

Foil-Tec VCL

Insulating Vapour Control Layer

Highly reflective and robust vapour control layer



- High vapour resistance.
- Helps to reduce condensation risk in accordance with BS 5250: 2002.
- Reduces air leakage when used in conjunction with YBS Foil Tape.
- The low emissivity reflective properties of Foil-Tec increases the thermal performance of the structure in which it is installed.
- Corrosion resistant surface.
- Excellent nail tear resistance.
- Tough and durable material with a high burst strength.
- Simple to cut, lightweight and easy to handle with no protective clothing required.

Foil-Tec VCL
Single

Foil-Tec VCL
Double

YBS Insulation has developed this product to increase the thermal performance of both walls and roofs.



YBS Insulation
HIGH QUALITY PRODUCTS FOR THE BUILDING INDUSTRY

Insulating Vapour Control Layer

Why use a vapour control layer?

Installing a vapour control layer as part of the internal lining will effectively control condensation and considerably help to reduce the rate of heat loss as it provides a barrier to air leakage.

A vapour control layer (VCL) is essential because when warm air meets a cold surface, condensation will occur and resulting in water/moisture formation.

Sources of moisture.

Controlling the passage of vapour within a building is a crucial element in eliminating condensation risk.

With the ever increasing demands for insulation, the risk of build up of moisture can be significant, especially with the everyday activities which can add to this such as cooking, washing dishes, clothes and ourselves.

It is not just in the domestic realm where vapour control is crucial, but in the commercial world, it is also critical. Paper mills, printing houses and laundries are just a few of the many examples where large amounts of moisture is created, which also needs to be managed.

Nature always finds a way and even when constructing a building using concrete slabs, masonry, plaster and screed, care needs to be taken that the moisture from these wet installations does not affect the overall structure of the building itself.

Foil-Tec VCL

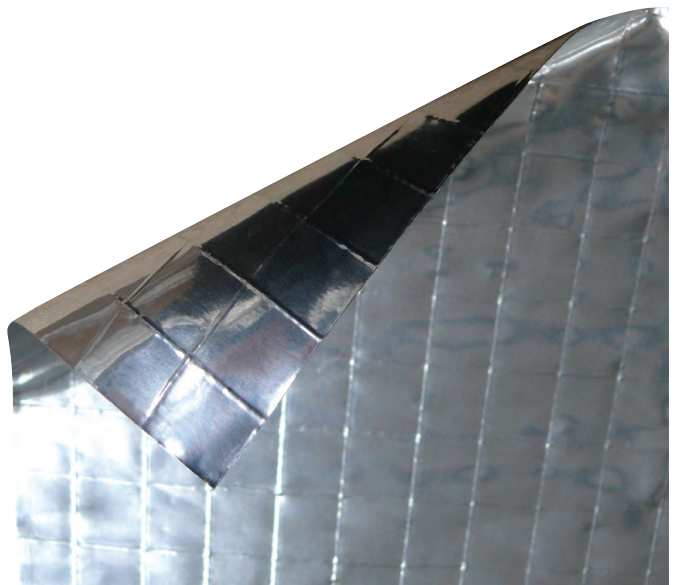
YBS Insulation has developed Foil-Tec to increase the thermal performance and effectively control condensation and air tightness of both walls and roofs.

Foil-Tec provides additional strength and thermal performance over conventional vapour control layer material, and giving the added benefit of a service cavity.

Foil-Tec is a multi-layer foil laminate coated with nitrocellulose to provide a corrosion resistant, highly reflective and robust vapour control layer insulation system.

Foil-Tec is a high-performance material which acts by creating a low emissivity air space in the wall or roof, thus reflecting the heat back into the building.

Foil-tec can be applied to enhance 'U' values in new build or refurbished building project to meet and exceed current building regulations.



Timber Frame Application

Foil-Tec VCL Single

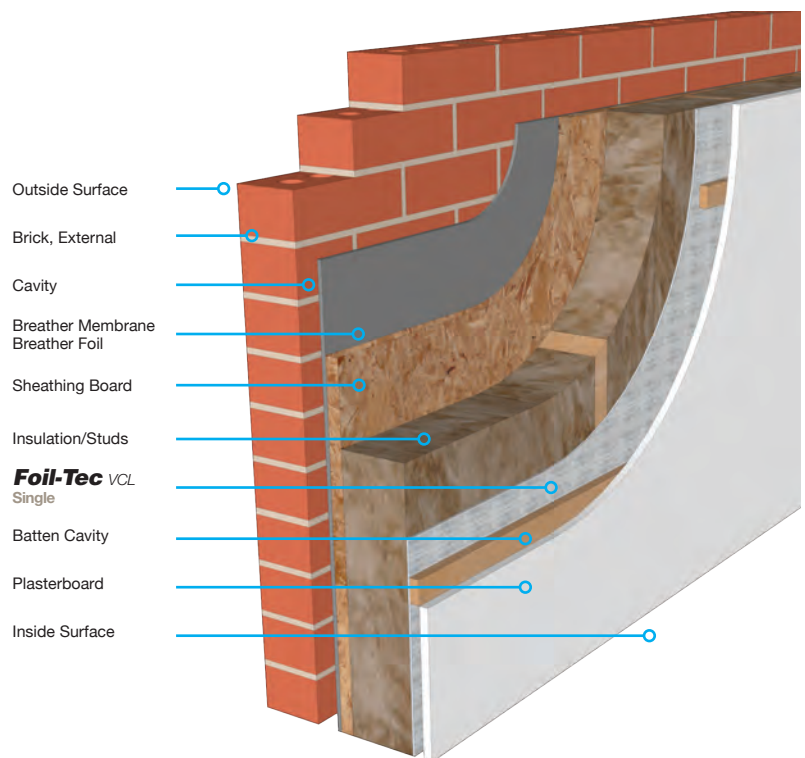
Fixing Instructions

Installation of Foil-Tec VCL Single for Timber frame applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the stud. The foil side of the material should face the adjacent air space. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

If there is no cavity present between the studs, fix horizontal counter battens, minimum 25mm by 38mm, to the timber frame at appropriate centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

All calculations based on 140mm timber frame, for custom calculations please send your request to technical@ybsinsulation.com

Description

Foil-Tec Single - Breather Foil

95mm Mineral Wool (0.044 W/mK)
115mm Mineral Wool (0.040 W/mK)
140mm Mineral Wool (0.040 W/mK)
120mm PIR (0.022 W/mK)

U-Value

0.28 W/m ² k
0.25 W/m ² k
0.22 W/m ² k
0.19 W/m ² k

Foil-Tec Single - Standard Breather Membrane

140mm Mineral Wool (0.044 W/mK)
140mm Mineral Wool (0.040 W/mK)
125mm PIR (0.022 W/mK)
140mm PIR (0.022 W/mK)

0.27 W/m ² k
0.25 W/m ² k
0.22 W/m ² k
0.19 W/m ² k

Foil-Tec VCL Double

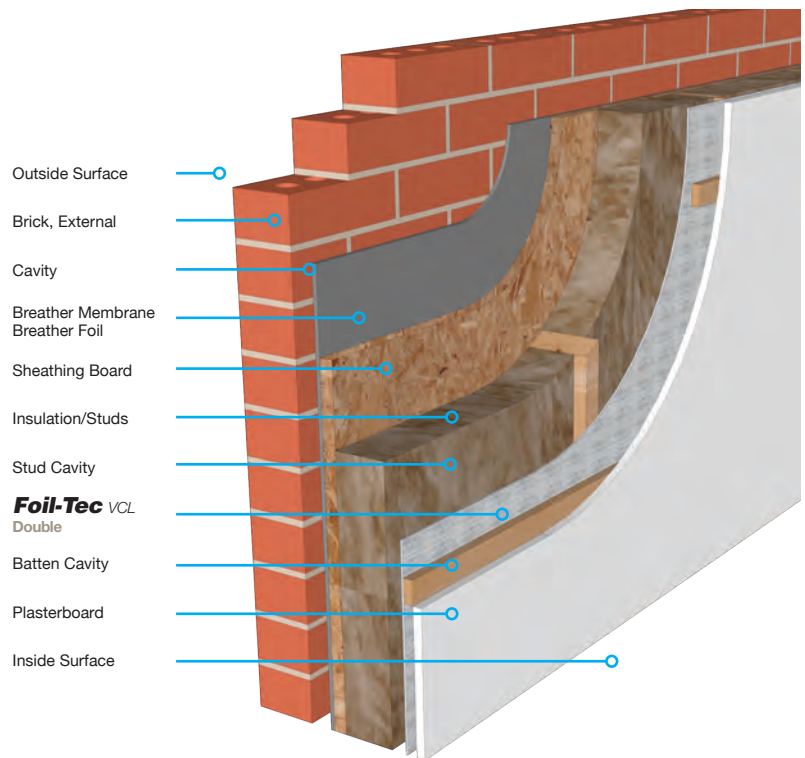
Fixing Instructions

Installation of Foil-Tec VCL Double for Timber frame applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is then applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the studs. The foil sides of the material will be facing the cavities formed. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Horizontal counter battens, minimum 25mm by 38mm are fixed to the wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

All calculations based on 140mm timber frame, for custom calculations please send your request to technical@ybsinsulation.com

Description	U-Value
Foil-Tec Double - Breather Foil	
60mm Mineral Wool (0.044 W/mK)	0.28 W/m ² k
80mm Mineral Wool (0.044 W/mK)	0.25 W/m ² k
125mm Mineral Wool (0.044 W/mK)	0.22 W/m ² k
90mm PIR (0.022 W/mK)	0.19 W/m ² k
Foil-Tec Double - Standard Breather Membrane	
95mm Mineral Wool (0.044 W/mK)	0.28 W/m ² k
115mm Mineral Wool (0.040 W/mK)	0.25 W/m ² k
90mm PIR (0.022 W/mK)	0.22 W/m ² k
120mm PIR (0.022 W/mK)	0.19 W/m ² k

Cavity Wall Application (Full Fill)

Foil-Tec VCL Single

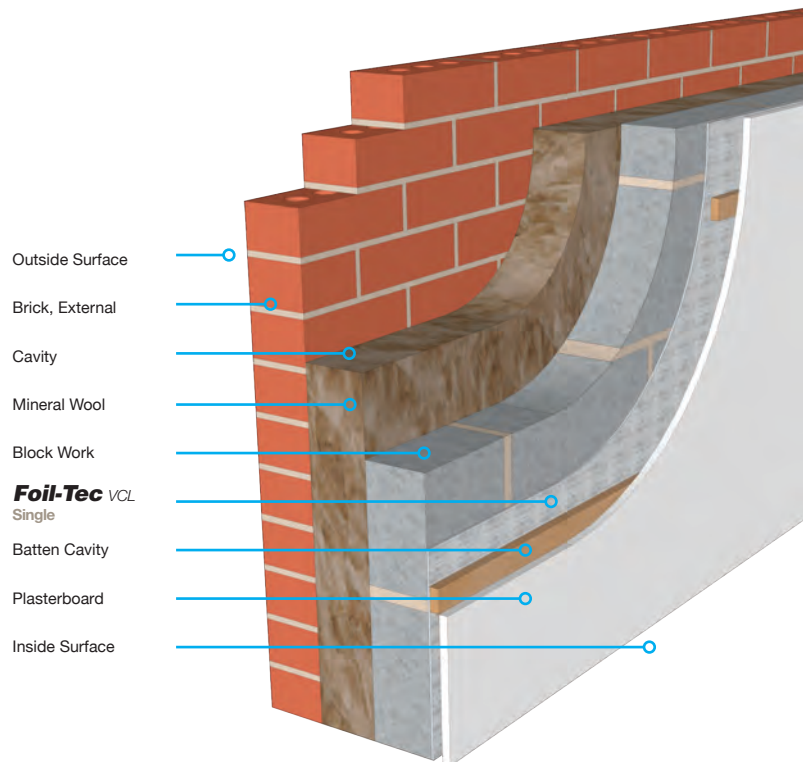
Fixing Instructions

Installation of Foil-Tec VCL Single for cavity wall applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the wall. The foil side of the material should face the adjacent air space. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Vertical counter battens, minimum 25mm by 38mm are fixed to wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description

Foil-Tec Single - 100mm Full Fill Mineral Wool

Dense Block (1.100 W/mK) - Mineral Wool (0.040 W/mK)

Medium Dense Block (0.500 W/mK) - Mineral Wool (0.035 W/mK)

Thermal Block (0.110 W/mK) - Mineral Wool (0.035 W/mK)

Thermal Block (0.110 W/mK) - Mineral Wool (0.035 W/mK) - 35mm IPB (0.88 m²K/W)

U-Value

0.28 W/m²k

0.25 W/m²k

0.22 W/m²k

0.19 W/m²k

Foil-Tec VCL Double

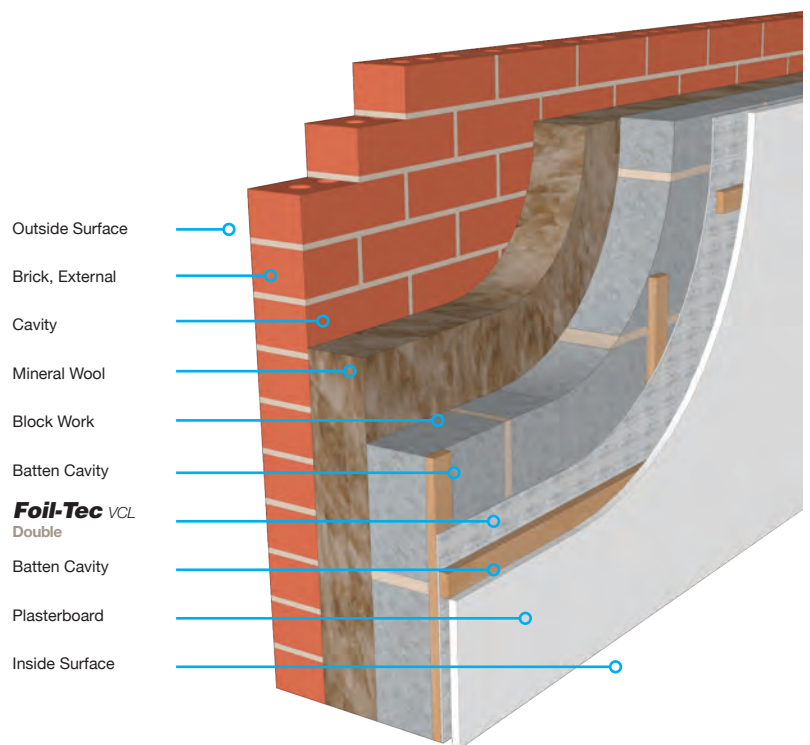
Fixing Instructions

Installation of Foil-Tec VCL Double for cavity wall applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Battens are fixed to the wall Foil-Tec VCL is then applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the battens at minimum 300mm centres. The foil sides of the material will be facing the cavities formed. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Vertical counter battens, minimum 25mm by 38mm are fixed to wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description

Foil-Tec Double - 100mm Full Fill Mineral Wool

Dense Block (1.100 W/mK) Mineral Wool (0.040 W/mK)

Dense Block (1.100 W/mK) Mineral Wool (0.035 W/mK)

Thermal Block (0.110 W/mK) Mineral Wool (0.035 W/mK)

U-Value

0.24 W/m²k

0.22 W/m²k

0.19 W/m²k

Cavity Wall Application (Partial Fill)

Foil-Tec VCL Single

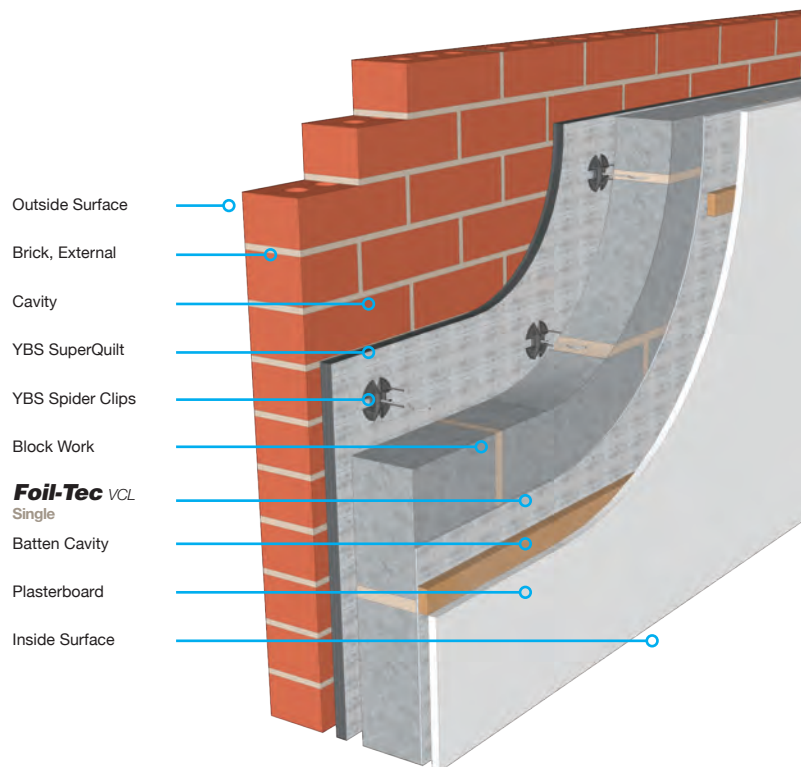
Fixing Instructions

Installation of Foil-Tec VCL Single for cavity wall applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and tack stapled onto the wall. The foil side of the material should face the adjacent air space. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Vertical counter battens, minimum 25mm by 38mm are fixed to wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description	U-Value
Foil-Tec Single - SuperQuilt	
Dense Block (1.100 W/mK) - SuperQuilt	0.28 W/m ² k
Thermal Block (0.110 W/mK) - SuperQuilt	0.23 W/m ² k
Thermal Block (0.110 W/mK) - SuperQuilt - 30mm Insulated Plasterboard (0.55 m ² K/W)	0.22 W/m ² k
Thermal Block (0.110 W/mK) - SuperQuilt - 40mm Insulated Plasterboard (1.49 m ² K/W)	0.18 W/m ² k
Foil-Tec Single - PIR	
Thermal Block (0.110 W/mK) - PIR 45mm	0.26 W/m ² k
Thermal Block (0.110 W/mK) - PIR 55mm	0.25 W/m ² k
Thermal Block (0.110 W/mK) - PIR 65mm	0.22 W/m ² k
Thermal Block (0.110 W/mK) - PIR 85mm	0.19 W/m ² k

Foil-Tec VCL Double

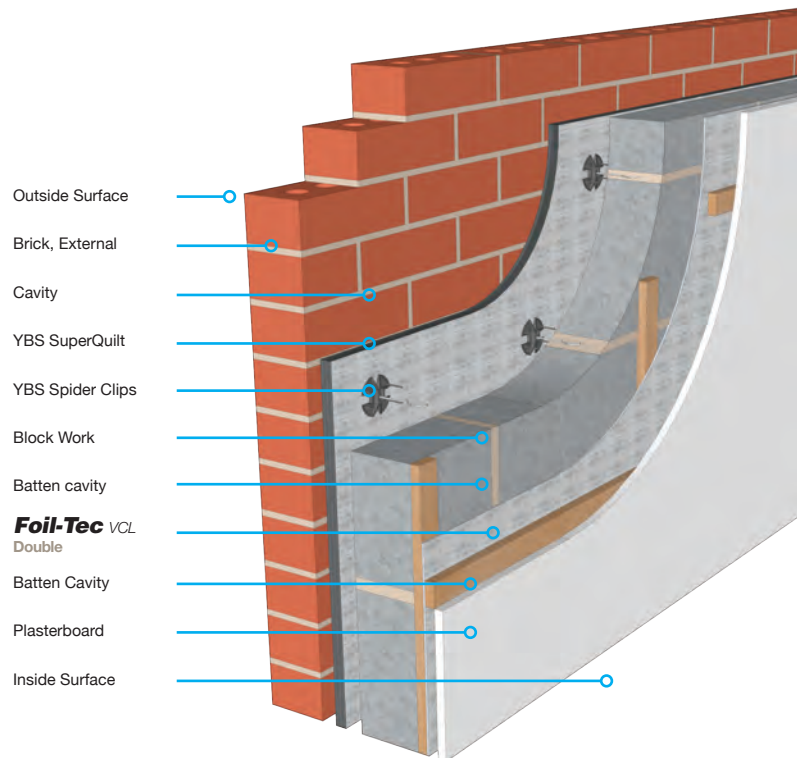
Fixing Instructions

Installation of Foil-Tec VCL Double for cavity wall applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Battens are fixed to the wall Foil-Tec VCL is then applied directly from the roll either vertically or horizontally depending on the wall height, pulled tight and stapled onto the battens at minimum 300mm centres. The foil sides of the material will be facing the cavities formed. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Vertical counter battens, minimum 25mm by 38mm are fixed to wall at 400mm centres. Battens must always be placed at the top and bottom of the wall and around the perimeter of doors and windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description	U-Value
Foil-Tec Double - SuperQuilt	
Dense Block (1.100 W/mK) - SuperQuilt	0.25 W/m ² k
Thermal Block (0.110 W/mK) - SuperQuilt	0.21 W/m ² k
Thermal Block (0.110 W/mK) - SuperQuilt - 30mm Insulated Plasterboard (0.55 m ² K/W)	0.19 W/m ² k
Foil-Tec Double - PIR	
Dense Block (1.100 W/mK) - PIR 45mm	0.28 W/m ² k
Thermal Block (0.110 W/mK) - PIR 40mm	0.25 W/m ² k
Thermal Block (0.110 W/mK) - PIR 50mm	0.22 W/m ² k
Thermal Block (0.110 W/mK) - PIR 70mm	0.19 W/m ² k

Roof Application

Foil-Tec VCL Single

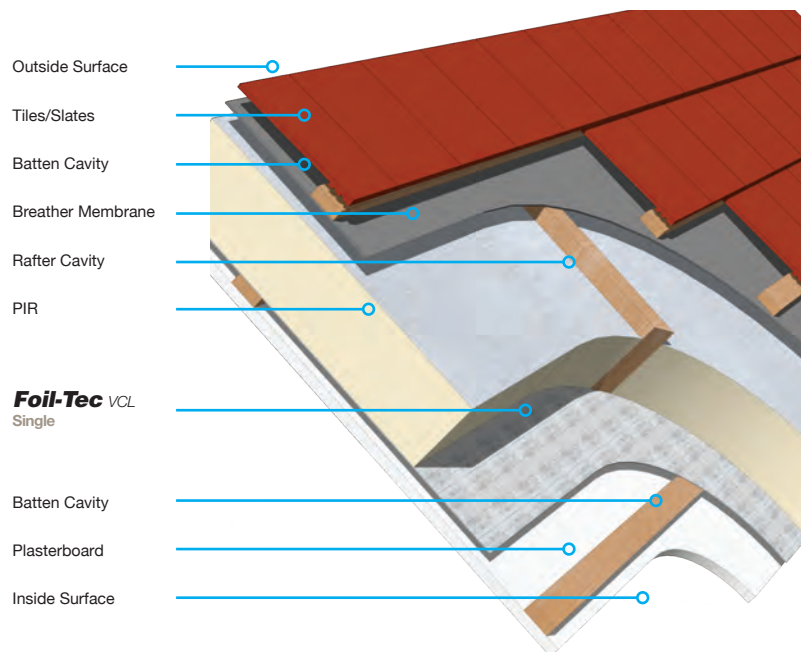
Fixing Instructions

Installation of Foil-Tec VCL Single for roof applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is applied directly from the roll either vertically or horizontally depending on the roof height, pulled tight and stapled onto the rafters. The foil side of the material should face the adjacent air space. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

If there is no cavity present between the rafters, fix horizontal counter battens, minimum 25mm by 38mm are fixed to the rafter at 600mm centres. Battens must always be placed at the top and bottom of the roof and around perimeter of sky lights/windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description	U-Value
Foil-Tec Single with Rafters at 400 Centres	
135mm PIR Between Rafters	0.18 W/m ² k
125mm PIR Between Rafters, 35mm PIR Under Rafters	0.15 W/m ² k
150mm PIR Between Rafters, 35mm PIR Under Rafters	0.13 W/m ² k
70mm PIR Between Rafters, SuperQuilt Over Rafters	0.18 W/m ² k
100mm PIR Between Rafters, SuperQuilt Over Rafters	0.15 W/m ² k
130mm PIR Between Rafters, SuperQuilt Over Rafters	0.13 W/m ² k
Foil-Tec Single with Rafters at 600 Centres	
135mm PIR Between Rafters	0.18 W/m ² k
125mm PIR Between Rafters, 25mm PIR Under Rafters	0.15 W/m ² k
150mm PIR Between Rafters, 30mm PIR Under Rafters	0.13 W/m ² k
65mm PIR Between Rafters, SuperQuilt Over Rafters	0.18 W/m ² k
95mm PIR Between Rafters, SuperQuilt Over Rafters	0.15 W/m ² k
120mm PIR Between Rafters, SuperQuilt Over Rafters	0.13 W/m ² k

Foil-Tec VCL Double

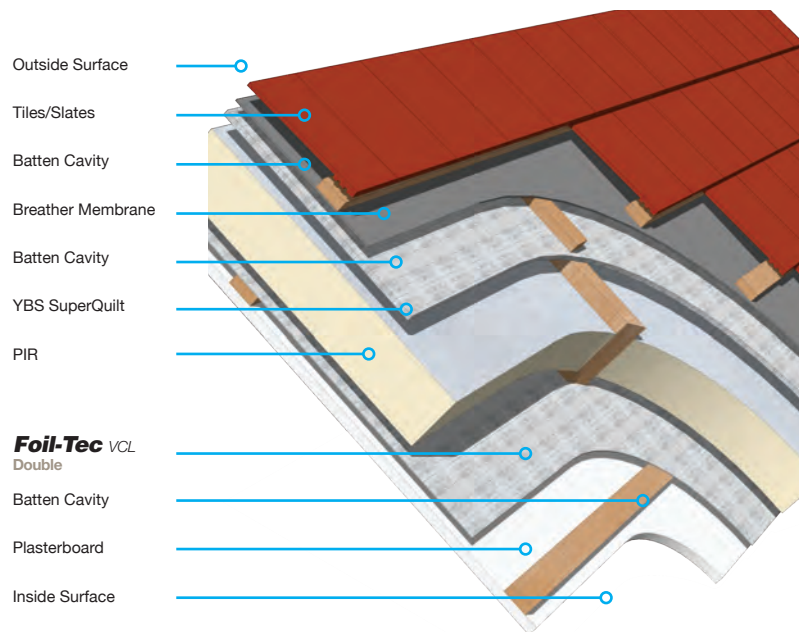
Fixing Instructions

Installation of Foil-Tec VCL Double for roof applications and additional insulation products should be in accordance with the manufacturers fixing instructions, certification and current good building practice.

Foil-Tec VCL is then applied directly from the roll either vertically or horizontally depending on the roof height, pulled tight and stapled onto the rafters. The foil sides of the material will be facing the cavities formed. All overlaps and perimeters must be taped and sealed using YBS Foil Tape.

Horizontal counter battens, minimum 25mm by 38mm are fixed to roof at 600mm centres. Battens must always be placed at the top and bottom of the roof and around perimeter of sky lights/windows.

The plasterboard is fixed to the battens in accordance with manufacturers fixing instructions.



U-Value table

For custom calculations please send your request to technical@ybsinsulation.com

Description	U-Value
Foil-Tec Double, Double Batten with Rafters at 400 Centres	
125mm PIR Between Rafters	0.18 W/m ² k
160mm PIR Between Rafters	0.15 W/m ² k
190mm PIR Between Rafters	0.13 W/m ² k
45mm PIR Between Rafters, SuperQuilt Over Rafters	0.18 W/m ² k
80mm PIR Between Rafters, SuperQuilt Over Rafters	0.15 W/m ² k
110mm PIR Between Rafters, SuperQuilt Over Rafters	0.13 W/m ² k
Foil-Tec Double, Double Batten with Rafters at 600 Centres	
120mm PIR Between Rafters	0.18 W/m ² k
150mm PIR Between Rafters	0.15 W/m ² k
205mm PIR Between Rafters	0.13 W/m ² k
45mm PIR Between Rafters, SuperQuilt Over Rafters	0.18 W/m ² k
75mm PIR Between Rafters, SuperQuilt Over Rafters	0.15 W/m ² k
100mm PIR Between Rafters, SuperQuilt Over Rafters	0.13 W/m ² k



Technical Properties

Product Description	Single	Double
Thickness	Less than 1mm	Less than 1mm
Weight	115g/m ²	196g/m ²
Mechanical Properties	Value	
Thermal performance		
Vertical Cavity at 20mm	0.740 m ² K/W	BS EN 6946
Cavity at 20° to 70°	0.490 m ² K/W	BS EN 6946
Vapour resistance	600 MNs/g	
Flammability	Class 1	BS 476-1
Packaging	50m ²	75m ²
Width	1m	1.5m
Length	50m	50m
Weight		
Single	5.75Kg	8.63Kg
Double	9.8Kg	14.7Kg

YBS Insulation

HIGH QUALITY PRODUCTS FOR THE BUILDING INDUSTRY

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*Calls are charged at 10p per minute from BT UK landline, other networks may vary.

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