Soil and Waste Drainage

PVC Pipes and Fittings

wavin


wavin | academy


wavin
wavin

Wavin is one of the leading companies in the plastic pipe industry in Turkey. Our company offers a wide range of high-quality pipe and fittings system solutions for building and infrastructure. Our company, which has a history of more than half a century, started production in 1971 in Adana. Pilsa Plastik A.Ş. was purchased by Wavin B.V, the largest European company in its own field in the Netherlands in 2008.

In 2012, all Wavin companies joined the Mexichem family which is South America's giant petrochemicals and raw materials producer. Mexichem announced its new name as ORBIA in 2019. ORBIA, with its new changing business structure, provides professional support to its customers with its products and services in 5 main business lines: Building & Infrastructure, Flour, Datacom, Precision Agriculture and Polymer Solutions. With the new structuring of ORBIA, its main mission is to advance life around the world.

In 2019, with the renewed business structure of ORBIA, building & infrastructure business line was started to represent by WAVIN, a single and strong brand across the globe. WAVIN operates in more than 40 countries around the world in 4 main regions: Europe-Middle East-Africa, Asia-Pacific, Latin America and USA-Canada with 12.000 employees.

Wavin is now a global leader in the supply of plastic pipe systems and solutions for both above and below ground applications in projects around the world. Since the 1950s, we have built an unrivalled reputation for continuous innovation, intelligent problem-solving, dedicated technical support and the highest standards.

Wavin Turkey offers traditional products such as PPR-C clean water, PVC wastewater as well as the innovative products such as Tigris Press-fit systems, SiTech+ low noise pipes, Qickstream siphonic rainwater drainage systems, Q-Bic Plus infiltration systems, Tegra plastic manholes etc. to the sector. Wavin Academy which is the first training centre of the sector was opened in 2014 within our factory in Adana, Tens of thousands of visitors from various levels of the mechanical installation sector have been able to increase their expertise by attending training at Wavin Academy since 2014. Our company provides fast service with Adana, Istanbul, Ankara and Izmir offices, distribution centres located in Istanbul and Adana and wide dealers network. In addition to our sales staff, our expert engineers and technical personnel support our customers for the projects.

To get more information about our company and products, please visit our website www.wavin.com.tr and follow us on our social media accounts.

BUILDING HEALTHY AND SUSTAINABLE ENVIRONMENTS

Cities around the world continue to grow: The United Nations study points out that more than 70% of the world's population will live in big cities by 2030. Along with urbanization, difficulties are experienced in sustainable construction, safe and efficient water supply, hygeiene issues and discharge of rainwater & wastewater. Climate change also means cities have to deal with periods of increasing droughts or floods. Comprehensive measures are needed to solve these problems.

Wavin has determined four principles for itself in order to contribute to the building healthy, sustainable environments all over the world by pointing to these problems. These are: safe and efficient water supply, better sanitation and hygiene, climate resilient cities and better building performance.

Wastewater and sewage systems that are are outdated or out of function are affected by urbanization and population growth, putting our health and safety in jeopardy.

In order to protect the health of our cities, wastewater should be discharged from the buildings by correctly projected and hygienic ways. Subsequently, the infrastructures should be provided with permanent solutions for less leakage, less clogging and better hygiene monitoring. Wavin focuses on providing permanent solutions for their solution.

System Description

Wavin PVC wastewater pipes and fittings are systems produced from PVC raw materials that provide the drainage of indoor wastewater.

Wavin PVC pipes and fittings, with their flexible connection and tight fit feature, offer a complete solution for wastewater discharge in buildings.

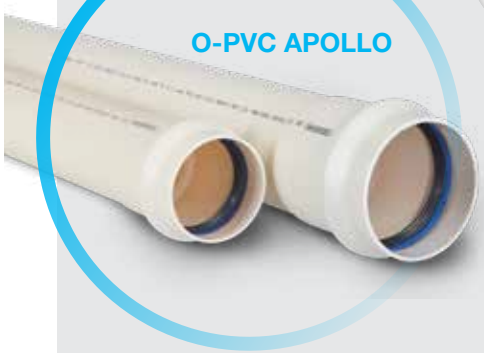
Wavin wastewater pipes and fittings respond to water discharge demands in buildings with 50 - 315 mm diameter and 150 - 6000 mm length options. Pipes and fittings offer long-lasting and leak-proof systems thanks to its "rubber" gasket and fully compatible gasket seat.

Sewage pipes and fittings produced from PVC raw material are in Bs2d0 late flammable fire class according to EN 13501-1 European standard, and in B1 fire class according to DIN4102 old German standard. Thanks to this feature, it meets the requirements set by the fire regulation at high-rise buildings.

For Better World

Lead-free(*) Pipes and Fittings

U-PVC pipes and fittings



O-PVC APOLLO

SiTech B1
Low noise,
low flammable

PVC Soil and Waste Pipe Systems

(*) PVC pipes and fitting are produced without Lead to protect human health and environment.

Lead-Free PVC

Stabilizers are used to protect the physical and chemical integrity of PVC pipes against high temperatures during production. As a result of Wavin's long-term R&D studies, new stabilizers have been developed that replace Lead, which do not contain any threat to health, and that are environmentally friendly and do not contain toxic elements. This revolutionary development in PVC pipes takes its place as the best alternative for protecting public health among PVC pipes in the market, as it does not contain heavy metals such as lead that may threaten human health.

Application Areas

Wavin PVC pipes and fittings are used in different project types such as hotel, residence, villa, hospital, school, industry and sports etc. It can be used safely in many buildings without pressure.

- Infrastructure and superstructure wastewater transport systems
- In indoor wastewater discharges and ventilation systems
- In electrical and communication infrastructure systems
- In the building rainwater discharge
- Industrial facilities, unpressurized lines

Fire Classification Report

TSE DENEY ve KALİBRASYON MERKEZİ BAŞKANLIĞI YAPI MALZEMELERİ YANGIN VE AKUSTİK LABORATUVAR MÜDÜRLÜĞÜ
HEADSHIP OF TSE TEST and CALIBRATION CENTER CONSTRUCTION MATERIALS FIRE AND ACOUSTICS LABORATORY

266964 / 08-15

YANGINA TEPKİ SINIFLANDIRMASI

1 Giriş

Bu rapor TS EN 13501-1: 2007 + A1: 2013'te belirtilen prosedürler doğrultusunda uygulanan **"WAVIN PVC-U Kirli Su Borusu"** ürününe ait yanıcılık sınıflandırması unsurlarını içerir.

YANGINA KARŞI TEPKİSİNİN TS EN 13501-1: 2010 STANDARDINA GÖRE SINIFLANDIRILMASI

Sponsor	WAVIN TR PLASTİK SANAYİ A.Ş.
Hazırlayan	TSE Yapı Malzemeleri Yangın ve Akustik Laboratuvar Müdürlüğü
Onaylanmış Kuruluş No.	1783
Ürünün Adı	WAVIN PVC-U Kirli Su Borusu
Sınıflandırma Raporu No.	266964 / 08-15
Yayın Numarası	2/2
Yayınlanma Tarihi	20.08.2015

Bu sınıflandırma raporu 4 sayfadan oluşmaktadır ve sadece bütün olarak kullanılabilir ya da yeniden oluşturulabilir.

2 Sınıflandırılmış Ürün Detayları

2.1 Genel

Ürün "WAVIN PVC-U Kirli Su Borusu" isminde plastikleştirici katılmamış PVC su borusudur.

2.2 Ürün Tanımı

"WAVIN PVC-U Kirli Su Borusu" ürünü TS EN 1329-1 standardına uygun olarak üretilmiş 50 mm ve daha büyük çaptaki plastikleştirici katılmamış PVC su boruları ile aynı reçete ile üretilen geçiş parçalarının oluşturduğu sistemdir.

Özellik	Değer/Tanım
Yüzey	Gri renkte, pürüzsüz, parlak
Et Kalınlığı (mm)	3,21 (Ortalama)

Yangın Davranışı	Duman Oluşumu	Alevli Damlacıklar
B	s2	d0

Fire Class: B-s2, d0

PVC Pipe and Fittings Product Range

Wavin Pilsa PVC-U pipes for waste Water drainage systems are produced in accordance with TS EN 1329-1. The pipes and fittings are manufactured from unplasticized PVC. The products are suitable for B and BD applications in buildings. Installation with push fit connections pipes and fittings is effortless, quick and reliable.

Raw Material

Unplasticized PVC (U-PVC)

Technical Data

Density:	~ 1.55 g/m3
Impact resistance:	TIR=<10%
Vicat Softening Temprature (VST):	>=79ºC
Longitudinal Reversion:	=<5%
Fire behavior:	EN13501-1 (bs2d0) DIN4102 (B1) Low Flowmable
Operation Temprature:	Short-time load by 70-75°C and 50-55°C long-term stress
Color:	Grey
Diameter Range:	50-315 mm
Length Range:	150-6000 mm

Application area code

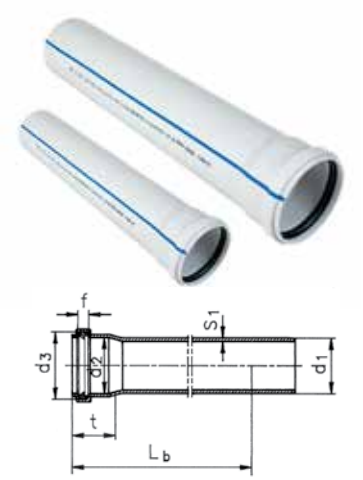
B: application area code for components intended for use above ground inside the building, or for components outside building fixed onto the wall

D: application code fort area under and within 1 m form the building where the pipes and fittings are buried in ground and are connected to the underground drainage and sewerage system

BD: apllication area code for components intended for both B and D application

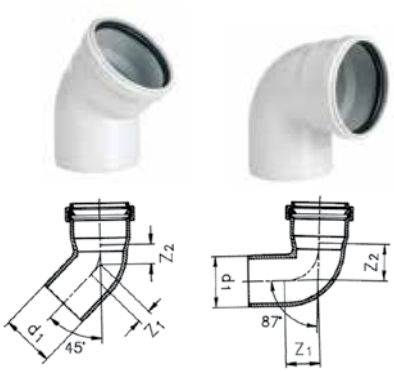
Wavin Pilsa Soil & Waste Product Range

B-BD type PVC S&W Pipe w/R.R



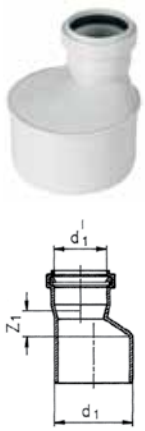
SAP	Nominal Diameter mm	Outer Diameter d1 (mm)	Pipe Length Lb (mm)	Wall Thickness s1 (mm)	Socket depth t (mm)	Extended Part Length f (mm)	Extended Part Inner Diameter d3 (mm)	Socket Inner Diameter d2 (mm)
3046845	50	50	150	3	46	7.8	59,6	150
3046847	50	50	250	3	46	7.8	59,6	250
3046849	50	50	500	3	46	7,8	59,6	500
3046852	50	50	1000	3	46	7,8	59,6	1000
3046854	50	50	2000	3	46	7,8	59,6	2000
3046856	50	50	3000	3	46	7,8	59,6	3000
3046860	50	50	6000	3	46	7,8	59,6	4000
3046862	70	75	150	3	51	7.8	84,5	75,4
3046864	70	75	250	3	51	7.8	84,5	75,4
3046866	70	75	500	3	51	7.8	84,5	75,4
3046869	70	75	1000	3	51	7.8	84,5	75,4
3046871	70	75	2000	3	51	7.8	84,5	75,4
3046873	70	75	3000	3	51	7.8	84,5	75,4
3046876	70	75	6000	3	51	7.8	84,5	75,4
3046878	100	110	150	3,2	60	9,1	120,6	110,4
3046880	100	110	250	3,2	60	9,1	120,6	110,4
3046882	100	110	500	3,2	60	9,1	120,6	110,4
3046885	100	110	1000	3,2	60	9,1	120,6	110,4
3046887	100	110	2000	3,2	60	9,1	120,6	110,4
3046889	100	110	3000	3,2	60	9,1	120,6	110,4
3046893	100	110	6000	3,2	60	9,1	120,6	110,4
3046895	125	125	150	3,2	67	10,4	137,5	125,4
3046897	125	125	250	3,2	67	10,4	137,5	125,4
3046899	125	125	500	3,2	67	10,4	137,5	125,4
3046902	125	125	1000	3,2	67	10,4	137,5	125,4
3046904	125	125	2000	3,2	67	10,4	137,5	125,4
3046906	125	125	3000	3,2	67	10,4	137,5	125,4
3046910	125	125	6000	3,2	67	10,4	137,5	125,4
3046912	150	160	150	4	81	11,7	174,3	160,5
3046914	150	160	250	4	81	11,7	174,3	160,5
3046916	150	160	500	4	81	11,7	174,3	160,5
3046919	150	160	1000	4	81	11,7	174,3	160,5
3046921	150	160	2000	4	81	11,7	174,3	160,5
3046923	150	160	3000	4	81	11,7	174,3	160,5
3046927	150	160	6000	4	81	11,7	174,3	160,5
3046929	200	200	150	4,9	99	13	216,2	200,6
3046931	200	200	252	4,9	99	13	216,2	200,6
3046933	200	200	500	4,9	99	13	216,2	200,6
3046936	200	200	1000	4,9	99	13	216,2	200,6
3046938	200	200	2000	4,9	99	13	216,2	200,6
3046940	200	200	3000	4,9	99	13	216,2	200,6
3046944	200	200	6000	4,9	99	13	216,2	200,6
3050102	250	250	2000	6,2	125	19,5	272,9	250,8
3050103	250	250	3000	6,2	125	19,5	272,9	250,8
3050106	250	250	6000	6,2	125	19,5	272,9	250,8
3050110	315	315	2000	7,7	132	20,8	338,9	316
3050111	315	315	3000	7,7	132	20,8	338,9	316
3050114	315	315	6000	7,7	132	20,8	338,9	316

Elbow 45° - 90°



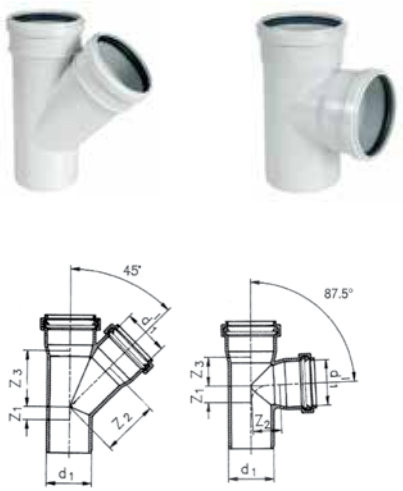
D (mm)	Di (mm)	∞= 45°		∞ = 87.5°	
		Z_1	Z_2	Z_1	Z_2
50	50	12	15	27	21
70	75	17	20	39	43
100	110	25	28	57	61
125	125	28	32	65	69
150	160	36	42	83	89
200	200	45	52	103	111

Reducer



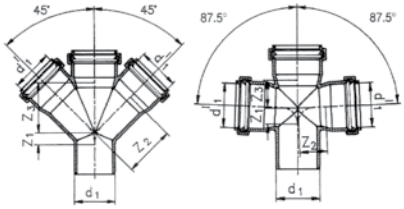
D(mm)	Z1
75/50	20
110/50	39
110/75	25
125/75	33
125/110	14
160/110	33
160/125	26
200/125	48
200/160	30

Branch 45° - 87,5°



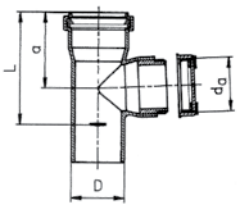
D (mm)	∞= 45°			∞ = 87.5°		
	Z_1	Z_2	Z_3	Z_1	Z_2	Z_3
50/50	12	61	61	27	29	29
75/50	-1	79	74	27	42	30
75/75	17	91	91	39	43	43
110/50	-17	101	90	27	59	30
110/75	0	116	109	40	60	44
110/110	25	133	133	57	61	61
125/50	-24	113	98	28	66	31
125/75	-6	125	116	40	66	44
125/110	18	143	141	57	68	62
125/125	28	151	151	65	69	69
160/75	-22	149	134	42	83	46
160/110	2	166	158	59	83	63
160/125	12	175	170	66	86	71
160/160	36	193	198	83	88	88
200/110	-16	193	179	60	103	65
200/125	-6	201	189	67	104	72
200/160	18	221	214	84	107	91
200/200	45	241	241	103	110	110

Double Branch 45° - 87,5°



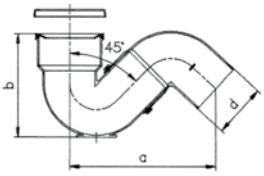
D(mm)	∞= 45°			∞ = 87.5°		
	Z_1	Z_2	Z_3	Z_1	Z_2	Z_3
50/50	12	61	61	27	29	29
75/50	-1	79	74	27	42	30
75/75	17	91	91	39	43	43
110/50	-17	101	90	27	59	30
110/75	0	116	109	40	60	44
110/110	25	133	133	57	61	61
125/50	-24	113	98	28	66	31
125/75	-6	125	116	40	66	44
125/110	18	143	141	57	68	62
125/125	28	151	151	65	69	69
160/75	-22	149	134	42	83	46
160/110	2	166	158	59	83	83
160/125	12	175	170	66	86	71
160/160	36	193	198	83	88	88
200/110	-16	193	179	60	103	65
200/125	-6	201	189	67	104	72
200/160	18	221	214	84	107	91
200/200	45	241	241	103	110	110

Acess piece



D	L	a	da
50	117	67	55
75	154	94	74
110	212	131	11
125	262	178	124
160	350	230	111
200	400	245	111

“S” Siphon

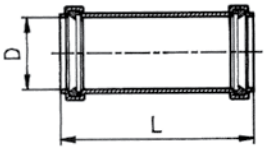


d	a	b	c
75	210	147	85
110	290	210	125

Socket

d	50	75	110	110
L	94	102	120	164

d	160	200	250
L	210	260	300



Air Ventilation

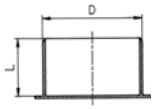
Çap (mm)
70
100

Check Valve

D (mm)
100
125
150

End cap

D	50	75	110	125	150	200
L	32	46	69	54	75	92

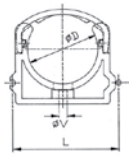


* d50-d125 diameters are PP and in black
d150-d200 dimaters are PVC and in grey

Siphon Gasket

D	100

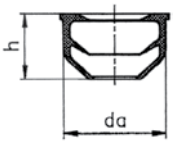
Pipe clamp



D	L	V
50		
75		
110		
125		
160		
200		

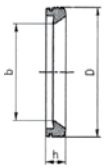
Bend 'S' Outlet Rubber Ring

D	da	h
50	55	41



Sealing gasket

D	50	75	110	125	150	200	250	315



Instructions for installation

Indoor Applications

Pilsa Waste Water Pipes and Fittings when delivered to the customer are ready for application. Therefore, no pilsa product needs to be heated during assembly.

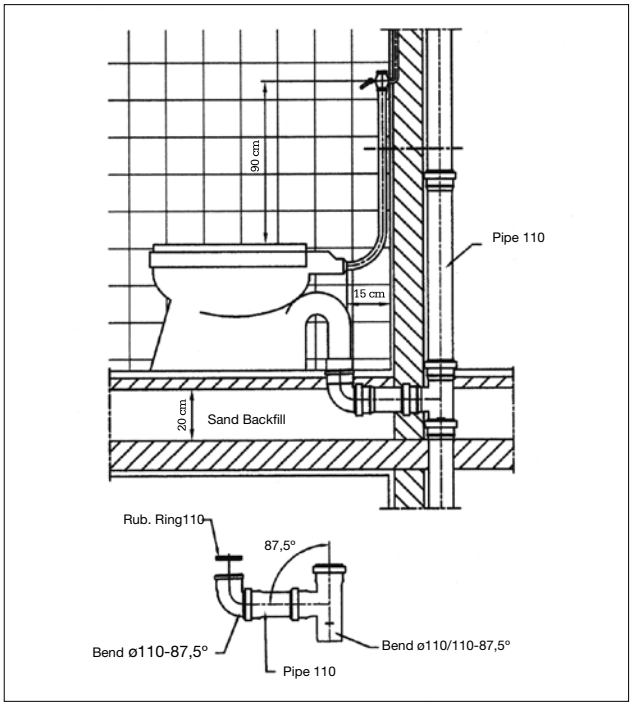
During the installation, PVC S&W Pipe clamp should be used. No other hooks, pins, or cams should be used instead of PVC S&W Pipe clamp since they may damage the PVC S&W Pipe.

If the completed waste water installation needs to be covered, it should be covered with plaster mortar. There should not be coarse stones and pebbles in this mortar.

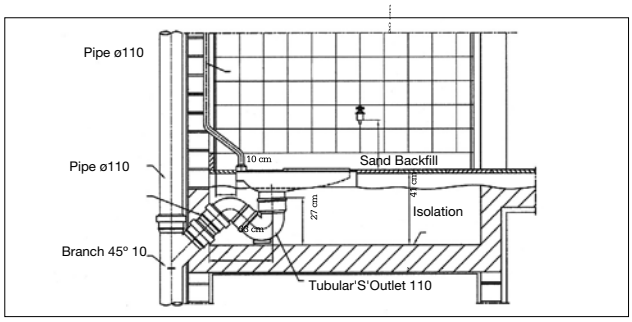
In cold weather (around 0°C), pipes and fittings must be protected from impacts. Due to thermal expansion, space should be left between pipe muf end and fitting at joint prints.

If the plastic pipes need to be painted, should be used oil or resing based paints instead of rough and cracking paints. During the installation, Pilsa S&W pipes and fittings should be easily interlaced together by greasing with liquid soap or grease oil.

S&W system pipes and fittings for toilets

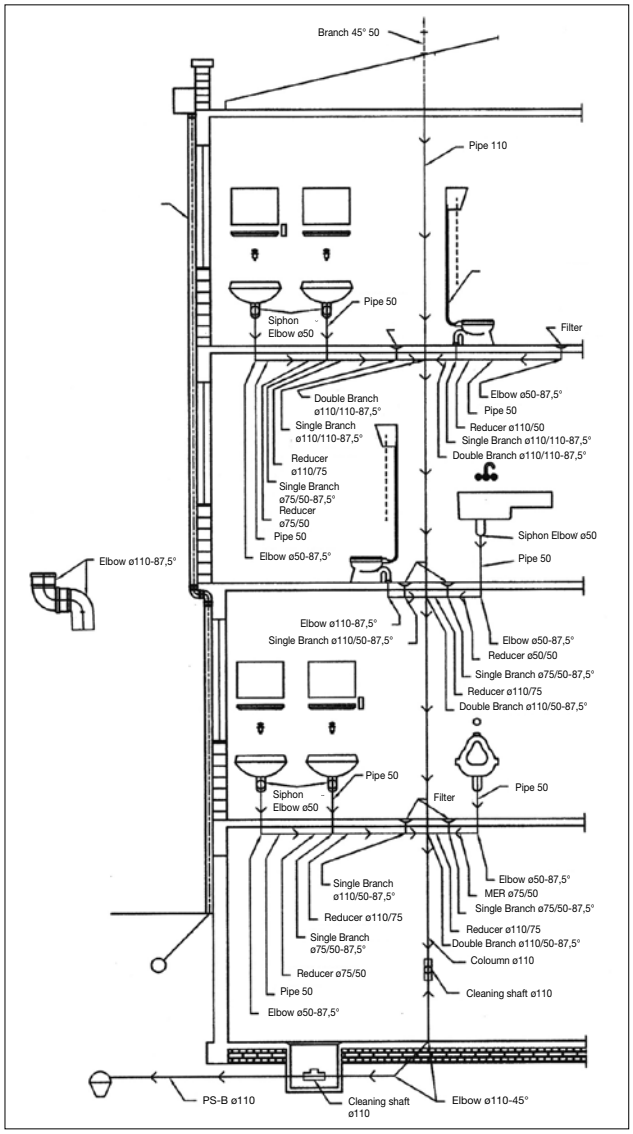


S&W system pipes and fittings for squat toilet (or squatting toilet)

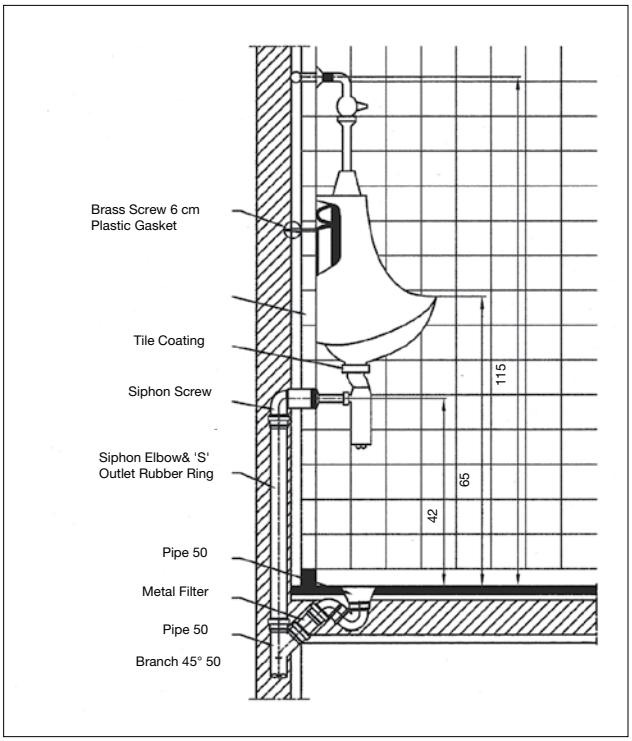


Siphon gasket is suitable for squat toilet installation. If the pipe connection will be install before squat toilet, a gasket suitable for the pipe should be requested.

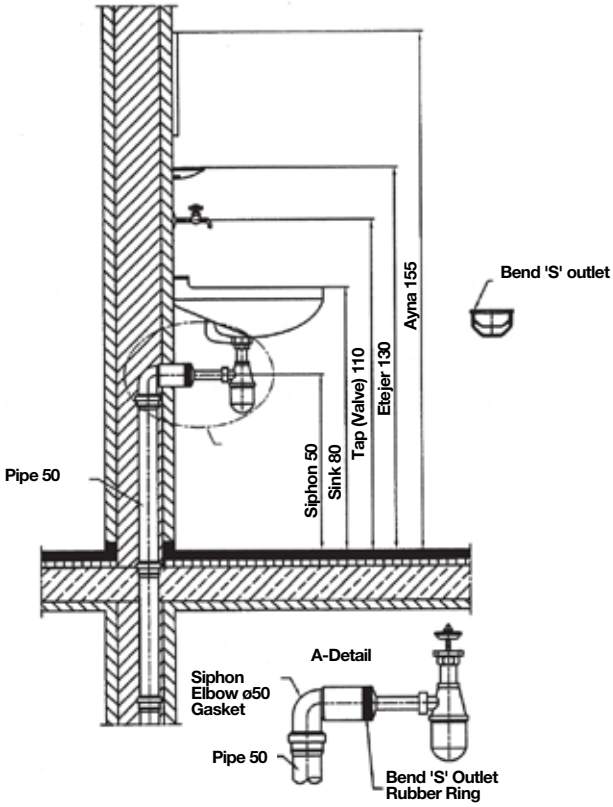
Waste and Rainwater Scheme



S&W system pipes and fittings for urinals



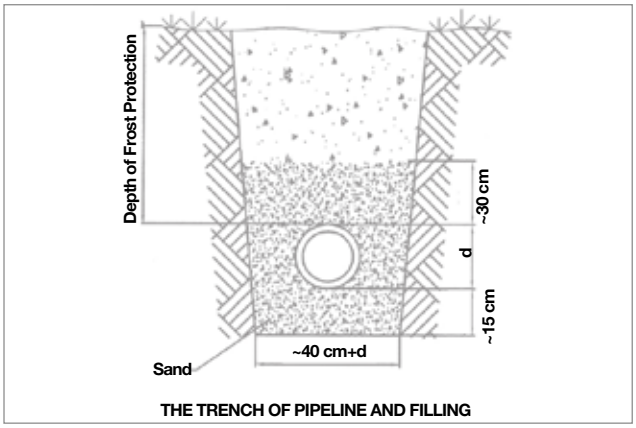
Sink connection



D application(below ground) installation

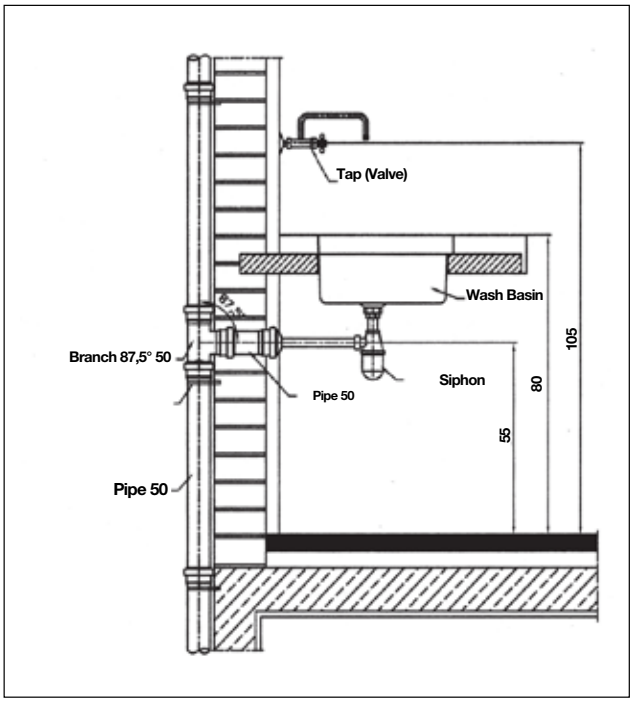
Being careful during the installation, ensures a long life of the pipeline. For this reason, the bottom of the trench should be flat and without stones.

Bottom width is determined by adding 40 cm to the pipe diameter. Plastic pipes should be laid under the frost layer as with other pipes. The amount of filling should be at least 1 to 1.5 meters depending on the climatic conditions and the soil type. Before installation the pipes, a bottom should be prepared by laying around 15 cm of non-stone material (soil, sand) on the bottom of the ditch. The pipe and fittings should laid to fit well on this bottom. After that, the pipe is filled with a 30 cm stone-free ground layer.This process is done in such a way that the top of the fittings and bell joints for the leakage test is left open. Closing after the leakage test for these zones is also applied fully.



THE TRENCH OF PIPELINE AND FILLING

S&W system pipes and fittings for kitchen sink



HepvO®

ANTI - ODOR WATERLESS TRAP

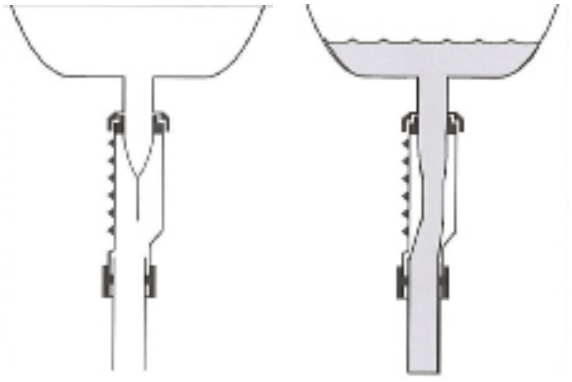
HepvO® is an innovative hygienic waste water valve. It is desig- ned to prevent unpleasant odor leakage into the building from sewage/waste water piping. It is self- sealed.

HepvO® blocks air input into the system from waste water piping thanks to its in-built membrane. In this way, it pre- vents air with unpleasant odor from propagating in living spaces and provides a comfortable environment.

While the water is flowing through the system, the mem- brane structure allows the transmission of fresh air with the water.

The **HepvO®** anti-odor waste valve can be installed verti- cally and horizontally (by means of an elbow). It is installed horizontally in confined spaces to allowspace-saving. It comes ready to install with its 32 mm and 40 mm diameter retainers and valve.

It has an endurance of up to 75°C in constant operationand up to 95°C in short-term operation.



Vertical: Off-Position

Vertical: In Position

Advantages when compared to conventional traps:

√ Does not cause odor or noise.

√ Is hygienic. Blocks insect entry. Does not have vaporization or freezing problems since it is water free. √ Provides high flow rate and rapid flow.

√ Pipes with lower diameters can be used since there is no inward air-flow in the main sewer line containing many connections.

√ ODOR-FREE

Prevents odors in the waste water system thanks to its in-built self sealing waste valve.

√ LOW NOISE

There is no noise during water discharge.

√ WATERLESS AND HYGIENIC

Since it doesn't hold water like flushes do, microorganisms can't form, and it also prevents insects and pest from getting in.

PLACES OF USE

- Sink
- Shower Stall
- Bidet
- Urinal
- Air Conditioner Drain
- Appropriate for use in boats, RVs etc

Installation Steps

VERTICAL INSTALLATION

1- **HepVO**® Anti-Odor Kit

2- Remove the outlet side union of the **HepVO**® and connect the bellow hose.

3- Rotate the union thread and attach to the valve. Check for proper installation by pulling the bellow hose.

4- Connect the sink strainer to the upper union inlet port of the Hepvo diaphragm by rotating it clockwise. Torque the gasket by tightening the union. The gasket that comes with the kit for d32 HepVO® connection must be used separately.

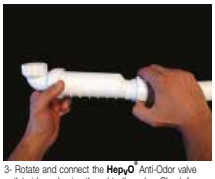
5- In order to connect it to the sink, remove the screw on top of the strainer and connect it so that the sink remains in between the metal strainer and the plastic base.

6- Release the bellow hose to drain the gasket without the need to form an S.

HORIZONTAL INSTALLATION

1- **HepVO**® Kit
+ **HepVO**® Elbow

2- **HepVO**® Fix the HepVO® elbow to the union inlet port of the **HepVO**®



3- Rotate and connect the **HepVO**® Anti-Odor valve outlet side and union thread to the valve. Check for proper installation by pulling the bellow hose.

4- Connect the sink strainer to the upper union inlet port of the elbow by rotating it clockwise. Torque the gasket by tightening the union. The gasket that comes with the kit for d32 **HepVO**® connection must be used separately.

5- In order to connect it to the sink, remove the screw on top of the strainer and connect it so that the sink remains in between the metal strainer and the plastic base.

6- Release the bellow hose to drain the gasket without the need to form an S.

HepVO kit with bellows and outlet

D (mm)
32
40

* Used for sink applications.

HepVO Waterless Trap

D (mm)
32
40

HepVO Elbow 87,5° Set

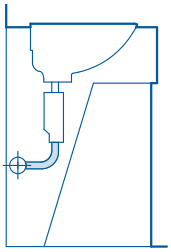
D (mm)
32
40

*It's available with seal

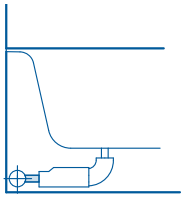
Adaptor

D (mm)
32
40

Sink



Shower



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