



METROPOLITAN CEBU WATER DISTRICT
TECHNICAL STANDARDS COMMITTEE

Prepared and Submitted by the
TECHNICAL STANDARDS COMMITTEE

SHOP DRAWING

No. DS13a-02:2022

STANDARD CONSTRUCTION DRAWING FOR

uPVC ELBOWS, B & S

MEMBER:

ED:

PD:

Chairman

Date:

CD:

CSD:

PAMD:

PMMD:

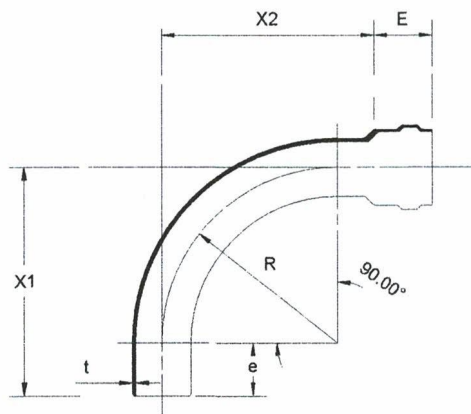
REVISION OF:

No. DS13a-01:2003

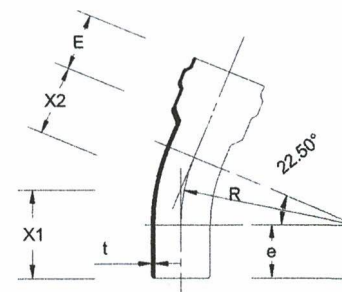
SHEET

No. 1/2

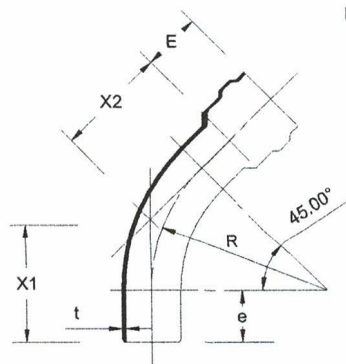
REVISIONS:



90° ELBOW



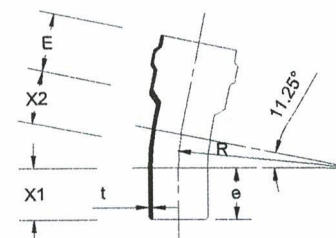
22 - 1/2° ELBOW



45° ELBOW

NOTE:

1. All units in mm, unless otherwise specied.
2. See attached specifications.
3. Drawn not to Scale.



11 - 1/4° ELBOW

Note: This standard shop drawing shall not be used for construction/procurement without approval from MCWD Technical Standards Committee.



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SHOP DRAWING

No. DS13a-02:2022

REVISION OF:

No. DS13a-01:2003

SHEET

No. 2/2

STANDARD CONSTRUCTION DRAWING FOR

uPVC ELBOWS, B & S

MEMBERS

ED:

PD:

Chairman

Date: _____

CD:

CSD:

PAMD: _____

PMMD:

REVISIONS:

90°

NOMINAL PIPE DIAMETER	O.D.	R	X ₁	X ₂	E	e	Minimum Wall Thickness	
							SERIES 10	SERIES 9
50	63	100.54	284.25	159.97	117.06	97.26	3.0	3.6
75	90	250	450	320	127	110	3.6	4.3
100	110	290	500	370	139	121	4.4	5.2
150	160	480	720	580	160	145	7.7	9.2
200	225	750	1020	880	188	177	10.8	12.9
250	280	1050	1360	1200	211	204	13.5	16.0
300	315	1162.28	1488.70	1328.40	226.89	221.29	15.2	18.0
350	355	1330.81	1679.88	1513.86	244.33	240.98	17.5	20.3
400	400	1520.41	1894.97	1722.51	263.94	263.13	19.3	22.9
450	450	1731.07	2133.95	1954.34	285.73	287.74	21.7	25.7

22 1/2°

NOMINAL PIPE DIAMETER	O.D.	R	X ₁	X ₂	E	e	Minimum Wall Thickness	
							SERIES 10	SERIES 9
50	63	100.54	224.93	74.20	117.06	97.26	3.0	3.6
75	90	250	300	120	127	110	3.6	4.3
100	110	290	330	130	139	121	4.4	5.2
150	160	480	440	190	160	145	7.7	9.2
200	225	750	580	280	188	177	10.8	12.9
250	280	1050	740	360	211	204	13.5	16.0
300	315	1162.28	804.69	399.05	226.89	221.29	15.2	18.0
350	355	1330.81	896.72	450.62	244.33	240.98	17.5	20.3
400	400	1520.41	1000.24	508.63	263.94	263.13	19.3	22.9
450	450	1731.07	1115.28	573.09	285.73	287.74	21.7	25.7

45°

NOMINAL PIPE DIAMETER	O.D.	R	X ₁	X ₂	E	e	Minimum Wall Thickness	
							SERIES 10	SERIES 9
50	63	100.54	224.93	102.59	117.06	97.26	3.0	3.6
75	90	250	300	178	127	110	3.6	4.3
100	110	290	330	200	139	121	4.4	5.2
150	160	480	440	290	160	145	7.7	9.2
200	225	750	580	440	188	177	10.8	12.9
250	280	1050	740	580	211	204	13.5	16.0
300	315	1162.28	804.69	640.98	226.89	221.29	15.2	18.0
350	355	1330.81	896.72	726.44	244.33	240.98	17.5	20.3
400	400	1520.41	1000.24	822.58	263.94	263.13	19.3	22.9
450	450	1731.07	1115.28	929.40	285.73	287.74	21.7	25.7

11 1/4°

NOMINAL PIPE DIAMETER	O.D.	R	X ₁	X ₂	E	e	Minimum Wall Thickness	
							SERIES 10	SERIES 9
50	63	100.54	203.22	69.13	117.06	97.26	3.0	3.6
75	90	250	250	90	127	110	3.6	4.3
100	110	290	270	110	139	121	4.4	5.2
150	160	480	330	150	160	145	7.7	9.2
200	225	750	420	200	188	177	10.8	12.9
250	280	1050	520	250	211	204	13.5	16.0
300	315	1162.28	557.80	277.30	226.89	221.29	15.2	18.0
350	355	1330.81	617.77	310.34	244.33	240.98	17.5	20.3
400	400	1520.41	687.50	347.51	263.94	263.13	19.3	22.9
450	450	1731.07	762.54	388.82	285.73	287.74	21.7	25.7

Note: This standard shop drawing shall not be used for construction/procurement without approval from MCWD Technical Standards Committee.