009	2.528
6"-235	18	.383	6.900	8.600	.011	5.246
8"-235	18	.503	9.050	11.100	.015	9.062
10"-235	18	.617	11.100	13.500	.015	13.714
12"-235	18	.733	13.200	16.010	.015	19.220
4"-305	14	.343	4.800	6.290	.009	3.271
6"-305	14	.493	6.900	8.800	.011	6.634
8"-305	14	.646	9.050	11.395	.015	11.454
10"-305	14	.793	11.100	13.915	.015	17.380
12"-305	14	.943	13.200	16.425	.015	24.645

AWWA C-905 PIPE PURPLE NON NSF NON POTABLE

Dimensions and Pressure Classes for Dimension Ratio (DR) PVC 1120 Pipe with Cast-Iron Pipe Equivalent OD's

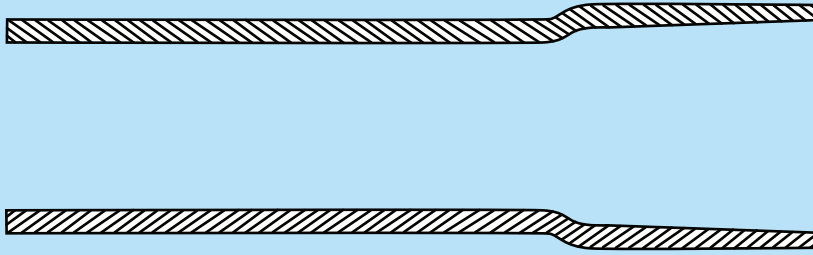
Size - Class PSI	DR	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Outside Diameter Tolerance ±Inches	Bell Outside Diameter Inches	Approximate Weight/Foot
14" - 165	25	.612	15.300	±.015	17.300	18.795
14" - 235	18	.850	15.300	±.015	17.300	25.987
16" - 100	41	.424	17.400	±.020	19.696	15.631
16" - 165	25	.696	17.400	±.020	20.240	25.083
16" - 200	21	.829	17.400	±.020	20.458	27.701
16" - 235	18	.967	17.400	±.020	20.675	34.283
18" - 165	25	.780	19.500	±.020	21.784	30.964
18" - 235	18	1.083	19.500	±.020	21.784	42.304

* Pressure Rating At 73.4° F

Vulcan Reclaimed Water Pipe Manufactured In 20' Lengths

NON NSF UL FM

TECHNICAL DATA



Solvent Weld Bell
or
Plain End
X Plain End

PRESSURE PIPE

ASTM D 1785 and ASTM D 2672

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.154	2.375	2.557	.006	.698
2-1/2	.203	2.875	3.095	.007	1.106
3	.216	3.500	2.770	.008	1.447
4	.237	4.500	4.846	.009	2.060
6	.280	6.625	7.135	.011	3.623
8	.322	8.625	9.289	.015	5.590
10	.365	10.750	11.576	.015	7.730
12	.406	12.750	13.330	.015	10.220

ASTM D 1785 and ASTM D 2672

Nominal Size Inches	Minimum Wall Thickness Inches	Pipe Outside Diameter Inches	Bell Outside Diameter Inches	Outside Diameter Tolerance ± Inches	Approximate Weight Foot
2	.218	2.375	3.125	.006	.959
2-1/2	.276	2.875	3.940	.007	1.463
3	.300	3.500	4.650	.008	1.958
4	.337	4.500	5.805	.009	2.861
6	.432	6.625	8.232	.011	5.456
8	.500	8.625	10.505	.015	8.285
10	.593	10.750	12.920	.015	12.283
12	.687	12.750	15.350	.015	16.900

* Pressure Rating At 73.4° F

Vulcan Pressure Pipe is manufactured in 20' lengths.
Solvent Weld Bell Joint assembly per ASTM-D-2855.



PIPE MATERIAL PROPERTIES FOR PVC 1120

Cell Classification 12454-B

Properties	Minimum Value	Unit	ASTM Test
Specific Gravity	1.40 ± 0.03	–	D 792
Tensile Strength At 73.4°F	7,000	psi	D 638
Modulus Of Elasticity In Tension	400,000	psi	D 638
Compressive Strength At 73.4°F	9,600	psi	D 695
Flexual Strength At 73.4°F	12,000 - 14,000	psi	D 790
IZOD Impact At 73.4°F	0.65	ft. lbs/in. Notched	D 256
Hardness-Durometer D	80 ± 2	–	D 2240
Coefficient Of Thermal Expansion	2.8 x10 ⁻⁵	in/in/°F	D 696
Thermal Conductivity	3-4 x 10 ⁻⁴	cal/cm2/sec/°C	D 177
Heat Distortion - Temperature @ 264 psi	165	°F	D 648
Flammability	Self-extinguishing	–	D 635
Dielectric Strength	1,400	Volts/mil	D 149
Dielectric Constant - 60 cps @ 30°F	3.70	–	D 150
Power Factor - 60 cps @ 30°F	1,255	%	D 150
Specific Volume Resistivity @ 73.4°F	3-5 x 10	ohm/cm	D 257
Water Absorption	0.05	%	D 570

VULCAN PLASTIC PIPE ASSEMBLY

1. Visually inspect and clean and dry all belled ends and spigot end before joint assembly.
2. Lubricate the spigot end of the pipe from the tapered end to the reference mark. **DO NOT LUBRICATE THE GASKET.**
3. Align the spigot end of the pipe to the belled end for insertion.
4. Place a wooden block on the belled end and using a pry bar push the spigot end into the belled end until the reference mark on the spigot end is even with end of the bell. **DO NOT OVER INSERT SPIGOT INTO BELL.**
5. If any unusual resistance occurs during the belling procedure, disassemble the joint and repeat steps 1-4. If resistance continues notify manufacturer prior to proceeding.
6. Field Cuts:
All rough edges must be removed and the spigot end beveled with a file or a beveling tool. Failure to do so could result in a damaged gasket.
7. The maximum bell deflection after joint assembly is 2/1/2° on the gasket joint for CIS - IPS - PSM.
8. CIS C-900 and C-905 should be installed in accordance with the AWWA C-605 #M23 PVC pipe design and installation, Uni Bell handbook of PVC pipe design and construction, and ASTM-D-2774-08.
9. IPS should be installed in accordance with the Uni Bell handbook of PVC pipe design and construction, and ASTM-D-2774-08.
10. PSM should be installed in accordance with the Uni Bell handbook of PVC pipe design and construction and ASTM D-2321.
11. The use of mechanical equipment (backhoe) is not recommended by the manufacturer for bell / spigot joint assembly.
12. Solvent weld bell joints per ASTM-D-2855 - used only approved cleaner - primer - cements.

PACKAGING

Pipe Size		Item Number	Length	Weight	No. Pcs. Per Unit	Footage Per Unit	Weight Per Unit	Units Per Truck	Footage Per Truck	Weight Per Truck
4" 100 CIS	DR25	290001	20'	1,851	38	760'	1,407	20	15,200'	28,135
4" 150 CIS	DR18	290006	20'	2,528	38	760'	1,921	20	15,200'	38,426
4" 200 CIS	DR14	290011	20'	3,271	38	760'	2,486	20	15,200'	49,719
6" 100 CIS	DR25	290002	20'	3,836	20	400'	1,534	20	8,000'	30,074
6" 150 CIS	DR18	290007	20'	5,246	20	400'	2,098	20	8,000'	41,968
6" 200 CIS	DR14	290012	20'	6,634	20	500'	2,654	16	6,400'	42,458
					30	600'		4		
8" 100 CIS	DR25	290003	20'	6,646	25	500'	3,323	4	4,400'	29,242
					30	600'	5,437	4		
8" 150 CIS	DR18	290008	20'	9,062	25	500'	4,531	4	4,400'	39,872
					20	400'	4,581	4		
8" 200 CIS	DR14	290013	20'	11,454	15	300'	3,436	8	4,000'	45,816
10" 100 CIS	DR25	290004	20'	10,046	16/20	320'/400'	2,194/2,743	4/4	2,880'	28,932
10" 150 CIS	DR18	290009	20'	13,714	8/10	160'/200'	2,194/2,743	4/4	2,880'	29,496
10" 200 CIS	DR14	290014	20'	17,38	8	160'	2,780	16	2,560'	44,493
					8	160'	2,283	8		
12" 100 CIS	DR25	290005	20'	14,267	12			4	2,240'	31,958
					8	160'	3,075	8		
12" 150 CIS	DR18	290010	20'	19,22	12	240'	4,613	4	2,240'	43,053
12" 200 CIS	DR14	290015	20'	24,645	8	160'	3,943	12	1,920'	47,318
					6	120'	3,010	8		
16" 165 CIS	DR25	290026	20'	25,083	3	60'	1,505	4	1,200'	30,100
					6	120'	4,114	8		
16" 235 CIS	DR18	290027	20'	34,283	3	60'	2,057	4	1,200'	41,140
4" GS 3034	SDR35	242032	14'	1,146	84	1176'	1,348	18	21168'	24,259
6" GS 3034	SDR35	242033	14'	2,572	30	420'	1,080	24	10080'	25,926
					30	420'	1,937	6		
8" GS 3034	SDR35	242034	14'	4,611	36	504'	2,324	6	5544'	25,563
					20	280'	2,028	6		
10" GS 3034	SDR35	242035	14'	7,242	25	350'	2,535	6	3780'	27,375
					12	168'	1,742	6		
12" GS 3034	SDR35	242036	14'	20,373	16	224'	2,324	6	2352'	24,397
15" GS 3034	SDR35	242037	14'	15,513	9	126'	1,955	12	1512'	23,456
					6	84'	1,788	6		
					4	56'	1,192	6		
					3	42'	894	3		
18" GS F679	SDR35	250049	14'	21,289	2	28'	596	3	1050'	22,353
21" GS F679	SDR35	250050	14'	29,721	4	56'	1,664	12	672'	19,973
4" GS 3034	SDR26	242043	14'	1,532	84	1176'	1,802	18	21168'	32,429
6" GS 3034	SDR26	242044	14'	3,409	30	420'	1,432	24	10080'	34,363
					30	420'	2,580	6		
8" GS 3034	SDR26	242045	14'	6,142	36	504'	2,096	6	5544'	34,051
					20	280'	2,696	6		
10" GS 3034	SDR26	242046	14'	9,629	25	350'	3,370	6	3780'	36,398
					12	168'	2,301	6		
12" GS 3034	SDR26	242047	14'	13,694	16	224'	3,067	6	2352'	32,208
15" GS 3034	SDR26	242048	14'	20,623	9	126'	2,599	12	1512'	31,182
					6	84'	2,375	6		
					4	56'	1,583	6		
					3	42'	1,187	3		
18" GS F679	SDR26	300013	14'	28,27	2	28'	792	3	1050'	29,684
21" GS F679	SDR26	300014	14'	39,477	4	56'	2,211	12	672'	26,529
2" CL 160	SDR26	207160	20'	0.434	222	4,440'	1,927	12	53,280'	23,124
2" CL 200	SDR21	207141	20'	0.533	222	4,440'	2,367	12	53,280'	28,398
2" CL 250	SDR17	218973	20'	0.653	222	4,440'	2,899	12	53,280'	34,792
2" CL 315	SDR 13.5	250071	20'	0.806	222	4,440'	3,579	12	53,280'	42,944
2" CL 160	SDR26	219745	40'	0.429	111	4,440'	1,905	12	53,280'	22,857
2" CL 200	SDR21	226186	40'	0.527	111	4,440'	2,340	12	53,280'	28,079
2" CL 250	SDR17		40'	0.646						
2-1/2" CL 160	SDR26	206153	20'	0.64	198	3,960'	1,728	12	47,520'	30,413
2-1/2" CL 200	SDR21	207155	20'	0.789	198	2,700'	2,130	12	47,520'	37,493
2-1/2" CL 250	SDR17	218974	20'	0.961	198	2,700'	2,595	12	47,520'	45,667
2-1/2" CL 160	SDR26	207143	40'	0.632	99	3,250'	2,048	12	47,520'	30,033
2-1/2" CL 200	SDR21	218969	40'	0.778	99	3,240'	2,521	12	47,520'	37,446
2-1/2" CL 250	SDR17		40'							
3" CL 160	SDR26	207161	20'	0.947	100	2,000'	1,894	12	24,000'	22,728
3" CL 200	SDR21	207144	20'	1.162	100	2,000'	2,324	12	24,000'	27,888
3" CL 250	SDR17	218936	20'	1.412	100	2,000'	2,824	12	24,000'	33,888
3" CL 315	SDR13.5	250075	20'	1.753	100	2,000'	3,506	12	24,000'	42,072
3" CL 160	SDR26	250039	40'	0.938	50	2,000'	1,876	12	24,000'	22,512
3" CL 200	SDR21	217555	40'	1.148	50	2,000'	2,296	12	24,000'	27,552
3" CL 250	SDR17		40'							
4" CL 160	SDR26	207163	20'	1.564	84	1,680'	2,628	12	20,160'	31,530
4" CL 200	SDR21	207145	20'	1.92	84	1,680'	3,226	12	20,160'	38,707
4" CL 250	SDR17	218937	20'	2.347	84	1,680'	3,943	12	20,160'	47,316
4" CL 315	SDR13.5	25007	20'	2.899	76	1,520'	4,406	12	18,240'	52,878
			40'		48	1,920'	2,968	8		
4" CL 160	SDR26	213466	40'	1.546	20	800'	1,237	2	16960'	26,220
			40'		48	1,920'	3,638	8		
4" CL 200	SDR21	250066	40'	1.895	20	800'	1,516	2	16,960'	32,139
			40'		48			8		
6" CL 160	SDR26	207164	20'	3.412	26	520'	1,774	8		
					30	600'	2,047	8	8,960'	30,572
6" CL 200	SDR21	207147	20'	4,195	26	520'	2,181	8		
					30	600'	2,517	8	8,960'	37,587
6" CL 250	SDR17	218834	20'	5,117	26	520'	2,661	8		
6" CL 315	SDR13.5	250078	20'	6,346	26	520'	3,070	8	8,960'	45,848
6" CL 160	SDR26	217553	40'	3,362	26	1,040'	3,300	16	8,320'	52,799
6" CL 200	SDR21	217559	40'	4.13	26	1,040'	3,496	8	8,320'	27,972
6" CL 250	SDR17		40'		26	1,050'	4,295	8	8,320'	34,362
8" CL 160	SDR26	207166	20'	5,801	30	600'	3,481	8	4,800'	27,845
8" CL 200	SDR21	207148	20'	7,124	30	600'	4,274	8	4,800'	34,195
8" CL 250	SDR17	219775	20'	8,685	30	600'	5,211	8	4,800'	41,688
					16	320'	2,887	4		
10" CL 160	SDR26	207168	20'	9,023	20	400'	3,609	4	2,880'	25,986
					16	320'	3,546	4		
10" CL 200	SDR21	207149	20'	11,08	20	400'	886	4	2,880'	21,910
					16	320'	4,331	4		
10" CL 250	SDR17	250070	20'	13,535	20	400'	5,414	4	2,880'	38,981
					12	240'	3,057	4		
12" CL 160	SDR26	207169	20'	12,737	4		1,019	4	2,240'	28,531
					12	240'	3,753	4		
12" CL 200	SDR21	250051	20'	15,637	4	80'	5,004	4	2,240'	35,027
					12	240'	4,586	8		
12" CL 250	SDR17	250076	20'	19,11	4	80'	1,529	4	2,240'	42,806
15"	SDR51	224912	20'	9,074	6	120'	1,089	12	1,440'	13,067
					6	120'	1,624	4		
					4	80'	1,082	4		
					3	60'	812	2		
18"	SDR51	224913	20'	13,531	2	40'	541	2	1,000'	13,531
21"	SDR51	226311	20'		4	80'	8	8	640'	