



Wavin Commercial Product Range Catalogue 2023



An Orbia business.

Wavin Commercial

Above ground systems



Contents

Introduction	2	Tigris K5 Press-fit Plumbing	71-80
Introduction to Wavin Commercial	2-3	Introduction	71
		Product details	72-80
Wavin AS+ Acoustic Soil	4-15	Tigris K1 Press-fit Plumbing	81-89
Introduction	5	Introduction	82
Product details	6-13	Product details	83-89
Technical data	14	Wavin QuickStream	90-96
General information	15	Siphonic Roof Drainage	90-96
Wavin Solvent Soil & Waste	16-41	Wavin Hep₂O Push-fit Plumbing	97-120
Introduction	17-18	Introduction	99
Estimating data	19	Product details	98-120
Product details	20-40	Transport, handling and waste	121-122
General information	41	Game changing BIM design	123
Wavin HDPE Soil, Waste and Vent	42-69	End-to-end customer support	124
Introduction	43		
Product details	44-64		
Chemical resistance	65-68		
General information	69		

Introduction to Wavin Commercial



Market Leading Pedigree

Wavin is uniquely well-qualified to meet all the piping and drainage requirements of commercial builds.

With operations in 40 countries and a turnover in excess of £1bn, Wavin is Europe's leading supplier of plastic drainage and plumbing systems for the construction industry. All that expertise, industry know-how, project insight and proven product solutions are available throughout Europe and the UK.

In the UK, our market leading brands include: Hep2O Push-fit plumbing and heating, Osma above and below ground drainage systems and Hepworth Clay, the market leading commercial drainage brand.

It's a pedigree we can illustrate with compelling case studies, manufacturing resource, technical support and a comprehensive range of innovative products.

In terms of volume and turnover, Wavin dominates the European Market.
Source: Plasteurope.com

World-Class Products

For every commercial piping and drainage connection from roof to floor.

Wavin currently holds no fewer than 1,500 BSI Kitemarks and a huge investment in innovation has created a wide range of industry firsts. These include: the world's first push-fit plumbing system; the first PPSU press-fit system; the world's quietest soil system and the only manufacturer to use 50% recycled content solid core pipes.

It's this level of commitment to innovation and manufacturing first class products that enables us to provide contractors with the very best commercial plumbing and drainage solutions available.

So, whether its roof drainage, potable water supply or an ultra efficient soil and waste system, contractors can specify and install Wavin commercial products and systems with total confidence, time and time again.





Game Changing BIM Design

Our BIM Revit Packages virtually design the pipe system for you

In-built intelligent assistance makes our BIM solution simply the best and our Revit packages are the first and only ones in the UK to be awarded the BSI Kitemark for BIM Objects. As a result, you will have access to all the economies, speed and 100% accurate digitalised modelling with BIM design from Wavin.

Intelligent assistance automates key aspects of pipe system design to speed the creation of fully detailed ‘as-built’ models. This right first time solution will provide an auto-generated Bill of Materials, eliminate waste, significantly reduce installation time and deliver real savings on-site.

**“Our installers report that the models match to the millimetre.
We can do the design work in a third of the time”**

Teknobad, Norway

End-to-End Customer Support

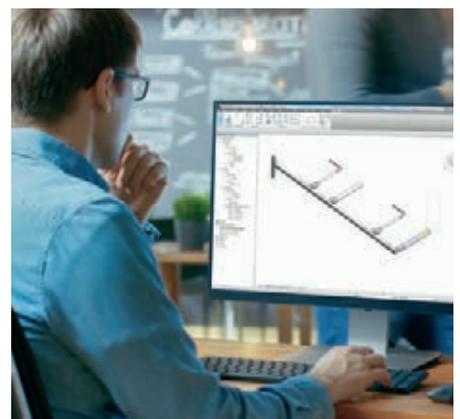
An unbeatable combination of benefits

In thousands of commercial projects we have established a unique knowledge bank of practical expertise, regulatory awareness and technical insight, which makes our customer support an invaluable resource for our commercial project partners.

Support is also provided through MyPortal – accessible anytime and from anywhere. Whether it’s E-learning, accessing our BIM packages or using our intuitive technical tools to help you get the job done faster, you can rely on Wavin for online assistance anytime of the day.

In addition, our Technical Team are conversant with all aspects of our product range and can assist with questions on system design, installation and product suitability, no matter what the application – either on-site or remotely.

Contact them today for support on your next project:
T: 0800 038 0088 E: technical.design.uk@wavin.com



“Wavin supported the installation team by providing certified training to ensure the installation can run smoothly with a product we haven’t used before. The team are now confident and we’re looking forward to getting started.”

Don Elworthy – Senior Contracts Manager,
Panks Engineering

Wavin AS+

Acoustic Soil



Above ground systems

Wavin AS+ Low Noise Soil System

Wavin AS+ is the successor to Wavin AS – providing 'best in class' sound insulation and new product features to make installation even easier and future proof.

Wherever low noise in discharge pipework (soil and rainwater applications) is a design requirement, the Wavin AS+ Push-fit Acoustic System is an efficient, practical and cost-reducing solution.



Wavin AS+ provides the option of a Low Noise or No Noise System as per Fraunhofer Institute of Building Physics test report 2019. Its mineral-reinforced molecular material and unique bracketing system can absorb airborne, structural and impact sound.

Installation is fast and easy which saves time and cost, especially compared with traditional sound insulating techniques such as cast iron. Mineral wrapping may not be required unless stipulated as in Robust details - ref Part E Building Regulations 2014.

Special Advantages

- ① Unique bracketing system – single bracket that can be used in multiple configurations, horizontal or vertically and options for low or no noise solutions
- ① Unique patented lubricated blue seal providing low insertion force, great pipe deflection, very good pressure and vacuumed performance
- ① Sculptured spigot significantly reduces push-in force
- ① Lightweight compared with cast iron, yet extremely robust and resistant to corrosion
- ① Push-fit technology saves installation time and cost compared to cast iron
- ① Soundcheck tool gives you the support you need to accurately predict the noise levels of any soil and waste installation

Features and Benefits – In Service

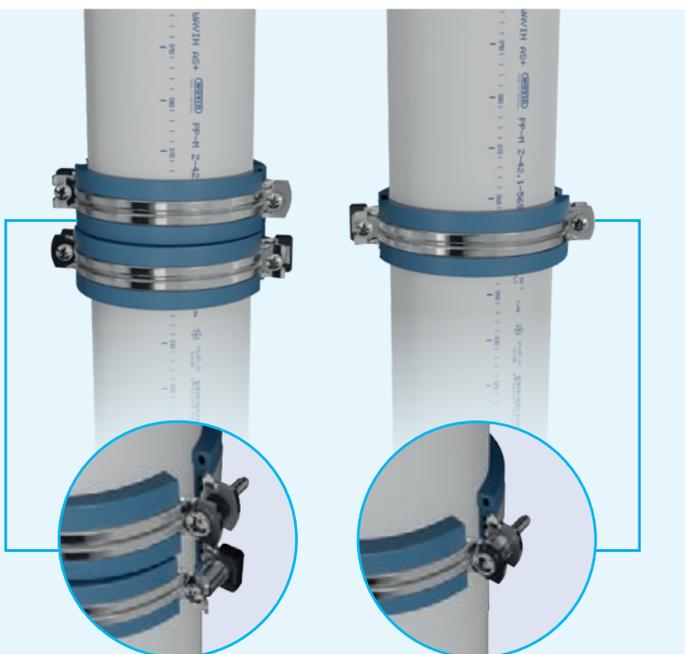
- ① Resistant to hot water: operational temperature capability of up to 95°C short-term (90°C long-term)
- ① Extremely robust: corrosion-resistant
- ① Waste water drainage capability between pH2 and pH12
- ① Smooth inner surface: resistant to build-up of internal deposits

Applications

- ① Soil stacks in multiple-storey buildings requiring noise insulation such as
 - Office buildings, Residential homes, High-rise apartments
 - Hotels
 - Hospitals
 - Shopping malls
 - Schools and universities
- ① Suspended pipework
- ① Internal rainwater systems

For full details download Wavin AS+ literature from wavin.co.uk

* DIN4109 behind the wall with 2,0 l/s
Fraunhofer Testreport 63/2019 an 64/2019



With no noise bracket arrangement <10 dB(A) according to 63/2019*

With low noise bracket arrangement 14 dB(A) according to 64/2019*

Wavin AS+

Product range overview

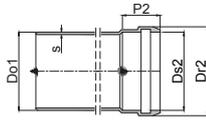
Product		DN 50	DN 100	DN 150
Pipe		✓	✓	✓
Double Socket Coupler		✓	✓	✓
Bend		✓	✓	✓
Long Bend			✓	
Branch		✓	✓	✓
Double Branch			✓	
Corner Branch			✓	
Shower Branch			✓	
Manifold			✓	
Double Socket Sleeve		✓	✓	✓

Product		DN 50	DN 100	DN 150
Long Socket		✓	✓	✓
Socket Plug		✓	✓	✓
Reducer			✓	✓
Access Pipe		✓	✓	✓
Bracket		✓	✓	✓
Covering Clamp type LKS		✓	✓	✓
Gasket EPDM		✓	✓	✓
Gasket NBR		✓	✓	✓
BM-R90		✓	✓	✓

Wavin AS+

Product details Acoustic soil system – Astolan® and PVC-U

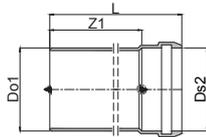
Pipe



Pipe with socket

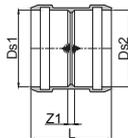
Material: Polypropylene with Astolan®

Nominal Size (mm)	Outer diameter Do1 = Ds2	Wall thickness s	Length of socket P2
50	50	3.0	46
100	110	5.3	59
150	160	5.6	71



Nominal Size (mm)	Part Number	Dimensions (mm)			
		Do1	Ds2	L	Z1
50	3080063	50	51	3046	3000
100	3080030	110	111	209	150
100	3080034	110	111	2059	2000
100	3080035	110	111	2759	2000
100	3080036	110	111	3059	3000
150	3080044	160	160	221.4	150
150	3080050	160	161	3070	3000

Fittings



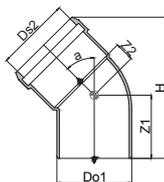
Double Socket Coupler

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm)			
		Ds1	Ds2	L	Z1
50	3080016	50	50	99	3
100	3080012	111	111	124	5
150	3080014	160	160	148	5

Wavin AS+

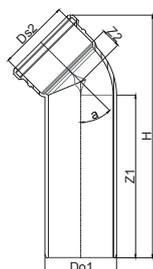
Product details Acoustic soil system – Astolan® and PVC-U



Bends – 15°, 30°, 45°, 67°, 87°

Material: Polypropylene with Astolan®

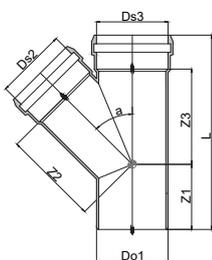
Nominal Size (mm)	Part Number	Dimensions (mm)					
		a	Do1	Ds2	H	Z1	Z2
50	3079965	15°	50	50	115	53	11
50	3079966	30°	50	51	122	57	13
50	3079967	45°	50	51	126	60	18
50	3079968	67°	50	51	124	68	23
50	3079969	87°	50	51	111	74	32
100	3079950	15°	110	110	157	70	17
100	3079951	30°	110	110	177	77	20
100	3079952	45°	110	110	192	85	32
100	3079953	67°	110	110	197	99	44
100	3079954	87°	110	110	186	114	61
150	3079959	15°	160	160	-	85	19
150	3079960	30°	160	160	-	96	28
150	3079961	45°	160	160	-	108	42
150	3079962	87°	160	160	-	151	84



Long Bend – 45°

Material: Polypropylene with Astolan®

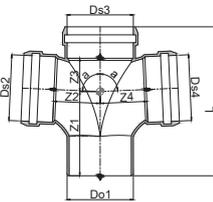
Nominal Size (mm)	Part Number	Dimensions (mm)			
		Do1	Ds2	H	Z1
100	3080026	110	110	25	250



Branch – 45° and 87°

Material: Polypropylene with Astolan®

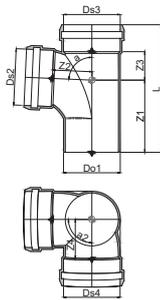
Nominal Size (mm)	Part Number	Dimensions (mm)							
			a	Do1	Ds2	Ds3	L	Z1	Z2
50/50	3079996	45°	50	50	50	171	60	62	62
50/50	3079997	87°	50	50	50	150	75	29	29
100/50	3079982	45°	110	50	110	197	59	106	81
100/50	3079983	87°	110	50	110	178	85	59	36
100/100	3079981	45°	110	111	110	277	83	194	138
100/100	3079980	87°	110	110	110	253	136	77	56
150/100	3079991	45°	160	110	160	304	71	175	165
150/100	3079992	87°	160	110	160	256	124	87	6
150/150	3079994	45°	160	160	160	375	108	200	199



Double Branch – 87°

Material: Polypropylene with Astolan®

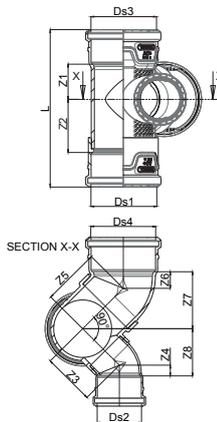
Nominal	Part	Dimensions (mm)								
Size (mm)	Number	Do1	Ds2	Ds3	Ds4	L	Z1	Z2	Z3	Z4
100/100/100	3080010	110	110	110	110	255	139	81	60	81



Corner Branch – 87°

Material: Polypropylene with Astolan®

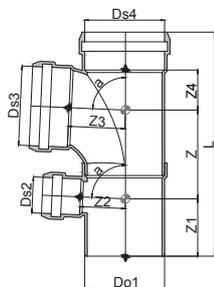
Nominal	Part	Dimensions (mm)								
Size (mm)	Number	Do1	Ds2	Ds3	Ds4	L	Z1	Z2	Z3	Z4
100/100/100	3080008	110	110	110	110	251	122	139	128	139



Shower Double Branch – 87°

Material: Polypropylene with Astolan®

Nominal	Part	Dimensions (mm)								
Size (mm)	Number	Do1	Ds2	Ds3	Ds4	L	Z	Z1	Z2	Z3
100/100/50	3080095	110	50	110	110	330	126	87	59	81



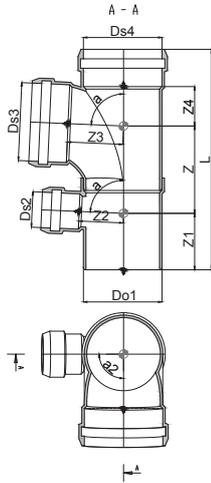
Shower Double Branch – 87° left

Material: Polypropylene with Astolan®

Nominal	Part	Dimensions (mm)								
Size (mm)	Number	Do1	Ds2	Ds3	Ds4	L	Z	Z1	Z2	Z3
100/100/50	3080096	110	50	110	110	330	126	87	59	81

Wavin AS+

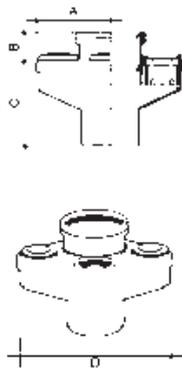
Product details Acoustic soil system – Astolan® and PVC-U



Shower Double Branch – 87° right

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm)								
		Do1	Ds2	Ds3	Ds4	L	Z	Z1	Z2	Z3
100/100/50	3080097	110	50	110	110	330	126	87	59	81



S/S Soil Manifold

- One plain end and one push-fit ring-seal socket
- Permits up to three 50mm connections to be made at floor level
- Complies with BS EN 12056-2:2000 clause ND. 3.3.2
- Make connections using 4Z124W, 2S355W or 2S356W (see below)
- Minimum installation aperture: 240mm square

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Dimensions (mm)			
		A	B	C	D
110	3065902	138	55	160	275

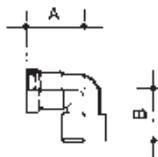


All-Fit Reducer – 40:32mm

- Connects to 32mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871
- Use with 2S355W (below) when a bend is required

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm)
		A
40	4Z124W	54

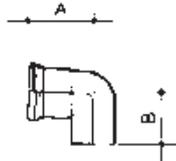


All-Fit Reduction Bend – 50:40mm

- Connects to 40mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
50	2S355W	70	65

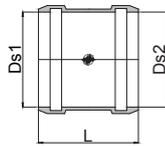


All-Fit 90° Spigot Bend – 50mm

- Connects to 50mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871

Material: ABS

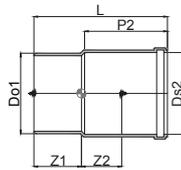
Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
50	2S356W	79	64



Repair Coupler

Material: Polypropylene with Astolan®

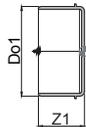
Nominal Size (mm)	Part Number	Dimensions (mm)		
		Ds1	Ds2	L
100	3080088	110	110	124
150	3080090	160	160	148



Long Socket

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm)					
		Do1	Ds2	L	P2	Z1	Z2
50	3080023	50	50	184	105	57	60
100	3080019	110	110	219	137	69	88
150	3080021	160	160	264	164	85	123



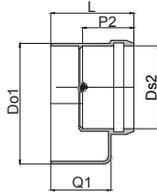
End Cap

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm)	
		Do1	Z1
50	3080106	50	51
100	3080103	110	65
150	3080105	160	76

Wavin AS+

Product details Acoustic soil system – Astolan® and PVC-U



Reducer

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm)				
		Do1	Ds2	L	P2	Q1
100/50	3080078	110	51	90	53	79
150/100	3080082	160	111	114	59	98

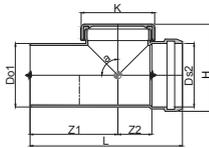


Reducer

- DN50mm spigot fits to Wavin AS+ DN50mm socket and reduces to 40mm plastic pipe to BS EN 1451, BS EN 1455 and BS EN 1566

Material: ABS

Nominal Size (mm)	Part Number	Dimensions (mm)
		A
50/40	5Z124W	78



Access Piece

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	a	Dimensions (mm)						
			Do1	Ds2	H	K	L	Z1	Z2
50	3079917	90°	50	50	84	65	164	82	37
100	3079913	90°	110	110	156	130	258	129	72
150	3079915	90°	160	160	213	130	271	135	68

Accessories



Wavin LKS-clamp

Material: Metal

Nominal Size (mm)	Part Number
50	4065138
100	4065141
150	4065143



Gasket

Material: EPDM

Nominal Size (mm)	Part Number
50	4065145
100	4065188
150	4065190



Gasket

Material: NBR

Nominal Size (mm)	Part Number
50	4065192
100	4025566
150	4025568



Wavin System Bracket

Material: Rubber, Metal

Nominal Size (mm)	Part Number
50	4066449
100	4066452
150	4066454



M10 Bolt

Material: Metal

Nominal Size (mm)	Part Number
80	3020511



Firecollar BM-R90

Material: Metal

Nominal Size (mm)	Part Number
50	4026102
100	4026106
150	4026109

Wavin AS+

Technical data

Wavin AS+ is a mineral reinforced polypropylene (PP) low noise soil and waste solution. A unique material composition for improved noise performance. Optimal sound reduction is guaranteed due to high density of material. Optimized three layer pipe structure for low noise levels push fit connections with a pre-lubricated elastomer seal (EPDM) for quick, easy and reliable installation.

Material

Polypropylene, mineral-reinforced.

Physical properties

⊖ Density	~ 1,9 g/cm ³
⊖ E-Modul	~ 1800 N/mm ²
⊖ Linear coefficient of thermal expansion	~ 0,06 mm/mK
⊖ Reaction to fire	DIN 4102, B2 and BS EN 13501 D-S3, d0
⊖ Temperature	Short-time load by 95°C and 90°C long-term stress

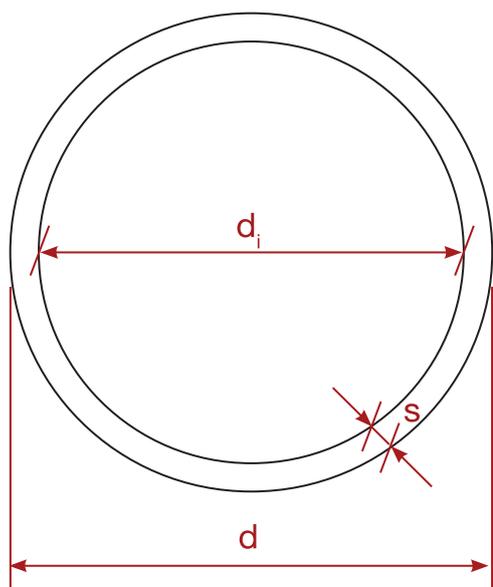
Colour

Light grey RAL7035

Pipe data

DN	d ¹⁾	d _i ²⁾	s ³⁾
50	50	44	3.0
100	110	99.4	5.3
150	160	148.8	5.6

1. Outer diameter in mm
2. Inner diameter in mm
3. Wall thickness in mm



Marking

Wavin AS+, nominal width, date, certification mark, material, fire class.

Example: Wavin AS+, DN100, date, Z.-42.1-569, mineral-reinforced PP Ü DIN 4102, B2.

Wavin AS+

General information

Quality, Standards and Approvals

The British Standards Institution has issued certificates registering Wavin as a firm of assessed capability, with a quality management system which meets the requirements of BS EN ISO 9001.

Wavin systems are the benchmark for excellence and product innovation: precision-manufactured using the most advanced injection moulding and extrusion machines. All products comply with or exceed relevant British and European standards to ensure reliability and long-lasting service.

The Wavin AS+ System has been tested by the Local Authority Building Control (LABC), who are satisfied that where robust construction details are not to be followed, the use of the Wavin AS+ System (without a mineral wool wrap) and only a nominal plasterboard encasement should not compromise any acoustic testing of a penetrated floor. Certificate number 377-9-7038, tested in accordance with BS EN 1451.

The Wavin AS+ System also meets the acoustic requirements of the German standard DIN 4109, achieving a sound performance of under 30dB (A) at 2l/s. The Wavin AS+ System also has the following worldwide approvals:

LABC System Type Approval

Approvals Worldwide	
UK	LABC System Approval, Cert. No. 377-9-7038 Tested in accordance with BS EN 1451
Germany	RAL – quality mark of the Germany Community of Plastic Pipes (GKR), Bonn German Institute of Building (DiBt) – general building inspection approval
Denmark	ETA Denmark VA 2.14 DK 6858
Norway	Godkjenningsnr. for Sanit�rmateriell Nr. 61-090
Sweden	Boverket DNR 83-4480/90
Australia	Watermark Nr.:MP52 Spec 005
Turkey	Turkish Standards Quality Appropriateness Certificate
Poland	Aprobata techniczna COBRTI INSTAL Nr AT-99-02-0670

Cert. No. 377-9-7038 Tested in accordance with BS EN 1451



Fire Test and Assessment Reports

- Ⓢ Passed and certified to BS 476 part 20 and EN 1366-3
- Ⓢ LANTAC Building Control Approval
- Ⓢ LABC Type Approval

Environment

All Wavin manufacturing sites operate Environmental Management Systems which comply with the requirements of and are certified to ISO 14001: 2004.

Health and Safety

The relevant provisions of the following legislation should be adhered to on site:

- Ⓢ Construction (Design and Management) Regulations 1994
- Ⓢ Control of Substances Hazardous to Health Regulations 1988
- Ⓢ Health and Safety at Work Act 1974
- Ⓢ Management of Health and Safety at Work Regulations 1999
- Ⓢ Manual Handling Operations Regulations 1992

Hazards Associated with PVC-U, PVC-C, Polypropylene and Polyethylene

There are no particular hazards associated with handling, cutting or working with the materials mentioned above, and protective clothing or equipment is not normally required.

Safety Data Sheets covering PVC-U, PVC-C, PP, PE, lubricant, solvent cements and cleaners are available from the Wavin Technical Design Department, please call Technical Enquiries to obtain a copy.

Supply

All systems are supplied through a nationwide network of merchant distributors. For details of your nearest merchant, contact Wavin Customer Services.

Sealing Rings

Where applicable, Sealing Rings are supplied fitted to each component and are included in the price.

Conditions of Sale

Wavin will not accept responsibility for the malfunction of any installation which includes components not supplied by Wavin. Goods are sold subject to Company conditions of sale.

Wavin Solvent

Soil & Waste



Above ground systems

Wavin Solvent Soil PVCu – Olive Grey

PVC-U design flexibility for tighter waste connections

The Wavin Solvent Soil system enables space saving and flexible installations for efficient removal of waste water. Reduced installed dimensions minimise duct space required, providing the ideal solution for multi-occupancy and flat developments, where space is a premium.



Features and Benefits

Fixed Joint

- ⊙ Solvent Soil allows installers to create a permanent fixed joint using a chemical weld
- ⊙ Suitable to multiple occupancy or high rise developments
- ⊙ The reduced dimensions help minimise the duct space required

Ease of Installation

- ⊙ A full range of fittings are available to make installation as easy as possible
- ⊙ Innovative keyway system to ensure waste pipe is installed with a fall required in Approved Document H of the Building Regulations
- ⊙ Removes need to accommodate a push-fit socket in tight spaces where a compact solution is needed

Sustainability

110mm and 160mm pipes are manufactured utilising Wavin's Recycore® Technology.

Complimentary Ranges

Wavin PVC-C Solvent Waste is available to connect sanitary objects and appliances to the soild stack.

For WC Connectors, Traps, Condensate, PP Pushfit Waste, ABS solvent weld and Overflow ranges see the Wavin Osma Soil and Waste Product and Installation Manual.

For Wavin AS+ Acoustic Soil System or Wavin HDPE, see other section of this guide and their separate product and installation manuals.

Applications

For vertical soil stacks and horizontal WC pipe in buildings where space is at a premium and solvent weld is the preferred connection method:

- ⊙ Apartment buildings
- ⊙ Hotels
- ⊙ Warehouses
- ⊙ Retail developments
- ⊙ Halls of residence
- ⊙ Hospitals
- ⊙ Offices



Wavin Solvent Soil and Waste

Product Selector

Introduction to Product Selector

The product selector gives details on the individual products in the following Wavin ranges:

- ⊙ Wavin PVC-U Solvent Soil
- ⊙ Wavin PVC-C Solvent Weld Waste

For WC Connectors, Traps, Condensate and Overflow ranges see the Wavin Osma Soil and Waste Product and Installation Manual.

Please refer to separate brochures for further information on other Wavin Industrial and Commercial Systems ranges such as Wavin AS+ Acoustic Soil System, Wavin HDPE and the K5/K1 Tigris Multilayer Press-fit Plumbing Systems.

Abbreviations

The following abbreviations are used in the product selector section to denote fittings or pipe type (also used in the Wavin price list). However, most products also have a bullet point detailing the product type i.e. two push-fit ends.

Key		
	P/E:	Pipe with both ends plain or fittings with one plain end and one special end
	D/SW:	Fittings with solvent sockets at all ends
	SW/S:	Fittings with one or more solvent sockets and one plain or special end
	S/SW:	Fittings with one or more push-fit (ring-seal) sockets but always one solvent socket
	S/S:	Pipe and fittings with one or more push-fit (ring-seal) sockets, but always one plain or special end
	D/S:	Fittings with push-fit (ring-seal) sockets at all ends

Wavin Solvent Soil and Waste

Estimating Data

Estimating Data

The following data is provided to help estimation of quantities required for pipe support and jointing.

Pipe Support

Pipes should be supported at the maximum centres shown opposite in Table 5.

Offset Bends

Pipe Brackets should also be fitted around the Offset Bend or directly below.

Table 5: Maximum Pipe Support Centres

Pipe Size (mm)	Centres (m)	
	Vertical	Horizontal
21.5	0.5	0.5
32	1.2	0.5
40	1.2	0.5
50	1.2	0.6
82	2	1
110	2	1
160	2	1.2

Jointing Material Allowances

Lubricant Allowance

For push-fit ring-seal joints (approximate figures).

Table 6: Lubricant Usage Guide

Description	Part No.	Nominal Pipe Sizes (mm) No. of Joints					
		32	40	50	82	110	160
Silicone Lubricant 50g tube	4S391G	44	37	20	16	9	4

Degreasing Cleaner/Solvent Cement Allowances

For solvent weld joints (approximate figures).

Table 7: Cleaner/Solvent Cement Usage Guide

Description	Part No.	Nominal Pipe Sizes (mm) No. of Joints						
		21.5	32	40	50	82	110	160
Degreasing Cleaner No.1 250ml can	4S380G	240	140	90	66	50	32	20
Solvent Cement No.2 250ml can	4S384G	180	90	60	40	16	11	6
Solvent Cement No.2 500ml can	4S385G	360	180	120	80	32	22	12

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**

Pipe



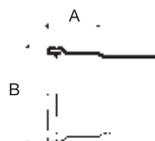
Plain Ended Pipe

- 110/160mm sizes are made with Wavin Recycore technology – a multi-layer construction with over 50% recycled material in solid core
- 110/160 mm pipe sizes are BS EN 1453-1:2000 kitemarked but have exactly the same performance characteristics as BS EN 1329-1:2000

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Length (m)
110	4S073E ♡ △	●	3
110	4S074E ♡ △	●	4
160	6S074E ♡ △	●	4

Socketed Pipe



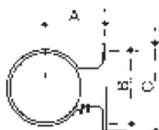
- One plain end, one ring-seal socket
- 110/160mm sizes are made with Wavin Recycore technology – a multi-layer construction with over 50% recycled material in solid core
- 110/160 mm pipe sizes are BS EN 1453-1:2000 kitemarked but have exactly the same performance characteristics as BS EN 1329-1:2000

Material: PVC-U, with Rubber seals



Nominal Size (mm)	Part Number	Colour Option	Length (m)	Dimensions (mm)	
				A	(O/D) B
110	4S043E ♡ △	●	3	65	132
110	4S044E ♡ △	●	4	65	132
160	6S043E ♡ △	●	3	88	191

Brackets



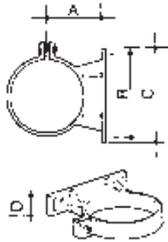
Pipe Bracket

- For support centres, see page 19

Material: PVC-U



Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)				Fixing Hole
			A	B	C	D	
110	4S082E ♡	●	94	120	140	25	6.5 dia
160	6S082E ♡	●	123	175	200	32	8 dia



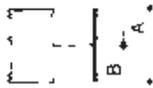
Socket Bracket

- Position in the recessed area adjacent to the sealing-ring housing
- For support centres, see page 19

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)				Fixing Hole
			A	B	C	D	
110	4S083E ♡	●	94	120	140	25	6.5 dia

Sockets

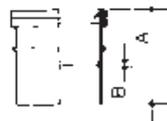


D/SW Double Socket

- Solvent weld socket at each end

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S104E ♡	●	98	2
160	6S104E ♡	●	119	3



S/SW Single Socket

- One solvent weld socket and one push-fit ring-seal socket
- Used for creating a fixed ring-seal joint on a plain-ended pipe or fitting, or where an expansion joint is required to accommodate thermal movement

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S124E ♡	●	105	2
160	6S124E ♡	●	135	2



D/S Double Socket – for repairs

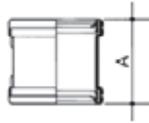
- Push-fit ring-seal socket at each end
- Used as a slip coupler for making repairs

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
110	4S105E ♡	●	111
160	6S105E ♡	●	145

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**



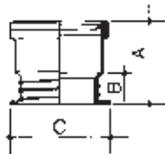
D/S Acoustic Socket

- Push-fit ring-seal socket at each end
- For acoustic performance and built in allowance for thermal expansion
- Can be used as an alternative to 4S124E

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
110	4S125E ♡	●	133

Connector



S/S Connector to Cast-Iron or Clay Drain Socket

- Connector to BS 1211 or BS 437 cast-iron socket or BS 65 clay drain socket

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4S107E ♡	●	121	51	134

Reducers

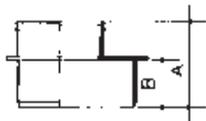


SW/S Reducer

- Spigot connects to 110mm PVC-U solvent weld socket to BS EN 1329/ BS EN 1453
- Socket connects to 50mm ABS or PVC-C solvent weld pipe to BS EN 1455-1/ BS EN 1566-1

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110x50	4S496E ♡	●	89	50

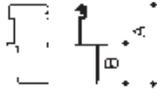


SW/S Reducer

- Spigot connects to 160mm PVC-U solvent weld socket to BS EN 1329/ BS EN 1453
- Solvent weld socket connects to 110mm PVC-U pipe to BS EN 1329/ BS EN 1453

Material: PVC-U

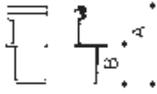
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
160x110	6S499E ♡	●	117	65



S/S Reducer

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110x50	4S096E ♡	●	103	53



S/S Reducer

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110x82	4S095E ♡	●	103	53

Expansion Cap



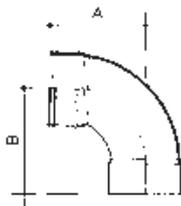
Expansion Cap

- With integral ring-seal
- Converts Wavin Solvent Weld Soil sockets to push-fit expansion sockets
- See Design Guide for advice on accommodating thermal movement

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
110	4S416E	●	22
160	6S416E	●	27

Bends



D/SW Bend – 87.5°

- Two solvent weld sockets

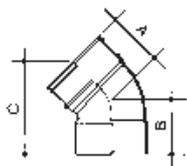
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S461E* ♡	●	152	166
160	6S461E* ♡	●	231	232

*can be used in conjunction with expansion cap (4S416E/6S416E) to create push-fit ring soil socket

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**

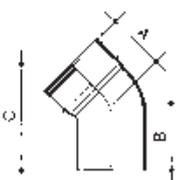


D/SW Bend – 45°

- Two solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S463E* ♡	●	87	87	148
160	6S463E* ♡	●	128	111	204



SW/S Bend – 45°

- One plain end and one solvent weld socket

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S263E* ♡	●	87	105	167

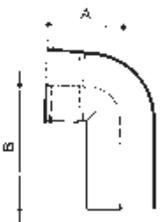


SW/S Bend – 11.25°

- One plain end and one solvent weld socket

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S268E* ♡	●	75	88	162

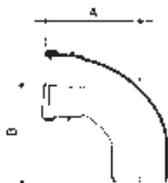


SW/S Long-Tail Bend – 87.5°

- One plain end and one solvent weld socket

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S260E* ♡	●	115	195



S/S Bend – 87.5°

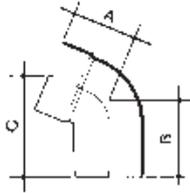
- One plain end and one push-fit ring-seal socket

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S161E ♡	●	162	160

*can be used in conjunction with expansion cap (4S416E/6S416E) to create push-fit ring soil socket

Offset Bends

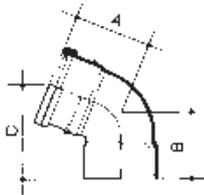


SW/S Offset Bend – 67.5°

- One plain end and one solvent weld socket
- Minimum achievable offsets: 137mm

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S435E* ♡	●	99	105	143

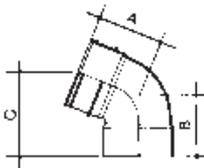


S/SW Offset Bend – 67.5°

- One solvent weld socket and one push-fit ring-seal socket
- Minimum achievable offsets: 137mm

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S440E* ♡	●	110	99	140



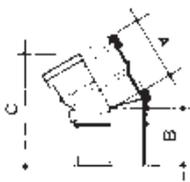
D/SW Offset Bend – 67.5° (Top)

- Two solvent weld sockets
- Minimum achievable offsets: 196mm

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S450E* ♡	●	108	102	123

Adjustable Bend



Adjustable Bend – 30°

- One plain end and one push-fit ring-seal socket
- Variable angle up to 30°
- Rotate segments to achieve required change of direction (flow arrow on socket indicates orientation of fitting)
- BBA certificated (Certificate No. 89/2174)

Material: Polypropylene, with Rubber seals

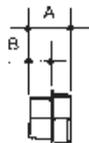
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S173E ▲	●	97	90	180

*can be used in conjunction with expansion cap (4S416E/6S416E) to create push-fit ring soil socket

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**

Boss Socket Adaptors



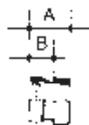
SW/S Solvent Weld Boss Adaptor

- Suitable for all Wavin Soil fittings incorporating boss socket positions
- Connects to 32mm [1¼"], 40mm [1½"] or 50mm [2"] solvent weld plastic pipe to BS EN 1455-1/BS EN 1566-1
- Horizontal adaptors have an inbuilt 2.5° fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	2S298E ♡	●	41	20
40	2S299E ♡	●	45	24
50	2S403E ♡	●	53	30

Boss Adaptors



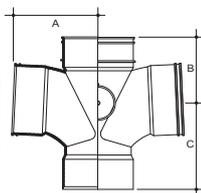
S/S Ring-Seal Boss Adaptor

- Suitable for all Wavin Soil fittings with boss socket positions
- Connects to 32mm [1¼"], 40mm [1½"] or 50mm [2"] plastic pipe to BS EN 1451-1/BS EN 1455-1/BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871
- Horizontal adaptors have an inbuilt 2.5° fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	2S398E ♡	●	50	27
40	2S399E ♡	●	53	30
50	2S402E ♡	●	70	52

Branches



D/SW Double 2-Boss Branch – 87.5°

- Four solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S430E* ♡	●	140.5	110	144.5

*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket

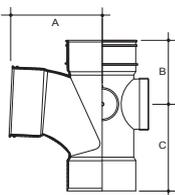


SW/S Corner Branch – 87.5°

- One plain end and three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S491E* ♡	●	179	113	144

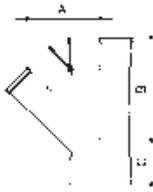


D/SW 2-Boss Access Branch – 87.5°

- Three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S493E* ♡	●	159	112	152



D/SW Single Branch – 45°

- Three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S410E* ♡	●	136	192	85



SW/S Single Branch – 87.5°

- One plain end and two solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S290E* ♡	●	159	112	152



D/SW Single Branch – 87.5°

- Three solvent weld sockets
- Three closed boss socket positions on 110mm fitting
- 160mm fitting has no bosses

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S490E* ♡	●	159	112	152

*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**

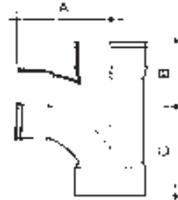


D/SW Unequal Single Branch – 87.5°

- Two 160mm solvent weld sockets
- One 110mm solvent weld socket on the branch
- Two closed boss socket positions

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
160	6S498E* ♡	●	167	130	155

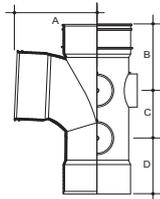


D/SW Single Branch – 87.5°

- Three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
160	6S490E* ♡	●	222	161	240



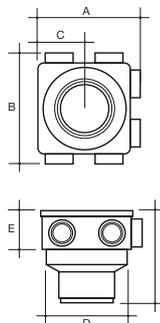
D/SW Single 5-Boss Branch

- Three solvent weld sockets
- 110mm branch

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B	C	D
110	4S495E* ♡	●	140.5	116.5	83.5	97.5

Manifolds



SW/S 6 Boss Manifold

- 6 boss connection points (No boss adaptors required)
- Dual 40/50mm solvent weld connection
- Compact design, 163mm body sits easily into 200mm drilled or formed hole
- Branch low in fitting: 132mm from centreline of branch horizontal inlet to 50mm spigot invert
- Horizontal instead of vertical waste connection – no upstanding bends required

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)					
			A	B	C	D	E	F
110	4S597E	●	204	222	94	163	79	184

*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket



S/S Soil Manifold

- One plain end and one push-fit ring-seal socket
- Permits up to three 50mm connections to be made at floor level
- Complies with BS EN 12056-2:2000 clause ND. 3.3.2
- Make connections using 2CS354 (below), 2CS355 or 2CS356
- Minimum installation aperture: 240mm square

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B	C	D
110	4S595E ♡	●	138	55	160	275

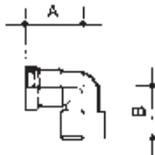


All-Fit Reducer – 40:32mm

- Connects to 32mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871
- Use with 2S355W (below) when a bend is required

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
40	4Z124W	○	54

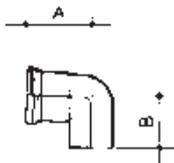


All-Fit Reduction Bend – 50:40mm

- Connects to 40mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
50	2S355W	○	70	65



All-Fit 90° Spigot Bend – 50mm

- Connects to 50mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871

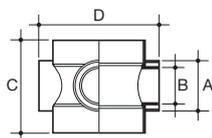
Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
50	2S356W	○	79	64

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**

Bossed Pipes

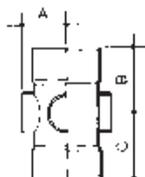


D/SW Short 3-Boss Pipe

- Three closed boss socket positions for use with the appropriate Boss Socket Adaptor (page 26)
- Three closed 40mm [1½"] spigot tail positions also allow for direct connection of 40mm [1½"] solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B	C	D
110	4S588E ♡	●	56	43	124	74



D/SW Bossed Pipe

- Two solvent weld sockets
- Three closed boss socket positions and one open to receive appropriate Boss Socket Adaptor (page 26)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S586E* ♡	●	70	104	115

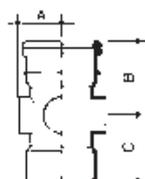


SW/S Bossed Pipe

- One plain end and one solvent weld socket
- Three closed boss socket positions and one open to receive appropriate Boss Socket Adaptor (page 26)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S585E* ♡	●	70	100	119



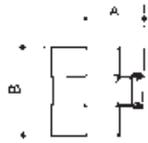
S/SW Bossed Pipe

- One plain end and one push-fit ring-seal socket
- Three closed boss socket positions and one open to receive appropriate Boss Socket Adaptor (page 26)

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S590E ♡	●	70	103	116

*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket



D/SW Bossed Pipe (Solvent Weld)

- Connects to 32mm [1¼"] or 40mm [1½"] plastic pipe to BS EN 1451-1/BS EN 1455-1/BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871
- Two solvent weld sockets
- One push-fit socket position

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110x32	4S483E ♡	●	95	87	123
110x40	4S484E ♡	●	110	99	140

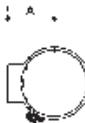
Strap Boss



Strap Boss

- For making side connections on BS EN 1329 plastic pipe after construction
- Use in conjunction with Boss Socket Adaptor (page 26)

Material: PVC-U



Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
110	4S319E ♡	●	77

Access Fittings



D/SW Access Bend – 87.5°

- Two solvent weld sockets
- Fitted with screwed access cover

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S469E* ♡	●	152	80	166



D/SW 3-Boss Access Pipe

- Two solvent weld sockets
- Fitted with screwed access cover

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S474E* ♡	●	70	104	115

*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket

Wavin Solvent Soil

Product details **PVC-U Solvent Soil**



SW/S Bossed Access Pipe

- One plain end and one solvent weld socket
- Three closed boss socket positions
- Fitted with screwed access cover

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S574E* ♡	●	70	100	119
160	6S474E* ♡	●	124	131	150

Plugs



P/E Access Plug

- Fits into a solvent weld socket to provide an access point
- Fitted with screwed access cover

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S292E ♡	●	50	132

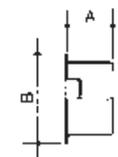


SW/S Access Plug

- Glues over a pipe spigot to provide an access point
- Fitted with screwed access cover

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S492E ♡	●	50	137



P/E Socket Plug

- For use as a blanking plug only

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
110	4S296E ♡	●	54	132

*can be used in conjunction with expansion cap (4S416E/6S416E) to create push-fit ring soil socket

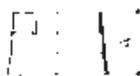
Terminal Fittings



Balloon Grating

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
110	4S302E	●	90



Weathering Collar

- Used to maintain a watertight seal between pipe and traditional lead or aluminium flashing
- To be solvent welded to pipe using Solvent Cement Filler

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
110	4S300E	●	86



SW/S Vent Cowl

- Provides an alternative weather-proof termination for soil and vent pipe, or outlet for a mechanical-ventilation system
- Can be used in a vertical or horizontal position

Material: PVC-U

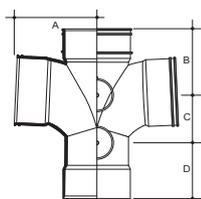
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4S310E ♡	●	172	40	100

Wavin Solvent Soil

Product details **Problem Solvers**

The following 110mm fittings are designed to assist installers in tight situations, e.g. inside a narrow duct. Please note, the boss adaptors listed on p.35 and 36 are only compatible with the four 110mm fittings shown below.

Double Branches

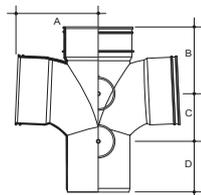


D/SW Double 4-Boss Branch – 87.5°

- Four solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4CS832SE* ♡	●	140.5	16.5	83.5



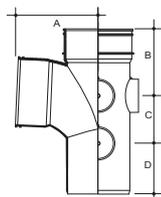
SW/S 4-Boss Branch – 87.5°

- One plain end and three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
110	4CS834SE* ♡	●	140.5	116.5	83.5

Single Branch

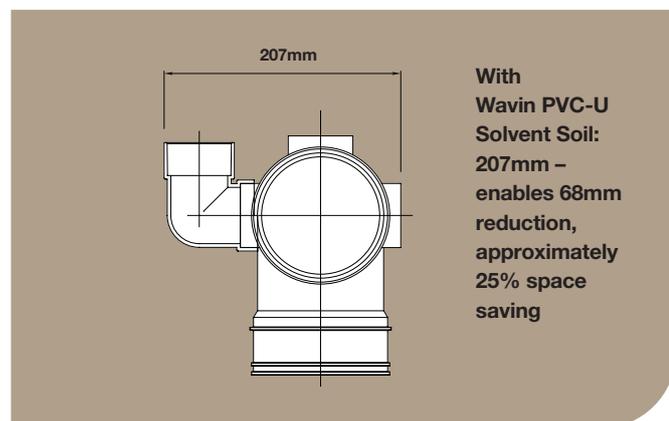


SW/S Single 5-Boss Branch – 87.5°

- One plain end and two solvent weld sockets

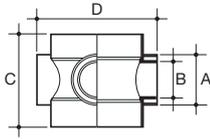
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B	C	D
110	4CS895SE* ♡	●	140.5	16.5	83.5	89



*can be used in conjunction with expansion cap (4S416E) to create push-fit ring soil socket

Bossed Pipe



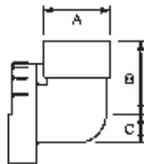
D/SW Short 3-Boss Pipe

- Three closed boss socket positions for use with the appropriate Boss Socket Adaptor (page 22)
- Three closed 40mm [1½"] spigot tail positions also allow for direct connection of 40mm [1½"] solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B	C	D
110	4CS588SE	●	56	43	124	74

Boss Adaptors

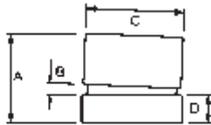


Boss Adaptor 90° – Solvent Weld

- Adjustable fall angles, adaptor prevents negative fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
40	2CS812SE	●	48.5	52	21.5
50	2CS813SE	●	61.5	64.5	28

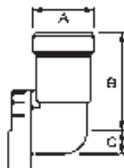


Boss Adaptor Straight – Solvent Weld

- Keyway locks adaptors into required 2.5° fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)			
			A	B (deg)	C	D
32	2CS814SE	●	47	2.5°	41.5	18
40	2CS815SE	●	50	2.5°	48.5	18
50	2CS816SE	●	57	2.5°	61.5	18



Boss Adaptor 90° – Push-fit

- Adjustable fall angles, adaptor prevents negative fall

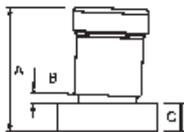
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
40	2CS802SE	●	55.5	83.5	21.5

Note: The boss adaptors listed in this section are designed to fit the 4CS895SE; 4CS832SE; 4CS834SE; 4CS588SE and are not compatible with other bossed fittings in the Wavin Solvent Soil range.

Wavin Solvent Soil

Product details **Problem Solvers**



Boss Adaptor Straight – Push-fit

- Keyway locks adaptors into required 2.5° fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B (deg)	C
32	2CS804SE 	●	78.5	2.5°	18
40	2CS805SE 	●	82	2.5°	18

Note: The boss adaptors listed in this section are designed to fit the 4CS895SE; 4CS832SE; 4CS834SE; 4CS588SE and are not compatible with other bossed fittings in the Wavin Solvent Soil range.

Wavin Solvent Waste

Product details **PVC-C Solvent Weld waste**

Pipe

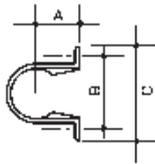


Plain-Ended Pipe

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Length (m)
32	4M073 ▾	● ● ○	3
40	5M073 ▾	● ● ○	3
50	2M073 ▾	● ● ○	3

Bracket



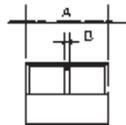
Pipe Bracket

- For support centres, see page 19

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
32	4M081 ▾	● ● ○	31	67	85
40	5M081 ▾	● ● ○	34	73	92
50	2M081 ▾	● ● ○	58	82	102

Sockets



Double Socket

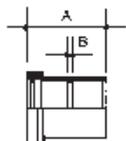
- For connecting lengths of PVC-C pipe

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	4M104 ▾	● ● ○	42	2
40	5M104 ▾	● ● ○	48	2
50	2M104 ▾	● ● ○	68	2

Wavin Solvent Waste

Product details **PVC-C Solvent Weld waste**



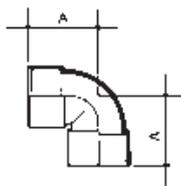
Expansion Socket

- For creating an expansion joint where provision for thermal movement is required.
- Solvent weld socket and push-fit ring-seal socket
- Push-fit socket connects to 32mm [1¼"], 40mm [1½"] or 50mm [2"] pipe to BS EN 1455-1 and BS EN 1566-1
- Also connects to copper pipe to BS 659 and BS 2871

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	4M124	● ○	64	3
40	5M124	● ○	65	3
50	2M124	● ○	72	3

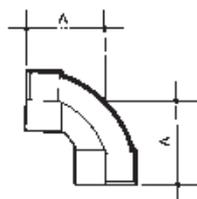
Bends



Knuckle Bend – 90°

Material: PVC-C

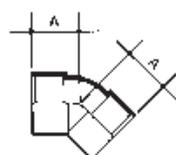
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
32	4M160	● ● ○	40
40	5M160	● ● ○	52
50	2M160	● ● ○	60



Bend – 87.5°

Material: PVC-C

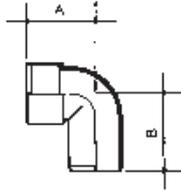
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
32	4M161	● ● ○	47
40	5M161	● ● ○	58
50	2M161	● ● ○	72



Bend – 45°

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)
			A
32	4M163	● ● ○	31
40	5M163	● ● ○	43
50	2M163	● ● ○	48

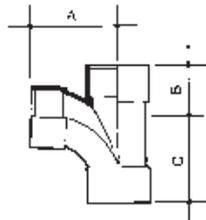


Spigot Bend – 90°

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	4M260	● ● ○	49	53
40	5M260	● ● ○	51	91
50	2M260	● ● ○	63	96

Tee

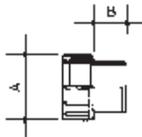


Tee – 87.5°

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
32	4M190	● ● ○	47	43	51
40	5M190	● ● ○	56	51	59
50	2M190	● ● ○	67	62	68

Plug



P/E Access Plug

- Fits into a solvent weld socket to provide an access point
- Fitted with screwed access cover
- See Design and Installation Guide and BS EN 12056:2000 regarding provision of access

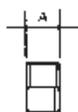
Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
32	4M292	● ● ○	43	20
40	5M292	● ● ○	51	22
50	2M292	● ● ○	63.5	29

Wavin Solvent Waste

Product details **PVC-C Solvent Weld waste**

Reducer



Reducer

- Fits inside a 40mm [1½"] solvent weld socket to BS EN 1455-1 and BS EN 1566-1
- Allows connection of a 32mm [1¼"] waste pipe to either 40mm [1½"] or 50mm [2"] pipe
- Also allows a 40mm [1½"] pipe to be connected to a 50mm [2"] pipe

Material: PVC-C

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
40x32	5M455 ♡	● ● ○	23
50x32	2M458 ♡	● ● ○	30
50x40	2M456 ♡	● ● ○	30

Note: For for all push-fit ranges and ancillaries, please refer to the Wavin Osma Soil and Waste Product and Installation Manual.

Wavin Solvent Soil and Waste

General Information

Materials

Pipes and most fittings in Wavin Soil and Waste systems are manufactured from the following materials, as individually denoted in the product listings in this Guide.

Material	Systems
PVC-U Unplasticised Polyvinyl Chloride	Soil systems and Solvent Weld Overflow system (pipe only)
PP Polypropylene	Push-Fit Waste system and Push-Fit Overflow system, V-Joint Traps
ABS Acrylonitrile Butadiene Styrene	ABS Solvent Weld Waste system and Solvent Weld Overflow system (fittings only)
PVC-C Chlorinated poly (vinyl chloride) (PVC-C)	PVC-C Solvent Weld Waste System
HDPE High Density Polyethylene	Electrofusion and Butt fusion welded system

Quality, Standards and Approvals

The British Standards Institution has issued certificates registering Wavin as a firm of assessed capability, with a quality management system which meets the requirements of BS EN ISO 9001.

Wavin systems are the benchmark for excellence and product innovation: precision-manufactured using the most advanced injection moulding and extrusion machines. All products comply with or exceed relevant British and European standards to ensure reliability and long-lasting service.

Acceptance

Wavin Soil and Waste systems comply, where applicable, with the requirements of the following British Standards:

- ⊙ BS 3943:1983 Specification for waste traps
- ⊙ BS 4514:2001 Unplasticised PVC soil and ventilating pipes, fittings and accessories (82.4mm minimum mean outside diameter)
- ⊙ BS 6209:1982 Solvent cement for non pressure thermoplastics pipe systems
- ⊙ BS EN 1329-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. PVC-U
- ⊙ BS EN 1453-1:2000 Plastics piping systems with structured-wall pipes for soil and waste discharge (low and high temperature) inside buildings. Unplasticized poly (vinyl chloride) (PVC-U)
- ⊙ BS EN 1566-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. PVC-C Chlorinated poly (vinyl chloride)
- ⊙ BS EN 12380:2002 Air admittance valves for drainage systems
- ⊙ BS EN 1519-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polyethylene (PE).



The British Standard Kitemark identifies pipe and fittings that are manufactured under the BSI certification scheme.



Wavin Soil systems have been awarded British Board of Agrément [BBA] certification as follows:

– Air Admittance Valve 40 and Air Admittance Valve 110 – 86/1643

– 110mm Adjustable Bend – 89/2174

References

Wavin Soil and Waste systems should be designed and installed in accordance with the guidance provided in the appropriate sections of the following:

- ⊙ Building Regulations 2000 (England and Wales): Approved Document H, Part H1
- ⊙ Building Standards (Scotland) Regulations 1993-2002 (including current amendments: Technical Standards Part M)
- ⊙ Building Regulations (Northern Ireland) 2000: Technical Booklet N
- ⊙ BS 8000 Workmanship on Building Sites: Part 13: 1989 Code of Practice for above ground drainage and sanitary appliances
- ⊙ BS EN 12056: 2000 Gravity drainage systems inside buildings: Part 3 Roof drainage, layout and calculation
- ⊙ Painting plastics: IP 11/1979. Watford, BRE 1979
- ⊙ Water Regulations Guide: London, Water Regulations Advisory Scheme, 2000
- ⊙ BS EN 752:2008 – Drain and sewer systems outside buildings

Wavin HDPE

Soil, Waste and Vent



Above ground systems

Wavin HDPE

Soil, waste and vent system

Wavin HDPE is a universal system approved for pipe installation in buildings to DIN 19535 and DIN EN 1519. The product range includes pipes and fittings with dimensions between 40mm and 315mm. Wavin HDPE is a complete soil, waste and vent system of pipes and fittings, manufactured from high-density polyethylene (PE HD). This tough and durable HDPE system offers an extraordinary chemical resistance in combination with a high flexibility level and great impact resistance.



Wavin HDPE pipes and fittings are jointed by welding, making the joints resistant to tension. There are two methods of welding: butt welding and electro-fusion welding. Most Wavin HDPE products can also be used as part of negative pressure installations like the siphonic roof drainage system Wavin QuickStream.

Feature and Benefits

⊕ High-temperature resistance

Wavin HDPE is resistant to temperatures of up to 90°C continuous temperature and 100°C short term

⊕ Flexibility

Wavin HDPE is well suited to assemblies subjected to vibration. It is therefore ideal for use in seismic zones and across expansion joints



⊕ UV resistance

With the addition of a percentage of carbon black, HDPE is UV-stabilised and can therefore be installed outdoors without degradation problems

⊕ Ease of welding

An advantage of Wavin HDPE is that it can be welded (both by butt welding and with electrofusion joints), thereby providing a perfectly sealed system

⊕ Low weight

Wavin HDPE's lightness makes transportation and handling easy

⊕ Use of adhesives

Because of its high resistance to chemical agents, Wavin HDPE cannot be jointed with adhesives

⊕ Low-temperature resistance

The elasticity of Wavin HDPE allows pipes to withstand freezing of internal water

⊕ Impact resistance

Wavin HDPE's elasticity gives pipes a high impact strength at temperatures as low as -40°C. This ruggedness makes handling of pipes easy during installation

⊕ Smooth Bore

The smooth surface of Wavin HDPE allows for both an optimum flow of any type of waste material and self-cleaning of pipes

⊕ Fire Hazards

Wavin HDPE does not issue any toxic gases during combustion

⊕ Wavin HDPE connection seals

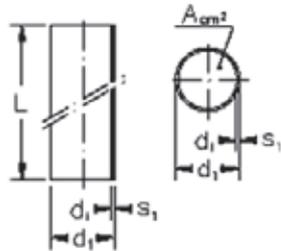
Quick-fit coupling and expansion joint seals remain resistant to waste water from household appliances, laboratories and hospitals

The seals are produced from an elastomer which guarantees sealing and durability even in extreme conditions

Wavin HDPE

Product details **Soil, Waste and Vent**

Pipe



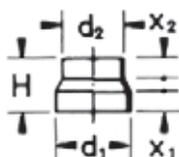
Pipe

- Pipes: From Ø 75 to Ø 315 pipe series S12,5 / PN 5 and in stiffness class SN 4, suitable for buried application 200 x 7.7, 250 x 9.6, 315 x 12.1
- 200, 250 and 315 mm in class S16 (SN2) available on request
- Nominal diameters according to DIN 19535
- Wavin PE standard pipes are supplied in 5 metre lengths marked with co-extruded green markings or text

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1	di	S1	L	A cm ²
40	3003465	40	34.0	3.0	5000	9.0
50	3003466	50	44.0	3.0	5000	15.2
56	3003477	56	50.0	3.0	5000	23.1
63	3003467	63	57.0	3.0	5000	25.4
75	3003468	75	69.0	3.0	5000	37.3
90	3003458	90	83.0	3.5	5000	54.1
110	3075609	110	101.4	4.3	3000	80.7
110	3003459	110	101.4	4.3	5000	80.7
125	3003460	125	115.2	4.9	5000	104.2
160	3003461	160	147.6	6.2	5000	171.1
200	3003462	200	184.6	7.7	5000	267.1
250	3003463	250	230.8	9.6	5000	418.4
315	3003464	315	290.8	12.1	5000	664.2

Fittings



Concentric Reducer

- Segment Welded *

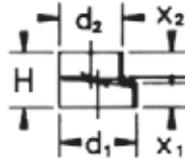
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			H
		d1/d2	X1	X2	
50/40	3084576	50/40	30	30	80
56/50	3003820	56/50	30	30	80
63/40	3003796 [▲]	63/40	30	30	80
63/50	3003797 [▲]	63/50	30	30	80
63/56	3003798	63/56	30	30	80
75/50	3003800 [▲]	75/50	30	30	80
75/63	3003801 [▲]	75/63	30	30	80
90/50	3003803 [▲]	90/50	30	30	80
90/63	3003804 [▲]	90/63	30	30	80
90/75	3003805 [▲]	90/75	30	30	80
110/50	3003807 [▲]	110/50	30	30	80
110/56	3003858	110/56	30	30	80
110/63	3003808	110/63	30	30	80
110/75	3003809	110/75	30	30	80
110/90	3003810	110/90	30	30	80
125/63	3003812 [▲]	125/63	30	30	80
125/110	3003815	125/110	30	30	80
160/110	3003816	160/110	32	29	100
160/125	3003817 [▲]	160/125	35	35	100
200/160	3018808*	200/160	100	100	250
250/200	3018809*	250/200	120	120	270
315/250	3018810*	315/250	130	130	325

NOTE: [▲] = Made to order

Wavin HDPE

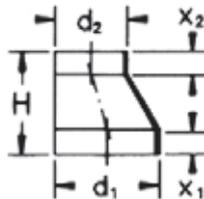
Product details **Soil, Waste and Vent**



Eccentric Reducer – Short

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2	H
50/40	3003821	50/40	35	37	80
56/50	3003841	56/50	35	37	80
63/40	3003822Q [▲]	63/40	35	37	80
63/50	3003823Q	63/50	35	37	80
63/56	3003842Q	63/56	35	37	80
75/40	3003824	75/40	33	30	80
75/50	3003825	75/50	35	37	80
75/56	3003843	75/56	35	37	80
75/63	3003826	75/63	35	37	80
90/50	3003827Q [▲]	90/50	31	34	80
90/63	3003828	90/63	31	38	80
90/75	3003829	90/75	31	43	80
110/40	3003830	110/40	31	34	80
110/50	3003831	110/50	31	34	80
110/56	3003835	110/56	31	35	80
110/63	3003832	110/63	35	37	80
110/75	3003833	110/75	31	36	80
110/90	3003834	110/90	35	37	80
125/75	3003836Q [▲]	125/75	35	30	80
125/90	3003837Q	125/90	35	32	80
125/110	3003838Q	125/110	36	36	80
160/110	3003839	160/110	35	37	80
160/125	3003840	160/125	35	37	80



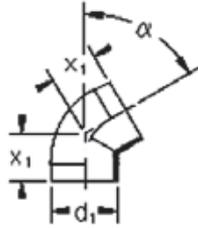
Eccentric Reducer – Long

- Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2	H
200/110	3018811	200/110	110	60	325
200/125	3018812	200/125	110	70	310
200/160	3018813	200/160	110	90	270
250/200	3070632*	250/200	130	110	325
315/200	3014918*	315/200	150	130	325
315/250	3003856*	315/250	150	130	395

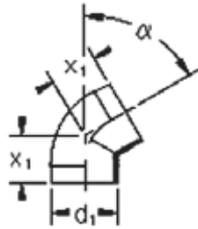
NOTE: [▲] = Made to order



Elbow 15°

Material: HDPE

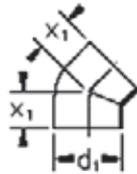
Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	∅	X1
110	3017993	110	15°	45
160	3043453 [▲]	160	15°	130
200	3043454 [▲]	200	15°	133
250	3043455 [▲]	–	–	–
315	3043457 [▲]	–	–	–



Elbow 30°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	∅	X1
110	3003576	110	30°	55
160	3003584	160	30°	80



Elbow 45°

- Segment Welded *

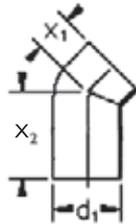
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)	
		d1	X1
40	3084563	40	40
50	3084565	50	45
56	3003597	56	45
63	3003569	63	50
75	3003572	75	50
90	3003574	90	55
110	3003577	110	60
125	3003582	125	65
160	3003585	160	100
200	3018820	200	160
250	3018821*	250	165
315	3018822* [▲]	315	230

NOTE: [▲] = Made to order

Wavin HDPE

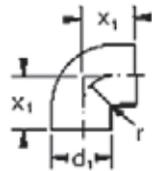
Product details **Soil, Waste and Vent**



Elbow 45° Long Tail

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	X1	X2
110	3075824 [▲]	110	95	156

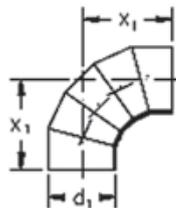


Elbow 88.5°

- Swept type †

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)	
		d1	X1
40	3084564 [†]	40	60
50	3084566 [†]	50	70
56	3003598	56	40
63	3003570 [†]	63	80
75	3003573 [†]	75	75
90	3003575	90	80
110	3003579 [†]	110	110
125	3003583 [†]	125	125
160	3003587 [†]	160	180

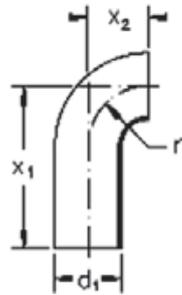


Elbow 90° Segment Welded

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	X1	
160	3003943	160	140	(Welded)
200	3018818 [*]	200	250	
250	3017978 [*]	250	335	
315	3018819 ^{*▲}	315	370	

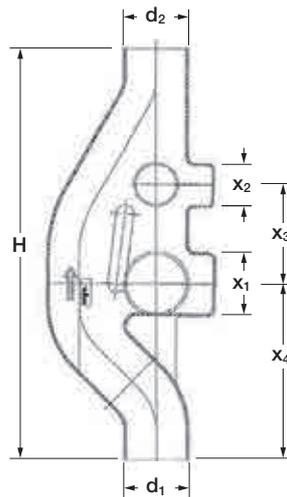
NOTE: [▲] = Made to order



Elbow 90° Extended

Material: HDPE

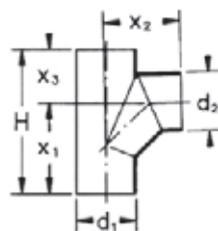
Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1	X1	X2	r
40	3084577	40	150	30	30
50	3084567	50	180	40	40
56	3003944	56	210	40	40
63	3003601 [▲]	63	210	50	50
75	3003622	75	210	70	70
90	3003602	90	240	90	90
110	3003603	110	270	103	100
125	3003605 [▲]	125	200	110	110



HDPE Airmix "sovent"

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)					
		d1/d2	X1	X2	X3	X4	H
110	3003791 [▲]	110	110	75	170	300	700
160	4042219 [▲]	160	110	75	162.6	457.7	950



Swept Branch 88.5°

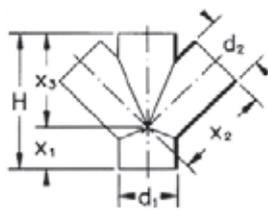
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1/d2	X1	X2	X3	H
110	3003792	110	170	140	100	270

NOTE: [▲] = Made to order

Wavin HDPE

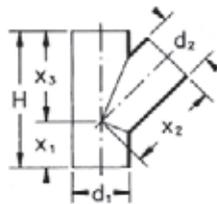
Product details **Soil, Waste and Vent**



Double Branch 45°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2-X3	H
90/50	3018005 [▲]	90/50	80	160	240
110/50	3003730 [▲]	110/50	80	180	260
110/110	3003728	110/110	80	180	260



Branch 45°

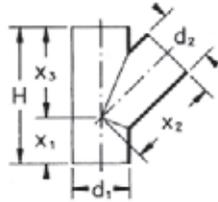
- Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2-X3	H
40/40	3084570	40/40	45	90	135
50/40	3084574	50/40	55	110	165
50/50	3084572	50/50	55	110	165
56/50	3003725Q	56/50	55	110	165
56/56	3003724	56/56	60	120	180
63/40	3003635Q [▲]	63/40	65	130	195
63/50	3003637Q	63/50	65	130	195
63/56	3003639Q	63/56	65	130	195
63/63	3003633	63/63	65	130	195
75/40	3003643Q	75/40	70	140	210
75/50	3003645Q	75/50	70	140	210
75/56	3003649	75/56	70	140	210
75/63	3003647Q	75/63	70	140	210
75/75	3003641	75/75	70	140	210
90/40	3003654Q	90/40	80	160	240
90/50	3003656Q	90/50	80	160	240
90/63	3003658Q [▲]	90/63	80	160	240
90/75	3003660Q [▲]	90/75	80	160	240
90/90	3003651Q [▲]	90/90	80	160	240
110/40	3003664 [▲]	110/40	90	180	270
110/50	3003666	110/50	90	180	270
110/56	3003674	110/56	90	180	270
110/63	3003668	110/63	90	180	270
110/75	3003670	110/75	90	180	270
110/90	3003672Q [▲]	110/90	90	180	270
110/110	3003662	110/110	90	180	270
125/50	3003678Q	125/50	100	200	300
125/63	3003679 [▲]	125/63	100	200	300
125/75	3003681Q [▲]	125/75	100	200	300
125/90	3003683Q [▲]	125/90	100	200	300
125/110	3003685	125/110	100	200	300
125/125	3003676 [▲]	125/125	100	200	300

NOTE: [▲] = Made to order

Other sizes continued on next page



Branch 45° – Continued

- Segment Welded *

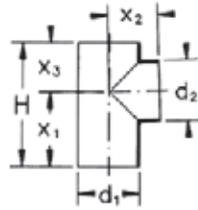
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2-X3	H
160/110	3003688	160/110	125	250	375
160/125	3003690 [▲]	160/125	125	250	375
160/160	4009725	160/160	125	250	375
200/110	3070633*	200/110	180	360	540
200/125	3018824Q [▲]	200/125	180	360	540
200/160	3070634*	200/160	180	360	540
200/200	3070630*	200/200	180	360	540
250/110	3003705*	250/110	220	440	660
250/125	3003707Q [▲]	250/125	220	440	660
250/160	3003709*	250/160	220	440	660
250/200	3003710*	250/200	220	440	660
250/250	3018826*	250/250	220	440	660
315/110	3003723*	315/110	280	560	840
315/125	3018827 [▲]	315/125	280	560	840
315/160	3018828*	315/160	280	560	840
315/200	3003718*	315/200	280	560	840
315/250	3003719*	315/250	280	560	840
315/315	3018829*	315/315	280	560	840

NOTE: [▲] = Made to order

Wavin HDPE

Product details **Soil, Waste and Vent**



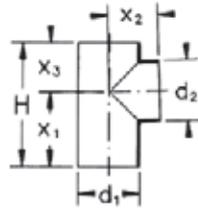
Branch 88.5°

- Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2-X3	H
40/40	3084571	40/40	75	55	130
50/40	3084575	50/40	90	60	150
50/50	3084573	50/50	90	60	150
56/50	3003726	56/50	105	70	175
56/56	3003727	56/56	105	70	175
63/50	3003638	63/50	105	70	175
63/63	3003634 [▲]	63/63	105	70	175
75/50	3003646 [▲]	75/50	105	70	175
75/56	3003650	75/56	105	70	175
75/63	3003648 [▲]	75/63	105	70	175
75/75	3003642	75/75	105	70	175
90/40	3003655	90/40	120	80	200
90/50	3003657	90/50	120	80	200
90/63	3003659 [▲]	90/63	120	80	200
90/75	3003661 [▲]	90/75	120	80	200
90/90	3003652	90/90	120	80	200
110/40	3003665	110/40	135	90	225
110/50	3003667	110/50	135	90	225
110/56	3003675	110/56	135	90	225
110/63	3003669 [▲]	110/63	135	90	225
110/75	3003671	110/75	135	90	225
110/90	3003673 [▲]	110/90	135	90	225
110/110	3003663	110/110	135	90	225
125/63	3003680 [▲]	125/63	150	100	250
125/110	3003686 [▲]	125/110	150	100	250
125/125	3003677	125/125	150	100	250
160/110	3003689	160/110	210	140	350
160/125	3003691 [▲]	160/125	210	140	350
160/160	3003687	160/160	210	140	350
200/110	3003698*	200/110	180	180	360
200/125	3018832 [▲]	200/125	180	180	360
200/160	3003702*	200/160	180	180	360
200/200	3018831*	200/200	180	180	360
250/110	3018002*	250/110	220	220	440
250/125	3018832 [▲]	250/125	220	220	440
250/160	3018003*	250/160	220	220	440
250/200	3018833*	250/200	220	220	440
250/250	3003704*	250/250	220	220	440
315/110	3018834 [▲]	315/110	280	280	560
315/125	3003716 [▲]	315/125	280	280	560
315/160	3018835 [▲]	315/160	280	280	560
315/200	3018836 [▲]	315/200	280	280	560
315/250	3018837 [▲]	315/250	280	280	560
315/315	3003713 [▲]	315/315	280	280	560

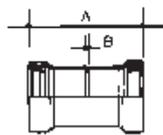
NOTE: [▲] = Made to order



Boss Pipe – Four Way Extended Spigot

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2	X1	X2-X3	H
110/56	3075823	110/56	136	115-86	222

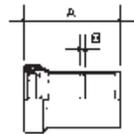


Universal Connector

- Two push-fit ring-seal sockets
- Connects to 40mm [1½"] or 50mm [2"] pipe to BS EN 1451-1/ BS EN 1455-1 and BS EN 1566-1

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
40	5W102G ♡	95	3
50	2W102G ♡	105	3

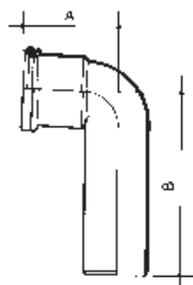


Expansion Socket – with Solvent Socket Tail

- For creating an expansion joint where provision for thermal movement is required.
- Solvent weld socket and push-fit ring-seal socket Push-fit socket connects to 50mm [2"] pipe to BS EN 1451-1/ BS EN 1455-1 and BS EN 1566-1

Material: ABS

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
50	2Z124W ♡	93	3



Long-Tail Bend – 87.5°

- One plain end and one push-fit ring-seal socket
- Push-fit socket connects to 50mm [2"] pipe to BS EN 1451-1/BS EN 1455-1 and BS EN 1566-1

Material: ABS

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
50	2Z359G	80	152

Wavin HDPE

Product details **Soil, Waste and Vent**



Rubber Boss Adaptor

- Boss adaptor to 32mm (36mm OD) UK pipe
- Boss adaptor to 40mm (43mm OD) UK pipe

Material: Synthetic Rubber

Nominal Size (mm)	Part Number
56/32	4063088 [▲]
56/40	4063089 [▲]



Galvanised HDPE Bracket M10 Connection

Material: Galvanised Steel

Nominal Size (mm)	Part Number
40	4012113
50	4012117
56	4063090 [▲]
63	4012121 [▲]
75	4012125
90	4012131
110	4012137
125	4012141
160	4012146



Bracket Insert

Material: Galvanised Steel

Nominal Size (mm)	Part Number
40	4012329
50	4012331
56	4063093 [▲]
63	4012333 [▲]
75	4012335
90	4012337
110	4012339
125	4012341 [▲]
160	4012343
200	4012345
250	4023375
315	4023376

NOTE: [▲] = Made to order



Galvanised HDPE Bracket

Material: Galvanised Steel

Nominal Size (mm)	Part Number
50 x 1/2"	4012118
56 x 1/2"	4063094 [▲]
63 x 1/2"	4012122
75 x 1/2"	4012126
90 x 1/2"	4012132
110 x 1/2"	4012138
125 x 1/2"	4012142
160 x 1/2"	4012147
200 x 1"	4012151
250 x 1"	4012155
315 x 1"	4012159



Mounting Plate

Material: Steel

Nominal Size (mm)	Part Number
M10	4063092 [▲]
G 1/2"	4012326



Fire Collar EFM

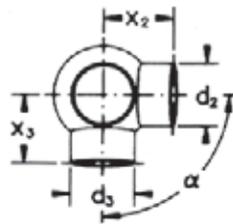
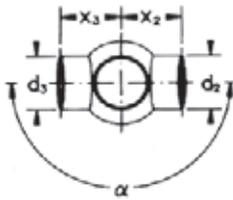
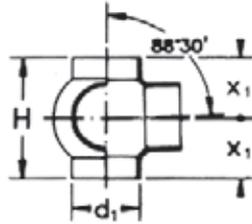
Material: Steel

Nominal Size (mm)	Part Number
40	4063766
50	4063767
63	4063768
75/78	4063769
90	4063770 [▲]
110	4026438
125	4026439 [▲]
160	4063772
200	4026441 [▲]
250	4026442 [▲]

NOTE: [▲] = Made to order

Wavin HDPE

Product details **Soil, Waste and Vent**



Spherical Branch, 2 Stubs

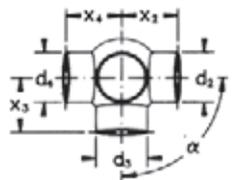
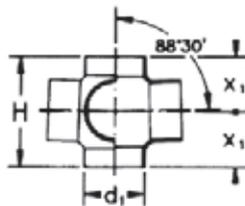
Material: HDPE

Type A – 180°

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2-d3	X1	X2-X3	H
110/110	3003755	110/110	100	120	200

Type B – 90°

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2-d3	X1	X2-X3	H
110/110	3003756	110/110	100	120	200



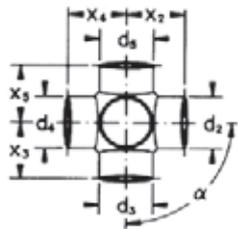
Spherical Branch, 3 Stubs

Material: HDPE

Type E – 90°

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2-d3	X1	X2-X3	H
110/110	3003776 [▲]	110/110	100	120	200

NOTE: [▲] = Made to order

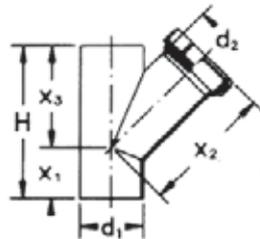


Spherical Branch, 4 Stubs

Material: HDPE

Type F – 90°

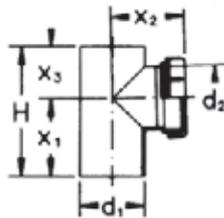
Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/d2-d3	X1	X2-X3	H
110/110	3003777	110/110	100	120	200



Access Tee 45°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1/d2	X1	X2	X3	H
110/110	3003739	110/110	90	230	180	270
125	3003741 [▲]	125	100	200	250	300
160/110	3003743	160/110	125	300	250	375

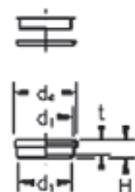


Access Tee 88.5°

• Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1/d2	X1	X2	X3	H
50	3003732 [▲]	50	90	60	85	150
63	3003734 [▲]	63	105	70	80	175
75/75	3003736	75/75	105	90	70	175
90	3003738Q [▲]	90	120	80	100	200
110/110	3003740	110/110	135	125	90	225
125	3018815Q [▲]	125	150	100	130	250
160/110	3070631*	160/110	210	150	140	350
200/110	3017974*	200/110	180	170	180	360
250/110	3017975*	250/110	220	190	220	440
315/110	3017976*	315/110	280	210	280	560



Wall Mounted Toilet Connector

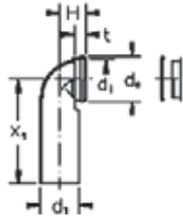
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/di	d _e	t	H
90/90	3003550 [▲]	90/90	110	28	38
110/110	3003554 [▲]	110/110	131	28	38

NOTE: [▲] = Made to order

Wavin HDPE

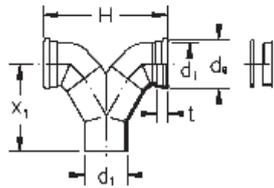
Product details **Soil, Waste and Vent**



Wall Mounted Toilet Connector Elbow 90° for hanging toilets

Material: HDPE

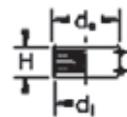
Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1/di	de	X1	t	H
90/90	3003619 [▲]	90/90	110	225	34	75
110/90	3018007 [▲]	110/90	110	225	34	75
110/110	3003620 [▲]	110/110	131	300	33	75



Wall Mounted Double Toilet Connector Elbow 90°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				
		d1/di	de	X1	t	H
110/110	3003621 [▲]	110/110	131	195	28	270



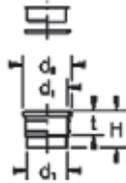
Electro-fusion Coupler – Universal Type (WAVIDUO)

- To be welded with: Electro-fusion welding machine DUO 315 (Part No. 4036330)

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	de	H
40	3003478	40	54	52
50	3003479	50	64	52
56	3003489	56	68	52
63	3003480	63	77	52
75	3003481	75	90	52
90	3003482	90	104	54
110	3003483	110	124	64
125	3003484	125	143	64
160	3003485	160	180	63
200	4061068	200	221	148
250	4064881	250	304	244
315	4064882	315	382	268

NOTE: [▲] = Made to order

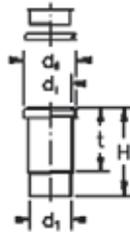


Push-fit Socket with Gasket and Cap

- To connect HDPE to PVC

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/di	de	t	H
40/40	3084561	40	57	50	85
50/50	3084562	50	67	50	85
56/56	3003493	56	57	52	85
63/63	3003494 [▲]	63	79	52	85
75/75	3003495	75	92	65	100
90/90	3003496 [▲]	90	110	69	105
110/110	3003497	110	131	70	105
125/125	3003498 [▲]	125	150	75	115
160/160	3003499	160	190	93	140



Expansion Socket with Gasket and Cap

- Segment Welded *
- To connect HDPE to PVC

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1/di	de	t	H
40/40	3003505	40/40	57	170	235
50/50	3003506	50/50	67	170	235
56/56	3018008	56/56	57	170	235
63/63	3003507	63/63	80	175	235
75/75	3003508	75/75	92	179	240
90/90	3003509	90/90	110	175	240
110/110	3003510	110/110	130	178	255
125/125	3003511 [▲]	125/125	148	180	255
160/160	3003512	160/160	188	190	285
200/200	3003513*	200/200	225	200	345
250/250	3070629	250/250	280	250	405
315/315	3003515	315/315	350	250	405

Push-fit depth in mm

Ø	-10°	0°	+10°	+20°
40 – 160	70	80	90	105
200 – 315	170	180	190	205

The expansion sockets from 40 to 315mm absorb the expansion and the contraction of a 5000mm long pipe. 10°C temperature difference = 2mm expansion or contraction per meter. On the expansion socket the push-in depth of the pipe at a room temperature of 0°C and +20°C is mentioned.

The expansion socket Ø 110 has an external ring for fixed-point bracket.

NOTE: [▲] = Made to order

Wavin HDPE

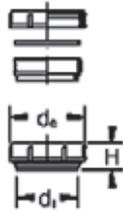
Product details **Soil, Waste and Vent**



Complete Screw Connection

Material: HDPE

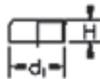
Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	de	H
40	3003905 [▲]	40	64	50
50	3003935 [▲]	50	74	58
63	3003936 [▲]	63	87	63
75	3003937 [▲]	75	103	65
110	3003938 [▲]	110	145	90



Complete Closing Cap

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	de	H
40	3003869	40	64	45
50	3003870	50	74	55
63	3003871 [▲]	63	87	40
75	3082542	75	107	38
90	3003872 [▲]	90	123	45
110	3003873	110	145	50

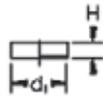


Weld Cap

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)	
		d1	H
40	3003860	40	38
50	3003861	50	38
56	3003874	56	38
63	3003862 [▲]	63	38
75	3003863	75	38
90	3003865 [▲]	90	40
110	3003866	110	45
125	3003867 [▲]	125	46
160	3003868	160	48

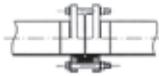
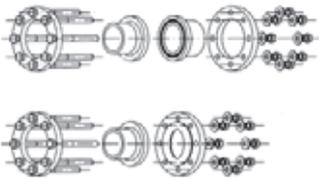
NOTE: [▲] = Made to order



Protection Cap for pipes and fitting

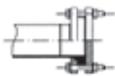
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)	
		d1	H
40	3018704 [▲]	40	30
50	3018705 [▲]	50	30
63	3018706 [▲]	63	30
75	3018707 [▲]	75	30
90	3018708	90	31
110	3018709	110	33
125	3018710 [▲]	125	36



Flange Connection

Material: HDPE



Flange Cap

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	de	H
110	3072765	110	110	80
160	3043503	160	160	85
200	3043504	200	200	140
250	3043505	250	250	145
315	3043506	315	315	145



Flange Adaptor

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)			
		d1	de	h	H
50	4025986 [▲]	50	88	17	60
63	4025988 [▲]	63	102	19	65
75	4025989 [▲]	75	122	21	70
110	4009748	110	158	24	80
125	4009749 [▲]	125	188	24	80
160	4009750 [▲]	160	212	24	85
200	4009751 [▲]	200	268	24	140
250	4025992 [▲]	250	320	27	145
315	3018031 [▲]	315	370	27	145

NOTE: [▲] = Made to order

Wavin HDPE

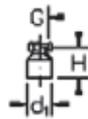
Product details **Soil, Waste and Vent**



Galvanised Steel Flange 1"

Material: Steel

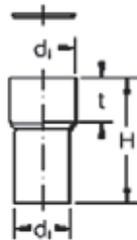
Nominal Size (mm)	Part Number
1"	4009793



Brass Nut Connection

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)		
		d1	G	H
40 x 3/4"	3003908 [▲]	40	3/4"	60
40 x 1"	3003910 [▲]	40	1"	60
40 x 1 1/4"	3003912 [▲]	40	1 1/4"	60
40 x 1 1/2"	3003913 [▲]	40	1 1/2"	60
50 x 3/4"	3003917 [▲]	50	3/4"	75
50 x 1 1/4"	3003921 [▲]	50	1 1/4"	60
50 x 1 1/2"	3003924 [▲]	50	1 1/2"	60
50 x 2"	3003927 [▲]	50	2"	60
63 x 2"	4009761 [▲]	63	2"	82



Shrink-on Socket with Seal

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm)				Ø connection
		d1	di	t	H	
50	3003516 [▲]	50	68	80	250	45 ÷ 60
63	3018026 [▲]	63	91	85	250	60 ÷ 82
75	3018027 [▲]	75	100	90	250	70 ÷ 92
90	3018028 [▲]	90	111	100	250	85 ÷ 102
110	3003528 [▲]	110	132	90	250	105 ÷ 124
125	3018029 [▲]	125	156	100	250	120 ÷ 148
160	3018030 [▲]	160	180	100	250	155 ÷ 172
200	3018025 [▲]	200	220	100	250	195 ÷ 212

NOTE: [▲] = Made to order



Electrofusion Welding Tool DUO "315"

- Supplied with two different welding cables, which must be used as follows:
 - Dimension 40 – 160mm: green welding cable
 - Dimension 200 – 315mm: brown welding cable
- Observe the installation and processing instructions when using the welding tool

Description	Part Number
Electrofusion welding tool DUO 315	4036330

**The DUO "315" electrofusion welding tool is for creating longitudinal frictional joints. The tool is designed exclusively for welding Wavin Duo and Geberit* brand, or Geberit compatible (Valsir, Coes, Vulcathene, Eurofusion, Aakatherm, Polypipe)* electrofusion sockets (*up to max. 160mm).*



Electrofusion Welding Tool Cable

Description	Part Number
40-160 Spare, for use with 4064999	4065001



Electrofusion Welding Tool Cable

Description	Part Number
200-315 Spare, for use with 4064999	4065000



Welding Mirror Complete with metal case

- Manual thermostat
- Teflon coating
- Maximum power consumption 800w
- Power supply 220~50Hz

Class	Description	Welding Diameter	Part Number
X1	TP200	160	4011403



Heat Reflector Butt-Welding Tool Maxi 315

Description	Part Number
Maxi 315, 90 – 315mm	4011402 [▲]

Wavin HDPE

Product details **Soil, Waste and Vent**



PE Pipe Cutter

DN (mm)	Part Number
40 – 63	4026014 [▲]
50 – 125	4011390
110 – 160	4011393
200 – 315	4011396



HDPE Rotary Peelers

Description	Part Number
for pipe 50mm	4042914
for pipe 63mm	4024493
for pipe 75mm	4024569
for pipe 90mm	4024432
for pipe 110mm	4024189
for pipe 125mm	4024393
for pipe 160mm	4024190
Replacement blade	4066330



Other Processing Aids

Description	Part Number
PE marker pen China Marker	4011453
PE pipe scraper	4020757
PE cleaner 0.7 litre bottle	4025509

NOTE: [▲] = Made to order

Wavin HDPE

Chemical resistance

The data in this list is intended only as a guide for planning purposes and are not automatically applicable to all conditions of use. Considerable deviations can occur dependent on type of exposure and probable contamination of the chemical medium. Wavin cannot be held liable for any special, indirect or consequential damages irrespective of whether caused or allegedly caused by negligence. No warranty can be derived concerning the data mentioned.

Symbols used in the table:

- + resistant
- 0 limited resistance only
- not resistant

SA saturated, aqueous solution

T customary in trade

TP technically pure

D diluted

No symbol means no testing, unknown

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
acetaldehyde	TP	+	o	o
acetic acid	60%			
acetic acid	10%	+	+	+
acetic acid	25%			
acetic acid	60-95%			
acetic anhydride	TP	+		o
acetone	TP	+	+	o
acetophenone	TO	+		-
acrylonitrile	TO	+	+	+
adipic acid	SA	+	+	+
air	-	+	+	+
allyl alcohol	96%	-	+	+
aluminium chloride	SA	+	+	+
aluminium fluoride	SA	+	+	+
aluminium sulphate	SA	+	+	+
alums	SA	+	+	+
ammonia, aqueous	SA	+	+	+
ammonia, fluid	TP	+	+	+
ammonia, gaseous	TP	+	+	+
ammonium acetate	SA			
ammonium carbonate, and bi	SA			
ammonium chloride	SA	+	+	+
ammonium fluoride	>10%	+	+	+
ammonium fluoride	20%			
ammonium fluoride	SA			
ammonium hydroxide	SA			
ammonium nitrate	SA	+	+	+
ammonium phosphate, also meta	SA	+	+	+
ammonium sulphide	SA	+	+	+
amyl acetate	TP	+	+	o
amyl alcohol	TP	+	+	o
aniline	SA			
aniline	TP	+	+	
aniline chlorhydrate	SA	+	+	+
anisole	TP	o	-	-
anthraquinone sulphonie acid, suspension	SA			
antimony trichloride	90%	+	+	+
apple juice	T	+	+	+
aqua regia (HCl / HNO ₃)	03:01	-	-	-
arsenic acid	SA	+	+	+
barium salts	SA	+	+	+
beer	T	+	+	+
benzaldehyde	o.1%			
benzaldehyde	TP	+	+	o
benzene	TP	o	o	o
benzine (cleaning benzine)	T	+	+	o
benzine -super (gas fuel)	T	+	+	o
benzine-benzene mixture	80/20			
benzoic acid	SA	+	+	+
benzoyl chloride	TP	o	o	o
benzyl alcohol	TP	+	+	o
borax	D			
borax	SA	+	+	+
boric acid	SA	+	+	+

Wavin HDPE

Chemical resistance

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
brandy	T			
bromic acid	10%			
bromine vapour	-			
bromine, fluid	TP	-	-	-
bromine, gaseous, dry	TP	-	-	-
butadiene	TP	o		
butane, gaseous	TP	+	+	+
butanol	TP	+	+	+
butyl acetate	TP	o		
butyl glycol (butandiol)	TP	+		
butyl phenol	SA			
butyl phenol	TP			
butyl phthalate	TP	+		o
butyric acid	20%			
butyric acid	TP	+	+	o
calcium carbonate	SA	+	+	+
calcium chlorate	SA	+	+	+
calcium chloride	SA	+	+	+
calcium hydroxide	SA	+	+	+
calcium hypochloride	SA	+	+	+
calcium nitrate	50%			
calcium nitrate	SA	+	+	+
calcium sulphate	SA	+	+	+
calcium sulphite	SA	o	o	o
camphor oil	TP	-	-	-
carbon dioxide	100%	+	+	+
carbon dioxide, gaseous, wet/dry	TP	+	+	+
carbon disulphide	TP	o	-	-
carbon monoxide	TP	+	+	+
carbon tetrachloride	TP	o	-	-
carbonic acid	SA			
castor oil	TP	+	+	+
caustic soda,		+	+	+
see sodium hydroxide solution				
chlorethanol	TP	+	+	+
chlorinated lime, slurry	-	+	+	+
chlorine, fluid	TP	-	-	-
chlorine, gaseous, dry	TP	o	-	-
chloroacetic acid	85%	+	+	+
chloroacetic acid	TP			
chloromethane	TP	o	-	-
chlorosulphuric acid	D			
chlorosulphuric acid	TP	-	-	-
chrome alum	SA	+	+	+
chromic acid	1-50%	+	o	o
citric acid	D			
citric acid	SA	+	+	+
coconut oil	TP			
copper chloride	SA	+	+	+
copper cyanide	SA			
copper nitrate	30%			
copper nitrate	SA	+	+	+
copper sulphate	SA	+	+	+
copper fluoride	2%			

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
corn germ oil	TP			
cottonseed oil	TP			
creosole	up to 90%	+	+	+
creosole	> 90%	+	+	o
creylic acid	SA			
crotonaldehyde	TP	+		o
cyclohexane	TP			
cyclohexanol	TP	+	+	+
cyclohexanon	TP	+		o
decahydronaphtalene (decalin)	TP	+		o
developer	T	+	+	+
dextrin	D	+	+	+
dibutyl phthalate	TP	+	o	o
dichloroacetic acid	TP	o	o	o
dichloroethylene	TP			
dichloromethane (methylene chloride)	TP	o		-
diethanolamine	TP	+		
diethylether	TP	o		
diglycolic acid	30%			
diglycolic acid	SA	+	+	+
diisooctyl phthalate	TP	+	+	o
dimethylamine	30%			
dimethylamine	TP			
dimethylformamide	TP	+	+	o
dioctyl phthalate	TP	+		o
dioxane	TP	+	+	+
disodium phosphate	SA			
ethanediol	TP	+	+	+
ethanol	40%	+		o
ethanol	TP	+	+	+
ethanolamine	TP			
ether, see diethyl ether		o		
ethyl acetate	TP	+		-
ethyl chloride, mono and di	TP			
ethyl glycol, see ethanediol		+	+	+
flax oil	TP	+	+	+
fluoric acid	40%			
fluoric acid	70%	+	+	o
fluoride	TP	-	-	-
fluorosilicic acid	40%	+	+	+
formaldehyde (formalin)	40%	+	+	+
formic acid	1-50%	+	+	+
formic acid	TP	+	+	+
fructose	T	+	+	+
fruit juices	T	+	+	+
furfuryl alcohol	TP	+	+	o
gelatin	D	+	+	+
glacial acetic acid	TP	+		o
glucose	20%			
glucose	SA	+	+	+
glucose	D	+	+	+
glycerine	TP	+	+	+
glycolic acid	30%			
glycolic acid	SA	+	+	+

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
heptane	TP	+	o	-
hexadecanol	TP			
hexane	TP	+	o	o
hydrobromic acid	SA	+		
hydrobromic acid	10%			
hydrochloric acid	SA			
hydrocyanic acid	10%	+	+	+
hydrogen	TP	+	+	+
hydrogen bromide	50%	+	+	+
hydrogen bromide	TP	+	+	+
hydrogen chloride, damp	TP	+	+	+
hydrogen chloride, dry	TP			
hydrogen peroxide	30%	+	+	+
hydrogen peroxide	90%	+	o	-
hydrogen sulphide	100%	+	+	+
hydrogen sulphide	SA			
hydrogen sulphide	TP	+	+	+
iodine tincture	T	+		o
i-propanol, see isopropanol		+	+	+
iron II chloride	SA	+	+	+
iron II sulphate	SA	+	+	+
iron III chloride	SA	+	+	+
iron III nitrate	D	+	+	+
iron III sulphate	SA	+	+	+
isopropanol	TP			
isopropylether	TP			
lactic acid	10%			
lactic acid	TP	+	+	+
lanolin (wool lipids)	T	+	o	o
lead acetate	SA	+	+	+
lead tetraethyl	TP	+		
magnesium carbonate	SA	+	+	+
magnesium chloride	SA	+	+	+
magnesium hydroxide	SA	+	+	+
magnesium nitrate	SA	+	+	+
magnesium sulphate	SA			
maleic acid	SA	+	+	+
malic acid	SA			
mercury	TP	+	+	+
mercury chloride	SA	+	+	+
mercury cyanide	SA	+	+	+
mercury nitrate	D	+	+	+
methanol (methyl alcohol)	TP	+	+	o
methyl acetate	TP	+	+	
methyl bromide	TP	o		-
methyl ethyl ketone	TP	+		o
methyl methacrylate	TP			
methylamine	up to 32%	+		
methylene chloride, see dichloromethane		o	-	-
milk	T	+	+	+
mineral oils	T	+	+	o
mineral water	T	+	+	+
molasses	T	+	+	+
muriatic acid	up to 35%	+	+	+

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
muriatic acid	20%			
muriatic acid, dilute	conc.	+	+	+
naphtha	T	+	-	-
naphthalene	TP			
nickel salts	SA	+	+	+
nicotinic acid	D	+	+	
nitric acid	10%			
nitric acid	25%	+	+	+
nitric acid	up to 40%	o	o	-
nitric acid	10-50%	o	o	-
nitric acid	more than 50%			
nitric acid	75%	-	-	-
nitric acid	98%			
nitrobenzene	TP	+	o	o
n-propanol	TP	+	+	+
oils and fats (vegetable/animal)	-	+	o	o
oleic acid	TP	+	+	+
olive oil	TP	+	+	o
oxalic acid	SA	+	+	+
oxygen	TP	+	+	o
ozone	TP	o	-	-
paraffin oil	TP	+	o	o
peanut oil	TP	+		
peppermint oil	TP	+		
perchloric acid	10%			
perchloric acid	20%	+	+	+
perchloric acid	70%			
perhydrol, see hydrogen peroxide 30%		+	+	+
petrol ether	TP	+	o	o
phenol	D	+	+	+
phenol, dilute	90%			
phenylhydrazine	TP			
phenylhydrazine chlorohydrate	TP			
phosphine	TP			
phosphoric acid	50%	+	+	+
phosphoric acid	up to 85%	+	+	o
phosphorus trichloride	TP	+	+	o
phosphoryl chloride	TP	+	+	o
picric acid	SA	+	+	
potable water, chlorinated	TP	+	+	+
potash, see potassium nitrate		+	+	+
potassium bichromate	40%			
potassium bichromate	SA	+	+	+
potassium borate	SA			
potassium bromate	SA	+	+	+
potassium bromate	10%			
potassium bromide	SA	+	+	+
potassium carbonate and bi	SA	+	+	+
potassium chlorate	SA	+	+	+
potassium chloride	SA	+	+	+
potassium chromate	40%	+	+	+
potassium cyanide	>10%	+	+	+
potassium cyanide	SA			
potassium fluoride	SA	+	+	+

Wavin HDPE

Chemical resistance

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
potassium hexacyanoferrate (II+III)	SA	+		+
potassium hydroxide	60%	+	+	+
potassium hydroxide	up to 50%	+	+	+
potassium hydroxide solution, see potassium hydroxide				
potassium hypochloride	D	+		o
potassium iodide	SA	+	+	+
potassium nitrate (potash)	SA	+	+	+
potassium orthophosphate	SA	+	+	+
potassium perchlorate	1%			
potassium perchlorate	10%			
potassium perchlorate	SA	+	+	+
potassium permanganate	SA			
potassium permanganate	20%	+	+	+
potassium persulphate	SA	+	+	+
potassium sulphate	SA	+	+	+
potassium sulphide	D	+	+	+
propane, gaseous	TR	+	+	
propionic acid	50%	+	+	+
propionic acid	TP	+	o	o
pyridine	TP	+	o	o
saccharic acid	SA			
salicylic acid	SA	+	+	+
sea water	T	+	+	+
sea water, see ocean water		+	+	+
silicone oil	TP	+	+	+
siliconic acid	D	+	+	+
silver acetate	SA	+	+	+
silver cyanide	SA	+	+	+
silver nitrate	SA	+	+	+
soap	D			
soda, see sodium carbonate		+	+	+
sodium acetate	SA	+	+	+
sodium benzoate	SA	+	+	+
sodium bicarbonate	SA	+	+	+
sodium biphosphate	SA	+	+	+
sodium borate	SA			
sodium bromide	SA	+	+	+
sodium carbonate	SA	+	+	+
sodium chlorate	SA	+	+	+
sodium chloride	SA	+	+	+
sodium chlorite	20%			
sodium cyanide	SA	+	+	+
sodium dichromate	SA	+	+	+
sodium fluoride	SA	+	+	+
sodium hexacyanoferrate (II + III)	SA	+	+	+
sodium hydrogen sulphite (sodium bisulphite)	SA	+	+	+
sodium hydroxide solution	up to 60%	+	+	+
sodium hydroxide, see sodium hydroxide solution		+	+	+
sodium hypochloride	13%	+	+	+
	active chlorine			
sodium nitrate	SA	+	+	+
sodium nitrite	SA	+	+	+
sodium orthophosphate	SA	+	+	+

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
sodium perborate	SA	+		o
sodium phosphate	SA	+	+	+
sodium silicate (water glass)	D	+	+	+
sodium sulphate and bi	SA	+	+	+
sodium sulphide	SA	+	+	+
sodium sulphite	40%			
sodium thiosulphate	SA	+	+	+
soy bean oil	TP	+	o	o
strength	D	+	+	+
sugar	SA	+	+	+
sulphur dioxide, dry, wet	TP	+	+	+
sulphur dioxide, fluid	TP			
sulphur trioxide	TP	-	-	-
sulphuric acid	up to 10%			
sulphuric acid	10-80%	+	+	+
sulphuric acid	96%	o		-
sulphurous acid	SA			
sulphurous acid	30%	+	+	+
Superchloric acid, see perchloric acid				
table salt, see sodium chloride		+	+	+
tannic acid (tannins)	D	+	+	+
tartaric acid	D	+	+	+
tartaric acid	SA			
tetrahydrofuran	TP	o	o	-
tetrahydronaphthalene (tetralin)	TP	o	o	-
thionyl chloride	TP	-	-	-
thiophene	TP	o	o	-
tin chloride II + IV	SA	+	+	+
toluene	TP	o	-	-
trichloroacetic acid	50%	+	+	+
trichloroethylene	TP	-	-	-
tricresyl phosphate	TP	+	+	+
triethanolamine	D	+		o
trimethylol propane	up to 10%			
turpentine oil	TP	o	o	o
urea	33%			
urea	>10%	+	+	+
urea	SA			
urine	T	+	+	+
vinegar (wine vinegar)	T	+	+	+
vinyl acetate	TP	+	+	o
whisky	T			
wine and spirits	T	+	+	+
wine vinegar	T	+	+	+
xylene	TP	o	-	-
yeast	D	+	+	+
yeast	SA			
zinc carbonate	SA	+	+	+
zinc chloride	SA	+	+	+
zinc oxide	SA	+	+	+
zinc sulphate	SA	+	+	+

Wavin HDPE

General information

References

Wavin Soil and Waste systems should be designed and installed in accordance with the guidance provided in the appropriate sections of the following:

- Ⓞ Building Regulations 2000 (England and Wales): Approved Document H, Part H1
- Ⓞ Building Standards (Scotland) Regulations 1993-2002 (including current amendments: Technical Standards Part M)
- Ⓞ Building Regulations (Northern Ireland) 2000: Technical Booklet N
- Ⓞ BS 8000 Workmanship on Building Sites: Part 13: 1989 Code of Practice for above ground drainage and sanitary appliances
- Ⓞ BS EN 12056: 2000 Gravity drainage systems inside buildings: Part 3 Roof drainage, layout and calculation
- Ⓞ Painting plastics: IP 11/1979. Watford, BRE 1979
- Ⓞ Water Regulations Guide: London, Water Regulations Advisory Scheme, 2000
- Ⓞ BS EN 752:2008 – Drain and sewer systems outside buildings
- Ⓞ Wavin HDPE Soil and Waste Product and Installation Manual

Installation guidance & instruction where provided.

Environment

All Wavin manufacturing sites operate Environmental Management Systems which comply with the requirements of and are certified to ISO 14001: 2004.

Health and Safety

The relevant provisions of the following legislation should be adhered to on site:

- Ⓞ Construction (Design and Management) Regulations 1994
- Ⓞ Control of Substances Hazardous to Health Regulations 1988
- Ⓞ Health and Safety at Work Act 1974
- Ⓞ Management of Health and Safety at Work Regulations 1999
- Ⓞ Manual Handling Operations Regulations 1992

Hazards associated with PVC-U, PVC-C, Polypropylene and Polyethylene

There are no particular hazards associated with handling, cutting or working with the materials mentioned above, and protective clothing or equipment is not normally required.

Safety Data Sheets covering PVC-U, PVC-C, PP, PE, lubricant, solvent cements and cleaners are available from the Wavin Technical Design Department, please call Technical Enquiries to obtain a copy.

Key	
P/E:	Pipe and fittings with both ends plain or with one plain end and one special end
S/S:	Pipe and fittings with one or more ring-seal or push-fit sockets, but always one plain or special end
D/S:	Fittings with ring-seal or push-fit sockets at all ends
S/SW:	Fittings with one or more ring-seal sockets but always one solvent socket
SW/S:	Fittings with one or more solvent sockets and one plain or special end
D/SW	Fittings with solvent sockets at all ends

Supply

All systems are supplied through a nationwide network of merchant distributors. For details of your nearest merchant, contact Wavin Customer Services.

Sealing Rings

Where applicable, Sealing Rings are supplied fitted to each component and are included in the price.

Conditions of Sale

Wavin will not accept responsibility for the malfunction of any installation which includes components not supplied by Wavin. Goods are sold subject to Company conditions of sale.

Wavin Tigris K5

Press-fit Plumbing



Above ground systems

Wavin Tigris K5 Press-Fit Plumbing & Heating System

NEW



Acoustic Leak Alert: follow the sound

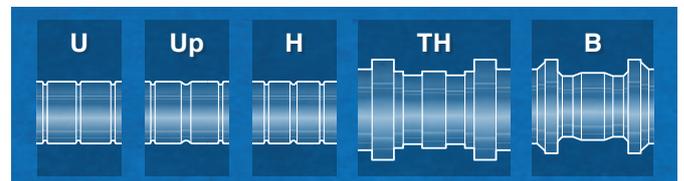
We have equipped Tigris K5/M5 with all kinds of smart solutions, including Acoustic Leak Alert. While performing a pressure test with air, an unpressed Tigris K5/M5 press fitting will be heard loud and clear. Thanks to the whistle sound of 80 decibels, you'll find the unpressed fitting very easily. Even if there's a lot of noise around you.

Press-fit Plumbing System

Wavin's brand new fitting program, Wavin Tigris K5/M5, builds on the success and reliability delivered by its predecessor, the Tigris K1/M1. The new Wavin Tigris K5/M5 is the very first of its kind to feature the innovative Acoustic Leak Alert function. Any un-pressed fitting will make itself known by producing a loud whistle. But that's not all. The fittings also offer an improved flow and can now be pressed with multiple pressing profiles.

Easy to switch with Multi Jaw

With Multi Jaw, Tigris K5 and Tigris M5 guarantee secure connections regardless of the profile. You can use all of the most common jaw profiles to press the fittings as they are compatible with U, Up, H, TH and B profiles. This eliminates the need to buy new equipment and makes it easy to switch without worrying about your system's warranty.



Optimal Flow Performance with Opti Flow

The new Wavin Tigris K5/M5 with Opti Flow has up to a 50% larger inner bore. **

Available in sizes:

16, 20, 25, 32, 40mm



Acoustic Leak Alert – detect non-pressed fittings by a whistle

Save valuable time when tracing a system for leaks – just follow the whistle



Multi Jaw – fits multiple pressing jaw profiles: U, Up, TH, B, H

No need to buy new equipment when switching to Wavin Tigris K5/M5



Opti Flow – increased inner bore for optimised flow

Optimised flow performance for maximum comfort

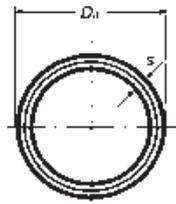
* Acoustic Leak Alert is simply an aid to find a leaking fitting. It does NOT replace the pressure test.

** Data represents 16mm fittings tests. For more information please review Tigris product and installation guide.

Wavin Tigris K5

Product details **Press-fit Plumbing System**

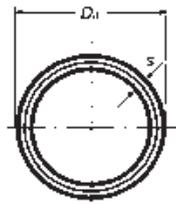
Pipe



Pipes – Straight Lengths

Material: HDPE, Aluminium and PEX-c

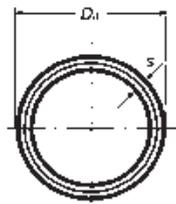
Nominal Size (mm)	Part Number	Dimensions		
		Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3072958	16	2.00	3
16 x 2.0	3061211	16	2.00	5
20 x 2.25	3072989	20	2.25	3
20 x 2.25	3061212	20	2.25	5
25 x 2.5	3072990	25	2.50	3
25 x 2.5	3061213	25	2.50	5
32 x 3.0	3070827	32	3.00	3
32 x 3.0	3041228	32	3.00	5
40 x 4.0	3041229	40	4.00	5



Pipe – Coils

Material: HDPE, Aluminium and PEX-c

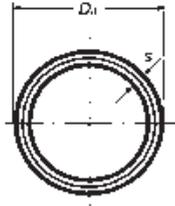
Nominal Size (mm)	Part Number	Dimensions		
		Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3018297	16	2.00	100
16 x 2.0	3018302	16	2.00	200
16 x 2.0	3061202	16	2.00	500
20 x 2.25	3018299	20	2.25	100
25 x 2.5	3018300	25	2.50	50
32 x 3.0	3018301	32	3.00	50



Pipe – Coils 9mm Pre-insulated

Material: HDPE, Aluminium and PEX-c

Nominal Size (mm)	Part Number	Col.	Dimensions		
			Dia (mm)	Size (mm)	Length (m)
32 x 3.0	3018804	○	32	3.00	25

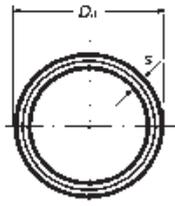


Pipe – Coils 9mm Pre-insulated

- For drinking water and heating installations
- Pipe insulation: round extruded insulation from foamed PE with co-extruded, moisture-resistant PE foil (red colour)
- 9mm insulation for cold water pipes according to DIN 1988 Part 2 and heating pipes according to the Energy Saving Ordinance (EnEV) Aging and form-resistant
- Building materials class: B2, normal flammability, according to DIN 4102
- Thermal conductivity: 0.040 W/mK
- Additional continuous insulation against impact noise is essential

Material: PE, HDPE, Aluminium and PEX-c

Nominal Size (mm)	Part Number	Col.	Dimensions		
			Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3004378	●	16	2.00	50
20 x 2.25	3004379	●	20	2.25	50
25 x 2.5	3071219	●	25	2.50	25
16 x 2.0	3071220	●	16	2.00	50
20 x 2.25	3071221	●	20	2.25	50
25 x 2.5	3071222	●	25	2.50	25



Pipes – Coils 13mm Pre-insulated

- For drinking water and heating installations
- Pipe insulation: round extruded insulation from foamed PE with co-extruded, moisture-resistant PE foil (red colour)
- 13mm insulation for cold water pipes according to DIN 1988 Part 2 and heating pipes according to the Energy Saving Ordinance (EnEV) Aging and form-resistant
- Building materials class: B2, normal flammability, according to DIN 4102
- Additional continuous insulation against impact noise is essential

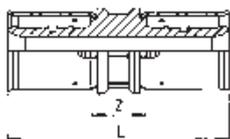
Material: PE, HDPE, Aluminium and PEX-c

Nominal Size (mm)	Part Number	Col.	Dimensions		
			Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3004380	●	16	2.00	50
20 x 2.25	3004381	●	20	2.25	50
25 x 2.5	3070529	●	25	2.50	25
16 x 2.0	3071224	●	16	2.00	50
20 x 2.25	3071225	●	20	2.25	50
25 x 2.5	3071226	●	25	2.50	25

Wavin Tigris K5

Product details **Press-fit Plumbing System**

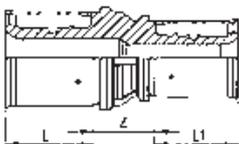
Couplers



Straight Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
16	3079754	68	18
20	3079755	69	17
25	3079756	78	18
32	3079757	78	18
40	3079758	101	19

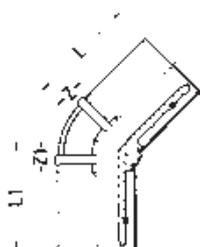


Reducing Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
20 x 16	3079759	26	25	19
25 x 16	3079760	30	25	19
25 x 20	3079761	30	26	19
32 x 20	3079762	30	26	19
32 x 25	3079763	30	30	19
40 x 32	3079764	41	30	20

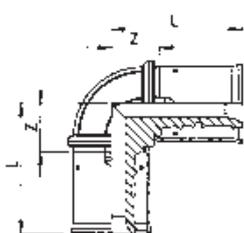
Elbows



Elbow 45°

Material: PPSU, Stainless Steel

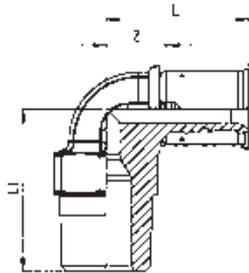
Nominal Size (mm)	Part Number	Dimensions (mm)			
		L	L1	Z	Z1
25	3079774	30	30	14	14
32	3023499	30	30	15	15
40	3079775	41	41	17	17



Elbow 90°

Material: PPSU, Stainless Steel

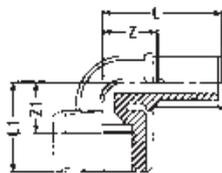
Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
16	3079768	25	17
20	3079769	26	20
25	3079770	30	22
32	3079771	30	26
40	3079772	41	29



Elbow 90° – Single Male BSP Thread

Material: PPSU, Stainless Steel

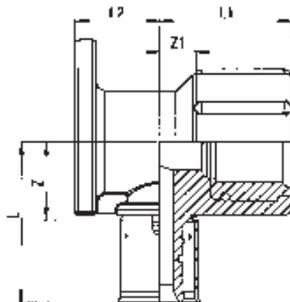
Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
16 x 1/2"	3079776	43	35	18
20 x 1/2"	3079777	45	41	19
20 x 3/4"	3079778			
25 x 3/4"	3079779	52	44	22
25 x 1"	3079780	55	50	25
32 x 1"	3079781	55	54	25



Elbow 90° – Single Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)			
		L	L1	Z	Z1
16 x 1/2"	3079782	49	34	24	17
20 x 1/2"	3079783	50	34	24	17
20 x 3/4"	3079784	53	36	27	18
25 x 3/4"	3079785	57	36	27	18
32 x 1"	3079786	57	36	27	18



Backplate Elbow – Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)				
		L	L1	L2	Z	Z1
16 x 1/2"	3079854	49	28	22	24	11
20 x 1/2"	3079855	50	28	22	24	11
20 x 3/4"	3079856	50	28	22	24	11



Toilet Tank Elbow

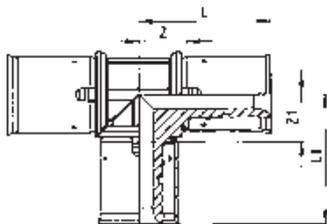
Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number
16 x 1/2"	3083259

Wavin Tigris K5

Product details **Press-fit Plumbing System**

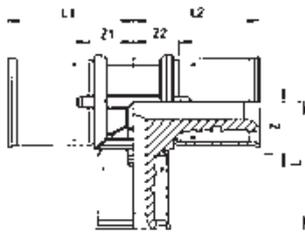
Tees



Equal Tee

Material: PPSU, Stainless Steel

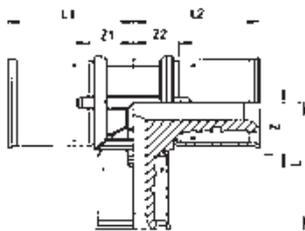
Nominal Size (mm)	Part Number	Dimensions (mm)			
		L	L1	Z	Z1
16	3079811	42	42	20	20
20	3079812	46	46	20	20
25	3079813	52	52	22	22
32	3079814	52	52	22	22
40	3079815	70	70	29	29



One End Reduced Tee

Material: PPSU, Stainless Steel

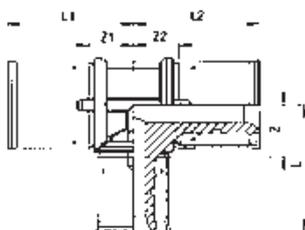
Nominal Size (mm)	Part Number	Dimensions (mm)					
		L	L1	L2	Z	Z1	Z2
20 x 20 x 16	3079824	46	43	46	20	20	20



Double End Reduced Tee

Material: PPSU, Stainless Steel

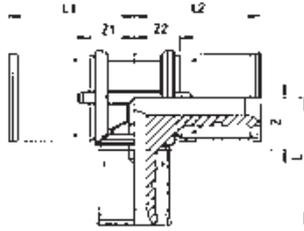
Nominal Size (mm)	Part Number	Dimensions (mm)					
		L	L1	L2	Z	Z1	Z2
16 x 20 x 16	3079821	43	44	44	17	20	20
20 x 25 x 20	3079826	49	46	48	19	22	22
25 x 32 x 25	3079833	52	55	55	22	25	25



Branch Reduced Tee

Material: PPSU, Stainless Steel

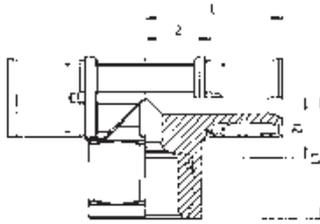
Nominal Size (mm)	Part Number	Dimensions (mm)					
		L	L1	L2	Z	Z1	Z2
20 x 16 x 20	3079823	44	43	43	19	17	17
25 x 16 x 25	3079827	47	48	48	22	18	18
25 x 20 x 25	3079828	48	50	50	22	20	20
32 x 16 x 32	3079834	50	47	47	25	17	17
32 x 20 x 32	3079835	52	49	49	26	19	19
32 x 25 x 32	3079837	56	52	52	26	22	22
40 x 25 x 40	3079839	59	63	63	29	22	22
40 x 32 x 40	3079840	59	61	61	29	20	20



Branch and One End Reduced Tee

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)					
		L	L1	L2	Z	Z1	Z2
20 x 16 x 16	3079822	44	42	43	20	17	17
25 x 16 x 16	3079829	47	42	47	22	19	17
25 x 20 x 20	3079825	46	45	50	22	19	20
32 x 25 x 25	3079836	56	52	52	26	22	22
40 x 32 x 32	3079842	59	55	67	29	26	26

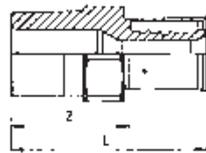


One Side Female BSP Thread Tee

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)			
		L	L1	Z	Z1
16 x 1/2" x 16	3079816	49	30	24	13
20 x 1/2" x 20	3079817	50	32	24	15
20 x 3/4" x 20	3079818	53	36	27	18
25 x 1/2" x 25	3079817	54	35	24	18
25 x 3/4" x 25	3079820	57	36	27	18

Connectors



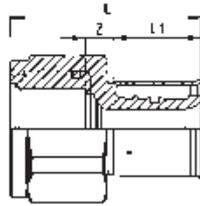
Connector - Single Male BSP Thread

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
16 x 1/2"	3079798	58	33
16 x 3/4"	3079799	63	38
20 x 1/2"	3079800	60	34
20 x 3/4"	3079801	64	38
25 x 3/4"	3079802	68	38
25 x 1"	3079803	75	45
32 x 1"	3079804	75	45
32 x 1 1/4"	3079805	81	51
40 x 1 1/4"	3079806	92	51

Wavin Tigris K5

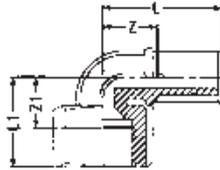
Product details **Press-fit Plumbing System**



Connector – Single Female BSP Thread

Material: PPSU, Stainless Steel, Brass

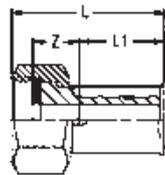
Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
16 x 1/2"	3079788	56	25	14
16 x 3/4"	3079789	58	25	15
20 x 1/2"	3079790	56	26	13
20 x 3/4"	3079791	59	26	15
25 x 3/4"	3079793	63	30	15
32 x 1"	3079796	67	30	16
40 x 1 1/4"	3079797	81	41	16



Screw Connector Elbow 90°

Material: PPSU, Stainless Steel

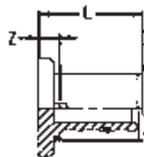
Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
16 x 1/2"	4064294	49	34	24
16 x 1/2" DRL	4066067	49	34	24
20 x 1/2" DRL	4066068	50	34	24



Tap Connector – Female BSP Thread

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
16 x 3/4"	4066074	58	25	15
20 x 3/4"	4066076	59	26	15
25 x 1"	4066079	67	30	16
32 x 1 1/4"	4066082			
40 x 1 1/2"	4064315			

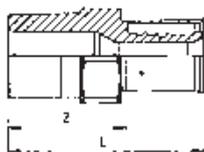


End Cap

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
16	3079859	37	12
20	3079860	38	12
25	3079861	42	12

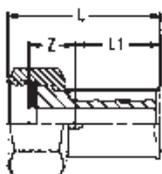
Tigris M5* – Connectors (Metal body)



Connector – Single Male BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
16 x 1/2"	4066041		
16 x 3/8"	4064262	53	28
16 x 3/4"	4066042	59	34
20 x 1"	4066045	63	37



Tap Connector – Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
16 x 1/2"	4066072	67	25	33



Wall Flange

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number
16 x 1/2"	4066133



Radiator Connector – 90° Elbow

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)
		L
16 x 15	4064235	175
16 x 15	4064239	300

NOTE:

* M5 fittings are manufactured from a UBA listed 617 brass.

– Materials on the UBA list are accepted as drinking water quality by the 4 member state.

– The UK is a member of the 4 member state, together with Germany, Netherlands and France.

Wavin Tigris K5

Product details **Press-fit Plumbing System**

Tigris M5 – Accessories



Transition Fitting to Copper

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number
16 x 15	4065978
20 x 15	4065979
20 x 22	4065981
25 x 22	4065982
25 x 28	4065983
32 x 28	4067485



Pressure Stopper

Material: Brass

Nominal Size (mm)	Part Number
16	4013571
20	4013572
25	4013573



Adaptor Fitting to Hep₂O

Material: PPSU, Stainless Steel, Polybutylene

Nominal Size (mm)	Part Number
16 x 15	4064277
20 x 22	4064280
25 x 22	4064281
25 x 28	4064282
32 x 28	4064283

Wavin Tigris K1

Press-fit Plumbing



Above ground systems

Wavin Tigris K1 Large Diameter Press-Fit Plumbing & Heating System

The versatile Wavin Tigris K1 Multilayer Press-fit System offers valuable advantages compared with traditional materials. Installation is faster and more straightforward. So time and cost can be saved. The system can be used for sanitary (including potable water) and heating applications. The fitting incorporates the Defined Leak Function (DLF) that brings extra safety by identifying unpressed fittings.



Applications

Wavin K1 meets the requirements for drinking water installation and radiator connection systems.

It is therefore suitable for hot and cold water installations and for radiator connections in residential construction as well as in public and commercial buildings.

Thanks to an extensive range of fittings with clever special solutions the system is optimally suited not only to new construction but also to renovations of old buildings.

Wavin K1 offers a large diameter range of fittings in the dimensions: 50, 63 and 75mm. For smaller diameters, please see our K5 range.

An extensive range of fittings, accessories and tools complements the system.

Special Advantages

The specific ways in which K1 improves on traditional, established techniques include:

- ⊕ Very fast, heat-free secure jointing
- ⊕ No need for Hot Works insurance
- ⊕ Minimal fittings required: saving time and cost

Quality

The Wavin K1 system is subject to constant internal quality controls and continuous external monitoring. Wavin K1 system meets all requirements in accordance with EN ISO 21003 standards for service conditions class 2 and 5. The system has been tested by accredited test laboratories and carries a wide set of other national approvals as well.

View the Tigris K1 illustration and see how Tigris K1 pipe gives you all the performance and durability you require, with the extra benefit of flexibility.



Wavin Tigris K1 Pipe



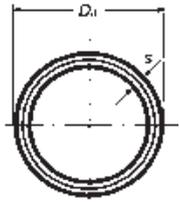
Wavin Tigris K1 Pipe

1	PPSU body: highly resistant to temperature, corrosion and scaling
2	Visible windows to show insert depth – no guesswork
3	'O' Ring ensures complete seal
4	Stainless steel sleeve for efficient, heat free jointing
5	Inner layer: superior PEX-C material
6	Aluminium layer: consistent thickness, fully detectable
7	Coupling agent: welds the aluminium to the inner and outer plastic layers
8	Outer layer: HDPE for resilience and flexibility

Wavin Tigris K1

Product details **Press-fit Plumbing**

Pipe

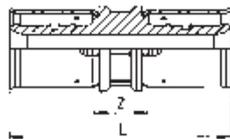


Pipes – Straight Lengths

Material: HDPE, Aluminium and PEX-c

Nominal Size (mm)	Part Number	Dimensions		
		Dia (mm)	Size (mm)	Length (m)
50 x 4.5	3004372	50	4.50	5
63 x 6.0	3028271	63	6.00	5
75 x 7.5	3053972	75	7.50	5

Couplers



Straight Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
50	3027832	108	32
63	3027847	155	35
75	3065639	157	33

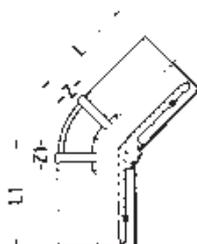


Reducing Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
50 x 32	3027833	26	26	28
50 x 40	3027834	38	38	35
63 x 40	3027852	60	38	42
63 x 50	3027850	60	38	36
75 x 50	3065641	62	39	27
75 x 63	3065640	62	61	31

Elbows



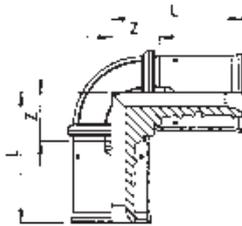
Elbow 45°

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
50	3024668	62	25
63	3027849	87	28
75	3065642	91	29

Wavin Tigris K1

Product details **Press-fit Plumbing**

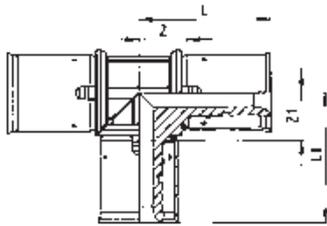


Elbow 90°

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
50	3024667	77	40
63	3027848	106	46
75	3065643	113	50

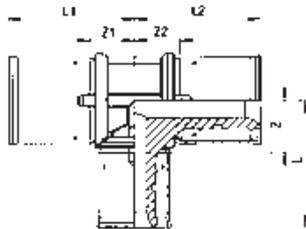
Tees



Equal Tee

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)			
		L	L1	Z	Z1
50	3027829	154	77	32	32
63	3027853	106	106	46	46
75	3065644	112	112	50	50

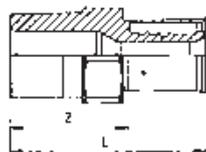


Branch Reduced Tee

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)					
		L	L1	L2	Z	Z1	Z2
50 x 25 x 50	3027830	64	68	68	39	31	31
50 x 32 x 50	3027842						
50 x 40 x 50	3027831	79	73	73	41	35	35
63 x 25 x 50	3027856	70	91	67	45	31	30
63 x 32 x 63	3027855	71	95	95	46	35	35
63 x 40 x 63	3027854	84	95	95	46	35	35
75 x 32 x 75	3065647	71	95	95	46	32	32
75 x 40 x 75	3065646	87	96	96	48	33	33
75 x 50 x 75	3065645	88	100	100	49	37	37

Connectors

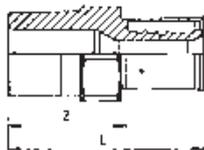


Connector – Single Male BSP Thread

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
50 x 1½"	3027837	95	57

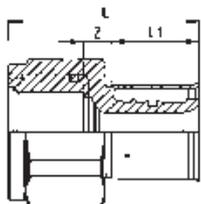
Tigris M1 – Connectors (Metal body)



Connector – Single Male BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)	
		L	Z
63 x 2"	3090826	108	50
75 x 2½"	4049178		



Connector – Single Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm)		
		L	L1	Z
50 x 1½"	4032698	75	38	17
63 x 2"	4032699	102	59	20
75 x 2½"	4049179			

NOTE:

* M1 fittings are manufactured from a UBA listed 617 brass.

– Materials on the UBA list are accepted as drinking water quality by the 4 member state.

– The UK is a member of the 4 member state, together with Germany, Netherlands and France.

Accessories and Tools



Internal Bending Spring

Nominal Size (mm)	Part Number
16	4013553
20	4013559
25	4013562

External Bending Spring

Nominal Size (mm)	Part Number
16	4023071
20	4023073
25	4023075

Wavin Tigris

Product details **Accessories and Tools**



Pipe Bending Pliers

Nominal Size (mm)	Part Number	Description
16	4043224	Pipe Bending Tool
20	4043225	Pipe Bending Tool



Pipe Bending Pliers – 16/20/25mm

Nominal Size (mm)	Part Number	Description
–	4023077	Pipe Bending Pliers



Pipe Straightener – 16/20/25mm

Nominal Size (mm)	Part Number	Description
–	4013530	Pipe Straightener



Pipe Cutter – 16-75mm

Nominal Size (mm)	Part Number	Description
–	4053508	Pipe Cutter – 16-75mm



Pipe Cutter with hold function – 16/20/25mm

Nominal Size (mm)	Part Number	Description
–	4036273	Pipe Cutter – 16/20/25mm
–	4037386	Replacement blade for Pipe Cutter (4036273)



Hand Press Tool – 16-20mm

Nominal Size (mm)	Part Number	Description
–	4013538	Hand Press Tool – 16-20mm

Note: contains the tool only



Hand Tool Insert

Nominal Size (mm)	Part Number
16	4013542
20	4013543



Cordless Pressing Tool – Mini

- For the perfect completion of Wavin Tigris K1 press connections of 16 to 40mm
- Supplied in a case, including charger
- Jaws sold separately

Nominal Size (mm)	Part Number	Description
–	4048906	Tigris K1 Pressing Tool – Mini
–	4066723	Battery for 4048906



Cordless Pressing Tool

- For the perfect completion of Wavin Tigris K1 press connections of 16 to 75mm
- Supplied in a case, including charger
- Jaws sold separately

Nominal Size (mm)	Part Number	Description
–	4048907	Tigris K1 Pressing Tool
–	4066725	Battery for 4048907



Pressing Jaws – Mini

- For use with 4048906

Nominal Size (mm)	Part Number
16	4046556
20	4046557
25	4046558
32	4046559
40	4046560

Wavin Tigris

Product details **Accessories and Tools**



Pressing Jaws

- For use with 4048907

Nominal Size (mm)	Part Number
16	4046691
20	4046694
25	4046695
32	4046756
40	4046758
50	4046759
63	4035779



Pressing Jaws

- For use with 4048907 and 4053510

Nominal Size (mm)	Part Number
75	4053509



Pressing Adaptor for 75mm Jaw

- For use with 4048907 and 4053509

Nominal Size (mm)	Part Number
75	4053510



Calibration Mandrel – 16-32mm

Nominal Size (mm)	Part Number
16	4999998
20	4999999
25	4023364
32	4023365



Calibration Mandrel – 40-75mm

Nominal Size (mm)	Part Number
40	4031987
50	4031988
63	4035780
75	4053507



Calibration Mandrel – 16/20/25mm

Nominal Size (mm)	Part Number
–	3021196



Hand Grip for Calibration Mandrel

Nominal Size (mm)	Part Number
–	3011162



Hand Grip for Calibration Mandrel

Nominal Size (mm)	Part Number
–	4036272



Calibration Set

- Including transport case and power click grasp

Nominal Size (mm)	Part Number	Description
–	4013541	Wavin Kalispeed-Set 16-32mm

Wavin QuickStream

Siphonic Roof Drainage



Wavin QuickStream



Plumbing engineers, architects, building owners and contractors are increasingly realising the many benefits of using siphonic roof drainage. For non-residential projects siphonic drainage has already become the norm for draining large and sometimes complex roof areas. Traditional gravity drainage is now the exception.

A lot can be said about the theory behind siphonic drainage, but this brochure will focus on the many benefits the system will bring to your project. Not only will a siphonic system quickly and efficiently discharge rainwater (even at peak rainfall conditions), it also allows you to save on build costs and free up space inside the building.

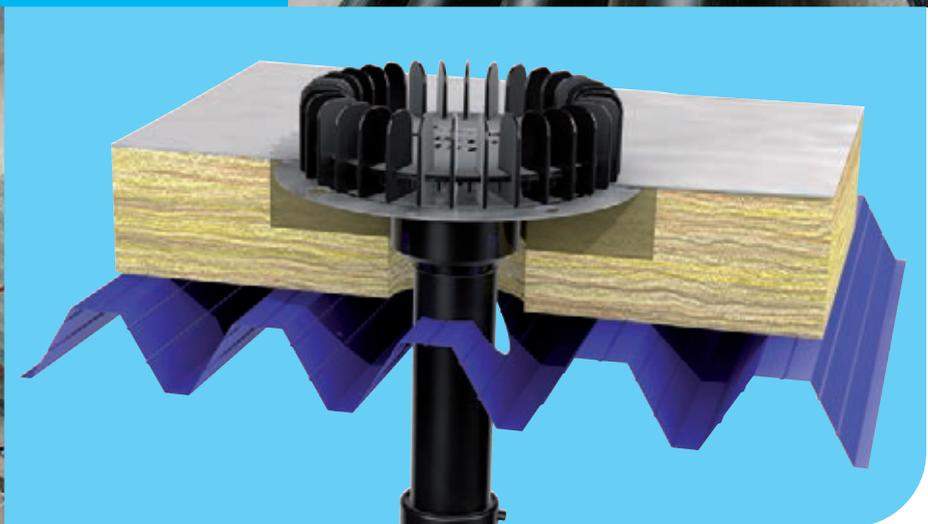
Wavin QuickStream

Siphonic Roof Drainage System

Siphonic Drainage Solutions

Wavin has been on the front line of siphonic drainage solutions ever since the Wavin QuickStream system was introduced in 1982.

Wavin QuickStream systems have now been successfully installed in more than 20 countries worldwide.



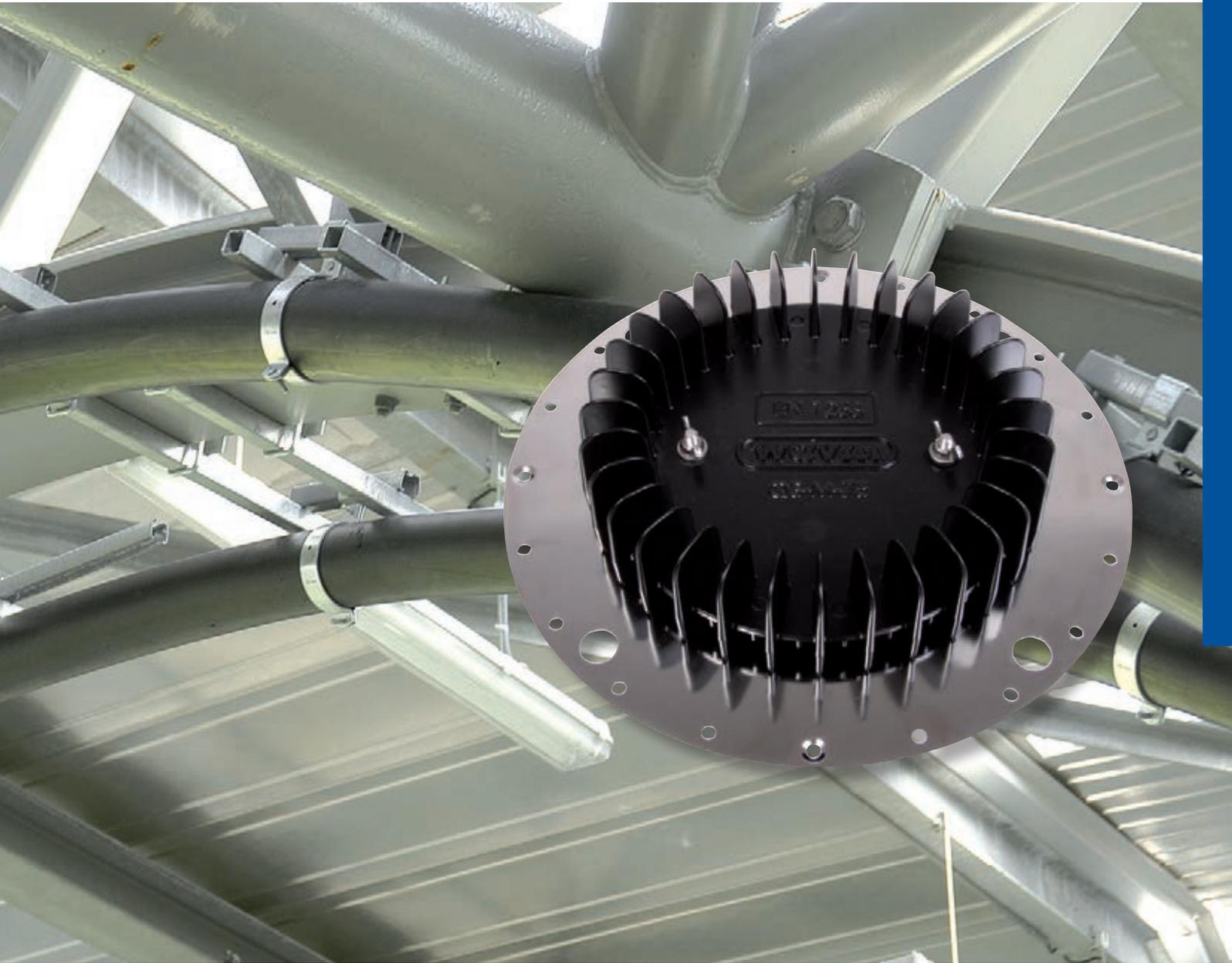
Advantages of siphonic drainage explained

Siphonic drainage systems offer clear advantages over traditional gravity drainage. Pipe sizes are smaller as water is being channelled through the pipes without air. Smaller pipe sizes and the reduced number of roof outlets, lower the installation costs and the overall building cost. Plus a reduction in downpipes results in no or limited pipe trenching next to the building, delivering considerable savings in ground works, and improved health and safety with regards to building access during construction.

As the lateral pipe work of a siphonic drainage system is installed without a gradient, the available space in the building is optimised and internal pipe work is no obstruction. Therefore siphonic drainage is, for example, the preferred choice for inner city multi-storey parking garages.



The Special Benefits of Wavin QuickStream



Not every siphonic system offers you the same benefits. Wavin QuickStream builds on over 30 years of experience in the calculation and design of siphonic systems, together with on-site installation support. The Wavin team will work with you to overcome on-site challenges and technical queries.

Wavin recognise that every element of the siphonic system and design must work together effectively to deliver an efficiently designed system, which will keep your building safe in a storm.

As well as a proven track record with over 30 years experience, Wavin QuickStream also offers:

- ④ Market leading, tried and tested, design software with the highest level of security and safety checks in the industry
- ④ An easy to install and maintain range of third party approved, sea water resistant, metal roof outlets catering for most roof constructions
- ④ A simple, safe, easy to install, third party approved bracketing system, specifically designed to handle the challenges of a siphonic roof drainage system
- ④ A 10 year system guarantee

Designing

Wavin QuickStream

The efficient performance of a siphonic roof drainage system is achieved by a combination of the system balance between roof outlets, correct levels of negative pressure, flow velocities in the system, flow velocities at discharge, and the priming of the system. It is therefore essential to use an established and proven analytical design program for system design.

Every QuickStream project is designed using specially designed AutoCad compatible software, which automatically makes compulsory checks on the above mentioned system elements: system balancing, cavitation, velocity and priming of the downpipes (see explanation right).

System Element	Check done by Wavin
System balancing	energy losses of all roof outlets are the same
Cavitation	negative pressure in the system is not too high
Priming of downpipe	downpipes need to be fully filled with water
Velocity	minimum speed to ensure cleansing of horizontal pipework



Only once all checks have concluded positively, and minimum design requirements are met, can outputs be printed from the software, ensuring the QuickStream system performance in practice.

Roof Outlets

Wavin QuickStream

QS-M-75 Range



The Wavin range of metal roof outlets are easy to install and maintain, with only 2 screws per outlet and no special tools required. The “260” outlets have a high nominal maximum flow rate; the “400” outlets have the same flow rate for a lower water level on the roof. This means fewer of the “400” outlets are needed to drain the same volume of water (approx 30% less

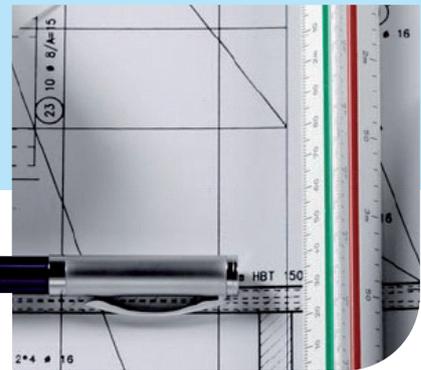
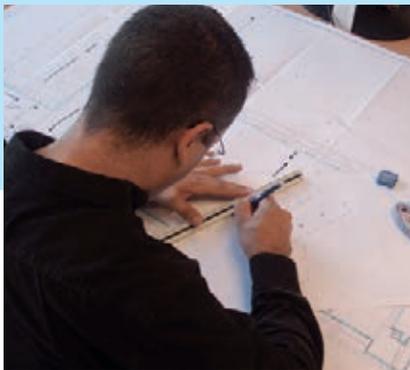
for a given water level). The roof outlets are sea water resistant (Test report available) and the hydraulic performance of the outlets has been independently tested and validated at LGA in Germany.

Technical (Installation) Support

Wavin designs and calculates all QuickStream systems using the most advanced software in the business. Output drawings are in AutoCad allowing easy incorporation into the AutoCad drawings of the building, and optimum communication between the building designer and Wavin.

The software also generates a 3-D system layout, which enables an easy and foolproof system installation.

You can rely on Wavin for local and on-site technical support throughout the project.



Contact your Wavin representative or our technical team for more information on Wavin Quickstream and how we can help with your project.

Bracketing System

Wavin QuickStream

The Wavin dedicated bracketing system is simple to use: in 3 easy steps the horizontal pipe work is installed in the easiest and safest way.

This bracketing system is designed for safe and quick installation by minimising loose parts and required tools, and offers the following benefits:

⦿ Easy connection at height – clamp is designed to hold pipe in place for easy, quick and safe installation

- ⦿ Clamps are delivered in one piece – quick assembly and no loose parts to fall from height to the building floor
- ⦿ All pipe is maintained at the same level ensuring no sloping of pipe work
- ⦿ The bespoke suspension system can incorporate a 30°C temperature variation
 - 100m of pipe will elongate or shorten 60cm when the temperature changes 30°C
- ⦿ Third party approved
 - independently tested by Bosch Engineering

Step 1



Step 2



Step 3



Wavin Stormwater Management Solutions

Wavin QuickStream is an integral part of Wavin Stormwater Management Solutions, which offers a specialist focus for the most efficient capture, transportation, cleaning, infiltration, attenuation and re-use of stormwater at source. This combination of specialist expertise and technology from Wavin is specifically focused on achieving the optimum solution for each project requiring effective and sustainable management of stormwater.

Wavin's unique expertise in stormwater management combines focused stormwater systems with proven project management skills to offer sustainable, customised, end-to-end solutions that deliver guaranteed performance and optimised customer value.



Wavin Hep₂O

Push-fit Plumbing & Heating System

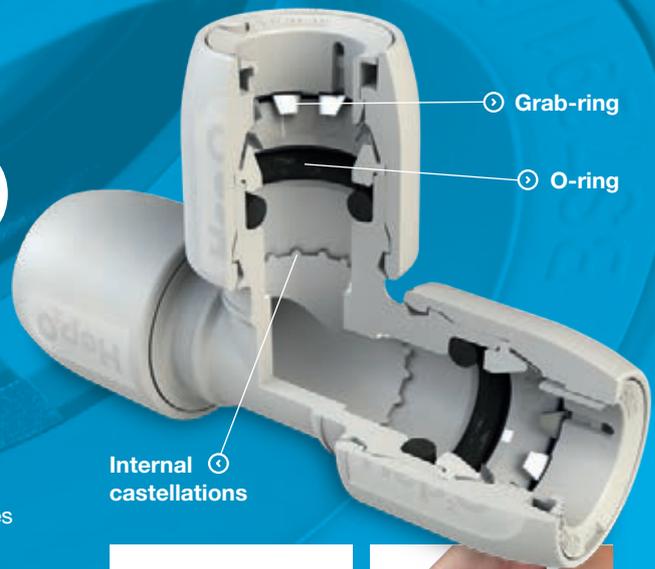


Above ground systems

Wavin Hep₂O Push-fit Plumbing & Heating System

Wavin Hep₂O flexible push fit plumbing developed in response to installer feedback, and has a number of unique and innovative features and benefits including;

- ⊙ In4Sure™ joint recognition – tells you when the pipe is in
- ⊙ Secure demounting with the new HepKey™ system
- ⊙ SmartSleeve™ insert stays captive in the pipe
- ⊙ 50 year industry leading Guarantee
- ⊙ Flexible pipe which comes off the coil straight



Standards and Approvals

Hep₂O meets the requirements of Class S of BS 7291, parts 1 and 2 and is manufactured within a Quality Management System which satisfies EN ISO 9002.

Hep₂O is also approved by WRAS – deemed safe for use in the supply of drinking water.

Guarantee

As a result of its rigorous Quality Management programme, Hep₂O carries a 50 year guarantee against defect in materials or manufacturing of all their pipe and fittings.

Important Note:

Fittings of all product ranges must be ordered in their pack multiples as illustrated in catalogue.

Hep₂O fittings are pre-lubricated, no additional lubrication is required.

DO NOT use any flux, jointing compound or non Hep₂O lubricant on Hep₂O fittings.



Key to Colour Reference

Code Suffix	Product Colour
BL	Black
BU	Blue
RD	Red
W	White

Wavin Hep₂O

Product details **Push-fit Plumbing**

Polybutylene Pipe



Coils – Barrier

- Straight Coiled Lengths in SmartPack dispensers
- Please Note: Order pipe by unit (coil) not by metre

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Coil Length (m)
10	HXX25/10W	○	25
10	HXX50/10W	○	50
10	HXX100/10W	○	100
15	HXX10/15W	○	10
15	HXX25/15W	○	25
15	HXX50/15W	○	50
15	HXX80/15W	○	80
15	HXX100/15W	○	100
15	HXX120/15W	○	120
22	HXX10/22W	○	10
22	HXX25/22W	○	25
22	HXX50/22W	○	50
28	HXX10/28W	○	10
28	HXX25/28W	○	25
28	HXX50/28W	○	50



Straight Lengths – Barrier

- Please Note: Order pipe by unit (length) not by metre
- Cut lengths only available as pack quantities

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Pipe Length (m)
15	HXX03/15W	○	3
22	HXX03/22W	○	3
28	HXX03/28W	○	3
15	HXX06/15W	○	6
22	HXX06/22W	○	6
28	HXX06/28W	○	6

Wavin Hep₂O

Product details **Push-fit Plumbing**



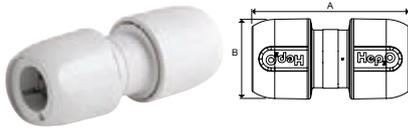
Pipe in Pipe System

- Coil of Hep₂O Barrier Pipe in Blue or Red Conduit
- Please Note: Order pipe by unit (coil) not by metre

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Coil Length (m)
10	HXXC5010 BU 	Blue	50
10	HXXC5010 RD 	Red	50
15	HXXC5015 BU 	Blue	50
15	HXXC5015 RD 	Red	50
22	HXXC5022 BU 	Blue	50
22	HXXC5022 RD 	Red	50
28	HXXC5028 BU 	Blue	25
28	HXXC5028 RD 	Red	25

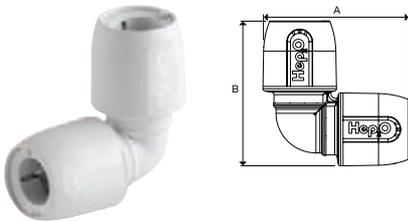
Demountable Fittings



Straight Connector

Material: Polybutylene (PB)

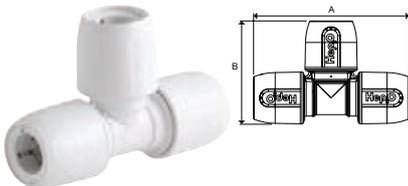
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD1/10W	○	66	23
15	HD1/15W	○	73	29
22	HD1/22W	○	79	40
28	HD1/28W	○	85	50



Elbow 90°

Material: Polybutylene (PB)

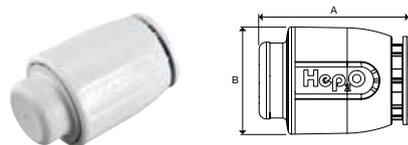
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD5/10W	○	48	48
15	HD5/15W	○	59	59
22	HD5/22W	○	71	71
28	HD5/28W	○	82	82



Equal Tee

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD10/10W	○	75	49
15	HD10/15W	○	88	59
22	HD10/22W	○	101	71
28	HD10/28W	○	114	82



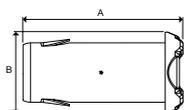
Demountable Stop-End

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD62/10W	○	46	42
15	HD62/15W	○	67	37
22	HD62/22W	○	44	40
28	HD62/28W	○	50	47

Wavin Hep₂O

Product details **Push-fit Plumbing**



SmartSleeve Pipe Support

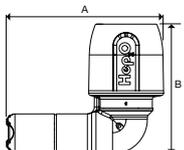
Material: Stainless Steel

For installation tips see:



WavinUK

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
10	HX60/10W	27	10
15	HX60/15W	32	15
22	HX60/22W	32	22
28	HX60/28W	36	28

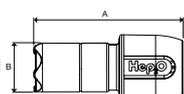


Spigot Elbow 90°

- Single Socket

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD4/10W	○	49	43
15	HD4/15W	○	62	51
15 x 10	HD4A/15W	○	55	46
22	HD4/22W	○	73	62



Socket Reducer

Material: Polybutylene (PB)

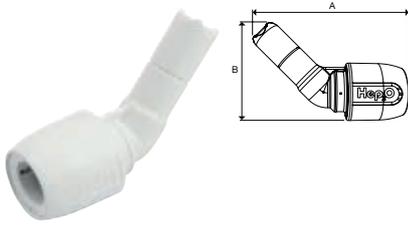
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 10	HD2/15W	○	62	23
22 x 15	HD2/22W	○	67	29
28 x 22	HD2/28W	○	75	40



Socket/Socket Reducer

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 10	HD3B/15W	○	62	29.6
22 x 15	HD3B/22W	○	70	40.4
22 x 10	HD3C/22W	○	70	40.4

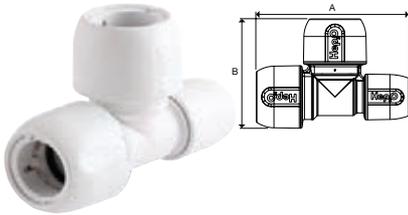


Obtuse Bend 135°

- Single Socket

Material: Polybutylene (PB)

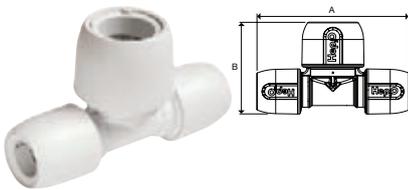
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HD8/10W	○	50	39
15	HD8/15W	○	62	50
22	HD8/22W	○	86	62



End Reduced Tee

Material: Polybutylene (PB)

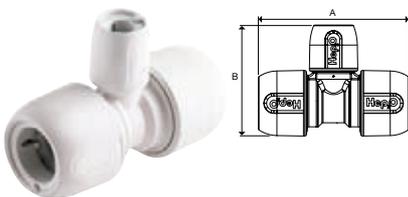
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 15 x 22	HD12/22W	○	98	71
28 x 22 x 28	HD12/28W	○	114	84



Double End Reduced Tee

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10 x 10 x 15	HD18/15W	○	82	52
10 x 10 x 22	HD18A/22W	○	91	54
15 x 15 x 22	HD18/22W	○	99	60
22 x 22 x 28	HD18/28W	○	111	73



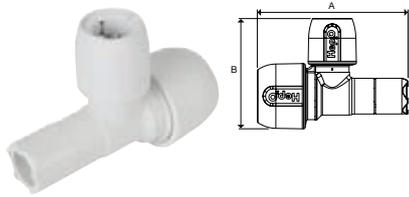
Branch Reduced Tee

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 15 x 10	HD13/15W	○	82	55
22 x 22 x 10	HD13A/22W	○	86	64
22 x 22 x 15	HD13/22W	○	92	68
28 x 28 x 15	HD13A/28W	○	96	78
28 x 28 x 22	HD13/28W	○	104	80

Wavin Hep₂O

Product details **Push-fit Plumbing**

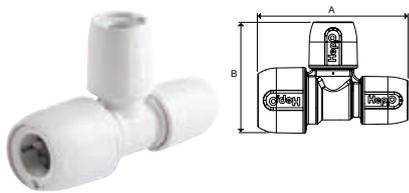


Branch Reduced Tee

- Spigot

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 15 x 10	HD15/15W	○	84	55
22 x 22 x 15	HD15/22W	○	93	68



Branch and One End Reduced Tee

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 10 x 10	HD14/15W	○	79	55
22 x 10 x 10	HD14A/22W	○	84	64
22 x 15 x 15	HD14/22W	○	92	68
28 x 22 x 22	HD14/28W	○	104	80

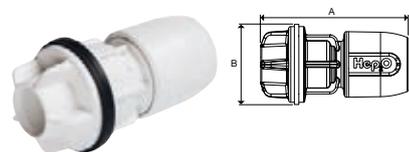


Blanking Peg

- For demountable Hep₂O fittings

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HX44/10W	○	17.1	50.6
15	HX44/15W	○	19.8	54.3
22	HX44/22W	○	26.5	54.8
28	HX44/28W	○	32.5	59.4



Tank Connector

- With BSP tail & backnut (For cold water use only)

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HX20/15W	○	68	36
BSP 3/4"	HX20/22W	○	69	43

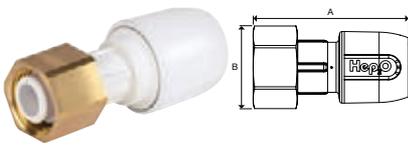


Tank Connector (Brass Body)

- With BSP tail & backnut (For cold water use only)

Material: Polybutylene (PB) Brass Body

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1"	HX20/28W	○	92	50

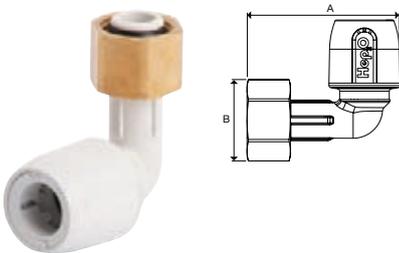


Straight Tap Connector

- With brass nut and alternative rubber washer

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HD25A/15W ▽	○	70	30
BSP 3/4"	HD25B/15W ▽	○	65	34
BSP 3/4"	HD25B/22W ▽	○	73	40

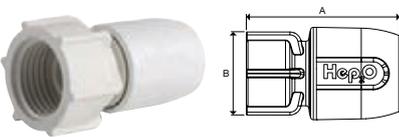


Bent Tap Connector

- With brass nut and alternative rubber washer

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HD27/15W ▽	○	64	29



Hand-Titan™ Tap Connector

- With rubber washer

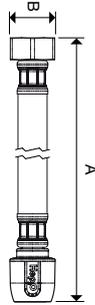
Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HD26A/10W ▽	○	47	27
BSP 1/2"	HD26A/15W ▽	○	49	29
BSP 3/4"	HD26B/15W ▽	○	50	33
BSP 3/4"	HD26B/22W ▽	○	50	40

Wavin Hep₂O

Product details **Push-fit Plumbing**

Flexible Tap Connectors



Hep₂O x BSP Nut

- With brass nut and rubber washer
- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
150 BSP 1/2"	HD425A/15W	○	150	29.5
300 BSP 1/2"	HD125A/15W	○	300	29.5
300 BSP 3/4"	HD125B/15W	○	300	29.5
300 BSP 3/4" (full bore)	HD125C/22W	○	300	40.3
300 BSP 3/4"	HD125B/22W	○	300	29.5
500 BSP 1/2"	HD225A/15W	○	500	29.5
500 BSP 3/4"	HD225B/15W	○	500	29.5
500 BSP 3/4" (full bore)	HD225C/22W	○	500	40.3
500 BSP 3/4"	HD225B/22W	○	500	40.3
1000 BSP 1/2"	HD325A/15W	○	1000	29.5
1000 BSP 3/4"	HD325B/22W	○	1000	40.3



Hep₂O x Hep₂O

- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
300 15 x 15	HD125H/15W	○	300	29.5
300 22 x 22	HD125H/22W	○	300	40.3
500 15 x 15	HD225H/15W	○	500	29.5
500 22 x 22	HD225H/22W	○	500	40.3



Hep₂O x Elbow BSP Nut

- With brass nut and rubber washer
- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
300 BSP 1/2"	HD125D/15W	○	311.5	29.5



Hep₂O Brass Service Valve x BSP Nut

- With brass nut and rubber washer
- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
300 BSP 1/2"	HD125E/15W	○	300	29.5
300 BSP 3/4"	HD125E/22W	○	300	40.3
500 BSP 1/2"	HD225E/15W	○	500	29.5
500 BSP 3/4"	HD225I/15W	○	500	29.5
500 BSP 3/4"	HD225E/22W	○	500	40.3



Hep₂O Brass Service Valve (Handle) x BSP Nut

- With brass nut and rubber washer
- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
300 BSP 1/2"	HD125EH/15W	○	300	29.5
300 BSP 3/4"	HD125EH/22W	○	300	40.3

Wavin Hep₂O

Product details **Push-fit Plumbing**



Hep₂O x Monobloc Mixers[†]

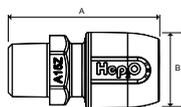
- Braided hose

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
300 15 x M10	HD125F/15W	○	300	29.5
300 15 x M12	HD125G/15W	○	300	29.5

[†]Sold and priced as a pair.

Auxiliary Fittings

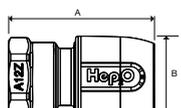


Adaptor

- Male BSP/Hep20 socket DZR Brass

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HX29/10W	▽ ○	53	27
BSP 1/2"	HX29/15W	▽ ○	58	29
BSP 3/4"	HX29/22W	▽ ○	62	40
BSP 1"	HX29/28W	▽ ○	67	50

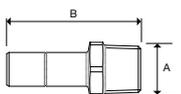


Adaptor

- Female BSP/Hep20 socket DZR Brass

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HX28/10W	▽ ○	50	29
BSP 1/2"	HX28/15W	▽ ○	52	29
BSP 3/4"	HX24/15W	▽ ○	54	33
BSP 3/4"	HX28/22W	▽ ○	57	40
BSP 1"	HX28/28W	▽ ○	63	50

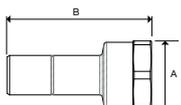


Adaptor

- Male BSP/Hep20 spigot DZR Brass

Material: Brass

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
BSP 1/2"	HX31/15W	▽	59
BSP 3/4"	HX31/22W	▽	63
BSP 1"	HX31/28W	▽	66



Adaptor

- Female BSP/Hep20 spigot DZR Brass

Material: Brass

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
BSP 1/2"	HX30/15W	▽	54.5
BSP 3/4"	HX30/22W	▽	58
BSP 1"	HX30/28W	▽	61

Wavin Hep₂O

Product details **Push-fit Plumbing**



Draincock

- Brass 15mm spigot

Material: Brass

Nominal Size (mm)	Part Number	Dimensions (mm)	
		A	B
15	HX32/15 GY ♡	68	43

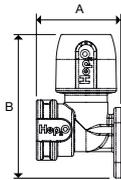


Adaptor

- Converts 1/2" tap connector to 3/4"

Material: Brass

Nominal Size (mm)	Part Number
BSP 1/2" x 3/4"	HX39 GR ♡



Wall Plate Elbow

- Hep₂O

Material: Plastic / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
BSP 1/2"	HX6/15W ♡	○	66	74
BSP 3/4"	HX6/22W ♡	○	66	78



Ball Valve

- Plated Brass (suitable for central heating use)

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15 x 15	HX22/15W	○	110	52
22 x 22	HX22/22W	○	116	68

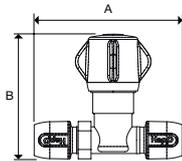


Gate Valve – Hot/Cold

- DZR Brass – Hep₂O ends (suitable for central heating use)

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15	HX35/15W	○	88	76
22	HX35/22W	○	112	88

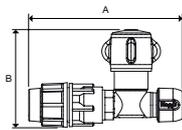


Stopcock – Cold Water

- Fitted with Hep₂O ends

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15	HX36/15W	○	115	96
22	HX36/22W	○	128	110

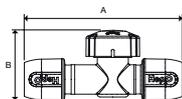


Stopcock – Cold Water

- Hep₂O to MDPE Conversion 22mm to 25mm MDPE

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
22	HX43/22W	○



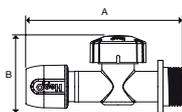
Shut-off Valve*

- With hot/cold indicator insert

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15	HX37/15W	○	106.3	50.3

*For intermittent hot and cold water use up to a maximum of 65°C. Not for use with central heating.



Appliance Valve*

- With hot/cold indicator insert

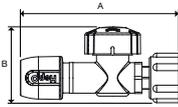
Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
15	HX38/15W	○

*For intermittent hot and cold water use up to a maximum of 65°C. Not for use with central heating.

Wavin Hep₂O

Product details **Push-fit Plumbing**



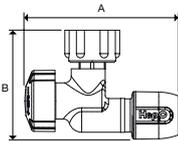
Straight Service Valve*

- With hot/cold indicator insert

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15	HX18/15W	○	104	51.8

*For intermittent hot and cold water use up to a maximum of 65°C. Not for use with central heating.



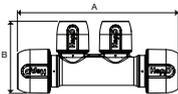
Angled Service Valve*

- With hot/cold indicator insert

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
15	HX19/15W	○	95	70

*For intermittent hot and cold water use up to a maximum of 65°C. Not for use with central heating.

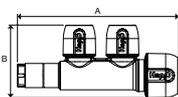


Two Port Manifold

- Closed spigot

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 15	HX88/22W	○	146	66

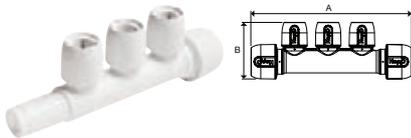


Two Port Manifold

- All socket

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 15	HX88B/22W	○	147	66

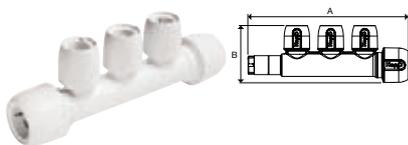


Three Port Manifold

- Closed spigot

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 15	HX89/22W	○	185	66

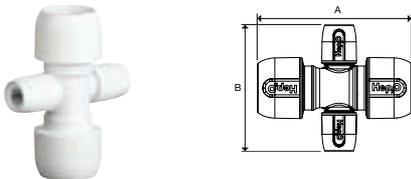


Three Port Manifold

- All socket

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 15	HX89B/22W	○	186	66

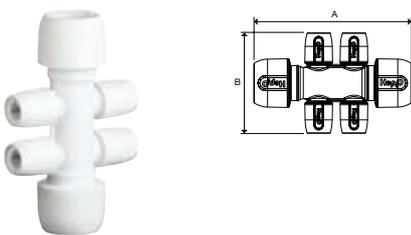


Two Port Manifold

- All socket

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX92B/22W	○	101	83

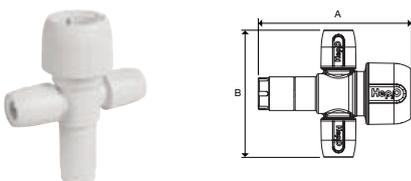


Four Port Manifold

- All socket

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX94B/22W	○	130	83



Two Port Manifold

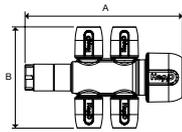
- Socket and closed spigot

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX92/22W	○	100	83

Wavin Hep₂O

Product details **Push-fit Plumbing**

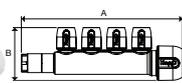


Four Port Manifold

- Socket and closed spigot

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX94/22W	○	129	83

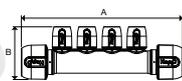


Four Port Manifold

- Socket and closed spigot, on one side

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX96/22W	○	187	62



Four Port Manifold

- All socket, on one side

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
22 x 10	HX96B/22W	○	187	62



One Port Valved Manifold

- Plated Brass 3/4" BSP Male/female 22mm Hep₂O port

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option



Two Port Valved Manifold

- Plated Brass 3/4" BSP Male/female 15mm Hep₂O ports

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option



Three Port Valved Manifold

- Plated Brass 3/4" BSP Male/female 15mm Hep₂O ports

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option
15	HX93T/15W	<input type="radio"/>



Four Port Valved Manifold

- Plated Brass 3/4" BSP Male/female 15mm Hep₂O ports

Material: Brass / Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option
15	HX94T/15W	<input type="radio"/>



Manifold End Caps

Material: Brass

Nominal Size (mm)	Part Number
3/4" Female	HX97 GY
3/4" Male	HX98 GY



Manifold Bracket – Pair

- For HX92T/15, HX93T/15 and HX94T/15

Nominal Size (mm)	Part Number
–	HX95A GR



Radiator Outlet Back Box

- Plastic (for stud wall)

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
–	HX109 GY	<input type="radio"/>

Wavin Hep2O

Product details **Push-fit Plumbing**



Radiator Outlet Back Box

- Metal (for solid wall)

Material: Metal

Nominal Size (mm)	Part Number
–	HX110 GY



Radiator Outlet Cover with Flap

- For use with HX109 and HX110

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
–	HX113 WH	○



Back Box Grommet

- For use with HX110

Material: Rubber

Nominal Size (mm)	Part Number	Colour Option
–	HX112 GY	●

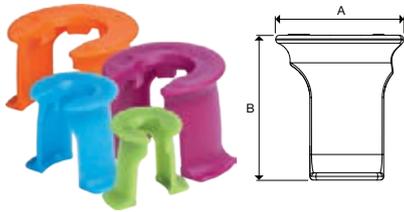


Radiator Chrome Uprand

Material: Metal

Nominal Size (mm)	Part Number	Dimensions (mm) Length
15	HX120 CH	600

Tools, Fixings and Accessories



HepKey Plus

- Demounting Tool

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			A	B
10	HX79/10W	●	40	38
15	HX79/15W	●	45	40
22	HX79/22W	●	56	40
28	HX79/28W	●	65	40



HepKey

- Demounting Tool

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)	
			Width	Depth
10	HX78/10W	●	32	14
15	HX78/15W	●	38	16
22	HX78/22W	●	49	18
28	HX78/28W	●	59	20

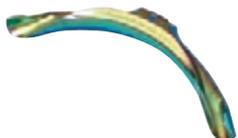


HepTool

- Demounting Tool

Material: Stainless Steel

Nominal Size (mm)	Part Number
10/28	HX77/10W
15/22	HX77/15W



Cold Forming Bend Fixture

- With passivate finish

Material: Metal

Nominal Size (mm)	Part Number
15	HX75/15 GR
22	HX75/22 GR

Wavin Hep₂O

Product details **Push-fit Plumbing**



Pipe Cutter – Scissor Type

- Standard

Material: Metal

Nominal Size (mm)	Part Number
–	HD74 GR



Pro Cutter

Material: Metal

Nominal Size (mm)	Part Number
–	HD75 GR



Pipe Cutter – Ratchet Type

Material: Metal

Nominal Size (mm)	Part Number
> 42	HD77 GR
> 28	HD78 GR



Hep₂O Joint Test Kit

Material: Metal

Nominal Size (mm)	Part Number
–	HX81 GR



Pipe Clips – Screw

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option
15	HX85/15W	○
22	HX85/22W	○
28	HX85/28W	○



Pipe Clip – Spacers

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
15	HX86/15W	○
22	HX86/22W	○



Pipe Clip Cable Type

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
10	HX65/10W	○
15	HX65/15W	○
22	HX65/22W	○
28	HX65/28W	○



Hep₂O Silicone Lubricant Spray

- Aerosol can for Hep₂O fittings

Nominal Size (mm)	Part Number
400ml	HX200



Flat Tap Connector Washers

Material: Rubber

Nominal Size (mm)	Part Number	Colour Option
15	HX58/15 GY	●
22	HX58/22 GY	●



Conical Tap Connector Washers

Material: Rubber

Nominal Size (mm)	Part Number	Colour Option
15	HX57/15 GR	●
22	HX57/22 GR	●

Wavin Hep₂O

Product details **Push-fit Plumbing**

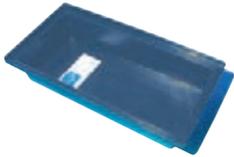
Conduit System



Conduit Pipe

Material: Polybutylene (PB)

Nominal Size (mm)	Part Number	Colour Option	Length (m)
15	HXC25/15 BL	●	25.0
15	HXC50/15 BL	●	50.0
22	HXC25/22 BL	●	25.0
22	HXC50/22 BL	●	50.0



Conduit Junction Box

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
-	HX100 BL	●



Conduit Junction Box Lid

Material: Plastic

Nominal Size (mm)	Part Number	Colour Option
-	HX104 BL	●



Conduit Terminal

Material: Brass

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm)		
			A	B	C
15	HX101/15W	●	75	36	48



Terminal Back Plate

Material: Metal

Nominal Size (mm)	Part Number
-	HX103 BL

Transport, handling and waste

Storage and handling

The Wavin system components are well protected in the original packaging. Nonetheless, all components (fittings and pipes) should be protected from mechanical and environmental damage.

Impairment due to ultraviolet radiation

Wavin multilayer composite pipes must be protected from direct, intense sunlight and ultraviolet (UV) radiation. This applies both for the storage of the pipes and for finished installation. Storage must therefore not take place in the open air. Suitable measures must be taken to protect finished systems and system components from the effects of UV rays.

Observe press and push-fit fitting assembly instructions

- ① Always cut the pipe to length at right angles
- ① Calibrate and chamfer the pipe end all round
- ① Push the pipe into the fitting to the stop
- ① Check the press fitting observation window
- ① Press in the case of the press fittings

Potential equalisation

Building and electrical regulations such as VDI 0190 parts 410 and 540 demand potential equalisation between earth wires and “conductive” water, waste water and heating pipes. As Wavin Hot and Cold Water Systems do not represent conductive pipe systems, they cannot be used for potential equalisation and are accordingly not to be earthed. An approved electrician must check that the installation of Wavin Tigris K5/K1 does not impair the existing electrical protective and earthing measures.

Installation temperature

The installation temperature for Wavin pipe systems should not fall below -10°C.

The operating temperatures of the new pressing machines with the Li-ion batteries from the Wavin range must be above -15°C nor above 40°C. The optimum processing range for Wavin Tigris K1 system components lies roughly between 5°C and 25°C.

Frost protection

When using Wavin Hot and Cold Water Systems with pipe networks that require protection from frost (e.g. cold water networks, brine pipes), we recommend the use of ethylene glycol (to protect from risk of freezing). Ethylene glycol can be used up to a maximum concentration of 35%. This concentration roughly corresponds to frostproofing of -22°C. Before using alternative frost protection additives, confirm the suitability/approval with the manufacturer or with Wavin.

Sealing

The assembly of a threaded connection must be in accordance with DIN 30 660. We strongly recommend the use of PTFE / Teflon Tape to seal the connection. Alternatively hemp may be used but only in conjunction with an approved plastic sealing compound such as Fermit. Restrict the amount of hemp as too great a quantity can result in damage to the internal threads and cross-threading. When using hemp make sure that the thread tips remain visible.

Contact with substances containing solvents

Avoid direct contact of Wavin Hot and Cold Water Systems with solvents or construction materials containing solvents (such as paints, sprays, expanding foams, adhesives).

Note: Specifically chemical sealants (e.g. Loctite) and adhesives (e.g. 2-part adhesives) must not be used. Expanding foams produced on the basis of methacrylate, isocyanate and acrylate must not be used.

Under unfavourable circumstances, aggressive chemicals that are present may cause damage to the plastic material.

The Wavin systems do not require the use of any chemical substance or additional lubrication during installation.

Statement on continuously operated recirculating systems

Tigris K5/K1 may be suitable for use in continuously operated recirculating systems but operating parameters need to be approved by Wavin technical management.

Contact Wavin Technical on 0800 038 0088 to discuss approval.

Definitions – Continuously operated re-circulating systems or Secondary Hot Water Circulation/Ring main installations. These differ from conventional hot water supply and central heating systems found in domestic properties. Continuously operated re-circulating systems are water-replenished systems which are maintained at a constant high temperature to provide a constant source of hot water and are used to distribute constant hot water to draw off points that may be distant from the heat source or hot water storage vessel. Applications include multi residential properties like care homes and hotels.

Transport, handling and waste

Handling, storage and safety

Handling

Care should be taken when handling pipe and fittings. Excessive scratching or scoring harms the appearance and can also affect the joint sealing.

Take extra care when handling pipe and fittings in wintry conditions. Cold weather reduces the impact strength of plastics. Use nylon belt slings, or forklifts with smooth forks, for mechanical unloading of block bundles. Metal slings, hooks or chains must not come into contact with pipes (see Figure 1).

Load and unload loose pipe by hand. Avoid using skids. When loose pipes have been transported one inside the other, always remove the inner pipe first.

Figure 1: Unloading of block bundles



Storage

Always store pipe on a reasonably flat surface free from sharp projections.

Block bundles

Block bundles can be stored up to 3m high without extra side supports or bearers. Block bundles will remain free-standing when cut. Take care when releasing bundles as the straps are under considerable tension and may flail when cut.

Loose pipes

Loose pipe requires side supports at least every 2m. These supports should consist of battens at least 75mm wide. Ideally, support loose gutter or pipe uniformly throughout its entire length. If this is not possible, place timber supports at least 75mm wide at 1m maximum centres beneath the pipe (see Figure 3) Stack different size pipe separately, or, if not possible, stack with larger diameters at the bottom.

Maximum stack size: 7 layers or 2m high (see Figure 2).

Stack Socketed Pipe with sockets protruding and placed at alternate ends to ensure pipe is evenly supported.

Fittings

Store fittings supplied in plastic bags away from direct sunlight. If this is not possible, open bags to prevent a build-up of temperature.

Fittings in cardboard packaging (e.g. Fire Stop Seals and Air Admittance Valves) should be stored under cover until required.

Store degreasing cleaners, silicone lubricant, solvent cement and fillers in a cool place away from any heat source and out of direct sunlight.

Safety

The relevant regulations detailed in the Health and Safety at Work Act 1974 must be adhered to on site.

Figure 2: Storage of loose pipe on the ground

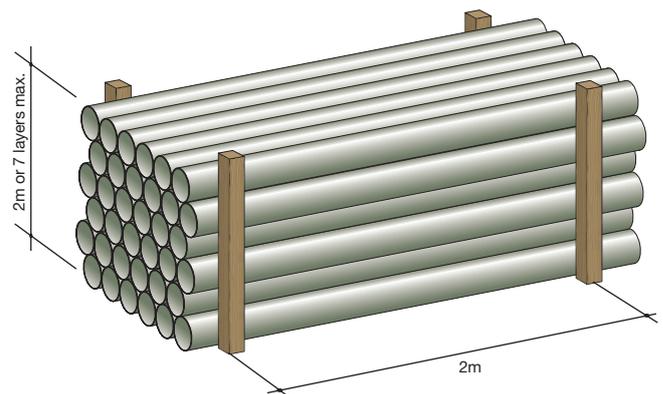
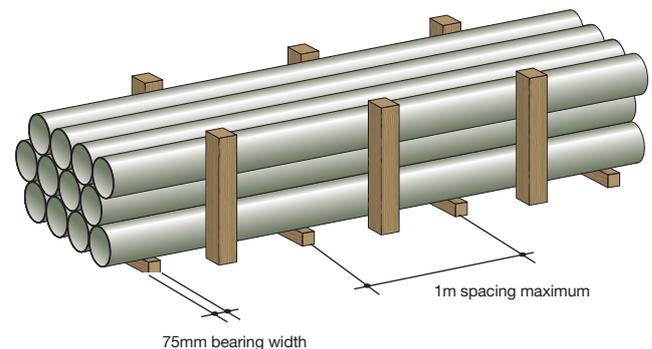
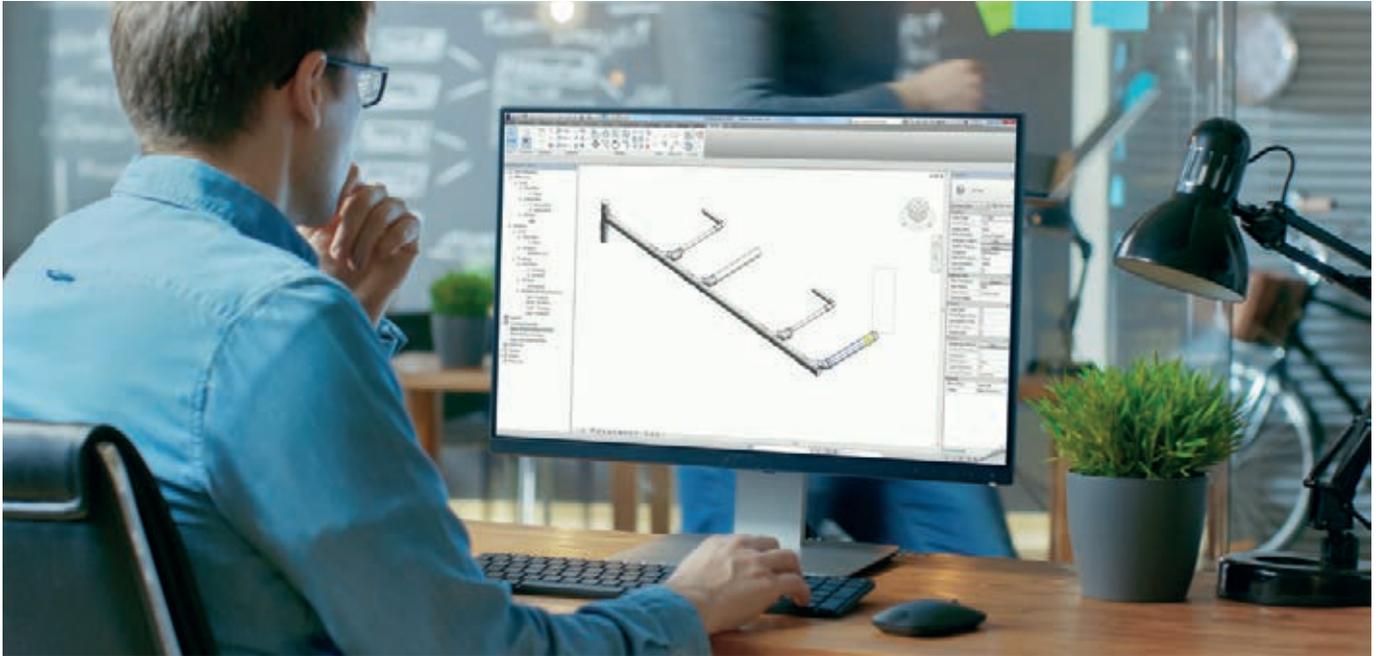


Figure 3: Storage of loose pipe on bearers



Game changing BIM design



Building Information Modelling (BIM)

We have created Revit families with integrated intelligent assistance to help you reach a complete 'as-built' pipe system in the fastest way possible, significantly reducing time spent on design.

Our Revit families help you reach a 100% accurate representation of the way piping systems will actually be installed, easily and without the use of product catalogues.

The quickest way to a complete 'as built' pipe system

Our Revit families for BIM ensure that the piping system selected can be installed as designed using only existing products in our portfolio that are available to install, saving time for both the engineer and contractor.

Precise Designs with Intelligent Assistance

Intelligent assistance can double productivity on-screen and on-site. The unique intelligent design assistance in Wavin's BIM Revit packages can slash project delivery time and costs through more accurate, faster and easier pipe modelling. The result is 'as-built' designs that reduce risk, eliminate waste and enhance productivity at every stage of a project.

Fully integrated Bill of Materials

Wavin Revit families contain an accurate Bill of Materials for each of our ranges including both pipes and fittings ready for you to order from your preferred distributor.

Our Revit packages are available in all of our above ground soil, waste, plumbing and heating systems, including;

- ⊖ Wavin AS+
- ⊖ Wavin HDPE
- ⊖ Wavin Tigris K5/K1
- ⊖ Wavin Solvent Soil
- ⊖ Wavin Hep₂O
- ⊖ Wavin Osma Push-Fit Soil & Waste
- ⊖ Wavin Osma Solvent Weld Soil and Waste
- ⊖ Wavin Traps and Accessories

You can also see lots of tips and tricks of how to use Wavin Revit families at myportal.wavin.co.uk.

End-to-end customer support



Technical design and project support

Wavin has a dedicated and well-resourced support service to assist you in eliminating avoidable costs and achieving the best installed outcome – every time.

From CPD sessions and optimised specification, to calculation, compliance, enhanced sustainability and reduced risk, our know-how is a perfect complement to your professional expertise.

To complement your own expertise, the professional team at our UK Technical Centre are an invaluable resource. They can contribute at each and every stage, from originating designs, commenting on existing designs, validating specification, checking regulatory compliance, performing calculations or simply answering a query.

In our experience, the earlier we are involved the more value we can add, but we are agile and flexible enough to respond when you need us, on one facet or every aspect of above ground commercial plumbing and drainage.

Contact Wavin Technical Design Department:

Tel: 0800 038 0088 Email: technical.design.uk@wavin.com or via online enquiry at www.wavin.co.uk

MyPortal

BIM Centre

MyPortal hosts our Revit families which have been created with integrated intelligent assistance to help you reach a complete 'as-built' pipe system in the fastest way possible, significantly reducing time spent on design.

Technical Tools

Our suite of free, simple to use tools have been designed to help design water management projects. This includes a Pipe Deformation tool, the AquaCell Configurator and an Inspection Chamber Selector.

To find out more visit www.myportal.wavin.co.uk MyPortal is an online hub that allows users to set-up a personal profile and access a host of features:

eLearning

MyPortal has a range of CPD and Product Training modules – each written by one of our team of experts – that conclude with an assessment of ten questions and downloadable certificate on successful completion of the course.

Once logged in, users can start, pause and resume courses at their convenience and keep track of their progress in their personalised dashboard. Courses have been designed to cater for Beginner, Intermediate and Advanced levels and encourage interaction and engagement throughout.



You can find lots of helpful videos regarding installation of our products on our Wavin YouTube channel at www.youtube.com/WavinUK



Wavin is part of Orbia, a community of companies working together to tackle some of the world's most complex challenges. We are bound by a common purpose: To Advance Life Around the World.

Orbia's Building and Infrastructure business Wavin is an innovative solutions provider for the global building and infrastructure industry. Backed by more than 60 years of product development experience, Wavin is advancing life around the world by building healthy, sustainable environments for global citizens. Whether it's to improve the distribution of clean drinking water, to make sanitation accessible for everyone, to create climate resilient cities, or to design comfortable living spaces, Wavin collaborates with municipal leaders, engineers, contractors, and installers to help future-proof communities, buildings and homes. Wavin has 12,000+ employees around 65 production sites worldwide, serving over 80 countries through a global sales and distribution network.

Wavin Limited | Registered Office | Edlington Lane | Doncaster | DN12 1BY
Tel. 0800 0380088 | www.wavin.co.uk | info@wavin.co.uk

© 2023 Wavin Wavin reserves the right to make alterations without prior notice. Due to continuous product development, changes in technical specifications may change. Installation must comply with the installation instructions.