ASTRAL®

where INNOVATION flows

STRONG NAHIN, ASTRAL STRONG!!™

ASTRAL ULTRADRAIN® - CONVENTIONAL SYSTEM

Technical Manual

IS 13592 CM/L-3795282

IS 14735 CM/L-7976310

MCGM APPROVED

EASY TO INSTALL

COST EFFECTIVE

For Residential & Commercial Applications

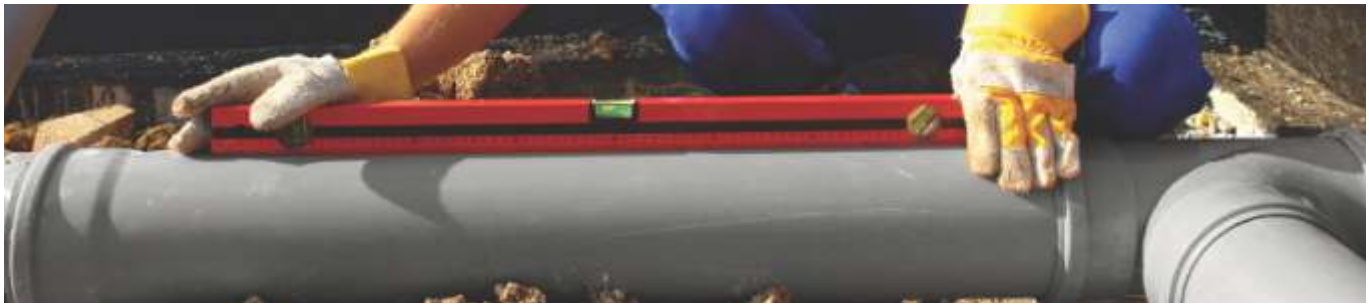
ASTRAL ULTRADRAIN® CONVENTIONAL SYSTEM

PROFILE

ASTRAL ULTRADRAIN® is a uPVC conventional drainage system for soil, waste and rain water. This system enables fast and efficient removal of waste without blockage and leakage. Its high impact strength, chemical and corrosion resistance. Long life and virtually zero maintenance have made ASTRAL ULTRADRAIN® system a preferred drainage and rain water system among architects, builders and plumbing contractors.

The state of the art equipment and virgin raw material used to produced ASTRAL ULTRADRAIN® SWR system. The system is available from 75mm to 160mm. the entire range is manufactured as per internationally accepted quality standards and specifications.

INTRODUCTION



KEY PROPERTIES AND BENEFITS

STRONGER, RESILIENT & LIGHT WEIGHT

ASTRAL ULTRADRAIN® system is highly resilient and tough with good mechanical strength and high impact resistance. At the same time this system is very light in weight which gives highest benefit to the end user in terms of transportation, installation and long service life.

HIGH FLOW RATES

Extremely smooth bores, precision joints and lack of internal projections ensure unrivaled hydraulic capacity over the total life of the system.

CORROSION RESISTANCE

The inert nature of ASTRAL ULTRADRAIN® uPVC drainage system provide complete corrosion resistance and renders wrapping, coating and lining unnecessary. It also ensures that uPVC sewer and drainage pipes have long operational life compare to conventional asbestos or cast iron systems.

QUICK & EASY INSTALLATIONS

ASTRAL ULTRADRAIN® pipes and fittings can be joined together with rubber ring or solvent weld system. These techniques are very simple and ensure 100% leak proof system at a reduced installation time with lower maintenance.

NON CONDUCTIVE

ASTRAL ULTRADRAIN® uPVC is a non conductor of electricity, and is therefore not subject to galvanic or electrolytic action.

VERSATILE AND ELEGANT

The physical properties of PVC allow designers a high degree of freedom while designing. Superb finished pipes and fittings.

CHEMICAL RESISTANCE

ASTRAL ULTRADRAIN® uPVC drainage system is inert to most of the acids, alkalis, effluents, salts, minerals and aggressive soils. The system remains unaffected by transportation of such type of media and gives longer life with trouble free service.

ENVIRONMENTAL IMPACT

uPVC has a lower feedstock energy especially compared to other polymers and common building materials. It is the least energy intensive of all thermoplastics. In life cycle analysis and independent studies, PVC's environmental impact has been found most favorable, so the more usage of PVC will greatly help to keep our global natural resources intake for longer period of time. It does not pollute air, water or land during manufacturing or service life and can be recycled after prolonged service life.

FLAMMABILITY

ASTRAL ULTRADRAIN® uPVC does not support combustion and is inherently difficult to ignite. It also stops burning once the source of heat is removed.

UV STABILIZED

ASTRAL ULTRADRAIN® system is UV stabilized which gives protection to the system while being operational in direct sun light.

PRODUCT SPECIFICATIONS

ULTRADRAIN PIPES : ASTRAL ULTRADRAIN® ISI marked pipes are available in both ringfit & selfit pipes with two different class of pipes named as "TYPE A" & "TYPE B". TYPE A pipes are recommended for use in ventilation and rain water application while TYPE B pipes are recommended for soil and waste discharge applications. Pipes are available in all sizes and in different lengths with single socket and double socket.

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RINGFIT PIPES - (Type A & Type B)

Ringfit pipes are socketed on automatic online socketing machine with very high degree of accuracy. The socket has groove inside for rubber ring. The rubber ring ensures trouble free water tight joint with allowance to thermal expansion /contraction. One end of the pipe is plain and the other is self socketed with an integral groove to hold the rubber gasket. When joined with a rubber ring, the joint formed is a trouble free, water tight one, ready to take care of thermal expansion / contraction.

Sizes : 75 mm, 90 mm, 110 mm, 160 mm

SELFIT PIPES - (Type A & Type B)

Selfit pipes are socketed on automatic socketing machine with self socket length (without groove). Such pipes are to be joined with solvent cement. One end of the pipe is plain and the other is self socketed on sophisticated automatic machines for high degree of accurate diameters. The pipes when joined using solvent cement, form a permanent water tight joint.

Sizes : 75 mm, 90 mm, 110 mm, 160 mm

NOMINAL DIAMETER	MEAN OUTSIDE DIAMETER		TYPE A WALL THICKNESS		TYPE B WALL THICKNESS	
	Min.	Max.	Min.	Max.	Min.	Max.
75	75.0	75.3	1.8	2.2	3.2	3.8
90	90.0	90.3	1.9	2.3	3.2	3.8
110	110.0	110.4	2.2	2.7	3.2	3.8
160	160.0	160.5	3.2	3.8	4.0	4.6

All dimensions are in mm and are same for Ringfit and Selfit pipes. Only socket geometry is different.

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ULTRADRAIN FITTINGS : ASTRAL ULTRADRAIN® ISI marked fittings are available in both grooved ring and pasting type in full range starting from 75 mm to 160 mm and are fully compatible with ASTRAL ULTRADRAIN® Pipes.

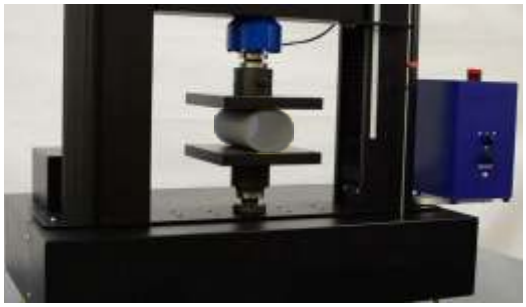
GROOVED RING

Grooved ring type fittings are self socketed with groove to hold the rubber ring. The grooves are made on highly accurate online socketing machines that give highest quality, performance and satisfaction.

PASTING TYPE

Pasting type fittings are self socketed on highly automatic machines. These fittings are to be joined with solvent cement.

TESTING REQUIREMENTS



ASTRAL ULTRADRAIN® uPVC pipes & fittings are subject to strict and continuous control on raw materials, production, dimensions & identification. The rigorous testing and quality control throughout the entire process ensures that ASTRAL ULTRADRAIN® System is highly reliable and efficient in working.

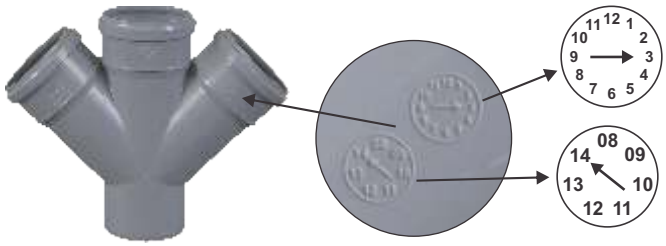
PIPES ARE SUBJECT TO TESTS LIKE.	
☑ Tensile Strength	☑ Impact Strength
☑ Reversion	☑ Stress relief test
☑ Vicat softening temp. test	☑ Exposure to Sunlight
☑ Water tightness of joint	☑ Resistance to H_2SO_4
☑ Axial Shrinkage.	

FITTING ARE SUBJECT TO TESTS LIKE.
☑ Impact Strength
☑ Stress relief test
☑ Vicat Softning temp. test
☑ Water tightness of joint
☑ Resistance to H_2SO_4
☑ Sulphated Ash content

The acceptance criteria for test results obtained are as per widely accepted International and National Standards.

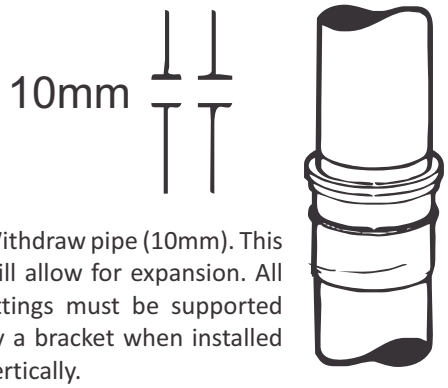
UNIQUE IDENTIFICATION :

Each fitting is having unique identification known as "Clock". This system ensures 100% traceability to every production lot.



THERMAL EXPANSION AND CONTRACTION :

ASTRAL ULTRADRAIN® piping system will undergo thermal expansion and contraction like any other thermoplastic materials. The thermal expansion & contraction depends on the co-efficient of thermal expansion (5.4×10^{-5} mm / mm /°C for PVC), length of piping and temperature difference encountered by the piping. Normally for drainage & sewerage system temperature difference of atmosphere will effect more to thermal movements of piping rather than effluent temperatures as full bore discharges are normally not happened for prolong time and also these discharges are periodic in nature. Still expansion & contraction issue needs to be addressed. For solvent weld systems, change in direction, offset or expansion loops are recommended while for ringfit joining systems specially designed rubber rings and proper joining of pipes and fittings will take care of length change. Please refer joining method section of this catalogue for more details.

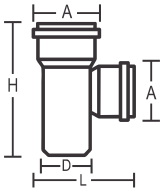


Withdraw pipe (10mm). This will allow for expansion. All fittings must be supported by a bracket when installed vertically.

PIPE CLIP SPACING DISTANCE				
Size (in mm)	75	90	110	160
Horizontal (in mtr.)	0.9	0.9	0.9	1.2
Vertical (in mtr.)	1.8	1.8	1.8	1.8

ASTRAL ULTRADRAIN® GROOVED RING FITTINGS

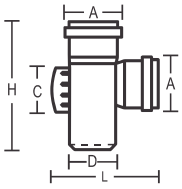
SINGLE TEE



D	WT.	A	H	L
75	3.2	90	186	135
90	3.2	105	233	170
110	3.2	127	258	193
160	4.0	182	362	270

Application : Required to connect branch soil / waste line to main line at an angle of 87.5°.

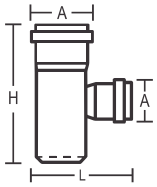
SINGLE TEE WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	186	176	79
90	3.2	105	233	193	92
110	3.2	127	258	224	107
160	4.0	182	362	298	107

Application : Same as plain Tee with option of door for cleaning purpose.

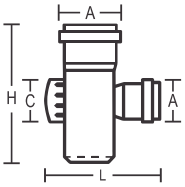
REDUCING TEE



D x d	WT.	A	H	L
110 x 75	3.2	127 x 90	260	175
160 x 75	4.0	182 x 90	343	229
160 x 110	4.0	182 x 127	343	235

Application : Required to connect branch line at 87.5° / 92.5°

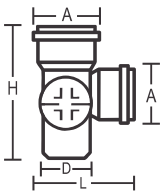
REDUCING TEE WITH DOOR



D x d	WT.	A	H	L	C
110 x 75	3.2	127 x 90	260	207	107
160 x 75	4.0	182 x 90	343	266	107
160 x 110	4.0	182 x 127	343	277	107

Application : Same as Reducing Tee with option of door for cleaning purpose.

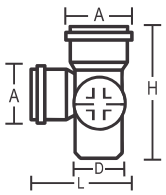
SINGLE TEE L-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	186	137	79
110	3.2	127	258	185	107

Application : Same as plain Tee with option of L-H door for cleaning purpose.

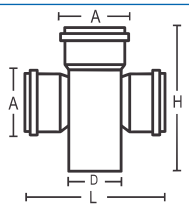
SINGLE TEE R-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	186	137	79
110	3.2	127	258	185	107

Application : Same as plain Tee with option of R-H door for cleaning purpose.

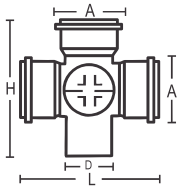
CROSS TEE



D	WT.	A	H	L
75	3.2	90	187	185
110	3.2	127	257	255

Application : Required to connect two adjacent branch line at an angle of 87.5°/92.5°

CROSS TEE WITH DOOR

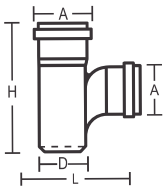


D	WT.	A	H	L	C
75	3.2	90	187	185	79
110	3.2	127	257	255	107

Application : Same as cross Tee with option of door for cleaning purpose.

ASTRAL ULTRADRAIN® GROOVED RING FITTINGS

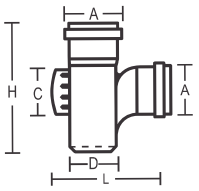
SWEPT TEE



D	WT.	A	H	L
# 75	3.2	90	204	155
#110	3.2	127	265	205

Application : Same as plain Tee with option of door for cleaning purpose.

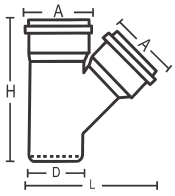
SWEPT TEE WITH DOOR



D	WT.	A	H	L	C
# 75	3.2	90	204	175	79
#110	3.2	127	265	230	107

Application : Same as plain Tee with option of door for cleaning purpose.

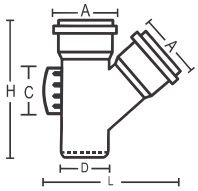
SINGLE 'Y'



D	WT.	A	H	L
75	3.2	90	217	180
90	3.2	105	258	207
110	3.2	127	294	266
160	4.0	182	412	347

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45°.

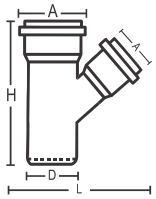
SINGLE 'Y' WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	217	200	79
90	3.2	105	258	223	92
110	3.2	127	294	273	107
160	4.0	182	412	370	107

Application : Same as plain 'Y' with option of door for cleaning purpose.

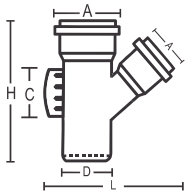
REDUCING SINGLE 'Y'



D	WT.	A	H	L
110 x 75	3.2	127 x 90	250	215

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45° with reduction of size.

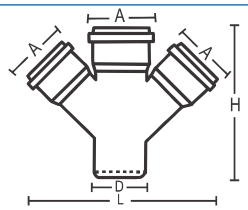
REDUCING SINGLE 'Y' WITH DOOR



D	WT.	A	H	L	C
110 x 75	3.2	127 x 90	250	242	107

Application : Same as reducing "Y" with option of door for cleaning purpose.

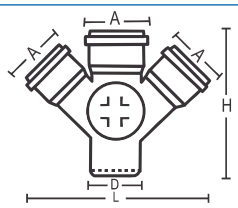
DOUBLE 'Y'



D	WT.	A	H	L
75	3.2	90	215	261
110	3.2	127	295	375

Application : Required to connect 2 branch soil/waste pipeline to the main vertical line at an angle of 45°.

DOUBLE 'Y' WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	215	261	79
110	3.2	127	295	375	107

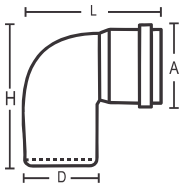
Application : Same as Double 'Y' with option of door for cleaning purpose.

ASTRAL ULTRADRAIN® CONVENTIONAL SYSTEM

 # Shortly Introducing

ASTRAL ULTRADRAIN® GROOVED RING FITTINGS

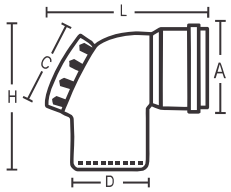
BEND 87.5°



D	WT.	A	H	L
75	3.2	90	146	134
90	3.2	105	174	173
110	3.2	127	198	175
160	4.0	182	276	267

Application : Required to connect internal pipeline to main pipeline & also for direction change at an angle of 87.5°.

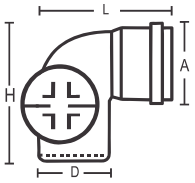
BEND 87.5° WITH DOOR (TS)



D	WT.	A	H	L	C
75	3.2	90	146	155	79
90	3.2	105	147	191	92
110	3.2	127	198	210	107
160	4.0	182	276	280	107

Application : Same as Bend with option of door for cleaning purpose.

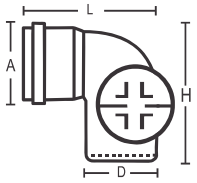
BEND 87.5° L-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	143	135	79
110	3.2	127	196	185	107

Application : Same as Bend with option of L-H door for cleaning purpose.

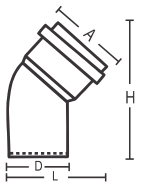
BEND 87.5° R-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	90	143	135	79
110	3.2	127	196	185	107

Application : Same as Bend with option of R-H door for cleaning purpose.

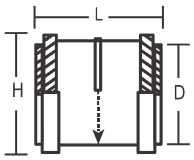
45° BEND



D	WT.	A	H	L
75	3.2	90	153	120
90	3.2	105	189	140
110	3.2	127	207	168
160	4.0	182	260	233

Application : Required as a shoe for drainage line & also for direction change at an angle of 45°.

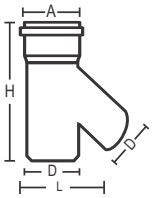
COUPLER



D	WT.	H	L
75	3.2	90	105
90	3.2	105	116
110	3.2	127	130
160	4.0	180	158

Application : Required to connect two length of pipe.

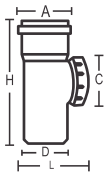
INVERT 'Y' 45º



D	WT.	A	H	L
75	3.2	90	221	180

Application : Required to connect two branches an angle of 45° with invert socket.

CLEANING PIPE

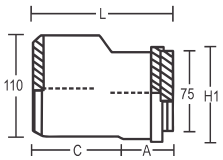


D	WT.	A	H	L	C
75	3.2	90	187	118	79
110	3.2	127	258	143	107
160	4	182	345	207	107

Application : Used in between a vertical line to facilitate cleaning.

ASTRAL ULTRADRAIN® GROOVED RING FITTINGS

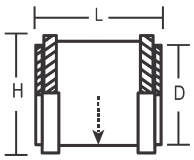
REDUCER



D x d	WT.	A	H-1	L	C
90 x 75	3.2	45	91	137	93
110 x 75	3.2	58	90	151	92
110 x 90	3.2	55	105	161	105
160 x 110	4.0	68	127	186	117

Application : Required to reduce 110mm dia. pipe to 75 mm dia. pipe.

REPAIR COUPLER



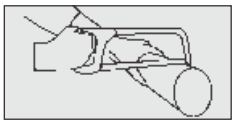
D	WT.	H	L
75	3.2	90	105
110	3.2	127	130

Application : Required to repairing of pipe, having small cracks / holes / dents.

RINGFIT JOINING METHOD :

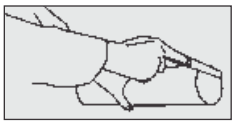
1. CUT PIPE :

Cut pipe square. As joints are sealed at the base of the fitting socket. An angled cut may result in joint failure.



2. REMOVE BURR AND BEVEL :

Remove all burr from inside and outside of pipe with a knife-edge, file, or deburring tool. Chamfer (bevel) the end of the pipe 10° -15°

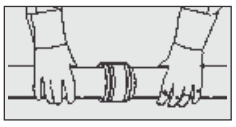


CLEAN :

Remove surface dirt, grease, or moisture with a clean dry cloth.

3. INSERT PIPE :

Insert the pipe in to the socket without the seal ring and mark along the pipe, when it is fully inserted.



4. FIX RUBBER RING :

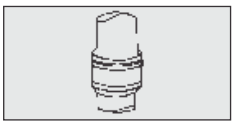
Fix the rubber ring in the groove without twisting it.

5. APPLY LUBRICANT :

Apply jointing lubricant to the chamfered end of the pipe & on rubber ring up to the mark made on spigot or to the socket end of fitting.

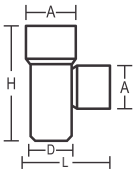
6. JOIN PIPE AND FITTINGS :

Push the pipe firmly into the socket till the gap between the mark on the spigot and the socket is about 10 mm to allow thermal expansion.



ASTRAL ULTRADRAIN® PASTING TYPE FITTINGS

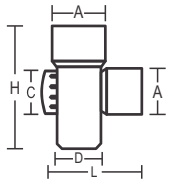
SINGLE TEE



D	WT.	A	H	L
75	3.2	82	190	140
90	3.2	97	236	165
110	3.2	117	264	195
160	4.0	168	368	285

Application : Required to connect branch soil / waste line to main line at an angle of 87.5°.

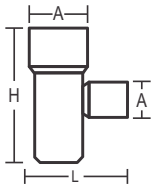
SINGLE TEE WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	190	172	79
90	3.2	97	236	198	92
110	3.2	117	264	233	107
160	4.0	168	368	318	107

Application : Same as plain Tee with option of door for cleaning purpose.

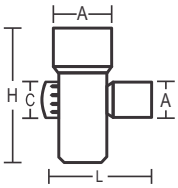
REDUCING TEE



D x d	WT.	A	H	L
110 x 75	3.2	117 x 82	265	179
160 x 75	4.0	168 x 82	350	233
160 x 110	4.0	168 x 172	350	240

Application : Required to connect branch line at 87.5° / 92.5°

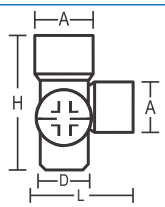
REDUCING TEE WITH DOOR



D x d	WT.	A	H	L	C
110 x 75	3.2	117 x 82	265	211	107
160 x 75	4.0	168 x 82	350	270	107
160 x 110	4.0	168 x 117	350	277	107

Application : Same as Reducing Tee with option of door for cleaning purpose.

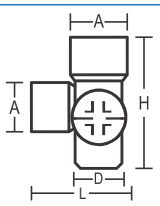
SINGLE TEE L-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	190	140	79
110	3.2	117	261	193	107

Application : Same as plain Tee with option of L-H door for cleaning purpose.

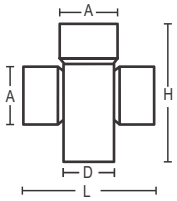
SINGLE TEE R-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	190	140	79
110	3.2	117	261	193	107

Application : Same as plain Tee with option of R-H door for cleaning purpose.

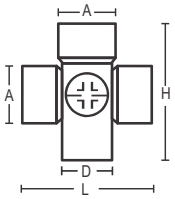
CROSS TEE



D	WT.	A	H	L
75	3.2	82	190	206
110	3.2	117	262	277

Application : Required to connect two adjacent branch line at an angle of 87.5°/92.5°

CROSS TEE WITH DOOR

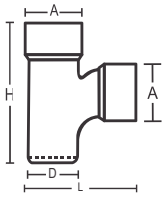


D	WT.	A	H	L	C
75	3.2	82	190	206	79
110	3.2	117	262	277	107

Application : Same as cross Tee with option of door for cleaning purpose.

ASTRAL ULTRADRAIN® PASTING TYPE FITTINGS

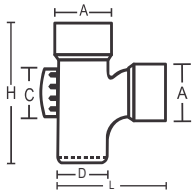
SWEPT TEE



D	WT.	A	H	L
# 75	3.2	82	208	160
#110	3.2	117	273	212

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45°.

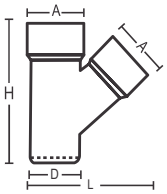
SWEPT TEE WITH DOOR



D	WT.	A	H	L	C
# 75	3.2	82	208	180	79
#110	3.2	117	273	236	107

Application : Same as plain 'Y' with option of door for cleaning purpose.

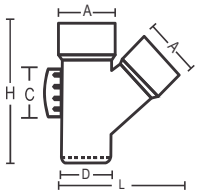
SINGLE 'Y'



D	WT.	A	H	L
75	3.2	82	220	175
90	3.2	97	260	207
110	3.2	117	298	253
160	4.0	168	417	348

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45°.

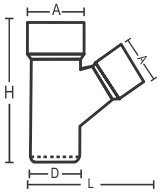
SINGLE 'Y' WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	220	202	79
90	3.2	97	260	225	92
110	3.2	117	298	290	107
160	4.0	168	417	382	107

Application : Same as plain 'Y' with option of door for cleaning purpose.

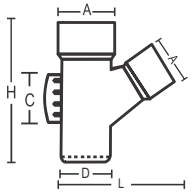
REDUCING SINGLE 'Y'



D	WT.	A	H	L
110 x 63	3.2	117 x 70	253	202
110 x 75	3.2	117 x 82	253	210

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45° with reduction of size.

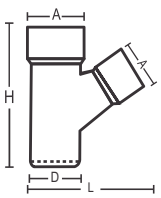
REDUCING SINGLE 'Y' WITH DOOR



D	WT.	A	H	L	C
110 x 63	3.2	117 x 70	253	234	107
110 x 75	3.2	117 x 82	253	247	107

Application : Same as reducing "Y" with option of door for cleaning purpose.

*REDUCING SINGLE 'Y'

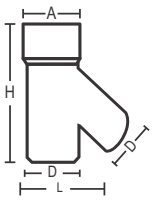


D	WT.	A	H	L
160 x 75	4.0	168	417	175
160 x 110	4.0	168	417	175

Application : Required to connect branch soil/waste pipeline to the main vertical line at an angle of 45° with reduction of size.

* Fabrication Item

INVERT 'Y' 45º



D	WT.	A	H	L
75	3.2	82	226	175

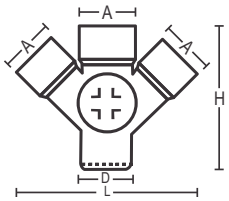
Application : Required to connect two branches an angle of 45° with invert socket.

ASTRAL ULTRADRAIN® CONVENTIONAL SYSTEM

Shortly Introducing

ASTRAL ULTRADRAIN® PASTING TYPE FITTINGS

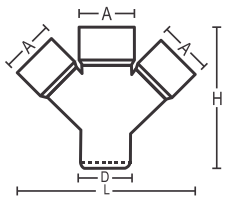
DOUBLE 'Y' WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	220	268	79
110	3.2	117	300	390	107

Application : Same as Double 'Y' with option of door for cleaning purpose.

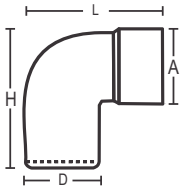
DOUBLE 'Y'



D	WT.	A	H	L
75	3.2	82	220	268
110	3.2	117	300	390

Application : Required to connect 2 branch soil/waste pipeline to the main vertical line at an angle of 45°.

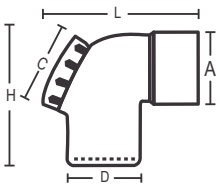
BEND 87.5°



D	WT.	A	H	L
75	3.2	82	142	140
90	3.2	97	171	174
110	3.2	117	195	188
160	4.0	168	270	271

Application : Required to connect internal pipeline to main pipeline & also for direction change at an angle of 87.5°.

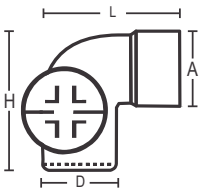
BEND 87.5° WITH DOOR (TS)



D	WT.	A	H	L	C
75	3.2	82	142	168	79
90	3.2	97	171	194	92
110	3.2	117	195	217	107
160	4.0	168	270	282	107

Application : Same as Bend with option of door for cleaning purpose.

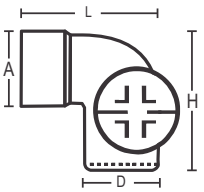
BEND 87.5° L-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	137	139	79
110	3.2	117	192	195	107

Application : Same as Bend with option of L-H door for cleaning purpose.

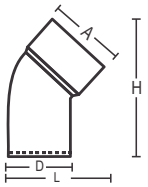
BEND 87.5° R-H WITH DOOR



D	WT.	A	H	L	C
75	3.2	82	137	139	79
110	3.2	117	192	195	107

Application : Same as Bend with option of R-H door for cleaning purpose.

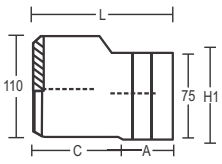
45° BEND



D	WT.	A	H	L
75	3.2	82	157	123
90	3.2	97	192	143
110	3.2	117	212	168
160	4.0	168	265	228

Application : Required as a shoe for drainage line & also for direction change at an angle of 45°.

REDUCER

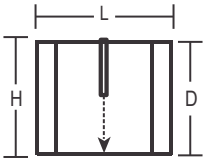


D x d	WT.	A	H-1	L	L
90 x 75	3.2	45	90	137	93
110 x 75	3.2	61	82	153	92
110 x 90	3.2	58	95	163	105
160 x 110	4.0	73	118	190	117

Application : Required to reduce 110mm dia. pipe to 75 mm dia. pipe.

ASTRAL ULTRADRAIN® PASTING TYPE FITTINGS

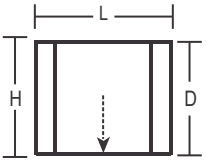
COUPLER



D	WT.	H	L
75	3.2	82	113
90	3.2	97	119
110	3.2	117	137
160	4.0	168	165

Application : Required to connect two length of pipe.

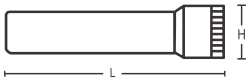
REPAIR COUPLER



D	WT.	H	L
75	3.2	82	113
110	3.2	117	137

Application : Required to repairing of pipe, having small cracks / holes / dents.

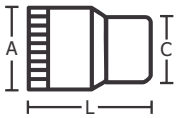
W.C. CONNECTOR (STRAIGHT)



D	L	H
110	450	122

Application : To connect W.C. pans to soil pipe.

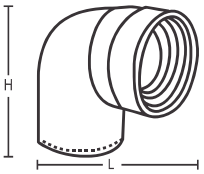
W.C. CONNECTOR (STRAIGHT)



D	WT.	A	C	L
125 x 110	3.2	125	110	103

Application : 125 x 110 Reducer with W.C. ring can be joined to required length of pipe to take the line out.

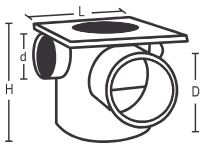
W.C. CONNECTOR (BEND)



D	L	H
110	192	197

Application : To provide appropriate adaption to W.C. pans.

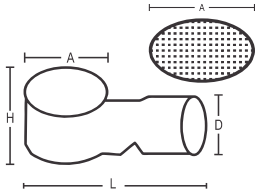
4", 5", 7" FLOOR TRAP



	D	d	A	L	H
4"	75	50	117	206	100
4"	75 x 63	50	117	206	100
5"	90 x 75	50	117	195	142
7"	75	40	117	208	178

Application : For multiple draining i.e. Bathroom/ Washbasin/ Washing machine / Bathtub etc. Provided with 3 additional inlets that can be opened as an when required.

NAHANI TRAP & JALI

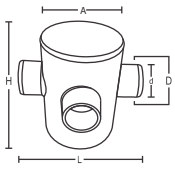


D	H	L	A
75	85	256	128
# 90	85	-	128
# 110	85	-	128

JALI	H	WT.	A
	110	3.4	119

Application : For draining waste from bathroom / wash basin out to the main line.

MULTI FLOOR TRAP ADAPTOR (HEIGHT RISER)

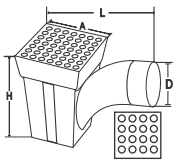


SIZE	WT.	A	D	d	L	H
110 x 50/40	2.75	110	50	40	180	158

 # Shortly Introducing

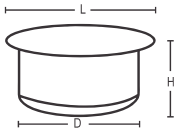
ASTRAL ULTRADRAIN® PASTING TYPE FITTINGS

GULLY TRAP (SQUARE TYPE) WITH JALI



D	WT.	A	L	H
110	3.2	139	290	239

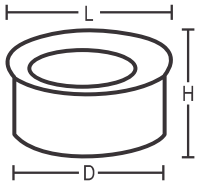
SOCKET PLUG



D	WT.	H	H
75	3.2	95	48
110	3.2	130	60

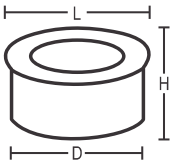
Application : Used as a blind plug to terminate the pipeline.

ECCENTRIC REDUCING BUSH



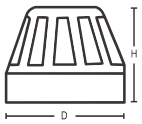
D	WT.	H	L
160 x 110	4.0	78	172
110 x 75	3.2	49	115
110 x 63	3.2	49	115

STRAIGHT REDUCING BUSH



D	WT.	H	L
160 x 110	4.0	83	170
110 x 75	4.0	83	170

VENT COWL



D	WT.	H
# 50	3.2	-
# 63	3.2	-
# 90	3.2	-
75	3.2	67
110	3.2	90

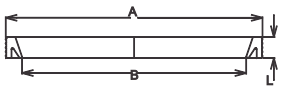
Application : Used as a cap on the top of the vertical line. Also helps in release of foul gases.

CLEANING PIPE

D	WT.	A	H	L	C
75	3.2	82	190	112	79
110	3.2	117	263	157	107
160	4	168	350	200	107

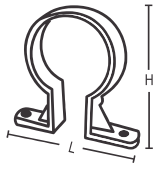
Application : Used in between a vertical line to facilitate cleaning.

RUBBER SEAL RING



D	A	B	L
75	85	71	9
90	100	84	9
110	122	106	10
160	175	152	13

PIPE CLIP



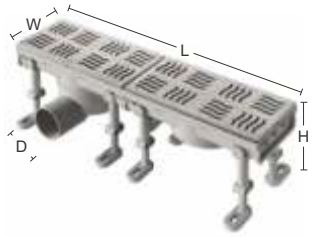
D	WT.	H	L
40	3.2	75	76
50	3.2	84	86
63	3.2	98	103
75	3.2	110	112
# 90	3.2	121	140
110	3.2	143	140
160	4.0	210	180

Application : To fix / secure the pipeline to the wall or flat surface.

 # Shortly Introducing

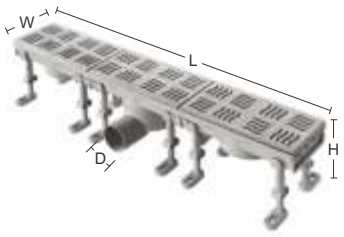
GULLY TRAPS

PRB4010 ABS MODULAR CHANNEL



L	W	D	H
400	100	50	105-137

PRB6010 ABS MODULAR CHANNEL



L	W	D	H
600	100	50	105-137

PRBG2010 JOINT TO GLUE FOR PRATIKO BAGNO

L	W
35	100

CHABS2010IN GULLY TRAP ABS

L	W	D	H
200	100	50	105

CHABSV1050IN ABS GULLY TRAP

L	W	D	H
100	100	50	82-74

CHABS1050IN ABS GULLY TRAP

L	W	D	H
100	100	50	82-74

CHABS1050G ABS GULLY TRAP

L	W	D	H
100	100	50	82-72

CHPVC10G PVC GULLY TRAP (GREY)

L	W	D	H
100	100	32-40-82	50

CHPVC10N PVC GULLY TRAP (BLACK)

L	W	D	H
100	100	32-40-82	50

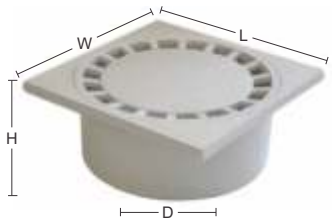
NEW ARRIVALS

GULLY TRAPS

CHPVC1550G — PVC GULLY TRAP

L	W	D	H
150	150	50	62

CHAPVC25G — PVC GULLY TRAP (GREY)

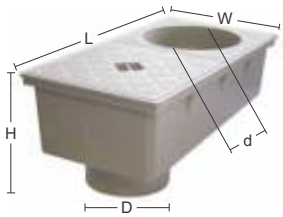


L	W	D	H
250	250	110	100

CHAPVC25N — PVC GULLY TRAP (BLACK)

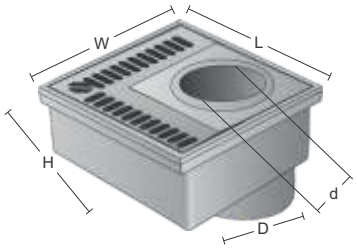
L	W	D	H
250	250	110	100

PSPV1611 — PLUVIAL BOX FOR ROUND RAIN PIPE



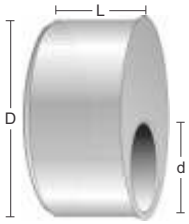
L	W	D	d	H
320	165	110	90-110-125	110

CHAN20G — PVC CORNER GULLY TRAP



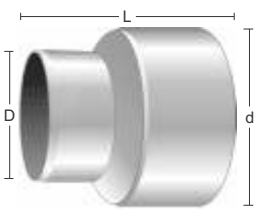
L	W	D	d	H
200	200	80-100-110	80-100	115

TAR07550 — SOCKET REDUCER



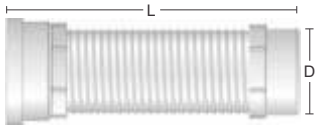
L	D	d
50	75	50

RC110100 — LEVEL INVERTER REDUCER



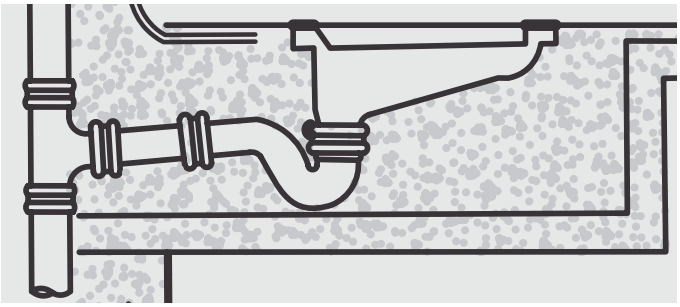
L	D	d
120	100	110

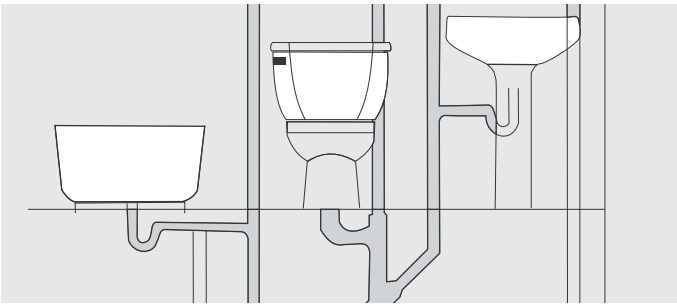
CWFL5511 — WC BEND



L	D
550	110

uPVC TRAPS





Traps are very important parts of drainage and sewage system and are most critical to ensure efficient working of the system. Traps prevent foul gases or air to enter back in passage and at a same time allow waste to flow through them.

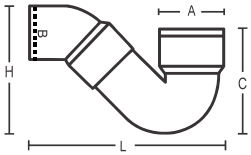
Conventional Cast Iron or cement traps are suspectible to bacterial growth due to its structure and material as they are not able to withstand the attack of salts, acidic or alkaline nature of effluent. This will lead to cracks in masonry and ultimately in inefficient working and unsatisfactory results of the system.

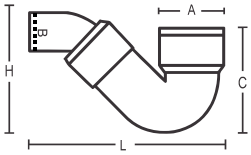
ASTRAL ULTRADRAIN® uPVC Traps are immune to attack of bacteria and have very good resistance to chemicals which make them most suitable for drainage system. These traps have very smooth inside surface which ensures efficient flushing of system.

Traps are available in "P", "Q" & "S" depending on the outlet angle required.

All traps have water seal well above 50 mm (normally accepted in most of the national, international and municipal guidelines) which ensure best functioning of traps.

P-TRAP

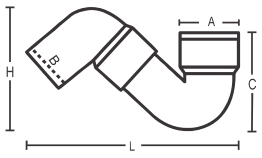




D	H	L	C	A	B
125 x 110	215	365	193	125	110
110 x 110	215	365	193	110	110
110 x 75	245	400	193	110	75

Application : To provide water seal & efficient functioning of the drainage system.

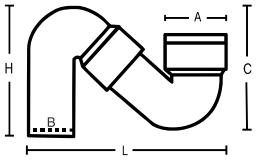
Q-TRAP



D	H	L	C	A	B
125 x 110	213	410	192	125	110
110 x 110	213	410	193	110	110

Application : Where the outlet is at 45° to inlet.

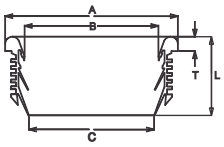
S-TRAP



D	H	L	C	A	B
125 x 110	230	405	192	125	110
110 x 110	228	395	193	110	110

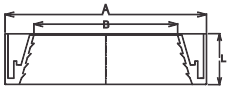
Application : Where inlet and outlet are parallel to each other.

LIP RING FOR P/Q/S TRAP



D	A	B	C	T	L
125	132	105	96	10	53

RUBBER RING FOR WC CONNECTOR & BEND



D	A	B	L
110	120	85	30

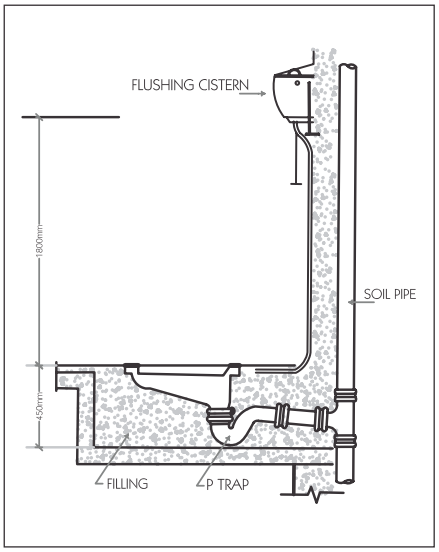
INSTALLATION OF TRAPS

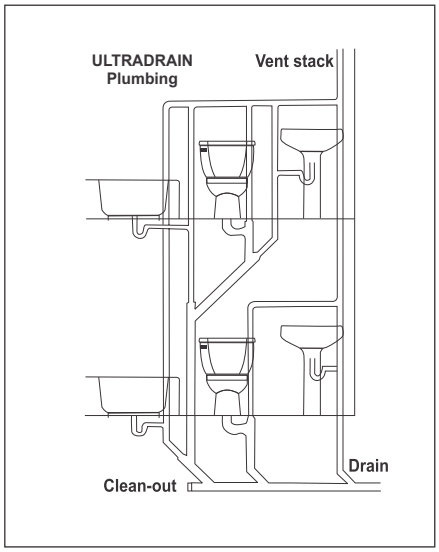
INSTALLATION OF TRAPS

- Select right type of trap from "P" / "Q" / "S" traps as per the outlet angle required. Place the trap on firm base, pour with concrete on a slab and set it relative to the level of finished floor.
- Concrete can be poured around "P" / "Q" / "S" trap but outlet to the trap must be left open clear to concrete.
- Place ASTRAL W.C. connector ring to the socketed end of trap.
- Apply rubber lubricant on W.C. connector ring and on outer side of W.C. pan. Join W.C. pan to trap by pushing W.C. pan to 125 mm socket of trap.
- Solvent cement can be used to make joints when 110 x 110 mm traps are being used to join connectors other than W.C. Pan connection.

In such cases, outlet of traps can be inserted in the socketed end of pipe or fittings which ever is applicable and joint can be solvent cemented.

TYPE OF COMMON INSTALLATION

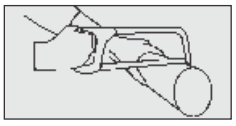




SOLVENT WELD JOINING METHOD :

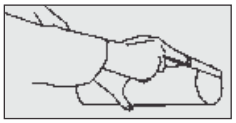
1. CUT PIPE :

Cut pipe square. As joints are sealed at the base of the fitting socket. An angled cut may result in joint failure.



2. REMOVE BURR AND BEVEL :

Remove all burr from inside and outside of pipe with a knife-edge file, or deburring tool. Chamfer (bevel) the end of the pipe 10° -15°

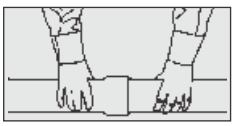


CLEAN :

Remove surface dirt, grease, or moisture with a clean dry cloth.

3. DRY FIT :

With light pressure, pipe should go one third to one half of the way into the fitting socket. Pipes and fittings that are too tight or too loose should not be used.

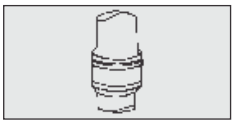


4. CEMENT :

Apply a full even layer of cement to the outside of a pipe and medium layer of cement to the inside of a fitting.

5. JOIN PIPE AND FITTINGS :

Assemble pipe and fitting socket till it contacts socket bottom. Hold pipe and fitting together until the pipe does not back out. Remove excessive cement from the exterior. A perfect made joint will show a continuous bead of cement around the perimeter.



TESTING ULTRADRAIN® SYSTEM & GOOD SITE PRACTICE

TESTING ULTRADRAIN® SYSTEM

PREPARING THE PIPELINE FOR TEST

- All joints should be inspected to ensure the correct location of the mark or groove to the coupling socket.
- Check that minimum cure time has elapsed since the last concrete thrust block or support was cast.
- Check the tightness of all ties and clamps and correct positioning of pipes.

WATER TEST

A water or hydrostatic test is the most technically superior test used to inspect a completed plastic piping system installation and is the testing procedure recommended by ASTRAL. It is also the most recommended test in most plumbing code standards. The purpose of the test is to locate any leaks at the joints and correct them prior to putting system into operation since it is important to be able to visually inspect the joints, a water test should be conducted prior to closing in the piping.

To isolate each floor or section being tested, test plugs are inserted through test fittings in the stack. All other opening should be plugged or capped with test plug or test caps. Fill the system to be tested with water at the highest point. As water fills a vertical pipe it creates hydrostatic pressure. The pressure increases as the height of water in the vertical pipe increases. Astral recommends testing at 5m of hydrostatic pressure (0.5 kg/cm^2) or as per the local authority's guidelines. Filling the system slowly should allow any air in the system to escape as the water rises in the vertical pipe. All entrapped air in the system should be expelled prior to the beginning of the test. Failure to remove entrapped air may give faulty test results.

Once the stack is filled to desired level of water column, a visual inspection of the section being tested should be made to check for leaks. If a leak is found, the corrective actions must be completed to find the cause of leak and to repair or replace the joint. Fifteen minutes is a suitable time for the water test. Once the system has been successfully tested, it should be drained and the next section should be prepared for testing.

GOOD SITE PRACTICE

HANDLING

- Take all reasonable care when handling ASTRAL ULTRADRAIN® uPVC pipes particularly in very cold conditions when the impact strength of the material is reduced.
- Do not throw or drop pipes, or drag them along hard surfaces.
- In case of mechanical handling, use protective slings and padded supports. Metal chains and hooks should not make direct contact with the pipe.

ON-SITE STORAGE

- Stack pipe lengths:
- either on a flat base or on level ground or on 75mm x 75mm timber at 1 meter maximum centers.
- Provide side support with 75mm wide battens at 1m centers (as show in figure).
- Ideally, stacks should contain one diameter pipe size only. Where this is not possible, stack largest diameter pipes at base of stack. Small pipes may be nested inside larger pipes.
- Store all materials in well ventilated, shady conditions.
- If stored in the open for long periods or exposed to strong sunlight, cover the stack with opaque sheeting.
- Store fittings under cover. Do not remove from cartons or packaging until required.
- Store solvent cement and cleaning fluid in a cool place out of direct sunlight and away from any heat source.

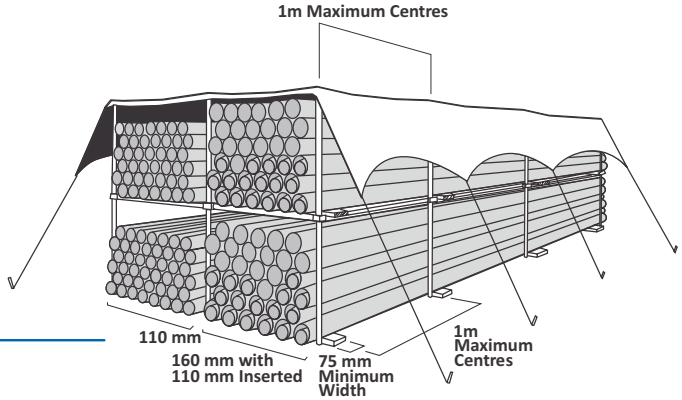
DO'S & DON'TS

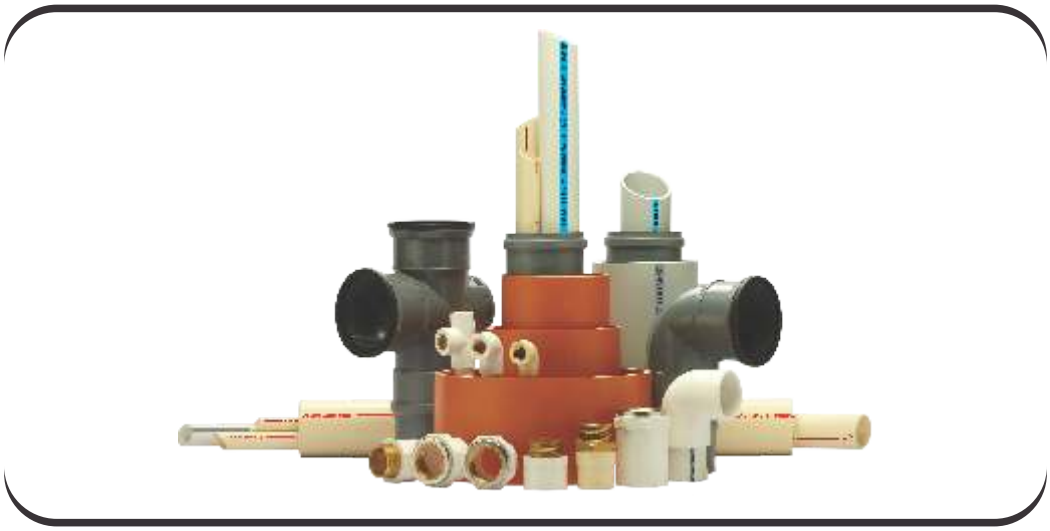
DO'S

- Always insist to use ASTRAL ULTRADRAIN® rubber lubricant and solvent cement for making joints.
- Cut the pipe straight, as improper cut may lead to leakage.
- Use test plug / socket plug for testing the lines. Try to avoid smoke test.
- Avoid over tightening of door caps. Make sure that door gaskets are placed properly before tightening.

DON'TS

- Do not insert the pipe into socket of fitting without chamfering. This can leads to misplacing of rubber rings and finally leakage in piping.
- Never mix soil and waste line without putting water seal trap in between.
- Never remove rubber rings from pipes and fittings to make solvent weld joint from the same pipe or fittings. This will lead to heavy leakage or failure of system.
- Do not install pipeline without properly placed pipe clips. This is required to ensure efficient working of the system.





OTHER PIPING SYSTEMS

ASTM UPVC PIPING SYSTEM	uPVC DRAIN WASTE & VENT SYSTEM	LIGHT WEIGHT FOAMCORE UPVC PIPES
CPVC PIPING SYSTEM FOR INDUSTRIES	WIRE GUARD CONDUIT PIPES & FITINGS	ALCA PLAST SHOWER CHANNELS
CPVC PIPING SYSTEM FOR FIRE SPRINKLERS	CPVC-AL-CPVC MULTILAYER COMPOSITE PIPE
CPVC PLUMBING SYSTEM FOR HOT & COLD WATER	THE LEADING SOUNDPROOF SOIL & WASTE SYSTEM
uPVC PIPES FOR DRAINAGE & SEWERAGE APPLICATIONS	CLAMPS, HANGERS AND ELECTRICAL FLUSH BOXES
uPVC PIPE FOR AGRICULTURE & WATER TRANSPORT SYSTEM	HEAVY METAL & LEAD FREE COLUMN PIPES FOR SUBMERSIBLE PUMPS

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