

CHARLOTTE
PIPE AND FOUNDRY COMPANY

DIMENSIONAL CATALOG

**ChemDrain® CPVC
Chemical Waste
Drain System**

(Updated July 25, 2018)

®
ChemDrain

DC-CD

You can't beat the system.®

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ChemDrain® CPVC Chemical Waste Drain System Dimensions



All products manufactured by Charlotte Pipe and Foundry Company are proudly made in the U.S.A.

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Download our Tech Tools App for dimensional info, tech calculators and more on your mobile device.

This catalog accurately reflects dimensional information to the best of our knowledge. If the dimensions on your job are critical, please verify dimensional information with our factory.

This dimensional catalog accurately reflects our product line at the time the catalog was printed. However, we add items on an ongoing basis to better serve our customers. Please refer to our current list price sheets for an accurate listing of items offered.

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

ChemDrain® CPVC Pipe

Possession of this price list shall not be construed as an offer to sell the products listed.

ChemDrain is a registered trademark of Charlotte Pipe and Foundry Company.



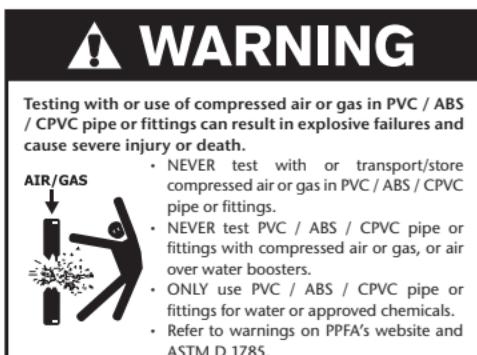
ChemDrain® CPVC Schedule 40 Pipe, Type IV, Grade 1

ASTM F 2618

CPVC SCHEDULE 40 (LIGHT GRAY)			PLAIN END		CPVC 4120	
PART NO.	NOM. SIZE	UPC # 611942-	QTY. PER SKID	AVG. OD (IN.)	MIN. WALL (IN.)	WT. PER 100 FT. (LBS.)
AW 14015	1 1/2" x 10'	10732	1650'	1.900	.145	55.3
AW 14002	2" x 10'	10733	1110'	2.375	.154	74.3
AW 14003	3" x 10'	10734	1040'	3.500	.216	154.2
AW 14004	4" x 10'	10735	600'	4.500	.237	219.6
AW 14006	6" x 10'	10736	280'	6.625	.280	386.1
AW 14008	8" x 10'	11363	180'	8.625	.322	581.1

NOTE: Full skids of pipe are polyethylene wrapped for cleanliness and UV protection.

NSF Listed. Meets All Requirements of ASTM F 2618.

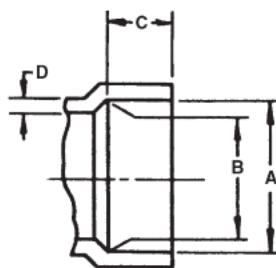


All products manufactured by Charlotte Pipe and Foundry Company are proudly made in the U.S.A.



ChemDrain® CPVC Fittings

Hub Dimensions

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CPVC

SIZE	A	B	C	D
1½	1.915	1.895	.687	.156
2	2.390	2.370	.750	.156
3	3.520	3.495	1.500	.218
4	4.520	4.495	1.750	.250
6	6.647	6.614	3.000	.281
8	8.655	8.610	4.000	.322

PART NO. AW 95C

**Transition Coupling - ChemDrain CPVC to
Steel, Cast Iron, Plain-end Glass or Any
Other Schedule 40 or 80 IPS Size**

Plastic or Metallic Pipe

**(300 Series Stainless Steel with
Fluoroelastomer Gasket)**



SIZE	SHIELD WIDTH	NUMBER OF CLAMPS
1½	2 1/8	2
2	2 1/8	2
3	2 1/8	2
4	2 1/8	2
6	3	4
8	4	4

PART NO. AW 96C

**Transition Coupling - ChemDrain CPVC to
Plain-end High-silicon Iron**

**(300 Series Stainless Steel with
Fluoroelastomer Gasket)**



SIZE	SHIELD WIDTH	NUMBER OF CLAMPS
2	2 1/8	2
3	2 1/8	2
4	2 1/8	2

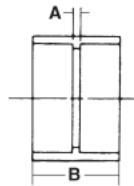
PART NO. AW 1C

ChemDrain Low-VOC Solvent Cement



PART NO. AW 100C**Coupling**
HUB X HUB

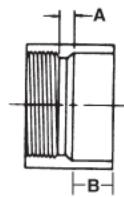
SIZE	A	B
1½	1/8	1 9/16
2	15/64	1 3/4
3	3/16	3 3/16
4	1/4	3 3/4
6	1/4	6 1/4
8	1/4	8 1/4


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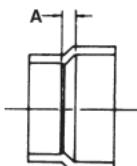
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PART NO. AW 101C**Female Adapter**
FPT X HUB

SIZE	A	B
1½	1/4	3/4
2	1/4	7/8
3	5/16	1 1/2
4	11/32	1 3/4
6	1/4	3

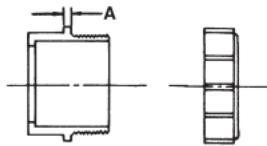
**PART NO. AW 102C****Pipe Increaser-Reducer**
HUB X HUB

SIZE	A
1½ x 2	17/32
1½ x 3	1 3/32
2 x 3	7/8
2 x 4	1 3/8
3 x 4	15/16
3 x 6	2
4 x 6	1 3/4

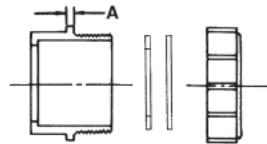


PART NO. AW 103PC**Trap Adapter-Male**
SPIGOT X SLIP WITH PLASTIC NUT

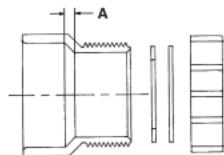
SIZE	A
1½	3/16

**PART NO. AW 103RC****Trap Adapter-Male**
with 1½" Plastic Nut and Washer
SPIGOT X SLIP WITH PLASTIC NUT

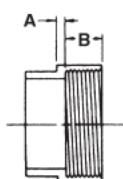
SIZE	A
1½	3/16

**PART NO. AW 104RC****Trap Adapter-Female**
with 1½" Plastic Nut and Washer
HUB X SLIP WITH PLASTIC NUT

SIZE	A
1½	3/16

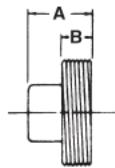
**PART NO. AW 105XC****Fitting Cleanout Adapter**
with Cleanout Plug (See AW 106C Dimensions)
SPIGOT X FPT

SIZE	A	B
1½	5/32	5/8
2	5/32	5/8
3	7/32	3/4
4	1/4	7/8
6	5/16	17/16



PART NO. AW 106C**Cleanout Plug**
MPT

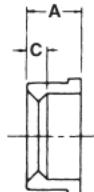
SIZE	A	B
1½	1 3/8	5/8
2	1 3/8	5/8
3	1 3/4	3/4
4	1 7/8	7/8
6	2	1


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PART NO. AW 107C**Flush Bushing**
SPIGOT X HUB

SIZE	A	C
2 x 1½	1 1/16	5/16
3 x 1½	1 3/4	1
3 x 2	1 3/4	7/8
4 x 2	2	1 1/8
4 x 3*	1 51/64	1/4
6 x 3	3 13/32	1 57/64
6 x 4	3 1/2	1 3/4
8 x 4	4 5/8	2 7/8
8 x 6	4 9/16	1 5/8

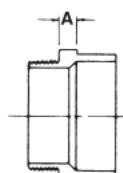


* 4 x 3 differs slightly in appearance

PART NO. AW 109C**Male Adapter**
MPT X HUB

(Note: Not a trap adapter. Will
not accept a tail piece.)

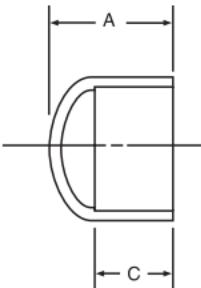
SIZE	A
1½	3/16
2	3/16
3	3/8
4	3/8
6	1 1/16



(Octagon shoulders for
tightening purposes.)

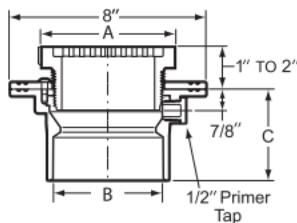
PART NO. AW 116C

SIZE	Cap SOCKET	
	A	C
1½	1 ⁵ / ₁₆	1 ⁵ / ₁₆
2	2 ⁵ / ₃₂	1 ³ / ₈
3	2 ¹⁵ / ₁₆	1 ²⁹ / ₃₂
4	3 ¹ / ₈	2 ¹ / ₃₂
6	4 ³ / ₄	3 ⁵ / ₈

**PART NO. AW 150MC**

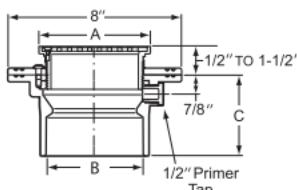
**Floor Drain with CPVC Adjustable Top
with 5" Round Grate and Membrane Collar**

SIZE	A	B	C
1½ X 5	5	1½	4 ³ / ₁₆

**PART NO. AW 160MS****

**Floor Drain with Stainless Steel
Adjustable Top with 6" Round Grate and
Membrane Collar**

SIZE	A	B	C
1½ X 6	6	1½	4 ³ / ₁₆

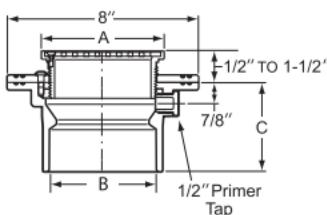


** Floor drains with Stainless Steel tops are rated as "Heavy Duty" per ASME A 112.6.3. Stainless Steel drain tops, grates on floor drains and floor cleanouts are purchased items and not of domestic manufacture.

PART NO. AW 180MS**

**Floor Drain with Stainless Steel
Adjustable Top with 8" Round Grate
and Membrane Collar**

SIZE	A	B	C
1 1/2 x 8	8	1 1/2	4 3/16
2 x 8	8	2	4



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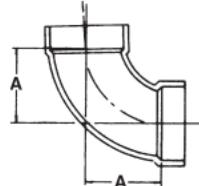
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PART NO. AW 300C

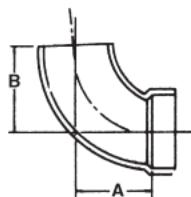
**1/4 Bend
(Sanitary 90° Ell)
ALL HUB**

SIZE	A
1 1/2	1 3/4
2	2 5/16
3	3 1/16
4	3 7/8
6	5
8	6

**PART NO. AW 302C**

**1/4 Bend, Street
(Sanitary 90° Street Ell)
SPIGOT X HUB**

SIZE	A	B
1 1/2	1 3/4	2 1/2
2	2 5/16	3 3/16
3	3 1/16	4 9/16
4	3 7/8	5 5/8
6	5 3/16	8 1/8

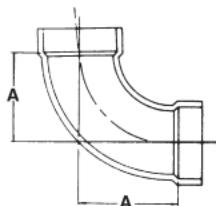


** Floor drains with Stainless Steel tops are rated as "Heavy Duty" per ASME A 112.6.3. Stainless Steel drain tops, grates on floor drains and floor cleanouts are purchased items and not of domestic manufacture.

PART NO. AW 304C**Long Sweep 1/4 Bend**

HUB X HUB

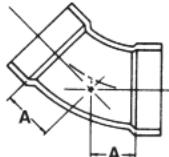
SIZE	A
1½	2¾
2	3¼
3	4⅛
4	4⅕

**PART NO. AW 321C****1/8 Bend**

(45° ELL)

HUB X HUB

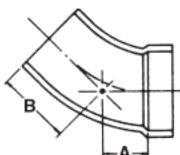
SIZE	A
1½	1⅛
2	1½
3	1¾
4	2⅓
6	2⅓
8	2⅓

**PART NO. AW 323C****1/8 Bend, Street**

(45° Street ELL)

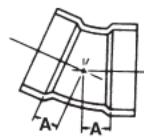
SPIGOT X HUB

SIZE	A	B
1½	1⅛	1⅓
2	1½	2⅓
3	1¾	3¼
4	2⅓	3⅕
6	2⅓	5⅓
8	2	6⅓



PART NO. AW 324C**1/16 Bend****[22 $\frac{1}{2}$ ° Ell]****HUB X HUB**

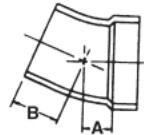
SIZE	A
1 $\frac{1}{2}$	1 $\frac{1}{2}$
2	1 $\frac{11}{16}$
3	1 $\frac{13}{16}$
4	1
6	1 $\frac{1}{2}$



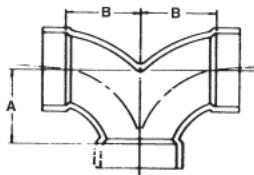
C H E M D R A I N C P V C F I T T I N G S

PART NO. AW 326C**1/16 Bend, Street****[22 $\frac{1}{2}$ ° Street Ell]****SPIGOT X HUB**

SIZE	A	B
1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{4}$
2	1 $\frac{11}{16}$	1 $\frac{1}{2}$
3	1 $\frac{13}{16}$	2 $\frac{5}{16}$
4	1	2 $\frac{3}{4}$
6	1 $\frac{1}{2}$	5 $\frac{3}{64}$
8	1 $\frac{3}{4}$	5 $\frac{5}{8}$

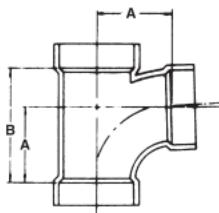
**PART NO. AW 327C****Double 1/4 Bend****ALL HUB**

SIZE	A	B
1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$
2	2 $\frac{5}{16}$	2 $\frac{5}{16}$
3	3 $\frac{1}{16}$	3 $\frac{1}{16}$

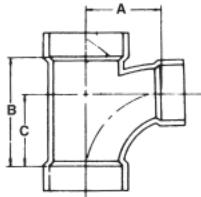


PART NO. AW 400C**Sanitary Tee**
ALL HUB

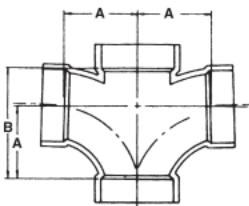
SIZE	A	B
1½	1¾	2¾
2	2⁵/₁₆	3¹/₁₆
3	3¹/₁₆	4⁷/₈
4	3⁷/₈	6¹/₈
6	5	8½
8	6	10¹/₂

**PART NO. AW 401C****Sanitary Tee, Reducing**
ALL HUB

SIZE	A	B	C
2 x 1½ x 1½	2³/₁₆	3¹/₈	1¹⁵/₁₆
2 x 1½ x 2	2⁵/₁₆	3¹¹/₁₆	2⁵/₁₆
2 x 2 x 1½	2³/₁₆	3¹/₈	1¹⁵/₁₆
3 x 3 x 1½	2⁹/₁₆	2¹¹/₁₆	1¾
3 x 3 x 2	2⁷/₈	3⁵/₁₆	2¹/₈
4 x 4 x 2	3⁵/₁₆	3³/₁₆	2¹/₁₆
4 x 4 x 3	3⁹/₁₆	4³/₄	3
6 x 6 x 4	4²⁷/₃₂	6³/₆₄	3²⁵/₃₂
8 x 8 x 4	8¹/₄	6³/₄	4¹/₈

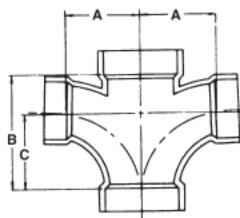
**PART NO. AW 428C****Double Sanitary Tee**
(Sanitary Cross)
ALL HUB

SIZE	A	B
1½	1¾	2¾
2	2⁵/₁₆	3¹¹/₁₆
3	3¹/₁₆	4⁷/₈
4	3⁷/₈	6¹/₈



PART NO. AW 429C**Double Sanitary Tee, Reducing
(Sanitary Cross)
ALL HUB**

SIZE	A	B	C
2 x 2 x 1½ x 1½	2¾/16	3⅛	1⅕/16
3 x 3 x 1½ x 1½	2¾/16	2⅛/16	1¾
3 x 3 x 2 x 2	2⅞	3⅝/16	2⅛/8
4 x 4 x 2 x 2	3⅝/16	3⅝/16	2⅛/16
4 x 4 x 3 x 3	3¾/16	4¾	3



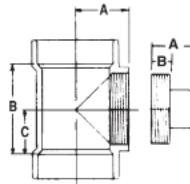
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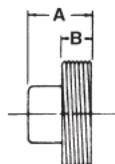
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PART NO. AW 444XC**Cleanout Tee
with Cleanout Plug
HUB X HUB X FPT**

SIZE	A	B	C
1½	1⅕/16	2¾/8	1¾/16
2	2¼	3	1½
3	2⅛/16	3⅝/8	1⅕/16
4	3⅝/8	5⅛/8	2⅙/16
6	4	8	4

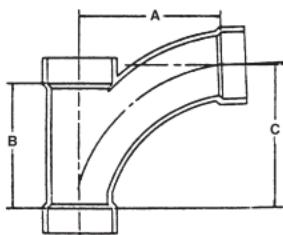
**Cleanout Plug
MPT**

SIZE	A	B
1½	1¾/8	5/8
2	1¾/8	5/8
3	1¾/4	¾
4	1⅞/8	7/8
6	2	1

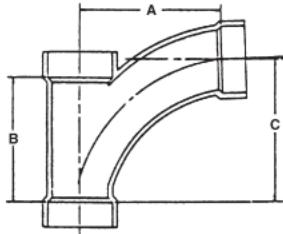


PART NO. AW 501C**Combination Wye and 1/8 Bend**
(One Piece)
ALL HUB

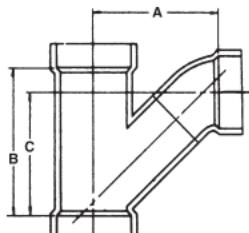
SIZE	A	B	C
1½	3 ⁵ / ₁₆	3½	3 ¹⁵ / ₁₆
2	5 ¹ / ₈	4 ⁷ / ₁₆	5 ¹ / ₈
3	7 ⁹ / ₁₆	6½	7 ⁹ / ₁₆
4	10	8½	10

**PART NO. AW 502C****Combination Wye and 1/8 Bend, Reducing**
(One Piece)
ALL HUB

SIZE	A	B	C
2 x 1½ x 1½	4 ³ / ₁₆	3½	3 ¹⁵ / ₁₆
2 x 2 x 1½	4 ³ / ₁₆	3½	3 ¹⁵ / ₁₆
3 x 3 x 1½	4 ³ / ₄	3½	3 ¹⁵ / ₁₆
3 x 3 x 2	5 ¹¹ / ₁₆	4 ⁷ / ₁₆	5 ¹ / ₈
4 x 4 x 2	6 ¹ / ₈	4½	5 ¹ / ₈
4 x 4 x 3	8 ¹ / ₁₆	6½	7 ⁹ / ₁₆

**PART NO. AW 503C****Combination Wye and 1/8 Bend**
ALL HUB

SIZE	A	B	C
6**	11 ¹⁵ / ₃₂	10 ⁵ / ₃₂	11 ⁹ / ₆₄
8**	14 ¹⁹ / ₃₂	14 ¹ / ₃₂	14 ²³ / ₃₂



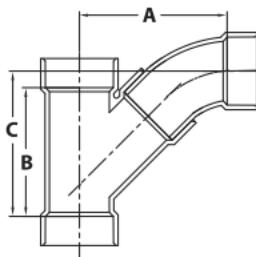
** Two pieces

PART NO. AW 504C**Combination Wye and 1/8 Bend,
Reducing
ALL HUB**

SIZE	A	B	C
6 x 6 x 3**	9 ³ / ₈	7 ⁵ / ₆₄	7 ¹⁹ / ₃₂
6 x 6 x 4*	8 ¹⁵ / ₁₆	8 ⁵ / ₈	7 ¹³ / ₁₆

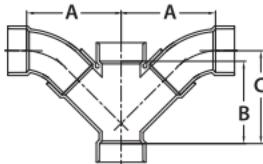
* One piece short pattern

** Two pieces

**PART NO. AW 507C****Double Combination Wye and 1/8 Bend
ALL HUB**

SIZE	A	B	C
1 ¹ / ₂ †	3 ³ / ₈	3 ⁷ / ₈	3 ³ / ₈
2†	5 ¹⁷ / ₆₄	5 ³ / ₈	4 ²⁷ / ₆₄
2x2x1 ¹ / ₂ x1 ¹ / ₂ †	4 ⁵ / ₃₂	4 ⁷ / ₃₂	3 ⁶¹ / ₆₄
3†	6 ¹ / ₄	7 ⁵ / ₈	6 ⁵ / ₁₆
3x3x2x2†	6 ⁵ / ₆₄	5 ⁵ / ₃₂	5 ¹¹ / ₆₄
4†	9 ¹³ / ₃₂	8 ³ / ₁₆	9 ⁵ / ₃₂
4x4x2x2†	7 ⁵ / ₁₆	5	6
4x4x3x3†	8 ¹⁹ / ₆₄	6 ⁹ / ₁₆	7 ¹⁹ / ₃₂
6†	11 ²¹ / ₃₂	11 ¹¹ / ₃₂	10 ³ / ₁₆
6x6x3x3†	12 ¹ / ₈	10 ⁹ / ₆₄	11 ⁵ / ₈
6x6x4x4†	12 ¹ / ₈	10 ⁹ / ₆₄	11 ⁵ / ₈

† Three pieces.

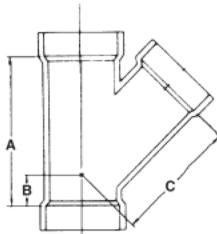
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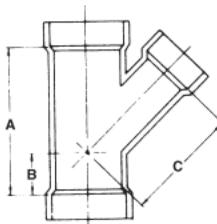
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PART NO. AW 600C

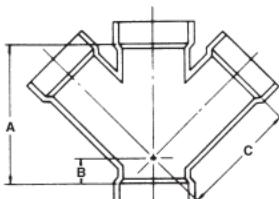
SIZE	Wye (45° Wye) ALL HUB		
	A	B	C
1½	4	1⅛	2⅞
2	5	1⅓	3⅝
3	6⅝	1⅕	5
4	8¼	1⅗	6⅔
6	10⅓	1⅓	8⅞
8	14⅛	2⅔	11⅓

**PART NO. AW 601C**

SIZE	Wye, Reducing (45° Wye) ALL HUB		
	A	B	C
2 x 1½ x 1½	3½	1⅛	2⅕
2 x 2 x 1½	4½	1	3⅖
3 x 3 x 1½	4¼	½	4⅖
3 x 3 x 2	5	¾	4⅖
4 x 4 x 2	5⅓	¾	5⅖
4 x 4 x 3	6⅝	1⅛	6
6 x 6 x 4	6⅞	¾	7½
8 x 8 x 4	10½	1	11⅓
8 x 8 x 6	10½	1	9⅓

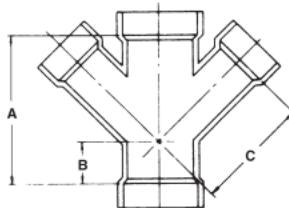
**PART NO. AW 611C**

SIZE	Double Wye (Double 45° Wye) ALL HUB		
	A	B	C
1½	4	1⅛	2⅞
2	5	1⅓	3⅝
3	6⅝	1⅕	5
4	8¼	1⅗	6⅔
6	10⅓	1⅓	8⅞



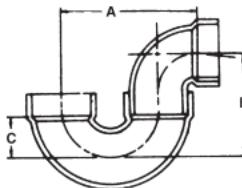
PART NO. AW 612C**Double Wye, Reducing
(Double 45° Wye)
ALL HUB**

SIZE	A	B	C
2 x 2 x 1 1/2 x 1 1/2	4 3/8	1 1/16	3 7/16
3 x 3 x 2 x 2	5	7/8	4 5/8
4 x 4 x 3 x 3	6 5/8	1 1/16	6
6 x 6 x 4 x 4	10 3/16	1 3/4	10 3/16

**PART NO. AW 706XC****P-Trap with Solvent Weld Joint**

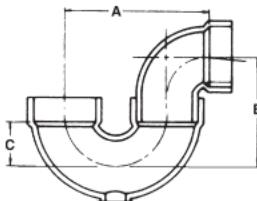
HUB X HUB

SIZE	A	B	C
1 1/2	4 5/8	3 15/16	1 3/4
2	6 13/16	4 7/8	2 3/8
3	8 15/16	6 15/16	3 1/16
4	11 1/16	8 7/16	3 11/16

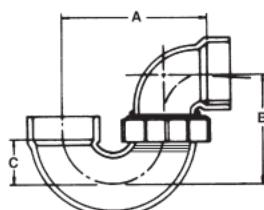
**PART NO. AW 707XC****P-Trap with Cleanout,
Solvent Weld Joint**

HUB X HUB

SIZE	A	B	C
1 1/2	4 5/8	3 15/16	1 3/4
2	6 13/16	4 7/8	2 3/8

**PART NO. AW 708PC****P-Trap with Union
HUB X HUB WITH PLASTIC NUT**

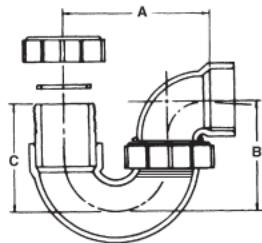
SIZE	A	B	C
1 1/2	4 5/8	3 15/16	1 3/4
2	6 13/16	4 7/8	2 3/8



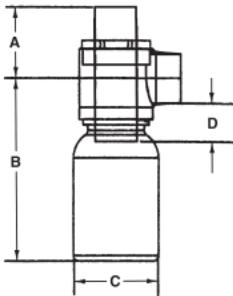
PART NO. AW 711PC**L.A. Pattern P-Trap with Union**
SLIP X HUB WITH PLASTIC NUTS

SIZE	A	B	C
1½	4½	3½	3¾

§ Nut is sized to fit tubular sink tailpieces.

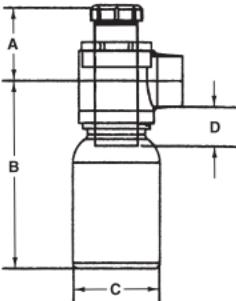
**PART NO. AW 712C****Jar Trap**
SLIP X HUB

SIZE	A	B	C	D
1½	3½	8¼	3¾	2

**PART NO. AW 712PC****Jar Trap with Tail Piece Adaptor**
SLIP X HUB WITH PLASTIC NUTS

SIZE	A	B	C	D
1½	3½	8½	3¾	2

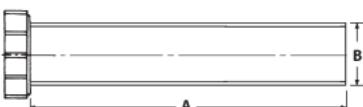
§ Nut is sized to fit tubular sink tailpieces.

**PART NO. AW 1512PC****CPVC Tail Piece with Nut†**
(May be cut to length)

Supplied with a Fluoroelastomer Gasket

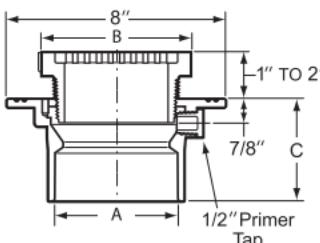
SIZE	A	B
1½ x 12	12	1½

† Tubular O.D.

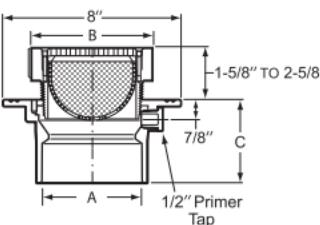


PART NO. AW 1500C***Floor Drain with CPVC Adjustable Top
with 5" Round Grate**

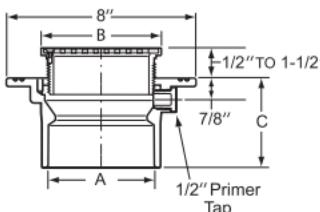
SIZE	A	B	C
1½ x 5	1½	5	4¾

**PART NO. AW 1520C*****Floor Drain with CPVC Adjustable Top
with 5" Round Grate and Strainer**

SIZE	A	B	C
1½ x 5	1½	5	4¾
2 x 5	2	5	4

**PART NO. AW 1600S******Floor Drain with Stainless Steel
Adjustable Top with 6" Round Grate**

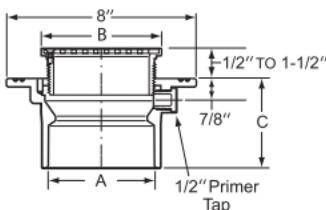
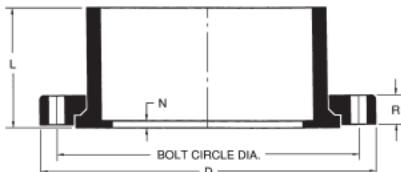
SIZE	A	B	C
1½ x 6	1½	6	4¾



- * Floor drains with CPVC tops are rated as "Light Duty" per ASME A 112.6.3. Any metallic screws or hardware are 304 SS. All floor drains are supplied with 1/2" FPT tapped connection for a trap primer. All drains and clean-outs are based on 4" body with smaller connection sizes factory bushed.
- * Floor drains with Stainless Steel tops are rated as "Heavy Duty" per ASME A 112.6.3. Stainless Steel drain tops, grates on floor drains and floor cleanouts are purchased items and not of domestic manufacture.

PART NO. AW 1800S****Floor Drain with Stainless Steel
Adjustable Top with 8" Round Grate**

SIZE	A	B	C
1 1/2 x 8	1 1/2	8	4 3/16

**PART NO. AW 8530C****Van Stone Flange
SOCKET**

Size	D	L	N	R
1 1/2	4 15/16	1 9/16	3/32	23/32
2	5 7/8	2 23/32	3/32	13/16
3	7 7/16	2 1/8	1/8	29/32
8	13 11/32	4 5/16	3/16	1 1/2

Size	BOLT CIRCLE DIA.	BOLT HOLE DIA.	NO. OF BOLT HOLES	BOLT DIA.	MIN. BOLT LENGTH*
1 1/2	3 7/8	5/8	4	1/2	2 1/2
2	4 3/4	3/4	4	5/8	3
3	6 5/8	3/4	4	5/8	3 1/4
8	11 3/4	29/32	8	3/4	4 1/2

* Bolt lengths were calculated using two Charlotte flanges.
Lengths may vary when mating with other brands or accessories.

** Floor drains with Stainless Steel tops are rated as "Heavy Duty" per ASME A 112.6.3. Stainless Steel drain tops, grates on floor drains and floor cleanouts are purchased items and not of domestic manufacture.

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.

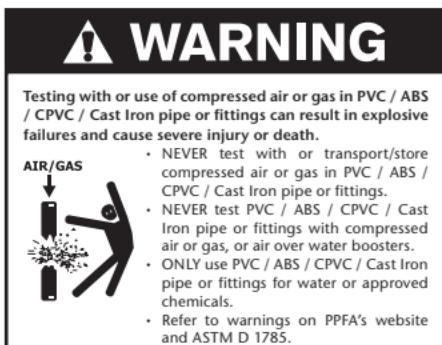
This Limited Warranty will not apply if:

- 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.

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.

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