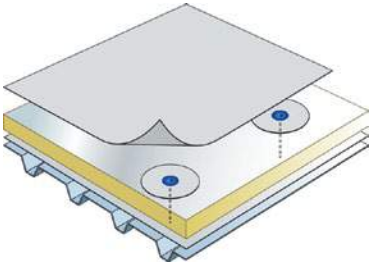
fatra

Product Guide

Environmentally friendly PVC single ply membranes



Fatra product guide

Contents

Company background

Fatra A.S.

Fatra is part of the Agrofert Holdings group which has been manufacturing a range of technical products including waterproofing membranes since 1935. Based in the Czech Republic, the group is one of the country's largest employers with over 20,000 staff. Fatra has enjoyed over 75 years of growth and is now one of Europe's largest manufacturers of single ply membranes.

Fatra (UK) Ltd

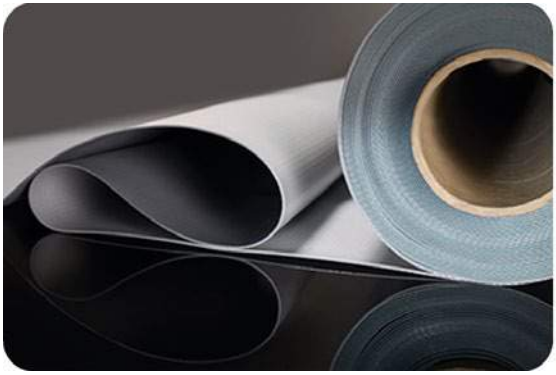
Fatra was formed over 20 years ago and has been involved in many noteworthy and high-profile projects. The company has continued to expand and now offers one of the most comprehensive packages available in the industry, including a range of high quality components backed by design services, costing advice, field support and training.

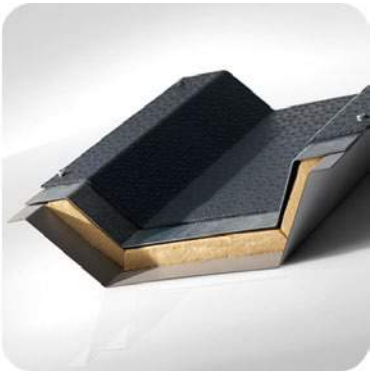
Quality and environment

Fatra membranes have been fully tested by the leading authorities in the UK. As well as a certified life expectancy in excess of 30 years from the British Board of Agrément (BBA), Fatra has both ISO 9001 Quality Standard and ISO 14001 Environmental Standard approvals, as well as FM approval and a BRE Green rating of A+.

Introduction to Fatra membranes

Fatra PVC membranes are made from recyclable PVC and in many cases are from already recycled product. They have been tested by the British Board of Agrément and last in excess of 30 years. There are four main membrane types.





FF810 membrane
Reinforced PVC membrane for mechanically fixed roofs

FF807 membrane
Fleece-backed PVC membrane for adhered roofs

FF812 membrane
Textured walkway membrane. To be used above FF810 or FF807 if required

FF804 membrane
Non-reinforced membrane for detailing. Not to be used as a field sheet.

The membranes are individually wrapped and delivered on pallets. The pallet shrink wrapping is for transport and is not a weatherproofing. The rolls should be stored flat in a dry environment. When being laid out for installation they should be left a short while to lose any ripples caused by the manufacturing process.

Single ply toolkit

The following tools will be needed to install Fatra membranes:

For welding:

110v Hot air welding gun (Leister Triac or similar)
20mm or 40mm welding nozzle
20mm 60 degree nozzle (for detailing)
Wire brush (for cleaning)
40mm Teflon-coated roller (for main welding)
Brass penny roller (for internal angles)
Seam probe (for testing welds)

For fixing:

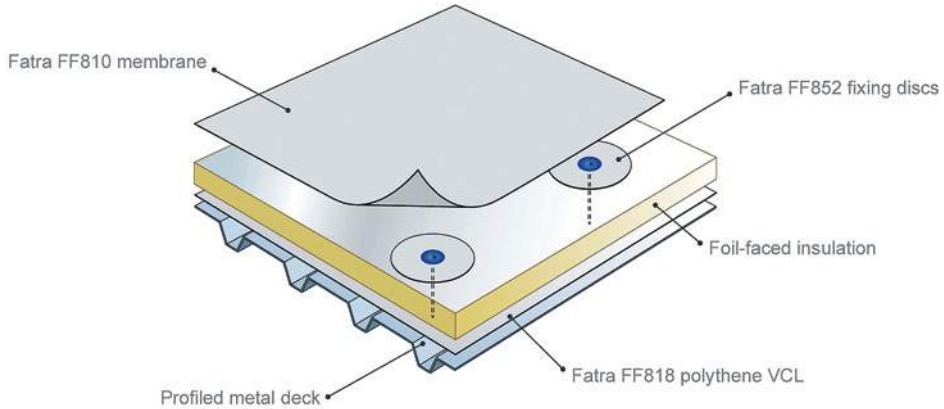
Screw gun (110v)
Correct driver and bits

For detailing:

Scissors (not knives) for trimming membrane
Metal snips (for trimming Fatra metal)
Toothed applicator for FF855 adhesive
Roller for FF859 adhesive
Tape measure, ruler & chalk line

Fatra FF810 membrane

Reinforced membrane for mechanically fixed roofs



Typical build-up

Profiled metal deck or 18mm plywood deck

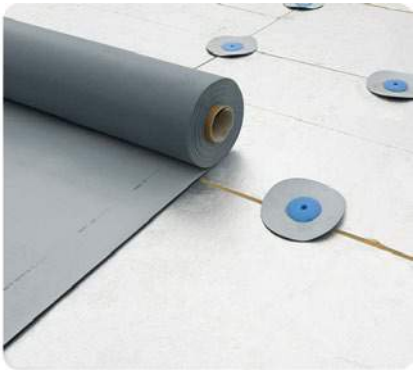
Fatra FF818 Polythene VCL

Foil-faced PIR insulation

FR-45 Tube washer, FBS-5.8 fixings and FF852 fixing discs

FF855 adhesive

Fatra FF810 membrane (1.5mm thick, 1.3m x 20m roll)



Fatra FF810 membrane

Installation

The Fatra mechanically fastened system uses Fatra FF810 reinforced membrane held in place using FF852 fixing discs and FF855 adhesive. Most commonly used over profiled metal decks, it can also be laid over plywood or OSB decks provided they are at least 18mm thick.

Lay FF818 polythene VCL loose over the substrate and tape all joints of the VCL with Fatra FA1 butyl sealant tape, allowing for 100mm side and end laps. Loose lay the insulation board to a staggered bond pattern, following the manufacturer's instructions.

Set out the FF852 fixing discs according to the project specific fixing calculation issued by the Fatra Technical Department, using the specified Fatrafix fastener. Across the width of the sheet the discs should be fixed at a maximum of 650mm centres. The last row of fixings should be no more than 200mm from the perimeter.

Using the toothed applicator supplied with the adhesive, apply FF855 adhesive to the FF852 discs. Roll the FF810 membrane over the discs. Line up and pull the membrane tight before the adhesive 'grabs'. Then smooth using a soft broom or the palm of your hand.

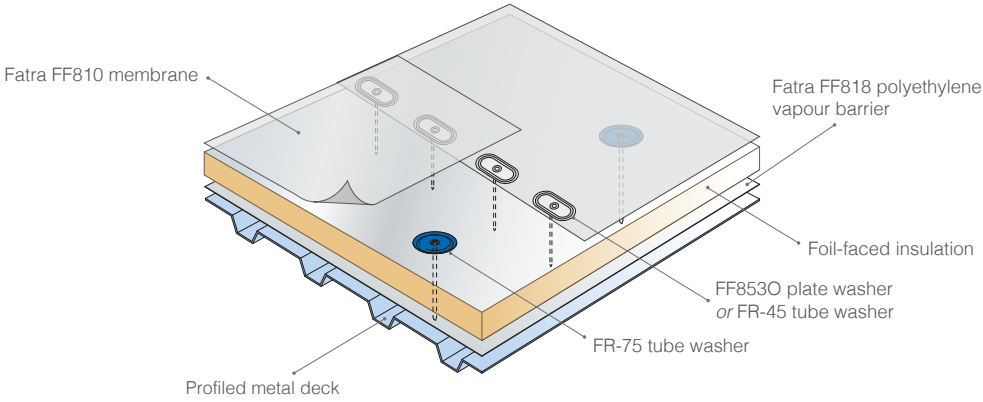
Securing the Fatra FF852 fixing discs

Applying FF855 adhesive to the FF852 fixing discs

Lining up and rolling out the membrane

Fatra FF810 membrane

Reinforced membrane for side-lap fixed roofs



Typical build-up

Profiled metal deck or 18mm plywood deck

Fatra FF818 Polythene VCL

Foil-faced PIR insulation

FR-75 Tube washer & FBS-5.8 fixings (Insulation)

FR-45 Tube washer / FF853O plate & FBS-5.8 fixings (Membrane)

Fatra FF810 membrane (1.5mm thick, 1.3m x 20m roll)

Fatra FF810 membrane

Side-lap fixed installation

Fatra reinforced membrane can also be mechanically side-lap fixed as an alternative option to the FF852 fixing disc system.

When side-lap fixing, Fatra FF810 1.3m wide membrane should be used, with each sheet overlapping the adjacent sheet by 120mm. The fixings should be spaced at 150mm centres, or in accordance with the Fatra wind load calculations, and the edge of the washer should be 10mm away from the edge of the membrane.

Insulation boards should be secured independently when lap fixing membrane. Use an FR-75 tube washer with the specified Fatrafix fastener.

For fastening the membrane, use either an FF853O 82mm x 40mm oval steel plate washer or an FR-45 tube washer with the appropriate fastener. If using a tube washer, ensure a suitable tool is used to puncture the membrane: do not snip the edge of the roll.

Once the membrane has been fixed, roll the next section of FF810 membrane over the sheet that has been secured, carefully lining up the membrane to achieve a 120mm overlap. This provides enough space to cover the fixings and to achieve a full hot air weld.

Side-lap fixing is also the preferred option if using FF814 PVC Standing seam profiles above FF810 membrane, and for any vertical upstands greater than 600mm in height.

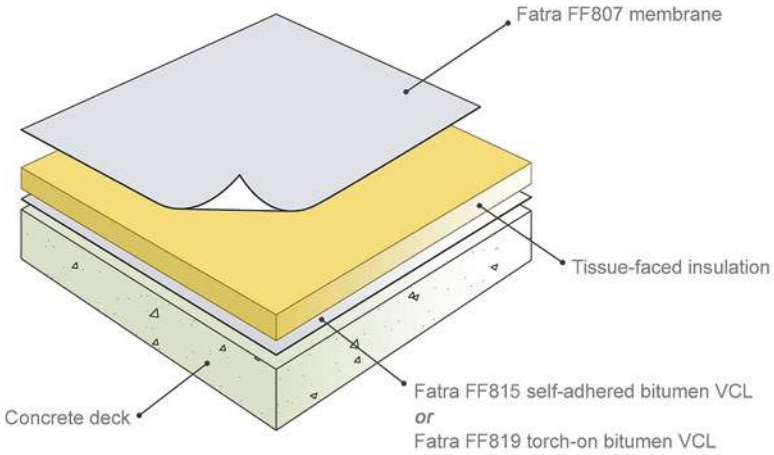
Insulation secured with FR-75 tube washers

120mm membrane overlap

Completed roof

Fatra FF807 membrane

Fleece-backed PVC membrane for adhered roofs



Typical build-up

Concrete deck

Fatra FF815 self adhered VCL or FF819 torch-on VCL

Tissue-faced PIR insulation

FF859 adhesive

Fatra FF807 membrane (1.5mm thick, 1.3m x 15.4m roll)

Fatra FF807 membrane

Installation

An adhered Fatra roof uses Fatra FF807 fleece-backed membrane. This is normally installed over insulation bonded to concrete decks. FF807 (1.3m wide) has a fleece backing and can also be bonded directly to asphalt or bituminous felt.

An appropriate bituminous felt VCL should be installed on to the dry and clean deck.

Apply Fatra FF867 insulation adhesive to the substrate. The adhesive should be in 5mm beads at 300mm centres in the centre of the roof, 150mm beads for the perimeters.

Lay the tissue faced thermal insulation board in a staggered bond pattern on to the adhesive and apply pressure to the board. Lay only the insulation that can be waterproofed that day.

After laying the insulation board roll out the membrane loose over the board making sure the membrane is running straight and the selvedge edge is lapped correctly.

Apply Fatra FF859 polyurethane adhesive to the insulation / substrate at a rate of no more than 4m² per litre.

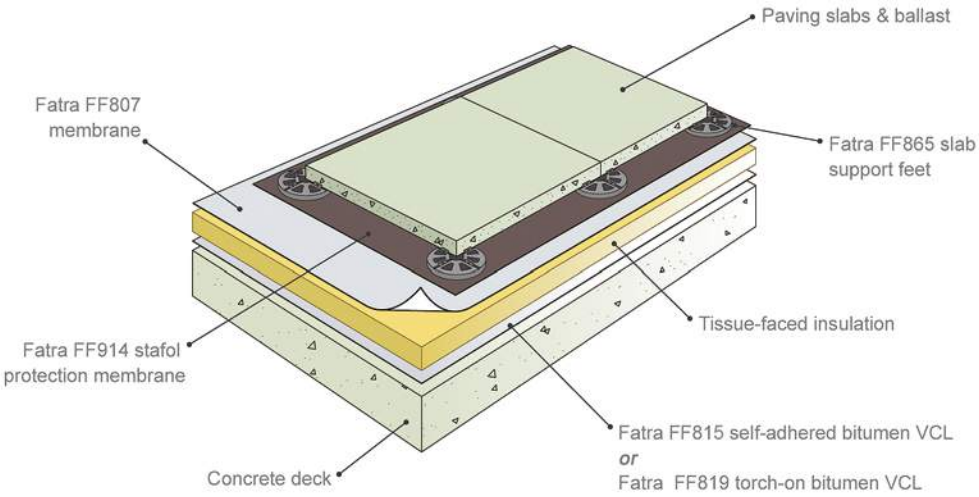
Wait until adhesive 'foams' then roll the membrane into the wet adhesive and apply pressure by using a roller or a soft brush.

Positioning the insulation boards

Applying FF859 adhesive to the insulation

Using a soft brush to smooth the membrane

Ballasted roofs



Typical build-up

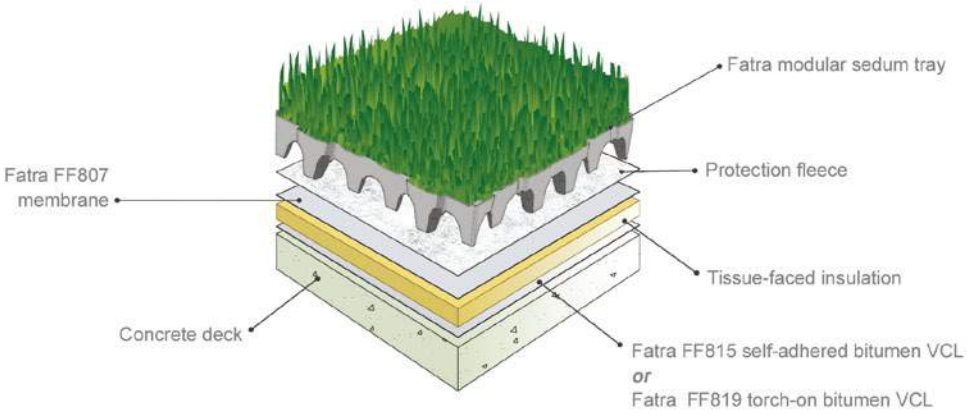
Fatra FF807 membrane (1.5mm thick, 1.3m x 15.4m roll)

Fatra FF914 protection membrane

Fatra FF865 slab support feet

Paving slabs, pebble ballast or timber decking

Modular tray green roof system



Typical build-up

Fatra FF807 membrane (1.5mm thick, 1.3m x 15.4m roll)

Fatra protection membrane or fleece

Modular sedum tray

'Sedum & wildflower' and 'Brown wildflower' trays also available

Overlaying existing roofs

As long as the structural deck has not been compromised, the option of re-roofing an existing building with Fatra products can be considered. A detailed survey should be carried out to ascertain whether the existing roof coverings have deteriorated to the extent that they must be stripped off, or if it is possible to overlay the existing roof.

Refurbishment options can include:

1) Overlay directly onto existing felt using FF807 membrane

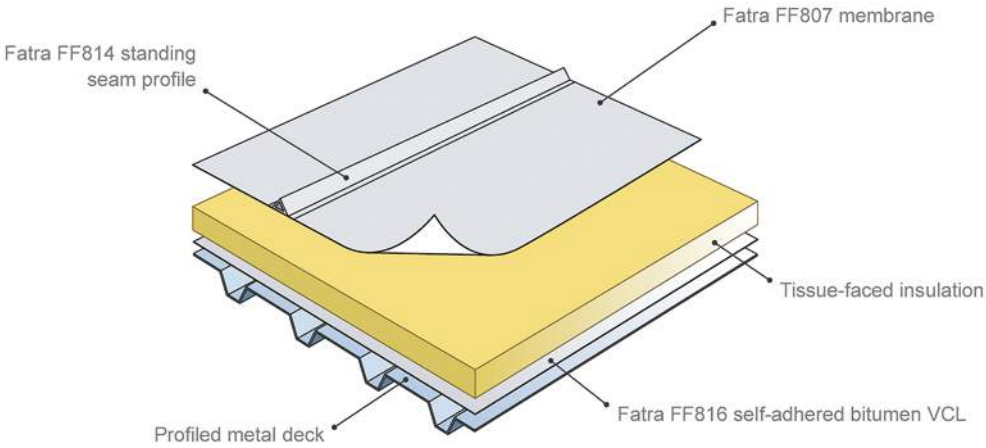
2) Mechanically fix FF801 separating fleece and use FF810 membrane

3) Mechanically fix / adhere insulation and use FF810 or FF807 membrane

4) Strip back to the existing deck and treat as a new build with new VCL, insulation and membrane

Please contact Fatra for further advice

PVC standing seam profile roofs



Typical build-up

Concrete / plywood deck

Fatra FF816 self-adhered VCL or FF819 torch-on VCL

Tissue-faced PIR insulation

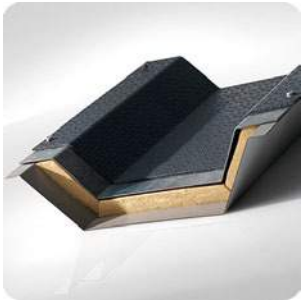
Fatra FF807 membrane (1.5mm thick, 1.3m x 15.4m roll)

Fatra FF814 PVC standing seam profile

System accessories

Fatra's aim is to provide a complete roofing solution. As part of this Fatra has introduced a number of components to ensure that the rest of the roof performs to the same high standard as the membranes. This also introduces the option of having a complete system guarantee covering all components on the roof.

- **Vapour control layers**
- **Geotextile fleeces**
- **Adhesives, primers & sealants**
- **Membrane coated metal**
- **Mechanical fixings & tube washers**
- **Galvanised bars**
- **Textured walkway membrane**
- **PVC standing seam profiles**
- **Vertical & horizontal rainwater outlets**
- **Sedum roof accessories**
- **Membrane cover tape and butt-straps**
- **Preformed corner and pipe details**
- **Lightning clips**



System accessories

Fatra rainwater outlets

Fatra outlets are designed specifically to work with Fatra membranes. Each comes with a flange of Fatra membrane to enable outlets to be welded to the roofing membrane and provide a jointless system.

Trims and corners

Fatra preformed corners must be used on every corner and Fatra coated membrane trims must always be used at every change of direction*.
Standard trims are available from stock, and custom trims are available to order.
**Fatra galvanised bars can also be used as an alternative to Fatra metal.*

Fixings

To install Fatra roof systems Fatrafix fixings must always be used. Fatra fixings cover most applications, deck types and insulation thicknesses. Fatra tube washers reduce the length and cost of fixings as well as acting as a thermal break.

Fatra liquid applied waterproofing: Introduction

Fatra's liquid applied waterproofing system is a cold applied waterproofing solution suitable for a wide range of applications, substrates and finishes providing an uninterrupted seamless finish. The coating delivers a long lasting, cost effective waterproofing solution for both new build and existing roof refurbishment projects.

The system is a single component, unreinforced, polyurethane liquid waterproofing coating that contains humidity activated accelerator technology to provide a highly elastic and hydrophobic membrane. Due to the unique formulation, the Fatra liquid system cures to form a completely defect free membrane with excellent mechanical and elastomeric properties, high tensile & tear strength and exceptional adhesion properties.

Fatra liquid applied waterproofing system is the ideal weatherproofing product for many applications including:

New & existing roofs • Inverted roofs • Warm roofs • Balconies & terraces
Felt / asphalt roof overlays • Gutter refurbishment • Awkward junctions

System benefits include:

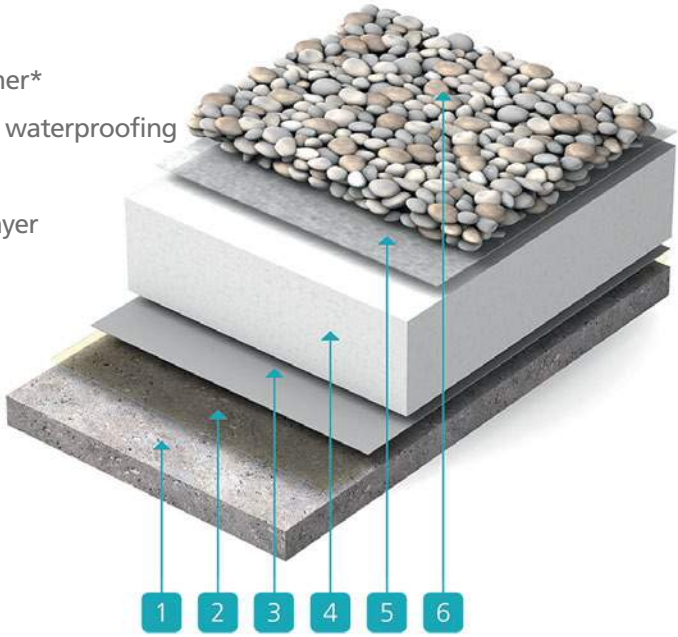
Speed of installation • 25 year life expectancy • 20 year product guarantee
Forms a waterproof & seamless membrane • Single component & fast curing
Reduces project time: no mixing, simple installation • BBA, CE & ISO certification

Fatra liquid applied waterproofing: Typical build-up

Typical build-up

Inverted roof application with ballast

1. Concrete substrate
2. **FLS 101** Same day primer*
3. **FLS 104** Liquid applied waterproofing
4. Insulation
5. Water management layer
6. Pebble ballast



* The primer type will depend on the project size and substrate type

Please refer to the 'Fatra Liquid Applied Waterproofing System' brochure for further details.

Environmentally friendly PVC single ply membranes

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