

i+seal Moulds

Aluminothermic Welding

Adding Value
“ I really do think this is
the future of welding. ”
GPX Engineering



Pandrol's i+seal – the world's first self-sealing mould – significantly streamlines the aluminothermic welding process.

Aluminothermic welding traditionally involves luting – sealing moulds to rail ends with paste or sand to avoid metal leaks. i+seal removes the need to do this. Built-in strip expands during the pre-heating phase of welding to create a tight seal between the mould and rail. Benefits include speed, increased reliability, reduced waste and a more comfortable, less stressful process for the welder.

The new technology is compatible with vignole and groove rails and is recommended for the most demanding networks, meeting the needs of short possession times and high safety standards.

→ TECHNICAL FEATURES

Automatic sealing

A built-in expansive strip automatically expands during the preheating phase of welding and creates a tight seal between the mould and the rail.

Felted mould

The mould is equipped of compressive felt to perfectly fit the rail profile, removing the need to manually grind the mould against the rail during the setup.

Moisture escape

Moisture during the preheating process can cause defects. The i+seal mould allows moisture to escape more easily than with luting.

Environmentally friendly

The moulds reduce plastic waste and the amount of energy needed for production and transportation.

Compatibility

i+seal moulds are compatible with vignole and grooved rail.

Compatible with worn rails

The i+seal mould in its standard configuration can weld rail up to 3mm wear. Welding up to 6mm wear or more is possible with adapted procedure.

→ ADVANTAGES

- Using i+seal saves three to five minutes per weld, as the mould is sealed automatically and there is no need for the luting procedure.
- The self-sealing felt is more reliable than manual sealing, especially in cold weather and tight spaces.
- Using i+seal reduces the defect rate by facilitating moisture evacuation during the preheat.
- It is environmentally friendly, as the mould design reduces plastic waste and saves on the energy needed to produce and transport traditional luting material.
- i+seal promotes the welder's health and wellbeing, reducing stress and time spent kneeling.
- The moulds are compatible with vignole and groove rails, meeting the demands of short possession times and high safety standards.



→ COMPONENTS

1. 2 moulds equipped with felt and expansive strip
2. Baseplate equipped with felt and expansive strip
3. Piece of felt to be placed between mould and slag tray
4. Plug

→ VIDEO OF THE MOULD IN USE



→ LEARN MORE



i+weld



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