



# Hynds Pinnacle<sup>®</sup> Manhole Steps

Technical Guide D4.15

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The ultimate step system. Hynds Pinnacle® Manhole Steps are watertight, safer, easier and quicker to install. Providing spark resistance, extra durability from corrosion through the use of a galvanised steel core fully encapsulated with industrial grade PE.



### **Applications**

Stormwater Manholes

Wastewater Manholes

Industrial sewer access when used in Hynds Pinnacle® precast chambers

### **Product Attributes**

Extremely high strength

Easy to install

Slip resistant

Watertight connection - no leaks

High durability

Lock clip replacement method enabled

### Approvals/Standards

Manufactured and tested to exceed European Standard EN13101

New Zealand specification
Australian Standard AS 4198:1994

### Sustainability

Available in Hynds LC® low carbon concrete

Verifiable carbon footprint data available

Customisable for climate-resilient infrastructure

### Quality/Environment/Health & Safety

ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018



### The benefits of Hynds Pinnacle® Manhole Steps

### Total corrosion protection

With a galvanised steel core and fully encapsulated industrial grade PE coating.

### Safety first

Spark proof surface giving increased Health and Safety in underground sewer insulation. No sharp edges or corners. Extra wide step width.

### Superior pull-out resistance

Pull-out resistance in excess of required safety standards.



### Watertight

Non-penetrating watertight connection through manhole wall.

No water leaks.

## Innovative step leg connection

Purpose designed black step insert cast into precast element. Locking clip and postioning sight line marks are provided.

### Easy push-in installation

No nut tightening required with rubber/ plastic hammer. One person required.

### **Design Specifications**

Hynds Pinnacle® Manhole steps are used for accessing the manhole system or precast chambers. These steps are set at 300 mm intervals within the riser sections, with the first step placed 150 mm down from the top of the riser.

These steps have a galvanised steel core and coated with a high industrial grade PE.

Manufactured and tested to AS4198:1994 and European Standard EN13101 is suitable for Stormwater, Wastewater and Sewer applications and is available as standard in all Pinnacle® and PERFECT® Manholes.

The Pinnacle® Manhole Step is easily installed by pushing the step into cast in inserts that don't penetrate the wall of

the riser making it watertight. The step is locked into place by a patented locking clip. There is no need to tighten nuts from the outside which makes installation much quicker and safer.

Damaged Pinnacle® Manhole Steps can be replaced easily in any Pinnacle® or PERFECT® manhole should the need arise.

### **TABLE 1 PE Encap Step Code**

Step Type	Product Code	Step Colour
PE Encap Galvanised push in step	STEPPENCAPGALV	Yellow

### **Step Installation**



1. Ensure cast-in black step inserts are clean and free of debris. Position step from inside the chamber.



2. Postion each step leg to align with the cast-in black step inserts.



3. Apply even force on both legs.



4. Push in as far as possible by hand.



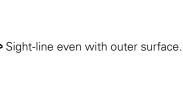
5. Gently tap on the hammering bar in line with each leg.



6. Continue tapping to ensure the step inserts evenly.



7. Installation is complete when the outside sight-line is even with the outer surface of the internal chamber wall.





### Step removal method

If a step requires removal or replacement, this may be performed without compromising the pull-out capability of the cast-in black insert.

To remove an existing step;

- 1. Cut the long horizontal step landing in half.
- 2. Once cut, the two parts are then rotated 90° so they can be pulled out of each black insert.
- 3. Check that the cast-in black inserts remain in good order.
- 4. The cast-in black inserts may be reused with a new Hynds Pinnacle® step.





Hynds Pinnacle® Manhole step testing.



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