RAKtherm®

Ultimate Piping Solutions

ADVANCED GERMAN TECHNOLOGY

DWV - RNP Technology
First Reinforced Multi-layer PVC-U in the Region

RAKtherm Launches the New Generation DWV Systems Technology…


RAKtherm
Ultimate Piping Solutions

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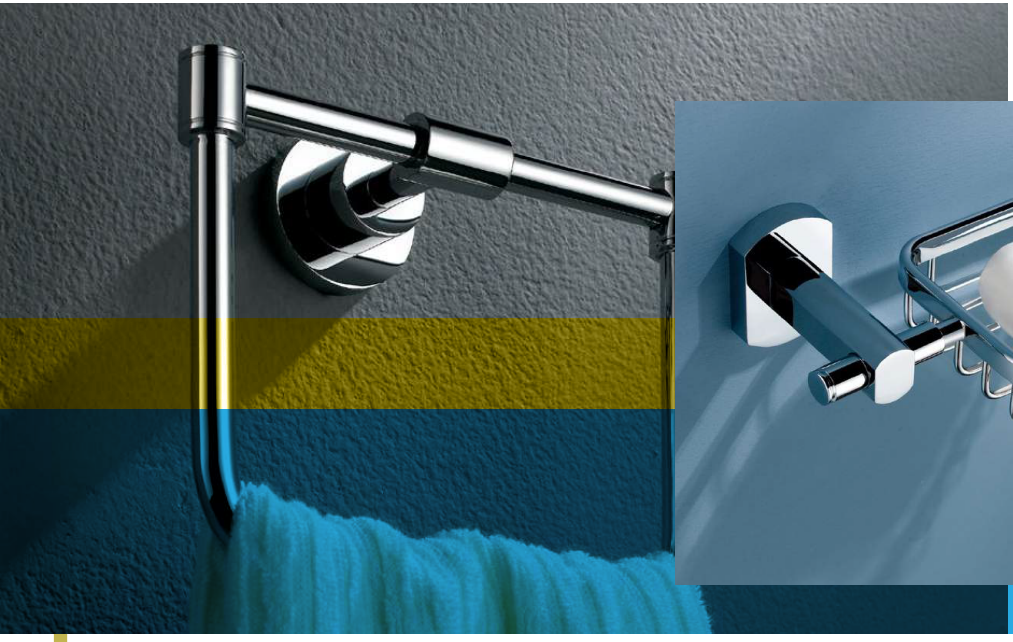
RAKtherm's manufacturing technical hub produces the world's most versatile and comprehensive piping solutions to support major MEP projects worldwide.

Tested, conformed, and certified by international certifying bodies from Germany, France, and UK.



OUR Profile

we provide most important international products in the fields of heat pipes, plumbing installations, sanitation fixtures and contracting

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MUJAHID TRADING

NICHE

RAKtherm Ultimate Piping Solutions' Profile

RAKtherm – Gulf Plastics and Converting Industries, is under the flourishing arm of renowned group Hashim Industry since 1963; RAKtherm is the flagship division and pioneer of integrated PPR, PEX, and DWV piping systems. The corporate sales headquarter is in Ras Al Khaimah, United Arab Emirates with global distribution through a network of stockists in 40 countries across GCC, North and South Africa, South and East Asia, and Europe.

RAKtherm's manufacturing technical hub produces the world's most versatile and comprehensive piping solutions to support major MEP projects worldwide. Tested, conformed, and certified by international certifying bodies from Germany, France, and UK.

For more information please visit our website at www.raktherm.com

OUR LEADERSHIP

"The most eminent high-end global manufacturer of piping systems technology"

Throughout the years, RAKtherm is known for its world-class brand delivering effective and efficient piping systems. With continuous pursuance in finding solutions to the major challenges in the MEP industry, we established ourselves highly recognized in the piping industry. Our understanding to the technological quest in plastic piping systems enables us to address these demanding challenges.

We are committed to making a real difference in providing hi-technological piping innovations that are breakthrough in the industry.

OUR LEADERSHIP

- **The source for the widest range of plumbing solutions**

RAKtherm manufactures the world's most versatile and comprehensive piping solutions suitable for a wide range of applications from potable water systems including drainage and sewage systems, and other fluid network installations. Our manufacturing technical hub is fully equipped with the most advance engineering machineries to produce vast of competent piping solutions to support projects in 40 countries around the world.

- **The leading international brand with global market acceptance**

We deliver global brand integrity. With strong network of stockists in 40 international countries to support major developments in the construction industry, we partner with local and international clients in building countless iconic projects throughout the world!

- **Our cornerstone is quality integrity**

RAKtherm is certified by globally recognized certifying bodies from Germany, France, UK, and Saudi. The strong adherence to quality management systems brings innovation breakthroughs to support plumbing developments in the construction industry. Our engineering teams of experts are dedicated to tackling the industry's toughest MEP challenges. A comprehensive quality system beginning from devising the required specification, sourcing the highest quality raw materials, production phase, packing, storage, until delivery.

- **A dedicated support-driven customer service**

Our dedicated customer service associates are available to support and assist you. Since piping is one of the vital parts of every structure, our commitment is to ensure that we resolve to fulfill your plumbing requirements.

- **Global distribution networks**

We make sure that RAKtherm piping systems will reach you. Our global operational hubs are available all across the 40 countries in GCC, North and South Africa, South and East Asia, and Europe.

RAKTHERM QUALITY

RAKtherm's quality management system is defined to ensure consistent high-quality production to intensify product integrity. We have developed a successful quality management principles based on the concept of premium quality that comprises of planning, quality control, quality assurance, and quality improvement. This principle involves processes that meet engineering requirements to withstand technical competitiveness in the global market.

Raktherm Continues To Unleash The Potential In Piping Solutions With Its Ground-Breaking Engineered Dwv Systems!

RAKtherm Launches the New Generation DWV Systems Technology…

RAKtherm's technical acumen for over 5 decades in wide range of integrated systems solutions, our expertise and commitment to innovation drives to develop high-performance piping solutions that will elevate the performance level even further. The DWV system is an integral part of the piping structure, therefore the contractors and engineers' demands for the best system with the best performance.

As the construction technology become more complex and more technically demanding, our proficiency in pipe engineering can address to resolve these demands.

When the application gets tough, RAKtherm gets going: with the latest systems range, RAKtherm DWV piping systems now provides a top-notch solution for challenging applications.

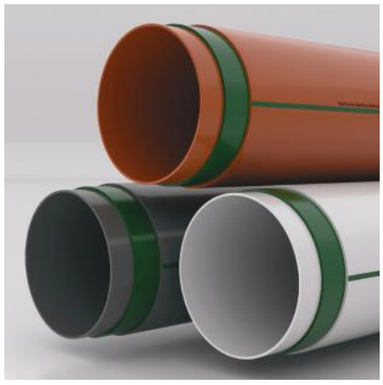
RAKtherm experts have developed the DWV piping systems with higher degree of strength, long-term stability, resists abrasions and aggressive chemicals, corrosion, and easy installation.

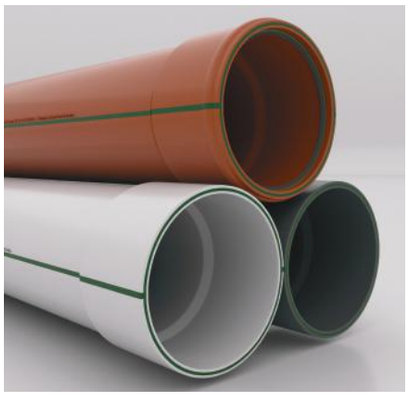
DWV Systems (Drain, sewerage, waste, and vent) is the latest development of RAKtherm.

A state of the art three-layers-pipe with solid-wall-construction, made from the new generation premium materials which significantly improves its' durability compared to the conventional pipes.

• RAKtherm's Groundbreaking RNP Technology

The pipes' uniform middle-layer-construction is based on special cells to ensure increased in mechanical properties, wherein the inner-layer and outer-layer are combined forming like a 'sandwich construction' which results to exceed the requirement for noise reduction, durability, flexibility, and longer-service-life





• Green Initiative

The increased resistance of pipe systems is in conjunction with RAKtherm's Green Initiative Program to create a more sustainable future. It aims to slow the consumption of raw materials and reduce the amount of waste entering landfills. RAKtherm's own special formula gives pipe systems both flexibility and rigidity properties, at the same time without affecting each other or affecting any other mechanical properties.

It also supports in helping to minimize other indirect environmental factors such as less CO2 emissions during transport, as well as reduced CO2 consumption during recycling, reuse, and disposal. A lead-free system can create a healthy working condition and protects the environment. When using new technologies, it is imperative that environment should not be compromised unlike the conventional products that damage our ecosystem.

- **The Rarefied Concept for Noise-Reduction Technology of RAKtherm**

SOUNDPROOF (TEXT, PIC PLYTRON-19PG)

To assess the noise, which the system will generate under the real operating conditions, test under EN 14366 are conducted, in which a portion of Multi-apartment building is simulated.

WHY RAKTHERM DWV (Drain, Waste, Vent) SYSTEMS?

The test bench has two storey's, basement and garret premises, through which the sewage system standpipe runs being attached to one of the walls. The noise level is measured both inside the premise where this pipe is installed, and in the so-called 'protected' premise located on the other side of this wall. Actual similarity of the test premise in multi-apartment and residential buildings is the restroom, and the common residential rooms are similar to the protected premise.

According to German standard DIN 4109, NOISE LEVEL IN THESE PREMISES AT NIGHT SHALL NOT EXCEED 30dB.

German Standard VDI 4100 establishes more stringent requirements i.e. according to this standard, to reach the maximum acoustic comfort, the noise level shall be maximum 24 dB for a multi-apartment building,and maximum 22 dB for a single-family home.

CONDITIONS		Waste water flow rate, L/s			
		0.5	1.0	2.0	4.0
Test as per EN 14366	Test premise	43	45	47	49
	Protected premise	<10	10	12	17
Test as per VDI 4100	Test premise	41	43	44	47
	Protected premise	<10	10	12	17

RAKtherm's RNP pipe system has confirmed its' high efficiency in management of noises in the sewage system.

Application of these pipes and fittings allows for making internal sewage of a single-family house or apartment in a multi-storey building really noiseless.

ENGINEERED RAW MATERIALS & STANDARDS

Specially formulated PVC-U resins by RAKtherm from the main raw materials sourced in the USA.

Type: Polyvinyl Chloride Homo polymer.

Polymerization Process: Suspension.

Appearance: White, free flowing powder resin is often converted into a wide range of pipe sizes and types, which meet the most stringent standards for water supply and distribution. Its medium molecular weight provides excellent processing characteristics in both single and multi-screw extruders.

TYPICAL PROPERTY VALUES

PROPERTY	TYPICAL VALUES	UNITS
K-value	67	-
Apparent Bulk Density	570	kg/m³
Retained on mesh 60 (250)	15	% max
Passing through mesh 200	4	% max
Volatile content	0.3	% max

RAKtherm PVC-U System Produced According to the Following Standards

PVC Standards:

BS EN 1329-1 :
Plastics piping systems for soil and waste discharge
Unplasticized poly (vinyl chloride) (PVC-U) Pipes and fittings.

Scope :

PVC-U Piping system in the field of Soil and Waste discharge (low and high temperature) inside building (marked with "B") and for soil & waste discharge systems for both inside building and buried in ground within the building structure (marked with "BD").

Also this standard applicable for Ventilation pipe work associated and rainwater pipe work within the building structure

System Range:
BS EN 1329 STD covering the size range from 32 mm up to 315 mm for both pipes and fittings

PVC Standards:

Application area code:

A code used in the marking of pipes and fittings to indicate the application area(s) for which they are intended, as follows;

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

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

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

BS EN 1401-1 :
Plastics piping systems for non-pressure underground drainage and sewerage Unplasticized poly (vinyl chloride) (PVC-U).

Scope :

EN 1401 specifies the requirements for pipes, fittings and the system of (PVC-U) piping systems in the field of non-pressure underground drainage and sewerage:

Outside the building structure (application area code ``U''); and both buried in ground within the building structure (application area code ``D'') and outside the building. This is reflected in the marking of products by ``U'' and ``UD''. It also specifies the test parameters for the test methods referred to in this standard.

System Range:

BS EN 1401 STD covering the size range from 110 up to 1000 mm for both pipes and fittings

Application area code:

A code used in the marking of pipes and fittings to indicate the application area(s) for which they are intended, as follows;

U : application area code for the area more than 1 m from the building to which the buried piping system is connected

D : application area code for the area under and within 1 m from the building where the pipes and the fittings are buried in ground and are connected to the soil and waste discharge system of the building.

Note : In code D application areas, the existence of hot water discharge in addition to the external forces from the surroundings is usual.

UD : application area code for components intended for use for both code U and D application area.

RAKtherm's MULTI-LAYER REINFORCED PVC-U SYSTEMS

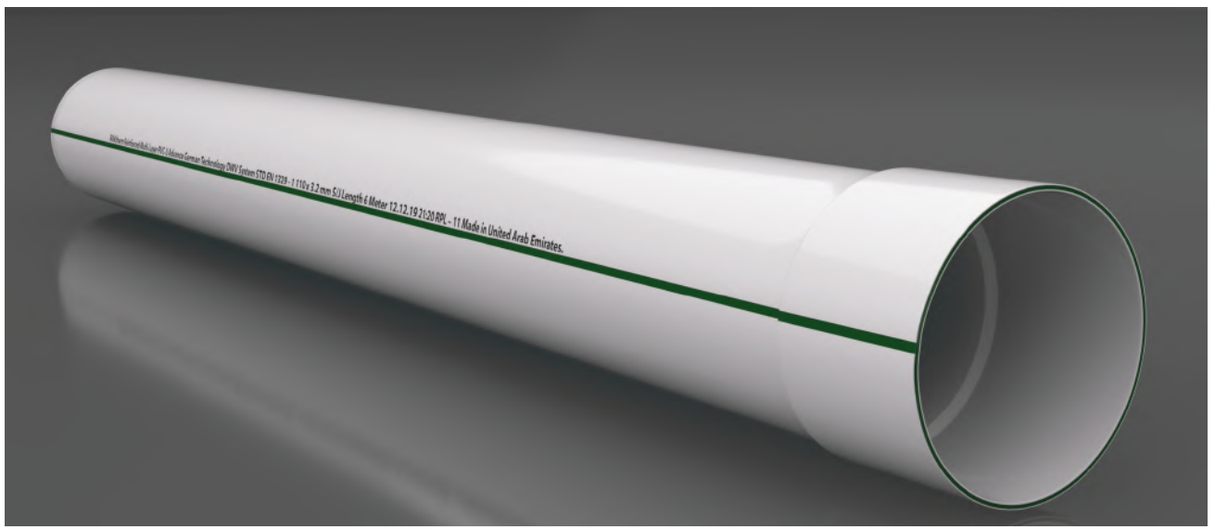
PVC-U Reinforced Pipes And Fittings Enhanced System (White)

Underground / Aboveground (Solvent joint)

The enhanced systems with high corrosion resistance properties that is perfect for underground and aboveground piping installations.

Pipes

PVC-U REINFORCED ENHANCED PIPES (White)



Art-No.	DIMENSION MM			Weight/KG
	OD	ID	S	
PRF3-50	50 mm	44 mm	3 mm	0.8
PRF4-50	50 mm	42 mm	4 mm	0.93
PRF5-50	50 mm	40 mm	5 mm	1.2
PRF3-75	75 mm	69 mm	3 mm	1.122
PRF4-75	75 mm	76 mm	4 mm	1.311
PRF5-75	75 mm	65 mm	5 mm	1.788
PRF3-110	110 mm	104 mm	3 mm	1.635
PRF4-110	110 mm	102 mm	4 mm	2.122
PRF5-110	110 mm	100 mm	5 mm	2.632
PRF3-160	160 mm	154 mm	3 mm	2.4
PRF4-160	160 mm	152 mm	4 mm	3.31
PRF5-160	160 mm	150 mm	5 mm	3.763

Fittings

ELBOW UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
E1PVC-50	50 mm	92.5	61	28.00	90°	0.111
E1PVC-75	75 mm	130	88	41.00	87.5°	0.254
E1PVC-110	110 mm	178	126	51.00	87.5°	0.655
E1PVC-160	160 mm	252	180	71.00	87.5°	1.465

Fittings

ELBOW WITH DOOR UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
E2DPVC-75	75 mm	130	88	41.00	87.5°	0.300
E2DPVC-110	110 mm	178	126	51.00	87.5°	0.723
E2DPVC-160	160 mm	252	180	71.00	87.5°	1.550

ELBOW UPVC DWV 45°

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
E3PVC-50	50 mm	98.7	61	28.00	45°	0.088
E3PVC-75	75 mm	136.8	88	41.00	45°	0.200
E3PVC-110	110 mm	181	126	51.00	45°	0.500
E3PVC-160	160 mm	260	180	71.00	45°	1.122

SOCKET UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
S1PVC-50	50 mm	60	61	28.00	N/A	0.060
S1PVC-75	75 mm	87	88	41.00	N/A	0.142
S1PVC-110	110 mm	108	126	51.00	N/A	0.332
S1PVC-160	160 mm	150	180	71.00	N/A	0.758

REDUCER SOCKET UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
R1PVC-11050	110/50 mm	105	110.1	28.00	N/A	0.191
R1PVC-11075	110/75 mm	117	110.1	41.00	N/A	0.223
R1PVC-160110	160/110 mm	175	160.3	51.00	N/A	0.570

ACCESS PLUG

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
S2DPVC-50	50 mm	55	50.1	N/A	N/A	0.057
S2DPVC-75	75 mm	72	75.1	N/A	N/A	0.136
S2DPVC-110	110 mm	87	110.1	N/A	N/A	0.290
S2DPVC-160	160 mm	120	160.3	N/A	N/A	0.509

TEE UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
T1PVC-50	50 mm	127	61	28.00	87.5°	0.161
T1PVC-75	75 mm	189	88	41.00	87.5°	0.400
T1PVC-110	110 mm	248	126	51.00	87.5°	0.958
T1PVC-160	160 mm	346	180	71.00	87.5°	2.162

TEE REDUCER UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
TR1PVC-160110160	110/160 mm	288	180	71.00	87.5°	1.611
TR1PVC-11050	110 x 50	165	125	185	87.5	
TR1PVC-11075	110 x 75	190	125	220	87.5	

TEE WITH DOOR UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
T2DPVC-75	75 mm	189	88	41.00	87.5°	0.455
T2DPVC-110	110 mm	248	126	51.00	87.5°	1.066
T2DPVC-160	160 mm	346	180	71.00	87.5°	2.267

TEE CROSS UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
TXPVC-110	110 mm	248	126	51.00	87.5°	1.200

Y UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
Y1PVC-50	50 mm	138	61	28.00	45°	0.175
Y1PVC-75	75 mm	203	88	41.00	45°	0.436
Y1PVC-110	110 mm	279	126	51.00	45°	1.182
Y1PVC-160	160 mm	320	180	71.00	45°	2.530

Y REDUCER UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
YR1PVC-160110	160/110mm	320	180	71.00	45°	1.813
YR1PVC-11050	110 x 50	185	125	190	45	
YR1PVC-11075	110 x 75	220	125	225	45	

45° DOUBLE 'Y' BRANCH

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
YT1PVC-110	110 mm	310	126	51.00	45°	1.560

Fittings

MULTI BRANCH UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
MBPVC-11050	110/50 mm	186	189.5	28.00	N/A	0.670

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
MBPVC-1105075	110/50/75 mm	208	194.75	28/41.	N/A	0.741

FLOOR TRAP MULTI BRANCH

Art-No.	Dimensions mm				
	D	H	W	L	A°
MB-PV2-200110110	200 x 110 x 110	190	300	300	N/A

P- TRAP UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
PTPVC-110	110 mm	256	152	51.00	N/A	0.842

SYPHON UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
SYPVC-110	110 mm	320	152	51.00	N/A	1.338
SYPVC-50	50	150	65	170	N/A	

SYPHON (P-TRAP) WITH DOOR

Art-No.	Dimensions mm				
	D	H	W	L	A°
SY2D-PV2-110	110	250	125	325	N/A

END PLUG UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
C1PVC-50	50 mm	38.5	56.5	35	N/A	0.031
C1PVC-110	110 mm	55	124	50	N/A	0.161

PIPE CAP UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
C2PVC-50	50 mm	26.5	56.5	22.1	N/A	0.030
C2PVC-75	75 mm	38.5	83.5	33.6	N/A	0.085
C2PVC-110	110 mm	47.3	120.56	41.8	N/A	0.150
C2PVC-160	160 mm	63.9	172.8	56	N/A	0.350

VENTILATION CAP UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
VPVC-75	75 mm	100	88	41	N/A	0.121
VPVC-110	110 mm	110	126	51	N/A	0.246
VPVC-160	160 mm	150	180	71	N/A	0.621

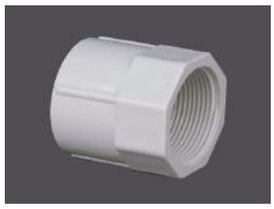
EXPANSION COUPLER WITH DOOR UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
EXDPVC-110	110 mm	145	138.5	61	N/A	0.526

TRANSITION FEMALE ELBOW UPVC DWV

Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
EFPVC-5011/2	50 mm x 1.1/2"	92.5	61	28	90°	0.110

TRANSITION FEMALE SOCKET UPVC DWV



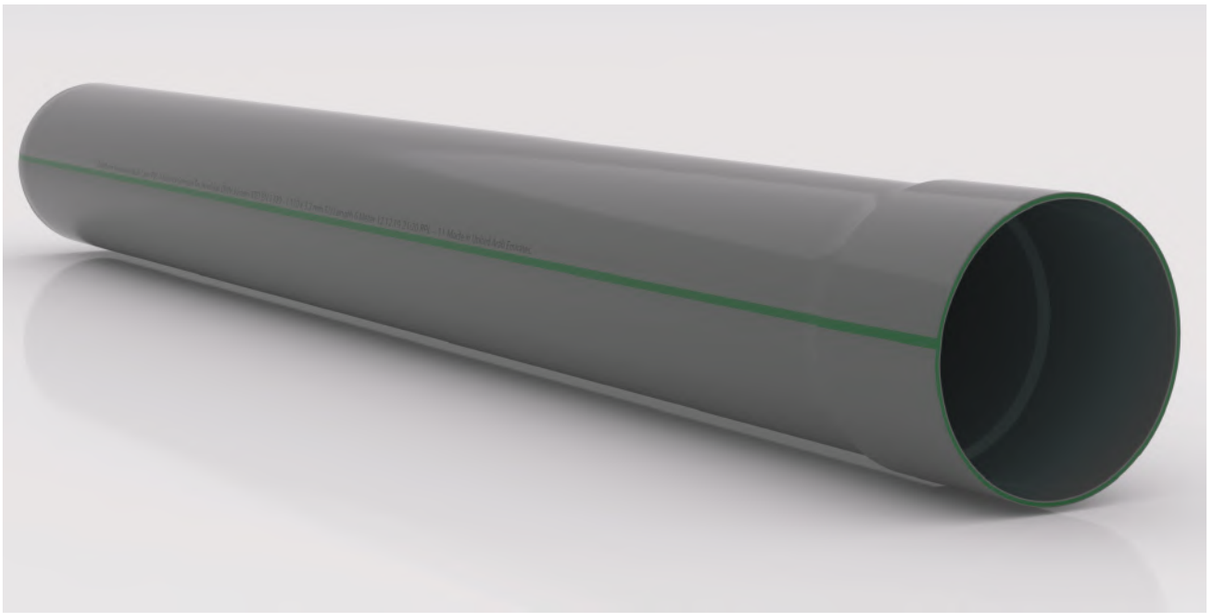
Art-No.	Dimensions mm					KG/PCS
	D	H	W	L	A°	
SFPVC-5011/2	50 mm x 1.1/2"	58	62.5	28	N/A	0.070

PVC-U Reinforced Pipes And Fittings Intensified System (Gray)

Aboveground (Solvent joint)

Engineered solution and easy to work on by easy jointing technique using the solvent-cement specifically manufactured by RAKtherm to complement the complete gray systems which creates a highly-reliable piping networks.

Pipe solvent gray.



Item Code	Dimension	Thick.	Len. mt
PRF-PV4-50x2.0x4	50	2.00	4
PRF-PV4-50x2.4x4	50	2.40	4
PRF-PV4-50x3.0x4	50	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-50x2.0	50	2.00	6
PRF-PV4-50x2.4	50	2.40	6
PRF-PV4-50x3.0	50	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-56x2.0x4	56	2.00	4
PRF-PV4-56x2.4x4	56	2.40	4
PRF-PV4-56x3.0x4	56	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-56x2.0	56	2.00	6
PRF-PV4-56x2.4	56	2.40	6
PRF-PV4-56x3.0	56	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-63x2.0x4	63	2.00	4
PRF-PV4-63x2.4x4	63	2.40	4
PRF-PV4-63x3.0x4	63	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-63x2.0	63	2.00	6
PRF-PV4-63x2.4	63	2.40	6
PRF-PV4-63x3.0	63	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-75x2.4x4	75	2.40	4
PRF-PV4-75x3.0x4	75	3.00	4
PRF-PV4-75x4.0x4	75	4.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-75x2.4	75	2.40	6
PRF-PV4-75x3.0	75	3.00	6
PRF-PV4-75x4.0	75	4.00	6

Pipe solvent gray.

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-82x3.0x4	82	3.00	4
PRF-PV4-82x3.2x4	82	3.20	4
PRF-PV4-82x4.0x4	82	4.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-82x3.0	82	3.00	6
PRF-PV4-82x3.2	82	3.20	6
PRF-PV4-82x4.0	82	4.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-110x3.2x4	110	3.20	4
PRF-PV4-110x3.8x4	110	3.80	4
PRF-PV4-110x4.0x4	110	4.00	4
PRF-PV4-110x5.0x4	110	5.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-110x3.2	110	3.20	6
PRF-PV4-110x3.8	110	3.80	6
PRF-PV4-110x4.0	110	4.00	6
PRF-PV4-110x5.0	110	5.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-160x3.2x4	160	3.20	4
PRF-PV4-160x3.8x4	160	3.80	4
PRF-PV4-160x4.0x4	160	4.00	4
PRF-PV4-160x4.7x4	160	4.70	4
PRF-PV4-160x7.7x4	160	7.70	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV4-160x3.2	160	3.20	6
PRF-PV4-160x3.8	160	3.80	6
PRF-PV4-160x4.0	160	4.00	6
PRF-PV4-160x4.7	160	4.70	6
PRF-PV4-160x7.7	160	7.70	6

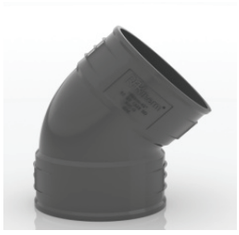
Solvent Gray Fitting V4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5°	E1-PV4-56	56	120
	E1-PV4-82	82	42
	E1-PV4-110	110	25
	E1-PV4-160	160	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5° with door	E2D-PV4-82	82	30
	E2D-PV4-110	110	20
	E2D-PV4-160	160	10

Solvent Gray Fitting V4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow	E3-PV4-56	56	140
	E3-PV4-82	82	60
	E3-PV4-110	110	40
	E3-PV4-160	160	10



Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5°	T1-PV4-56	56	50
	T1-PV4-82	82	24
	T1-PV4-110	110	14
	T1-PV4-160	160	5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5° with door	T2D-PV4-82	82	22
	T2D-PV4-110	110	14
	T2D-PV4-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Reducer Tee	TR1-PV4-11082	110 x 82	20
	TR1-PV4-160110	160 x 110	10

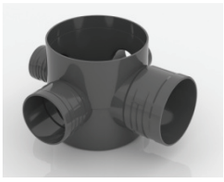
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Access Plug	S2D-PV4-82	82	104
	S2D-PV4-110	110	60
	S2D-PV4-160	160	24

Fitting Item description	Item Code	Size	Std.Qty/ Carton
End Cap	C2-PV4-56	56	600
	C2-PV4-82	82	230
	C2-PV4-110	110	90
	C2-PV4-160	160	40

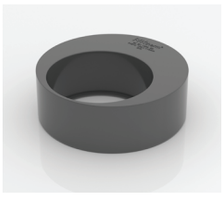
Solvent Gray Fitting V4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
End Plug	C1-PV4-56	56	600

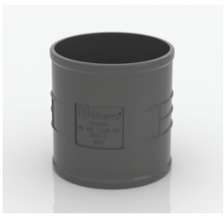
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Floor Trap Multi Branch	FT2-PV4-1108256	110 x 82 x 56	24



Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Bush	RB-PV4-11056	110 x 56	88
	RB-PV4-11082	110 x 82	88
	RB-PV4-160110	160 x 110	9



Fitting Item description	Item Code	Size	Std.Qty/ Carton
Socket	S1-PV4-56	56	200
	S1-PV4-82	82	72
	S1-PV4-110	110	60
	S1-PV4-160	160	10



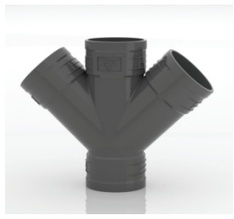
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Ventilation Cap	V-PV4-82	82	176
	V-PV4-110	110	96
	V-PV4-160	160	24

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Y (Tee 45°)	Y1-PV4-56	56	50
	Y1-PV4-82	82	24
	Y1-PV4-110	110	14
	Y1-PV4-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Y (Tee 45°)	YR1-PV4-11082	110 x 82	16
	YR1-PV4-160110	160 x 110	8

Solvent Gray Fitting V4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
45° Double 'Y' Branch	YT1-PV4-110	110 x110 x 110	9



Fitting Item description	Item Code	Size	Std.Qty/ Carton
Cross Tee	TX-PV4-110	110 x110 x 110	12

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Rain Water Outlet	RWO-PV4-82	82	20
	RWO-PV4-110	110	22

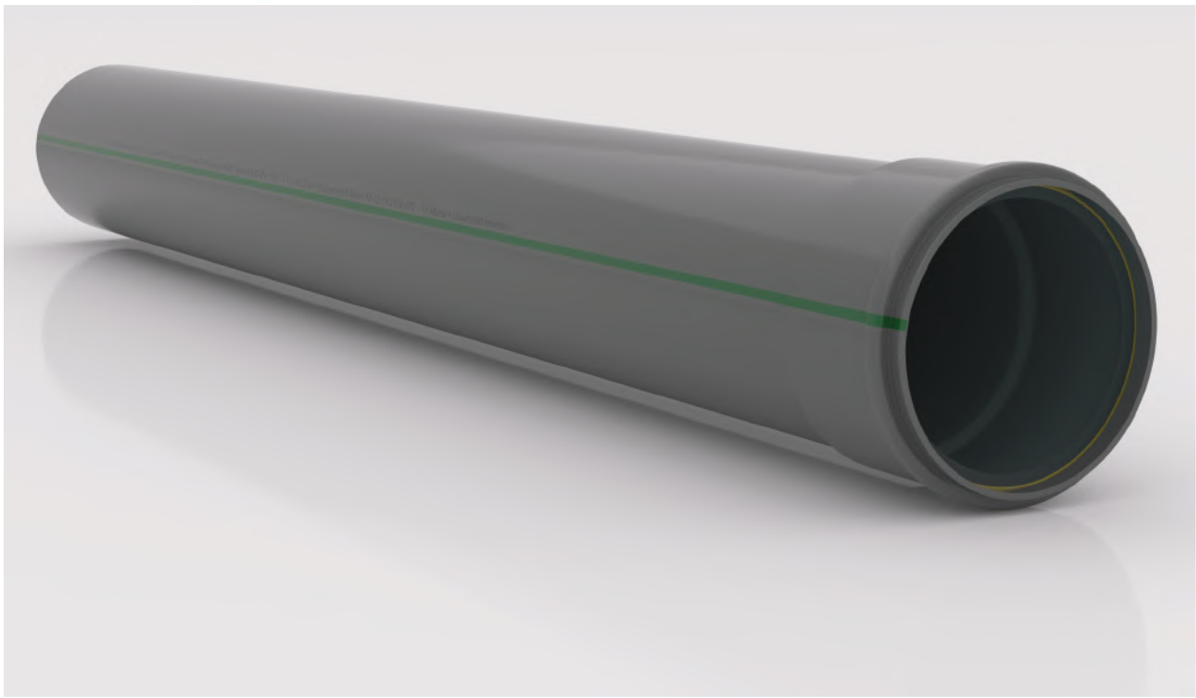
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Gully Trap Bottle	GT2-PV4-160110	160 x 110	5

PVC-U Reinforced Pipes And Fittings Intensified System (Gray)

Aboveground (Push-fit)

The intensified PVC-U system of RAKtherm with exceptional multi-layer reinforced rubber joint, that can withstand up to 70°C. This system can significantly provide seamless water tight connection for leak-proof service.

Pipe Push-fit gray. (BS EN 1329)



Item Code	Dimension	Thick.	Len. mt
PRF-PV3-50x2.0x4	50	2.00	4
PRF-PV3-50x2.4x4	50	2.40	4
PRF-PV3-50x3.0x4	50	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-50x2.0	50	2.00	6
PRF-PV3-50x2.4	50	2.40	6
PRF-PV3-50x3.0	50	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-56x2.0x4	56	2.00	4
PRF-PV3-56x2.4x4	56	2.40	4
PRF-PV3-56x3.0x4	56	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-56x2.0	56	2.00	6
PRF-PV3-56x2.4	56	2.40	6
PRF-PV3-56x3.0	56	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-63x2.0x4	63	2.00	4
PRF-PV3-63x2.4x4	63	2.40	4
PRF-PV3-63x3.0x4	63	3.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-63x2.0	63	2.00	6
PRF-PV3-63x2.4	63	2.40	6
PRF-PV3-63x3.0	63	3.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-75x2.4x4	75	2.40	4
PRF-PV3-75x3.0x4	75	3.00	4
PRF-PV3-75x4.0x4	75	4.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-75x2.4	75	2.40	6
PRF-PV3-75x3.0	75	3.00	6
PRF-PV3-75x4.0	75	4.00	6

Pipe Push-fit gray. (BS EN 1329)

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-82x3.0x4	82	3.00	4
PRF-PV3-82x3.2x4	82	3.20	4
PRF-PV3-82x4.0x4	82	4.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-82x3.0	82	3.00	6
PRF-PV3-82x3.2	82	3.20	6
PRF-PV3-82x4.0	82	4.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-110x3.2x4	110	3.20	4
PRF-PV3-110x3.8x4	110	3.80	4
PRF-PV3-110x4.0x4	110	4.00	4
PRF-PV3-110x5.0x4	110	5.00	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-110x3.2	110	3.20	6
PRF-PV3-110x3.8	110	3.80	6
PRF-PV3-110x4.0	110	4.00	6
PRF-PV3-110x5.0	110	5.00	6

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-160x3.2x4	160	3.20	4
PRF-PV3-160x3.8x4	160	3.80	4
PRF-PV3-160x4.0x4	160	4.00	4
PRF-PV3-160x4.7x4	160	4.70	4
PRF-PV3-160x7.7x4	160	7.70	4

Item Code	Dimension	Thick.	Len. mt
PRF-PV3-160x3.2	160	3.20	6
PRF-PV3-160x3.8	160	3.80	6
PRF-PV3-160x4.0	160	4.00	6
PRF-PV3-160x4.7	160	4.70	6
PRF-PV3-160x7.7	160	7.70	6

Fittings Push-fit gray

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5°	E1-PV3-50	50	120
	E1-PV3-75	75	42
	E1-PV3-82	82	42
	E1-PV3-110	110	25
	E1-PV3-160	160	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow 87.5° with door Swept	E2D-PV3-75	75	30
	E2D-PV3-82	82	30
	E2D-PV3-110	110	20
	E2D-PV3-160	160	5

Fittings Push-fit gray

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow 45°	E3-PV3-50	50	140
	E3-PV3-75	75	60
	E3-PV3-82	82	60
	E3-PV3-110	110	40
	E3-PV3-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Tee 87.5° Swept	T1-PV3-50	50	50
	T1-PV3-75	75	24
	T1-PV3-82	82	24
	T1-PV3-110	110	14
	T1-PV3-160	160	5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5° with door	T2D-PV3-75	75	22
	T2D-PV3-82	82	22
	T2D-PV3-110	110	14
	T2D-PV3-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Reducer Tee	TR1-PV3-11050	110 x 50	20
	TR1-PV3-11075	110 x 75	20
	TR1-PV3-11082	110 x 82	20
	TR1-PV3-160110	160 x 110	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Floor Trap Muli Branch	FT2-PV3-1107550	110 x 75 x 50	24
	FT2-PV3-1108256	110 x 82 x 56	24

Fittings Push-fit gray

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Socket	R1-PV3-7550	110 x 56	88
	R1-PV3-8256	82 x 56	88
	R1-PV3-11050	110 x 50	88
	R1-PV3-11075	110 x 75	88
	R1-PV3-11082	110 x 82	70
	R1-PV3-160110	160 x 110	21

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Socket	S1-PV3-50	50	200
	S1-PV3-75	75	72
	S1-PV3-82	82	72
	S1-PV3-110	110	60
	S1-PV3-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Syphon P trap	ST2-PV3-110	110	6

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Syphon S trap	SS2-PV3-110	110	6

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Y (Tee 45°)	Y1-PV3-50	50	50
	Y1-PV3-75	75	24
	Y1-PV3-82	82	24
	Y1-PV3-110	110	14
	Y1-PV3-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Y (Tee 45°)	YR1-PV3-11050	110 x 50	8
	YR1-PV3-11075	110 x 75	8
	YR1-PV3-11082	110 x 82	16
	YR1-PV3-160110	160 x 110	8

Fittings Push-fit gray

Fitting Item description	Item Code	Size	Std.Qty/ Carton
45° Double 'Y' Branch	YT1-PV3-110	110 x110 x 110	9

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Cross Tee	TX-PV3-110	110 x110 x 110	12

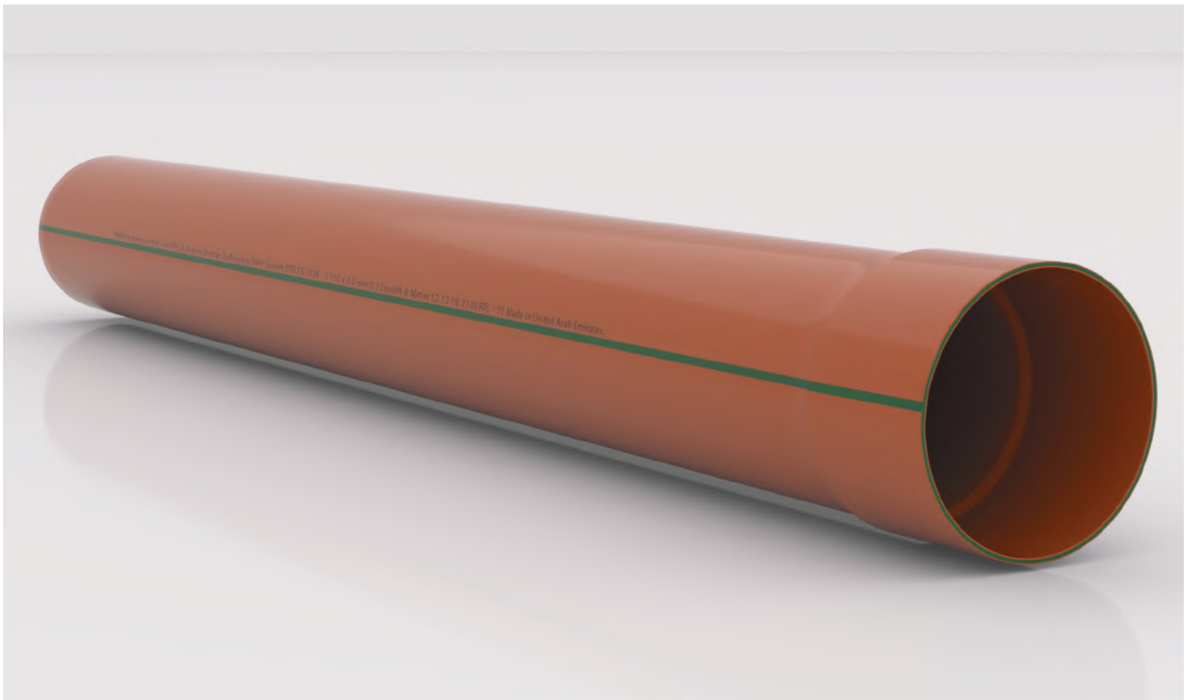
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Access Plug	IS2-PV3-110	110	6

PVC-U Reinforced Pipes And Fittings Heightened System (Terracotta Orange)

Underground (Solvent Joint)

Engineered solution and easy to work on by easy jointing technique using the solvent-cement specifically manufactured by RAKtherm to complement the complete orange systems which creates a highly-reliable piping networks.

Solvent Orange Pipe V6 (BS EN 1401)



Item Code	Dimension	Thick.	Len. mt
PRF-PV6-50x3.0x4	50	3.00	4
PRF-PV6-50x3.0	50	3.00	6
PRF-PV6-56x3.0x4	56	3.00	4
PRF-PV6-56x3.0	56	3.00	6
PRF-PV6-63x3.0x4	63	3.00	4
PRF-PV6-63x3.0	63	3.00	6
PRF-PV6-75x4.0x4	75	4.00	4
PRF-PV6-75x4.0	75	4.00	6
PRF-PV6-82x4.0x4	82	4.00	4
PRF-PV6-82x4.0	82	4.00	6
PRF-PV6-110x4.0x4	110	4.00	4
PRF-PV6-110x5.0x4	110	5.00	4
PRF-PV6-110x4.0	110	4.00	6
PRF-PV6-110x5.0	110	5.00	6
PRF-PV6-160x4.0x4	160	4.00	4
PRF-PV6-160x4.7x4	160	4.70	4
PRF-PV6-160x7.7x4	160	7.70	4
PRF-PV6-160x4.0	160	4.00	6
PRF-PV6-160x4.7	160	4.70	6
PRF-PV6-160x7.7	160	7.70	6

Solvent Orange Fitting V6

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5°	E1-PV6-56	56	120
	E1-PV6-82	82	42
	E1-PV6-110	110	25
	E1-PV6-160	160	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5° with door	E2D-PV6-82	82	30
	E2D-PV6-110	110	20
	E2D-PV6-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow 45°	E3-PV6-56	56	140
	E3-PV6-82	82	60
	E3-PV6-110	110	40
	E3-PV6-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5°	T1-PV6-56	56	50
	T1-PV6-82	82	24
	T1-PV6-110	110	14
	T1-PV6-160	160	5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5° with door	T2D-PV6-82	82	22
	T2D-PV6-110	110	14
	T2D-PV6-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Reducer Tee	TR1-PV6-11082	110 x 82	20
	TR1-PV6-160110	160 x 110	10

Solvent Orange Fitting V6

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Access Plug	S2D-PV6-82	82	104
	S2D-PV6-110	110	60
	S2D-PV6-160	160	24

Fitting Item description	Item Code	Size	Std.Qty/ Carton
End Cap	C2-PV6-56	56	600
	C2-PV6-82	82	230
	C2-PV6-110	110	90
	C2-PV6-160	160	40

Fitting Item description	Item Code	Size	Std.Qty/ Carton
End Plug	C1-PV6-56	56	600

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Floor Trap Multi Branch	FT2-PV6-1108256	110 x 82 x 56	24

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Bush	RB-PV6-11056	110 x 56	88
	RB-PV6-11082	110 x 82	88
	RB-PV6-160110	160 x 110	9

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Socket	S1-PV6-56	56	200
	S1-PV6-82	82	72
	S1-PV6-110	110	60
	S1-PV6-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Ventilation Cap	V-PV6-82	82	176
	V-PV6-110	110	96
	V-PV6-160	160	24

Solvent Orange Fitting V6

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Y (Tee 45°)	Y1-PV6-56	56	50
	Y1-PV6-82	82	24
	Y1-PV6-110	110	14
	Y1-PV6-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Y (Tee 45°)	YR1-PV6-11082	110 x 82	16
	YR1-PV6-160110	160 x 110	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
45° Double 'Y' Branch	YT1-PV6-110	110 x110 x 110	9

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Cross Tee	TX-PV6-110	110 x110 x 110	12

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Rain Water Outlet	RWO-PV6-82	82	20
	RWO-PV6-110	110	22

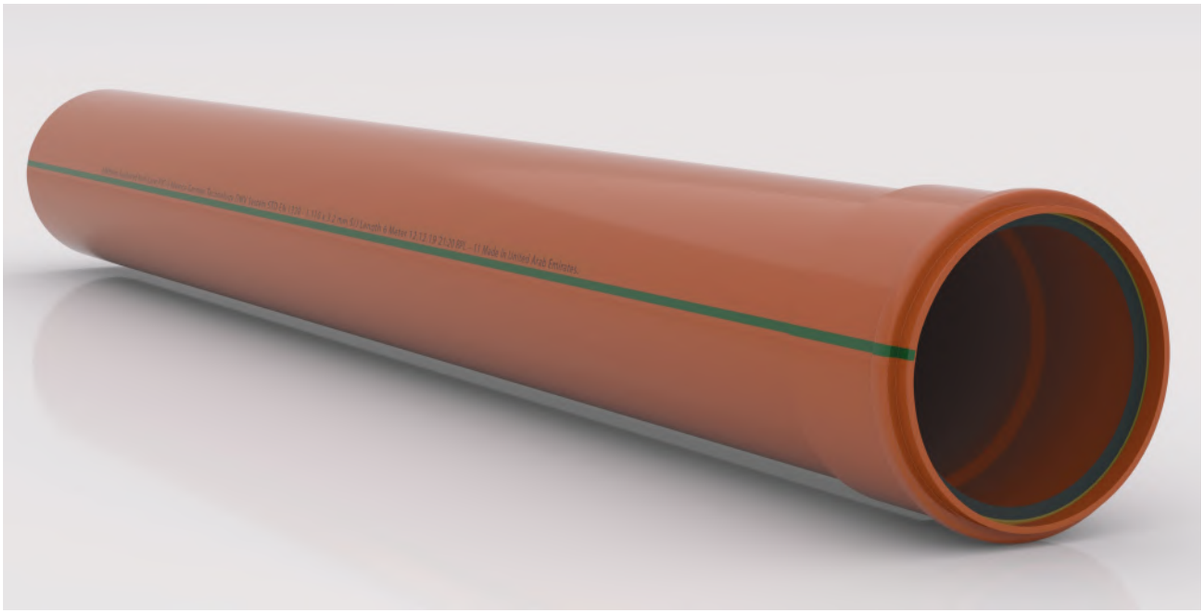
Fitting Item description	Item Code	Size	Std.Qty/ Carton
Gully Trap Bottle	GT2-PV6-160110	160 x 110	5

PVC-U Reinforced Pipes And Fittings Heightened System (Terracotta Orange)

Underground (Push-fit)

The heightened PVC-U system of RAKtherm with exceptional multi-layer reinforced rubber joint, that can withstand up to 70°C. This system can significantly provide seamless water tight connection for leak-proof service.

Rubber Orange Pipe V5 (BS EN 1401)



Item Code	Dimension	Thick.	Len. mt
PRF-PV5-50x3.0x4	50	3.00	4
PRF-PV5-50x3.0	50	3.00	6
PRF-PV5-56x3.0x4	56	3.00	4
PRF-PV5-56x3.0	56	3.00	6
PRF-PV5-63x3.0x4	63	3.00	4
PRF-PV5-63x3.0	63	3.00	6
PRF-PV5-75x4.0x4	75	4.00	4
PRF-PV5-75x4.0	75	4.00	6
PRF-PV5-82x4.0x4	82	4.00	4
PRF-PV5-82x4.0	82	4.00	6
PRF-PV5-110x4.0x4	110	4.00	4
PRF-PV5-110x5.0x4	110	5.00	4
PRF-PV5-110x4.0	110	4.00	6
PRF-PV5-110x5.0	110	5.00	6
PRF-PV5-160x4.0x4	160	4.00	4
PRF-PV5-160x4.7x4	160	4.70	4
PRF-PV5-160x7.7x4	160	7.70	4
PRF-PV5-160x4.0	160	4.00	6
PRF-PV5-160x4.7	160	4.70	6
PRF-PV5-160x7.7	160	7.70	6

Rubber Orange Fitting V5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Elbow 87.5°	E1-PV5-50	50	120
	E1-PV5-75	75	42
	E1-PV5-82	82	42
	E1-PV5-110	110	25
	E1-PV5-160	160	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow 87.5° with door Swept	E2D-PV5-75	75	30
	E2D-PV5-82	82	30
	E2D-PV5-110	110	20
	E2D-PV5-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Elbow 45°	E3-PV5-50	50	140
	E3-PV5-75	75	60
	E3-PV5-82	82	60
	E3-PV5-110	110	40
	E3-PV5-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Tee 87.5° Swept	T1-PV5-50	50	50
	T1-PV5-75	75	24
	T1-PV5-82	82	24
	T1-PV5-110	110	14
	T1-PV5-160	160	5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Tee 87.5° with door	T2D-PV5-75	75	22
	T2D-PV5-82	82	22
	T2D-PV5-110	110	14
	T2D-PV5-160	160	4

Rubber Orange Fitting V5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Swept Reducer Tee	TR1-PV5-11050	110 x 50	20
	TR1-PV5-11075	110 x 75	20
	TR1-PV5-11082	110 x 82	20
	TR1-PV5-160110	160 x 110	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Floor Trap Multi Branch	FT2-PV5-1107550	110 x 75 x 50	24
	FT2-PV5-1108256	110 x 82 x 56	24

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Socket	R1-PV5-7550	110 x 56	88
	R1-PV5-8256	82 x 56	88
	R1-PV5-11050	110 x 50	88
	R1-PV5-11075	110 x 75	88
	R1-PV5-11082	110 x 82	70
	R1-PV5-160110	160 x 110	21

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Socket	S1-PV5-50	50	200
	S1-PV5-75	75	72
	S1-PV5-82	82	72
	S1-PV5-110	110	60
	S1-PV5-160	160	10

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Syphon P trap	ST2-PV5-110	110	6
Syphon S trap	SS2-PV5-110	110	6

Rubber Orange Fitting V5

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Y (Tee 45°)	Y1-PV5-50	50	50
	Y1-PV5-75	75	24
	Y1-PV5-82	82	24
	Y1-PV5-110	110	14
	Y1-PV5-160	160	4

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Reducer Y (Tee 45°)	YR1-PV5-11050	110 x 50	8
	YR1-PV5-11075	110 x 75	8
	YR1-PV5-11082	110 x 82	16
	YR1-PV5-160110	160 x 110	8

Fitting Item description	Item Code	Size	Std.Qty/ Carton
45° Double 'Y' Branch	YT1-PV5-110	110 x110 x 110	9

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Cross Tee	TX-PV5-110	110 x110 x 110	12

Fitting Item description	Item Code	Size	Std.Qty/ Carton
Access Plug	IS2-PV3-110	110	6

RAKtherm's TRIPLE-SEALING-LIP SOLUTIONS, Engineered Perfection for PVC Sewer Pipe Systems

The multi-layer reinforced rubber joint, is an integrated seal for plastic pipe systems for aboveground and underground applications of drainage sewerage systems.

RAKtherm's triple-sealing-lip solutions is now the industry-beating performance, it is highly effective seal which requires low-jointing force while ensuring a secure seal across wide range of pipe-joint level tolerances

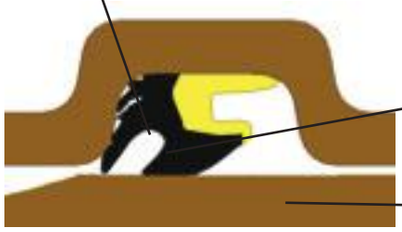
RAKtherm Triple-Sealing-Lip

Linear Expansion resistance

Geometric Design for Functionality

The unique design has a flexible thermoplastic elastomeric sealing element bonded to a polypropylene retaining ring which holds the seal firmly in the correct position during pipe transportation and joint assembly.

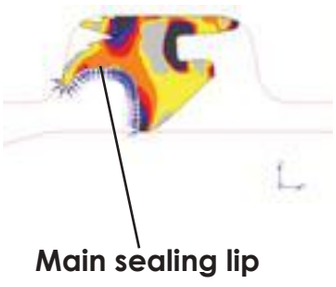
RAKtherm triple-sealing-lip seal is designed to have a low assembly force in minimum gap and on maximum gap, which is able to have a good compression on its 3 different lips. The assembly can be done at maximum compression without any problem.



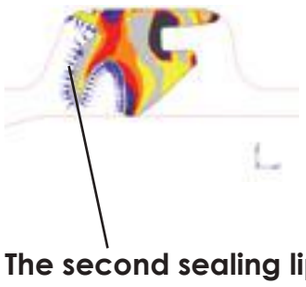
DWV - RNP Technology

The Concept of Triple-Sealing-Lip from RAKtherm

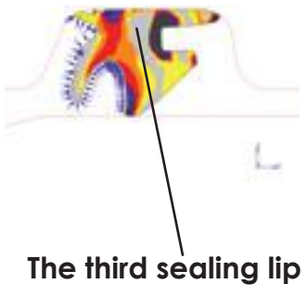
DIN lock™ is a combined lip and compression seal that is positioned in the socket by the pipe manufacturer. The seal is designed to absorb any permissible variation in the groove.



Main sealing lip



The second sealing lip



The third sealing lip

EXCELLENT ENGINEERING ADVANTAGE :

ENGINEERED TO LAST

- Non-corrosive that combats deterioration caused by chemical action
- Dimension Stability to maintain its original shape and dimension at certain application conditions.
- Environmental Stress Crack Ability to stand when the subjected to aggressive chemicals and put under stress.
- Flexibility Strength to withstand deformation under load.
- Greater Impact Strength on ability to withstand the effects of dropping and/ or striking which determine the toughness.
- Stress crack resistance properties that resists tensile stresses less than its short-time mechanical strength.
- Excellent thermal expansion at a given extreme temperature conditions.

EASE OF INSTALLATION

One of the cost savers in using DWV fittings is the installation speed because it is light in weight with flexibility properties. It is easy to work on by easy jointing technique using solvent cement making the jointing process and installation simple. Furthermore, the solvent cement is readily available in the market.

VALUE FOR INVESTMENT

It is highly durable and prevents premature breakage, which minimizes expensive replacements and maintenance costs. The service life performance is guaranteed to last for long years because it provides leak-free service.

SAFETY FACTORS

- DWV fittings are bacteria and fungi resistant; even chemical and fire resistant.
- Supports the green building advocacy in compliance with non-harmful effects in the ecosystem.

GUIDELINES IN TRANSPORTING AND INSTALLATION

PROPER TRANSPORTING AND STORAGE OF PVC-U PIPES AND FITTINGS

The pipes and Fittings are to be transported with suitable vehicles and are to be properly loaded and unloaded. During transport, the entire length of the pipes should be supported if possible, in order to avoid sagging. Severe impact stress is to be avoided, particularly in high cold temperatures. Pipes and fittings may be stored outdoors. The following measures must be observed on storing pipes:

- The pipes must be stored in such a manner that perfect support is ensured and that no deformation can occur.
- The stored place should be protected from the sunlight.
- The layers of pipes can be stored either with or without wood in between the layers.
- When storing, pipe sockets should be horizontally and vertically unhampered.
- The stack height should not exceed 2 m. Rubber sealing elements, insofar as these are not protected by a coat of finishing varnish, may not be stored outdoors for a long period.

SUPPORTING AND EMBEDDING

The supporting and embedding of pipes and fittings made of PVC-U in the case of buried ground piping are of vital significance and must therefore be carried out with great care in accordance with DIN EN 1610. In the case of concrete casings of PVC pipes, it must be ensured that the casing is produced in such a manner that it can support itself alone without the pipe

When bedding the pipes in the region of ground water, care must be taken that the filling material does not move (e.g. embedding in a gravel filter layer or in concrete).

1. On bedding in soil under foundations, there must be a minimum cover of 150 mm over the socket. In the case of direct burdening by construction components, protective pipes must be laid if necessary.

INSTALLATION PROCEDURE

Each pipe and fitting is to be leveled according to drop and direction. A straight, continuous path in the stipulated slope is to be observed. In exceptional cases DN (OD) 110 to 200 pipes can be installed as indicated in the following diagram. The data indicated on the following tables, may, however not be exceeded.

THE CORRECT CUTTING TO LENGTH AND SLANTED CUTTING

If necessary, the pipes may be cut to length (fittings may not be shortened since there is no guarantee that they will still be watertight) with suitable plastic cutter or a fine-toothed saw. By means of guiding the saw through a cutting frame as illustrate, a right-angled cut can be achieved. For larger pipe cuttings, a cutting disc suitable for PVC can be used. The cutting edges must be trimmed. The pipe ends must be slanted at an angle of approx. 15° in accordance with the diagram, using suitable tools for slanting or a coarse file.

CHECKING OF WATERPROOFNESS FOR WATER-TIGHTNESS

Vertical pipes or suitable pressure meters are to be used in order to carry out checks. Readings are to be taken at the lowest point on the area to be tested. Non-pressure pipes are to be tested with 0.5 bar excess pressure, measured at the lowest point in the area of piping to be tested which is covered by water. Testing time is 15 minutes. The test is to be carried out on piping which has not yet been covered.

In order to secure location, the piping can be embedded and partly covered (filling cone0), with pipe connections remaining uncovered. If necessary, the piping is to be protected against floating. All opening of the section of piping to be checked in such a manner those they are watertight and secure against pressure.

FILLING AND SEALING

On both sides of the piping, stone-free, compressible soil (maximum granule size 20 mm Ø) is to be layered up to 0.30 m and compressed either manually or with the help of light machines. The piping may not be pushed to the side. If necessary, soil should be filled in and compressed simultaneously from both sides. The vertical position of smaller DN (OD) pipes is to be secured during the embedding procedure. The degree of compaction of the soil in the region of the pipes presumed in the structural analysis is to be produced by means of adequate compression. This is to be proved on request (for example, by means of gauging the Proctor density of by means of driving bores). In exceptional cases, for example when ditches are narrow and do not permit sufficient compressing of the embedding in the supporting are, the piping can be partly or fully installed with concrete or similar materials. Further filling in is then to take place layer-by-layer up to a height of 0.30 m over the pipe crown.

SUBSEQUENT CONNECTION TO PVC SEWER PIPES

In order to install a branch, a sufficiently long piece of pipe (length of the fittings+2 d) is removed the pipe-ends are trimmed, cut at an angle and the branch is inserted . Sleeve sockets, with which the piping is once again closed, are pushed over both the other half of the pipe and over the adjusting piece to be inserted

RAKtherm Launches the New Generation
DWV Systems Technology...

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