

# Product Data Sheet

## PENETRATION BOX Accessories

**Standard and modular cabinets for roof penetrations. The Axter Penetration Box is designed to address the problem of bringing service pipes, cables, air intakes, vents, ductwork through the waterproofing system on a roof.**

The Penetration Box is an insulated polyester powder coated aluminium unit that provides an aesthetic and robust solution to the housing and protection of roof penetrations and openings from the early stages of a project.

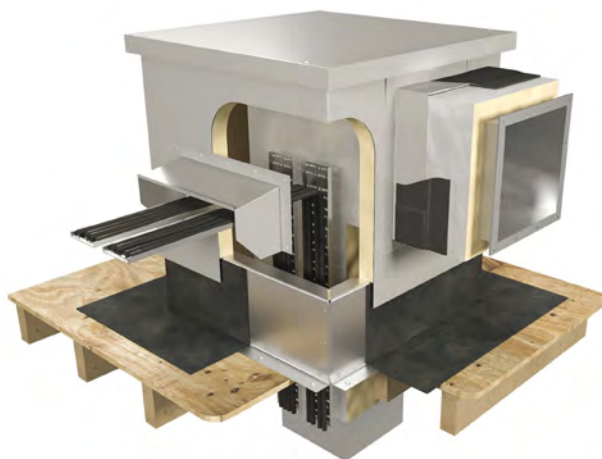
It is manufactured from sheet aluminium in RAL 7074 Telegrey powder coated finish.

Standard sized units supplied by Axter (see below) are insulated internally with 50mm PIR insulation.

The lid is removable to facilitate installation of services.

A pre-fitted weathering hood protects the point where the services enter the Penetration Box.

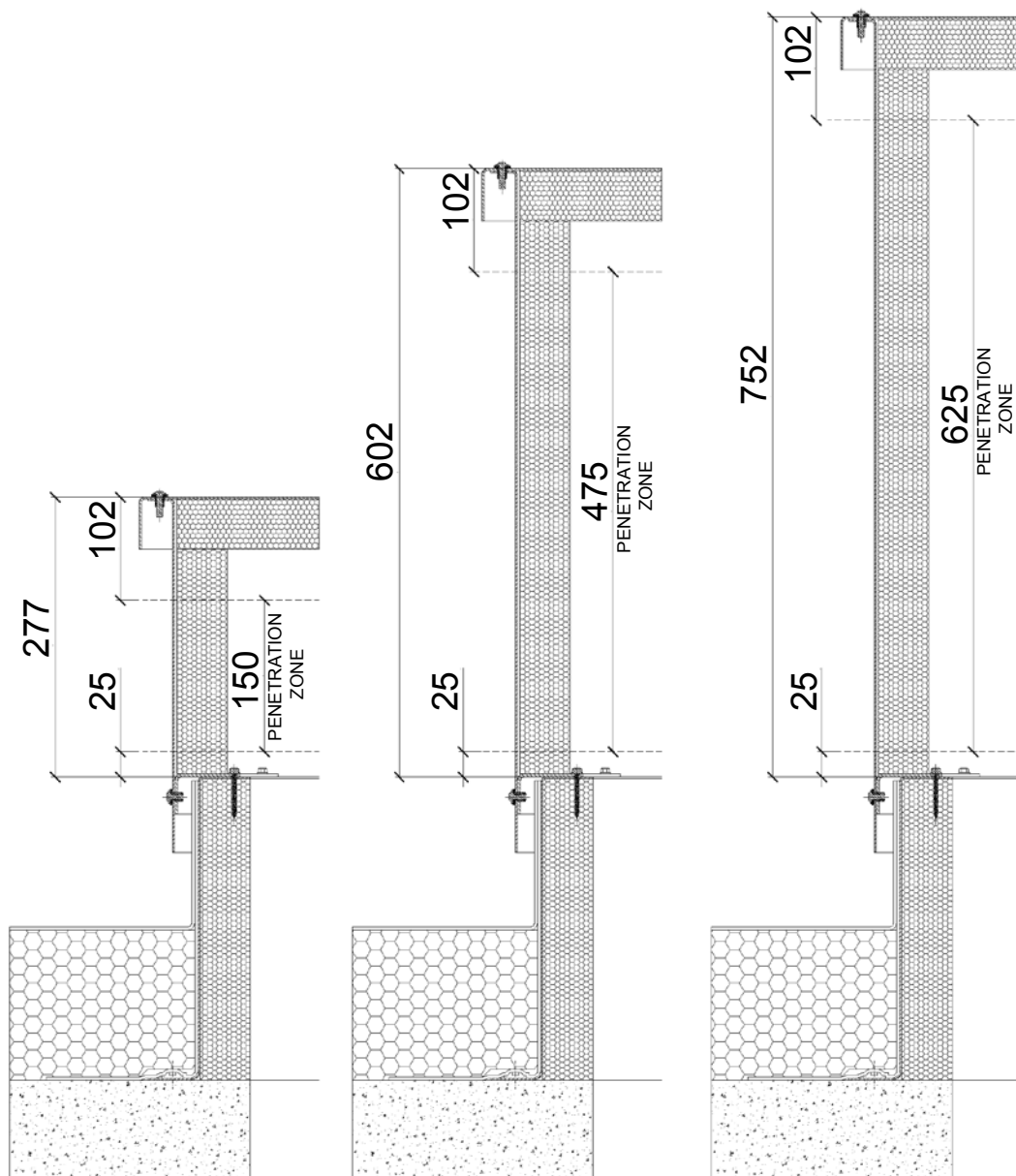
A range of weathering accessories and louvres can be added retrospectively if required.



## Key benefits

- robust and durable, protects roof penetrations/openings and eliminates associated water ingress at all stages of a project
- compatible with all roof constructions - warm, cold, inverted, green – both UPVC and aluminium kerbs available
- compatible with all roof finishes - single ply, bitumen, liquid applied and hot melt applications
- insulated internally with PIR insulation to optimise the building's thermal performance at riser position
- smart appearance and uniform detailing for multiple service locations
- can be powder coated to any RAL colour if required. All lids are removable
- most options can be retro-fitted to existing service penetrations for refurbishment projects
- bespoke and custom units available

## Typical Cabinet Section



**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 300 x 300mm. Insulated cabinet only.**  
**(diagram not to scale)**

Sold as a kit which includes base, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

Penetration Box 300 x 300. (no kerb included)	
OA height from the kerb to top of lid	277
OA cabinet width	454
OA cabinet length	454
Kerb options	
Roof opening size	300 x 300
UVPC height available	150
Aluminium heights available	200, 375, 450, 600
Penetration Box 300 x 300 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047

**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 400 x 700mm. Insulated cabinet only.  
(diagram not to scale)**

Sold as a kit which includes kerb, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

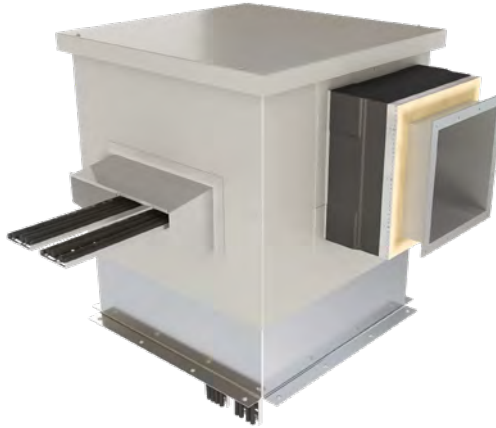
Penetration Box 400 x 700. (no kerb included)	
OA height from the kerb to top of lid	277
OA cabinet width	554
OA cabinet length	854
Kerb options	
Roof opening size	400 x 700
UVPC height available	150
Aluminium heights available	200, 375, 450, 600
Penetration Box 400 x 700 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047

**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 600 x 900mm. Insulated cabinet only.**  
**(diagram not to scale)**

Sold as a kit which includes base, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

Penetration Box 600 x 900. (no kerb included)	
OA height from the kerb to top of lid	277
OA cabinet width	754
OA cabinet length	1054
Kerb options	
Roof opening size	600 x 900
UVPC height available	150
Aluminium heights available	200, 375, 450, 600
Penetration Box 600 x 900 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047

**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 600 x 600mm. Insulated cabinet only.**  
**(diagram not to scale)**

Sold as a kit which includes kerb, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

Penetration Box 600 x 600. (no kerb included)	
OA height from the kerb to top of lid	602
OA cabinet width	754
OA cabinet length	754
Kerb options	
Roof opening size	600 x 600
Aluminium heights available	200, 375, 450, 600
Penetration Box 600 x 600 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047

**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 750 x 750mm. Insulated cabinet only.**  
**(diagram not to scale)**

Sold as a kit which includes kerb, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

Penetration Box 750 x 750. (no kerb included)	
OA height from the kerb to top of lid	752
OA cabinet width	904
OA cabinet length	904
Kerb options	
Roof opening size	750 x 750
Aluminium heights available	200, 375, 450, 600
Penetration Box 750 x 750 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047

**PENETRATION BOX STANDARD SIZES****PENETRATION BOX 750 x 1500mm. Insulated cabinet only.**  
**(diagram not to scale)**

Sold as a kit which includes kerb, insulated cabinet and lid, and weathering hood.

Manufactured from sheet aluminium in a RAL 7074 Telegrey polyester powder coated finish. The cabinet is insulated internally with 50mm PIR insulation and the unit has a removable lid facilitating installation of services. A pre-fitted weathering hood protects the point where services enter the cabinet.

Penetration Box 750 x 750. (no kerb included)	
OA height from the kerb to top of lid	752
OA cabinet width	904
OA cabinet length	1654
Kerb options	
Roof opening size	750 x 1500
Aluminium heights available	200, 375, 450, 600
Penetration Box 750 x 750 Materials	
Cabinet & Lid	2.0mm aluminium, 50mm PIR insulation, thermal efficiency, 0.34W/mK. PPC to RAL 7047
Weathering hood	2.0mm aluminium, PPC to RAL 7047



## USING THE RIGHT PENETRATION BOX

### Select a kerb

**Base Material:** Axter penetration boxes kerbs are available in either aluminium or UPVC.

Aluminium kerb will normally be used for inverted roofs and hot melt systems.

UPVC kerbs can be used with most bituminous, single ply and liquid applied systems.

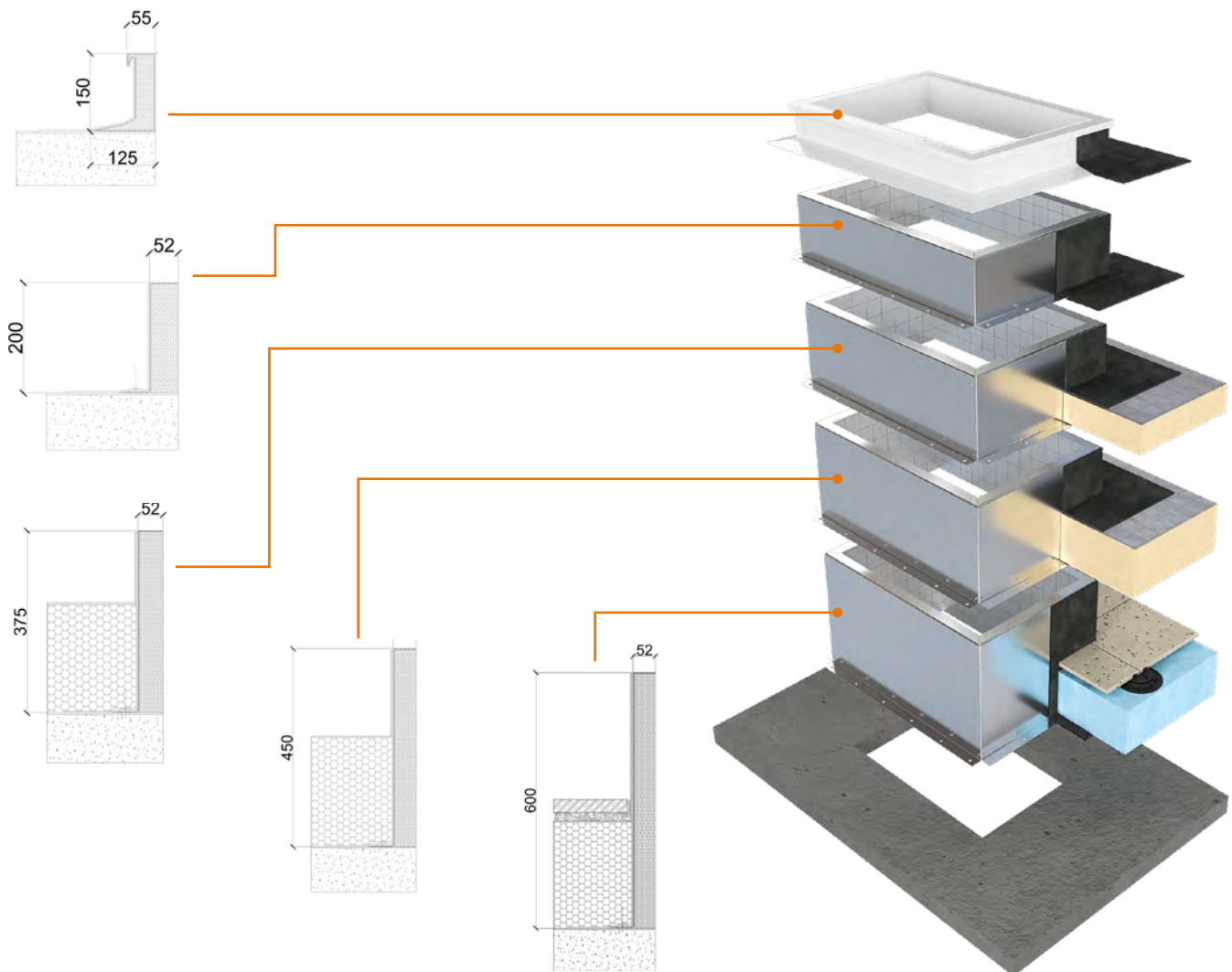
**Width and Length:** For ease of use, the dimensions used in specifying the width and length are the clear internal dimensions.

Kerbs are available in 300x300mm, 400x700mm, 600x900mm, 600x600mm, 750x750mm, 750x1500mm.

**Roof aperture:** The roof aperture size required is the same as the internal dimensions.

**Powder coating:** The aluminium kerbs can be powder coated to any RAL colour on request.

### Typical kerb sections



### Height:

For warm roof constructions, the height of the base required will depend on whether the base sits on the roof deck or on top of the waterproofing. The top of the kerb should be at least 150mm above the finished roof level. For cold roof constructions, a 150mm high kerb will normally be sufficient.

**Insulation:** The aluminium kerb are insulated with 50 mm insulation and provide a 'U' value of 0.41W/mK.

### Choose a matching cabinet & lid

**Material:** The cabinets are manufactured from 2mm aluminium and come with a removable lid for easy access into the box.

**Width and Length:** For ease of use and ordering, the dimensions used will be the same as the base.

**Height:** Standard heights represent the overall height of the cabinet.

When adding the base and cabinet heights, 75mm should be deducted to allow for the weathering lap between the cabinet and the base.

**Insulation:** All cabinets are insulated giving a thermal efficiency of 0.34W/mK.

**Powder coating:** All penetration boxes are finished with polyester powder coated finish in RAL 7047 Telegrey. Other RAL colours are available upon request.



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