



# dBlue Acoustic Soil & Waste System

Enjoy silence

dBlue

  
aliaxis

# Driven by comfort

Increased living standards have shaped modern installation regulations of drainage systems. Today, whether a consultant or installer, you need soil & waste solutions capable of responding to the commercial challenges faced by your clients' and end users' businesses. The drive for more:

## Comfort of living

End users gain more comfort of living with Akatherm dBlue. The system is optimised for acoustic comfort using the latest production techniques, ensuring an installation that meets the most stringent noise regulations.

## Speed of installation

A distinctive benefit of Akatherm dBlue is the fast installation. Easy to use and secured socket connections minimise installation time of each joint without further use of electrical tools.

## Freedom of application

Its high resistance against heat and chemicals, unique products for high-rise, underground approval and dimension up to 200 mm enable Akatherm dBlue to be used as a single system installation in a broad range of applications.

## Proven systems

Akatherm dBlue is a high quality acoustic soil & waste system produced in conformity with the EN1451. It meets national and international quality and safety standards.



**Fact:**  
**Trend towards noise reduction**

Higher living standards have dictated lower acceptable noise production of installed drainage systems. For instance an acceptable noise level in a 4-star hotel at night time is 25 dB.



**Fact:**  
**Fast building construction**

Fast building constructions rely heavily on a time plan with strict deadlines for each part of the installation. A fast installation of the drainage system is therefore essential in meeting the overall construction planning.



**Fact:**  
**Increasing global standards**

Wide spread accessibility of information has increased local awareness. Large construction companies take their practice across the world, thereby raising the minimum standards.

These particular challenges can only be overcome by a specialist drainage solution. Akatherm helps you to meet these demands with confidence.

Akatherm dBlue offers more than just an acoustic soil & waste system. Like every specialist drainage solution from Akatherm, it comes with a comprehensive level of support.

All our systems are backed by solid research, full training and unique products, plus the service standards you would expect from high performance drainage experts and the worldwide backing of the Aliaxis group.

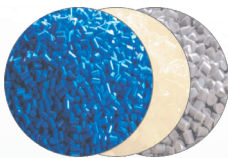


### Akatherm dBlue designed for noise reduction

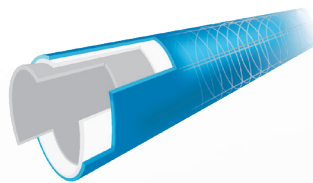
The Akatherm dBlue system is made from a state-of-the-art combination of plastic and sound absorbing mineral filler (PP-MD) to maximise absorbance of sound. The material formula is developed by the Aliaxis R&D laboratory and offers a unique combination of acoustic performance, weight, resistance and mechanical strength.

The triple-layer pipe structure is produced using the latest co-extrusion technology. Each layer has its own function optimised to reduce sound levels, increase mechanical characteristics and improve the drainage flow.

Used in conjunction with the dBlue acoustic brackets, the system effectively uncouples the vibrations and greatly reduces noise and acoustic vibrations down to a level of 18 dB. This makes it ideal for residential housing, multi occupancy apartments as well as hospitals, hotels and other commercial buildings, where reduced noise levels are required.



**State-of-the-art material formula**



**Latest co-extrusion technology**



**High noise reduction**



# Enjoy urban living

Akatherm dBlue is ideal for residential housing, multi occupancy apartments, high-rise as well as hospitals, hotels and other commercial buildings, where reduced noise levels are required.



**Hotels**  
**Spas**  
**Residential housing**



**High-rise**  
**Multi occupancy apartments**  
**Commercial buildings**



**Hospitals**  
**Care buildings**

## Acceptable noise in our everyday surroundings

The acceptable noise level that a person can be exposed to while performing everyday activities and relaxing is described as 'the threshold noise level value'. Noise in drainage systems is generated by waste water falling vertically through downpipes as well as waste water in horizontal pipes running through concealed ceilings.

### Structure-borne noise reduction

Structure-borne noise is effectively dampened by:

- dBlue acoustic bracket with rubber lining
- Tight rubber ring connection between pipe and fitting

### Air-borne noise reduction

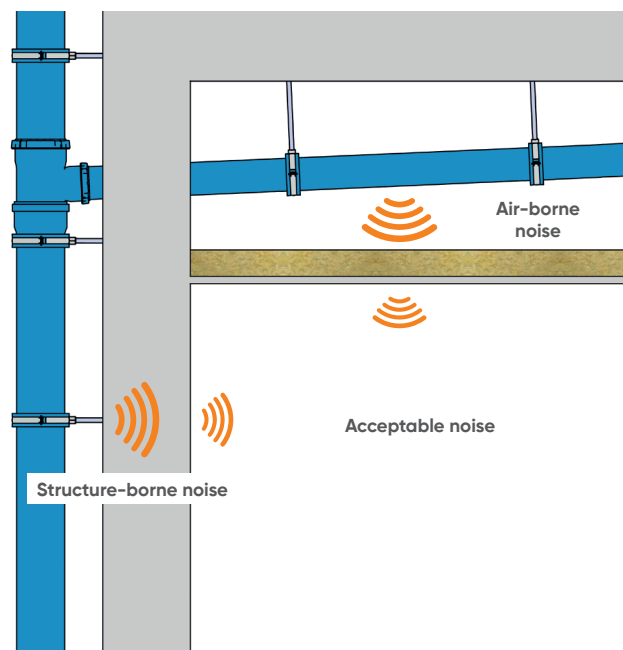
Air-borne noise is effectively reduced by:

- Pipe and fittings from PP-MD
- Triple layer pipe

### Acceptable noise

Akatherm dBlue effectively reduces noise levels compared to the acceptable noise in our everyday surroundings:

- |                               |              |
|-------------------------------|--------------|
| • Habitable room at nighttime | 25 dB        |
| • Hospital wards at daytime   | 30 dB        |
| • Non-habitable rooms daytime | 40 dB        |
| • <b>dBlue</b>                | <b>18 dB</b> |



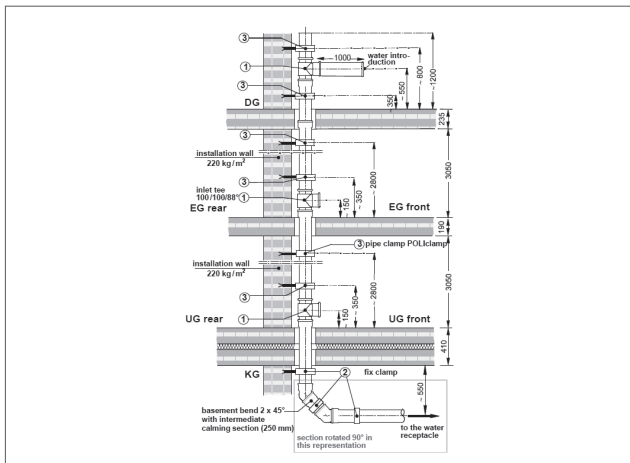
## Proven results meeting strictest requirements

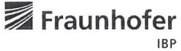
Tests and measurements of noise emitted by the Akatherm dBlue system were conducted according to the European standard EN 14366 'Laboratory measurement of noise from waste water installations'.

The Akatherm dBlue system is certified at a noise transmission level of 18 dB at a water flow of 4 l/s using dBlue acoustic brackets with rubber lining.

The 18 dB is measured at the bottom floor in the room next to the downpipe where the soil & waste flow and resulting noise levels are highest, especially in multi-storey living apartments or high-rise buildings that have a combined soil & waste flow.

All tests were carried out in the accredited institute for building physics Fraunhofer in Germany. Results are available in test report P-BA 26/2016e.





Institution for testing, supervision and certification, officially recognized by the building supervisory authority. Approvals of new building materials, components and types of construction.

Director  
Prof. Dr. Philip Leistner  
Prof. Dr. Klaus Peter Seifbauer

**Test Report P-BA 26/2016e**



**Determination of the Acoustic Performance of a Wastewater Installation System in the Laboratory**

**Client:** Nicoll Polska Sp. z o.o.  
ul. Dzierżynowska 4  
50-400 Wrocław  
POLAND

**Test object:** Wastewater installation system consisting of plastic pipes and fittings "dBlue DN 110 x 3.4" with pipe clamps "dBlue Clamp" (manufacturer: Nicoll Polska Sp. z o.o.).

**Content:**  
Results sheet 1: Summary of test results  
Figures 1 to 3: Detailed results  
Figures 4 and 5: Test set-up  
Annex A: Measurement set-up, noise excitation, acoustic parameters  
Annex F: Evaluation of measurements  
Annex P: Description of the test facility  
Annex V: Assessment according to VDI 4100

**Test date:** The measurement was carried out on September 30, 2015 in the test facilities of the Fraunhofer Institute for Building Physics in Stuttgart.


Stuttgart, February 1, 2016  
Responsible Test Engineer:  Head of Laboratory:   
Dipl.-Ing. (FH) J. Mohr M.B.P. Dipl.-Ing. (FH) S. Ohler

The test was carried out in a laboratory, accredited according to DIN EN ISO/IEC 17025:2005 by DAkkS. The accreditation certificate is D-PL-11140-11-01.

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## Quality and certification

Akatherm dBlue is developed and manufactured within an ISO 9001 Quality Assurance system and complies with the EN 1451 and other relevant international standards as well as meeting numerous national approved quality and safety standards.



Germany



Australia



Sweden



Ukraine



Czech Republic



Poland



**EN14366**  
Noise measurement



**EN13501**  
Fire class  
measurement



**ISO 9001**  
Quality  
management system



**ISO 14001**  
Environmental  
management system

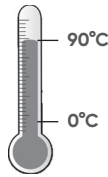
# Best placed in the race

Robust, complete and installation friendly

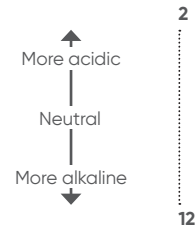
## Material advantages



High noise reduction without insulation



High resistance to waste water temperatures up to 90°C (peak 95°C)



High chemical resistance ranging from pH2 to pH12



Triple layer pipe is rigid, noise-attenuated with a smooth bore that resists incrustation and blockages



Sustainable system 100% recyclable ISO 14001 certified company



Installation possible at temperatures down to -10°C

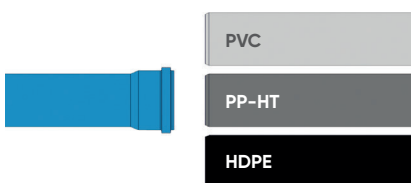
## System advantages



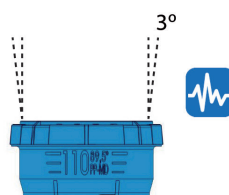
dBlue acoustic brackets with rubber lining reduce acoustic vibrations to a minimum



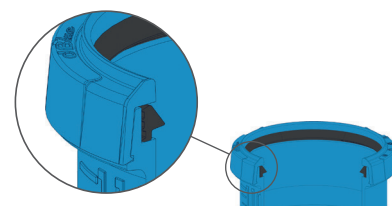
Fast installation of rubber ring joints without additional tools



Transitions to PVC, PP-HT and HDPE possible without additional transition fittings required



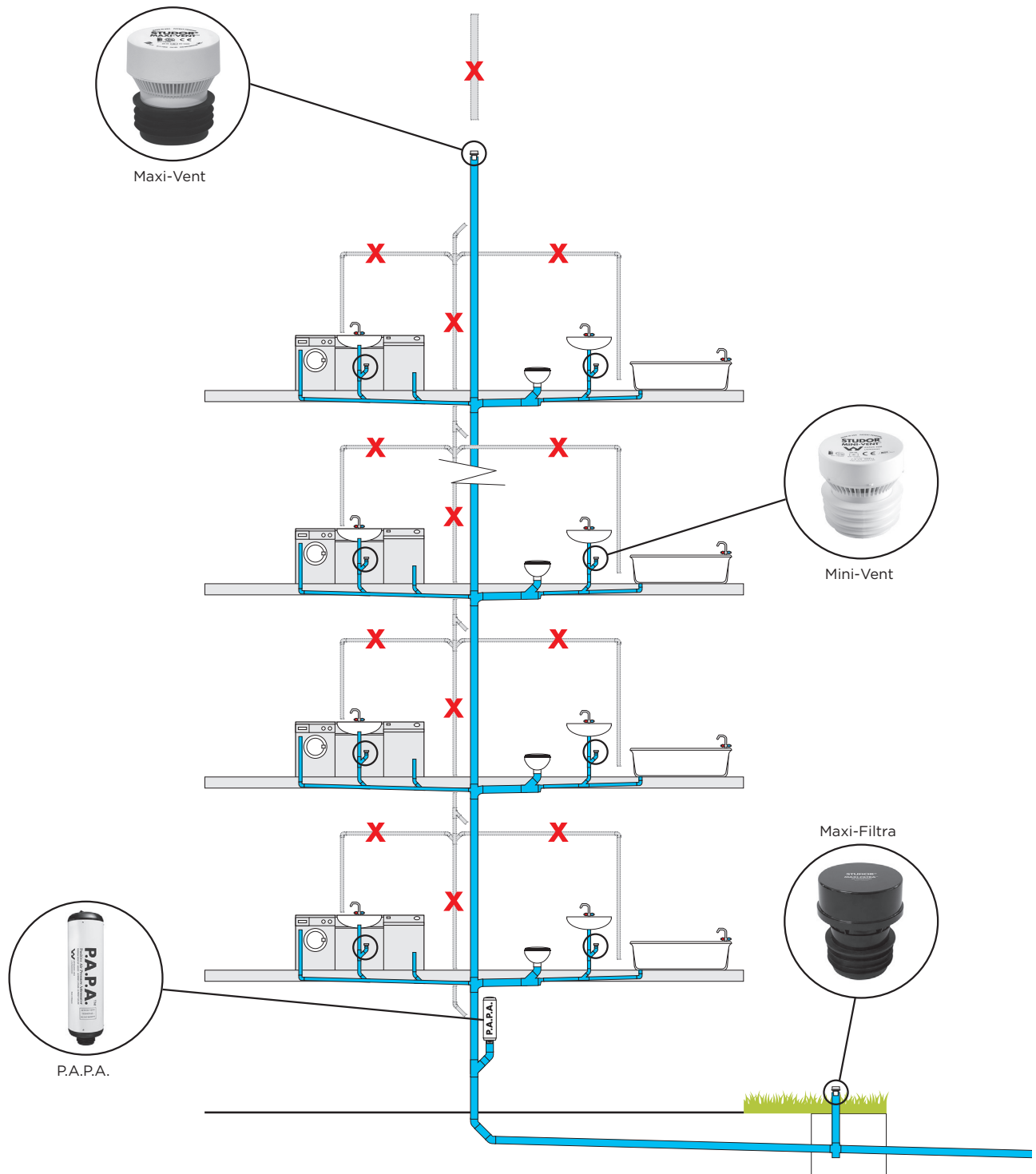
Rubber ring joint increases flexibility of the pipe system during ground movement or earthquake



Snap cap technology with tight rubber ring containment and installation angle indication

# How to consider unnecessary piping

The concept is simple: Studor active drainage ventilation products replace traditional secondary ventilation within drainage systems and will prevent the loss of water seals in traps.



\*Refer Aliaxis Active Drainage Ventilation brochure for design guide

# Pipes

## Pipe with socket



d	Length	Code
40 x 1,8	150	PPA-040-018-015-D
40 x 1,8	250	PPA-040-018-025-D
40 x 1,8	500	PPA-040-018-050-D
40 x 1,8	1000	PPA-040-018-100-A
40 x 1,8	1500	PPA-040-018-150-A
40 x 1,8	2000	PPA-040-018-200-A
40 x 1,8	3000	PPA-040-018-300-A
50 x 1,8	150	PPA-050-018-015-D
50 x 1,8	250	PPA-050-018-025-D
50 x 1,8	500	PPA-050-018-050-D
50 x 1,8	1000	PPA-050-018-100-A
50 x 1,8	1500	PPA-050-018-150-A
50 x 1,8	2000	PPA-050-018-200-A
50 x 1,8	3000	PPA-050-018-300-A
75 x 2,3	150	PPA-075-023-015-D
75 x 2,3	250	PPA-075-023-025-D
75 x 2,3	500	PPA-075-023-050-D
75 x 2,3	1000	PPA-075-023-100-A
75 x 2,3	1500	PPA-075-023-150-A
75 x 2,3	2000	PPA-075-023-200-A
75 x 2,3	3000	PPA-075-023-300-A
90 x 2,8	150	PPA-090-028-015-D
90 x 2,8	250	PPA-090-028-025-D
90 x 2,8	500	PPA-090-028-050-D
90 x 2,8	1000	PPA-090-028-100-A

d	Length	Code
0 x 2,8	1500	PPA-090-028-150-A
90 x 2,8	2000	PPA-090-028-200-A
90 x 2,8	3000	PPA-090-028-300-A
110 x 3,4	150	PPA-110-034-015-D
110 x 3,4	250	PPA-110-034-025-D
110 x 3,4	500	PPA-110-034-050-D
110 x 3,4	1000	PPA-110-034-100-A
110 x 3,4	1500	PPA-110-034-150-A
110 x 3,4	2000	PPA-110-034-200-A
110 x 3,4	3000	PPA-110-034-300-A
125 x 3,9	150	PPA-125-039-015-D
125 x 3,9	250	PPA-125-039-025-D
125 x 3,9	500	PPA-125-039-050-D
125 x 3,9	1000	PPA-125-039-100-A
125 x 3,9	1500	PPA-125-039-150-A
125 x 3,9	2000	PPA-125-039-200-A
125 x 3,9	3000	PPA-125-039-300-A
160 x 4,9	150	PPA-160-049-015-D
160 x 4,9	250	PPA-160-049-025-D
160 x 4,9	500	PPA-160-049-050-A
160 x 4,9	1000	PPA-160-049-100-A
160 x 4,9	1500	PPA-160-049-150-A
160 x 4,9	2000	PPA-160-049-200-A
160 x 4,9	3000	PPA-160-049-300-A

## Pipe plain-end



d	Length	Code
200 x 6,2	3000	PPA-200-062-300-A

# Fittings

## Double socket



d	Code
40	VMD-040-000-00D
50	VMD-050-000-00D
75	VMD-075-000-00D
90	VMD-090-000-00D
110	VMD-110-000-00D
125	VMD-125-000-00D
160	VMD-160-000-00D
200	VMD-200-000-00D

## Sleeve socket



d	Code
40	VMP-040-000-00D
50	VMP-050-000-00D
75	VMP-075-000-00D
90	VMP-090-000-00D
110	VMP-110-000-00D
125	VMP-125-000-00D
160	VMP-160-000-00D
200	VMP-200-000-00D

## Socket plug



d	Code
40	VKK-040-000-00D
50	VKK-050-000-00D
75	VKK-075-000-00D
90	VKK-090-000-00D
110	VKK-110-000-00D
125	VKK-125-000-00D
160	VKK-160-000-00D
200	VKK-200-000-00D

## Reducer eccentric



d	Code
50 x 40	VRD-050-040-00D
75 x 40	VRD-075-040-00D
75 x 50	VRD-075-050-00D
90 x 40	VRD-090-040-00D
90 x 50	VRD-090-050-00D
90 x 75	VRD-090-075-00D
110 x 50	VRD-110-050-00D
110 x 75	VRD-110-075-00D
110 x 90	VRD-110-090-00D
125 x 110	VRD-125-110-00D
160 x 110	VRD-160-110-00D
160 x 125	VRD-160-125-00D
200 x 160	VRD-200-160-00D

## Swept bend



α	d	Code
87,5	50*	VKL-050-LBR-090D
87,5	75*	VKL-075-LBR-090D
87,5	110*	VKL-110-LBR-090D

\*fabricated

## Expansion socket



d	Code
75	VDK-075-000-00D
90	VDK-090-000-00D
110	VDK-110-000-00D

## Elbow



Elbow 45°

Elbow 87.5°

α	d	Code
15	40	VKL-040-000-15D
15	50	VKL-050-000-15D
15	75	VKL-075-000-15D
15	90	VKL-090-000-15D
15	110	VKL-110-000-15D
30	40	VKL-040-000-30D
30	50	VKL-050-000-30D
30	75	VKL-075-000-30D
30	90	VKL-090-000-30D
30	110	VKL-110-000-30D
45	40	VKL-040-000-45D
45	50	VKL-050-000-45D
45	75	VKL-075-000-45D
45	90	VKL-090-000-45D
45	110	VKL-110-000-45D
45	125	VKL-125-000-45D
45	160	VKL-160-000-45D
45	200	VKL-200-000-45D
67	40	VKL-040-000-67D
67	50	VKL-050-000-67D
67	75	VKL-075-000-67D
67	90	VKL-090-000-67D
67	110	VKL-110-000-67D
87,5	40	VKL-040-000-90D
87,5	50	VKL-050-000-90D
87,5	75	VKL-075-000-90D
87,5	90	VKL-090-000-90D
87,5	110	VKL-110-000-90D
87,5	160	VKL-160-000-90D
87,5	200	VKL-200-000-90D

## Branch



Branch 45°

α	d	Code
45	40 x 40	VTR-040-040-45D
45	50 x 40	VTR-050-040-45D
45	50 x 50	VTR-050-050-45D
45	75 x 40	VTR-075-040-45D
45	75 x 50	VTR-075-050-45D
45	75 x 75	VTR-075-075-45D
45	90 x 40	VTR-090-040-45D
45	90 x 50	VTR-090-050-45D
45	90 x 75	VTR-090-075-45D
45	90 x 90	VTR-090-090-45D
45	110 x 40	VTR-110-040-45D
45	110 x 50	VTR-110-050-45D
45	110 x 75	VTR-110-075-45D
45	110 x 90	VTR-110-090-45D
45	110 x 110	VTR-110-110-45D
45	125 x 110*	VTR-125-110-45AD
45	125 x 125	VTR-125-125-45D
45	160 x 110	VTR-160-110-45D



Branch 87.5°

α	d	Code
45	160 x 160	VTR-160-160-45D
45	200 x 200	VTR-200-200-45D
67	40 x 40	VTR-040-040-67D
67	50 x 40	VTR-050-040-67D
67	50 x 50	VTR-050-050-67D
67	75 x 40	VTR-075-040-67D
67	75 x 50	VTR-075-050-67D
67	75 x 75	VTR-075-075-67D
67	90 x 40	VTR-090-040-67D
67	90 x 50	VTR-090-050-67D
67	90 x 90	VTR-090-090-67D
67	110 x 50	VTR-110-050-67D
67	110 x 75*	VTR-110-075-67AD
67	110 x 110	VTR-110-110-67D
87,5	40 x 40	VTR-040-040-90D
87,5	50 x 40	VTR-050-040-90D
87,5	50 x 50	VTR-050-050-90D
87,5	75 x 40	VTR-075-040-90D

α	d	Code
87,5	75 x 50	VTR-075-050-90D
87,5	75 x 75	VTR-075-075-90D
87,5	90 x 75*	VTR-090-075-90AD
87,5	90 x 50	VTR-090-050-90D
87,5	90 x 90	VTR-090-090-90D
87,5	110 x 40	VTR-110-040-90D
87,5	110 x 50	VTR-110-050-90D
87,5	110 x 75	VTR-110-075-90D
87,5	110 x 90	VTR-110-090-90D
87,5	110 x 110	VTR-110-110-90D
87,5	125 x 110*	VTR-125-110-90AD
87,5	125 x 125	VTR-125-125-90D
87,5	160 x 110*	VTR-160-110-90AD
87,5	160 x 160	VTR-160-160-90D
87,5	200 x 200	VTR-200-200-90D

\*assembled

## Clean out branch 90°



d	Code
50	VCZ-050-000-00D
75	VCZ-075-000-00D
90	VCZ-090-000-00D
110	VCZ-110-000-00D
125	VCZ-125-000-00D
160	VCZ-160-000-00D
200 *	VCZ-200-000-90AD

\*fabricated

## Double branch



α	d	Code
45	110 x 50	VCR-110-050-045
45	110 x 110	VCR-110-110-045
67	90 x 90 *	VCRZ-090-090-067
67	110 x 50 *	VCRZ-110-050-067
67	110 x 110 *	VCRZ-110-110-067
90	110 x 110 *	VCRZ-110-110-090

\*fabricated

## Double corner branch



α	d	Code
90	110 x 110 *	VCNZ-110-110-090

## Vent Cowl



d	Code
50	WYW-050-000-000T
75	WYW-075-000-000T
110	WYW-110-000-000T
160	WYW-160-000-000T

## Akavent sockets

d	Description	Code
75	dBlue Plug-in socket	VVEN-KIE-075-00D
110	dBlue Plug-in socket	VVEN-KIE-110-00D
110	dBlue Expansion socket	VVEN-WLO-110-00D
160	dBlue Expansion socket	VVEN-WLO-160-00D

# Traps

## Floor waste gully



d	Code
110/50/50/50/75	VWP-110-050-75D

## Four way riser



d	Code
110/50/50/50/50	VKO-110-050-00D

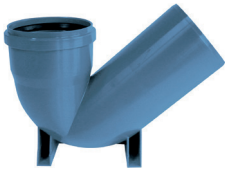
## Adjustable disconnecter trap



d	Code
50 *	VSF-050-000-00D
75 *	VSF-075-000-00D
90 *	VSF-090-000-00D
100 *	VSF-110-000-00D

\*fabricated

## P-trap



d	Code
110	VSFP-110-000-00D

# Transition fittings

## Trap connection socket



d	Code
40 x 32	VRD-SYF-040-32D
40 x 40	VRD-SYF-040-40D

## Trap connection bend



d	Code
40 x 32	VKL-SYF-040-32D
40 x 40	VKL-SYF-040-40D
50 x 32	VKL-SYF-050-32D
50 x 40	VKL-SYF-050-40D

## Cast Iron transition



d	Code
50 x 58	TRA-050-000-000
75 x 78	TRA-075-000-000
110 x 110	TRA-110-000-000

## PVC to dBlue transition



d	Code
36/40	TRA-PVC-036-040
43/50	TRA-PVC-043-050
56/75	TRA-PVC-056-075

## Brackets

### Bracket with rubber lining (metal)



d	Code
40	POB-STL-040-000
50	POB-STL-050-000
75	POB-STL-075-000
90	POB-STL-090-000
110	POB-STL-110-000
125	POB-STL-125-000
160	POB-STL-160-000
200	POB-STL-200-000

### Socket retainer for testing



d	Code
110	VDSC-KIE-STL-110
160	VDSC-KIE-STL-160

### Socket securing clip



d	Code
40	VCLP-KIE-STL-040
50	VCLP-KIE-STL-050
75	VCLP-KIE-STL-075
90	VCLP-KIE-STL-090
110	VCLP-KIE-STL-110
125	VCLP-KIE-STL-125
160	VCLP-KIE-STL-160
200	VCLP-KIE-STL-200

## Accessories & spare parts

### dBlue lubrication



	Code
250 ml	PAS-250-000-000

### Chamfer tool



d	Code
40 - 160	NAR-FAZ-040-160

### Pipe cutters



d	Code
40 - 75	NAR-OBC-040-075
50 - 125	NAR-OBC-050-125
90 - 160	NAR-OBC-090-160

### Hole saw for floor gully and four way riser



d	Code
45	NAR-KOR-045-000

### Deburr tool



d	Code
40 - 200	NAR-OKR-040-200

### Rubber ring

SBR



d	Code
40	USZ-KAN-040-BL
50	USZ-KAN-050-BL
75	USZ-KAN-075-BL
90	USZ-KAN-090-BL
110	USZ-KAN-110-BL
125	USZ-KAN-125-BL
160	USZ-KAN-160-BL
200	USZ-KAN-200-BL

# Cew Sin Range of Products





# Product Certification And Standard Compliance

## PVC-U SOIL, WASTE & VENT SYSTEM

### MS 1063:2002

- Unplasticized polyvinyl chloride (pvc-u) pipes for soil and waste discharge (low and high temperature) within the building structure.
- Unplasticized polyvinyl chloride (pvc-u) fittings for soil and waste discharge (low and high temperature) within the building structure.

## PVC-U RAINWATER DRAINAGE SYSTEM

### BS EN 12200-1:2016

- Unplasticized polyvinyl chloride (pvc-u) rainwater pipes for above ground external use.

### MS 1063:2002

- Unplasticized polyvinyl chloride (pvc-u) pipes for soil and waste discharge (low and high temperature) within the building structure.
- Unplasticized polyvinyl chloride (pvc-u) fittings for soil and waste discharge (low and high temperature) within the building structure.

### BS EN ISO 1452-2:2009

- Unplasticized polyvinyl chloride (pvc-u) pipes for water supply.

## PVC-U UNDERGROUND SEWERAGE SYSTEM

### MS 979:PART 1:1985

- Unplasticized polyvinyl chloride (pvc-u) pipes for non-pressure underground drainage and sewerage.

### MS 979:PART 2:1985

- Unplasticized polyvinyl chloride (pvc-u) pipes for non-pressure underground drainage and sewerage.

## HDPE (PE100) PIPE

### MS 1058:PART 2:2005 & ISO 4427: PART 2:2007+A1:2014

- Polyethylene (pe) pipes for water supply.

## PVC-U PRESSURE PIPE SYSTEM

### MS 628-2:2014

- Unplasticized polyvinyl chloride (pvc-u) pipes for water supply (plain end).
- Unplasticized polyvinyl chloride (pvc-u) pipes for water supply (with socket for solvent cement and elastomeric ring seal joints).

### MS 628-4:2015

- Polyvinyl chloride (pvc) solvent cement.

### BS 3506:1969

- Unplasticized polyvinyl chloride (pvc-u) pipes for industrial applications.

### BS EN ISO 1452-2:2009

- Unplasticized polyvinyl chloride (pvc-u) pipes for water supply.

## PP-R HOT & COLD WATER SYSTEM

### MS 2286:PART 2:2012 & ISO 15874:PART 2:2013

- Plastic piping systems for hot and cold water installations -polypropylene (pp) -part 2: pipes.

### MS 2286:PART 3:2012 & ISO 15874:PART 3:2013

- Plastic piping systems for hot and cold water installations -polypropylene (pp) -part 3: fittings.

## PIPES FOR INFRASTRUCTURE

### MS 1034:2013

- Rigid polyvinyl chloride (pvc) conduit for underground telecommunication cables.

### BS 3506:1969

- Unplasticized polyvinyl chloride (pvc-u) pipes for industrial applications.

### MS 1058:PART 2:2005 & ISO 4427: PART 2:2007+A1:2014

- Polyethylene (pe) pipes for water supply.

### TM CERTIFICATION OF SOLID WALL HIGH DENSITY POLYETHYLENE (HDPE) PN 10 / SDR13.6 / 110MM CONDUIT

### TM CERTIFICATION OF UPVC TELECOMMUNICATION DUCT 107MM

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