wavin

CONNECT TO BETTER

Product guide

Wavin Above Ground

Commercial Systems

Mexichem
Building & Infrastructure

CONNECT TO BETTER

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Introduction
Commercial Systems

In any commercial build, water management is one of the essential elements that everybody has to contend with, and Wavin is uniquely qualified to assist.

We connect market leading brands – like Osma and Hep_2O – with technical advice and project support. Our award-winning designs and innovations deliver real world benefits and measurable gains in performance and sustainability. And we link regulatory requirements to qualified advice and compliant solutions. At every stage – from initial planning and on-site issue resolution to assured one-source supply and product certification at handover – we connect you to better solutions, better partnerships, better value and better outcomes.

Water supports life. It is a crucial and precious resource which sustains humanity, ecosystems and economic prosperity and so is deserving of the protection it receives through legislation and regulation. As an authority on water, Wavin is informed and qualified to advise specifiers, developers and contractors on how best to respond through compliant and sustainable design, installation and maintenance.

Building Regulation Part H (Drainage and Waste Disposal)

Building Regulation Part H embraces the guidelines for drainage and waste disposal that must be met in the UK. Although Part H extends to rainwater drainage and solid waste storage, waste drainage issues are to the fore. The Building Regulations are designed to ensure that all foul water (waste from urinals, portals, food preparation water etc.) is properly disposed of to maintain a decent level of sanitation, promoting both personal and environmental health. The regulations also highlight the importance of pollution prevention, working sewage infrastructure and sewage maintenance.

WRAS Approval

Any water fitting that, when installed, will carry or receive water from the public mains water supply in the UK, must comply with the Water Supply (Water Fittings) Regulations or Scottish Byelaws. As compliance is granted directly by representatives of the water suppliers, it is accepted by every water supplier in the UK.

Approval requires that a water fitting should not cause waste, misuse, undue consumption or contamination of the water supply and are “of an appropriate quality and standard”. Wavin’s Tigris K1 and Hep_2O range has WRAS product approval, demonstrating full compliance with the requirements, provided the fitting is installed according to any conditions given with approval.

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Tigris K1
Commercial Systems

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Introduction to Tigris K1
Commercial Systems

Tigris K1 is a press-fit plumbing system designed for potable water, sanitary and heating applications. Tigris K1 is ideally suited for installation on commercial projects such as educational establishments, apartment blocks and hotels.

The Tigris K1 system comprises multilayer composite pipe and high quality polyphenylsulphone (PPSU) fittings with a fixed stainless steel sleeve, in sizes (outside diameter) 16mm, 20mm, 25mm, 32mm, 40mm, 50mm, 63mm and 75mm.

Advantages in practice:

- Adaptors included in range for easy connectivity to Wavin's Hep$_2$O system or to copper systems
- Dimensions from 16mm to 75mm
- Low insertion forces due to the patented Wavin hexagonal head shape
- Defined leak function reveals unpressed fittings at pressure test
- Quick and safe assembly
- Suitable for any water quality
- 25 year guarantee

Approvals and Certificates

Wavin Tigris K1 is subject to constant internal quality controls and continuous external monitoring.

Wavin Tigris K1 is certified to EN-ISO 21003 and BS 6920:2000. It is also approved by WRAS, DVGW and KIWA.

Table 1: Technical specifications

Wavin Tigris K1	
Pipe material (for multilayer composite pipes see pages 7 and 8)	Internal layer is electron-beam crosslinked polyethylene (PE-Xc), external layer is PE, with an aluminium layer between, connected by special bonding agents
Fitting material	polyphenylsulphone (PPSU), press sleeve in stainless steel
Pipe colour	White
Maximum operating pressures (according to EN21003)	Class 1 (Sanitary / 60°C) 10 bar Class 2 (Sanitary / 70°C) 10 bar Class 4 (Underfloor heating) 10 bar Class 5 (Radiator heating) 6 bar
Max. permanent operating temperature	85°C (with a max. pressure of 6 bar)
Max. short term operating temperature	100°C (max. 100h in 50 years)
Max. permanent operating pressure	10 bar (with a max. temperature of 70°C)
Coefficient of thermal expansion	0.025 – 0.030 mm/m K
Thermal conductivity	0.4 W/m K
Pipe roughness	0.007mm

WRAS APPROVED PRODUCT DVGW kiwa Partner for progress

'How to' Videos

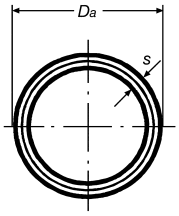
For design and installation of Tigris K1 please see the Tigris K1 Product and Installation Manual which can be downloaded from the Wavin website at www.wavin.co.uk or visit our YouTube Channel Wavin UK.

YouTube

They can be viewed at www.youtube.com/WavinUK on the Tigris K1 playlist.

Product Details
Tigris K1

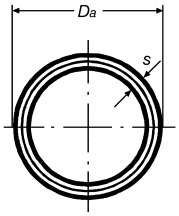
Pipe



Pipes – Straight Lengths

Material: HDPE, Aluminium and PEX-c

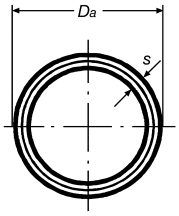
Nominal Size (mm)	Part Number	Dimensions Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3061211	16	2.00	5
20 x 2.25	3061212	20	2.25	5
25 x 2.5	3061213	25	2.50	5
32 x 3.0	3041228	32	3.00	5
40 x 4.0	3004371	40	4.00	5
50 x 4.5	3004372	50	4.50	5
63 x 6.0	3028271	63	6.00	5
75 x 7.5	3053971	75	7.50	5



Pipes – 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
20 x 2.25	3018299	20	2.25	100
25 x 2.5	3018300	25	2.50	50

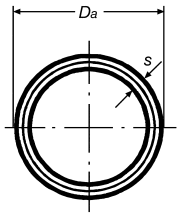


Pipes – Coils 9mm Pre-insulated

- 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	Dimensions Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3004378	–	–	50
20 x 2.25	3004379	–	–	50



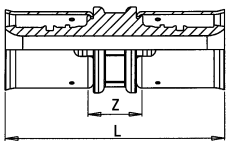
Pipes – Coils 13mm Pre-insulated

- 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	Dimensions Dia (mm)	Size (mm)	Length (m)
16 x 2.0	3004380	–	–	50
20 x 2.25	3004381	–	–	50

Couplers

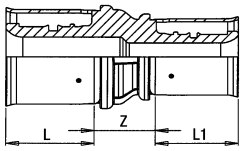


Straight Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
16	3023348	53	13
20	3023359	62	16
25	3023360	74	18
32	3023488	83	23
40	3024665	103	26
50	3027832	108	32
63	3027847	155	35
75	3065639	157	33

Product Details
Tigris K1

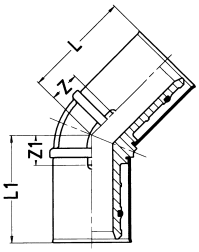


Reducing Coupler

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z
20 x 16	3023525	20	19	15
25 x 16	3023526	26	19	17
25 x 20	3023527	26	20	18
32 x 20	3023528	26	20	20
32 x 25	3023522	26	21	20
40 x 32	3023529	26	26	24
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

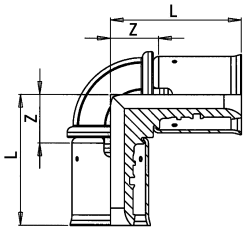
Elbows



Elbow 45°

Material: PPSU, Stainless Steel

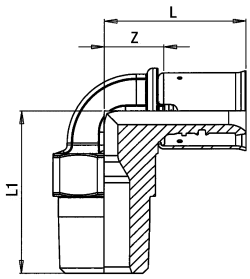
Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
25	3023498	36	7
32	3023499	38	13
40	3027839	60	22
50	3024668	62	25
63	3027849	87	28
75	3065642	91	29



Elbow 90°

Material: PPSU, Stainless Steel

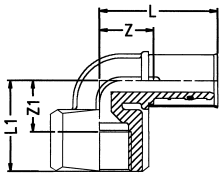
Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
16	3023363	31	12
20	3023364	22	14
25	3023365	43	17
32	3023500	47	21
40	3024666	71	34
50	3024667	77	40
63	3027848	106	46
75	3065643	113	50



Elbow 90° – Single Male BSP Thread

Material: PPSU, Stainless Steel

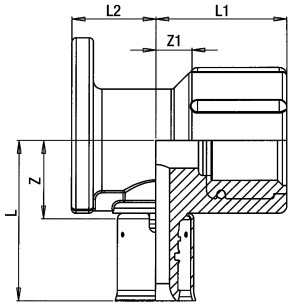
Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z
16 x ½"	3023542	33	38	14
20 x ½"	3023543	34	41	15
20 x ¾"	3023544	37	45	18
25 x ¾"	3023545	44	47	18
32 x 1"	3023539	49	57	23



Elbow 90° – Single Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z	Z1
16 x ½"	3023546	38	33	19	18
20 x ½"	3023547	39	35	19	20
20 x ¾"	3023548	42	38	22	21
25 x ¾"	3023549	49	40	23	23
32 x 1"	3023540	55	47	29	28

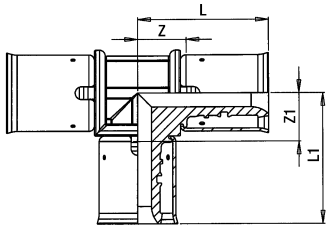


Backplate Elbow – Female BSP Thread

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	L2	Z	Z1
16 x ½"	3023344	38	30	20	21	16
20 x ½"	3023555	39	20	20	26	18
20 x ¾"	3023537	42	19	19	27	18

Tees

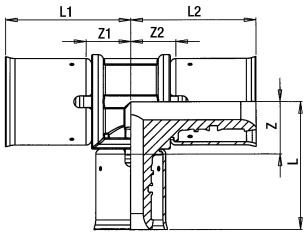


Equal Tee

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z	Z1
16	3023345	31	31	12	12
20	3023346	34	34	14	14
25	3023347	43	43	17	17
32	3023521	47	47	21	21
40	3024664	71	71	26	26
50	3027829	154	77	32	32
63	3027853	106	106	46	46
75	3065644	112	112	50	50

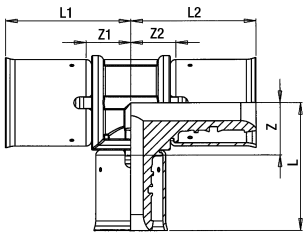
Product Details
Tigris K1



One End Reduced Tee

Material: PPSU, Stainless Steel

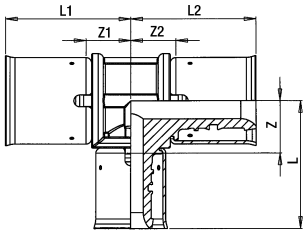
Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	L2	Z	Z1	Z2
20 x 20 x 16	3023505	35	35	32	14	14	13



Double End Reduced Tee

Material: PPSU, Stainless Steel

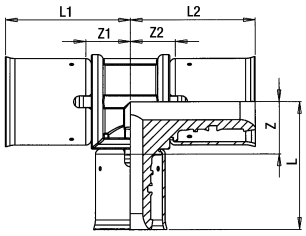
Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	L2	Z	Z1	Z2
16 x 20 x 16	3023504	34	32	32	14	14	14
20 x 25 x 20	3023510	40	36	36	15	16	16
25 x 32 x 25	3023515	42	46	46	17	21	21



Branch Reduced Tee

Material: PPSU, Stainless Steel

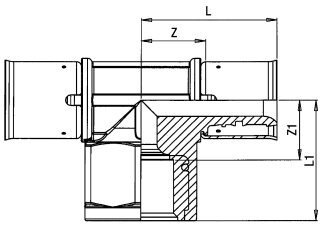
Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	L2	Z	Z1	Z2
20 x 16 x 20	3023506	33	33	33	14	12	12
25 x 16 x 25	3023508	35	39	39	16	13	13
25 x 20 x 25	3023511	37	41	41	16	15	15
32 x 16 x 32	3023513	39	39	39	20	32	32
32 x 20 x 32	3023514	41	41	41	20	15	15
32 x 25 x 32	3023516	47	43	43	21	17	17
40 x 25 x 40	3023518	59	67	67	33	30	30
40 x 32 x 40	3023519	59	71	71	34	34	33
50 x 25 x 50	3027830	64	68	68	39	31	31
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



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	3023507	33	33	30	14	12	11
25 x 16 x 16	3023509	34	38	30	16	13	12
25 x 20 x 20	3023512	37	41	35	17	15	14
32 x 25 x 25	3023517	47	43	42	21	17	16
40 x 32 x 32	3023520	59	70	53	34	34	28

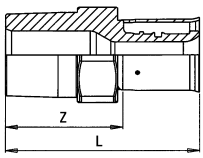


One Side Female BSP Thread Tee

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z	Z1
16 x ½" x 16	3023557	38	33	19	18
20 x ½" x 20	3023558	38	35	19	19
20 x ¾" x 20	3023559	42	38	22	21
25 x ¾" x 25	3023560	49	40	23	23

Connectors

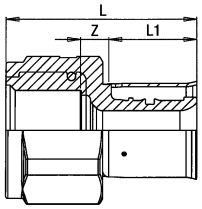


Connector – Single Male BSP Thread

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
16 x ½"	3023495	49	30
20 x ½"	3023496	50	30
20 x ¾"	3023550	55	35
25 x ¾"	3023551	62	36
25 x 1"	3023552	68	42
32 x 1"	3023541	68	42
32 x 1¼"	3023553	74	48
40 x 1¼"	3027836	90	53
50 x 1½"	3027837	95	57
63 x 2"	4032685	108	50

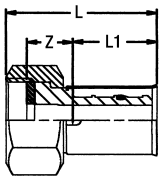
Product Details
Tigris K1



Connector – Single Female BSP Thread

Material: PPSU, Stainless Steel, Brass

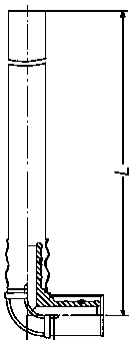
Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z
16 x ½"	3023494	43	19	9
20 x ½"	3023361	44	20	10
20 x ¾"	3023497	47	20	11
25 x ¾"	3023362	54	26	12
32 x 1"	3023554	58	26	13
40 x 1¼"	3027838	77	44	13
50 x ½"	4032698	75	38	17
63 x 2"	4032699	102	59	20



Tap Connector – Female BSP Thread

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	L1	Z
16 x ½"	4032700	51	21	21
16 x ¾"	3023489	40	19	12
20 x ¾"	3023490	41	20	12
25 x 1"	3023491	50	26	14
32 x 1¼"	3023492	51	26	15
40 x 1½"	3023493	72	39	22

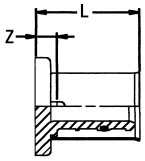


Radiator Connector – 90° Elbow

Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L
16	4037512	300

Accessories and Tools



End Cap

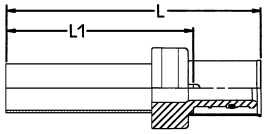
Material: PPSU, Stainless Steel

Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
16	3023561	33	12
20	3023562	38	12
25	3023563	44	14

Adaptor Fitting to Hep$_2$O

Material: PPSU, Stainless Steel, Polybutylene

Nominal Size (mm)	Part Number
16 x 15	3052945
20 x 22	3052946
25 x 22	3052947
25 x 28	3052948
32 x 28	3052949



Transition Fitting to Copper

Material: PPSU, Stainless Steel, Brass

Nominal Size (mm)	Part Number	Dimensions (mm) L	Z
16 x 15	3004399	66	42
25 x 22	3004401	80	49

Pressure Stopper

Material: Brass

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

Product Details
Tigris K1

Bending Spring

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

Pipe Cutter – 16-75mm

Nominal Size (mm)	Part Number	Description
–	4053508	Pipe cutter – 16-75mm
–	4053545	Replacement blade for pipe cutter (4053508) 16-75mm

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

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

Pressing Jaws – Mini

- For use with 4048906

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

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
75	4053509*
75	4053510*

*NOTE: Both parts 4053509 (75mm pressing jaw) and 4053510 (adaptor jaw) will be required to press the largest 75mm diameter fittings

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	4031988
50	4031987
63	4035780
75	4053507

Product Details
Tigris K1

Hand Grip for Calibration Mandrel

Nominal Size (mm)	Part Number	Description
–	3011162	Hand Grip for Calibration Mandrel

Calibration Set

- Including transport case and power click grasp

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

Tool offers

for customers who don't own press-fit tools.

To preserve the Wavin guarantee, Wavin jaws should always be used.

FREE HIRE*

Spend £2.5k to receive 12 weeks free mini tool hire package
WORTH OVER £400
Including: mini tool, all jaws (16-40mm) and calibration set

FREE HIRE*

Spend £4k to receive 12 weeks free standard tool hire package
WORTH OVER £650
Including: standard tool, all jaws (16-75mm) and calibration set

*Next day delivery is now included on all tool hire offers.

CONNECT TO BETTER

Osma Compact
Commercial Systems

Introduction to Osma Compact Commercial Systems

Osma PVC-U Compact Soil System

The Osma PVC-U Compact 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

Space Saving

- Compact Soil units allow greater design flexibility with tighter connections to 32, 40 and 50mm waste pipework
- The reduced dimensions help minimise the duct space required

Ease of Installation

- Branches available with rotating bases: enables connections in difficult-to-reach spaces
- Innovative 'stop' position on fitting to prevent waste being installed with a fall less than 2.5°
- Solvent weld and push-fit connection options

Sustainablilty

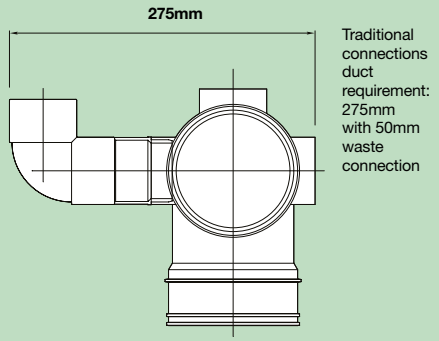
110mm and 160mm pipes are manufactured utilising Wavin's Recycore® Technology.

Available in 82, 110 and 160mm diameters Colour: Olive/Grey 82/110/160mm fittings and 82mm pipe in PVC-U to BS EN 1329-1:2000 110 /160mm pipe is manufactured with Wavin Recycore technology – a multi-layer construction with over 50% recycled material in solid core 110 /160mm pipe sizes are BS EN 1453-1:2000 kitemarked but have exactly the same performance characteristics as BS EN 1329-1:2000.

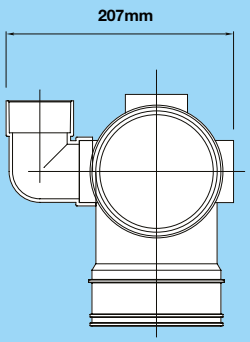
50% RECYCLED RAW MATERIAL

Made with Wavin Recycore® Technology™

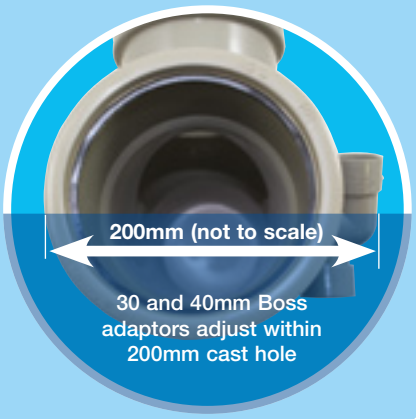
For design and installation of Wavin Osma Compact please see the Wavin Osma Compact Product and Installation Manual which can be downloaded from the Wavin website at www.wavin.co.uk



Traditional connections duct requirement: 275mm with 50mm waste connection



With Wavin Osma PVC-U Compact Soil: 207mm – enables 68mm reduction, approximately 25% space saving



Introduction to Product Selector

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

- Osma PVC-U Compact Soil
- Osma WC Connectors
- Osma PVC-C Solvent Weld Waste
- Osma Water Seal Traps
- Osma Condensate Drainage
- Osma PVC-U and ABS Solvent Weld Overflow
- Osma Soil and Waste Accessories

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.

Recycled Pipe

All 110mm and 160mm PVC-U plain ended and single socketed soil pipe in Osma is now manufactured using Wavin's Recycore Technology and contains at least 50% recycled PVC.

50% RECYCLED RAW MATERIAL

Made with Wavin Recycore® Technology™

	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

Estimating Data
Osma Compact

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 7.

Offset Bends

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

Table 7: 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 8: 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 9: 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

CONNECT TO BETTER

Solvent Soil
Osma Compact

Pipe

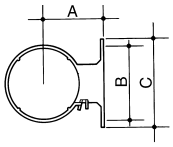
Plain Ended Pipe

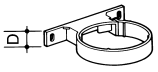
- 110/160mm sizes are made with Wavin Recycore technology – a multi-layer construction with over 50% recycled material in solid core
- 110/160 mm pipe sizes are BS EN 1453-1:2000 kitemarked but have exactly the same performance characteristics as BS EN 1329-1:2000
- 82mm pipe is standard PVC-U pipe, kitemarked to BS EN 1329-1

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Length (m)
82	3S074G		4
110	4S073E		3
110	4S074E		4
160	6S074E		4

Brackets



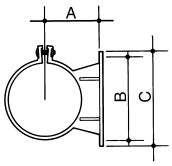


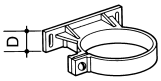
Pipe Bracket

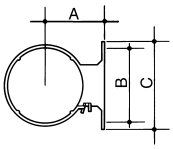
- For support centres, see page 18

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D	Fixing Hole
82	3S082G		76	92	112	16	6.5 dia
110	4S082E		94	120	140	25	6.5 dia
160	6S082E		123	175	200	32	8 dia







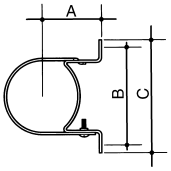
Socket Bracket

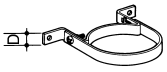
- Position in the recessed area adjacent to the sealing-ring housing
- For support centres, see page 18

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D	Fixing Hole
82	3S083G		76	78	140	28.5	6.5 dia
110	4S083E		94	120	140	25	6.5 dia

Solvent Soil
Osma Compact





Pipe or Socket Bracket

- Multi-functional support component that can be used for pipes or sockets
- When using as a socket bracket, always position unit in the recessed area adjacent to the sealing-ring housing
- For support centres, see page 18

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	Fixing Hole
82	3S084 ▽	78	120	140	16	7 dia
110	4S084 ▽	94	160	180	20	7 dia
160	6S084 ▽	124	220	240	25	7 dia

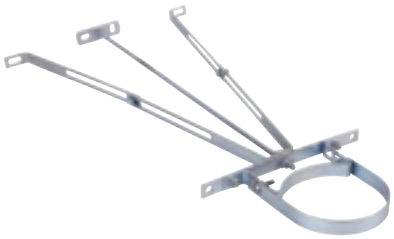
Suspended Bracketing System

Adjustable Pipe Bracket Assembly

- Pack contains Threaded Rod, Threaded Bracket, Bracket Plate and Pipe/Socket Bracket
- For support centres, see page 18
- Not suitable for damp inaccessible voids

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number
110	4S086
160	6S086



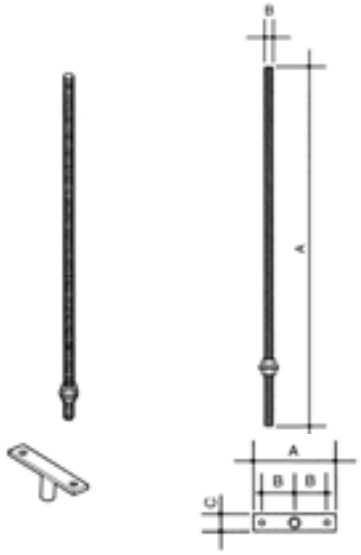
Adjustable Socket Bracket and Brace Assembly

- Pack contains Threaded Rod, Threaded Bracket, Bracket Plate, two Adjustable Braces, and Pipe/Socket Bracket
- For support centres, see page 18
- Not suitable for damp inaccessible voids

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number
110	4S085
160	6S085

Suspended Bracketing System – Components



M8 Threaded Rod

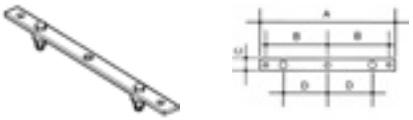
Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
–	–	500	8

Threaded Bracket

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
–	–	120	40	30



Bracket Plate

Material: BZP – Coated Mild Steel

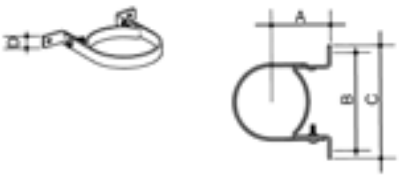
Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	–	240	110	20	80

Adjustable Brace

- Used for creating anchor points

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A min	A max	B
–	–	264	493	260



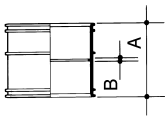
Pipe or Socket Bracket

Material: BZP – Coated Mild Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	Fixing Hole
110	–	94	160	180	20	7 dia
160	–	124	220	240	25	7 dia

Solvent Soil
Osma Compact

Sockets

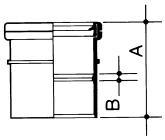


D/SW Double Socket

- 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



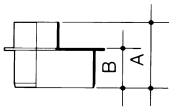
S/SW Single Socket

- 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
82	3S124G		97	2
110	4S124E		105	2
160	6S124E		135	2

Reducers

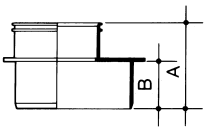


SW/S Reducer

- 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

Expansion Cap

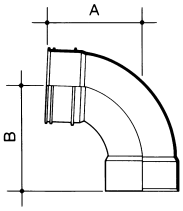
Expansion Cap

- With integral ring-seal
- Converts Osma 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

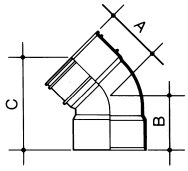


D/SW Bend – 87.5°

- 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

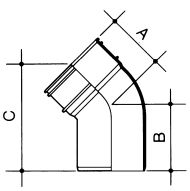


D/SW Bend – 45°

- 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°

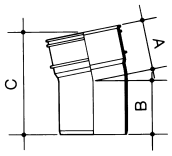
- One plain end and one solvent weld socket

Material: PVC-U

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

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

Solvent Soil
Osma Compact

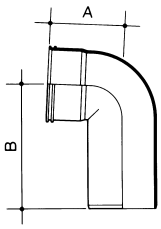


SW/S Bend – 11.25°

- 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



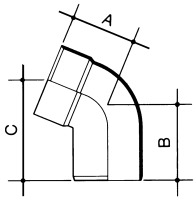
SW/S Long-Tail Bend – 87.5°

- 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

Offset Bends

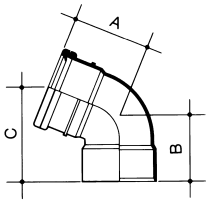


SW/S Offset Bend – 67.5°

- One plain end and one solvent weld socket
- Minimum achievable offsets: **82** 115mm, **110** 137mm, **160** 233mm

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
82	3S435G		92	87	123
110	4S435E*		99	105	143



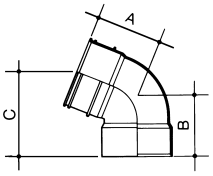
S/SW Offset Bend – 67.5°

- One solvent weld socket and one push-fit ring-seal socket
- Minimum achievable offsets: **82** – 115mm, **110** – 137mm, **160** – 233mm

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
82	3S440G		95	87	123
110	4S440E*		110	99	140

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



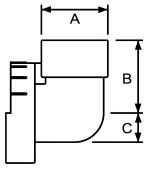
D/SW Offset Bend – 67.5° (Top)

- 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

Boss Adaptors

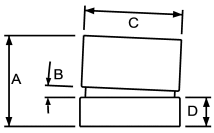


Boss Adaptor 90° – Solvent Weld

- 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



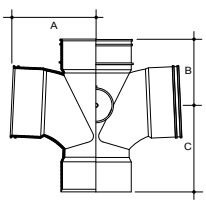
Boss Adaptor Straight – Solvent Weld

- 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

Branches



D/SW Double 2-Boss Branch – 87.5°

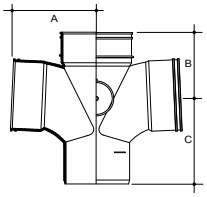
- Four solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS829SE*		140.5	110	144.5

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

Solvent Soil
Osma Compact

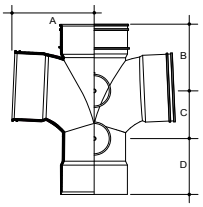


SW/S Double 2-Boss Branch – 87.5°

- One plain end and three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS831SE*		140.5	110	141.5

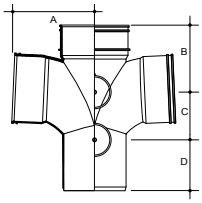


D/SW Double 4-Boss Branch – 87.5°

- 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

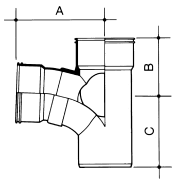


SW/S 4-Boss Branch – 87.5°

- 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

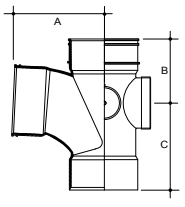


SW/S Corner Branch – 87.5°

- One plain end and three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS491SE*		179	113	144



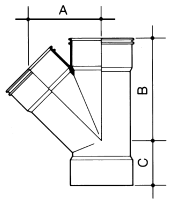
D/SW 2-Boss Access Branch – 87.5°

- Three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS893SE*		159	112	152

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

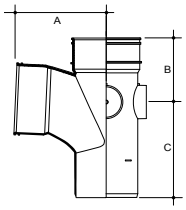


D/SW Single Branch – 45°

- Three solvent weld sockets

Material: PVC-U

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

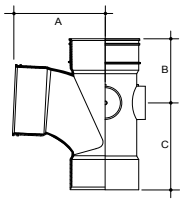


SW/S Single 3-Boss Branch – 87.5°

- One plain end and two solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS889SE*		159	112	167

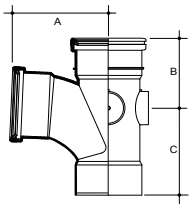


D/SW Single 3-Boss Branch – 87.5°

- Three solvent weld sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS890SE*		159	112	152

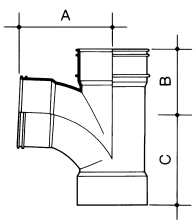


S/SW Single 3-Boss Branch – 87.5°

- Two push-fit sockets and one solvent weld socket

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS892SE*		159	112	167



D/SW Single Branch – 87.5°

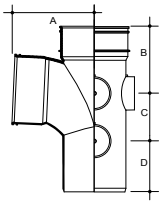
- Three solvent weld sockets

Material: PVC-U

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

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

Solvent Soil
Osma Compact

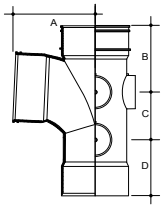


SW/S Single 5-Boss Branch – 87.5°

- 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



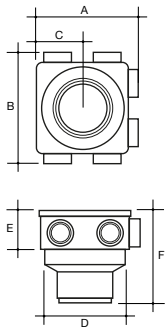
D/SW Single 5-Boss Branch

- Three solvent weld sockets
- 110mm branch

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
110	4CS897SE*		140.5	116.5	83.5	97.5

Manifold



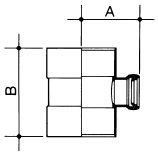
SW/S 6 Boss Manifold

- 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

Bossed Pipes



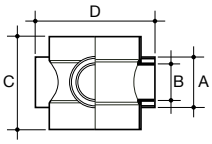
D/SW Bossed Pipe (Solvent Weld)

- 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	4CS483E		95	87	123
110x40	4CS484E		110	99	140

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

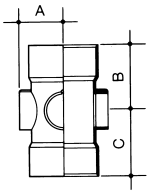


D/SW Short 3-Boss Pipe

- Three closed boss socket positions for use with the appropriate Boss Socket Adaptor (page 25)
- 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

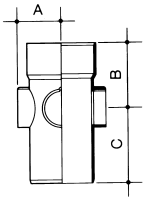


D/SW Bossed Pipe

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

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS586SE*	●	70	104	115



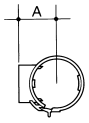
SW/S Bossed Pipe

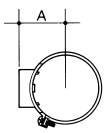
- One plain end and one solvent weld socket
- Three closed boss socket positions and one open to receive appropriate Boss Socket Adaptor (page 25)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS585SE*	●	70	100	119

Strap Boss





Strap Boss

- For making side connections on BS EN 1329 plastic pipe after construction
- Use in conjunction with Boss Socket Adaptor (page 25)

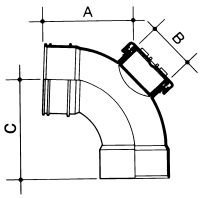
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
110	4CS319SE	●	77

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

Solvent Soil
Osma Compact

Access Fittings

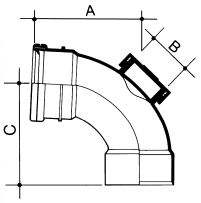


D/SW Access Bend – 87.5°

- 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

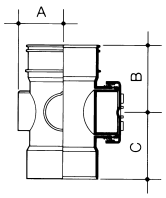


S/SW Access Bend – 87.5°

- One solvent weld socket and one push-fit ring-seal socket
- 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	●	163	80	160

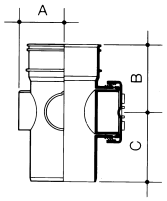


D/SW 3-Boss Access Pipe

- 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	4CS474SE*	●	70	104	115



SW/S Bossed Access Pipe

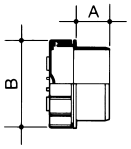
- One plain end and one solvent weld socket
- Three closed boss socket positions
- Fitted with screwed access cover

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS574SE*	●	70	100	119
160	6CS474SE*	●	124	131	150

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

Plugs

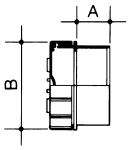


P/E Access Plug

- 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
82	3S292G		56	100
110	4S292E		50	132
160	6S292E		58	188

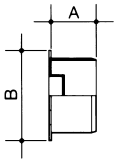


SW/S Access Plug

- 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



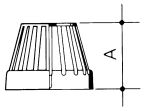
P/E Socket Plug

- 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

Terminal Fittings

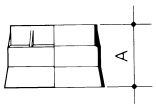


Balloon Grating

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
82	3S302G		94
110	4S302E		90

Solvent Soil
Osma Compact

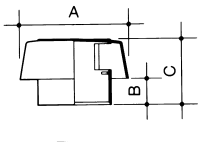


Weathering Collar

- 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
82	3S300G	●	62
110	4S300E	●	86
160	6S300E	●	58



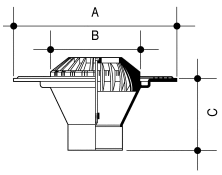
SW/S Vent Cowl

- 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

Roof Outlet



SW/S Domed Roof Outlet

- Outlet capacity (outlet at centre of roof):
  82mm outlet 2.97 l/s; 143m² max. roof area
  110mm outlet 4.35 l/s; 209m² max. roof area
- Fitted with:
  82mm outlet solvent-weld socket
  110mm outlet solvent-weld socket

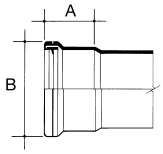
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
82	3S414G	●	270	130	124
110	4S414G	●	338	188	147

CONNECT TO BETTER

Ring-Seal Soil
Osma Compact

Pipe



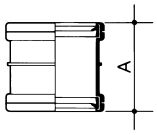
Socketed Pipe

- 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
- 82mm pipe is standard PVC-U pipe, kitemarked to BS EN 1329-1

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Length (m)	Dimensions (mm) A	(O/D) B
82	3S043G		3	51	104
82	3S044G		4	51	104
110	4S044E		4	65	132
160	6S043E		3	88	191

Socket



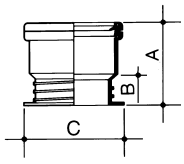
D/S Double Socket – for repairs

- 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
82	3S105G		102
110	4S105E		111
160	6S105E		145

Connector



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

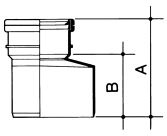
- Connector to BS 1211 or BS 437 cast-iron socket or BS 65 clay drain socket

Material: PVC-U, with Rubber seals

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

Ring-Seal Soil
Osma Compact

Reducers

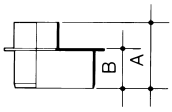


S/S Reducer

- One plain end and one push-fit socket

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
82x50	3S094G		119	68

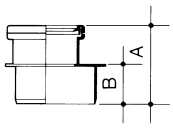


S/S Reducer

- One plain end and one push-fit socket

Material: PVC-U, with Rubber seals

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

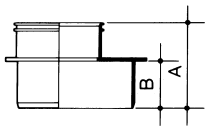


S/S Reducer

- One plain end and one push-fit socket

Material: PVC-U, with Rubber seals

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



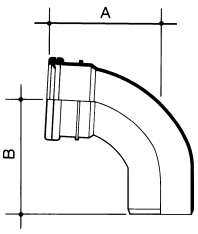
S/S Reducer

- One plain end and one push-fit socket

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
160x110	6S099E		130	68

Bends

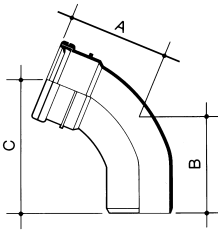


S/S Bend – 87.5°

- 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
82	3S161G		128	125
110	4S161E		162	160

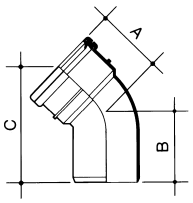


S/S Bend – 67.5°

- 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	C
82	3S162G		132	121	180



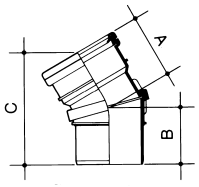
S/S Bend – 45°

- 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	C
82	3S163G		81	70	126

Adjustable Bend



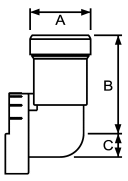
Adjustable Bend – 30°

- 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

Boss Adaptors



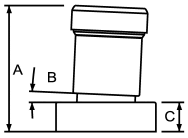
Boss Adaptor 90° – Push-fit

- Adjustable fall angles, adaptor prevents negative fall

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	2CS801SE		47.5	77	18
40	2CS802SE		55.5	83.5	21.5

Ring-Seal Soil
Osma Compact



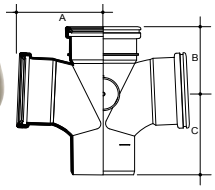
Boss Adaptor Straight – Push-fit

- 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

Branches

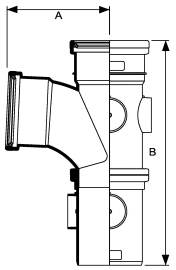


S/S Double 2-Boss Branch – 87.5°

- One plain end and three push-fit sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS830SE		148.5	118	141.5

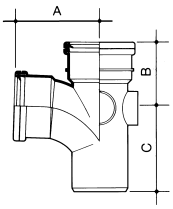


S/S 110mm Variable 6-Boss Branch – 87.5°

- One plain end and two push-fit sockets
- Rotating branch connection

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4CS852SE		172	376

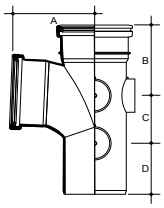


S/S Single Branch – 87.5°

- One plain end and two push-fit ring-seal sockets
- 82mm has two boss sockets, 110mm has three boss sockets

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
82	3CS190SG		155	118	146
110	4CS891SE		169.5	122.5	167

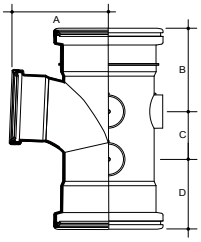


S/S Single 5-Boss Branch

- One plain end and two push-fit sockets

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
110	4CS896SE		146.5	123.5	83.5	89

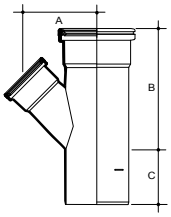


D/S Unequal Single 5-Boss Branch – 87.5°

- Three push-fit sockets
- 110mm branch

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
160	6CS897SE		169.5	146	83.5	122



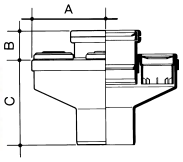
S/S Unequal Junction – 45°

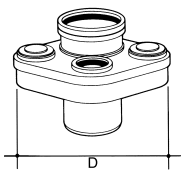
- One plain end and two push-fit sockets
- 110mm branch

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
160	6CS218E		184	303.5	83.5

Manifolds





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

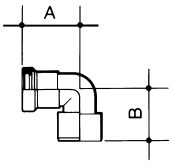
Ring-Seal Soil
Osma Compact

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

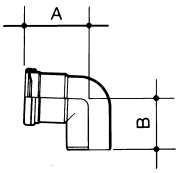


All-Fit Reduction Bend – 50:40mm

- 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



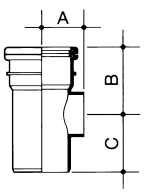
All-Fit 90˚ Spigot Bend – 50mm

- 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

Bossed Pipes

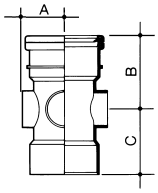


S/S Bossed Pipe

- One plain end and one push-fit ring-seal socket
- Use in conjunction with Boss Socket Adaptor (page 25)

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
82	3CS649SG	●	61	90	86

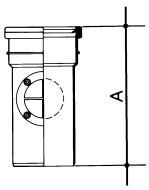


S/SW Bossed Pipe

- 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 25)

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4CS590SE ▽		70	103	116



S/S Access Pipe

- One plain end and one push-fit ring-seal socket
- Fitted with bolted, oval access door

Material: PVC-U, with Rubber seals

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
82	3S274G ▽		255

Solvent Waste
Osma Compact

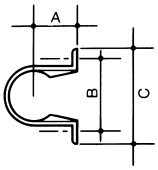
Pipe

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



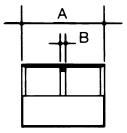
Pipe Bracket

- For support centres, see page 7

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

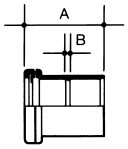


Double Socket

- 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	2M124 ▽	● ● ○	68	2



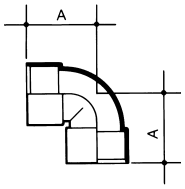
Expansion Socket

- 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	2M104	●○	72	3

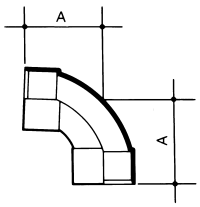
Bends



Knuckle Bend – 90°

Material: PVC-C

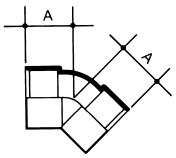
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
32	4M160	●●○	40
40	5M160	●●○	52
50	2M160	●●○	60



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

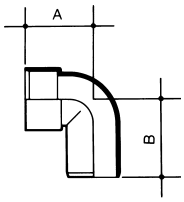


Bend – 45°

Material: PVC-C

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

Solvent Waste
Osma Compact

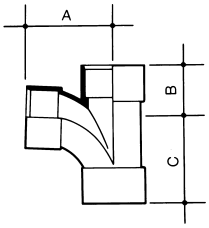


Spigot Bend – 90°

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

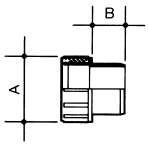


Tee – 87.5°

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



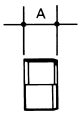
P/E Access Plug

- 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

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

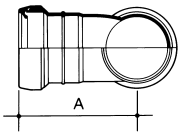
Material: PVC-C

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

NOTE: For compatible connectors and adaptors see the ABS Solvent Weld range.

Accessories
Osma Compact

WC Manifold Branches (incorporating gasket)

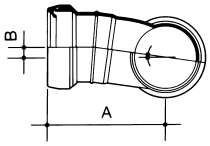


S/SW Manifold Branch – Straight

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	Effective Length
110	4S601W	◯	180	132

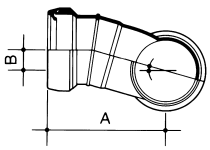


S/SW Manifold Branch – 8°

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	Effective Length
110 LH	4S602W	◯	180	16	132
110 RH	4S612W	◯	180	16	132

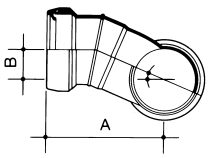


S/SW Manifold Branch – 15.5°

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	Effective Length
110 LH	4S603W	◯	180	32	132
110 RH	4S613W	◯	180	32	132



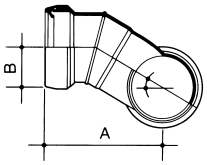
S/SW Manifold Branch – 23°

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	Effective Length
110 LH	4S604W	◯	180	48	132
110 RH	4S614W	◯	180	48	132

NOTE: All Manifold Branches are fitted with a gasket for direct connection to the outlets of WC's manufactured to BS 5503
See Design and Installation Guide and BS EN 12056:2000 on the provision of access

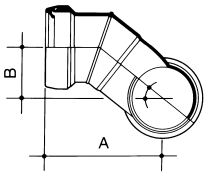


S/SW Manifold Branch – 30.5°

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	Effective Length
110 LH	4S605W	◯	180	64	132
110 RH	4S615W	◯	180	64	132



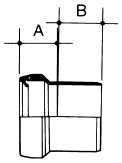
S/SW Manifold Branch – 38°

- One solvent weld and one push-fit socket (right hand illustrated)

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	Effective Length
110 LH	4S606W	◯	180	80	132
110 RH	4S616W	◯	180	80	132

WC Connectors (incorporating gasket)

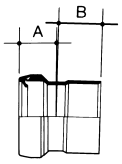


P/E Connector – 2.5°

- One plain end

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S791W	◯	53	63

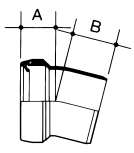


SW/S Connector – 2.5°

- One solvent weld socket

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S792W	◯	53	63



P/E Connector – 14°

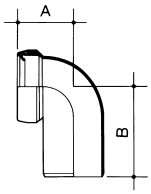
- One plain end

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S711W	◯	53	63

NOTE: Manifold Branches and WC Connectors are fitted with a gasket for direct connection to the outlets of WC's manufactured to BS 5503

Accessories
Osma Compact

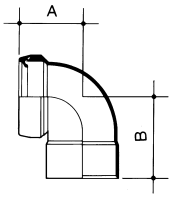


P/E Connector – 90°

- One plain end

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S771W	◯	109	173



SW/S Connector – 90°

- One solvent weld socket

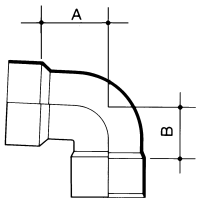
Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S772W	◯	109	134

NOTE: Manifold Branches and WC Connectors are fitted with a gasket for direct connection to the outlets of WC's manufactured to BS 5503

See Design and Installation Guide and BS EN 12056:2000 on the provision of access

WC Connectors (gasket to be fitted)



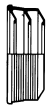
SW/S Connector – 87.5°

- One solvent weld socket
- For direct connection to WC's to BS 1213 when fitted with the appropriate Gasket 4S120W or 4S121W

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S745W	◯	106	77

WC Gasket



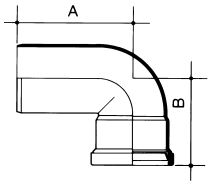
S/S Access Pipe – WC Gasket

- For use with Connectors 4S730W, 4S731W, 4S745W and 4S746W
- Connects to WC spigots as follows:
  CWC121 suits 4" to 4¼" spigots
  CWC120 suits 4¼" to 4½" spigots

Material: Synthetic Rubber

Nominal Size (mm)	Part Number	Colour Option	Dimensions (inch) WC Spigot
110	4S121W	◯	4" to 4¼"
110	4S120W	◯	4¼" to 4½"

WC Connectors (ancillaries)



S/S Long-Tail Bend – 87.5°

- For use with WC Connectors
- Do NOT use as a WC connector

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	4S790W	◯	195	134

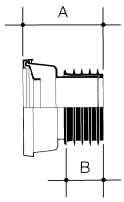
Plain-Ended Pipe – 600mm

- For use with WC Connectors where connection to SVP is visible

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) Length
110	4S600W	◯	600

Easy-Fit Pan Connectors



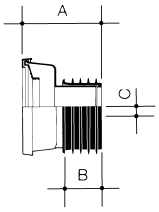
Easy-Fit Connector – Straight

- For use where the WC outlet is horizontal to the branch connection
- Fitted with a gasket for direct connection to the outlets of WC's manufactured to BS 5503
- Spigot end of 3½" Connector WC003W incorporates gasket for direct insertion into plain end of 3½" cast-iron pipe to BS 416
- Spigot end of 4" Connector WC004W incorporates gasket for direct insertion into plain end of 4" pipe e.g. cast-iron, plastic or clay

Material: Polypropylene

Nominal Size (inch)	Part Number	Colour Option	Dimensions (mm) A	B
3½"	WC003W	◯	116	52
4"	WC004W	◯	116	52

Accessories
Osma Compact

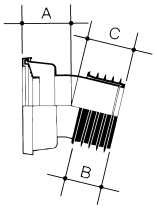


Easy-Fit Connector – Offset

- For use where the WC outlet is not directly in line with the branch connection. Correct alignment obtained by turning the connector
- Fitted with a gasket for direct connection to the outlets of WC's manufactured to BS 5503
- Spigot end of 3½" Connector WC003W incorporates gasket for direct insertion into plain end of 3½" cast-iron pipe to BS 416
- Spigot end of 4" Connector WC004W incorporates gasket for direct insertion into plain end of 4" pipe e.g. cast-iron, plastic or clay

Material: Polypropylene

Nominal Size (inch)	Part Number	Colour Option	Dimensions (mm) A	B	C
4"	WC204W	○	116	52	16

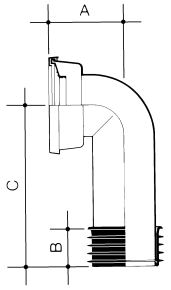


Easy-Fit Connector – 14°

- Converts a horizontal WC outlet to an angle of 14° (76°)
- Spigot end of 3½" Connector incorporates gasket for direct insertion into plain end of 3½" cast-iron pipe to BS 416
- Spigot end of 4" Connector incorporates gasket for direct insertion into plain end of 4" pipe e.g. cast-iron, plastic or clay

Material: Polypropylene

Nominal Size (inch)	Part Number	Colour Option	Dimensions (mm) A	B	C
4"	WC144W	○	73	52	67

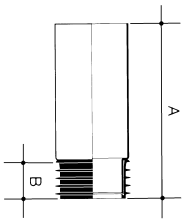


Easy-Fit Connector – 90°

- Converts a horizontal WC outlet to a left or right-hand 'S' or 'P' trap
- Can be cut to required length
- Spigot end incorporates gasket for direct insertion into plain end of 4" pipe e.g. cast-iron, plastic or clay

Material: Polypropylene

Nominal Size (inch)	Part Number	Colour Option	Dimensions (mm) A	B	C
4"	WC904W	○	107	52	236



Straight Extension Piece

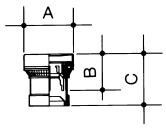
- One plain end
- Makes up the distance between any Easy-Fit Connector and soil or drain pipe connection
- Spigot end incorporates gasket for direct insertion into plain end of 4" pipe e.g. cast-iron, plastic or clay

Material: Polypropylene

Nominal Size (inch)	Part Number	Colour Option	Dimensions (mm) A	B
4"	WC404W	○	255	52

Accessories
Osma Compact

Air Admittance Valves

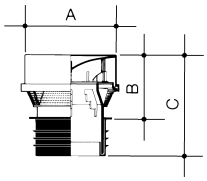


Air Admittance Valve

- A1 rated to BS EN 12380
- For direct connection to a 32mm [1¼"] or 40mm [1½"] waste spigot
- Allows air into discharge pipe systems without allowing foul air to escape
- BBA certificated (Certificate No. 86/1643)

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32/40	4S303W	○	66	40	71



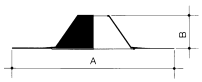
Air Admittance Valve

- A1 rated to BS EN 12380
- For direct connection to a 110mm spigot on BS EN 1329/BS EN 1453 soil pipe
- For 82mm pipe, the rubber seal is removed, a short length of pipe welded to the socket, and the pipe fitted into a Socket 3CS124
- Allows air into discharge pipe systems without allowing foul air to escape
- BBA certificated (Certificate No. 86/1643)

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
110	4S304W	○	130	85	135

Pipe Flashings

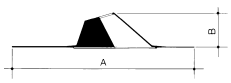


Varipitch Pipe Flashing for Flat Roofs

- For use with 82mm and 110mm soil pipe to BS EN 1329 which penetrates a flat roof

Material: Aluminium base, EPDM Rubber cone

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
–	4S281G	●	400x400	85



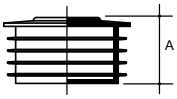
Varipitch Pipe Flashing for Pitched Roofs

- For use with 82mm and 110mm soil pipe to BS 1329 which penetrates a pitched roof

Material: Aluminium base, EPDM Rubber cone

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
–	4S283G	●	450x450	85

Internal Drain Connector



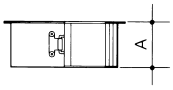
Internal Drain Connector

- For 32mm/40mm waste pipe and 50mm waste pipe

Material: Neoprene synthetic rubber

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
110x32/40	4S298	●	60.5
110x50	4S299	●	60.5

Fire Stop Seal



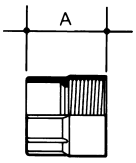
Fire Stop Seal

- For use with 50mm, 82mm, 110mm and 160mm pipes which penetrate a compartment wall or floor
- See design and installation guidance and Building Regulations 1992, Approved Document B for fire stopping requirements

Material: Metal, containing an intumescent compound

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
50	2S001	●	60
82	3S001	●	60
110	4S001	●	60

Connectors



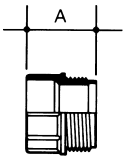
Female Iron Connector

- Threaded socket connector, and solvent weld socket
- Threaded socket connects to 1¼", 1½" or 2" BSPT male iron spigot
- Solvent weld socket connects to 32mm [1¼"], 40mm [1½"], or 50mm [2"] plastic waste pipe to BS EN 1455-1 and BS EN 1566-1

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
32	4Z127W	○	50
40	5Z127W	○	53

Accessories
Osma Compact



Male Iron Connector

- Threaded spigot connector, and solvent weld socket
- Threaded spigot connects to 1¼", 1½" or 2" BSPT female iron sockets
- Solvent weld socket connects to 32mm [1¼"], 40mm [1½"], or 50mm [2"] plastic waste pipe to BS 5255

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
32	4Z128W	○	44
40	5Z128W	○	47
50	2Z128W	○	53

Spares

Snap Cap

- Snap-on cap which retains the sealing ring in all standard Osma ring-seal fittings

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option
82	3S116G	●

T' Ring Seal

- Synthetic rubber sealing ring for all standard Osma ring-seal fittings

Material: EPDM

Nominal Size (mm)	Part Number	Colour Option
82	3S130G	●

Cleaners, Solvent Cements, Lubricants

Degreasing Cleaner No. 1

- Use for cleaning solvent weld joints prior to assembly.

Size (ml)	Part Number
250	4S380G

Solvent Cement No. 2

- Use for making solvent weld joints

Size (ml)	Part Number
250	4S384G
500	4S385G

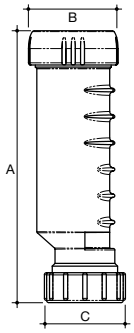
Silicone Lubricant

- Use to aid assembly of ring-seal socket-and-spigot joints

Size	Part Number
50g tube	4S391G
400ml spray can	4S392

Traps
Osma Compact

HepvO Hygienic Self-Sealing Waste Valve

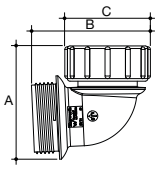


HepvO Valve

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	BV1	○	188	61	55
40	CV1	○	188	68	62

HepvO Knuckle Adaptor

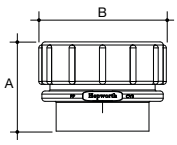


HepvO 87.5° Knuckle Adaptor

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	BV11	○	66	70	50
40	CV11	○	70	74	56

HepvO Running Adaptor



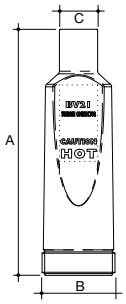
HepvO Running Adaptor

- For installing HepvO in a pipe run

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
32	BV3	○	43	55
40	CV3	○	43	62

HepvO Tundish Adaptor

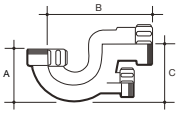


HepvO Tundish Adaptor Kit

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	BV1/21	○	142	22	15

For installation tips see: YouTube WavinUK

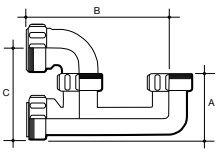


Tubular 'P' Outlet

- Fixed 19mm shallow seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	4V806W	◯	64	139	73
40	5V806W	◯	76	146	77

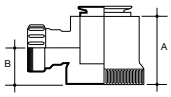


Tubular 'P' Outlet

- Lowline bath 50mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
40	5V802W	◯	79	164	111

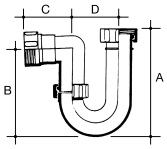


Bottle 'P' Outlet

- Top entry shower
- Chrome waste 50mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
40	5V824W	◯	87	44

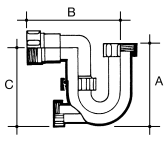


Tubular 'P' Outlet

- Swivel, 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
32	4V801W ▽	◯	153	136	62	87
40	5V801W ▽	◯	163	148	72	87



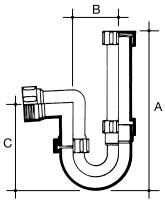
Tubular 'P' Outlet

- Swivel, 76mm seal c/w cleaning eye

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
40	5V846W ▽	◯	163	163	116

Traps
Osma Compact

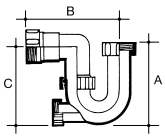


Adjustable Tubular 'P' Outlet

- Swivel, 76mm seal telescopic maximum 40mm extension

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A (min)	A (max)	B	C
40	5V807W	◯	247	287	90	150

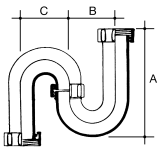


Tubular 'Running'

- Swivel, 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A (inlet)	B	C (outlet)	D
40	5V805W	◯	160	86	149	216
50	2V805W	◯	159	75	169	242

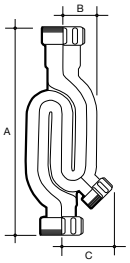


Tubular 'S' Outlet

- Swivel, 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A (inlet)	B	C (outlet)
32	4V803W	◯	152	85	86
40	5V803W	◯	162	85	85

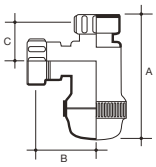


Pedestal Trap

- Fixed, 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	4V825W	◯	237	44	71

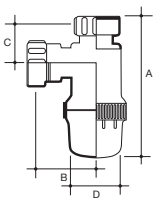


Bottle 'P' Outlet

- 38mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
32	4V809W	◯	140	77	55
40	5V809W	◯	142	84	54

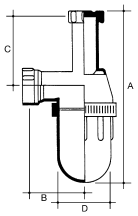


Bottle 'P' Outlet

- 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
32	4V812W	◯	167	69	50	72
40	5V812W	◯	172	76	53	79

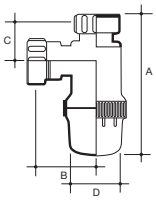


Bottle 'P' Outlet

- 38mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A (min)	A (max)	B	C	D
40	5V808W	◯	191	297	87	75	84



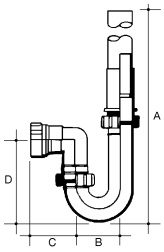
Bottle 'P' Anti-Syphon

- 76mm seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
32	4V814W	◯	167	69	50	72
40	5V814W	◯	171	82	53	79

Traps
Osma Compact

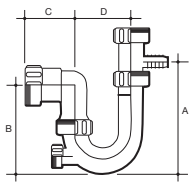


Washing Machine Trap Kit

- 76mm seal, complete with 0.6m pipe

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
40	5V870W	○	678	90	72	150

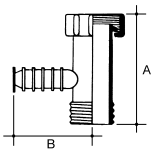


Washing Machine Half Trap

- Swivel 76mm seal

Material: Polypropylene

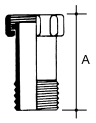
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
40	5V864W	○	182	150	70	93



Washing Machine Tee

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
40	5V871W	○	73	58

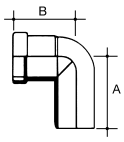


Cap and Lining

- BSP Male Iron Tail
- 32mm Unequal Ends, 1¼ -32mm to 1½ - 40mm
- 40mm Unequal Ends, 1½ - 40mm to 1¼ -32mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
32	4Z363W	○	73
40	5Z363W	○	73

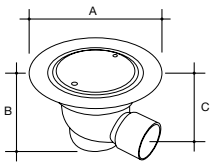


Spigot Bend – 87.5°

- Varifix 'P' to 'S' Conversion Bend

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
32	4A830W	○	73	68
40	5A830W	○	73	58



Shower Gully

- Sheet floor

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C
50	2V510W	●	242	183	120

Overflow
Osma Compact

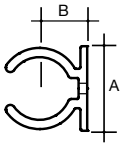
Pipe

Plain-Ended Pipe

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Length (m)
21.5	1E073W	○	3

Pipe Clip



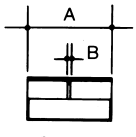
Pipe Clip

- For support centres, see page 7

Material: PVC-U

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
21.5	1E082W	○	28	16

Socket



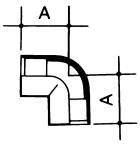
Double Socket

- For support centres, see page 7

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
21.5	1E104W	○	53	2

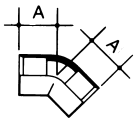
Bends



Bend – 90°

Material: ABS

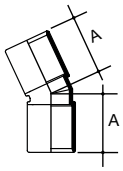
Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
21.5	1E160W	○	39



Bend – 45°

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
21.5	1E166W	○	33

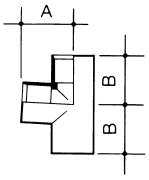


Bend – 25°

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
21.5	1E163W	○	34

Tee

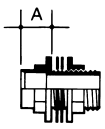


Tee – 90°

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
21.5	1E190W	○	39	39

Tank Connectors

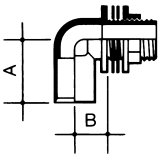


Straight Tank Connector

- Flanged, threaded connector at one end, 19mm solvent weld socket at the other
- Includes two gaskets for connecting to tanks or cisterns

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
21.5	1E129W	○	27



Bent Tank Connector – 90°

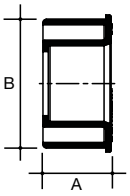
- Flanged, threaded connector at one end, 19mm solvent weld socket at the other
- Includes two gaskets for connecting to tanks or cisterns

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
21.5	1E139W	○	45	42

Overflow
Osma Compact

Reducers



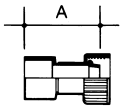
Waste to Overflow Reducer

- Fits inside a solvent weld waste socket to BS EN 1455-1 and BS EN 1566-1
- Allows connection of 21.5mm pipe

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
32x21.5	1E344W	◯	19	36
40x21.5	1E346W	◯	23	43

Cap and Lining



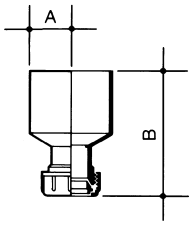
Cap and Lining

- Threaded nut connector at one end, 21.5mm solvent weld socket at the other
- The nut connects to ¾" BSPT male thread

Material: ABS

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A
21.5	1E156W	◯	54

Tundish



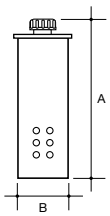
Tundish

- Provides an air break

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
21.5	1O149W	◯	28	88

Soakaway



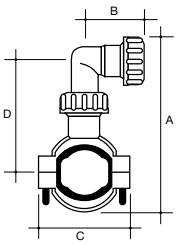
Soakaway

- 110mm OD with 21.5mm, 32mm, 40mm pipe connections

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B
110	1V403G	●	325	120

Connectors and Adaptors

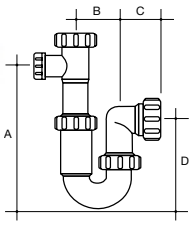


Pipe Clamp

- 32/40mm waste and 21.5mm connection

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
21.5	1V402W	○	130	48	71	78

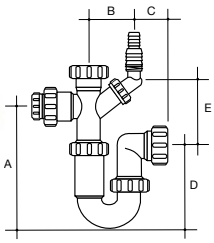


Tubular Swivel Trap

- 40mm x 75mm adjustable with 21.5mm connection

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D
40	5V407W	○	224	63	68	130



Tubular Swivel Trap

- 40mm x 75mm adjustable with 21.5mm connection and washing machine nozzle

Material: Polypropylene

Nominal Size (mm)	Part Number	Colour Option	Dimensions (mm) A	B	C	D	E
40	5V468W	○	188	130	61	130	90

General Information
Osma Compact

Materials

Pipes and most fittings in Osma 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
ABS Acrilonytrile Butadiene Stryrene	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
PE Polyethylene	V-Joint Traps

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

Osma 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

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

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

– Air Admittance Valve 40 and Air Admittance Valve 110 (page 52) – 86/1643

– 110mm Adjustable Bends (page 37) – 89/2174

References

Osma 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
- Osma Soil and Waste Product and Installation Manual

CONNECT TO BETTER

Wavin AS
Commercial Systems

Introduction to Wavin AS
Commercial Systems

Wavin AS Acoustic Soil System

Wavin AS is an effective low noise system, available in 110mm and 160mm. Complemented by a full range of push-fit fittings, the system offers flexibility of an extensive choice, excellent quality and reliability. Compared to cast iron, Wavin AS is quick and easy to install, because of its socket connections.

Wavin AS is resistant to hot water and fulfils the mechanical test requirements of BS EN 1451, which means 95°C short term and 90°C long term temperature loading. Where PVC-U fittings are used, long term temperature resistance is reduced and only suitable for use with intermittent discharges of water up to 90°C. Wavin AS can be used for the drainage of waste water between pH 2 and pH 12.

Features and Benefits

- High Density Material – Wavin AS is made of a minerally reinforced polypropylene called Astolan®. Because of its high specific weight and its special molecular structure, Astolan® is able to absorb airborne sound as well as structure borne sound
- Easy Installation – quick and economic in comparison to cast iron. Wavin AS is lightweight thus easy to handle. Installation is quick and easy, due to the proven push fit socket connections and easy pipe cutting, leading to time and cost savings
- Easy Fixing – Wavin AS can be fixed with rubber lined metal brackets. Expensive fixing techniques are not necessary
- Durable – Wavin AS is extremely robust, resistant to corrosion, internally very smooth and resistant to deposits

Applications

Multiple storey buildings requiring noise insulation:

- Hotels
- Hospitals
- Shopping malls
- Office buildings
- Residential homes
- High-rise apartments
- Schools and universities

The Wavin AS system can be installed as:

- Soil stacks
- Internal rainwater systems
- Suspended pipe systems

To allow waste connections to the main stack, Wavin AS can be used in conjunction with Wavin's standard waste systems. It can also be used in conjunction with standard PVC-U soil fittings if required.

Sound Insulation
Wavin AS

General Principles

With its excellent noise insulating characteristics, Wavin AS is the optimal solution where noise insulation is required. The patented raw material Astolan®, a mineral filled polypropylene, has a high specific weight and special molecular structure, which enables absorption of a number of different sound sources.

Structure Borne Sound

Structure borne sound transmits from the shock or impact zone over the whole pipe. The special molecular structure of Wavin AS enables the absorption of structure borne sound.

Airborne Sound

Sound which diffuses in the air. Occurs inside the pipe due to impact and flow noises. Due to vibration of the pipe additional airborne sounds are generated. Sound energy is absorbed in the pipe wall.

Wavin AS pipe material provides excellent airborne sound absorbing behaviour, because of its high specific weight and special molecular structure.

Impact Sound

Sound which diffuses in solid materials. Structure borne sound is created by the impact of waste water on the pipe wall, especially in vertical stacks in the area of bends and branches.

Sound Absorption

The weight per meter of a soil and waste system is of great importance in absorbing airborne and structure borne sounds.

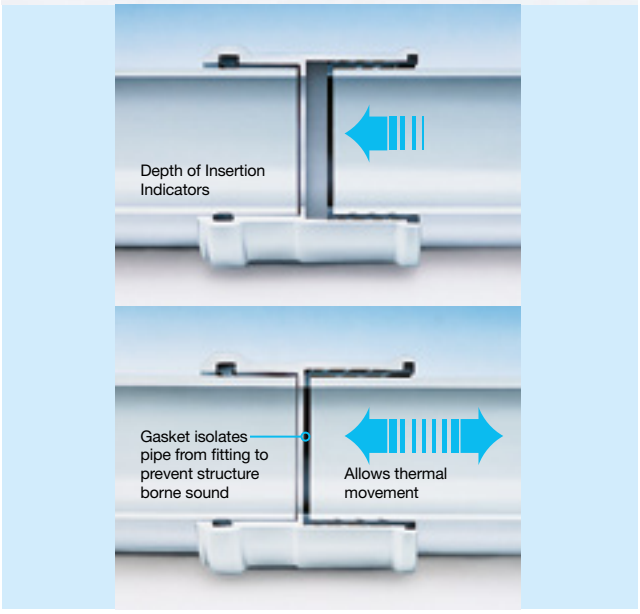
The combination of high specific weight and high elasticity gives the optimal results in damping the transmission of both sounds through a pipe system. Wavin AS is specifically developed to make optimal use of both properties, the pipe weight of 110mm Wavin AS for example is no less than 3.55kg/m. This is heavy enough to provide appropriate sound absorption while still being significantly lighter than cast iron.

Compensator Socket

The Wavin AS compensator socket is a special fitting used to connect plain ended pipe to a branch so that:

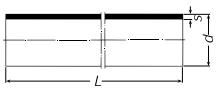
- Maximum acoustic performance is achieved by preventing structure borne sound.
- Compensation is allowed for thermal movement on every floor without the need to employ the common practice of withdrawing pipe by 10mm from the fitting.

This not only saves working time, but also gives additional technical security to the system.



Acoustic Soil Range
Wavin AS

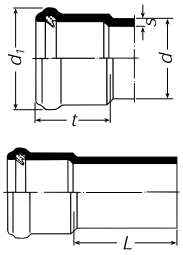
Pipe



Plain Ended Pipe

Material: Polypropylene with Astolan®

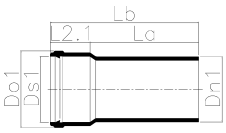
Nominal Size (mm)	Part Number	Dimensions (mm) d	s	L
110	3003325	110	5.3	3000
160	3003331	160	5.3	3000



Single Socketed Pipe

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) d	d1	s	t	L
110	3012211	110	132	5.3	61	3000
110	3003362	110	132	5.3	61	2000

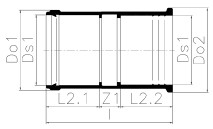


Single Socketed 150mm Short Length Pipe

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Do1	Do2	Ds1	L	L2.1	L2.2
110	3074619	110	132	110	61	150	211
160	3074622	160	188	160	66	150	216

Couplers

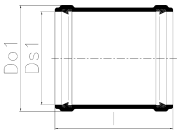


Compensator Socket

- For acoustic performance and built in allowance for thermal expansion
- For more information see page 5

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Do1	Do2	Ds1	L	L2.1	L2.2	Z1
110	3074603	132	132	110	127	57	48	22
160	3074606	188	188	160	151	66	63	22



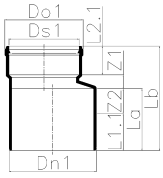
D/S Sleeve

- All push-fit sockets

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Do1	Ds1	L
110	3074610	132	110	117
160	3074612	188	160	143

Reducer



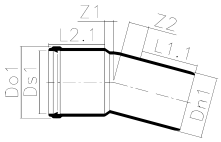
Single Socket Reducer

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L1.1	L2.1	La	Lb	Z1	Z2
160/110	3074698	160	132	110	66	61	115	220	44	49

Bends

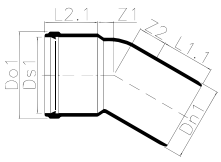


S/S Bend – 15°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L1.1	L2.1	Z1	Z2
110	3074637	110	132	110	61	61	15	27
160	3074647	160	188	160	66	66	19	13



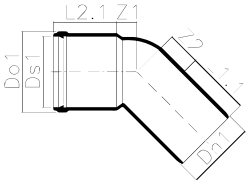
S/S Bend – 30°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L1.1	L2.1	Z1	Z2
110	3074638	110	132	110	61	61	19	37
160	3074648	160	188	160	66	66	30	24

Acoustic Soil Range
Wavin AS

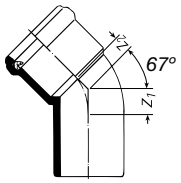


S/S Bend – 45°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L1.1	L2.1	Z1	Z2
110	3074639	110	132	110	61	61	28	44
160	3074649	160	188	160	66	66	24	36

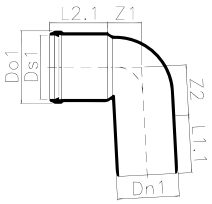


S/S Bend – 67°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Z1	Z2
110	3074640	60	44



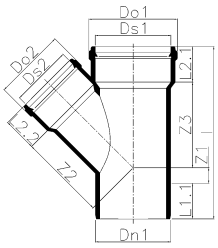
S/S Bend – 87°

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

Material: Polypropylene with Astolan® / PVC-U†

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L1.1	L2.1	Z1	Z2
110†	3074641	110	132	110	61	61	58	78
160	3074650	160	188	160	66	66	95	108

Branches

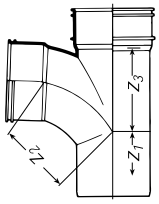


S/S Equal Branch – 45°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Do2	Ds1	Ds2	L	L1.1	L2.1	L2.2	Z1	Z2	Z3
110	3074673	110	132	132	110	110	303	61	61	61	43	138	138
160	3074681	160	188	188	160	160	362	66	66	66	36	194	194

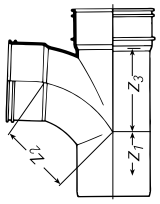


S/S Equal Branch – 67°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Z1	Z2	Z3
110	3074674	58	84	84

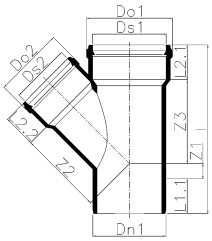


S/S Equal Branch – 87°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Z1	Z2	Z3
110	3074713	70	88	138

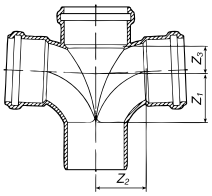


S/S Unequal Branch – 45°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Do2	Ds1	Ds2	L	L1.1	L2.1	L2.2	Z1	Z2	Z3
110/160	3074680	160	188	132	160	110	322	66	66	61	24	176	166

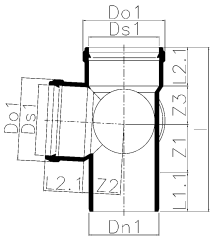


S/S Double Branch – 87°

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

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Z1	Z2	Z3
110	3074715	100	88	47



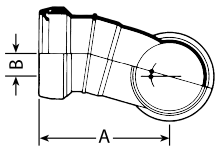
S/S Corner Branch – 87°

- One plain end and three push-fit ring-seal sockets
- Square entry

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	L	L1.1	L2.1	Z1	Z2	Z3
110	3074684	110	132	110	258	61	61	78	58	58

Acoustic Soil Range
Wavin AS



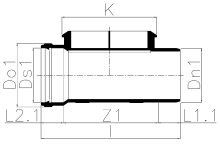
D/S WC Manifold Branch – Straight

- All push-fit sockets

Material: PVC-U with EDPM seals

Nominal Size (mm)	Part Number	Offset Degree	Dimensions (mm) A	B	Effective Length (mm)
110	3020490	Straight	180	–	132
110 LH	3020491	8°	180	16	132
110 LH	3020492	15.5°	180	32	132
110 LH	3020493	23°	180	48	132
110 LH	3020494	30.5	180	64	132
110 LH	3020495	38	180	80	132
110 RH	3020496	8°	180	16	132
110 RH	3020497	15.5°	180	32	132
110 RH	3020498	23°	180	48	132
110 RH	3020499	30.5	180	64	132
110 RH	3020500	38	180	80	132

Access Pipe



S/S Access Pipe

- Rectangular access
- One plain end and one push-fit socket

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) Dn1	Do1	Ds1	K	L	L1.1	L2.1	Z1
110	3074687	110	132	110	0	359	58	61	240
160	3074689	160	188	160	0	411	65	66	280

Bossed Pipe

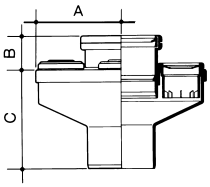
Single Boss Pipe – Spigot Tail

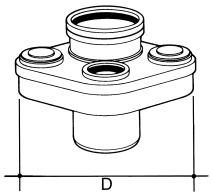
- One plain end and two push-fit ring-seal sockets

Material: PVC-U, with EPDM seals

Nominal Size (mm)	Part Number
110x32	3020506
110x40	3020507
110x50	3020508

Manifold





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), 2C355 or 2C356
- Minimum installation aperture: 240mm square

Material: PVC-U, with Rubber seals

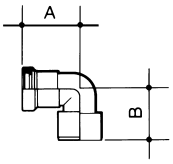
Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
110	3065902	138	55	160	275

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 2CS355 (below) when a bend is required

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A
40	2CS354	54

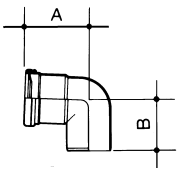


All-Fit Reduction Bend – 50:40mm

- 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	2CS355	70	65



All-Fit 90° Spigot Bend – 50mm

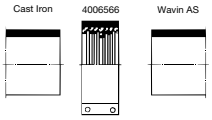
- Connects to 50mm plastic pipe to BS EN 1451-1/BS EN 1455-1/ BS EN 1566-1, or to copper pipe manufactured to BS 659 or BS 2871

Material: ABS

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
50	2CS356	79	64

Acoustic Soil Range
Wavin AS

Adaptor to Cast Iron



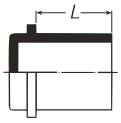
Connector to Cast Iron

- Connects from Wavin AS to Cast Iron

Material: Steel

Nominal Size (mm)	Part Number
110	4006566
160	4006568

Stop End



Socket Plug

Material: Polypropylene with Astolan®

Nominal Size (mm)	Part Number	Dimensions (mm) L
110	3074704	57
160	3074706	49

Safety Clip for Socket Plug

Material: Stainless Steel

Nominal Size (mm)	Part Number
110	4006571
160	4006573

Fire Collar

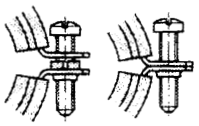
Fire Collar

- Fixing lugs for masonry walls and concrete floors

Material: Steel, Intumenescent layer

Nominal Size (mm)	Part Number
110	3020509
160	3020513

Accessories and Spares



Pipe Bracket with Rubber Insert

- M10 Female thread for fixing
- Can be used both as a fixed and as a sliding bracket

Material: EPDM, Steel (Zinc Plated)

Nominal Size (mm)	Part Number
110	3020510
160	3020514

Chamfering Tool

- For pipe chamfering
- Use for standard pipe/socket connections (not compensator socket gasket end)

Nominal Size (mm)	Part Number
110	3020512

M10 x 80mm Bolt

- Fixing for Solid Wall
- Socket suitable for Torx screwdriver

Material: Steel (Zinc Plated)

Nominal Size (mm)	Part Number	Dimensions (mm) M10
–	3020511	80

Spare Sealing Ring

Material: Rubber

Nominal Size (mm)	Part Number
110	4006583
160	3000177

Spare Collar

Material: Rubber

Nominal Size (mm)	Part Number
110	4006554
160	4006556

Technical Data
Wavin AS

Material

Astolan®; polypropylene, minerally reinforced, resistant to hot water, DIN 4102, B2.

Table 3: Physical Characteristics of Astolan®

Physical Characteristics of Mineral Reinforced Astolan®	
Density	1.9 g/cm³ 3 DIN 53479
Elongation at break	29%
Tensile strength	13 N/mm²
E-modulus	3800 N/mm²
Coefficient of thermal linear expansion	0.09 mm/mK
Fire resistancy	DIN 4102, B2
Colour	Light grey RAL 7035

Marking

Wavin AS, nominal diameter, production year, quality mark, approval, material, control mark, fire classification.

Example:
Wavin AS, DN 100, 2002,
Z.-42.1-228, ASTOLAN®, Ü DIN 4102, B2.

Important Note

Some fittings in the Wavin AS range are manufactured from PVC-U. These are:

- Soil Manifold I Bend 87°
- WC Manifold Branches I Single Boss Pipes

Solvent cement should not be applied to Wavin AS pipe and fittings, as minerally reinforced polypropylene WILL NOT BOND TO PVC. PVC-C Waste can be connected via the the universal push-fit connection sockets on the Wavin AS Acoustic Soil fittings.

CONNECT TO BETTER

General Information
Wavin AS

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:

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	Godkjenningsnmnda vor Sanitärmateriell 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

LABC System Type Approval

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

system approval
LABC

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 HDPE
Commercial Systems

CONNECT TO BETTER

Introduction to HDPE
Commercial Systems

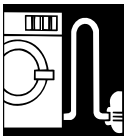
HDPE Soil, Waste and Vent System

System Description

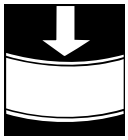
Wavin HDPE is a universal system approved for pipe installation in buildings to DIN 19535 and DIN EN 1519. The product range includes pipes and fittings with dimensions between 40mm and 315mm.

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 under-pressure installations like the siphonic roof drainage system Wavin QuickStream.

Material Characteristics



High-temperature resistance
Wavin HDPE is resistant to temperatures of up to 95°C



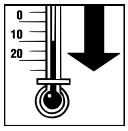
Flexibility
Wavin HDPE is well suited to assemblies subjected to vibration. It is therefore ideal for use in seismic zones and across expansion joints

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 all chemical agents even if only slightly wetted by waste water. The seals are produced from an elastomer which guarantees sealing and durability even in extreme conditions

Introduction to HDPE
Commercial Systems

Applications

Domestic waste-water system
Tensile resistant joint technology guarantees the highest levels of leakage security. The Wavin HDPE waste-water piping system complies with DIN 19535 and DIN EN 1519 and is resistant to the effects of hot water. It meets the requirements of DIN EN 12056 and DIN 1986 -100 (95° short-term loading).

Rainwater piping
Wavin HDPE waste-water piping is suitable for use on rainwater drainage systems. HDPE piping can be used in low-pressure systems to drain free surface waters and rainwater (see the Wavin QuickStream technical handbook).

Industrial waste-water
The Wavin PE system is resistant to aggressive chemicals. Further details about the chemical resistance of PE-HD can be found in chapter 7 on pages 40-43.

Manufacture and testing
Wavin HDPE piping complies with the technical specifications in DIN EN 1519 and DIN 19535 Part 2 as tested by the National Materials Testing Facility.

Product Specifications

Basic material
Wavin HDPE waste-water pipes and fittings are manufactured from PE - HD material.

Colour
Black

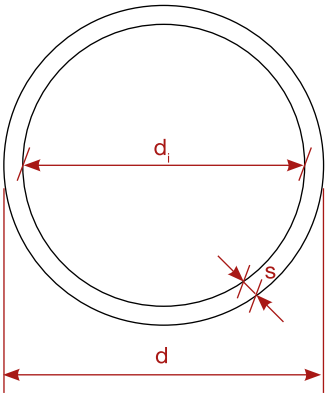
Identification and labelling
Wavin HDPE, nominal diameters, year of manufacture, material, supervision marks, fire category: B2

Example: Wavin HDPE EN 1519 IIP 152 UNI Ue DIN 19535 DN 100 110 x 4.3 PE BD S 12.5 weldable, tempered A-M-G-T

Properties

Melt flow index:	0.3 – 0.89 g/10 min
Coefficient of expansion:	0.2 mm/m °C
UV resistance:	given by carbon content of 2 – 2.5 %
Fire behaviour:	DIN 4102, B2

Pipe data



Calculation of SDR classes

$$SDR = \frac{d}{s}$$

Table 1: Pipe data

DN	d[1])	d_i[2])	s[3])	SDR[4])	SN
40	40	34.0	3.0	13.6	–
50	50	44.0	3.0	17	–
56	56	50.0	3.0	17	–
60	63	57.0	3.0	21	–
70	75	69.0	3.0	26	–
90	90	83.0	3.5	26	4
100	110	101.4	4.3	26	4
125	125	115.2	4.9	26	4
150	160	147.6	6.2	26	4
200	200	187.6	6.2	33	2
200	200	184.6	7.7	26	4
250	250	234.4	7.8	33	2
250	250	230.8	9.6	26	4
300	315	295.4	9.8	33	2
300	315	290.8	12.1	26	4

1. Outer diameter in mm
2. Inner diameter in mm
3. Wall thickness in mm
4. SDR class

Quality assurance

All piping and fittings are subject to continuous internal quality control procedures. The system is also subject to external monitoring by the Materials Testing Facility. The system conforms to the established technical specifications set out in Building Regulations A, Part 1 Issue 2003/1 No.12.1.8 and comply with DIN EN 1519 - 1:2001-01 and DIN 19535 - 10:200-01.

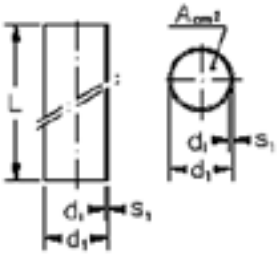
Information on the transportation and storage of HDPE pipes and fittings

HDPE pipes must be protected against damage during transportation and especially during loading and unloading. Prior to any unloading, pipes should be carefully inspected for damage incurred during transportation. Where lifting gear is to be employed, the use of wide belts and slings is recommended. Unpaletted pipes should, wherever possible, be supported along their entire length and prevented from rolling against each other. Pipe storage areas and supporting surfaces should be free from sharp edges.

Caution: Short-term pipe deformation can occur where pipes are unevenly exposed to the effects of the sun (or other forms of heat). Pipes should therefore not be stored in direct sunlight.

Product Details
Wavin HDPE

Pipe



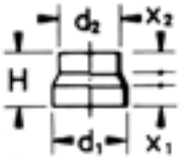
Pipe

- Pipes: From Ø 75 to Ø 160 pipe series S12,5 / PN 5. From Ø 200 to Ø 315 pipe series S16 / PN 4
- 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 cm²
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

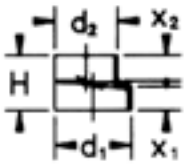


Concentric Reducer

- Segment Welded *

Material: HDPE

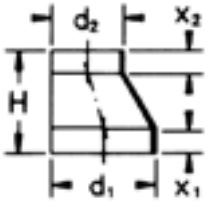
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2	H
56/50	3003820	56/50	30	30	80
63/56	3003798	63/56	30	30	80
110/56	3003858	110/56	30	30	80
110/63	3003808	110/63	30	30	80
110/75	3003809	110/75	30	30	80
110/90	3003810	110/90	30	30	80
125/110	3003815	125/110	30	30	80
160/110	3003816	160/110	32	29	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



Eccentric Reducer

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
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
90/63	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
160/110	3003839	160/110	35	37	80
160/125	3003840	160/125	35	37	80

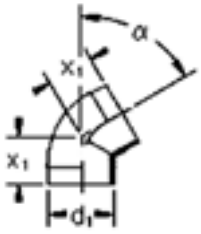


Eccentric Reducer – Long

- Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2	H
200/110	3003846	200/110	110	60	325
200/125	3003847	200/125	110	70	310
200/160	3003848	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

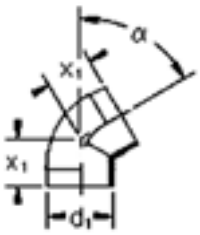


Elbow 15°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	∂	X1	r
110	3017993	110	15°	45	80

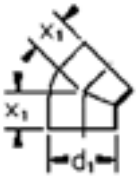
Product Details
Wavin HDPE



Elbow 30°

Material: HDPE

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

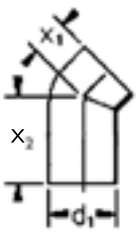


Elbow 45°

- Segment Welded *

Material: HDPE

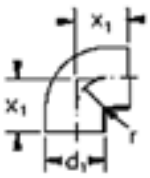
Nominal Size (mm)	Part Number	Dimensions (mm) d1	X1
40	3003561	40	40
50	3003565	50	45
56	3003597	56	45
63	3003569	63	50
75	3003572	75	50
90	3003574	90	55
110	3003577	110	60
125	3003582	125	65
160	3003585	160	100
200	3003588	200	160
250	3018821*	250	165
315	3018822*	315	230



Elbow 45° Long Tail

Material: HDPE

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

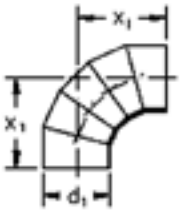


Elbow 88.5°

- Swept type *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	X1
40	3003563*	40	60
50	3003567*	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
200	3018818	200	250
250	3017978	250	335
315	3018819	315	370

Elbow 90° Extended

Material: HDPE

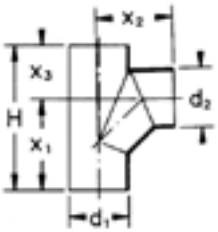
Nominal Size (mm)	Part Number	Dimensions (mm) d1	X1	X2	r
40	3003940	40	150	30	30
50	3003600	50	180	40	40
56	3003944	56	210	40	40
75	3003622	75	210	70	70
90	3003602	90	240	90	90
110	3003603	110	270	103	100

Product Details
Wavin HDPE

HDPE Airmix “sovent”

Material: HDPE

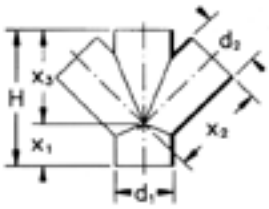
Nominal Size (mm)	Part Number	Dimensions (mm) di
110	3003791	110
160	4042219	160



Swept Branch 88.5°

Material: HDPE

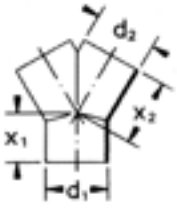
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2	X3	H
110	3003792	110	170	140	100	270



Double Branch 45°

Material: HDPE

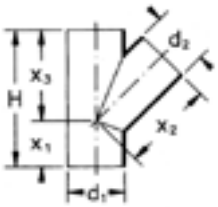
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2-X3	H
110/110	3003728	110/110	80	180	260



Y-Branch 30°

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	X1	X2
110/110	3003753	110/110	90	120



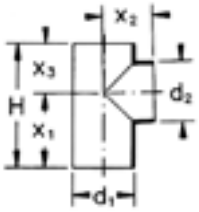
Branch 45°

- Segment Welded *

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2-X3	H
40/40	3003627	40/40	45	90	135
50/40	3003631	50/40	55	110	165
50/50	3003629	50/50	55	110	165
56/56	3003724	56/56	60	120	180
63/63	3003633	63/63	65	130	195
75/56	3003649	75/56	70	140	210
75/75	3003641	75/75	70	140	210
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
110/110	3003662	110/110	90	180	270
125/63	3003679	125/63	100	200	300
125/110	3003685	125/110	100	200	300
125/125	3003676	125/125	100	200	300
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
200/160	3070634*	200/160	180	360	540
200/200	3070630*	200/200	180	360	540
250/110	3003705*	250/110	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
315/160	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

Product Details
Wavin HDPE

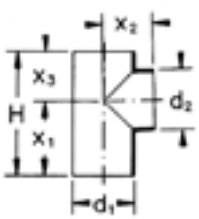


Branch 88.5°

- Segment Welded *

Material: HDPE

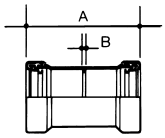
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2-X3	H
40/40	3003628	40/40	75	55	130
50/40	3003632	50/40	90	60	150
50/50	3003630	50/50	90	60	150
56/50	3003726	56/50	105	70	175
56/56	3003727	56/56	105	70	175
63/50	3003638	63/50	105	70	175
75/56	3003650	75/56	105	70	175
75/75	3003642	75/75	105	70	175
90/40	3003655	90/40	120	80	200
90/50	3003657	90/50	120	80	200
90/90	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
110/75	3003671	110/75	135	90	225
110/110	3003663	110/110	135	90	225
125/125	3003677	125/125	150	100	250
160/110	3003689	160/110	210	140	350
160/160	3003687	160/160	210	140	350
200/110	3003698*	200/110	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
250/160	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
315/160	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



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

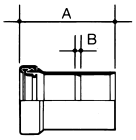


Universal Connector

- 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

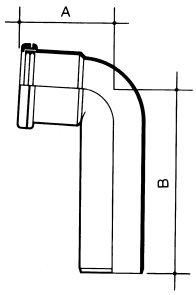


Expansion Socket – with Solvent Socket Tail

- 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

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

Product Details
Wavin HDPE

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

Galvanised HDPE Bracket

Material: Galvanised Steel

Nominal Size (mm)	Part Number
40 x ½"	4012114
50 x ½"	4012118
56 x ½"	4063094
63 x ½"	4012122
75 x ½"	4012126
90 x ½"	4012132
110 x ½"	4012138
125 x ½"	4012142
160 x ½"	4012147
200 x 1"	4012151
250 x 1"	4012155
315 x 1"	4012159

Mounting Plate

Material: Steel

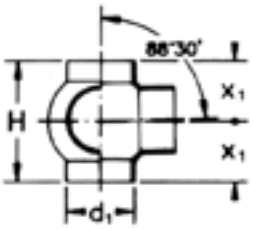
Nominal Size (mm)	Part Number
M10	4063092
G ½"	4012326

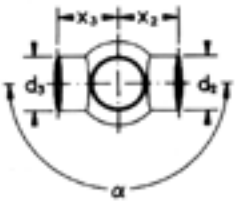
Fire Collar EFM

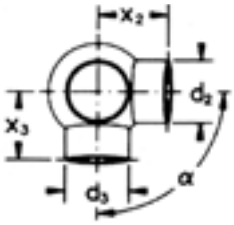
Material: Steel

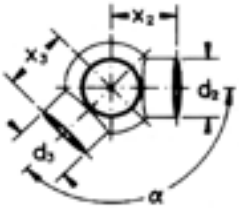
Nominal Size (mm)	Part Number
40 x 63	4026435
75	4026436
78 x 90	4026437
110	4026438
125	4026439
135 x 160	4026440
200	4026441
250	4026442

Product Details
Wavin HDPE









Spherical Branch, 2 Stubs

Material: HDPE

Type A – 180°

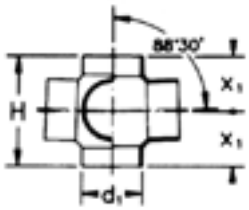
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2-d3	X1	X2-X3	H
110/75	3003764	110/75	100	120	200
110/110	3003755	110/110	100	120	200

Type B – 90°

110/110	3003756	110/110	100	120	200

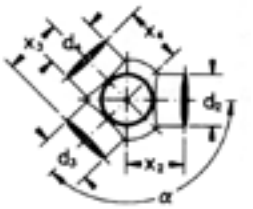
Type C – 135°

110/110	3003774	110/110	100	120	200



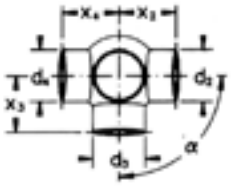
Spherical Branch, 3 Stubs

Material: HDPE



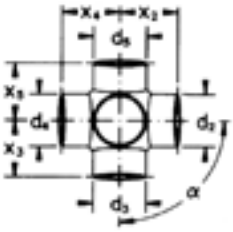
Type D – 135°

Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2-d3	X1	X2-X3	H
110/110	3003775	110/110	100	120	200



Type E – 90°

110/110	3003776	110/110	100	120	200

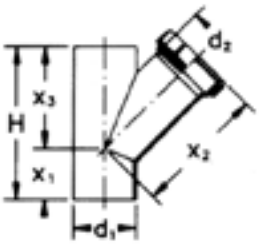


Spherical Branch, 4 Stubs

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

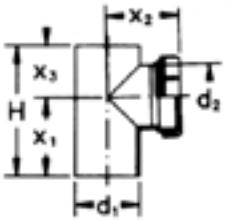


Access Tee 45°

Material: HDPE

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

Product Details
Wavin HDPE

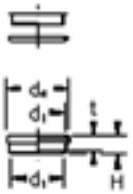


Access Tee 88.5°

- Segment Welded *

Material: HDPE

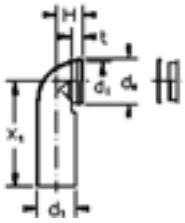
Nominal Size (mm)	Part Number	Dimensions (mm) d1/d2	X1	X2	X3	H
75/75	3003736	75/75	105	90	70	175
110/110	3003740	110/110	135	125	90	225
160/110	3070631*	160/110	210	150	140	350
200/110	3017974*	200/110	180	170	180	360
250/110	3017975*	250/110	220	190	220	440
315/110	3017976*	315/110	280	210	280	560



Wall Mounted Toilet Connector

Material: HDPE

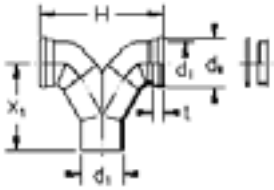
Nominal Size (mm)	Part Number	Dimensions (mm) d1/di	de	t	H
90/90	3003550	90/90	110	28	38
110/110	3003554	110/110	131	28	38



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

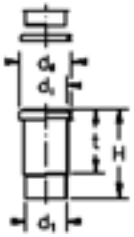
Nominal Size (mm)	Part Number	Dimensions (mm) d1	de	H
40	3003478	40	54	52
50	3003479	50	64	52
56	3003489	56	68	52
63	3003480	63	77	52
75	3003481	75	90	52
90	3003482	90	104	54
110	3003483	110	124	64
125	3003484	125	143	64
160	3003485	160	180	63
200	4061068	200	244	208
250	4036299	250	304	244
315	4036300	315	382	268

Push-fit Socket with Gasket and Cap

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1/di	de	t	H
40/40	3003491	40/40	57	50	85
50/50	3003492	50/50	67	50	85
56/56	3003493	56/56	57	52	85
75/75	3003495	75/75	92	65	100
110/110	3003497	110/110	131	70	105
160/160	3003499	160/160	190	93	140

Product Details
Wavin HDPE



Expansion Socket with Gasket and Cap

- Segment Welded *

Material: HDPE

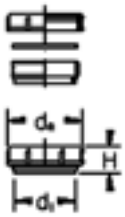
Nominal Size (mm)	Part Number	Dimensions (mm) d1/di	de	t	H
40/40	3003505	40/40	57	170	235
50/50	3003506	50/50	67	170	235
56/56	3018008	56/56	57	170	235
63/63	3003507	63/63	80	175	235
75/75	3003508	75/75	92	179	240
90/90	3003509	90/90	110	175	240
110/110	3003510	110/110	130	178	255
125/125	3003511	125/125	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.



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
75	3003864	75	103	45
110	3003873	110	145	50

Weld Cap

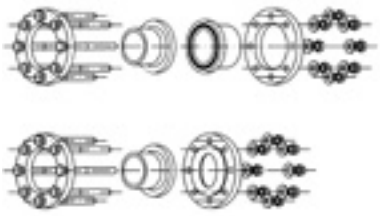
Material: HDPE

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

Protection Cap for pipes and fitting

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	H
90	3018708	90	31
110	3018709	110	33



Flange Connection

Material: HDPE

Flange Adaptor

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	de	h	H
75	4025989	75	122	21	70
110	4009748	110	158	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

Product Details
Wavin HDPE

Galvanised Steel Flange 1"

Material: Steel

Nominal Size (mm)	Part Number
1"	4009793

Brass Nut Connection

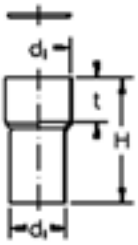
Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	G	H
63	4009761	63	2"	82

Internal Thread Joint

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	G	t	H
50	3003925	50	1 – ½"	22	55



Shrink-on Socket with Seal

Material: HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) d1	di	t	H	Ø connection
50	3003516	50	68	80	250	45 ÷ 60

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* electrofusion sockets (*up to max. 160mm).*

Heat Reflector Butt-Welding Tool VR 160

Description	Part Number
VR 160, 40 – 160mm	4011398

Heat Reflector Butt-Welding Tool Media 250

Description	Part Number
Media 250, 75 – 250mm	4011401

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
X1	TP300	250	4011404

Product Details
Wavin HDPE

Heat Reflector Butt-Welding Tool Maxi 315

Description	Part Number
Maxi 315, 90 – 315mm	4011402

PE Pipe Cutter

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

Pipe Scraper

- Delivery period on request

DN (mm)	Part Number
75 – 315	4026921

Other Processing Aids

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

CONNECT TO BETTER

Chemical Resistance
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	+	+	
oaniline chlorhydrate	SA	+	+	+
anisole	TP	o	–	–
anthraquinone sulphonic acid, suspension	SA			
antimony trichloride	90%	+	+	+
apple juice	T	+	+	+
aqua regia (HCl / HNO3)	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	+	+	+

Chemical Resistance
Wavin HDPE

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 choride	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	+	+	+
coppper fluoride	2%			

Chemical resistance	Concentration	PE-HD Temperature °C.		
		20	40	60
corn germ oil	TP			
cottonseed oil	TP			
cresole	up to 90%	+	+	+
cresole	> 90%	+	+	o
cresylic 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%	+	0	–
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	+	+	+

Chemical Resistance
Wavin HDPE

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	+	+	
proprionic acid	50%	+	+	+
proprionic 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	+	+	+

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General Information
Wavin HDPE

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

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 Service Support
Commercial Systems

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 opitimised 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: 0844 8565165
Email: technical.design@wavin.co.uk or via online enquiry at www.wavin.co.uk

MyPortal

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.

BIM Centre

MyPortal hosts our Revit familes 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

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.

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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

The Revit families for BIM available in our Download Centre automatically allow for the correct fittings, including reducers, when required. This also allows eccentricity to be applied upon configuration and has options for using an equal tee instead of a reducing tee.

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 families are available in several of our systems including:

- **Wavin AS**
- **Wavin HDPE**
- **Wavin Tigris K1**
- **Hep$_2$O**
- **Osma Push-Fit Soil & Waste**
- **Osma Solvent Weld Soil and Waste**
- **Traps and Accessories**

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

YouTube

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

Transport, Handling and Waste
Commercial Systems

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

- Always cut the pipe to length at right angles
- Calibrate and chamfer the pipe end all round
- Push the pipe into the fitting to the stop
- Check the press fitting observation window
- Press in the case of the press fittings
- See pages 19 – 27 for detailed installation and assembly information

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 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 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 0844 8565165 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.

Handling, Storage and Safety

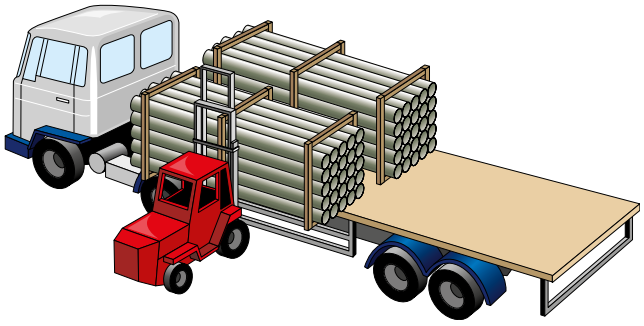
Handling

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

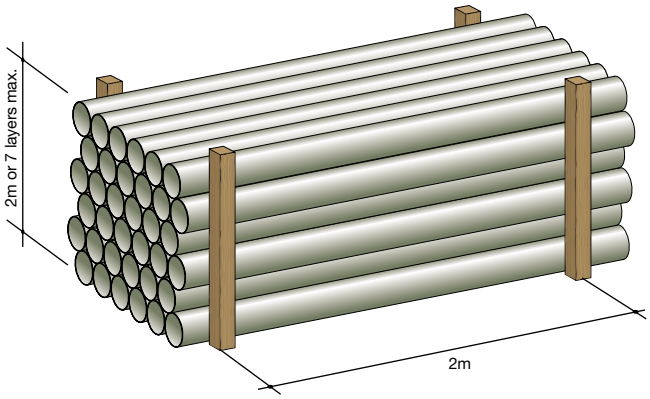
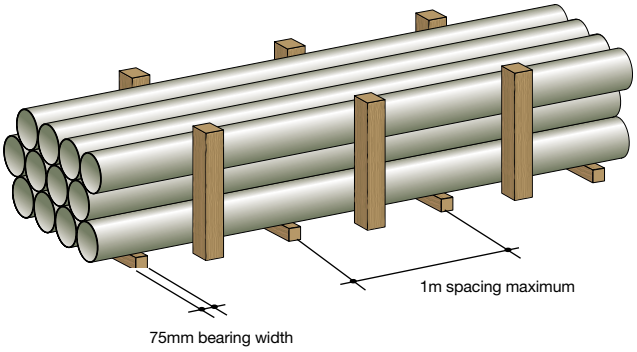


Figure 3: Storage of loose pipe on bearers



General Information
Commercial Systems

Technical Advice

Wavin solutions are backed by Wavin's comprehensive technical advice service. This is available to provide expert assistance at every stage of a project, from planning and product selection to installation and maintenance.

Contact Wavin Technical Design Department:

Tel: 0844 856 5165

Email: technical.design@wavin.co.uk or via online enquiry at wavin.co.uk

Literature

The following Wavin publications are also available from the Literature Department at Chippenham.

General

- Wavin Above Ground Systems: Trade Price List

Above Ground Systems

- Osma Soil and Waste:
  Product and Installation Manual
- Tigris K1:
  Product and Installation Manual
- Hep_2O:
  Product Guide
- Wavin HDPE:
  Product and Installation Manual
- Wavin AS Acoustic Soil:
  Product and Installation Manual
- Wavin Osma Compact:
  Product and Installation Manual

To request details with regards to any of the above components and/or for any technical enquires please contact:

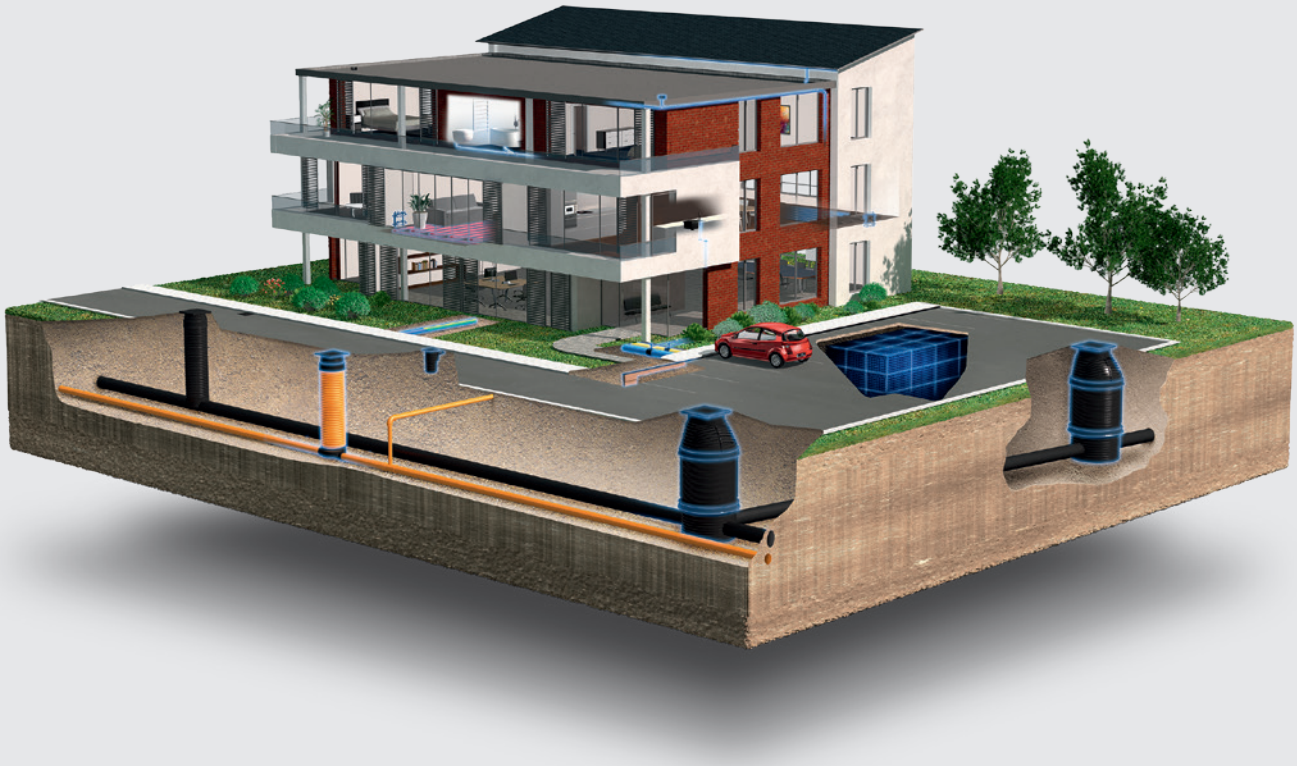
Literature Request
Tel: 01249 766333
Email: literature@wavin.co.uk

Technical Design
Tel: 0844 856 5165
Email: technical.design@wavin.co.uk

Wavin Online
The complete range of Wavin/Osma product and installation guides are also available online at: wavin.co.uk
Did you know you can also download our BIM files, take e-learning courses and CPD's online at myportal.wavin.co.uk and you can see installation tips on our YouTube channel WavinUK

YouTube

Discover our broad portfolio at
www.wavin.co.uk



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Building & Infrastructure

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