Product Certification

This is to certify that all Plastic Pipe and Fittings manufactured by Charlotte Pipe and Foundry Company are manufactured in the United States and conform to the following standards:

PVC SCH. 40 SOLID WALL PIPE
ASTM D 1784, ASTM D 1785, ASTM D 2665
FHA UM 79a
FEDERAL SPECIFICATION L-P-320a
NSF STANDARD 14 AND 61

PVC SCH. 40 DWV CELLULAR CORE PIPE
ASTM D 4396, ASTM F 891
NSF STANDARD NO. 14

PVC SCH. 40 DWV FITTINGS
ASTM D 1784, ASTM D 2665, ASTM D 3311,
ASTM F1866
FHA UM 79a
FEDERAL SPECIFICATION L-P-320a
NSF STANDARD NO. 14

ConnecTite® PUSH-FIT DWV FITTINGS
ASME A112.4.4, IAPMO IGC 334
NSF STANDARD NO. 14

PVC SDR-21 AND SDR-26 PRESSURE PIPE
ASTM D 1784, ASTM D 2241
NSF STANDARD NO. 14 AND 61

PVC SCH. 40 PRESSURE FITTINGS
ASTM D 1784, ASTM D 2466
NSF STANDARD 14 AND 61

PVC SCH. 40 WELL CASING PIPE
ASTM D 1784, ASTM F 480
NSF STANDARD NO. 14 AND 61

PVC SCH. 80 PIPE
ASTM D 1784, ASTM D 1785
NSF STANDARD NO. 14 AND 61

PVC SCH. 80 FITTINGS
ASTM D 1784, ASTM D 2467
ASTM D 2464 ASTM F 1970
NSF STANDARD NO. 14 AND 61

PVC SDR 35 SEWER MAIN PIPE
ASTM D 1784, ASTM D 3034, SDR 35
ASTM D 3212, ASTM F 477

PVC SEWER AND DRAIN PIPE
ASTM D 1784, ASTM D 2729

PVC THIN WALL PIPE & FITTINGS
ASTM D 1784, ASTM D 2949
NSF STANDARD NO. 14

CPVC FLOWGUARD GOLD® CTS PIPE & FITTINGS
ASTM D 1784, ASTM D 2846
FHA UM-61a
NSF STANDARD NO. 14 AND 61
CSA LISTED ON SPECIFIED ITEMS

CPVC CHEMDRAIN® SCH. 40 PIPE & FITTINGS
ASTM D 1784, ASTM F 2618
NSF STANDARD 14

ABS SCH. 40 DWV CELLULAR CORE PIPE
ASTM D 3965, ASTM F 628
NSF STANDARD NO. 14

ABS PLUS® SCH. 40 DWV CELLULAR CORE PIPE
ASTM D 3965, ASTM D 4396, ASTM F 1488

ABS SCH. 40 DWV FITTINGS
ASTM D 3965, ASTM D 2661, ASTM D 3311
FHA UM 79a
FEDERAL SPECIFICATION L-P-322b
NSF STANDARD NO. 14

CHARLOTTE PIPE AND FOUNDRY COMPANY

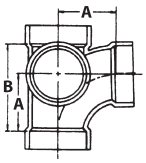
Physical Properties of Charlotte Pipe® ABS and PVC Materials*

PROPERTY	UNITS	ABS	ASTM NO.		PVC	ASTM NO.
Specific Gravity	g/cc	1.05	D 792		1.40	D 792
Tensile Strength (73°F) Minimum	Psi	4,500	D 638		7,000	D 638
Modulus of Elasticity in Tension (73°F) Minimum	Psi	240,000	D 638		400,000	D 638
Flexural Strength (73°F)	Psi	10,585	D 790		14,000	D 790
Izod Impact (notched at 73°F) Minimum	ft lb/ in. of notch	6.00	D 256		0.65	D 256
Hardness (Durometer D)		70	D 2240		80 ± 3	D 2240
Hardness (Rockwell R)		100	D 785		110 - 120	D 785
Compressive Strength (73°F)	Psi	7,000	D 695		9,600	D 695
Hydrostatic Design Stress	Psi	N/A			2,000	D 1598
Coefficient of Linear Expansion	in./ in./ °F	5.5×10^{-5}	D 696		3.0×10^{-5}	D 696
Heat Distortion Temperature at 264 psi Minimum	degrees F	180	D 648		158	D 648
Coefficient of Thermal Conductivity	BTU/ hr/sq ft/ °F/ in.	1.1	C 177		1.2	C 177
Specific Heat	BTU/ °F/lb	0.35	D 2766		0.25	D 2766
Water Absorption (24 hrs at 73°F)	% weight gain	0.40	D 570		.05	D 570
Cell Classification - Pipe		42222	D 3965		12454	D 1784
Cell Classification - Fittings		32222	D 3965		12454	D 1784
Burning Rate					Self Ext.	D 635

*Above data is based upon information provided by the raw material manufacturers. It should be used only as a recommendation and not as a guarantee of performance.

PART NO. PVC 449

Sanitary Tee with 2″ Left Hand Sanitary Inlet on Center

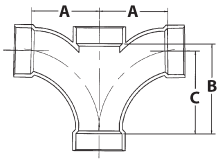


ALL HUB

SIZE	A	B
2 (PVC)	2 5/16	3 11/16

PART NO. 500

Double Fixture Fitting



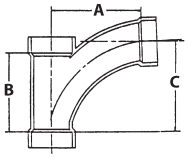
ALL HUB

SIZE	A	B	C
2 (PVC)	3 1/2	4 5/8	4 1/4
2 (ABS)	3 15/32	4 17/32	4 7/32
2 x 1 1/2 x 1 1/2 (PVC)	2 7/8	3 1/2	3 1/8
2 x 1 1/2 x 1 1/2 (ABS)	2 27/32	3 9/16	3 3/32
2 x 1 1/2 x 2 x 2 (ABS)	3 15/32	4 17/32	4 7/32
2 x 2 x 1 1/2 x 1 1/2 (PVC)	2 7/8	3 1/2	3 1/8
2 x 2 x 1 1/2 x 1 1/2 (ABS)	2 27/32	3 13/32	3 1/16
3 (PVC)	4 15/16	6 3/4	6 1/4
3 (ABS)	4 7/8	6 5/8	6 1/8
3 x 2 x 3 x 3 (ABS)	4 7/8	6 5/8	6 1/4

PART NO. 501

Combination Wye & 1/8 Bend

(One Piece)



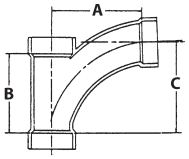
ALL HUB

SIZE	A	B	C
1 1/2 (PVC)	3 15/16	3 1/2	3 15/16
1 1/2 (ABS)	3 7/8	3 1/2	3 13/16
2 (PVC)	5 1/8	4 7/16	5 1/8
2 (ABS)	5 5/32	4 7/16	5
3 (PVC)	7 9/16	6 1/2	7 9/16
3 (ABS)	7 17/32	6 15/32	7 7/16
4 (PVC)	10	8 1/2	10
4 (ABS)	9 31/32	8 15/32	9 27/32

PART NO. 502

Combination Wye & 1/8 Bend, Reducing

(One Piece)



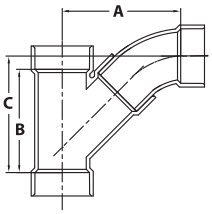
ALL HUB

SIZE	A	B	C
2 x 1 1/2 x 1 1/2 (PVC)	4 3/16	3 1/2	3 15/16
2 x 1 1/2 x 1 1/2 (ABS)	4 1/8	3 17/32	3 3/4
2 x 2 x 1 1/2 (PVC)	4 3/16	3 1/2	3 15/16
2 x 2 x 1 1/2 (ABS)	4 1/8	3 7/16	3 7/8
3 x 3 x 1 1/2	4 3/4	3 1/2	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	4 1/2	5 1/8
4 x 4 x 3 (PVC)	8 1/16	6 1/2	7 9/16
4 x 4 x 3 (ABS)	7 29/32	6 13/32	7 5/16

PART NO. PVC 503

Combination Wye & 1/8 Bend

(Two Pieces)



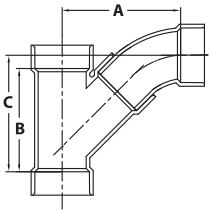
ALL HUB

SIZE	A	B	C
6∞ (PVC)	11 15/32	10 1/8	11 9/64
8∞ (PVC)	14 19/32	14 1/8	14 23/32
10∞ (PVC)	18 1/2	16 1/2	18 1/4
12∞ (PVC)	21 1/2	19 1/2	21 1/2
14(F)∞ (PVC)	36 7/8	32 1/2	37 3/16
16(F)∞ (PVC)	39 1/2	35 1/2	39 13/16

PART NO. PVC 504

Combination Wye & 1/8 Bend, Reducing

(Two Pieces)



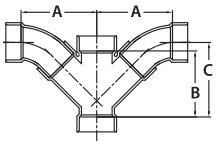
ALL HUB

SIZE	A	B	C
6 x 6 x 3∞ (PVC)	8 7/8	7 1/4	8
6 x 6 x 4(1) (PVC)	8 15/16	7 9/32	7 13/16
8 x 8 x 4∞ (PVC)	11 17/32	10 1/2	10 1/2
8 x 8 x 6∞ (PVC)	12 1/2	10 1/2	11 3/16
10 x 10 x 4§ (PVC)	16 3/16	14 1/4	15 27/64
10 x 10 x 6§ (PVC)	15 31/32	14 1/4	15 9/64
10 x 10 x 8∞ (PVC)	15 7/16	14 1/4	14 25/32
12 x 12 x 4§ (PVC)	16 3/4	13 1/2	15 11/32
12 x 12 x 6§ (PVC)	16 7/16	13 1/2	15 5/64
12 x 12 x 8∞ (PVC)	16 3/32	13 17/32	14 5/8
12 x 12 x 10∞ (PVC)	19 15/32	17 1/16	18 3/16
14 x 14 x 4(F)∞ (PVC)	15 47/64	12 31/32	11 31/32
14 x 14 x 6(F)∞ (PVC)	17 7/32	15 21/32	15 19/64
14 x 14 x 8(F)∞ (PVC)	18 21/32	18 1/8	18 1/2
14 x 14 x 10(F)∞ (PVC)	22 1/2	20 3/4	22 1/4
14 x 14 x 12(F)∞ (PVC)	21 3/16	25 1/2	26 3/8
16 x 16 x 4(F)∞ (PVC)	16 1/2	12 9/16	12 7/8
16 x 16 x 6(F)∞ (PVC)	18 5/8	15 41/64	15 3/16
16 x 16 x 8(F)∞ (PVC)	19 11/16	18 5/8	19 3/16
16 x 16 x 10(F)∞ (PVC)	23 1/4	23	22 15/16
16 x 16 x 12(F)∞ (PVC)	26 3/16	27 3/16	27 13/16
16 x 16 x 14(F)∞ (PVC)	37 1/8	27 13/16	33 1/4

PART NO. PVC 507

Double Combination Wye & 1/8 Bend

(Three Pieces or Five Pieces)



ALL HUB

SIZE	A	B	C
4 (PVC)	9 13/32	8 1/4	9 5/32
2 x 2 x 1 1/2 x 1 1/2 (PVC)	4 7/8	4 3/8	4 15/16
3 x 3 x 2 x 2 (PVC)	6 5/64	4 15/16	5 11/64
4 x 4 x 2 x 2 (PVC)	7 5/16	5	6
4 x 4 x 3 x 3 (PVC)	8 19/64	6 5/8	7 19/32
6 x 6 x 4 x 4§ (PVC)	11 21/32	10 1/8	10 3/16

(1) One piece short pattern
(F) Fabricated
§ Fitting shipped with any required bushing(s) installed, street bend strapped to fitting; assembled from molded components.
∞ Fitting shipped with street bend strapped to fitting.

Note: If PVC or ABS is not listed for a specific size, that size fitting is available in PVC and ABS materials, and the dimensions listed are the same for both materials.