



# PVC Soil & waste ranges



[marleypd.co.uk](http://marleypd.co.uk)

## Innovation & Expertise

## PVCu Soil and Waste Systems

Marley Plumbing & Drainage offer a comprehensive range of soil and waste systems. Available with a variety of jointing methods and manufactured to UK and European standards and are designed for use on commercial and residential projects.

### Product specification information

This guide contains design and installation information for Marley PVCu soil & waste drainage systems. All documentation can be downloaded from [marleypd.co.uk](http://marleypd.co.uk)

### Key

ABS = Acrylonitrile butadiene styrene  
 PVC-c = Chlorinated Polyvinyl Chloride  
 PVCu = Poly vinyl chloride un-plasticised  
 PP = Polypropylene



BS EN ISO 9001:2008  
 BS EN ISO 14001:2004

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# Marley Soil & Waste Systems

## PVCu soil and waste systems

The PVCu soil system is available in 82, 110 and 160mm push-fit and solvent weld options incorporating socketed and plain ended pipe.

110 and 160mm pipe support components have been designed specifically to support horizontal or vertical suspended PVCu pipework.

Pipes and fittings are also suitable for use as internal and external rainwater pipes to drain flat roofs and metal gutter systems on commercial and industrial buildings.



## Waste ranges

Solvent waste		Push-fit waste	Overflow	Multikwik <sup>®</sup>	
PVCu	ABS	Polypropylene	PVCu	Compression waste Polypropylene	Traps Polypropylene
Suitable for internal and external applications.	Lightweight and cost effective for internal installation. Easy to cut joint and install.	For internal use, ideally suited to fast installation. Cost effective solution where systems are being installed or modified.	A complete range of pipework and fittings for overflow and boiler condensate applications.	Multi-fit compression socket, for internal use. Easy installation to similar sized new or existing plastic and copper pipework.	A range of traps, which enable quick & easy installation to any new or existing plastic or copper pipework.
Available in 32, 40 and 50 mm	Available in 32, 40 and 50 mm	Available in 32, 40 mm	Available in 21.5 mm	Available in 32, 40 mm	Available in 32, 40 and 50 mm
White & Black	White, Black & Grey	White, Black & Grey	White	White & Chrome	White & Chrome

\* For information on Multikwik compression waste and traps visit [marleypd.co.uk](http://marleypd.co.uk).

ABS and polypropylene waste pipes and fittings are designed for internal use and should not be fitted externally as they will be subject to ultraviolet light degradation. If fitted externally it is recommended that they are protected by the application of a suitable paint or are boxed in.

### Features and benefits

- Push-fit or solvent weld jointing
- Light weight
- Easy to handle on site
- Quick and easy to install, saving time and money
- Provides quick and hygienic removal of sanitary waste water
- All collar bosses are individually pressure tested to ensure joint integrity
- Hole saw locator on all bosses for ease of installation

### Key product information:

- 82mm, 110mm and 160mm Soil sizes
- 32mm, 40mm and 50mm Waste sizes

### Typical applications:

- Apartments
- Hotels
- Libraries
- Hospitals
- Public buildings
- Restaurants
- Residential properties

## HDPE soil

The HDPE soil range is certified to BS EN 1519: 2000 (licence number KM 545820) An extension of the Marley soil & waste portfolio, the HDPE range offers an alternative solution to cast iron.

It is particularly suited for commercial applications or where a product with high impact or abrasion resistance is required, such as hospitals, hotels, schools, as well as residential buildings.



### Key fitting: Aerator

The need for secondary venting in high-rise buildings can be eliminated with the aerator. An aerator fitting breaks the discharge fall on each floor and as a consequence the secondary vent pipe is not required as the pressure difference stays well within the limit of 3 mbar.

The unique shape of the fitting increases the capacity of the stack allowing the soil and waste flow from the higher floors to smoothly converge with the flow on the lower floor.

## dBlue Acoustic soil

An acoustic soil and waste range with a layered pipe providing quick, hygienic removal of sanitary waste water. The noise generated by the flow of water is dramatically reduced – making it perfect for multi-occupancy apartment blocks and high specification developments.



# Solvent waste – PVC-c

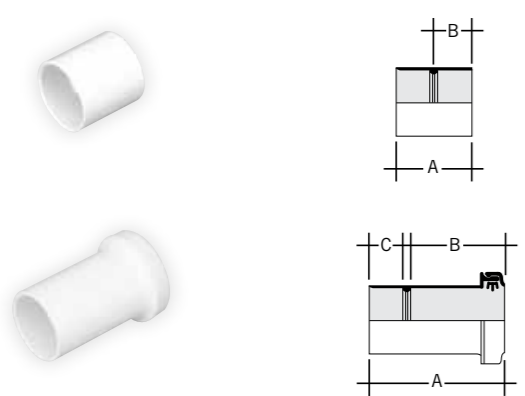
## PIPE



Size mm	Code	Length	Colour	Qty
32	<b>KP104</b>	4m	W B	10
40	<b>KP204</b>	4m	W B	10
50	<b>KP304</b>	4m	W B	5

Double spigot

## STRAIGHT COUPLINGS

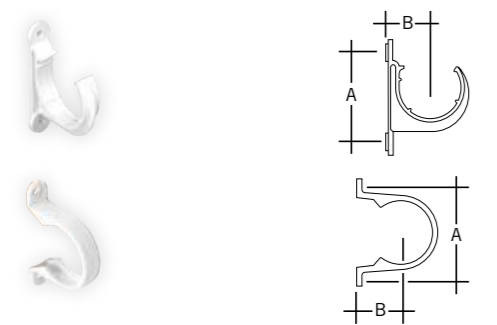


Size mm	Code	A	B	Colour	Qty
32	<b>KSC1</b>	46	20	W B	60
40	<b>KSC2</b>	53	24	W B	30
50	<b>KSC3</b>	66	28	W B	30

Size mm	Code	A	B	C	Colour	Qty
32	<b>KEC1</b>	86	61	20	W	10
40	<b>KEC2</b>	90	64	23	W	10
50	<b>KEC3</b>	82	50	30	W	10

Expansion/adaptor

## PIPE CLIPS



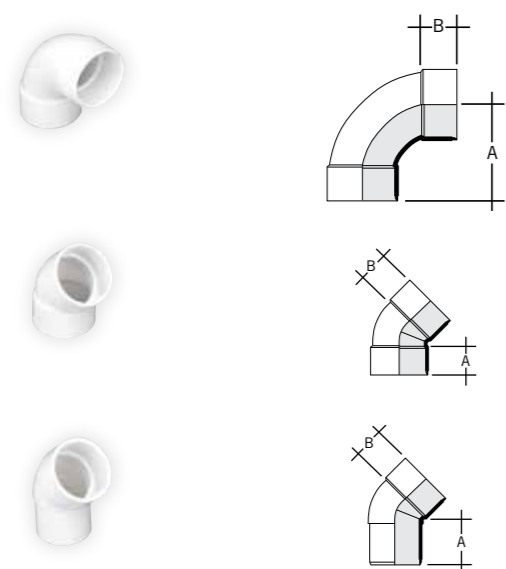
Size mm	Code	A	B	Colour	Qty
32	<b>KF1</b>	57	30	W B G	100
40	<b>KF2</b>	62	30	W B G	100
50	<b>KF3</b>	77	41	W B G	80

Open clip

Size mm	Code	A	B	Colour	Qty
32	<b>WC3</b>	76	30	W B	100
40	<b>WC4</b>	82	30	W B	100
50	<b>WC5</b>	100	38	W	80

Closed clip

## BENDS



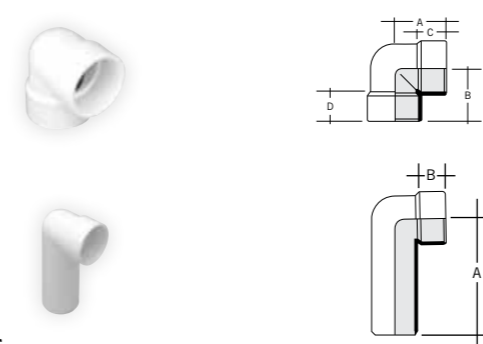
Size mm	Code	Angle	A	B	Colour	Qty
32	<b>KB1</b>	88½°	57	18	W B	50
40	<b>KB2</b>	88½°	62	21	W B	30
50	<b>KB3</b>	88½°	78	28	W B	10

Size mm	Code	Angle	A	B	Colour	Qty
32	<b>KB12</b>	45°	29	18	W B	10
40	<b>KB22</b>	45°	33	21	W B	20
50	<b>KB32</b>	45°	42	28	W B	20

Size mm	Code	Angle	A	w	Colour	Qty
32	<b>KBA12</b>	45°	24	23	W	40
40	<b>KBA22</b>	45°	35	26	W	20
50	<b>KBA32</b>	45°	39	30	W B G	20

Spigot

## BENDS



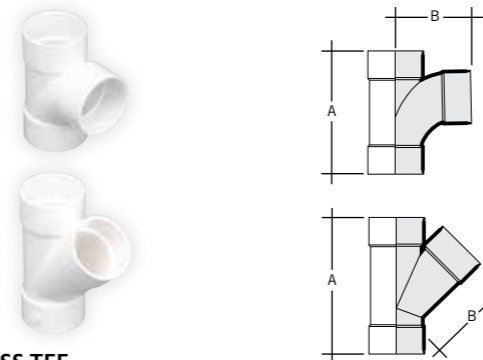
Size mm	Code	Angle	A	B	C	D	Colour	Qty
40	<b>KBK25</b>	90°	48	48	23	23	W B	20
50	<b>KBK35</b>	90°	59	50	20	28	W	10

Knuckle bend/boss adaptor, which can solvent weld over a boss upstand

Size mm	Code	Angle	A	B	Colour	Qty
32	<b>KBS1</b>	87½°	92	18	W	20
40	<b>KBS2</b>	87½°	92	23	W	20
50	<b>KBS3</b>	87½°	92	30	W B G	10

Solvent socket/spigot

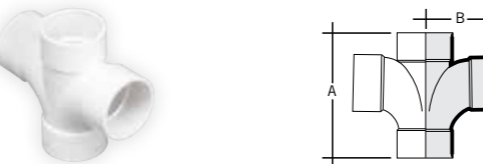
## TEES



Size mm	Code	Angle	A	B	Colour	Qty
32	<b>KT1</b>	88½°	92	57	W B	30
40	<b>KT2</b>	88½°	106	62	W B	20
50	<b>KT3</b>	88½°	135	78	W B	10

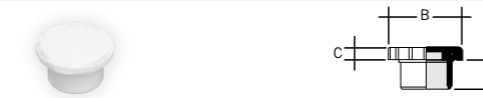
Size mm	Code	Angle	A	B	Colour	Qty
40	<b>KT21</b>	45°	117	78	W	20
50	<b>KT31</b>	45°	149	100	W	10

## CROSS TEE



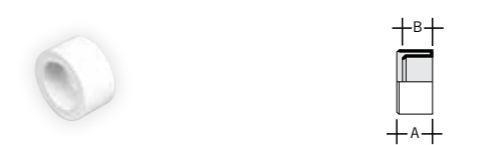
Size mm	Code	Angle	A	B	Colour	Qty
40	<b>KXT21</b>	88½°	106	62	W	10
50	<b>KXT31</b>	88½°	140	87	W	10

## ACCESS PLUG



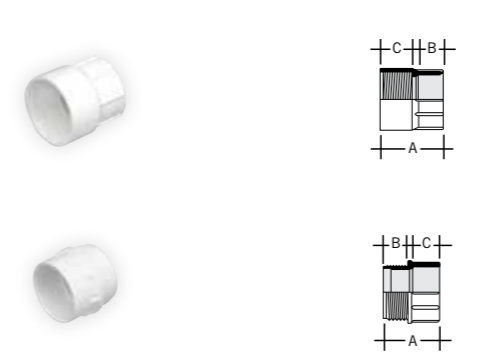
Size mm	Code	A	B	C	Colour	Qty
32	<b>KAP1</b>	22	53	8	W B	10
40	<b>KAP2</b>	25	57	8	W B	10
50	<b>KAP3</b>	33	71	8	W B	10

## SOCKET REDUCER



Size mm	Code	A	B	Colour	Qty
32-21.5	<b>KR175</b>	22	20	W	100
40-32	<b>KR210</b>	28	22	W B	80
50-32	<b>KR310</b>	32	28	W	40
50-40	<b>KR320</b>	32	28	W B	40

## IRON ADAPTORS



### Female

Size mm	Code	A	B	C	Colour	Qty
32	<b>KFA1</b>	50	25	20	W	10
40	<b>KFA2</b>	53	25	24	W	10
50	<b>KFA3</b>	60	25	28	W	10

Solvent socket/BSP thread

### Male

Size mm	Code	A	B	C	Colour	Qty
32	<b>KMA1</b>	44	20	20	W	50
40	<b>KMA2</b>	47	20	24	W	40
50	<b>KMA3</b>	53	20	28	W	40

Solvent socket/BSP thread

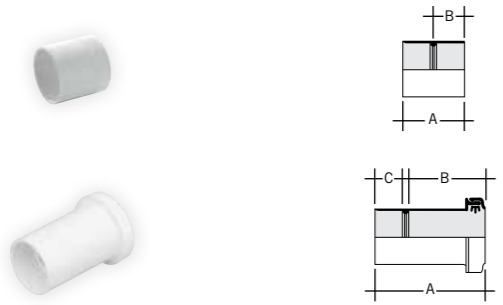
# Solvent waste – ABS

## PIPE



Size mm	Code	Length	Colour	Qty
32	<a href="#">WAP33</a>	3m	W B G	♥ 10
40	<a href="#">WAP43</a>	3m	W B G	♥ 10
50	<a href="#">WAP53</a>	3m	W B G	♥ 5

## STRAIGHT COUPLINGS

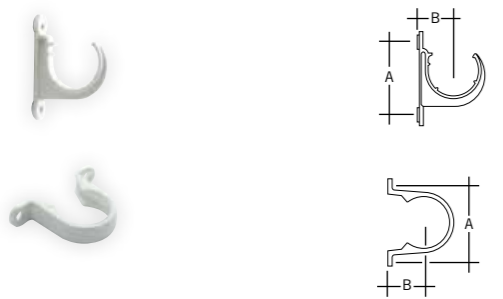


Size mm	Code	A	B	Colour	Qty
32	<a href="#">WAC3</a>	40	20	W B G	♥ 40
40	<a href="#">WAC4</a>	46	23	W B G	♥ 30
50	<a href="#">WAC5</a>	63	30	W B G	♥ 30

Size mm	Code	A	B	C	Colour	Qty
32	<a href="#">WAC31</a>	86	61	20	W	♥ 10
40	<a href="#">WAC41</a>	90	64	23	W	♥ 10
50	<a href="#">KEC3*</a>	82	50	30	W	♥ 10

Expansion/copper adaptor

## PIPE CLIPS



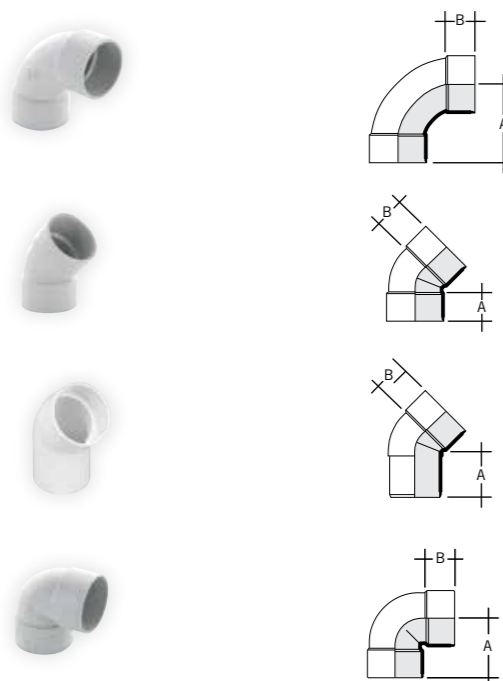
Size mm	Code	A	B	Colour	Qty
32	<a href="#">KF1</a>	57	30	W B G	♥ 100
40	<a href="#">KF2</a>	62	30	W B G	♥ 100
50	<a href="#">KF3</a>	77	41	W B G	♥ 80

Open clip

Size mm	Code	A	B	Colour	Qty
32	<a href="#">WC3</a>	76	30	W B G	♥♥ 100
40	<a href="#">WC4</a>	82	30	W B G	♥♥ 100
50	<a href="#">WC5</a>	100	38	W	♥♥ 80

Closed clip

## BENDS



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAB3</a>	88½°	55	20	W B G	♥ 50
40	<a href="#">WAB4</a>	88½°	64	23	W B G	♥ 30
50	<a href="#">WAB5</a>	88½°	86	30	W B G	♥ 20

Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAB31</a>	45°	32	20	W B G	40
40	<a href="#">WAB41</a>	45°	36	23	W B G	♥ 20
50	<a href="#">WAB51</a>	45°	47	30	W B G	♥ 20

Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAB32</a>	45°	45	20	W	30
40	<a href="#">WAB42</a>	45°	48	23	W	♥ 20

Spigot

Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAB33</a>	90°	44	20	W B G	♥ 30
40	<a href="#">WAB43</a>	90°	53	23	W B G	♥ 20

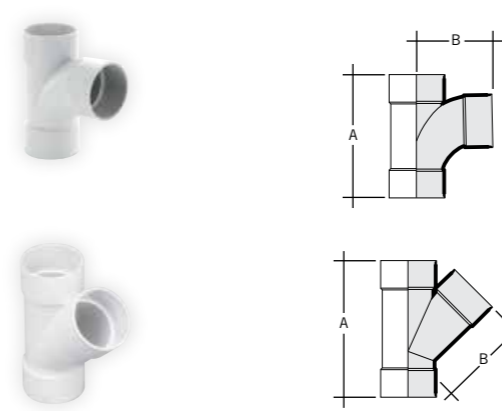
Knuckle bend

## ACCESS PLUG



Size mm	Code	A	B	C	Colour	Qty
32	<a href="#">WAA3</a>	22	53	8	W B G	♥ 10
40	<a href="#">WAA4</a>	25	57	8	W B G	♥ 10
50	<a href="#">WAA5</a>	33	71	8	W B G	♥ 10

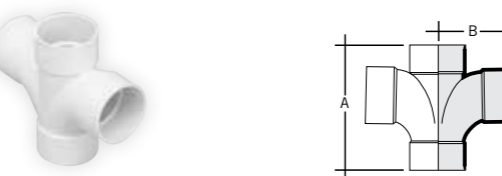
## TEES



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAT3</a>	88½°	90	55	W B G	♥ 30
40	<a href="#">WAT4</a>	88½°	107	64	W B G	♥ 20
50	<a href="#">WAT5</a>	88½°	140	86	W B G	♥ 10

Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WAT31</a>	45°	102	65	W	♥ 20
40	<a href="#">WAT41</a>	45°	117	79	W	♥ 20
50	<a href="#">WAT51</a>	45°	150	100	W	♥ 10

## CROSS TEE



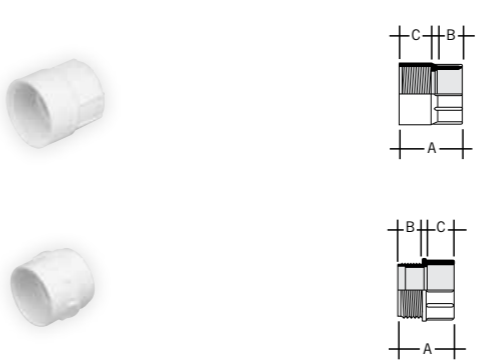
Size mm	Code	Angle	A	B	Colour	Qty
40	<a href="#">WAT42</a>	88½°	106	65	W	♥ 10
50	<a href="#">WAT52</a>	88½°	140	88	W	♥ 10

## SOCKET REDUCER



Size mm	Code	A	B	Colour	Qty
40-32	<a href="#">WAR43</a>	26	20	W B G	♥ 80
50-32	<a href="#">WAR53</a>	31	20	W B G	♥ 40
50-40	<a href="#">WAR54</a>	31	23	W B G	♥ 40

## IRON ADAPTORS



### Female

Size mm	Code	A	B	C	Colour	Qty
32	<a href="#">WAF3</a>	50	25	25	W	♥ 10
40	<a href="#">WAF4</a>	53	25	24	W	♥ 10
50	<a href="#">WAF5</a>	60	25	28	W	♥ 10

### Male

Size mm	Code	A	B	C	Colour	Qty
32	<a href="#">WAM3</a>	44	20	20	W	♥ 50
40	<a href="#">WAM4</a>	47	20	24	W	♥ 40
50	<a href="#">WAM5</a>	53	20	28	W	♥ 40

## CAP AND LINING



Size mm	Code	A	Colour	Qty
32	<a href="#">WAM31</a>	58	W	♥ 10

# Push-fit waste – PP

## PIPE



Size mm	Code	Length	Colour	Qty
32	<a href="#">WPP33</a>	3m	W B G	10
40	<a href="#">WPP43</a>	3m	W B G	10

## STRAIGHT COUPLING



Size mm	Code	A	B	Colour	Qty
32	<a href="#">WPC3</a>	66	38	W B G	10
40	<a href="#">WPC4</a>	69	38	W B G	20

## PIPE CLIPS



Size mm	Code	A	B	Colour	Qty
32	<a href="#">KF1</a>	57	30	W B G	100
40	<a href="#">KF2</a>	62	30	W B G	100

Open clip



Size mm	Code	A	B	Colour	Qty
32	<a href="#">WC3</a>	76	30	W B G	100
40	<a href="#">WC4</a>	82	30	W B G	100

Closed clip

## BENDS



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WPB31</a>	45°	42	42	W B G	20
40	<a href="#">WPB41</a>	45°	43	43	W B G	20

Push-fit sockets



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WPB32</a>	45°	36	31	W B G	10
40	<a href="#">WPB42</a>	45°	36	32	W B G	20



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WPB33</a>	90°	60	60	W B G	10
40	<a href="#">WPB43</a>	90°	65	65	W B G	20

Knuckle bend



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WPB34</a>	88½°	75	37	W B G	10
40	<a href="#">WPB44</a>	88½°	75	37	W B G	30

## TEE



Size mm	Code	Angle	A	B	Colour	Qty
32	<a href="#">WPT31</a>	88½°	105	63	W B G	10
40	<a href="#">WPT41</a>	88½°	115	68	W B G	30

## ACCESS PLUG



Size mm	Code	A	Colour	Qty
32	<a href="#">WPA31</a>	20	W B G	100
40	<a href="#">WPA41</a>	20	W B G	100

## SOCKET REDUCER



Size mm	Code	A	B	Colour	Qty
40-32	<a href="#">WPR43</a>	45	36	W B G	10

## MULTI-FIT COMPONENTS



Size mm	Code	A	B	C	Required hole size	Colour	Qty
32	<a href="#">WUM33</a>	86	56	24	42	G	10
40	<a href="#">WUM43</a>	86	58	24	50	G	20

Fit BS EN 1451, BS EN 1455 or BS EN 1566 pipe. Straight tank connector

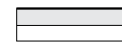
**Multikwik**

TRAPS, COMPRESSION WASTE  
& SANITARY SYSTEMS

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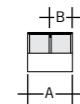
# Condense and Overflow system – PVCu

## PIPE



Size mm	Code	Length	Colour	Qty
21.5	<b>OP213</b>	3m	W	30
21.5	<b>OP21</b>	4m	W	30

## STRAIGHT COUPLING



Size mm	Code	A	B	Colour	Qty
21.5	<b>OSC21</b>	28	13	W	10

## PIPE CLIP



Size mm	Code	A	B	Colour	Qty
21.5	<b>OC21</b>	44	14	W	10

## BENDS

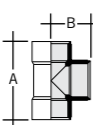


Size mm	Code	Angle	A	Colour	Qty
21.5	<b>OB90</b>	90°	25	W	10



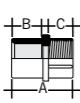
Size mm	Code	Angle	A	Colour	Qty
21.5	<b>OB45</b>	45°	13	W	10

## TEE

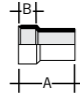


Size mm	Code	Angle	A	B	C	Colour	Qty
21.5	<b>OT90</b>	90°	50	25	21.5	W	10

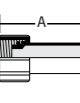
## ADAPTORS



Female iron							
Size mm	Code	A	B	C	Colour	Qty	
21.5	<b>OFA21</b>	47	23	19	W	70	



Straight, to 22mm							
Size mm	Code	A	B	Colour	Qty		
21.5	<b>OCA21</b>	39	13	W	150		

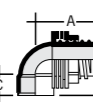


Cap and lining							
Size mm	Code	A	Colour	Qty			
21.5	<b>OCL21</b>	46	W	100			

## TANK CONNECTORS



Straight							
Size mm	Code	A	Colour	Qty			
21.5	<b>OTC21</b>	50	W	10			



Bent							
Size mm	Code	Angle	A	B	C	Colour	Qty
21.5	<b>OBC90</b>	90°	48	25	13	W	10

Including polyethylene washers and quick fix Acme threads

## Marley co-ex soil

**110mm soil pipe with at least 30% recycled content\***

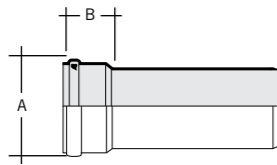
Marley 110mm soil pipe now combines the environmental benefits of using recycled material with the quality and aesthetic advantages of co-extrusion technology.

- ♻️ BS EN 1329 certified
- Higher gloss levels
- Improved weathering performance
- Available in grey and black
- Same list price as standard white pipe
- Colour matched to all standard 110mm Marley soil fittings



# Push-fit soil – PVCu

## PIPE



Size mm	Code	Length	A	B	Colour	Qty
82	<a href="#">SP303</a>	3m	100	76	B G	156
82	<a href="#">SP304</a>	4m	100	76	G	156

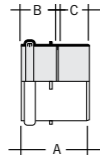
### 110MM CO-EX SOIL

110	<a href="#">SP4025</a>	2.5m	128	70	B G	100
110	<a href="#">SP403</a>	3m	128	70	W B G	2
110	<a href="#">SP404</a>	4m	128	70	G	100

160	<a href="#">SP603</a>	3m	182	107	G	46
160	<a href="#">SP604</a>	4m	182	107	G	46

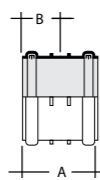
Push-fit socket

## STRAIGHT COUPLINGS



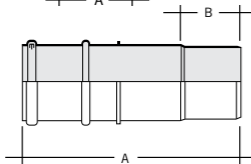
### Loose pipe socket

Size mm	Code	A	B	C	Colour	Qty
82	<a href="#">SE300</a>	103	50	48	B G	30
110	<a href="#">SE400</a>	109	61	48	W B G	8
160	<a href="#">SE600</a>	190	107	77	G	4



### Double ring seal slip coupling

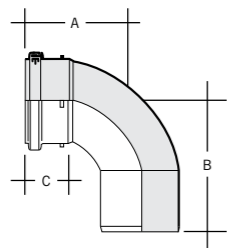
Size mm	Code	A	B	Colour	Qty
82	<a href="#">SE305</a>	104	49	B G	30
110	<a href="#">SE405</a>	128	64	B G	8
160	<a href="#">SE605</a>	170	83	G	4



### Triple socket

Size mm	Code	A	B	Colour	Qty
110	<a href="#">SE402</a>	311	82	G	4

## SHORT RADIUS BENDS



Size mm	Code	Angle	A	B	C	Colour	Qty
82	<a href="#">SB31</a>	87½°	138	115	49	B G	20
110	<a href="#">SB41</a>	87½°	158	157	70	W B G	4
160	<a href="#">SFB61</a>	87½°	242	232	88	G	1

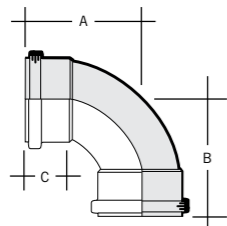
Push-fit socket/spigot

Size mm	Code	Angle	A	B	C	Colour	Qty
82	<a href="#">SB35</a>	45°	76	73	49	B G	20
110	<a href="#">SB45</a>	45°	84	89	62	W B G	4
160	<a href="#">SFB65</a>	45°	120	118	85	G	2

Push-fit socket/spigot

Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">SB410</a>	10°	98	75	60	W B G	4
110	<a href="#">SB420</a>	20°	104	81	60	W B G	4
110	<a href="#">SB430</a>	30°	76	90	60	W B G	4

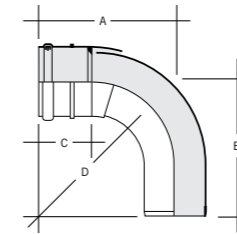
Push-fit socket/spigot



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">SB411</a>	88½°	135	145	60	B G	4

Double push-fit socket

## ADJUSTABLE BENDS



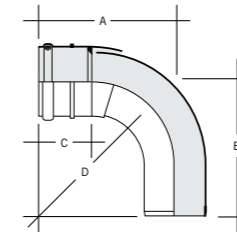
Size mm	Code	Angle	A	B	C	Colour	Qty
82	<a href="#">SB37</a>	11-87½°	195	187	49	B G	10

Push-fit socket/spigot



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">SB46</a>	5-14°	125	135	82	G	4

Push-fit socket/spigot



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<a href="#">SB47</a>	21-90°	189	187	90	127	B G	4

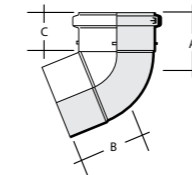
Push-fit socket/spigot



Size mm	Code	Angle	A	B	C	D	Colour	Qty
160	<a href="#">SB67</a>	31-90°	285	275	96	184	G	2

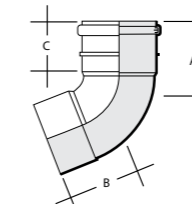
Push-fit socket/spigot

## OFFSET BENDS



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">SNE405</a>	67½°	94	91	60	W B G	4

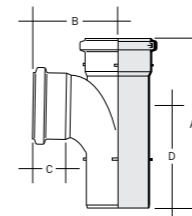
Push-fit solvent socket



Size mm	Code	Angle	A	B	C	Colour	Qty
82	<a href="#">SNE300</a>	67½°	98	86	57	B G	30
160	<a href="#">SNE600</a>	67½°	178	182	88	G	140

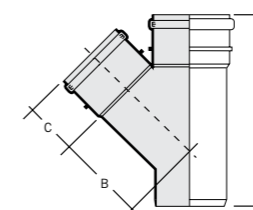
Push-fit solvent socket

## EQUAL BRANCHES



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<a href="#">SY401</a>	87½°	299	150	60	175	W B G	4
160	<a href="#">SY601</a>	87½°	438	245	96	260	G	2

Push-fit sockets/spigot



Size mm	Code	Angle	A	B	C	Colour	Qty
82	<a href="#">SY36</a>	45°	229	130	55	G	10
110	<a href="#">SY460</a>	45°	285	198	62	B G	4
160	<a href="#">SY63</a>	45°	400	200	90	G	2

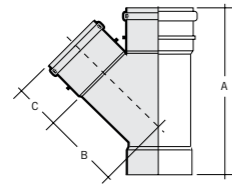
Push-fit sockets/spigot

Push-fit sockets/spigot



# Push-fit soil – PVCu

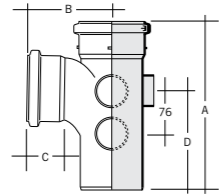
## EQUAL BRANCHES



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SY466</b>	45°	282	198	62	B G	4

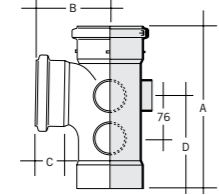
Push-fit sockets/solvent socket

## FIVE BOSS BRANCHES



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SY405</b>	87½°	287	143	60	175	W B G	4

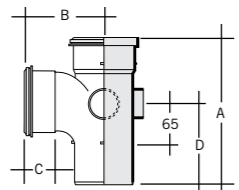
Push-fit sockets/spigot



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SY5415</b>	87½°	280	143	60	168	B G	4

Push-fit sockets/spigot

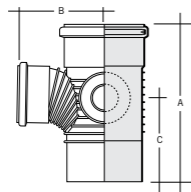
## THREE BOSS BRANCH



Size mm	Code	Angle	A	B	C	D	Colour	Qty
82	<b>SY33F</b>	87½°	212	122	52	121	B G	10

Push-fit sockets/spigot

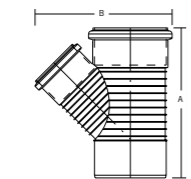
## UNEQUAL BRANCHES



Size mm	Code	Angle	A	B	C	Colour	Qty
160x110	<b>SY64</b>	87½°	337	175	175	G	2

Push-fit sockets/spigot. 2 boss/access upstands

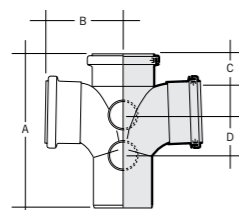
## UNEQUAL BRANCHES



Size mm	Code	Angle	A	B	Colour	Qty
160x110	<b>SY66</b>	45°	335	306	G	2

Push-fit sockets/spigot

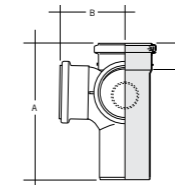
## DOUBLE BRANCH



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SY404</b>	87½°	288	141	54	76	G	4

Push-fit sockets/spigot. 4 boss branch

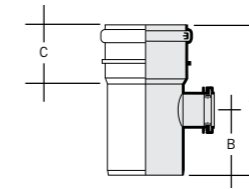
## CORNER BRANCH



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SY411°</b>	87½°	287	143	60	175	G	4

Push-fit sockets/spigot

## BOSS PIPES



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SW41</b>	87½°	204	86	82	W B G	4

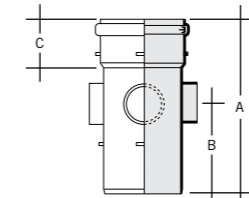
Push-fit socket/spigot. 1x40mm boss connection



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SW415</b>	87½°	204	86	82	B G	4

Push-fit socket/spigot. 1x32mm boss connection

## BOSS PIPES



Size mm	Code	Angle	A	B	C	Colour	Qty
82	<b>SW30</b>	90°	202	101	49	B G	15

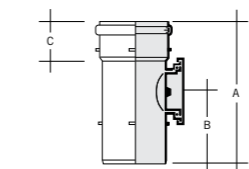
Push-fit socket/spigot. 3 boss upstands, 1 drilled



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SW40</b>	90°	244	123	70	W B G	4

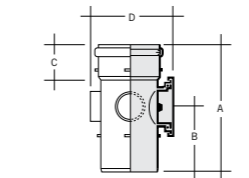
Push-fit socket/spigot. 4 boss upstands

## ACCESS PIPES



Size mm	Code	A	B	C	Colour	Qty
82	<b>SF31</b>	205	101	52	B G	15

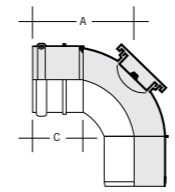
Push-fit socket/spigot



Size mm	Code	A	B	C	D	Colour	Qty
110	<b>SF41</b>	244	123	70	152	B G	4

Push-fit socket/spigot. 3 boss upstands

## REAR ACCESS BENDS



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SB42</b>	87½°	138	146	55	B G	4

Push-fit socket/spigot



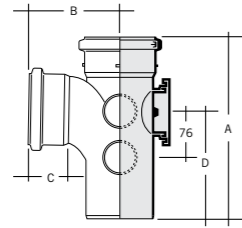
Size mm	Code	A	B	C	Colour	Qty
82	<b>SB38</b>	124	127	57	B G	1

Push-fit socket/spigot

# Push-fit soil – PVCu

# Solvent soil – PVCu

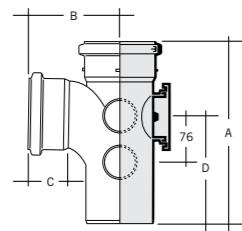
## REAR ACCESS BRANCHES



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SY402</b>	87½°	287	143	60	175	B G	4

Push-fit socket/spigot  
4 boss upstands

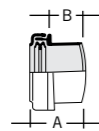
## REAR ACCESS BRANCHES



Size mm	Code	Angle	A	B	C	D	Colour	Qty
82	<b>SY34F</b>	87½°	212	121	52	101	B G	6

Push-fit socket/spigot

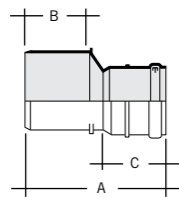
## BOSS CONNECTOR



Size mm	Code	Angle	A	B	Colour	Qty
32	<b>SA411</b>	87½°	43	21	W B G	50
40	<b>SA421</b>	87½°	43	21	W B G	40
50	<b>SA420</b>	87½°	66	45	B G	40

Solvent weld with push-fit seal

## LEVEL INVERT REDUCERS



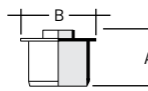
Size mm	Code	A	B	C	Colour	Qty
110x82	<b>SRM304</b>	192	78	82	B G	20

Spigot/socket

Size mm	Code	A	B	C	Colour	Qty
160x110	<b>SRM604</b>	219	90	82	G	4

Push-fit spigot/socket

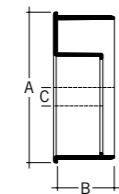
## CONCENTRIC REDUCER



Size mm	Code	A	B	Colour	Qty
110-50	<b>SE41</b>	105	135	B G	18

Spigot to boss upstand

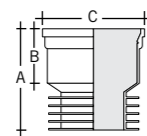
## ECCENTRIC REDUCER



Size mm	Code	A	B	C	Colour	Qty
160-110	<b>SRS604</b>	168	68	20	G	6

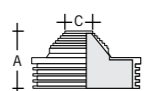
Spigot/socket

## ADAPTOR



Size mm	Code	A	B	C	Colour	Qty
110	<b>SA42</b>	130	65	130	B	40

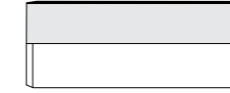
Soil to drain adaptor



Size mm	Code	A	B	C	Colour	Qty
110	<b>SA110</b>	58	25	34	B	10

Waste to drain adaptor

## PIPE

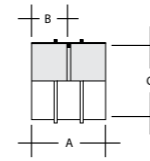
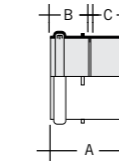


## 110MM CO-EX SOIL

Size mm	Code	Length	Colour	Qty
110	<b>SL403</b>	3m	W B G	100
110	<b>SL404</b>	4m	G	100
160	<b>SL603</b>	3m	G	46
160	<b>SL604</b>	4m	G	46

Double spigot

## STRAIGHT COUPLINGS



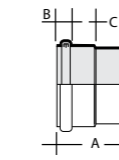
## Loose pipe socket

Size mm	Code	A	B	C	Colour	Qty
82	<b>SE300</b>	103	50	48	B G	30
110	<b>SE400</b>	109	61	48	W B G	8
160	<b>SE600</b>	190	107	77	G	4

## Double solvent socket

Size mm	Code	A	B	C	Colour	Qty
82	<b>SES301</b>	93	44	82	G	50
110	<b>SES401</b>	102	50	124	B G	8
160	<b>SES601</b>	174	64	128	G	4

## EXPANSION COUPLING

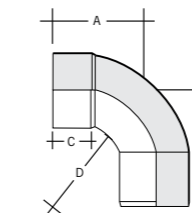


## Solvent socket ring seal adaptor

Size mm	Code	A	B	C	Colour	Qty
110	<b>SE409</b>	105	20	52	B G	8

To accommodate thermal movement in both vertical and horizontal solvent pipework

## SHORT RADIUS BENDS



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SBS41</b>	87½°	162	168	50	G	4

Solvent socket/spigot

Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SBS42</b>	87½°	149	149	47	119	B G	4
160	<b>SBS62</b>	87½°	186	186	66		G	2

Double solvent socket

Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SBS45</b>	45°	76	76	52	B G	4
160	<b>SBS65</b>	45°	98	98	66	G	2

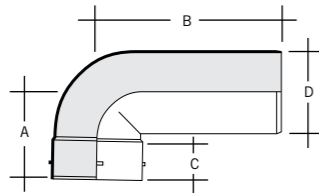
Double solvent socket

Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SBS415</b>	45°	76	89	52	B G	4
160	<b>SBS615</b>	67½°	168	175	76	G	2

Solvent socket/spigot

# Solvent soil – PVCu

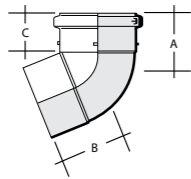
## LONG RADIUS BEND



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SBS40</b>	87½°	114	240	48	110	W B G	4

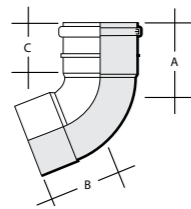
Solvent socket/spigot

## OFFSET BENDS



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SNE405</b>	67½°	76	61	60	W B G	4

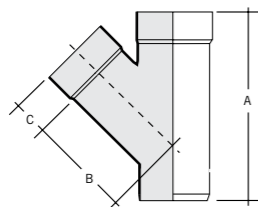
Push-fit / solvent socket



Size mm	Code	Angle	A	B	C	Colour	Qty
82	<b>SNE300</b>	67½°	88	48	49	B G	30
160	<b>SNE600</b>	67½°	178	182	96	G	140

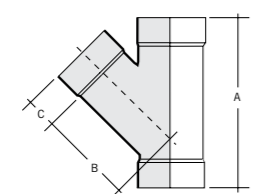
Push-fit / solvent socket

## EQUAL BRANCHES



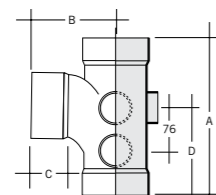
Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SYS460</b>	45°	277	135	55	B G	4

Solvent sockets/spigot



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SYS466</b>	45°	274	135	55	B G	4
160	<b>SYS666</b>	45°	362	194	66	G	4

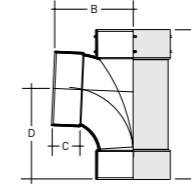
Triple solvent socket



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SYS405</b>	87½°	272	135	55	168	B G	4

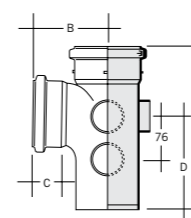
Triple solvent socket. 5 Boss upstands

## EQUAL BRANCHES



Size mm	Code	Angle	A	B	C	D	Colour	Qty
160	<b>SYS601</b>	87½°	270	180	66	205	G	2

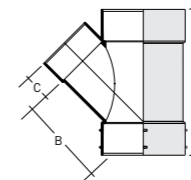
Triple solvent socket



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SYS415</b>	87½°	279	135	55	175	B G	4

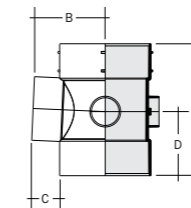
Double solvent socket/spigot. 5 Boss upstands

## UNEQUAL BRANCHES



Size mm	Code	Angle	A	B	C	Colour	Qty
160	<b>SYS644</b>	45°	286	169	55	G	4

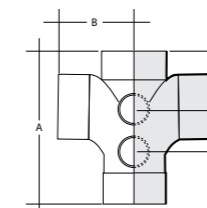
Triple solvent socket



Size mm	Code	Angle	A	B	C	D	Colour	Qty
160	<b>SYS664</b>	87½°	234	132	52	118	G	4

Solvent sockets

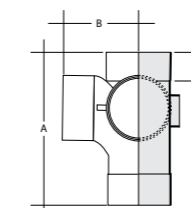
## DOUBLE BRANCH



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SYS404</b>	87½°	274	133	45	76	G	4

Solvent sockets, 4 boss upstands

## CORNER BRANCH

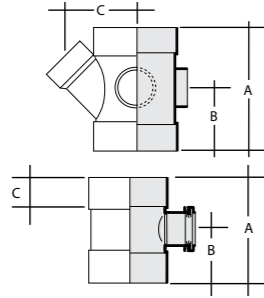
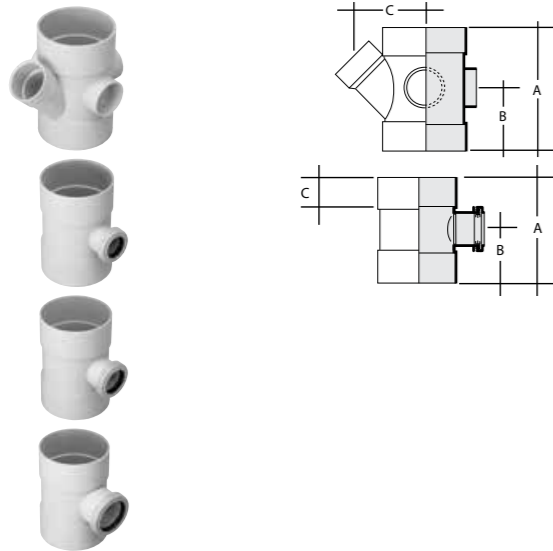


Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SYS411°</b>	87½°	272	135	55	G	1

Solvent sockets. 1 boss upstand

# Solvent soil – PVCu

## BOSS PIPES



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SWS4135</b>	45°	186	93	145	G	4

Solvent sockets. 3 x 50mm boss upstands

Size mm	Code	Angle	A	B	C	Colour	Qty
110x32	<b>SWS415</b>	87½°	170	85	52	W B G	4

Solvent sockets. 1 x 32mm push-fit boss connection

Size mm	Code	Angle	A	B	C	Colour	Qty
110x40	<b>SWS41</b>	87½°	170	85	52	W B G	4

Solvent sockets. 1 x 40mm boss connection

Size mm	Code	Angle	A	B	C	Colour	Qty
110x50	<b>SWS42</b>	87½°	170	85	52	B G	4

Solvent sockets. 1 x 50mm drilled boss connection

## STRAP-ON-BOSS



Size mm	Code	Angle	A	B	Required hole size	Colour	Qty
32x110	<b>SWS4150</b>	90°	70	55	50	B G	40
40x110	<b>SWS410</b>	90°	70	62	50	B G	40
50x110	<b>SWS420</b>	90°	86	75	63	B G	30

Push-fit boss connection

## CONDENSATE STRAP-ON-BOSS



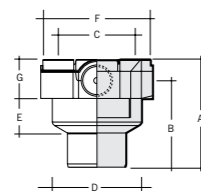
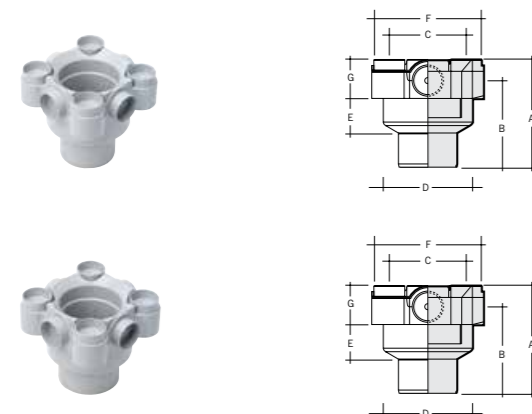
Size mm	Code	Angle	A	B	Required hole size	Colour	Qty
21.5x110	<b>SWS4C</b>	90°	70	21.5	57	G	50

## PATCH BOSS



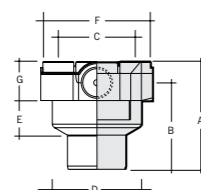
Size mm	Code	A	B	Colour	Qty
32x82	<b>SWS332</b>	95	18	G	20
40x82	<b>SWS340</b>	95	23	G	20
50x82	<b>SWS350</b>	95	27	G	20

## 8-WAY COLLAR BOSS



Size mm	Code	A	B	C	D	E	F	G	Colour	Qty
110	<b>SCB41</b>	195	157	140	195	61	204	70	G	1

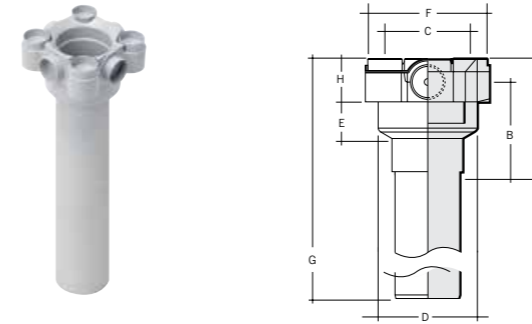
Solvent socket/spigot



Size mm	Code	A	B	C	D	E	F	G	Colour	Qty
110	<b>SCBS41</b>	184	146	140	164	61	204	70	G	1

Solvent socket

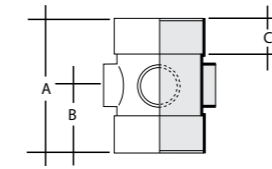
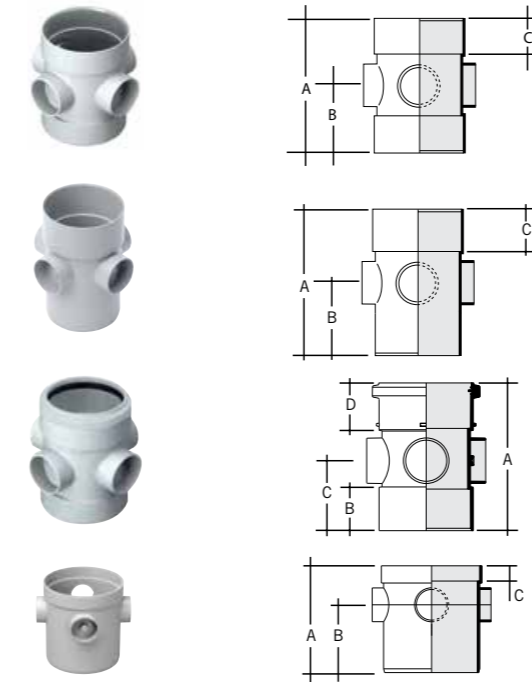
## 8-WAY COLLAR BOSS



Size mm	Code	A	B	C	D	E	F	G	H	Colour	Qty
110	<b>SCBL41</b>	184	146	140	164	61	204	532	70	G	1

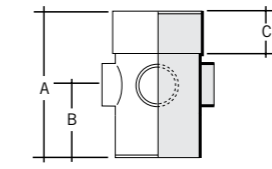
Solvent socket/spigot with 350mm spigot tail

## BOSS PIPES



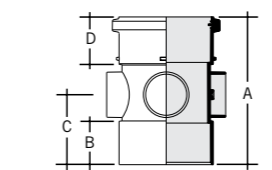
Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SWS40</b>	90°	179	92	55	B G	4
160	<b>SWS60</b>	90°	200	100	66	G	4

Double solvent socket. 4 boss upstands, 1 drilled



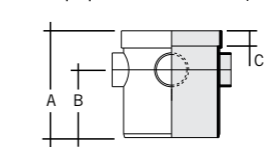
Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SWS405</b>	90°	179	92	54	B G	4	

Solvent socket/spigot. 4 boss upstands, 1 drilled



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<b>SWS406</b>	90°	184	55	87	60	G	4

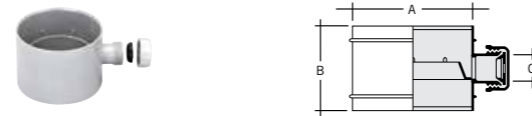
Push-fit/Solvent socket. 4 boss upstands



Size mm	Code	Angle	A	B	C	Colour	Qty
160	<b>SW60</b>	90°	335	110	96	G	4

Solvent socket/spigot  
4 boss upstands (1 pre-drilled)

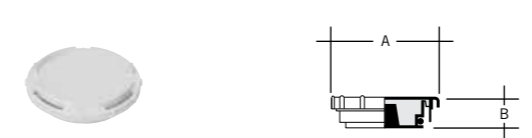
## CONDENSATION TRAP



Size mm	Code	A	B	C	Colour	Qty
110	<b>SCT4</b>	115	82	22	G	6

With 21.5/22mm overflow connection  
For ventilation pipework only

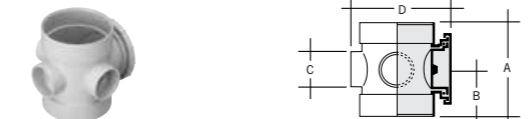
## ACCESS CAPS



Size mm	Code	A	B	Colour	Qty
82	<b>SE30</b>	114	35	B G	30
110	<b>SE40</b>	150	37	B G	30
160	<b>SE62</b>	195	40	G	15

With pressure plug

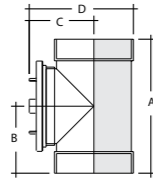
## ACCESS PIPES



Size mm	Code	A	B	C	D	Colour	Qty
110	<b>SFS41</b>	150	75	56	154	W B G	4

Double solvent sockets. 3 boss upstands

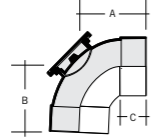
## ACCESS PIPES



Size mm	Code	A	B	C	D	Colour	Qty
160	<b>SF611</b>	287	144	138	223	G	2

Double solvent sockets

## REAR ACCESS BEND



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<b>SBS420</b>	87½°	131	128	54	B G	4

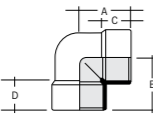
Double solvent socket

## BOSS CONNECTORS



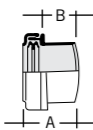
Size mm	Code	A	B	Colour	Qty
32	<b>SA415</b>	35	20	G	50
40	<b>SA425</b>	30	25	B G	50
50	<b>SA435</b>	58	28	G	50

Solvent weld with solvent weld joint



Size mm	Code	Angle	A	B	C	D	Colour	Qty
40	<b>KBK25</b>	90°	48	48	23	23	W B	20
50	<b>KBK35</b>	90°	59	50	20	28	W	10

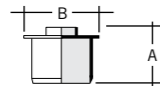
Knuckle bend/boss adaptor, which can solvent weld over a boss upstand



Size mm	Code	A	B	Colour	Qty
32	<b>SA411</b>	43	21	W B G	50
40	<b>SA421</b>	43	21	W B G	40
50	<b>SA420</b>	66	45	B G	40

Solvent weld with push-fit seal

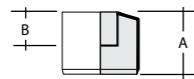
## CONCENTRIC REDUCERS



Size mm	Code	A	B	C	Colour	Qty
110-50	<b>SE41</b>	105	135		B G	18

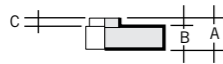
Spigot to boss upstand

## ECCENTRIC REDUCERS



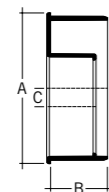
Size mm	Code	A	B	Colour	Qty
82-50	<b>SRM30</b>	66	35	B G	90

Spigot/Socket



Size mm	Code	A	B	C	Colour	Qty
110-50	<b>SRM402</b>	48	25	19	B G	10

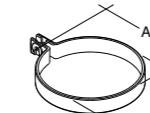
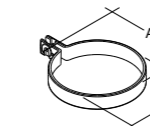
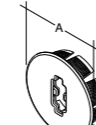
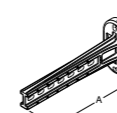
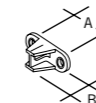
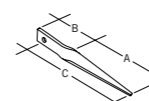
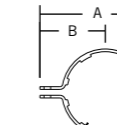
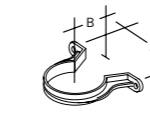
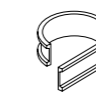
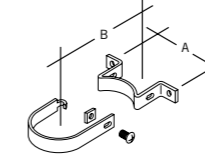
Solvent socket to boss upstand



Size mm	Code	A	B	C	Colour	Qty
110-82	<b>SRS304</b>	82	110	52	G	6
160-110	<b>SRS604</b>	168	68	20	G	6

Spigot/Socket

## CLIPS



## Socket clip

Size mm	Code	A	B	Colour	Qty
110	<b>SC41</b>	152	101	B G	50
160	<b>SC61</b>	240	121	G	50

PVC coated mild steel, includes 6x20mm nut and bolt

## Barrel clip collar

Size mm	Code	Colour	Qty
1000	<b>SC621</b>	G	25

Converts socket clip to pipe clip (3x110mm or 2x160mm)

## Pipe clip

Size mm	Code	A	B	Colour	Qty
82	<b>SC35</b>	125	93	B G	20
110	<b>SC45</b>	150	101	W B G	50

Closed pipe clip

## Pipe clip

Size mm	Code	A	B	Colour	Qty
82	<b>SC35S</b>	117	70	B G	20

For use with drive-in spike or backplate

## Extension backplate

Code	A	B	Colour	Qty
<b>RT200</b>	104	45	W B G BR	50

PVCu

For use with RC251/2, RCE2 and RC32 pipe clips

## Drive-in spike

Code	A	B	C	Colour	Qty
<b>RSS1°</b>	115	58	154	G	50

Galvanised mild steel

## Backplate

Code	A	B	Colour	Qty
<b>RCB300</b>	48	31	W B G BR	100

For use with SC35S

## Extension Bracket

Code	A	B	Colour	Qty
<b>RT250</b>	243	114	B G	20

## Cover plate

Code	A	B	Colour	Qty
<b>RT2501</b>	111	35	B G	1

For use with RT250

## Pipe clip

Code	A	B	Colour	Qty
<b>RPC1</b>	137	111	B G	20

For use with RT250

## Socket clip

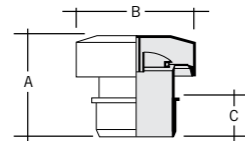
Code	A	B	Colour	Qty
<b>RSC1</b>	141	119	B G	1

For use with RT250

# Accessories

# WC connectors

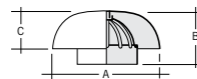
## DURGO AIR ADMITTANCE VALVES



Size mm	Code	A	B	C	Colour	Qty
50	<a href="#">SVD2*</a>	98	82	28	W	32
82	<a href="#">SVD3*</a>	108	118	40	G	18
110	<a href="#">SVD4</a>	124	138	50	G	18

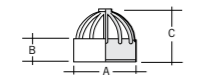
Durgo valve including polystyrene insulating hood.  
 \*Can be fitted below flood level. It is recommended this is fitted in a push-fit socket.  
 BBA certified for use up to 10 storeys.

## VENT TERMINALS



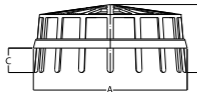
### Roof cowl/vent terminal

Size mm	Code	A	B	C	Colour	Qty
110	<a href="#">SVC1</a>	200	98	70	W B G	10



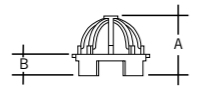
### Vent terminal

Size mm	Code	A	B	C	Colour	Qty
82	<a href="#">SV321</a>	90	30	75	B G	30
110	<a href="#">SV42</a>	117	34	95	W B G	60



### Vent terminal

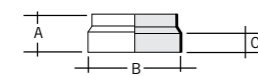
Size mm	Code	A	B	C	Colour	Qty
160	<a href="#">SV62°</a>	160	71	25	G	20



### Vent terminal

Size mm	Code	A	B	Colour	Qty
50	<a href="#">RV225</a>	55	18	W B G	30

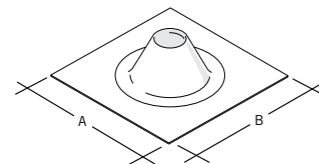
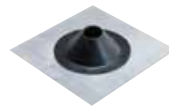
## WEATHERING COLLAR



Size mm	Code	A	B	C	Colour	Qty
82	<a href="#">SV31*</a>	51	94	25	B	100
110	<a href="#">SV43</a>	57	130	25	W B G	35

PVCu for solvent joint to pipe \*Available in black rubber only.

## WEATHERING SLATES



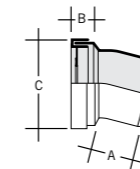
Size mm	Code	A	B	Colour	Qty
400	<a href="#">SAS40</a>	400	400	G	5

Flat. Manufactured from aluminium and rubber

Size mm	Code	A	B	Colour	Qty
450	<a href="#">SAS45</a>	450	450	G	5
610	<a href="#">SAS61</a>	610	610	G	5

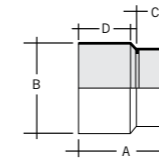
Inclined. Manufactured from aluminium and rubber

## STRAIGHT CONNECTORS



Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">SG40</a>	14°	63	50	134	W	4

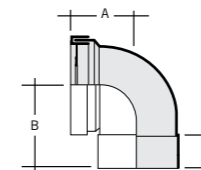
Spigot



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<a href="#">SGS41W*</a>	14°	139	134	53	80	W	20

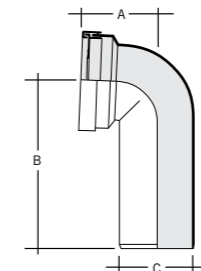
Solvent socket. Pan socket to be trimmed to suit WC spigot length

## BENT CONNECTORS



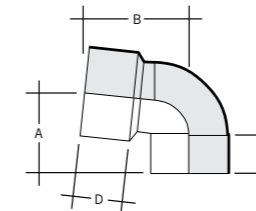
Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">ST40</a>	90°	106	125	51	W	4

Solvent socket



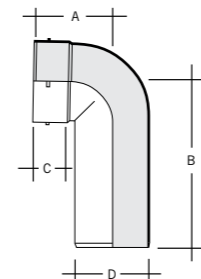
Size mm	Code	Angle	A	B	C	Colour	Qty
110	<a href="#">ST41W</a>	90°	106	240	210	W	4

Long spigot



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<a href="#">STS41W*</a>	85°	104	156	53	80	W	4

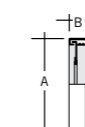
Solvent socket. Pan socket to be trimmed to suit WC spigot length



Size mm	Code	Angle	A	B	C	D	Colour	Qty
110	<a href="#">SBS40W</a>	90°	114	240	48	110	W	4

Long spigot/ solvent socket

## WC SEAL AND CAP



### 83 - 114mm outlet

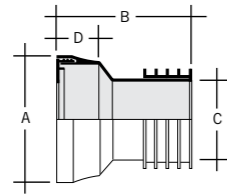
Size mm	Code	A	B	Colour	Qty
	<a href="#">SA323W</a>	141	24		70

For use with SGS41 and STS41

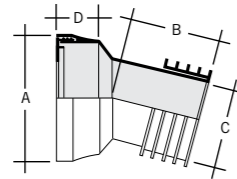
# Universal push-fit WC connectors

# WC manifold system

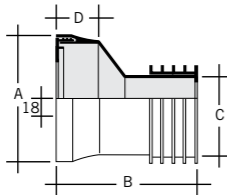
## STRAIGHT CONNECTORS



Size mm	Code	Angle	A	B	C	D	Colour	Qty
100	<b>SWC11</b>		132	110	81	46	W	25

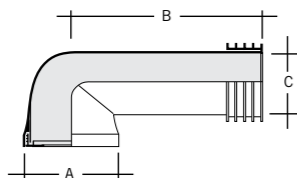


Size mm	Code	Angle	A	B	C	D	Colour	Qty
100	<b>SWCB14</b>	14°	132	61	81	46	W	20



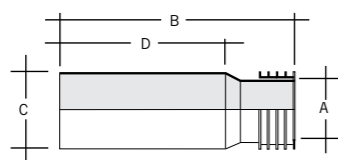
Size mm	Code	Angle	A	B	C	D	Colour	Qty
100	<b>SWC22</b>	22°	132	115	81	46	W	25

## LONG BENT CONNECTOR



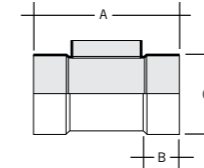
Size mm	Code	Angle	A	B	C	Colour	Qty
100	<b>SWCB90</b>	90°	132	235	81	W	10

## EXTENSION PIECE



Size mm	Code	A	B	C	D	Colour	Qty
100	<b>SWCE33</b>	81	300	116	226	W	12

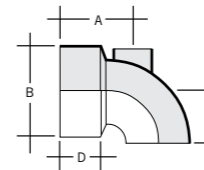
## BRANCH



Size mm	Code	A	B	C	Colour	Qty
110x90	<b>SM41W</b>	214	50	116	W	10

Solvent sockets

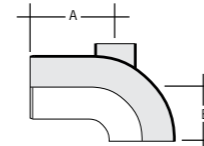
## ADJUSTABLE WC BEND



Size mm	Code	Angle	A	B	C	D	Colour	Qty
90	<b>SM42W*</b>	50-90°	108	134	75	60	W	15

50mm vent boss upstand  
Pan socket to be trimmed to suit WC spigot length

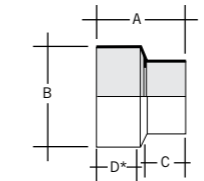
## ADJUSTABLE SPIGOT BEND



Size mm	Code	Angle	A	B	Colour	Qty
90	<b>SM43W</b>	50-90°	119	75	W	15

50mm vent boss upstand  
Pan socket to be trimmed to suit WC spigot length

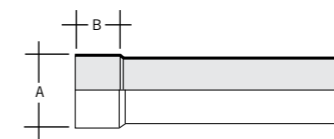
## WC CONNECTOR



Size mm	Code	A	B	C	D	Colour	Qty
90	<b>SM44W</b>	117	134	46	80	W	30

Pan socket to be trimmed to suit WC spigot length

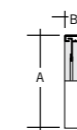
## EXTENSION PIPE



Size mm	Code	A	B	Colour	Qty
90	<b>SM45W</b>	96	46	W	50

300mm  
For use with SM43 only

## WC SEAL AND CAP

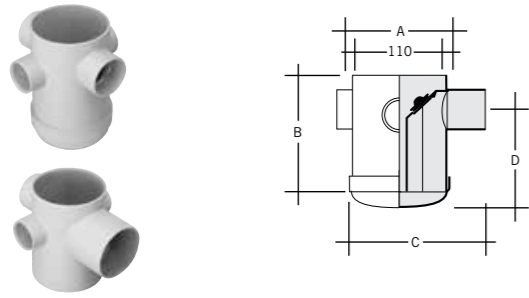


83-114mm outlet		A	B	Colour	Qty
Size mm	Code				
90	<b>SA323W</b>	141	24	W	70

For use with SM42 and SM44

## PVCu floor outlets

### TRAPPED FLOOR GULLIES



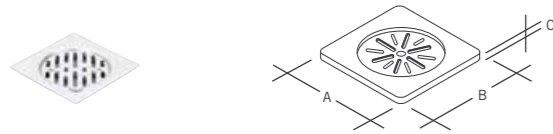
Size mm	Code	A	B	C	D	Colour	Qty
50	<b>SFG42AS</b>	117	164	145	116	G	8

Solvent outlet. 90mm adjustable water seal

Size mm	Code	A	B	C	D	Colour	Qty
82	<b>SFG43AS</b>	117	164	175	100	G	8

Solvent outlet. 75mm adjustable water seal

### STAINLESS STEEL TILE GRATE AND COVER

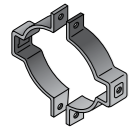


Code	A	B	C	Colour	Qty
150x150 <b>SGG4</b>	150	150	7	NU	40

Grade 304 stainless steel

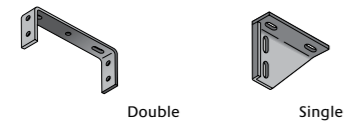
## Pipe support systems

### TWO PIECE PIPE BRACKET



Size mm	Code	Colour	Qty
110	<b>JB42*</b>	NU	50
160	<b>JB62*</b>	NU	50

### BASE PLATE



Size mm	Code	Support	Colour	Qty
110	<b>JBP42*</b>	Double support	NU	1
160	<b>JBP62*</b>	Double support	NU	50
	<b>JDP1*</b>	Single support	NU	50

### CHANNEL STRIP



Size mm	Code	Strip	Colour	Qty
2000	<b>JCS2*</b>	Strip	NU	50
	<b>JCA1*</b>	Angle	NU	10

### BARREL CLIP COLLAR



Code	Colour	Qty
<b>SC621*</b>	NU	25

1m PVC strip when cut to length. Converts pipe bracket to pipe size (3x110mm or 2x160mm)

### NUTS AND BOLTS



Size mm	Code	Colour	Qty
20x6	<b>RNB11*</b>	NU	1

## Ancillary items

### SOLVENT CEMENT



Size	Code	Tub	Qty
250ml	<b>KS10</b>	Tub	20
500ml	<b>KS20</b>	Tin	20

To BS EN 14680

### SILICONE LUBRICANT



Size	Code	Qty
50g	<b>SZ50</b>	10



Size	Code	Qty
100g	<b>SZ100</b>	50



Size	Code	Qty
400ml	<b>SZ400</b>	12



Size	Code	Qty
500g	<b>SZ500</b>	24

Water Research Centre Approved

### SPARE RING SEALS



Size mm	Code	Qty
82	<b>SR82T</b>	5
110	<b>SR110T</b>	5
160	<b>SR160T</b>	5

To BS EN 681/1



## Sanitary pipework design

All sanitary pipework systems should be designed to satisfy the following regulations and standards where applicable.

- The Building Regulations 2010: Approved Document H, Section 1.
- The Building Standards Technical Handbook (Scotland) 2010: Part M.
- The Building Regulations (Northern Ireland) 2000, Technical Handbook N.
- BS EN 12056: 2000, Parts 1 to 5.

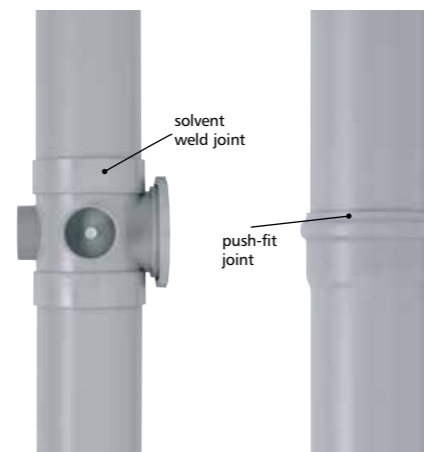
Regular consultation is essential between Architects and Plumbing Engineers throughout the building design stage as the careful arrangement of kitchen and bathroom appliances will simplify the final sanitary pipework layout. This will help to ensure that an efficient sanitary pipework system is installed at minimum cost.

The design information provided in this catalogue is endorsed in the above publications and while every effort has been made to ensure accuracy, no responsibility can be accepted for errors or omissions. For detailed guidance please consult the relevant documents referred to above.

## Methods of jointing

82, 110 and 160mm PVCu pipes and fittings are available in both solvent and push-fit jointing methods. Solvent soil is widely used on smaller diameter waste and overflow pipework, although expansion and copper adaptor couplings include a push-fit joint to allow for thermal movement.

As polypropylene cannot be solvent welded, the push-fit method of jointing is used throughout the system.



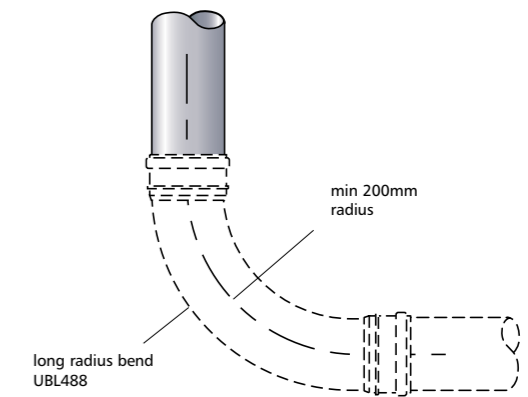
## Thermal movement

The coefficient of linear expansion for PVCu is 0.06mm/m/°C. As a result a 3m length of pipe will increase in length by approximately 3.6mm when subjected to a 20°C temperature variation. Therefore, it is important to ensure that any movement is controlled and push-fit joints are installed to accommodate any expansion that may occur due to increases in ambient temperature or hot water discharges.

## Bends at the base of stacks

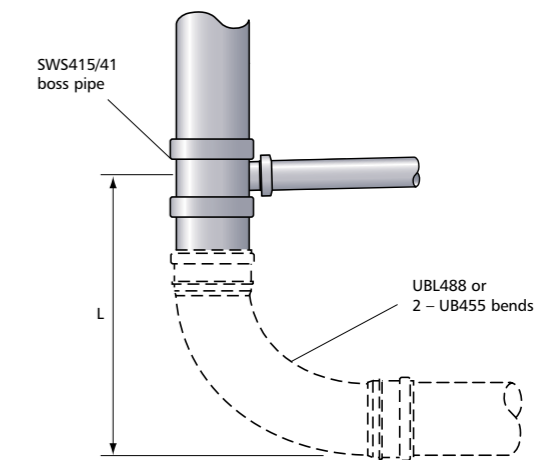
Bends at the base of vertical stacks should be of long radius and have a minimum centre line radius of 200mm on a 110mm nominal size stack. Two 45° radius bends may also be used as an alternative to provide the change of direction and connection to the building drain. The same design principle should also be adopted where offsets occur in stacks of one or more storey height.

Where pipework is suspended in a ceiling void or car park, it is recommended that two 45° solvent weld bends are used with a short piece of pipe between to ensure the radius exceeds that required.



## Branches at the base of stacks

For single dwellings up to three storeys high, the distance between the centre line of the lowest branch connection and the invert of the drain should be at least 450mm. For multi-storey systems up to five storeys high, the minimum distance should be 740mm and for systems higher than five floors no connections are permissible at ground floor level. Where this occurs a separate stub stack should be provided to serve the ground floor or individual appliances should have their own separate connection to the building drain.



L = 450mm up to three storeys high  
L = 740mm up to five storeys high  
L = one storey height, over five storeys

## Sizing of soil stacks

It is recommended that the guidance given within BS EN 12056, part 2 be adopted when sizing soil stacks. Marley Technical Services Department offer design and installation advice, including the sizing of soil stacks, for customers who use or specify Marley Plumbing & Drainage products.

## Soil stack capacity

The capacity of a soil stack can be increased by the installation of a secondary ventilated stack. The following information is taken from tables 11 & 12 of BS EN 12056-2: 2000 which illustrates this increase.

### Primary ventilated stack

Stack size (mm)	Maximum capacity (l/s) Swept entries
82	2.6
110	5.2
160	12.4

### Secondary ventilated stack

Stack size (mm)	Secondary vent (mm)	Maximum capacity (l/s) Swept entries
82	50	3.4
110	50	7.3
160	80	18.3



Secondary ventilated stack

## Material and manufacture

Marley Plumbing & Drainage pipes and fittings for sanitary pipework systems are manufactured from different plastics materials including PVCu, PVC-c, ABS and PP.

The table right details the important dimensions and weights of each of the systems together with the relevant British and European Standards we manufacture to. All pipes are manufactured using a continuous extrusion process and fittings are produced by high-pressure injection moulding.

## Chemical and temperature resistance

Most plastics used for sanitary pipework are highly resistant to those chemicals normally found in domestic waste water and sewerage systems. For applications where chemical discharges are likely to occur, HDPE soil range may be more suitable.

Generally the maximum working temperature of Marley PVCu and PVC-c when subjected to continuous flow is 70°C and 75°C respectively. Higher intermittent discharges of up to 95°C may be accommodated by PVCu provided the period of discharge does not exceed one minute duration.

Alternatively, reference can be made to ISO publications TR10358 & TR7620 which provide comprehensive information on chemical and temperature resistance of plastics and rubber materials.

## Pipe dimensions and weights

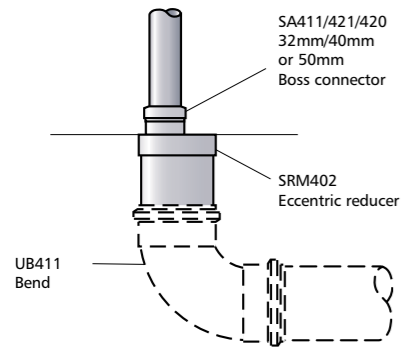
Pipe Material Standard	BS Nominal Size (mm/inch)	Mean Outside Diameter (mm)		Wall Thickness (mm) Min	Weight kg/metre
		Min	Max		
<b>Soil PVCu</b>					
Pipe: BS 4514	82	82.4	82.0	3.0	1.30
Pipe: BS EN 1329	110	110.0	110.3	3.20	1.70
	160	160.0	160.4	3.20	2.50
<b>Waste PVC-c</b>					
Fittings: BS 5255	36/1¼	36.15	36.5	1.80	0.33
Pipe: BS EN 1566	40/1½	42.75	43.1	1.90	0.41
	50/2	55.75	56.1	2.00	0.57
<b>Waste ABS</b>					
Pipe and fittings: BS EN 1455	32/1¼	36.15	36.5	1.80	0.20
	43/1½	42.75	43.1	1.90	0.26
	50/2	55.75	56.1	2.00	0.35
<b>Waste Polypropylene</b>					
Pipe: BS EN 1451	32/1¼	34.45	34.8	1.80	0.21
	40/1½	40.85	41.2	1.90	0.26
<b>Overflow PVCu</b>					
	21.5¾	21.55	21.70	1.10	0.11

## Offsets in stacks

Offsets in the wet portion of a discharge stack should be avoided wherever possible but where they have to be fitted a large radius or two 45° bends should be used to create each change of direction. Offsets in lightly loaded stacks up to three storeys high do not require offset venting but on multi-storey buildings this may be necessary depending on the loading of the stack and the numbers of floors above the offset. The principles previously described for bends and branches at the base of a stack should also be applied.

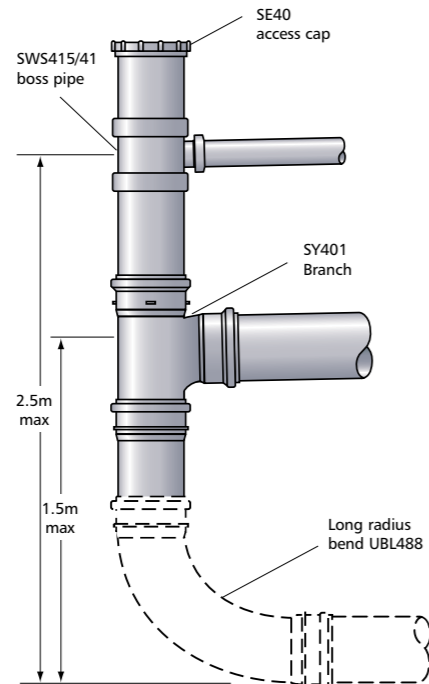
## Stub waste

This technique is often used to connect isolated ground floor waste appliances such as basins, baths, shower trays and sinks to eliminate exposed pipework or low level ducting. The 110mm unventilated PVCu drain is terminated at finished floor level with a reducer and boss adaptor to suit the size of waste from the appliance.

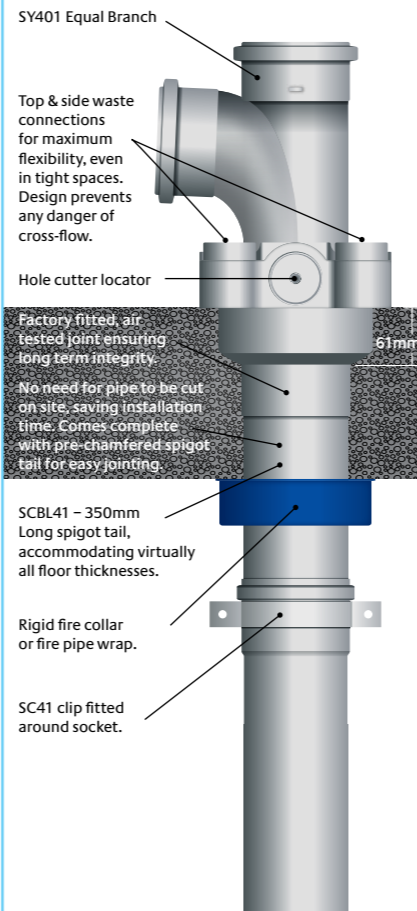


## Stub stacks

An unventilated stub stack terminated with an access fitting may be used to connect a group of ground floor appliances to the building drain provided the vertical drop to the invert level of the drain does not exceed 1.5m from a WC and 2.5m from a waste appliance. Where one or more stub stacks are connected to the same drain, the head of the run should be ventilated to atmosphere or air admittance valves fitted to each stub stack arrangement.



## 8-way collar boss



## Branch pipe gradients

The gradient of a branch pipe should be uniform and adequate to drain the pipe and appliance efficiently. A minimum gradient of 18mm/metre should be adopted for 32, 40 and 50mm nominal size pipes but larger diameter 82, 110 and 160mm branch runs may be laid flatter at 9mm/metre fall where the discharge flow rate exceeds 2.5 litres/second.

## Branch pipe lengths

The following information is taken from Table 6 of BS EN 12056: 2: 2000 and provides general guidance on the recommended lengths of unventilated branch pipes for a variety of sanitary appliances.

Appliances	Dia (mm)	Min. trap seal depth (mm)	Max. length of pipe (m)	Pipe gradient (%)	Max. bends (No.)	Max. drop H (m)
Washbasin or bidet	32	75	1.7	2.2	0	0
Washbasin or bidet	40	75	3.0	1.8 to 4.4	2	0
Bath or shower	40	50	No limit	1.8 to 9.0	No limit	1.5
Bowl urinal	40	75	3.0	1.8 to 9.0	No limit	1.5
Trough urinal	50	75	3.0	1.8 to 9.0	No limit	1.5
Kitchen sink	40	75	No limit	1.8 to 9.0	No limit	1.5
Dishwasher or washing machine	40	75	3.0	1.8 to 4.4	No limit	1.5
WC	110	50	No limit	1.8 min	No limit	1.5

The maximum lengths given above may be increased where the branch pipe is ventilated or an air admittance valve is used. For further details refer to the above standard.

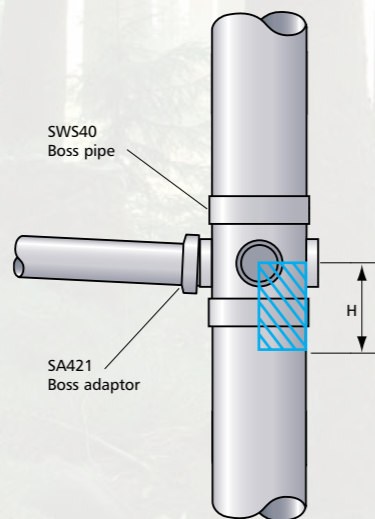


## Prevention of cross-flow

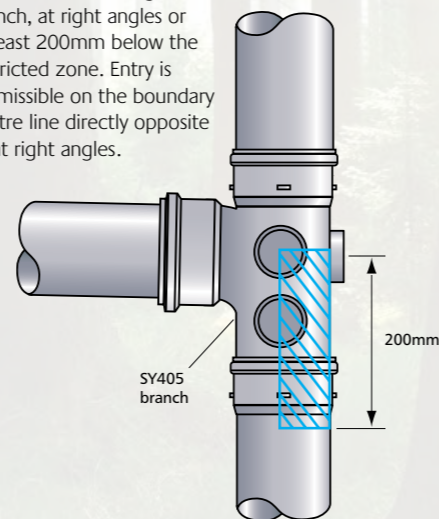
Where small diameter branch waste pipes connect to a discharge stack they must be arranged to eliminate the risk of cross-flow from one branch to the other. A branch creates a no entry zone for opposing waste connections, which varies depending on the stack diameter. No connections should be made within the restricted zone although entry is permissible on the centre line of the boundary directly opposite or at right angles.

Stack size (mm)	Height of zone 'H' (mm)
82	90
110	110
160	250

'H' = 200mm irrespective of stack diameter

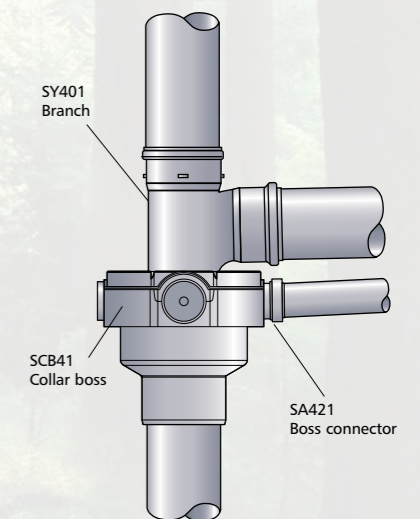


To prevent cross-flow from a large diameter branch to a smaller waste connection, the latter should be made to the stack at or above the centre line of the larger branch, at right angles or at least 200mm below the restricted zone. Entry is permissible on the boundary centre line directly opposite or at right angles.



The **Marley Collar Boss** was specifically designed to overcome installation problems imposed by the 200mm restricted zone and to allow multiple low level bath or shower waste pipes to be connected to the stack above floor level. Cross-flow is prevented as the circular annular chamber protects the small diameter waste connections from the WC discharge allowing waste water to flow freely and merge below the critical zone.

Different combinations of 110mm branches can be used with the collar boss to accommodate various WC positions which may be up to 3 metres from the vertical stack.



## Combined branch waste

A combined branch waste is often used to connect a bath and/or shower and basin to the discharge stack as this allows waste pipework to be neatly concealed in a low level duct.

Where this technique is adopted a 45° entry tee must be used to ensure the basin discharge is swept in the direction of flow towards the stack. The minimum distance between the bath or shower and basin connection should not be less than 500mm and it is recommended that an anti-syphon bottle trap is fitted to the basin or a vent provided to protect the appliance from self-syphonage.

It is recommended that the distance of the combined waste does not exceed 3 metres, however, experience has shown that longer runs using 40 or 50mm pipework has proved successful provided adequate fall can be obtained to ensure self-cleansing velocity is maintained

## Waste traps

Generally appliances such as sinks, baths and showers do not suffer from self-syphonage as the trap seal is replenished at the end of the discharge due to the flat bottom design of the appliance. Tubular traps are recommended for such appliances as they ensure unrestricted discharge and reduce the risk of blockage and prevent the accumulation of sediment.

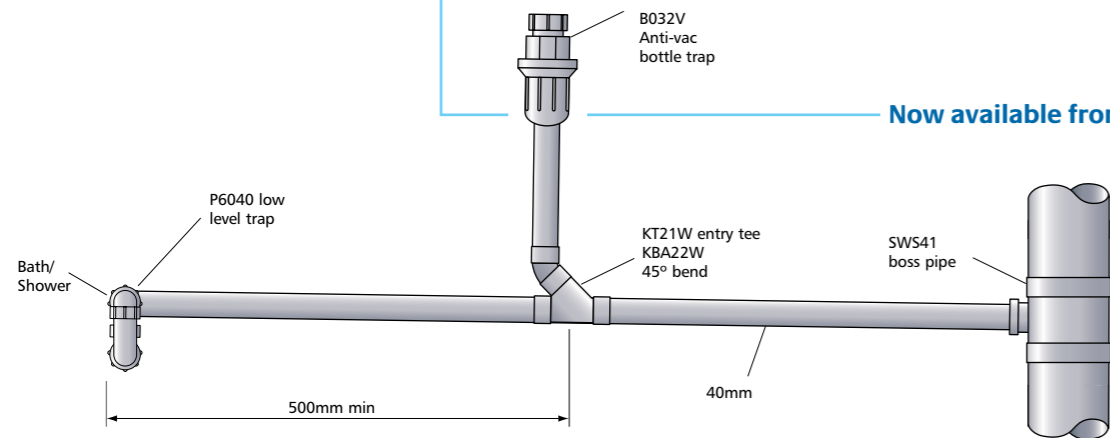
- Compression jointed polypropylene traps can be taken apart to remove a blockage or gain access to the waste system
- Range includes P-traps, S-traps, bottle traps, bath & shower traps and different configurations for washing machines, dishwashers, 1½ or 2 bowl sinks
- White with multiple seal depths
- Sizes: 32, 40 and 50mm

The **Multikwik anti-vac bottle trap**, B032V / B040V, was specially developed to prevent self-syphonage from basins, which can occur particularly where the waste pipe drops vertically from the appliance before falling at an even gradient to the discharge stack.

The trap also eliminates the need for a secondary vent pipe where basins are located further than the recommended 3m maximum from the stack. Non-mechanical, the trap operates as air is drawn in through a by-pass tube to eliminate any syphonic action and ensure the trap seal is maintained.

It is recommended its use is restricted to ground floor baths and showers that discharge directly to an external trapped gully. It should not be fitted to a bath or shower where the waste pipe is connected to a soil stack.

Now available from Multikwik®



## WC manifold system

Developed for use in sanitary pipework systems in schools, hospitals, public and commercial buildings, the manifold system allows ranges of toilets to be connected to a horizontal float above floor level and eliminate the need for specially fabricated fittings.

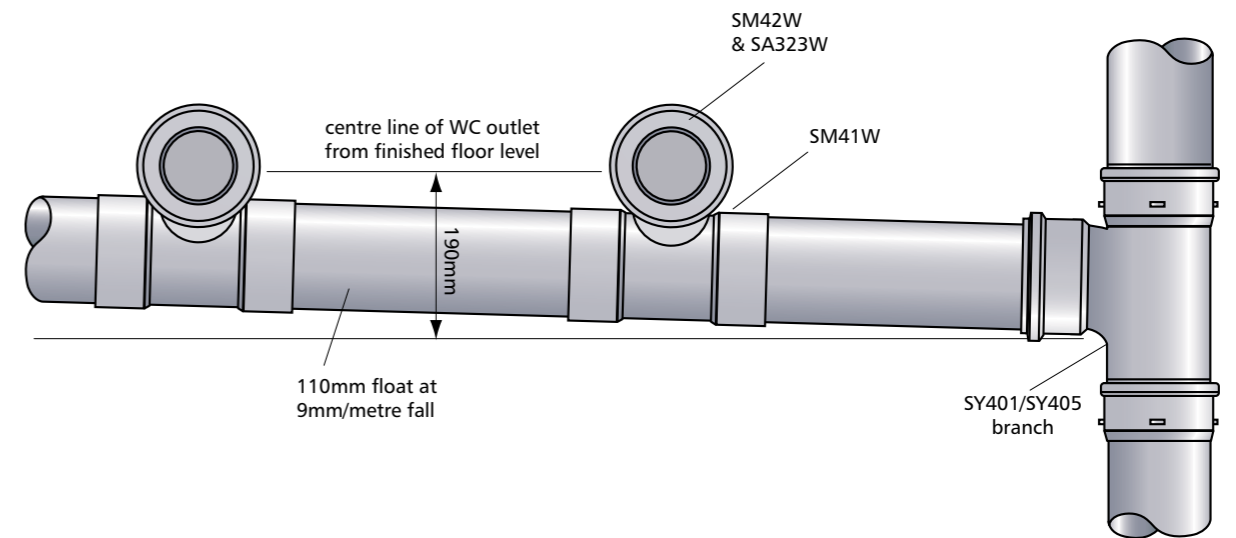
The components are suitable for installation in a duct, or for fitting on the surface of the wall directly behind the pan. Where the manifold is fitted directly behind the range of toilets,

the minimum distance between the end of the WC spigot and the face of the wall is 150mm. To facilitate varying angles and gradients the 110 x 90mm manifold branch has a radial socket to match both options of adjustable WC bend. When the selected bend is cut to the appropriate line and solvent welded into the socket on the manifold branch a uniform fall is obtained between each toilet on the horizontal float.

To accommodate different dimensions between the WC spigot and horizontal float, the adjustable spigot bend SM43W may be trimmed by up to 35mm or the extension pipe SM45W can be used with the pan connector SM44W and SA323W cap & seal.

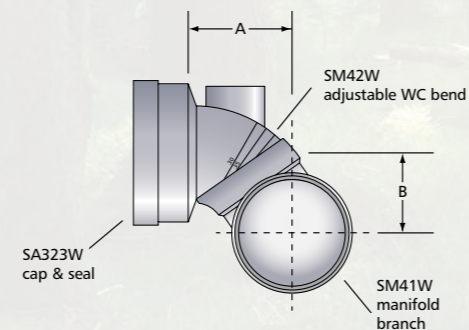
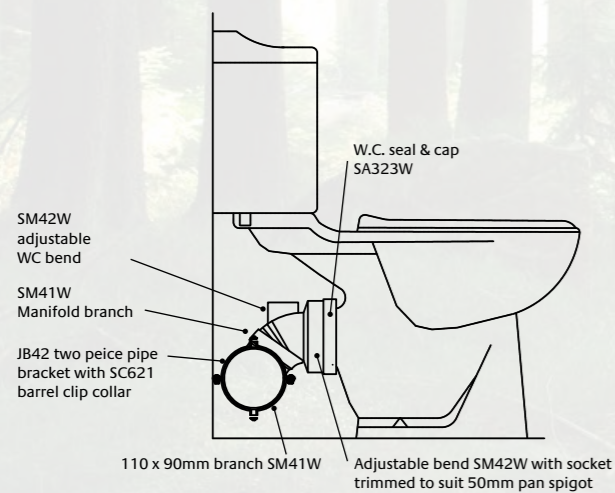
The WC socket on both the SM42W and SM44W must be trimmed to suit the length of pan spigot before the SA323W is fitted.

For installation details see page 45.



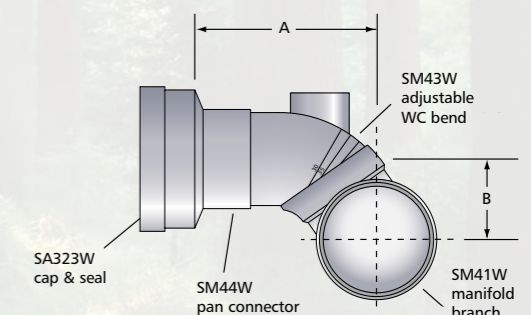
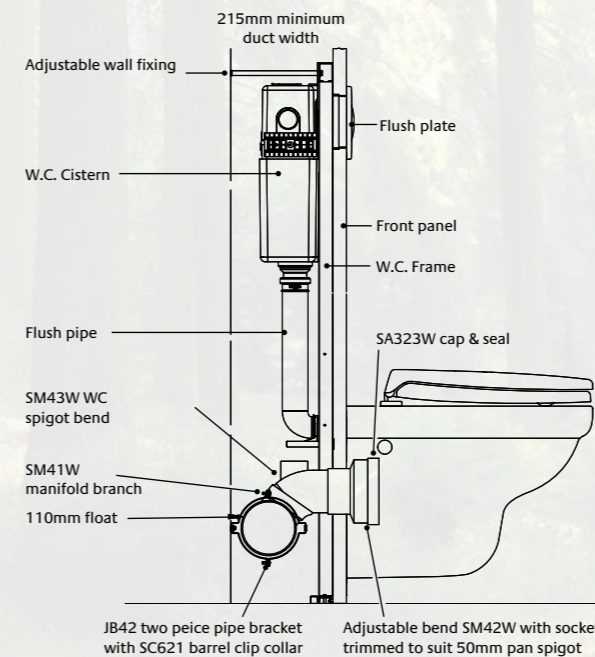
Manifold branch SM41W with SM42W

Cut line	50°	55°	60°	65°	70°	75°	80°	85°	90°
A - projection (mm)	93	93	92	91	90	87	84	80	75
B - drop (mm)	69	77	85	93	101	109	116	123	130



Manifold branch SM41W with SM43W

Cut line	50°	55°	60°	65°	70°	75°	80°	85°	90°
A - projection (mm)	180	180	179	178	177	174	171	167	162
B - drop (mm)	69	77	85	93	101	109	116	123	130



## Durgo air admittance valve

The Durgo valve is designed to reduce the number of ventilating pipes and subsequent roof penetrations in domestic, commercial and public buildings. Suitable for use in sanitary pipework systems up to ten storeys high, the valve must be fitted in a vertical position above the flood level of the highest appliance connecting to the stack. Valves should be installed within the building in a ventilated duct or roof space where there is no risk of freezing and must be accessible for inspection and testing.

The 50, 82 and 110mm size valves have been assessed by the British Board of Agrément and awarded Certificate No 06/4325 which permits their use in accordance with the Building Regulations. A copy of the full certificate is available and provides comprehensive information on their use and installation.

When installed the valve will remain closed unless the system is subject to negative pressure whereby the diaphragm will lift and allow air to be drawn in to eliminate syphonic action. Positive pressure ensures the valve closes and prevents foul air escaping from the system. Each valve is supplied boxed with a polystyrene insulation cover that should remain in position after installation, as this will protect the valve against freezing, particularly when installed in a roof space.

To ventilate the underground drainage system and to minimise the effects of back pressure should a blockage occur, the branch or main drain serving a stack or stacks fitted with Durgo valves may require conventional venting at a point upstream of the stack connection.

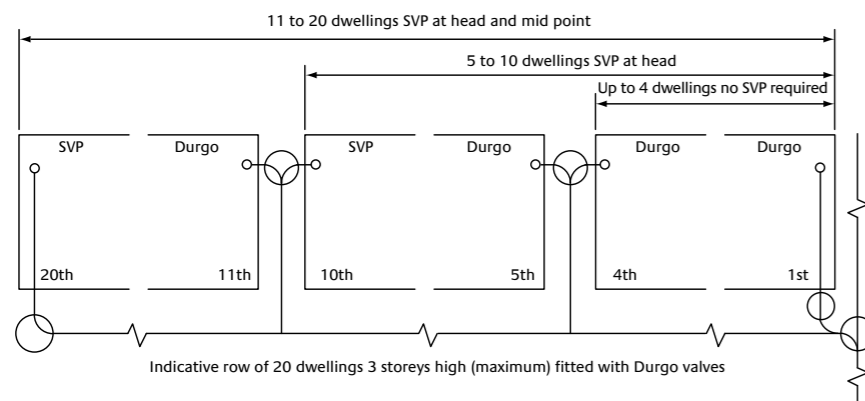
For up to and including four dwellings, 1, 2, or 3 storeys in height, additional drain venting is not required. Where a drain serves more than four such dwellings equipped with the valve, the drain should be vented according to the following rules:

5 to 10 such dwelling – conventional ventilation to be provided at the head of the system.

11 to 20 such dwellings – conventional ventilation to be provided at the mid-point and at the head of the system.

For multi-storey domestic dwellings (other than those referred to previously) and non-domestic buildings, conventional drain venting should be provided if more than one such building, each equipped with the valves, is connected to a common drain which itself is not vented by means of a ventilating stack or a discharge stack not fitted with a valve.

Stacks should not be fitted with valves when the connecting drain is subject to periodic surcharging or is fitted with an intercepting trap. An open vent must be provided and this also applies to stacks that discharge to a cesspool or septic tank.



## Fire protection

The Building Regulations 1991 (as amended) require that a building shall be sub-divided into compartments where necessary to inhibit the spread of fire. Plastics pipework is permitted to penetrate separating walls, compartment walls and floors provided the appropriate measures are taken to prevent the spread of fire in accordance with Part B of the Approved Document (2010).

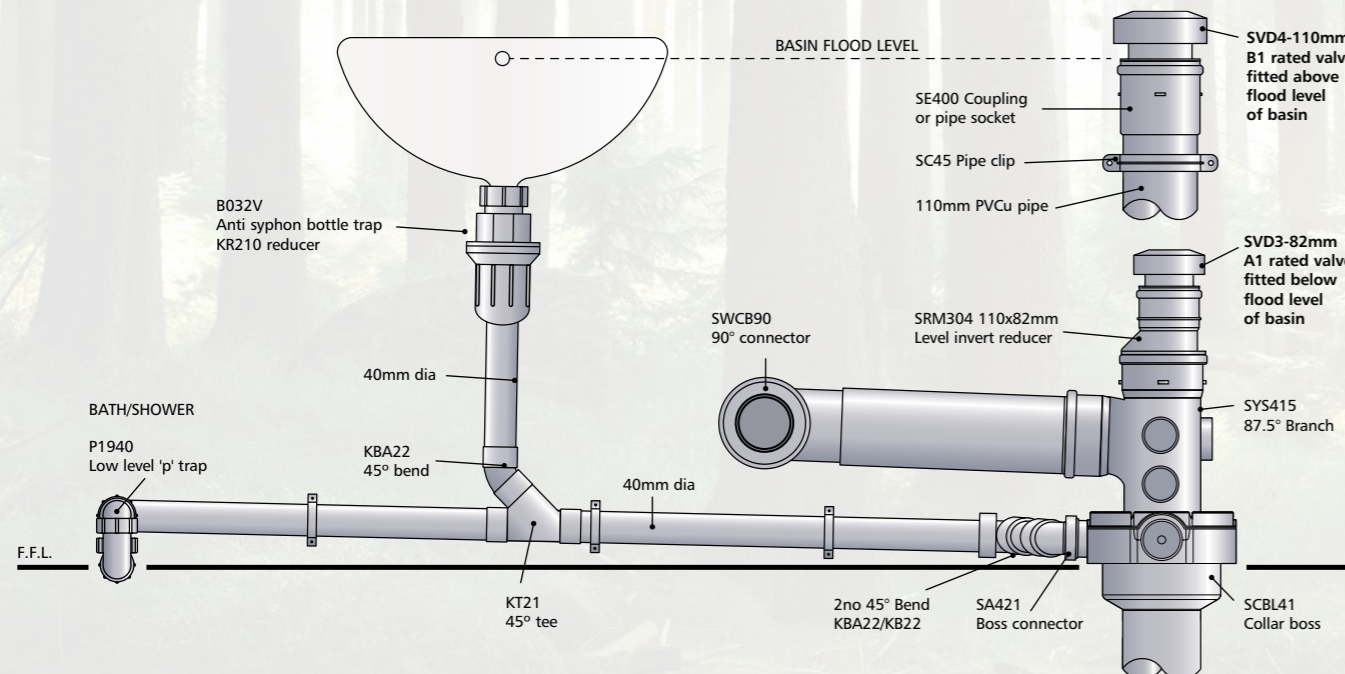
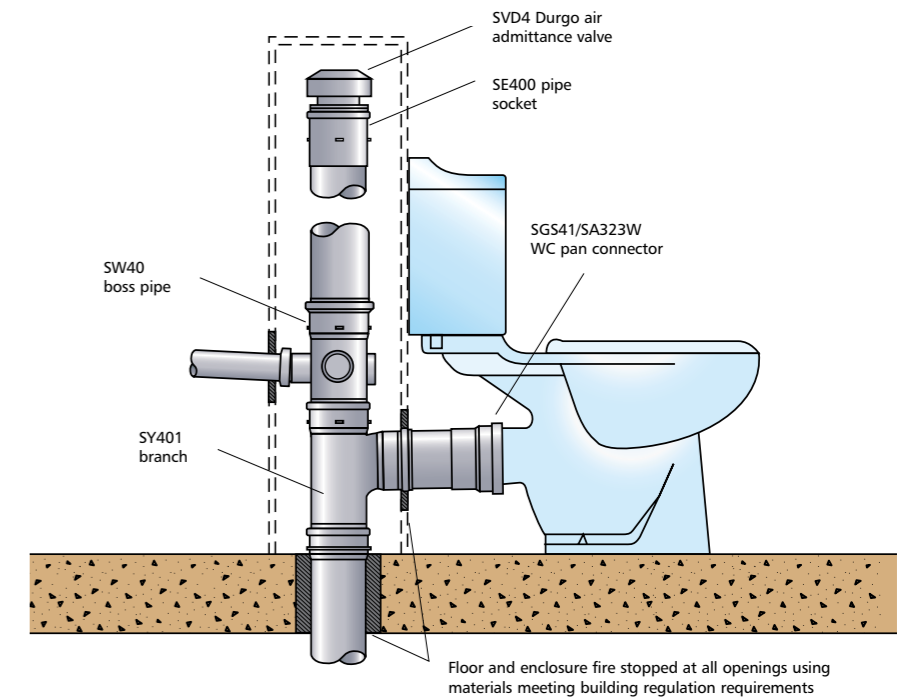
To comply with this, pipes must be enclosed within a fire resistant enclosure which extends from floor to ceiling within each storey. The enclosure must have a class 'O' internal surface and have each side formed by a separating wall, external wall or by casing. Any casing must have a minimum 1/2 hour fire resistance and penetrations of the duct must be limited to 160mm vertical and 110mm horizontal.

Where longer periods of fire resistance are required, fire collars or pipe wraps can be fitted.

Tests carried out at FIRTO on a variety of typical sanitary pipework arrangements proved that it was possible to achieve up to 1 1/2 hour fire rating through a compartment floor without a fire collar or pipe wrap where the stack was terminated by an air admittance valve.

Various other arrangements were also tested and achieved a minimum of 2 hours integrity.

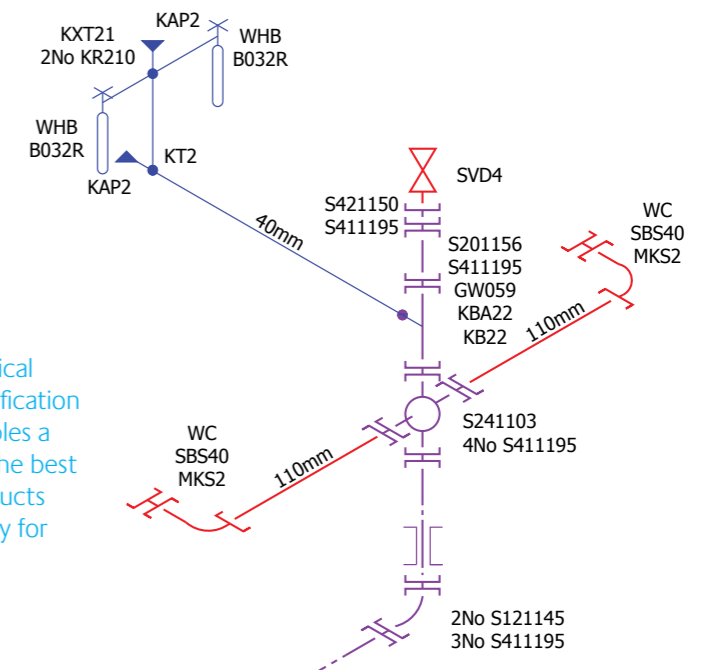
The construction illustrated below achieved a 1 1/2 hour fire resistance rating without the need for a fire resistance enclosure. The enclosure is necessary to achieve a 2 hour rating.



## Technical advisory service

Marley Plumbing & Drainage provide technical support to all those involved with the specification and installation of their products. This enables a specialist team to give detailed advice on the best way of utilising the extensive range of products and systems manufactured by the company for building services.

**Technical Hotline: 01622 852695**



## Joining techniques

The ring seal has been successfully employed as the principal method of joining large diameter PVCu pipes and fittings since their introduction over thirty years ago. This particular technique has proved extremely reliable as the joint can accommodate thermal movement that will occur as a result of temperature variations. An expansion gap of between 5-10mm should be allowed within each ring seal socket as each full length of pipe is installed and fixed using socket and barrel pipe clips.

Solvent weld jointing is also widely used and many components in the range are available with this facility to provide an effective alternative. By selecting these fittings a solvent weld system can be installed, however, ring seal joints must be incorporated to control thermal movement.

While the most popular method of joining larger size PVCu pipes and fittings is by ring seal, with small diameter waste pipework the principal choice is usually solvent weld. Where this technique is used expansion couplings must be introduced where pipe lengths exceed 1.8 metres or between fixed points. The same principle should also be adopted when the polypropylene push-fit waste system is installed.

It should be noted that polypropylene cannot be solvent welded and together with the ABS waste system must not be fitted externally unless painted to protect it from ultra-violet degradation.

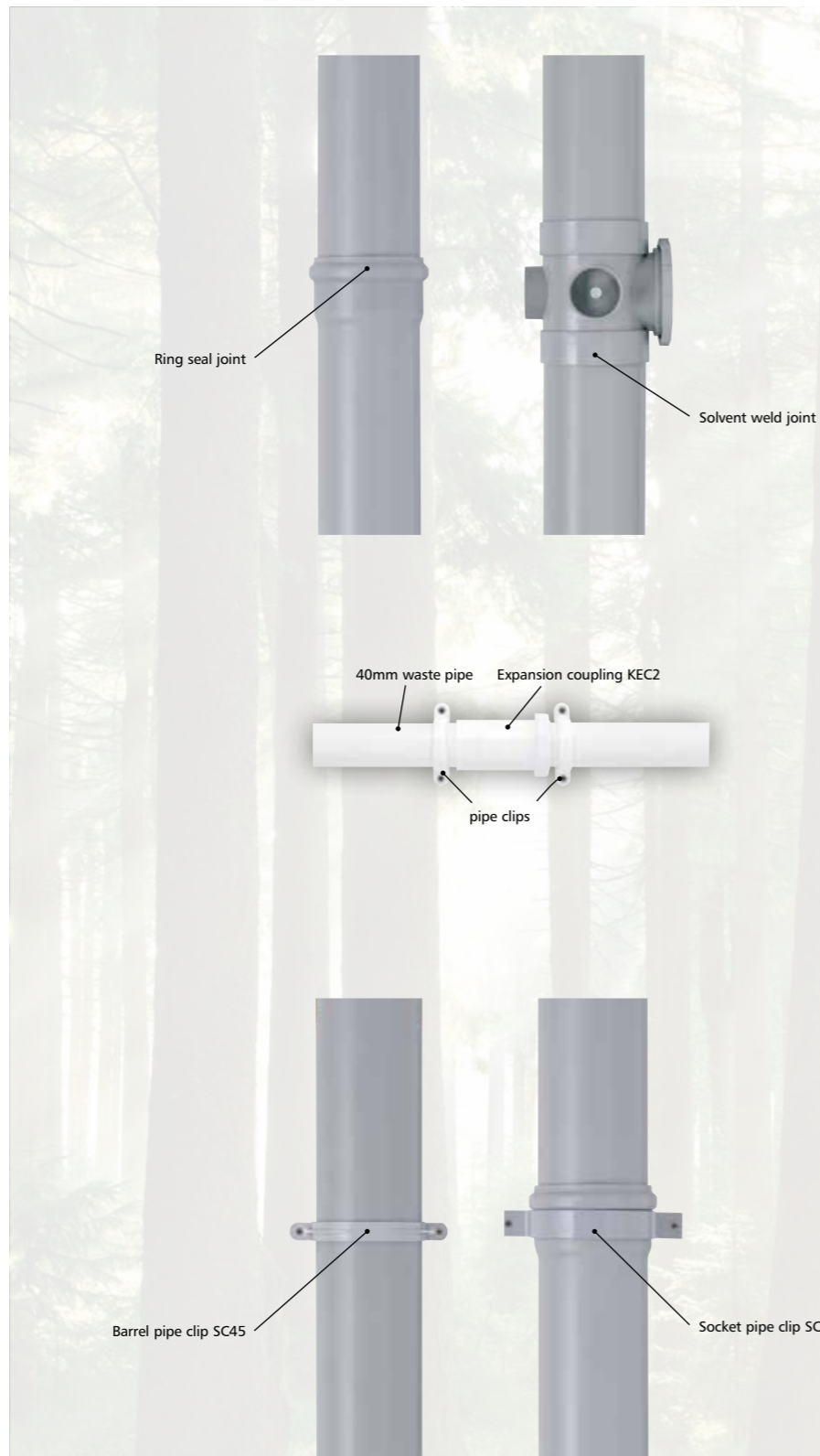
For installation using solvent cement please see [marleypd.co.uk](http://marleypd.co.uk)

## Pipe support

Experience has proved that an efficient and reliable PVCu sanitary pipework system depends considerably on the attention that is placed on the correct provision of pipe support brackets. This is particularly important in multi-storey buildings where care must be taken to ensure clips are positioned to control thermal movement at each floor level.

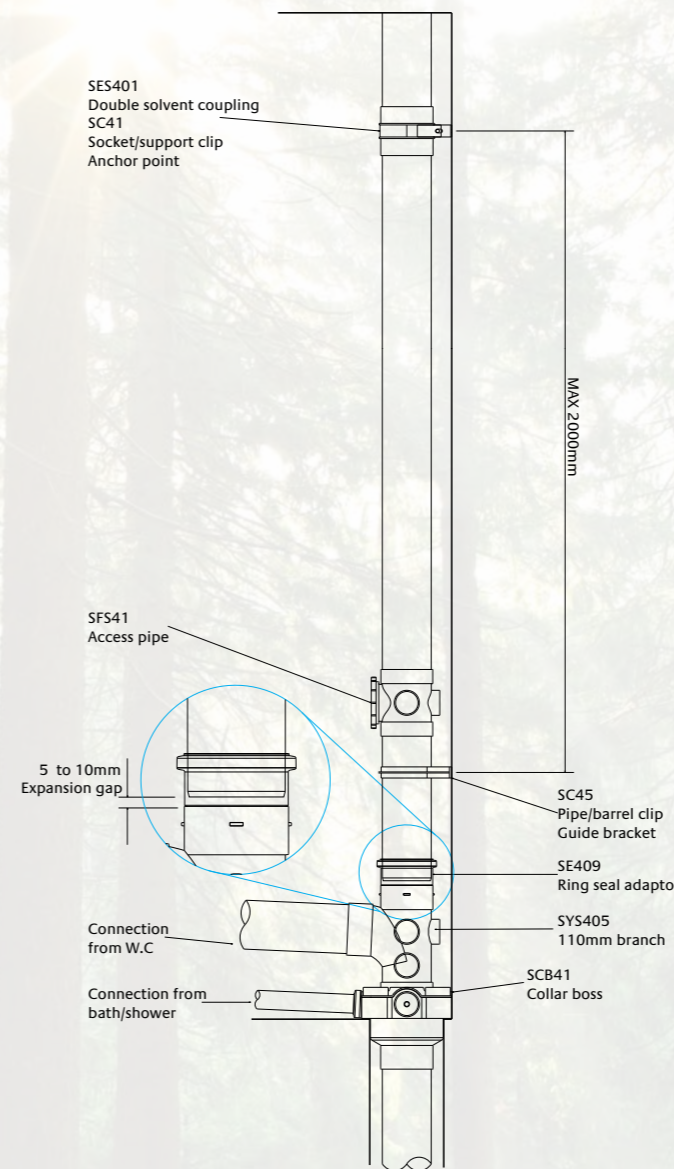
Plastic coated metal socket clips are designed to fit ring seal sockets and act as anchor brackets. These used in conjunction with PVCu intermediate pipe clips, control expansion and contraction and maintain the vertical alignment of the stack.

Two piece socket clips SC41/61 may be adapted to suit the appropriate pipe size by using a section of barrel clip collar SC621 to provide the necessary spacer sleeve. The table opposite indicates the maximum recommended support centres of different size plastic pipe systems.

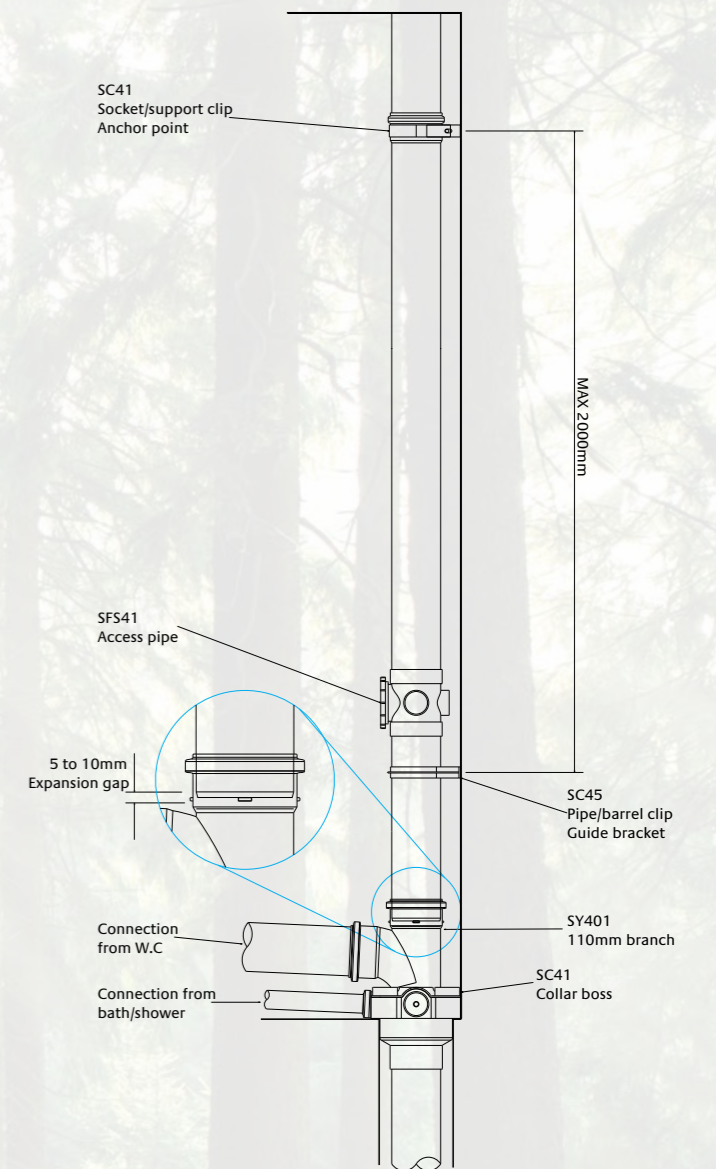


## Solvent soil stack installation

The addition of the SE409 ring seal adaptor allows for thermal movement required in a solvent soil installation



## Push-fit soil stack installation



Pipe material	BS Nominal pipe size	Horizontal support (m)	Vertical support (m)
PVCu	21.5	0.50	1.20
PP	32	0.50	1.20
	40	0.50	1.20
PVCc	32	0.50	1.20
ABS	40	0.50	1.20
	50	0.60	1.20
PVCu	82	1.00	2.00
	110	1.00	2.00
	160	1.20	2.00

## Marley pipe support system

The Marley pipe support range was developed to meet the specific requirements of PVCu suspended sanitary pipework and drainage systems. Manufactured in zinc electro plated mild steel for internal use, the versatile range of components can be assembled to provide a robust, lightweight system suitable for most applications. The system also provides suitable control of expansion and contraction.

The arrangements of brackets and channel supports have been extensively tested and the assembly techniques used have been successfully employed on many domestic and commercial installations.

### Single support

Recommended for waste or larger diameter pipework fixed within 500mm of the floor soffit.

### Double support

Developed for use with larger diameter pipework fixed within 1.0m of the floor soffit.

### Pipe brackets

The 110mm two piece pipe brackets are designed to fit round the ring seal socket of a pipe or fitting. Where intermediate support brackets are located, the SC621 PVC barrel clip collar is used as a spacer sleeve between the pipe and bracket.

### Angle and side bracing

Angle braces should be provided at 6m centres to prevent lineal and thermal movement. Side bracing may also be necessary on long runs where there are no side connections to eliminate lateral movement.

### Vertical pipes

The transition between vertical and horizontal pipework should be achieved using two 45° bends or a single 87½° long radius bend with a support bracket positioned as close as possible.

### Branch connections

All branch connections into horizontal pipework should be made at 45° to ensure the discharge is swept in the direction of flow.

### Structural fixings

It is recommended that 6mm rawlbolt or similar proprietary fixings are used to secure base plate and angle cleats to the structure.

## Boss branches

The Marley range of boss branches are designed to allow multiple waste pipe connections to be made to the discharge stack from different directions. Four different side entry combinations are possible together with a rear if required. Staggered waste pipe connections, directly opposite are not permitted as cross-flow could occur.

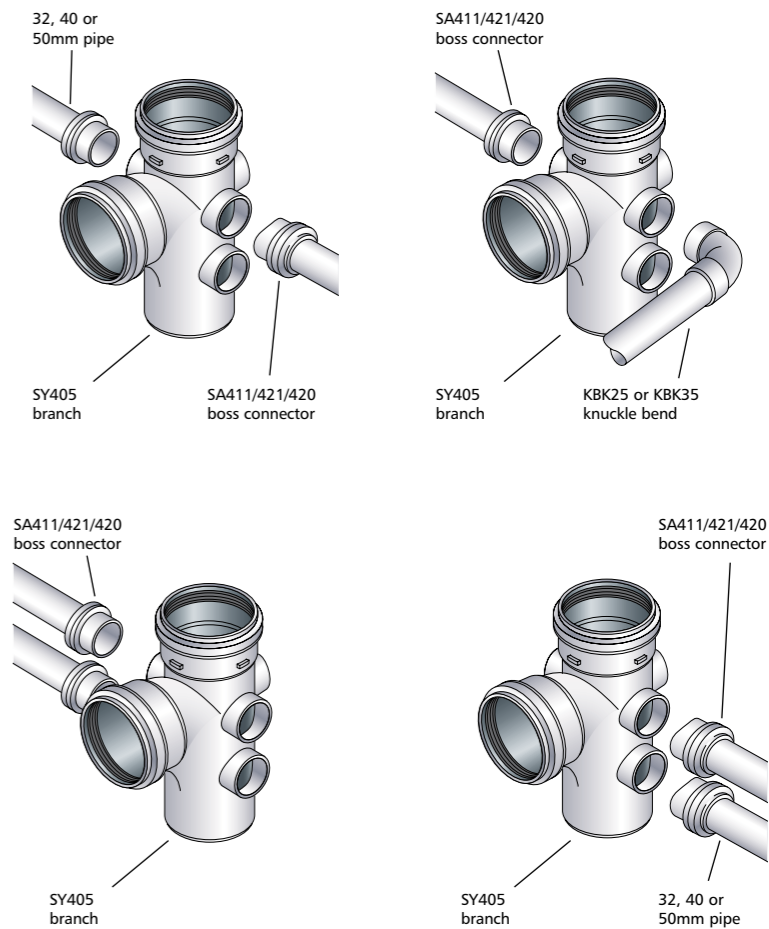
## Compatibility

Boss pipes, boss connectors and strap-on bosses fitted with multi-fit 'T' ring seals are suitable for use with PVCc or ABS waste systems to BS EN 1566 or BS EN 1455-1, polypropylene to BS EN 1451-1 and metric size copper to BS EN 16090.

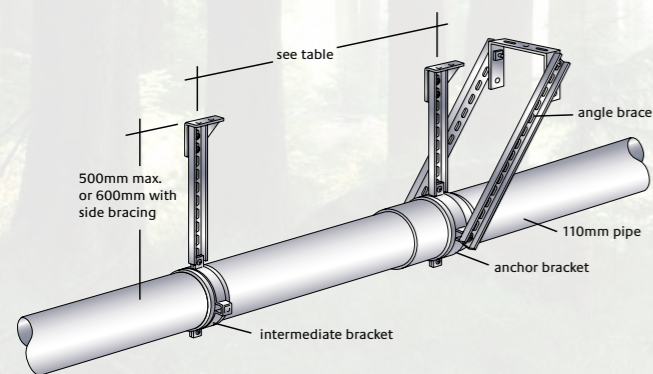
Un-perforated boss upstands on boss pipes, branches and reducers may be drilled to accept 32, 40 and 50mm boss connectors SA411, SA421 and SA420 using a 51mm diameter hole saw. Knuckle bends KBK25 and KBK35 may also be used as 90° boss connectors for 40 and 50mm PVCc or ABS waste pipework.

## Horizontal connections

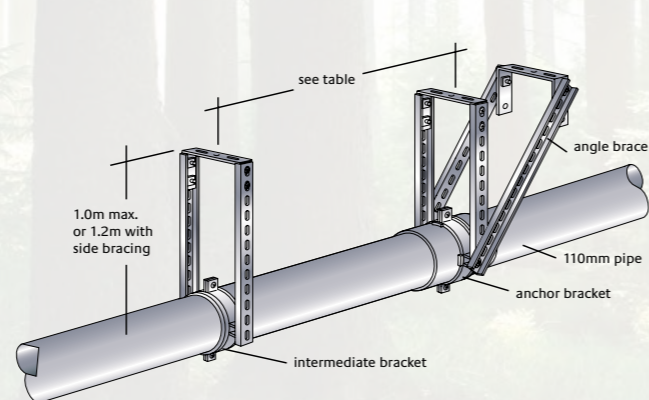
The SWS4135 boss pipe is recommended for use in horizontal situations where connections to 110mm diameter pipe is made at 45°. This fitting has a 50mm solvent weld socket to accept PVCc or ABS waste pipes.



## Single support



## Double support

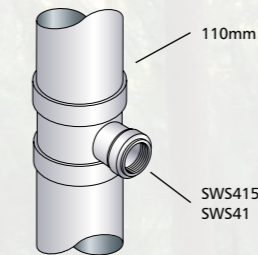


## Boss pipe connections

Four different types of fitting are available to provide alternative methods of connecting small diameter waste pipes to 82, 110 and 160mm vertical discharge stacks.

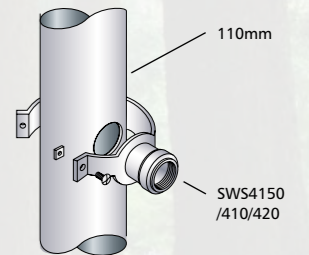
### Single boss pipes.

Available with ring seal or solvent weld sockets for push-fit or solvent weld jointing, single boss pipes allow 32, 40 and 50mm waste pipe connections to be made at 87½° direct to the vertical stack.



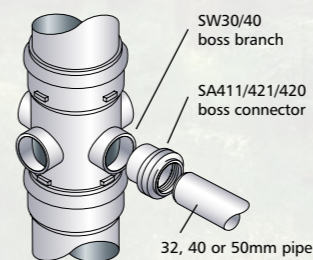
### Strap-on-bosses.

Primarily designed to permit 32, 40 and 50mm waste pipe connections to be made to existing 110mm PVCu discharge stacks, strap-on-bosses can also be used on new systems to provide flexibility of installation during different stages of construction.



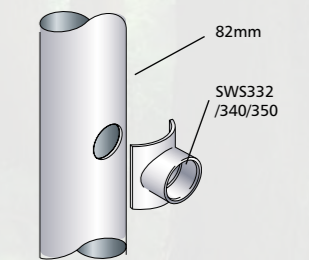
### Multiple entry boss pipes.

Supplied in ring seal or solvent weld options, all have 90° boss upstands on each fitting with one inlet port open. Connection is made using the appropriate size Marley boss connector to suit 32, 40 or 50mm waste pipes.



### Patch bosses.

Suitable for solvent weld jointing to new and existing 82mm diameter PVCu discharge stacks to accept 32, 40 and 50mm size PVCc or ABS waste pipework.



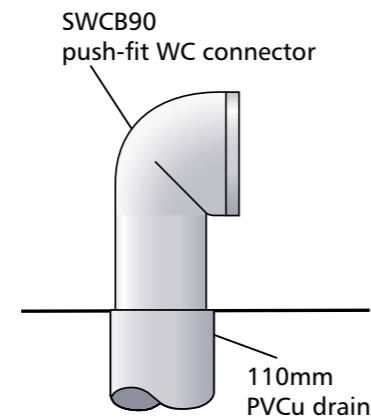
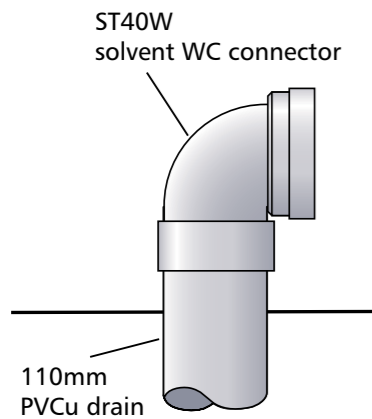
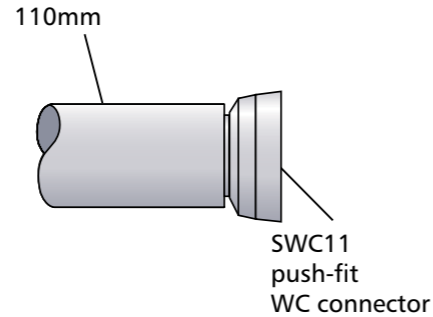
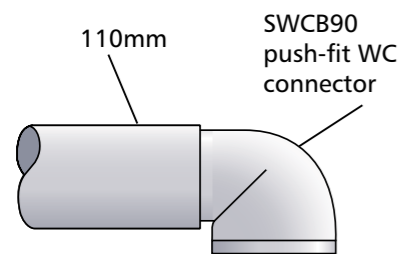
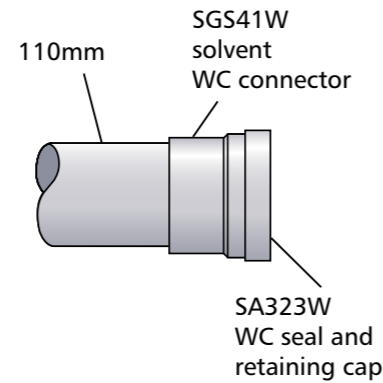
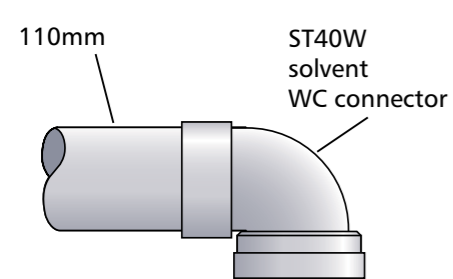
## WC connections

Two different types of connectors are available to allow connection to vitreous china or stainless steel WC pans, slop hoppers and other similar sanitary equipment. Manufactured in PVC and eva (ethylene vinyl acetate) to accommodate a range of outlet sizes between 84 and 110mm sanitary pipework or underground drainage.

The 90° ST40W, ST41W and SG40W connectors are supplied complete with flexible seal and retaining cap. Where the SGS41W or STS41W pan

connectors are used, the WC socket must be trimmed to suit the length of pan spigot before the SA323W is solvent welded in position.

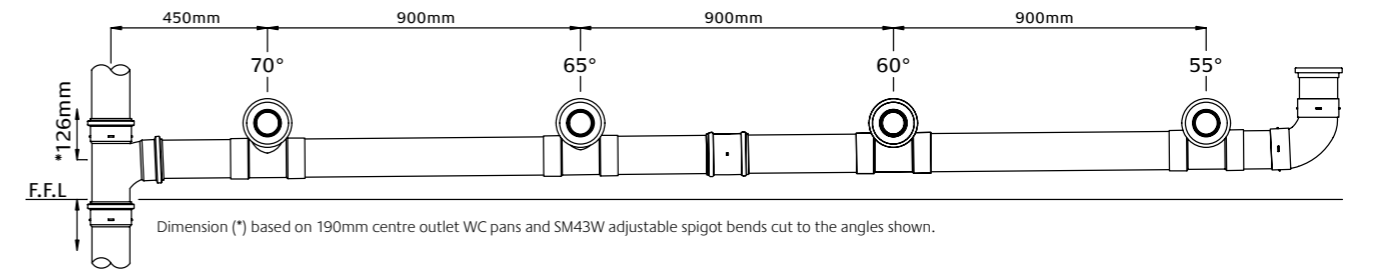
Ground floor toilets often have their own connection to the building drain to eliminate pipework and ducting. Where this occurs both types of connector are suitable for push-fit or solvent weld jointing to the 110mm PVC drain.



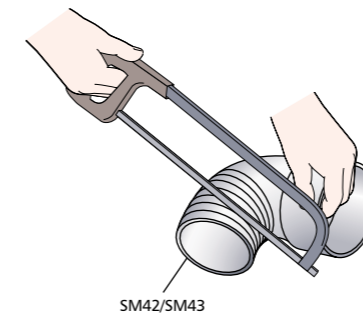
## WC manifold system

Up to six WCs can be connected to a soil stack using the WC manifold system and a single branch connection. By using a double branch connection, an additional six WCs can be connected. The table, right, details the angles of the manifolds for this installation.

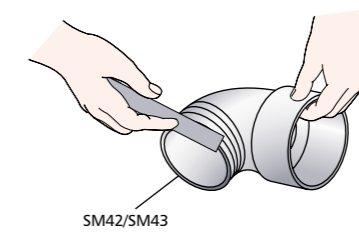
NUMBER OF WCs	ANGLE OF MANIFOLD BRANCH					
	WC 1	WC 2	WC 3	WC 4	WC 5	WC 6
6	80°	75°	70°	65°	60°	55°
5	75°	70°	65°	60°	55°	
4	70°	65°	60°	55°		
3	65°	60°	55°			
2	60°	55°				



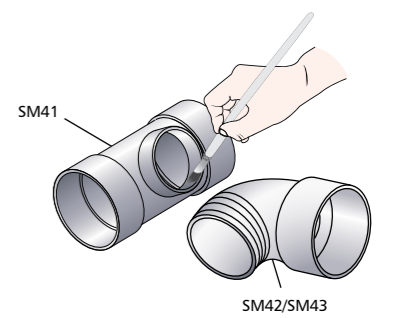
1. Select the adjustable bend angle required from the above diagram according to the WC position. Cut the bend with a hacksaw, removing the unwanted portion.



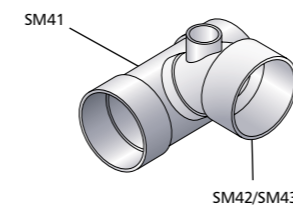
2. File away any rough edges from the face of the fitting and wipe clean the bend and branch, with a dry cloth. Before jointing, the bend and branch should be checked for position and alignment, both parts being marked to ensure accurate assembly.



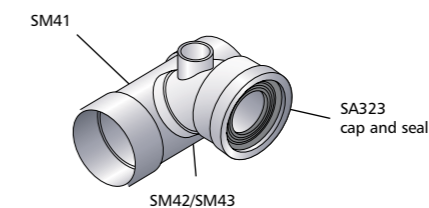
3. Apply a uniform coat of Marley solvent cement, to the short branch radial socket and to the external surface of the bend body.



4. Assemble the branch immediately, insuring that the marked lines on the fitting coincide. Do not twist the two parts of the branch during this operation, but maintain steady pressure until the spigot of the bend comes to rest against the internal surface of the branch socket. Quickly wipe off any surplus solvent cement from the inside and outside of the completed joint and hold in position for approximately 15 seconds.



5. Trim the WC socket to suit the toilet pan spigot length and remove any swarf with a file. Place the seal in the socket, apply a uniform coat of solvent cement about 15mm wide to the outside of the socket and inside the retaining cap. Push onto the socket and wipe off any surplus solvent cement.



To accommodate varying dimensions between the WC spigot and the centre line of the horizontal pipe run, the adjustable spigot bend SM43 or extension pipe SM45 can be used with WC connector SM44.



## Quality Product

The Marley HDPE range is the only system in the UK certified to BS EN 1519.



## Technical Services

Our team of experts will provide support throughout the design process, creating drawings for each stack element and liaising with our fabrications team to ensure that every detail is to specification.

## The Fabrications Team

Our dedicated team of skilled fabricators will pre-build the HDPE soil stacks in a controlled factory environment, to project specifications and to the highest quality, with pressure testing to BS EN 12056-2 on every stack as standard.



## On Site Support

This is useful for particularly complex installations, where our years of industry experience may be beneficial.



## Delivered when and where you need it

Following drawing sign off, a delivery schedule is agreed.

Deliveries will arrive to the agreed schedule, saving precious space on site.



## Why choose a fabricated system?



Saves time



Saves money



Saves storage



Saves waste



Expertise



Simplification



Quality, assured



Delivery when you need it

# Site Work

## Inspection and testing

Inspection and testing should be carried out in accordance with BS EN 12056: 2000 and Building Regulations noting especially the details given in respect of air testing and the fact that smoke testing of plastics pipework should be avoided as the materials can be adversely affected.

## Air test

The installation should be capable of withstanding an air test of positive pressure of at least 38mm water gauge for at least 3 minutes. During this time every trap should maintain a water seal of at least 25mm.

## Handling

PVCu pipes are strong, though lightweight and therefore very easily handled. However, reasonable care should be exercised while handling, particularly in extremely cold conditions. Pipes should preferably be loaded and unloaded by hand but if mechanical handling is used, protected slings are recommended.

## Maintenance

Provided that the system is designed and installed correctly, no maintenance will be required.

If blockage does occur, use only flexible or roller type rods. Pointed or bearing type metal fittings are not recommended. Tests have been carried out on PVCu pipes and fittings using equipment from specialist drain cleaning contractors and their standard equipment is suitable.

## Safety

The relevant regulations are outlined in the Health and Safety At Work Act 1974 and The Construction (Design and Management) Regulations 1994 and should be followed. Hazard sheets, dealing with the correct storage, use, and any hazards of working with solvent cement, silicone lubricant and fire protection products are available from Marley Plumbing & Drainage.

## Storage

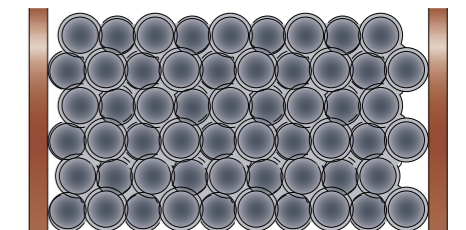
Pipes should be stacked on a reasonably flat, level surface on timber battens not less than 75mm wide spaced at a maximum of 1m centres. Side support should also be provided at intervals of not more than 1.5m.

Different size pipes should be stacked separately. However, where this is not possible, larger diameter pipes should be placed at the bottom.

Spigot and socket pipes should be stacked separately. However, where this is not possible, larger diameter pipes should be stacked with

sockets at alternate ends protruding to ensure pipes are evenly supported along their length.

Pipes should not be stacked more than 7 high and when stored in the open for long periods, or exposed to strong sunlight, they should be covered with an opaque sheet. Fittings supplied in cardboard boxes or polythene bags should be stored under cover and kept packed until required. Solvent cement should be stored in a cool place out of direct sunlight and away from any heat source.





## British & European Standards

### BS EN 1329-1: 2014

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure – PVCu.

### BS EN 1451-1: 2000

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure – polypropylene.

### BS EN 1519-1: 2000

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure – polyethylene.

### BS 4514: 2001

Specification for PVCu soil and ventilating pipes, fittings and accessories.

### BS EN 1566-1: 2000

Specification for thermoplastics waste pipe and fittings.

### BS 5255: 1989

Specification for thermoplastics waste pipe and fittings.

### BS EN 1455-1: 2000

Plastics piping systems for soil and waste (low and high temperature) within the building structure – ABS.

### BS 5627: 1984

Specification for plastics connectors for use with horizontal outlet vitreous china WC pans.

### BS EN 14680: 2015

Specification for adhesives for non-pressure thermoplastics pipe systems.

### BS EN 681-1: 1996

Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Part 1 vulcanised rubber.

### BS EN ISO 9001: 2015

Quality systems. Model for Quality Assurance in Design, Development, Production, Installation and Servicing.

### BS EN ISO 14001: 2015

Environmental management systems. Requirements with guidance for use.

## Accreditations



Certificate No. 06/4325



BS EN 1329-1 : 2000  
BS 4514 : 2001  
BS EN 1566-1: 2000  
BS 5255: 1989  
BS EN 1455-1: 2000  
BS EN 1451-1: 2000  
BS EN 1519-1: 2000



BS EN ISO 9001: 2008  
BS EN ISO 14001: 2004

Products indicated by this symbol comprise of components not covered by Marley Plumbing and Drainage BS EN ISO 9001 Scope of Registration. However these products have been fully inspected and tested in accordance with our own Quality Management System requirements.



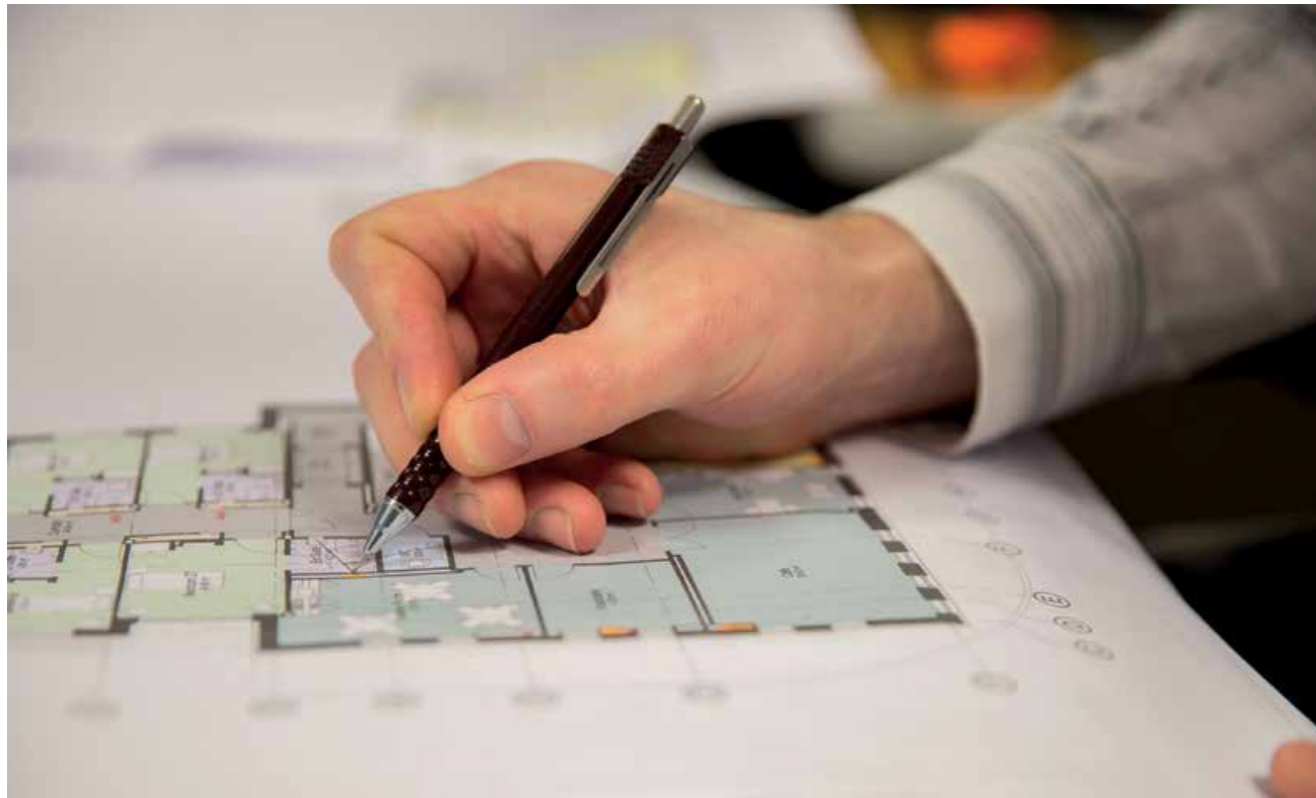
### Case study

#### Leicester Student Accommodation

Hundreds of en-suite shower pods were installed during the construction of a student accommodation building in the East Midlands using the Marley PVCu soil and waste system, and in particular, the eight-way collar boss.

“We have come to rely on Marley for their technical advice. Particularly in situations such as this one. We wanted Marley involved from an early stage to be able to advise and steer the design process”














Dave Gourley, Project Manager  
H Malone and Sons Ltd



Designing the most efficient drainage system for a project is a skill for which the Marley Technical Services team are renowned. Marley Plumbing & Drainage provide technical support to all those involved with the specification and installation of our products.

## Our technical team can help you specify the system you need

Years of experience mean that we can support you throughout your tender process and assist with any technical and installation requirements.

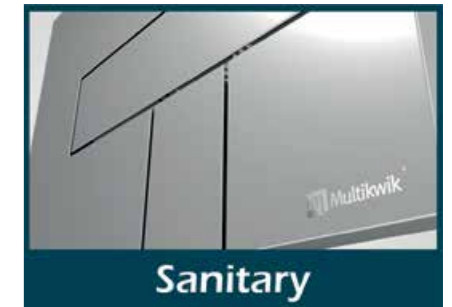
- |   |   |   |   |
|---|---|---|---|
|  <b>DESIGN SERVICES</b>        |  <b>VALUE ENGINEERING</b>  |  <b>TECHNICAL ADVICE</b>     |  <b>FABRICATIONS SERVICE</b>           |
|  <b>RAINWATER CALCULATIONS</b> |  <b>MATERIAL TAKE-OFFS</b> |  <b>CAD FILES</b>            |  <b>BIM OBJECTS</b>                    |
|  <b>FIELD AND SITE SUPPORT</b> |  <b>SPECIFICATION</b>      |  <b>SPECIAL FABRICATIONS</b> |  <b>IN-HOUSE AND EXTERNAL TRAINING</b> |
|  <b>CPD SEMINARS</b>           |   |   |   |



An acoustic soil and waste range with a layered pipe providing quick, hygienic removal of sanitary waste water. The noise generated by the flow of water is dramatically reduced – making it perfect for multi-occupancy apartment blocks and high specification developments.



Marley Akatherm HDPE is a drainage system which offers an alternative solution to cast iron. It is particularly suited for commercial applications or where a product with high impact or abrasion resistance is required, such as hospitals, hotels, schools, as well as residential buildings. HDPE will also cope with temperature variations of -40°C to 100°C making it ideal for external as well as internal installations.



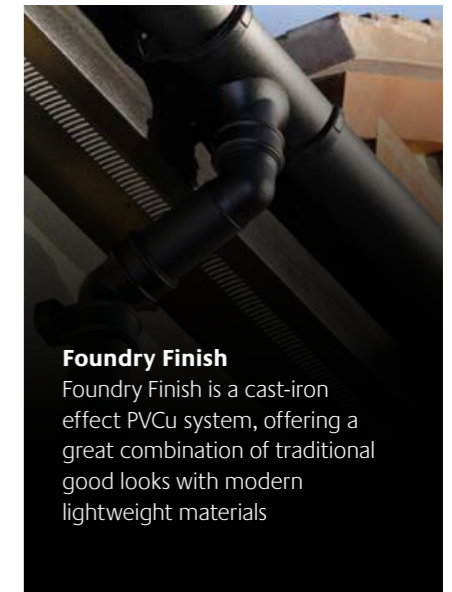
The Multikwik brand is known and trusted by plumbers for its sanitary frames, cisterns, traps, compression waste systems and market leading range of pan connectors. Complementing the Marley range it provides an excellent solution to modern bathroom design with a wide choice of product options.



The Marley Plumbing & Drainage range of underground systems include the solid wall range, predominately for round the house drainage and Quantum structured wall range for sewer and highway drainage applications.



Five gutter profiles and three downpipe options provide a rainwater solution for any application. Advanced Life<sup>4</sup> technology on four of the key profiles, coupled with the benefits of the Easyclip and notching capability combine to make the Marley rainwater range the most comprehensive available.





[marleypd.co.uk](http://marleypd.co.uk)

For general enquiries and details of your nearest stockist please call the customer services department:

**Tel: 01622 852585**

**Email: [customerservice@marleypd.com](mailto:customerservice@marleypd.com)**

To place an order

For delivery to **England & Wales**

**Email: [orders.lenham@marleypd.co.uk](mailto:orders.lenham@marleypd.co.uk)**

**Fax: 01622 851111**

For delivery to **Scotland**

**Email: [orders.uddingston@marleypd.co.uk](mailto:orders.uddingston@marleypd.co.uk)**

**Fax: 01698 810307**

For all estimate requests

**Email: [estimates@marleypd.co.uk](mailto:estimates@marleypd.co.uk)**

For Technical advice please call

**01622 852695**

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December 2017

