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# SUBMITTAL FOR CHARLOTTE PIPE® SERVICE CAST IRON SOIL PIPE AND FITTINGS

Date:	
Job Name:	Location:
Engineer:	Contractor:

#### Scope:

This specification covers Service Cast Iron pipe, fittings, and compression gaskets used in sanitary drain, waste and vent (DWV), sewer, and storm drainage applications. This system is intended for use in non-pressure applications.

#### Specification:

Pipe and fittings shall comply with ASTM A 74. Compression gaskets shall comply with ASTM C 564. All pipe and fitting shall be made in the United States, and marked with the collective trademark of the Cast Iron Soil Pipe Institute, . Service cast iron pipe and fittings are listed by NSF® International to the UP Code.

#### Installation:

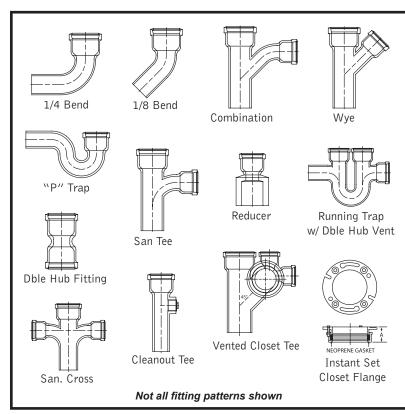
Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry Company® and shall conform to all applicable plumbing, fire, and building code requirements. The system shall be hydrostatically tested after installation to 10 ft. of head (4.3 psi maximum). **WARNING!** Never test with or transport/store compressed air or gas in Cast Iron pipe or fittings. Doing so can result in explosive failures and cause severe injury or death.

#### Referenced Standards:

ASTM A 74: Cast Iron Soil Pipe and Fittings

ASTM C 564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings





S R + F + S + T A J B + T A J B Laying Length
(Telescoping Length)

		PIPE - S	ERVICE		
	Telescoping Length	Hub I.D.	O.D.	r <u>rel</u> I.D.	Nominal Thickness
Size	Y	A	J	В	T
2"	2.50	2.94	2.30	1.96	0.17
3"	2.75	3.94	3.30	2.96	0.17
4"	3.00	4.94	4.30	3.94	0.18
5′′	3.00	5.94	5.30	4.94	0.18
6′′	3.00	6.94	6.30	5.94	0.18
8′′	3.50	9.25	8.38	7.94	0.23
10"	3.50	11.38	10.50	9.94	0.28
12"	4.24	13.50	12.50	11.94	0.28
15"	4.25	16.95	15.88	15.16	0.36

Charlotte Pipe and Foundry Company • P.O. Box 35430 Charlotte, NC 28235 • (800) 438-6091 • www.charlottepipe.com



#### **Certifications**

This is to verify that products manufactured by Charlotte Pipe and Foundry, Cast Iron Division, are manufactured in the United States and conform to the following standards:

#### **SERVICE HUB AND SPIGOT PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). ASTM A 74

Listed by NSF® International to the UP Code ISO 9001:2008 Certified

#### **EXTRA HEAVY HUB AND SPIGOT PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). ASTM A 74

Listed by  $NSF^{\$}$  International to the UP Code ISO 9001:2008 Certified

#### **HUBLESS PIPE AND FITTINGS**

All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI). CISPI Standard 301
ASTM A 888
Listed by NSF® International to the UP Code
ISO 9001:2008 Certified

#### **HUBLESS COUPLINGS**

CISPI Standard 310 ASTM C 1277 Certified by NSF® International

#### **HUBLESS HEAVY DUTY COUPLINGS**

Meets ASTM C 1540

#### **COMPRESSION GASKETS**

ASTM C 564 CISPI HSN 85

Very truly yours,

Hooper Hardison, President

**Notary Public** 

My commission expires March 10, 2024

. Michelle R. Well

tope Handson

MICHELLE R WEBB NOTARY PUBLIC MECKLENBURG COUNTY, NC My Commission Expires 3-10-2024



LC-CI (6-22-22)



### **Reference Standards Cast Iron**

#### **AMERICAN SOCIETY FOR TESTING AND MATERIALS**

ASTM	TITLE
A 74 SCOPE:	SPECIFICATION FOR CAST IRON SOIL PIPE AND FITTINGS HUB AND SPIGOT (SERVICE AND EXTRA HEAVY) THIS SPECIFICATION COVERS CAST IRON PIPE AND FITTINGS USED IN SANITARY DRAIN, WASTE, AND VENT (DWV), SEWER, AND STORM DRAINAGE APPLICATION. THIS SYSTEM IS INTENDED FOR USE IN NONPRESSURE APPLICATIONS.
C 564 SCOPE:	SPECIFICATION FOR RUBBER GASKETS FOR CAST IRON SOIL PIPE AND FITTINGS THIS SPECIFICATION COVERS PREFORMED RUBBER GASKETS USED TO SEAL JOINTS IN CAST IRON SOIL PIPE AND FITTINGS.
C 1277 SCOPE:	SPECIFICATION FOR COUPLING FOR USE IN CONNECTION WITH HUBLESS CAST IRON PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATION (REGULAR HUBLESS COUPLING) THE PURPOSE OF THIS SPECIFICATION IS TO ESTABLISH CRITERIA FOR MATERIAL DIMENSIONS AND TOLERANCES FOR ONE TYPE OF COUPLING USED IN HUBLESS CAST IRON SOIL PIPE AND FITTING FOR SANITARY AND STORM DRAIN, WASTE AND VENT PIPING APPLICATIONS.
C 1540 SCOPE:	SPECIFICATION FOR SHIELDED COUPLINGS JOINING HUBLESS CAST IRON SOIL PIPE AND FITTINGS (HEAVY DUTY COUPLINGS) THIS SPECIFICATION COVERS THE EVALUATION OF THE PERFORMANCE OF SHIELDED HUBLESS COUPLINGS TO JOIN CAST IRON SOIL PIPE AND FITTINGS.

#### **CAST IRON SOIL PIPE INSTITUTE**

CISPI	TITLE
301	SPECIFICATION FOR HUBLESS CAST IRON SOIL PIPE AND FITTINGS FOR SANITARY AND
	STORM DRAIN, WASTE, AND VENT PIPING APPLICATIONS
SCOPE:	THE PURPOSE OF THIS STANDARD IS TO ESTABLISH STANDARDS COVERING MATERIAL,
	DIMENSIONS, AND TOLERANCE FOR PIPE AND FITTINGS FOR HUBLESS CAST IRON SANITARY
	AND STORM DRAIN, SANITARY WASTE, AND VENT PIPING APPLICATIONS.
310	SPECIFICATION FOR COUPLING FOR USE IN CONNECTION WITH HUBLESS CAST IRON PIPE
	AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATION
	(REGULAR HUBLESS COUPLING)
SCOPE:	THE PURPOSE OF THIS SPECIFICATION IS TO ESTABLISH CRITERIA FOR MATERIAL
	DIMENSIONS AND TOLERANCES FOR ONE TYPE OF COUPLING USED IN HUBLESS CAST
	IRON SOIL PIPE AND FITTING FOR SANITARY AND STORM DRAIN, WASTE AND VENT PIPING
	APPLICATIONS.
	ALL LIGATIONS.

## **Gray Iron Physical Properties**

Tensile Strength	20,000 p.s.i. — 60,000 p.s.i. (21,000 p.s.i.)
Elastic Modulus (Young's modulus)	10 - 23 x 10 <sup>6</sup> p.s.i.
Hardness (Brinell)	150 - 250 BHN
Thermal Conductivity	0.110 - 0.137 calories/cm²/Sec/cm/ °C
Thermal Expansion	10 x 10 <sup>-6</sup> / °C 6 x 10 <sup>-6</sup> / °F
Density	0.25 - 0.28 lb./in <sup>3</sup> 6.95 - 7.35 gm/cm <sup>3</sup>
Specific Heat	0.13 BTU / lb / °F 0.13 cal / gm / °C

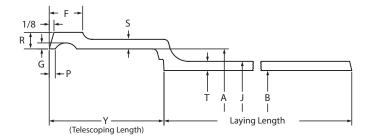
## **Composition of Gray Iron**

The following are typical ranges of elements present in unalloyed gray cast iron normally produced in commercial practice:

Carbon (C)	2.60 - 3.85%
Silicon (Si)	1.25 - 2.90%
Manganese (Mn)	0.40 - 1.00%
Phosphorus (P)	0.02 - 0.90%
Sulfur (S)	0.04 - 0.20%



# Service Cast Iron



## **A WARNING**

Testing with or use of compressed air or gas in Cast Iron pipe or fittings can result in explosive failures and cause severe injury or death.



- NEVER test with or transport/store compressed air or gas in Cast Iron pipe or fittings.
- NEVER test Cast Iron pipe or fittings with compressed air or gas.
- ONLY use Cast Iron pipe and fittings for drain, waste and vent or sanitary sewer applications.

### **Service Cast Iron Soil Pipe**

Size <sup>A</sup>	Inside Diameter of Hub <sup>B</sup>	Outside Diameter of Barrel	Telescoping Length	Inside Diameter of Barrel	Thick of Ba	
Availability <sup>B</sup>	Λ		Υ	В	T	
	Α	J	ĭ	D	Nom	Min
2"	2.94	2.30	2.50	1.96	0.17	0.14
3"	3.94	3.30	2.75	2.96	0.17	0.14
4"	4.94	4.30	3.00	3.94	0.18	0.15
5"	5.94	5.30	3.00	4.94	0.18	0.15
6"	6.94	6.30	3.00	5.94	0.18	0.15
8"	9.25	8.38	3.50	7.94	0.23	0.17
10"	11.38	10.50	3.50	9.94	0.28	0.22
12"	13.50	12.50	4.25	11.94	0.28	0.22
15"	16.95	15.88	4.25	15.16	0.36	0.30

	Thicknes	ss of Hub	- Mille of H.J.	Distance from	Double of L	
Size <sup>A</sup>	Hub Body	Over Bead	Width of Hub Bead	Lead Groove to End, Pipe and Fittings <sup>B</sup>	Depth of L	ead Groove
	S (min)	R (min)	F(min)	Р	G (min)	G (max)
2"	0.13	0.34	0.75	0.22	0.10	0.19
3"	0.16	0.37	0.81	0.22	0.10	0.19
4"	0.16	0.37	0.88	0.22	0.10	0.19
5"	0.16	0.37	0.88	0.22	0.10	0.19
6"	0.18	0.37	0.88	0.22	0.10	0.19
8"	0.19	0.44	1.19	0.38	0.15	0.22
10"	0.27	0.53	1.19	0.38	0.15	0.22
12"	0.27	0.53	1.44	0.47	0.15	0.22
15"	0.30	0.58	1.44	0.47	0.15	0.22

<sup>\*</sup>Nominal inside diameter.



Cast Iron pipe and fittings are only intended for DWV (drain, waste and vent) non-pressure applications. Using cast iron pipe and fittings in pressure applications could result in explosive failures, causing serious injury or death or property damage.

<sup>&</sup>lt;sup>B</sup>For tolerances, please refer to the chart Dimensional Tolerances for Extra Heavy and Service Cast Iron Soli Pipe and Fittings.

# Service Cast Iron

### **Service Cast Iron Soil Pipe**

Part No. SV 1
Pipe, 5' Lengths, Single Hub

Size	Weight	
2"x5'	22.5	
3"x5'	31.8	
4"x5'	41.0	
5"x5'	52.5	
6"x5"	69.2	
8"x5'	101.0	
10"x5'	150.9	
12"x5'	197.3	
15"x5'	287.5	

Part No. SV 3
Pipe, 10' Lengths, Single Hub

Size	Weight
2"x10'	40.1
3"x10'	59.5
4"x10"	75.1
5"x10'	100.4
6"x10"	122.8
8"x10'	180.5
10"x10'	259.7
12"x10'	345.9
15"x10'	525.1

#### Part No. SV 4 Pipe, 30" Lengths, Double Hub



Size	Weight	
2"x30"	13.8	
3"x30"	17.6	
4"x30"	27.1	

# **WARNING**

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- NEVER test Cast Iron pipe or fittings with compressed air or gas.
- ONLY use Cast Iron pipe and fittings for drain, waste and vent or sanitary sewer applications.



# Service Cast Iron

#### PART NO. SV 1



Pipe, 5' Lengths, Single Hub					
Size	L	Weight			
2" x 5'	5′	23.8			
3" x 5'	5′	31.8			
4" x 5'	5′	41.0			
5" x 5'	5′	52.5			
6" x 5'	5′	69.2			
8" x 5'	5′	101.0			
10" x 5'	5′	150.9			
12" x 5'	5′	197.3			
15" x 5'	5′	302.7			

Weights are approximate and are for shipping purposes only.

#### PART NO. SV 3



Pipe, 10' Lengths, Single Hub

i ipe, to	Lenguis, 3	iligic ilub
Size	L	Weight
2" x 10'	10′	40.1
3" x 10'	10′	59.5
4" x 10'	10′	75.1
5" x 10'	10′	100.4
6" x 10"	10′	122.8
8" x 10"	10′	180.5
10" x 10"	10′	276.1
12" x 10'	10′	345.9
15" x 10'	10′	525.1

#### PART NO. SV 4

Pipe, 30" Lengths, Double Hub

Size	L	Weight
2" x 30"	25′′	13.8
3" x 30"	241/2"	17.6
4" x 30"	24''	27.1



#### PART NO. SV 900

Service Weight Charlotte Seal Gasket

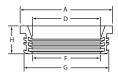
J	Service Meight Charlotte Sear Dasket					
Size	Α	D	F	G	Н	Weight
2	31/2	23/16	21/8	31/8	131/32	0.3
3	$4^{1/2}$	33/16	31/8	41/8	21/16	0.4
4	51/2	43/16	41/8	51/4	29/32	0.5
5	61/2	53/16	5½	61/4	29/32	0.6
6	71/2	63/16	61/8	71/4	21/4	0.8
8	93/4	813/32	83/16	99/32	3	1.5
10	127/16	101/2	105/16	1111/16	23/4	2.4



#### **PART NO. SV 950**

Service Weight Quik-Tite Gasket

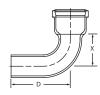
	Sei vice weight want-life basket						
Size	Α	D	F	G	Н	Weight	
2	31/2	21/16	2	31/4	13/32	0.3	
3	47/8	31/16	31/16	43/8	13/4	0.4	
4	53/4	4	4	53/16	13/4	0.5	
5	63/4	5	5	6	21/16	0.8	
6	8	65/16	65/16	711/32	25/32	0.8	
8	10	83/16	83/16	81/2	21/2	1.5	
10	121/4	101/4	10	111/2	21/2	2.3	
12	143/8	121/4	12	14	2 <sup>7</sup> / <sub>8</sub>	3.0	



#### PART NO. SV 5

Quarter Bend (90° EII)

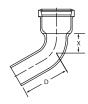
yuarter bend (90 Ell)					
D	Х	Weight			
6	31/4	5.1			
7	4	7.7			
8	41/2	13.1			
81/2	5	16.2			
9	51/2	21.7			
111/2	65/8	36.5			
121/2	75/8	57.3			
15	83/4	82.8			
(XH)	(XH)	(XH)			
	D 6 7 8 8½ 9 11½ 12½ 15	D X 6 31/4 7 4 8 41/2 81/2 5 9 51/2 111/2 65/8 121/2 75/8 15 83/4			



#### PART NO. SV 7

Sixth Bend (60° EII)

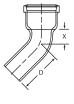
Sixth Bend (60 Ell)						
Size	D	Х	Weight			
2	43/4	2	4.3			
3	51/2	21/2	6.9			
4	65/16	213/16	10.8			
5	65/8	31/8	14.0			
6	67/8	33/8	16.4			
8	9	41/8	32.5			



#### PART NO. SV 8

Eighth Bend (45° EII)

Eighth benu (45 Eil)						
Size	D	Х	Weight			
2	41/4	11/2	4.2			
3	415/16	115/16	6.5			
4	5 <sup>1</sup> 1/16	23/16	10.7			
5	5 <sup>7</sup> /8	23/8	13.1			
6	61/16	29/16	16.6			
8	8	31/8	32.3			
10	83/8	31/2	44.1			
12	105/16	41/16	65.4			
15	(XH)	(XH)	(XH)			



<sup>(</sup>HX) Please see Extra Heavy dimensions

Sixteenth Bend (22 1/2° EII)

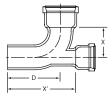
Sixteenth Bend (22 1/2" Ell)						
Size	D	Х	Weight			
2	35/8	7/8	3.4			
3	43/16	13/16	6.0			
4	413/16	15/16	8.8			
5	47/8	13/8	11.6			
6	5	11/2	13.8			
8	611/16	113/16	24.6			
10	67/8	2	37.1			
12	85/8	23/8	57.7			
15	(XH)	(XH)	(XH)			



#### PART NO. SV 10

Quarter Bend with Low Heel Inlet

Size	D	Х	X'	Weight
3 x 2	7	4	9	9.8
4 x 2	8	41/2	101/2	13.0



PART NO. SV 12

Quarter Bend with Side Opening

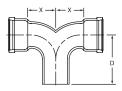
¥				
Size	D	Χ	Weight	
4w2LH	8	31/2	16.2	
4w2RH	8	31/2	16.5	



#### PART NO. SV 15

Double Quarter Bend

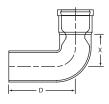
		DOUDIC QU	aitti Dtiiu	
1	Size	D	Х	Weight
Ī	4	8	41/2	15.0



#### PART NO. SV 18

**Reducing Quarter Bend** 

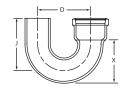
	u		
Size	D	Χ	Weight
3 x 2	7	33/8	7.0
4 x 2	71/2	41/2	11.7
4 x 3	81/8	43/8	9.1



#### PART NO. SV 23

Single Hub Return Bend

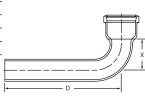
	Jiligio	Hub Neturi	Della	
Size	D	Х	J	Weight
3	55/8	5	5 <sup>7</sup> /8	9.4
4	71/2	611/32	73/16	16.4



#### PART NO. SV 25

Long Quarter Bend

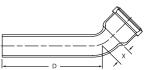
rolla Anglice Della							
Size	Size D X Weight						
2 x 12	12	31/4	6.9				
3 x 12	12	4	10.3				
4 x 12	12	41/2	15.4				
4 x 16	16	41/2	20.4				
4 x 18	18	41/2	21.4				
4 x 24	24	41/2	27.9				



#### PART NO. SV 26

Long Eighth Bend

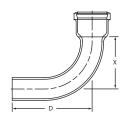
Long Eighth Bend									
Size	Size D X Weight								
2 x 12	12	11/2	6.2						
3 x 12	12	1 <sup>15</sup> / <sub>16</sub>	9.9						
3 x 18	18	1 <sup>15</sup> / <sub>16</sub>	12.4						
4 x 12	12	23/16	15.6						
4 x 18	18	23/16	20.6						
6 x 18	18	29/16	31.0						



#### PART NO. SV 29

Short Sweep Bend

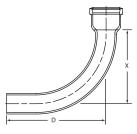
onor concep bend								
Size	Size D X Weight							
2	8	51/4	6.2					
3	9	6	9.4					
4	10	61/2	16.6					
5	101/2	7	20.7					
6	11	71/2	26.6					
8	131/2	8 <sup>5</sup> / <sub>8</sub>	37.4					
10	141/2	95/8	71.5					
12	17	103/4	100.6					



<sup>(</sup>HX) Please see Extra Heavy dimensions



Long Sweep Bend								
Size	Size D X Weight							
2	11	81/4	7.6					
3	12	9	12.2					
4	13	91/2	21.2					
5	131/2	10	25.3					
6	14	101/2	29.9					
8	16½	115//8	52.9					
10	171/2	12 <sup>5</sup> /8	82.6					
12	20	133/4	103.5					
15	(XH)	(XH)	(XH)					



#### PART NO. SV 31

4 x 3

 Reducing Long Sweep Bend

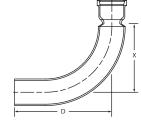
 Size
 D
 X
 Weight

 3 x 2
 12
 9
 12.0

91/2

17.6

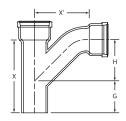
13



#### PART NO. SV 32

Combination Wye & Eighth Bend
(Charlotte Pattern)

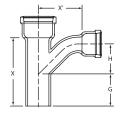
	(Charlotte rattern)							
Size	G	Н	Х	X'	Weight			
4	57/16	43/8	11 <sup>3</sup> / <sub>8</sub>	61/2	20.3			



#### PART NO. SV 33

Combination Wye & Eighth Bend

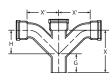
(Long Turn Pattern)							
Size	G	Н	Х	X'	Weight		
2 x 2	4	33//8	8	47/8	8.6		
3 x 2	43/16	4	9	53/4	11.1		
3 x 3	5	5½16	101/2	7	14.8		
4 x 2	311/16	41/2	9	61/4	15.5		
4 x 3	41/2	5%16	101/2	71/2	19.2		
4 x 4	41/2	71/2	12	9	24.5		
5 x 2	33/8	5	9	63/4	14.6		
5 x 3	4	61/16	101/2	8	21.3		
5 x 4	41/4	75/16	12	91/2	25.9		
5 x 5	5 <sup>1</sup> / <sub>2</sub>	85/8	131/2	11	33.6		
6 x 2	211/16	51/2	9	71/4	19.6		
6 x 3	31/8	6%16	101/4	81/2	24.7		
6 x 4	41/4	713/16	12	10	31.7		
6 x 5	5 <sup>1</sup> /16	91/8	131/2	111/2	34.3		
6 x 6	53/4	105/16	15	127/8	44.2		
8 x 2	31/8	61/2	101/2	81/4	34.0		
8 x 4	43/4	813/16	131/2	11	40.1		
8 x 5	51/2	101/8	15	121/2	49.6		
8 x 6	65/16	115/16	16½	137/s	55.7		
8 x 8	711/16	137/8	191/2	17	85.6		



#### PART NO. SV 35

### Double Combination Wye & Eighth Bend

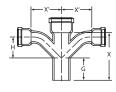
	(Charlotte Pattern)								
Size	G	Н	Х	X'	Weight				
4	57/16	43/8	113/8	61/2	26.0				



#### PART NO. SV 35F

Double Combination Wye & Eighth Bend

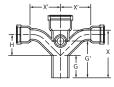
(Long Turn Pattern)							
Size	G	Н	Χ	X'	Weight		
2 x 2	4	33//8	8	47/8	12.0		
3 x 2	43/16	4	9	53/4	14.6		
3 x 3	5	5 <sup>1</sup> / <sub>16</sub>	101/2	7	22.0		
4 x 2	311/16	$4^{1}/_{2}$	9	61/4	19.7		
4 x 3	41/2	5%16	101/2	71/2	26.5		
4 x 4	51/4	613/16	12	9	36.2		
5 x 4	41/4	75/16	12	91/2	30.9		
6 x 4	41/4	713/16	12	10	41.0		
6 x 6	53/4	105/16	15	127/8	69.6		



#### PART NO. SV 35F

### Double Combination Wye & Eighth Bend

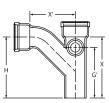
With 2" Lup Hub inlet							
Size	G	G'	Н	χ	X'	Weight	
4	41/4	10	613/16	12	9	41.7	



#### PART NO. SV 39A

### Combination Wye & Eighth Bend with Side Inlet

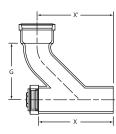
	with Side injet									
Size	G'	Н	Χ	X'	Weight					
4w/2RH	10	121/16	12	9	27.3					
4w/2LH	10	121/16	12	9	28.3					



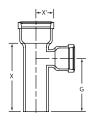
#### PART NO. SV 41

## Combination Wye & Eighth Bend with Cleanout on Main

With Cicalioat on Main									
	IPS								
Size	Tap	G	χ	X'	Weight				
4	31/2	9	123/16	121/4	18.9				

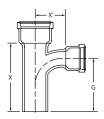


$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		S	traight Te	е	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Size	G	Х	X'	Weight
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 x 2	61/4	8	13/4	7.0
	3 x 2	7	9	21/2	9.0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3 x 3	71/2	10	21/2	12.0
	4 x 2	7	9	3	12.7
5x5         8½         12         3½         19.0           6x4         8         11         4         19.9           6x6         9         13         4         24.0	4 x 3	71/2	10	3	14.0
6 x 4         8         11         4         19.9           6 x 6         9         13         4         24.0	4 x 4	8	11	3	16.6
6 x 6 9 13 4 24.0	5 x 5	81/2	12	31/2	19.0
	6 x 4	8	11	4	19.9
$8 \times 4 \qquad 9^{5}/8 \qquad 12^{7}/8 \qquad 5^{1}/4 \qquad 37.0$	6 x 6	9	13	4	24.0
	8 x 4	95/8	12 <sup>7</sup> / <sub>8</sub>	51/4	37.0



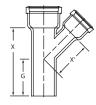
#### PART NO. SV 43

	S	anitary Te	е	
Size	G	χ	X'	Weight
2 x 2	61/4	8	23/4	7.9
3 x 2	7	9	4	10.9
3 x 3	71/2	10	4	11.9
4 x 2	7	9	41/2	14.2
4 x 3	71/2	10	41/2	16.9
4 x 4	8	11	41/2	18.6
5 x 4	8	11	5 5	17.9
5 x 5	81/2	12		22.3
6 x 2	7	9	51/2	15.0
6 x 3	71/2	10	51/2	21.4
6 x 4	8	11	51/2	22.8
6 x 6	9	13	51/2	29.8
8 x 4	93/4	13	61/2	35.7
8 x 6	103/4	15	61/2	43.0
8 x 8	113/4	17	65/8	50.8
10 x 4	93/4	13	71/2	52.0
10 x 6	103/4	15	71/2	57.7
10 x 8	113/4	17	75/8	68.0
10 x 10	123/4	19	75/8	75.9
12 x 6	12	16½	81/2	79.0
12 x 8	13	181/2	85/8	104.0
12 x 10	14	201/2	85/8	123.0
12 x 12	15	221/2	83/4	113.0
15 x 6	12	16½	10	145.0
15 x 8	13	181/2	101/8	173.0
15 x 12	15	221/2	101/4	204.0
15 x 15	(XH)	(XH)	(XH)	(XH)



#### PART NO. SV 44

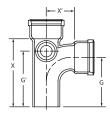
		Wye		
Size	G	X	χ'	Weight
2 x 2	4	8	4	8.3
3 x 2	43/16	9	5	10.9
3 x 3	5	101/2	51/2	12.2
4 x 2	35//8	9	53/4	14.4
4 x 3	47/16	101/2	61/4	16.8
4 x 4	51/4	12	63/4	20.3
5 x 2	31/8	9	61/2	15.3
5 x 3	37/8	101/2	7	19.8
5 x 4	411/16	12	71/2	23.0
5 x 5	51/2	131/2	8	27.0
6 x 2	29/16	9	71/4	19.7
6 x 3	33/8	101/2	73/4	23.7
6 x 4	43/16	12	81/4	26.7
6 x 5	415/16	131/2	83/4	29.5
6 x 6	53/4	15	91/4	36.5
8 x 2	31/8	101/2	81/2	31.0
8 x 3	315/16	12	9	33.2
8 x 4	43/4	131/2	91/2	38.3
8 x 5	51/2	15	10	41.2
8 x 6	65/16	161/2	101/2	45.4
8 x 8	711/16	191/2	1113/16	58.4
10 x 3	23/4	12	103/4	54.0
10 x 4	3%16	131/2	111/8	55.4
10 x 5	45/16	15	115/8	60.6
10 x 6	5½	161/2	121/8	64.1
10 x 8	61/2	191/2	137/16	86.9
10 x 10	8	221/2	141/2	111.1
12 x 4	41/8	15	127/16	69.7
12 x 5	47/8	161/2	12 <sup>15</sup> / <sub>16</sub>	78.0
12 x 6	511/16	18	137/16	87.7
12 x 8	71/16	21	143/4	100.6
12 x 10	89/16	24	1513/16	131.0
12 x 12	101/8	27	167/s	175.2
15 x 4	63/8	15	15	138.5
15 x 6	4	18	153/4	153.6
15 x 8	53/8	21	171/16	187.1
15 x 10	67/8	24	18½	225.0
15 x 12	87/16	27	193/16	260.0
15 x 15	(XH)	(XH)	(XH)	(XH)



#### PART NO. SV 50

Sanitary Tee with Left Hand Side Tap

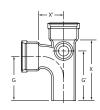
	Wi	th Left I	Hand Si	de Tap	
Size	G	G'	Х	X'	Weight
4w/2	8	9	11	$4^{1}/_{2}$	16.3



#### PART NO. SV 50A

Sanitary Tee with Right Hand Side Tap

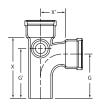
	with Right Hand Side Iap									
Size	G	G'	χ	χ'	Weight					
4w/2	8	9	11	41/2	16.5					



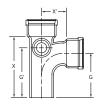
#### PART NO. SV 50B

Sanitary Tee with Right and Left Hand Side Taps

with Right and Left Hand Side laps									
Size	G	G'	Χ	X'	Weight				
4w/2	8	9	11	41/2	16.3				



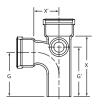
Sar	Sanitary Tee with Left Hand Side Inlet									
Size	G	G'	Χ	X'	Weight					
4w/2	8	9	11	41/2	20.2					



#### PART NO. SV 56B

Sanitary Tee with Right Hand Side Inlet

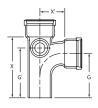
with Right Hand Side Inlet									
Size	G	G'	Х	X'	Weight				
4w/2	8	9	11	41/2	20.0				



#### PART NO. SV 56C

Sanitary Tee with Right and Left Hand Side Inlets

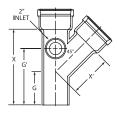
wit	n Kign	t and Le	ert nand	a Side in	lets
Size	G	G'	Х	X'	Weight
4w/2	8	9	11	41/2	23.1



#### PART NO. SV 57

Wye with Left Hand Side Inlet

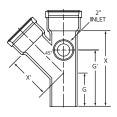
Size	G	G'	Χ	X'	Weight
4w/2	51/4	10	12	63/4	23.8



#### PART NO. SV 57A

Wue with Right Hand Side Inlet

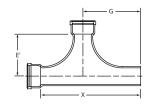
	wye wi	ıı ıvığıı	t Hallu	Jiue IIIIe	
Size	G	G'	Χ	X'	Weight
4w/2	51/4	10	12	63/4	23.8



#### PART NO. SV 71A

Single Two-Wau Cleanout

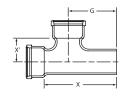
	Jillgic i	wo-may c	icaliout	
Size	Х	E'	G	Weight
4	227/16	93/8	123/4	33.5



#### PART NO. SV 71B

Short Special Two-Way Cleanout

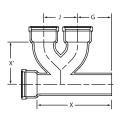
Size	G	Х	X'	Weight
4	8	12	4	16.0



#### PART NO. SV 72

Double Two-Way Cleanor	•

			-5		
Size	G	J	Х	X'	Weight
4	61/2	67/16	13 <sup>5</sup> / <sub>8</sub>	71/2	31.2
6 x 4 x 4	61/2	67/16	135/8	81/4	39.1



#### PART NO. SV 76

Sanitary Tee with Cleanout on Main

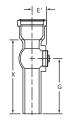
	IPS				
Size	Tap	G	Χ	X'	Weight
4	31/2	8	121/8	41/2	16.7



#### PART NO. SV 79

Washington Test Tee¥

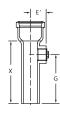
wasiiiigiuii iest iee*							
Size	IPS Tap	E'	G	х	Weight		
2	2	13/4	7	9	7.3		
3	4	27/8	71/8	103/4	13.1		
4	4	31/4	71/4	105/8	16.8		
_ 5	5	35/8	7	11	22.5		
6	6	4	83/4	13	26.9		
8	8	5	11	16 <sup>3</sup> / <sub>8</sub>	41.6		
10	10	71/2	11	17 <sup>5</sup> /8	68.7		



#### PART NO. SV 80

Cleanout Tee with Brass Plug

Size	IPS Tap	E'	G	v	Weight
Size			u		weight
2	11/2	2	61/4	8	6.2
3	2	21/2	7	9	9.3
4	3	3	8	11	14.6
5	4	31/2	81/2	12	18.7
6	4	41/4	9	13	25.3
12	8	8	13	181/2	92.2



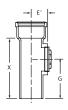
#### PART NO. SV 81

Miami Test Tee, Less Plug

#### and PART NO. SV 81S

Miami Test Tee with Southern Raised-Head Brass Plug Installed

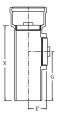
- 11	Ivaisen-liean prass Link liistalien							
	IPS							
Size	Tap	E'	G	Х	Weight			
2	2	21/32	61/2	9	7.0			
3	3	21/2	65/8	95/8	10.0			
4	4	3	71/4	11	15.5			
6	6	4	9	131/4	22.8			



 $<sup>^{\</sup>xi}$  This fitting can be ordered without or with a Southern Raised Head Brass Plug installed (2" through 8" available with plug).

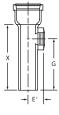
Test Tee with Internal Tap
----------------------------

	103(100	WICH HICCH	ווטו וטף	
Size	E'	G	Χ	Weight
4	215/16	77/8	12	15.9



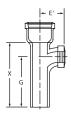
#### PART NO. SV 83

Straight Tapped Tee							
Size	E'	G	χ	Weight			
2 x 1½	2	61/4	8	5.5			
2 x 2	2	61/4	8	6.0			
3 x 1½	21/2	7	9	7.4			
3 x 2	21/2	7	9	8.6			
4 x 2	3	7	9	12.3			
4 x 3	4	8	11	14.0			
4 x 4	3	71/4	11	15.0			
5 x 2	31/2	7	9	13.5			
5 x 4	31/2	81/2	12	17.9			
6 x 4	41/4	9	13	24.4			



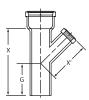
#### PART NO. SV 84

Sanitary Tapped Tee						
Size	E'	G	Х	Weight		
2 x 1½	213/16	61/4	8	6.0		
2 x 2	31/16	61/4	8	5.8		
3 x 1½	35/16	7	9	8.0		
3 x 2	3%16	7	9	8.1		
4 x 1½	313/16	7	9	10.3		
4 x 2	41/16	7	9	11.7		
4 x 3	41/16	8	11	13.6		



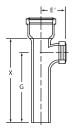
#### PART NO. SV 85

Tapped Wye						
Size	G	Х	X'	Weight		
3 x 2	5	101/2	65/8	10.3		
4 x 1½	41/2	9	61/2	11.0		
4 x 2	41/4	9	6	12.7		



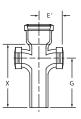
#### PART NO. SV 89

L	ong Sanit	ary lapp	ed lee	
Size	E'	G	χ	Weight
2 x 2 x 18	31/16	16	18	8.8



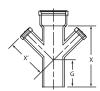
#### PART NO. SV 91

Sanitary Tapped Cross						
Size	E'	G	Χ	Weight		
2 x 1½	213/16	61/4	8	11.3		
2 x 2	31/16	61/4	8	6.7		
3 x 2	3%16	7	9	9.0		
4 x 2	41/16	7	9	11.6		



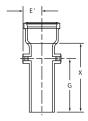
#### PART NO. SV 92

Tapped Double Wye					
Size	G	Χ	X'	Weight	
4 x 2	53/4	12	7 <sup>7</sup> /8	16.9	



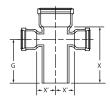
#### PART NO. SV 93

Tapped Cross						
Size	E'	G	Х	Weight		
3 x 2	21/2	7	9	9.4		
4 x 2	3	7	9	13.1		



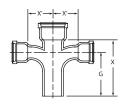
#### **PART NO. SV 108**

Straight Cross						
Size	G	Х	X'	Weight		
4 x 2	7	9	3	16.0		
4	8	11	3	17.0		



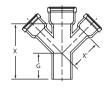
#### **PART NO. SV 109**

Sanitary Cross						
Size	G	Х	X'	Weight		
2	61/4	8	23/4	10.0		
3 x 2	7	9	4	12.5		
3	71/2	10	4	15.6		
4 x 2	7	9	41/2	16.0		
4 x 3	71/2	10	41/2	20.0		
4	8	11	41/2	22.9		
5 x 4	8	11	5	23.2		
6 x 4	8	11	51/2	29.0		
6	9	13	51/2	34.9		
8	113/4	17	65/8	105.0		



#### PART NO. SV 110

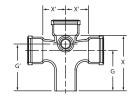
Double Wye						
Size	G	Х	X'	Weight		
2	4	8	4	9.7		
3 x 2	43/16	9	<u>4</u> 5	12.8		
3	5	101/2	51/2	17.5		
4 x 2	35/8	9	53/4	16.2		
4 x 3	47/16	101/2	61/4	19.8		
4	51/4	12	63/4	27.2		
5	51/2	131/2	8	27.0		
6 x 3	33/8	101/2	73/4	24.6		
6 x 4	43/16	12	81/4	31.8		
6	53/4	15	91/4	44.0		
8 x 4	43/4	131/2	91/2	44.5		
8 x 6	65/16	16½	101/2	57.3		
8	711/16	191/2	11 <sup>13</sup> / <sub>16</sub>	90.0		
10 x 6	51/8	161/2	121/8	73.7		
10 x 8	61/2	191/2	137/16	99.0		
10	8	221/2	141/2	172.0		
12 x 6	511/16	18	137/16	112.0		
12 x 8	711/16	21	143/4	135.0		
12	10½	27	167/s	216.1		
15	(XH)	(XH)	(XH)	(XH)		



 $<sup>^{(</sup>XH)}$  Please see Extra Heavy dimensions

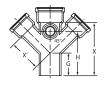


Sanitary Cross with 2" Side Inlet						
Size	G	G'	Χ	X'	Weight	
4	8	9	11	41/2	27.0	



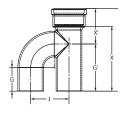
#### PART NO. SV 115

	ouble W	ye with	2" Sid	le Openi	ng
Size	G	Н	Х	X'	Weight
4 x 4	51/4	10	12	63/4	31.8



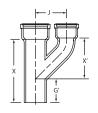
#### PART NO. SV 134

Vent Branch						
Size	Х	X'	J	G	G'	Weight
4	11	6	61/2	4	8	19.6



#### PART NO. SV 135

"H" Branch					
Size	Х	X'	J	G	Weight
4 x 3	123/16	79/16	6	$4^{1}/_{2}$	17.0
4	13 <sup>15</sup> / <sub>16</sub>	811/16	61/2	51/4	19.6



#### **PART NO. SV 137**

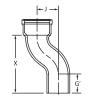
Bar Grate with Legs				
Size	G	Х	Weight	
4	3	43/4	2.0	





#### PART NO. SV 141

45° Offset				
Size/Offset	Χ	G'	J	Weight
4 x 4	11	4	4	11.6
4 x 6	13	4	6	15.0
4 x 8	15	4	8	15.6



#### PART NO. SV 143

	Reducer	
Size	X	Weight
3 x 2	43/4	4.6
4 x 2	5	6.0
4 x 3	<u>5</u> 5	7.0
5 x 2	5	6.6
5 x 3	5	6.8
5 x 4	5	9.0
6 x 2	5	8.2
6 x 3	5 5	9.9
6 x 4		10.4
6 x 5	5	10.9
8 x 3	6	14.3
8 x 4	6	16.6
8 x 5	6	16.4
8 x 6	6	16.8
10 x 4	6	20.0
10 x 5	6	23.9
10 x 6	6	24.0
10 x 8	6	26.5
12 x 4	61/2	32.2
12 x 6	61/2	34.4
12 x 8	61/2	37.2
12 x 10	61/2	38.4
15 x 6	61/2	52.3
15 x 8	61/2	55.0
15 x 10	61/2	55.7
15 x 12	61/2	64.9



#### PART NO. SV 144

#### Reducer Increaser

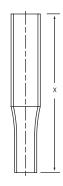
	neddeer mercaser		
Size	χ	Weight	_
2 x 4	9	9.4	
3 x 4	9	8.8	
4 x 5	9	11.3	
4 x 6	9	15.2	
4 x 8	12	24.5	
5 x 6	9	12.8	
6 x 8	12	24.0	Ξ
8 x 10	12	44.0	



#### PART NO. SV 147

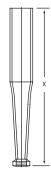
#### Long Plain Increaser

Long Flam mereaser			
Size	Χ	Weight	
3 x 4 x 24	24	13.6	
4 x 5 x 30	30	27.4	



Long Tapped Increaser

2011B 12PP02 1110102001				
Size	Χ	Weight		
2 x 4 x 30	30	22.8		



**PART NO. SV 151** 

Tapped Spigot				
	Size	Α	Weight	
	4 x 2	41/4	4.7	



**PART NO. SV 153** 

Double Hub Fitting				
Size	Х	Weight		
2	11/4	4.2		
3	11/4	7.0		
4	11/2	9.1		
6	11/2	13.1		
8	11/2	22.1		
10	11/2	36.3		
12	11/2	46.3		
15	(XH)	(XH)		



#### PART NO. SV 155

	Pipe Plug	
Size	Х	Weight
2	31/2	1.3
3	33/4	2.5
4	4	4.1
5	4	6.0
6	4	8.0
8	41/2	12.4
10	41/2	17.7
12	51/4	23.3
15	(XH)	(XH)



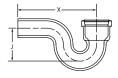
#### **PART NO. SV 159**

Vent Cap with Set Screw			
Size	Weight		
4	2.6		



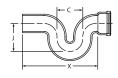
#### **PART NO. SV 169**

``P'' Trap				
Size	J	Х	Weight	
2	4	91/2	7.1	
3	51/2	12	13.1	
4	61/2	14	23.2	
5	71/2	151/2	30.4	
6	81/2	17	42.0	
8	101/2	221/16	86.2	



#### **PART NO. SV 170**

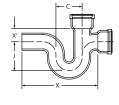
Running Trap					
Size X C J Weigh					
4	171/2	6	61/2	19.3	
6	211/2	8	81/2	48.0	



#### **PART NO. SV 174**

Running Trap with Single Hub Vent

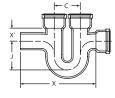
	realiting trap with single trap vent					
Size	Vent Size	С	J	Х	X'	Weight
3	3	5	51/2	15	21/2	15.3
4	4	6	61/2	171/2	3	28.3
5	4	7	71/2	191/2	31/2	39.7
6	4	8	81/2	211/2	4	45.9
8	4	10	11	275/8	51/4	95.9
8	6	10	11	275/8	51/4	110.0



#### PART NO. SV 175

Running Trap with Double Hub Vent

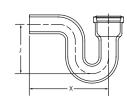
Size	Vent Size	С	J	Х	Χ'	Weight
3	3	5	51/2	15	21/2	23.0
4	4	6	61/2	171/2	3	36.3
5	4	7	71/2	191/2	31/2	42.5
6	4	8	81/2	211/2	4	57.3
6	6	8	81/2	211/2	4	61.5
8	4	10	11	275/8	51/4	98.8
8	6	10	11	275/8	51/4	99.7
10	8	12	13	31%	61/4	187.0
12	10	15	15	383/4	71/4	287.6
15	12	181/2	181/2	45	9	460.0



#### **PART NO. SV 180**

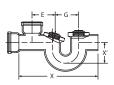
Deep Seal "P" Tran

	Deep Seal	i iiap	
Size	Χ	J	Weight
2	91/2	6	8.1
3	12	7	14.3
4	14	8	29.0
6	17	91/2	40.4



#### **PART NO. SV 184**<sup>[T]</sup> Improved Running Trap with Double Cleanout and Tee Branch

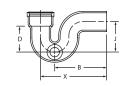
Vent Size	Size	Е	G	х	X'	Weight
4	3	51/4	61/4	201/2	51/2	34.3
4	4	53/8	61/4	201/2	51/2	33.7



#### **PART NO. SV 188**<sup>(T)</sup>

	``P'' Trap	with	Cleanout	Rig	ht Side
ze	Х	J	В	D	Weiah

"P" Irap with Cleanout Right Si					Side
Size	Χ	J	В	D	Weight
4	14	61/2	11	51/2	20.0



<sup>(</sup>XH) Please see Extra Heavy dimensions

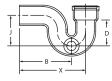
<sup>(</sup>T) Note: 31/2" IPS tap



#### **PART NO. SV 188A**<sup>[T]</sup>

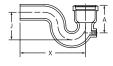
"P" Tran with Cleanout Left Side

	1 110	ap with	Cicali	Jul Leil .	Jiuc
Size	Х	J	В	D	Weight
4	14	61/2	11	51/2	20.0



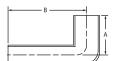
#### **PART NO. SV 198**

"P" Trap with 1/2" Heel Tap						
Size	Х	J	Α	Weight		
2	91/2	4	4	6.8		
3	12	51/2	43/8	13.0		
4	14	61/2	45/8	23.1		



#### PART NO. SV 200

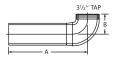
Clos	et Bend, Pla	ain - Less (	Collar
Size	Α	В	Weight
3 x 4	6	12	11.3
3 x 4	6	15	12.0
3 x 4	6	16	12.0
3 x 4	6	18	13.0
3 x 4	8	18	14.0
3 x 4	10	12	13.0
3 x 4	10	15	13.0
3 x 4	10	16	17.5
3 x 4	10	18	16.0
3 x 4	12	12	15.9
3 x 4	16	16	20.6
3 x 4	18	18	22.7
3	16	16	16.7
4	4	12	12.3
4	4	16	14.3
4	4	18	17.1
4	6	12	12.5
4	6	15	15.0
4	6	16	16.9
4	6	18	14.0
4	8	16	18.4
4	8	18	19.8
4	10	12	15.3
4	10	15	18.0
4	10	16	19.6
4	10	18	19.0
4	12	12	14.0
4	12 12 12	14	14.0
4	12	16	20.8
4	12	18	19.0
4	14	16	22.6
4	14	18	24.0
4	16	16	23.8
4	16	18	24.7
4	18	18	27.4



#### PART NO. SV 206

**Tapped Closet Bend with** Southern Code Brass Plug

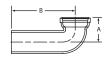
	5			
	Size	Α	В	Weight
	3½ x 4 x 4 x 18	18	4	17.4



#### PART NO. SV 208

**Hub-End Closet Bend, Low Hub** 

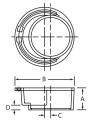
Hab Ella Closet Bella, Low Hab					
Size	Α	В	Weight		
4	45/8	12	14.2		
4	45/8	14	15.4		
4	45/8	16	17.5		
4	45/8	18	18.9		



#### PART NO. SPL 217

Offset Closet Flange (To Offset 1")

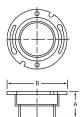
UIIS	: C105	et Lialiki	יטון ש	יוספנו.	<u>.</u> )
Size	Α	В	С	D	Weight
4 x 2	2	6	1	5/8	2.5
$4 \times 2^{1/2}$	21/2	73/16	1	5/8	3.3
4 x 4◊	4	61/4	2	2	4.5



#### PART NO. SPL 219

Greensboro Reducing Closet Flange (Can be used to connect 4" fixture with 3" line, or 4" No-Hub)

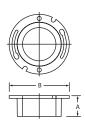
		,		,	
Size		Α	В	Weight	Ξ
4 x 3 x	3 3	1/8	73/16	3.7	_



#### PART NO. SPL 220\*

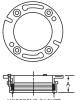
Closet Flange, Notched and Slotted

CIUSE	rialige, i	ivicileu alli	Jointen
Size	Α	В	Weight
4 x 1	1	73/16	2.0
4 x 1½	11/2	73/16	2.6
4 x 2	2	73/16	3.0
$4 \times 2^{1/2}$	21/2	73/16	3.6
4 x 3	3	73/16	4.3
4 x 4	4	73/16	4.7
4 x 5	5	73/16	4.5
4 x 6	6	73/16	5.3



#### PART NO. SPL 225

Instant Set Closet Flange					
	Size	Α	Weight		
	3 x 2†	2	3.5		
	4 x 2‡	2	5.6		
	4 x 3§	2	3.0		
	4 x 4±	4	4.0		





<sup>♦ 2&</sup>quot; Offset

<sup>\*</sup> Caulk type to go over pipe.

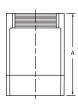
<sup>†</sup> Four-bolt pattern. Test cap configuration not offered. ‡ Three-bolt pattern. Available with or without test cap. § Three-bolt reducing pattern, with test cap.

Iron Body Cleanout Ferrule, Body Only, Less Brass Plug

#### and PART NO. SV 228S

Iron Body Cleanout Ferrule with Southern Raised-Head Brass Plug Installed ¥

Ivaisen-liean piass i ink ilistalien .					
Size	Tap Size	Α	Weight		
2	11/2	31/2	1.3		
3	21/2	33/4	2.0		
4	3	41/4	3.6		
5	4	41/4	4.5		
6	5	41/4	5.2		
8	6	41/2	11.7		
10	6	41/2	16.3		
12	6	51/4	25.5		
15	(XH)	(XH)	(XH)		
$4 \times 3^{1/2}$	31/2	41/2	4.0		
4 x 8	31/2	8	8.1		
4 x 12	31/2	12	9.2		



#### PART NO. SV 253

C1 1		1 - 1 - 1 - 4
SISSION	Insertabl	ie Joini

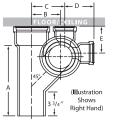
Size	Α	В	С	Weight		
2	14	6	6	7.0		
3	16	8	63/4	11.6		
4	141/2	7	6	12.9		
5	157/s	9	57/8	17.0		
6	163/16	81/2	6	20.4		
8	18	10	63/4	37.0		



#### PART NO. SV 458

Vented Closet Tee with 2'' Top Vent and 2" Extended Side Inlet (Right Hand or Left Hand; Designed for use

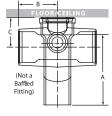
below the flo	or; F	itting	does n	ot req	uire a l	baffle)
Size	Α	В	С	D	Е	Weight
4x4x2x2x4 RH	11	41/2	53/16	49/16	43/16	37.0
4x4x2x2x4 LH	11	41/2	53/16	49/16	43/16	37.8



#### PART NO. SV 459D

Vented Closet Cross with 2" Top Vent and 2" Extended Side Inlet (Designed for use below the floor;

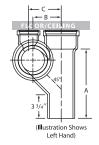
i ittilig does liot liave a parlie)				
Size	Α	В	С	Weight
4x4x2x2x4	11	61/4	43/4	47.0



#### PART NO. SV 460

Vented Closet Tee with 2" Top Vent (Right Hand or Left Hand; Designed for use

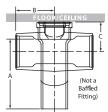
Delow tile	11001;	riccing	uves	nocrequire	a parrie j
Size		Α	В	С	Weight
4x4x2x4l	RH	11	41/2	5 <sup>3</sup> / <sub>16</sub>	35.0
4x4x2x4	ΙH	11	41/2	53/16	35.0



#### PART NO. SV 463D

Vented Closet Cross with  $2^{\prime\prime}$  Top Vent and 2" Extended Side Inlet (Designed for use below the floor; Fitting does not have a haffle)

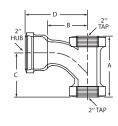
- 11	ttilig udes	HOLHAVE	a value j	
Size	Α	В	С	Weight
4 x 4 x 2	11	61/4	43/4	43.8



#### PART NO. SV 566

	Тарро	ed Long	Sweep	Tee	
`i=-	Α	В	_	_	

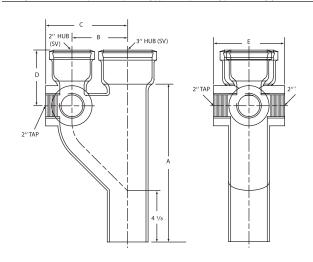
	тарре	ea Long	Sweet	lee	
Size	Α	В	С	D	Weight
2 x 2	51/2	31/8	4	55/8	6.2



#### PART NO. SV 581

Double Sink Stack-1770

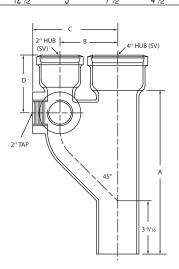
(Designed for use above the floor) Size Weight 3 x 2 x 2 123/4 18.0



#### PART NO. SV 581

#### Double Sink Stack-1770

(Designed for use above the floor) Size 4 x 2 x 2 121/2 41/2 21.4



<sup>(</sup>XH) Please see Extra Heavy dimensions.

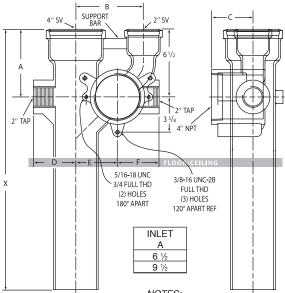
 $<sup>\</sup>pm$  This fitting not available with plug installed in 4 x 3½ and 4 x 8 fitting sizes.



#### PART NO. SV 973R

Right Hand Starter Fitting with 4" Tap and 2" Tapped "A" Side Inlet [Designed for use above the floor with back-outlet water closets]

	(500	orgriou ror ac		•• .		2011			.00010,
Size	Inlet	Α	В	С	D	Е	F	Χ	Weight
4	61/2	See Chart	61/2	4	41/16	4	4	25	34.8
4	91/2	See Chart	61/2	4	41/16	4	4	25	34.4



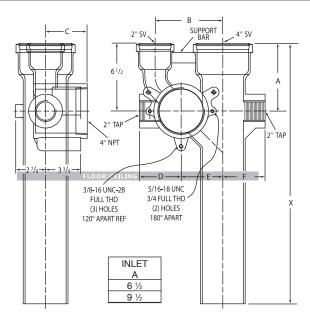
NOTES:

- 1. Single Vertical R.H. Offset Back Outlet Starter Fitting
- 2. 4" Stack with 2" Vent & Inlets
- 3. Face Plate Package Not Included

#### PART NO. SV 973L

Left Hand Starter Fitting with 4" Tap and 2" Tapped"A" Side Inlet (Designed for use above the floor with back-outlet water closets)

	(			••	••• ••••				,	
Size	Inlet	Α	В	С	D	Е	F	Χ	Weight	
4	61/2	See Chart	61/2	4	4	4	4	25	39.2	
4	91/2	See Chart	61/2	4	4	4	4	25	39.0	



#### NOTES:

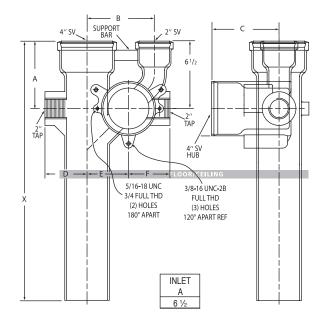
- Single Vertical
   L.H. Offset Back Outlet Starter Fitting
- 2. 4" Stack with 2" Vent & Inlets
- 3. Face Plate Package Not Included

#### PART NO. SV 974R

Right Hand Starter Fitting with 4" Hub and 2" Tapped "A" Side Inlet

[Designed for use above or in the floor with back-outlet or bottom-outlet water closets]

		0. 500		1101 11410	. 0.00	010,			
Size	Α	В	С	D	Е	F	Х	Weight	
4 with A Inlet	61/2	61/2	61/2	41/16	4	4	25	39.2	



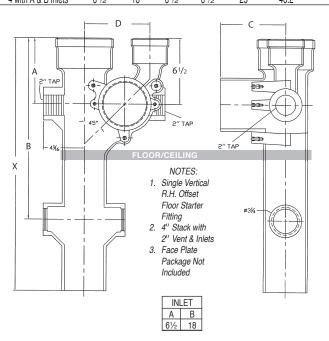
#### PART NO. SV 974R

# Right Hand Starter Fitting with 4" Hub and 2" Tapped "A" and "B" Side Inlets [Designed for use above or in the floor with back-outlet

 or bottom-outlet water closets)

 Size
 A
 B
 C
 D
 X
 Weight

 4 with A & B Inlets
 6½
 18
 6½
 6½
 25
 46.2

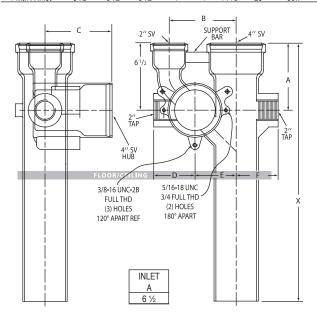


#### PART NO. SV 974L

# Left Hand Starter Fitting with 4" Hub and 2" Tapped "A" Side Inlet

(Designed for use above or in the floor with back-outlet or bottom-outlet water closets)

Size	Α	В	С	D	Е	F	Χ	Weight	
4 with A Inlet	61/2	61/2	61/2	4	4	41/16	25	39.7	

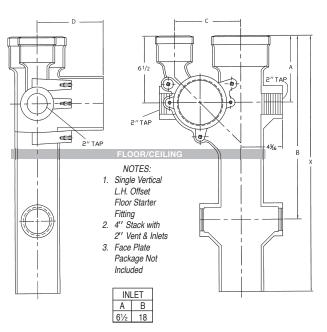


#### PART NO. SV 974L

# Left Hand Starter Fitting with 4'' Hub and 2'' Tapped ''A'' and ''B'' Side Inlets (Designed for use above or in the floor with back-outlet

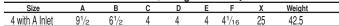
or bottom-outlet water closets)

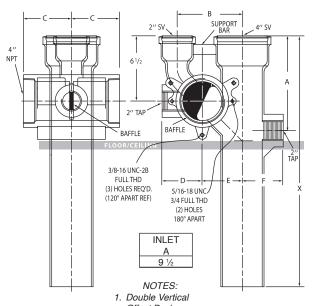
Size	Α	В	С	D	Χ	Weight	
4 with A & B Inlets	61/2	18	61/2	61/2	25	43.7	
	V / L		<b>V</b> / L	V / L			_



## Double Starter Fitting with 4 $^{\prime\prime}$ Tap and 2 $^{\prime\prime}$ Tapped "A $^{\prime\prime}$ Side Inlet

(Designed for use above the floor with back-outlet water closets; Fitting has a baffle)





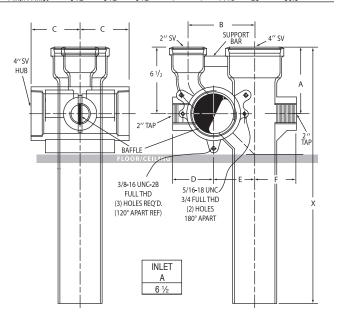
- Offset Back
  Outlet Starter
  Fitting
  2. 4" Stack with
- 2" Vent & Inlets
  3. Face Plate
- 3. Face Plate Package Not Included

#### PART NO. SV 976

Double Starter Fitting with 4" Hub and 2" Tapped "A" Side Inlet (Designed for use above or in the floor with back-outlet or bottom-outlet water closets; Fitting has a baffle)

 Size
 A
 B
 C
 D
 E
 F
 X
 Weight

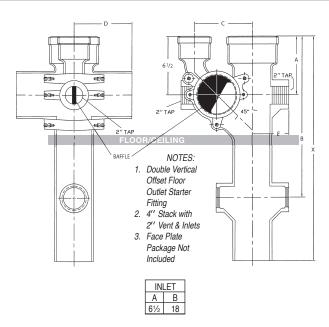
 4 with A Inlet
 6½
 6½
 6½
 4
 4
 4¼
 25
 50.8



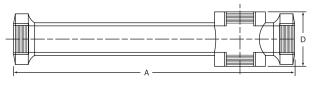
#### **PART NO. SV 976**

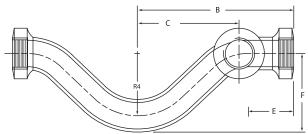
# Double Starter Fitting with 4'' Hub and 2'' Tapped "A" and "B" Side Inlets

[Designed for use above or in the floor with back-outlet or bottom-outlet water



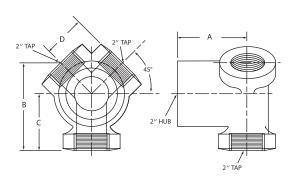
#### **PART NO. SV 982**





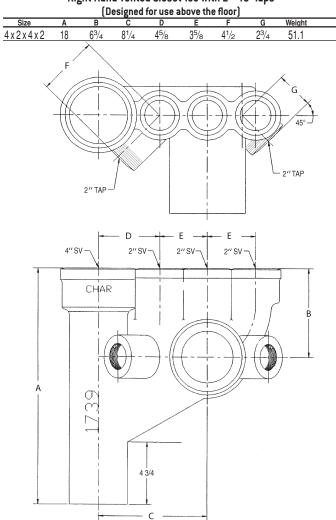
**PART NO. SV 985** 

	Tapped Bath Vent Wye							
=	Size	Α	В	С	D	Weight		
	2 x 2	41/16	5	31/4	21/2	8.4		



**PART NO. SV 1739R** 

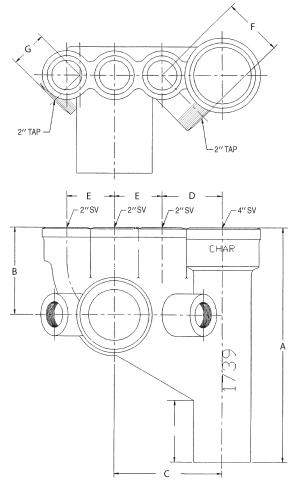
Right Hand Vented Closet Tee with 2  $^{\prime\prime}$  45° Taps



**PART NO. SV 1739L** 

Left Hand Vented Closet Tee with 2'' 45° Taps [Designed for use above the floor]

		יון	caigneu	IUI USE	anove (II	6 11001 )			
Size	Α	В	С	D	E	F	G	Weight	
4x2x4x2	18	63/4	81/4	45/8	35/8	41/2	23/4	51.0	

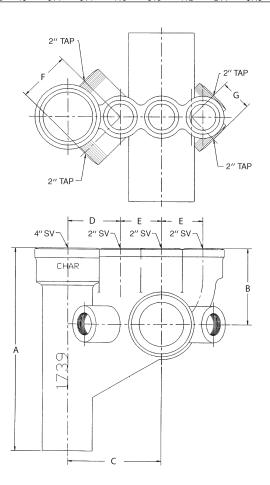




#### PART NO. SV 1739 D

Vented Closet Cross with 2" 45° Taps [Designed for use above the floor]

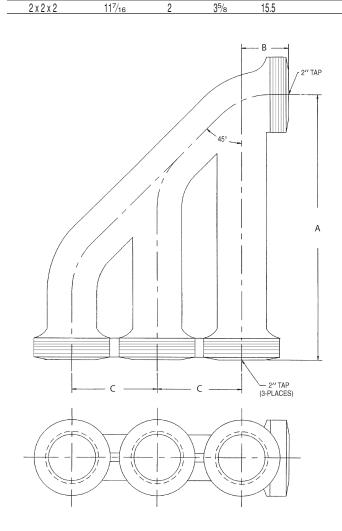
	(Designed for use above the floor)								
Size	Α	В	С	D	Е	F	G	Weight	
4x2x4x2	18	63/4	81/4	45/8	35/8	41/2	23/4	57.5	



**PART NO. SV 1801** 

Size

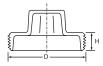
	Tapped Harp Fi	tting		
Α	В	С	Weight	
117/16	2	35/8	15.5	•





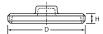
#### PART NO. PLG 410

FART NO.	LFG 410		
	Ohio Code l	Brass Plug	
Size	D	Н	Weight
10	1023/32	21/32	10.6



#### PART NO. PLG 430

So	outhern Cod	le Brass Pl	ug
Size	D	Н	Weight
11/2	157/64	49/64	0.2
2	223/64	49/64	0.3
21/2	255/64	51/64	0.4
3	315/32	57/64	0.6
31/2	363/64	57/64	0.7
4	431/64	61/64	1.1
5	535/64	61/64	1.5
6	619/32	17/32	2.5
8	839/64	1%2	4.0



#### PART NO. PLG 440

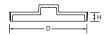
Southern Code Countersunk Brass Plug

D	Н	Weight
1 <sup>57</sup> / <sub>64</sub>	13/32	0.2
2 <sup>23</sup> / <sub>64</sub>	7/16	0.3
315/32	33/64	0.6
363/64	33/64	0.8
431/64	35/64	0.9
535/64	11/16	1.7
6 <sup>19</sup> /32	11/16	2.3
	1 <sup>57</sup> / <sub>64</sub> 2 <sup>23</sup> / <sub>64</sub> 3 <sup>15</sup> / <sub>32</sub> 3 <sup>63</sup> / <sub>64</sub> 4 <sup>31</sup> / <sub>64</sub> 5 <sup>35</sup> / <sub>64</sub>	157/64 13/32 2 <sup>23</sup> /64 7/16 315/32 33/64 3 <sup>63</sup> /64 33/64 4 <sup>31</sup> /64 35/64 5 <sup>35</sup> /64 11/16



#### PART NO. PLG 450

Cast Iron Plug				
Size	D	Н	Weight	
6	635/64	117/64	4.2	
10	1039/64	131/32	9.0	



# **WARNING**

Testing with or use of compressed air or gas in Cast Iron pipe or fittings can result in explosive failures and cause severe injury or death.



- NEVER test with or transport/store compressed air or gas in Cast Iron pipe or fittings.
- NEVER test Cast Iron pipe or fittings with compressed air or gas.
- ONLY use Cast Iron pipe and fittings for drain, waste and vent or sanitary sewer applications.



# SUBMITTAL FOR CHARLOTTE® SEAL AND QUIK-TITE COMPRESSION GASKETS

#### Charlotte Seal Gasket

Charlotte Seal Gaskets are used for joining Hub and Spigot Cast Iron pipe and fittings conforming to ASTM A 74.

#### Material:

Charlotte Seal Gaskets are a molded one-piece gasket made from Neoprene. Neoprene is one of the few elastomers that is well suited for direct burial because it has the ability to withstand the natural corrosive components of soil as well as sanitary effluent. Neoprene has a maximum operating temperature of 212°F and has a maximum joint deflection of 5 degrees.

#### **Gasket Specification:**

Charlotte Seal Gaskets are produced in conformance with ASTM C 564.

#### **Features:**

The molded bead design locks into the lead bead groove on Charlotte Pipe<sup>®</sup> Hub and Spigot Cast Iron Pipe and Fittings to provide a secure, leak free seal.

#### Quik-Tite Gasket

Quik-Tite Gaskets are used for joining Hub and Spigot Cast Iron pipe and fittings conforming to ASTM A 74.

#### Material:

Quik-Tite Gaskets are a molded one-piece gasket made from Neoprene. Neoprene is one of the few elastomers that is well suited for direct burial because it has the ability to withstand the natural corrosive components of soil as well as sanitary effluent. Neoprene has a maximum operating temperature of 212°F and has a maximum joint deflection of 5 degrees.

#### **Gasket Specification:**

Quik-Tite Gaskets are produced in conformance with ASTM C 564.



**Molded Bead** 

#### Charlotte Seal Gasket

Available for 2"-10" Service and 2"-15" Extra Heavy Cast Iron Systems



Quik-Tite Gasket

Available for 2"-12" Service and 4"-15" Extra Heavy Cast Iron Systems



For more information, call us at 1-800-438-6091 or log on to www.charlottepipe.com.

# SUBMITTAL FOR CHARLOTTE® SEAL AND QUIK-TITE COMPRESSION GASKETS

#### Installation

- 1. Clean the hub and spigot so they are free of all dirt, mud, sand, gravel, and other foreign materials.
- 2. Remove sharp edges by filing or tapping with a ballpeen hammer. Insert the gasket into the hub.
- 3. The gasket must be completely inserted into the hub. Only the gasket's flange that shows identification information should remain exposed outside the hub.
- 4. Lubricate the gasket following the pipe joint lubrication manufacturer's recommendations. For
  - small-diameter pipe and fittings (2" 4"), coat the inside of the gasket with lubricant using a paint brush or rag, and then coat the outside of the spigot. For large-diameter pipe and fittings (5" 15"), we recommend that an adhesive lubricant be used to ensure a water-tight seal. Adhesive lubricants should be applied to the inside of the spigot and the inside of the hub.



5. Align the pipe so that it is straight, then push or pull the spigot through all the sealing rings of the gasket. Charlotte plain-end pipe is manufactured with beveled ends to make insertion easy. As the spigot barrel is forced

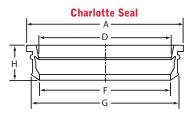


into the gasket, the gasket is compressed and completely seals the joint in both displacement and compression. When seated correctly, you will feel the spigot end of the pipe "bottom" in the hub.

### NOTICE

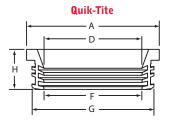
Charlotte Pipe and Foundry Company strongly recommends that its cast iron hub and spigot pipe and fittings be joined with compression gaskets sold by our Company. Our hub and spigot pipe and fittings are manufactured to very specific manufacturing tolerances which conform to ASTM A 74. Our gaskets, produced in conformance with ASTM C 564, are especially designed to work with our pipe and fitting tolerances.

#### **Dimensional Diagrams**



	Service						
	2"	3"	4"	5"	6"	8"	10"
А	31/2	41/2	5½	61/2	7½	93/4	121/16
D	23/16	33/16	43/16	5¾16	63/16	813/32	10½
F	21/8	31/8	41/8	51/8	61/8	83/16	105/16
G	31//8	41/8	51/4	61/4	71/4	9%32	1111/16
Н	131/32	21/16	2%32	2%32	21/4	3	2 3/4

	Extra Heavy							
	2"	3"	4"	5"	6"	8"	10"	12"
А	31/2	415/16	53/4	63/4	8	10	121/2	147/16
D	23/8	31/2	47/32	5½	61/2	81/2	10¾	125/8
F	2%32	31/2	413/32	5½	6½	85/16	1011/32	125/8
G	33/16	41/2	57/16	63/16	73/8	91/2	11½	14
Н	1%	21/4	21/4	21/2	21/2	3	3	3



	Service							
	2"	3"	4"	5"	6"	8"	10"	12"
А	31/2	47/8	53/4	63/4	8	10	121/4	143/8
D	21/16	31/16	4	5	65/16	83/16	101/4	121/4
F	2	31/16	4	5	65/16	83/16	10	12
G	31/4	43/8	53/16	6	711/32	81/2	11½	14
Н	13/32	13/4	13/4	21/16	25/32	21/2	21/2	27/8

### NOTICE

Service Weight gaskets should only be used with Service Weight pipe and fittings, where Extra Heavy gaskets should be used with Extra Heavy pipe and fittings. Due to dimensional variances between systems, the two are not interchangeable.

Extra Heavy						
	4" XH	15" XH				
Α	61/8	17¾				
D	41/4	1513/32				
F	413/32	15				
G	511/16	167//8				
Н	113/16	31/4				

For more information, call us at 1-800-438-6091 or log on to www.charlottepipe.com.



#### LIMITED WARRANTY

Charlotte Pipe and Foundry Company® (Charlotte Pipe®) Products are warranted to be free from manufacturing defects and to conform to currently applicable ASTM standards for a period of five (5) years from date of delivery. Buyer's remedy for breach of this warranty is limited to replacement of, or credit for, the defective product. This warranty excludes any expense for removal or reinstallation of any defective product and any other incidental, consequential, or punitive damages. **This limited warranty is the only warranty made by seller and is expressly in lieu of all other warranties, express and implied, including any warranties of merchantability and fitness for a particular purpose.** No statement, conduct or description by Charlotte Pipe or its representative, in addition to or beyond this Limited Warranty, shall constitute a warranty. This Limited Warranty may only be modified in writing signed by an officer of Charlotte Pipe.

This Limited Warranty will not apply if:

- 1) The Products are used for purposes other than their intended purpose as defined by local plumbing and building codes, and the applicable ASTM standard.
- 2) The Products are not installed in good and workmanlike manner consistent with normal industry standards; installed in compliance with the latest instructions published by Charlotte Pipe and good plumbing practices; and installed in conformance with all applicable plumbing, fire and building code requirements.
- 3) This limited warranty does not apply when the products of Charlotte Pipe are used with the products of other manufacturers that do not meet the applicable ASTM or CISPI standards or that are not marked in a manner to indicate the entity that manufactured them.
- 4) In hubless cast iron installations, this warranty will not apply if products are joined with unshielded hubless couplings. Charlotte Pipe requires that its hubless cast iron pipe and fittings be joined only with shielded hubless couplings manufactured in accordance with CISPI 310, ASTM C 1277 and certified by NSF® International or with Heavy Duty Couplings meeting ASTM C 1540.
- 5) The Products fail due to defects or deficiencies in design, engineering, or installation of the piping system of which they are a part.
- 6) The Products have been the subject of modification; misuse; misapplication; improper maintenance or repair; damage caused by the fault or negligence of anyone other than Charlotte Pipe; or any other act or event beyond the control of Charlotte Pipe.
- 7) The Products fail due to the freezing of water in the Products.
- 8) The Products fail due to contact with chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents that are not compatible.
- 9) Pipe outlets, sound attenuation systems or other devices are permanently attached to the surface of Charlotte® PVC, ABS or CPVC products with solvent cement or adhesive glue.

Charlotte Pipe products are manufactured to the applicable ASTM or CISPI standard. Charlotte Pipe and Foundry **cannot** accept responsibility for the performance, dimensional accuracy, or compatibility of pipe, fittings, gaskets, or couplings not manufactured or sold by Charlotte Pipe and Foundry.

This Limited Warranty will not apply unless written notice of a claim is mailed to Charlotte Pipe at the address below within 30 days of discovery of the allegedly defective product.

Any Charlotte Pipe products alleged to be defective **must** be made available to Charlotte Pipe at the following address for verification, inspection and determination of cause:

Charlotte Pipe and Foundry Company Attention: Technical Services 2109 Randolph Road Charlotte, North Carolina 28207

**Purchaser must obtain a return materials authorization** and instructions for return shipment to Charlotte Pipe of any product claimed defective or shipped in error.

Any Charlotte Pipe product **proved** to be defective in manufacture will be replaced F.O.B. point of original delivery, or credit will be issued, at the discretion of Charlotte Pipe.

4/20/21

Charlotte, Charlotte Pipe and "You can't beat the system" are registered trademarks of Charlotte Pipe and Foundry Company.



P0 B0X 35430

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