

# THE SILENT TREATMENT

dBlue Acoustic  
Plumbing System  
Sanitary and Drainage



# COMPACT LIVING

Current urban living requires more people to live in close proximity. Councils and town planners promote the intensification of apartment-style living to allow for a rapidly growing population.

Communal living increases the need to reduce noise in these intimate environments, to provide comfort and wellbeing for occupants.

To assist with this noise-reduction initiative, Marley offers the dBlue acoustic plumbing system suitable for sanitary and drainage applications. This noise-reducing system has been specified and installed in commercial buildings, hospitals, apartments, homes and other multi-occupancy urban developments throughout New Zealand. The dBlue acoustic pipe system reduces water-flow noise, creating a quieter living environment. This multi-layered high performance plumbing system delivers the best kind of silent treatment.



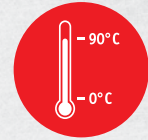
# dBLUE BENEFITS

## Noise reduction



This BRANZ-appraised system has been shown to reduce the noise generated by waste water flowing through a plumbing system.

## Temperature resistant



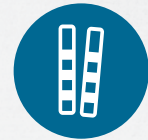
Temperature resistant up to 90 degrees and down to -10, dBlue is ideal for use in hot waste removal.

## No lagging required



dBlue doesn't require lagging which saves on installation time and allows for easy inspection.

## High chemical resistance



Ranging from acids (pH2) to alkalis (pH12).

## Space saving



With no lagging required, dBlue allows for more useable space in your building.

## 100% Recyclable



This sustainable system is 100% recyclable and adheres to the environmental standard ISO4001.

### dBlue has Certification to Australian and New Zealand Standards

dBlue is designed in accordance with the installation standard AS/NZS3500.2. The system complies with AS/NZS 7671 and has WaterMark certification. The dBlue system has been developed under a ISO 9001 Quality management system and ISO 14001 Environmental management system.

**AS/NZS 7671:2010** – Plastic piping systems for soil and waste discharge (low and high temperature) inside buildings – Polypropylene(PP)

- **WaterMark - WMK25729**

**AS/NZS 5065:2005** – Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications

- **WaterMark – WMK25751**

**Branz appraisal - No 610**



**BRANZ Appraised**  
Appraisal No.610 [2021]



**ISO 9001**  
Quality management system



**ISO 14001**  
Environmental management system

# ACOUSTIC ATTRIBUTES

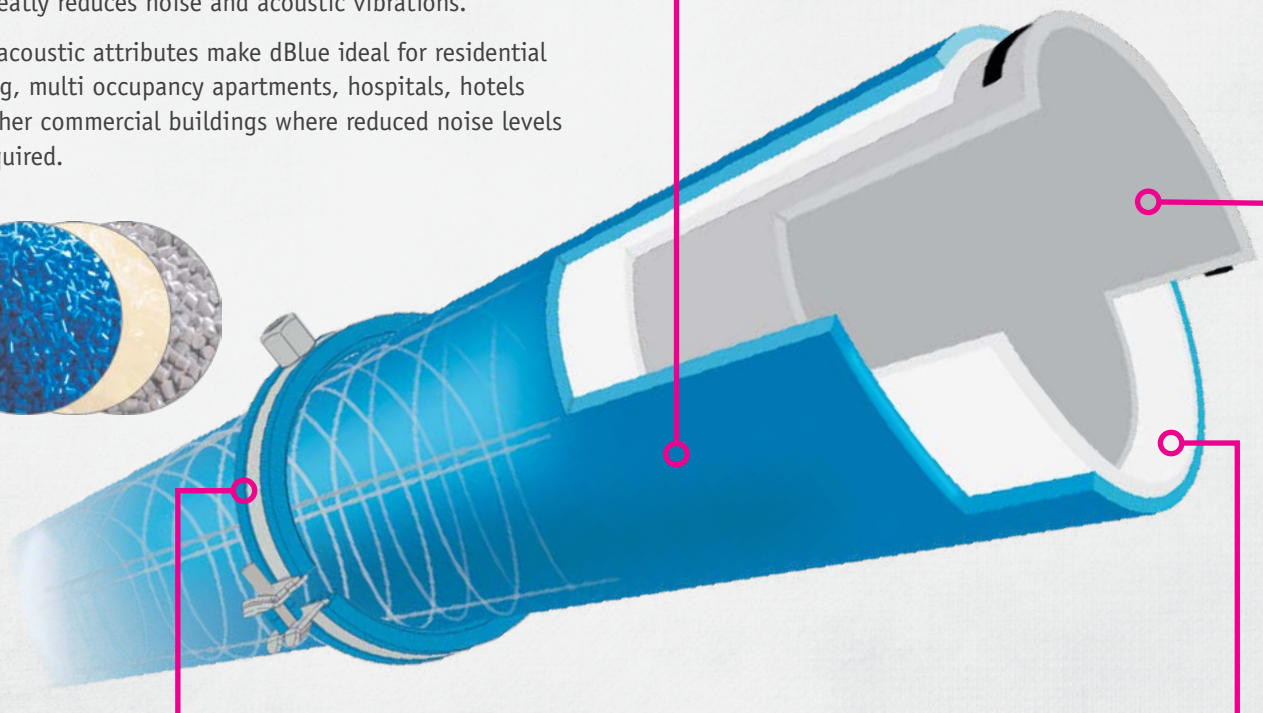
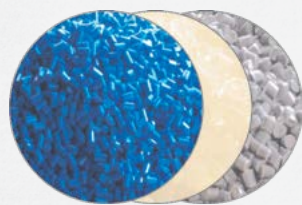
The Marley dBlue acoustic plumbing system is engineered from a state-of-the-art combination of plastic and sound absorbing mineral filler (PP-MD). The dBlue system is designed to minimise the transfer of sound within sanitary and drainage plumbing applications.

The material formula is developed by the Aliaxis R&D laboratory and offers a unique combination of acoustic performance, weight, chemical and temperature resistance with mechanical strength.

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

Used in conjunction with the dBlue acoustic rubber lined brackets, the system effectively uncouples the vibrations and greatly reduces noise and acoustic vibrations.

These acoustic attributes make dBlue ideal for residential housing, multi occupancy apartments, hospitals, hotels and other commercial buildings where reduced noise levels are required.



## INTERNAL LAYER - GREY

- High temperature resistance 90° (peak 95°)
- Chemical resistance
- Smooth surface

## OUTER LAYER - BLUE

- Resistance to external tensions
- Installation down to -10°C

## RUBBER LINED ACOUSTIC BRACKET

- Reduces acoustic vibration in the system
- Acoustic dampening rubber lining
- Strong metal bracket to handle weight loads
- Spacers included to allow for guide brackets

## INTERMEDIATE LAYER - WHITE

- Reinforced by minerals
- Noise reduction
- High stiffness

# ACOUSTIC PERFORMANCE

## Noise in a sanitary and drainage system is caused by waste water flowing inside a plumbing pipe system.

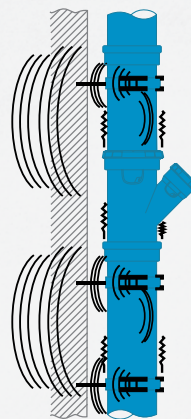
The waste water is turbulent and causes noise as well as vibrations in the pipe structure. The vibrations are emitted directly from the pipe surface as air-borne noise and as structure-borne noise to the wall through the fixing system. dBlue has been designed to reduce both air-borne noise and structure-borne noise.

### How dBlue reduces air-borne noise

Air-borne noise is reduced using absorbent materials. The plastic PP-MD used for dBlue is a special formula adding sound-dampening mineral fillers with increased weight to maximise the absorbance of air-borne noise sound waves.

### How dBlue reduces structure-borne noise

Structure-borne noise is reduced by using soft material to acoustically uncouple the vibrating source or impact event. The dBlue acoustic bracket has a special rubber lining designed to best uncouple any vibrations from the pipe system.



#### Air-borne noise reduction

- PP-MD material
- Triple layer pipe

#### Acoustic vibration reduction

- Tight rubber ring connection between pipe and fitting

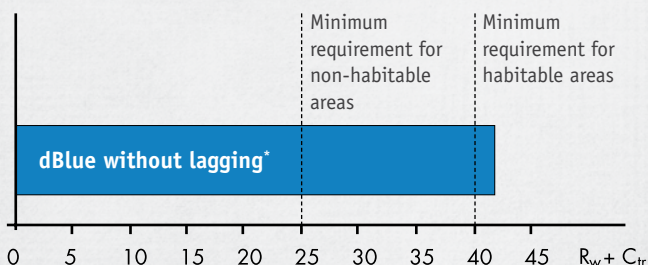
#### Structure-borne noise reduction

- dBlue® acoustic bracket with rubber lining
- Pipe and fittings from PP-MD

## The dBlue plumbing system has been tested as an international solution.

Australia and New Zealand share many plumbing standards. To offer the best proof of performance for a regional solution dBlue has been tested to Australian requirements for acoustic plumbing noise. These requirements include testing to established standards AS/NZS ISO 717.1:2004 and AS/NZS ISO 140.7:2006.

dBlue has been independently tested by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and meets the required  $R_w + C_{tr}$  25 and 40 benchmarks without the need for lagging.



\*  $R_w + C_{tr}$  40 results are extrapolated based on the  $R_w + C_{tr}$  25 results. Comparative testing with uPVC and lagging based on using 13mm Plasterboard and R1.5 insulation batts.



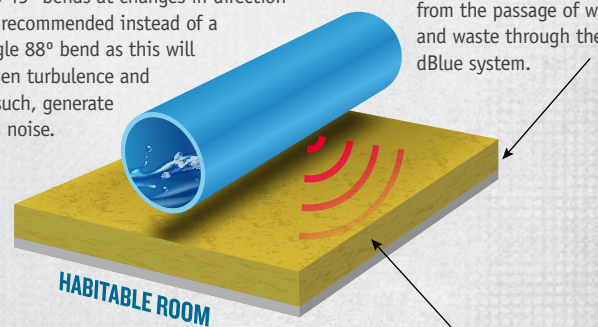
CSIRO is Australia's national science agency, and is one of the largest and most diverse scientific institutions in the world with more than 50 sites throughout Australia and overseas.

### Note. dBlue is **not intended for exposed installations.**

To meet acoustic requirements in habitable areas, the system must be separated from the living space by an industry standard ceiling or wall structure.

A dBlue system reduces structure-borne noise by using a proprietary clip system to isolate the pipe from the building structure.

Two 45° bends at changes in direction are recommended instead of a single 88° bend as this will lessen turbulence and as such, generate less noise.



Insulation and plasterboard are necessary to reduce the sound transmission of any air-borne noise emanating from the passage of water and waste through the dBlue system.

The construction materials between dBlue pipe and adjacent room must have a sound reduction level of  $R_w + C_{tr} \geq 40$  for a habitable room or  $R_w + C_{tr} \geq 25$  for a non-habitable room or kitchen.

# THE RANGE



The dBlue acoustic plumbing system includes a full range of pipes, brackets and fittings allowing for optimal sound dampening in sanitary or drainage applications within New Zealand buildings.

## Pipes



50, 75, 110 and 160mm 1 and 3 metre lengths

PA.100.50.0.15	PA.100.75.3.0
PA.100.50.0.50	PA.100.110.0.15
PA.100.50.1.0	PA.100.110.0.50
PA.100.50.3.0	PA.100.110.1.0
PA.100.75.0.15	PA.100.110.3.0
PA.100.75.0.50	PA.100.160.3.0
PA.100.75.1.0	

## Bends



50, 75, 110 to 160mm 15 to 88 degrees

PA.101.50.15	PA.101.75.88
PA.101.50.30	PA.101.110.15
PA.101.50.45	PA.101.110.30
PA.101.50.88	PA.101.110.45
PA.101.75.15	PA.101.110.88
PA.101.75.30	PA.101.160.45
PA.101.75.45	PA.101.160.88

## Slip Coupler



Slip couplers available 50, 75, 110 to 160mm

PA.110.50
PA.110.75
PA.110.110
PA.110.160

## Stop Coupler



Stop couplers available 50, 75, 110 to 160mm

PA.121.50
PA.121.75
PA.121.110
PA.121.160

## Junction 45°



45 "Y" Junction 50, 75, 110 to 160mm

PA.104.50.45	PA.104.110.50.45
PA.104.75.45	PA.104.110.75.45
PA.104.75.50.45	PA.104.160.45
PA.104.110.45	PA.104.160.110.45

## Junction 88°



88 "T" Junctions 50, 75 to 110mm

PA.104.50.88
PA.104.75.88
PA.104.110.88

## Socket Cap



50, 75 to 110mm

PA.137.50
PA.137.75
PA.137.110

## RRJ Lubrication



DBJL250

## PIPE BEVEL TOOL



DBPBTOOL

## Floor waste gully



110/50/50/50/75mm

PA.159.110.75

## PP-PVC reducer bung



40 to 50mm

PA.PVC.40.50*
PA.PVC.50.75*
PA.50.50.200^
PA.75.65.200^

## Acoustic brackets



50, 75, 110 to 160mm

PA.140.50M
PA.140.75M
PA.140.110M
PA.140.160M

## Socket clip



50, 75 to 110mm

PA.137.50CLIP
PA.137.75CLIP
PA.137.110CLIP

## Level Inverts



50, 75, 110 to 160mm

PA.123.75.50
PA.123.110.50
PA.123.110.75
PA.123.160.110

## Inspection Pipe



50, 110 to 160mm

PA.129.110
PA.129.160

## Trap Connection



50mm

PA.101.50.88.TRAP

Visit our website for a full list of the range available [marley.co.nz](http://marley.co.nz)

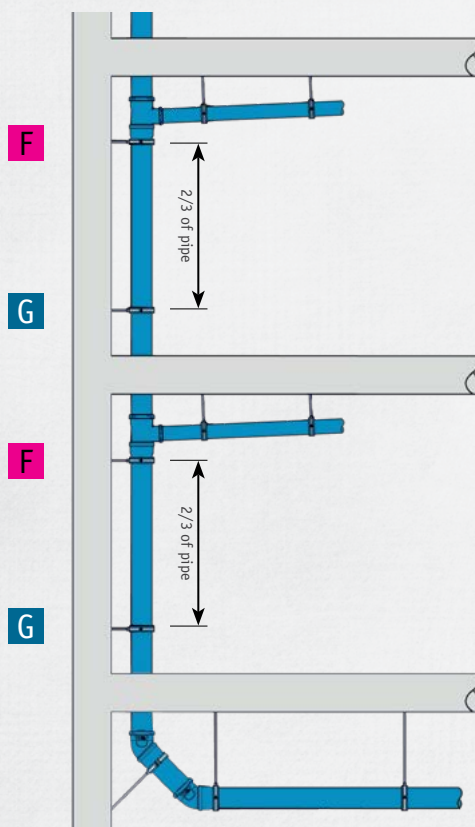
# SYSTEM OVERVIEW

The dBlue system includes design, installation and technical instructions on how to install rubber ring components using proprietary dBlue lubrication.

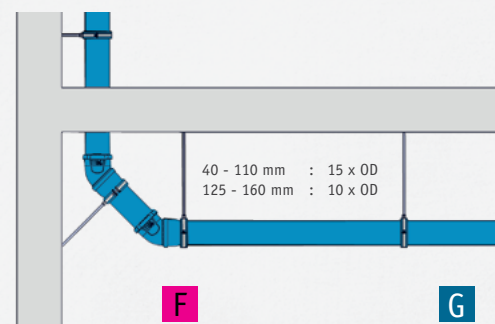
The dblue system has specific horizontal and vertical bracketing plans including required anchor and guide points.



Bracketing plan – vertical stack



Bracketing plan – horizontal stack

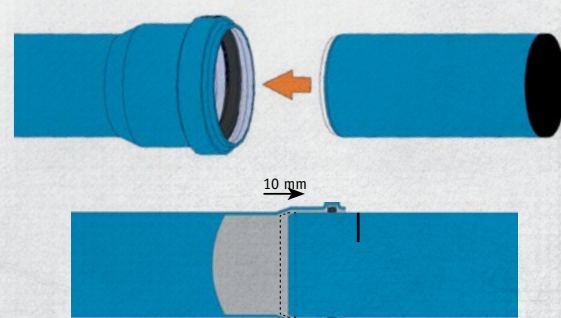


- F** Anchor point bracket (closed without spacers)
- G** Guide bracket (open with 2 spacers)

**One fitting per floor level**

- Fixed point bracket directly below each socket
- Guide bracket at 2/3 of the pipe length

Rubber ring jointing system



For full design details and technical requirements refer to the dBlue Specifications Manual available at [marley.co.nz](http://marley.co.nz).

## Sustainable Manufacturing

Marley is committed to creating environmentally sustainable processes and products and was the first plastics manufacturer in New Zealand to achieve ISO14001 registration. We are also Best Environmental Practice certified for our entire range of manufactured uPVC systems. This means we get our raw materials from sustainable and responsible sources, continuously work on our manufacturing processes to reduce our environmental footprint and accept our products back at the end of their useful life for recycling.



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