

# BUILDING KNOWLEDGE SERIES

## ENERGY RATING IN FIRSTRATE5®

TECHNICAL GUIDANCE FOR THERMOSEAL™ WALL WRAP XP

When modelled correctly, reflective laminate wall wrap products can contribute an additional air-gap R-Value to a wall system, improving the overall thermal efficiency of the home. To ensure that the additional air-gap R-Value is correctly calculated, this Building Knowledge Series by CSR Building Products provides guidance on how to accurately input Bradford Thermoseal Wall Wrap XP into FirstRate5®

Accurately simulate the contribution of wall wrap



CSR

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## PRODUCT SPECIFICATION

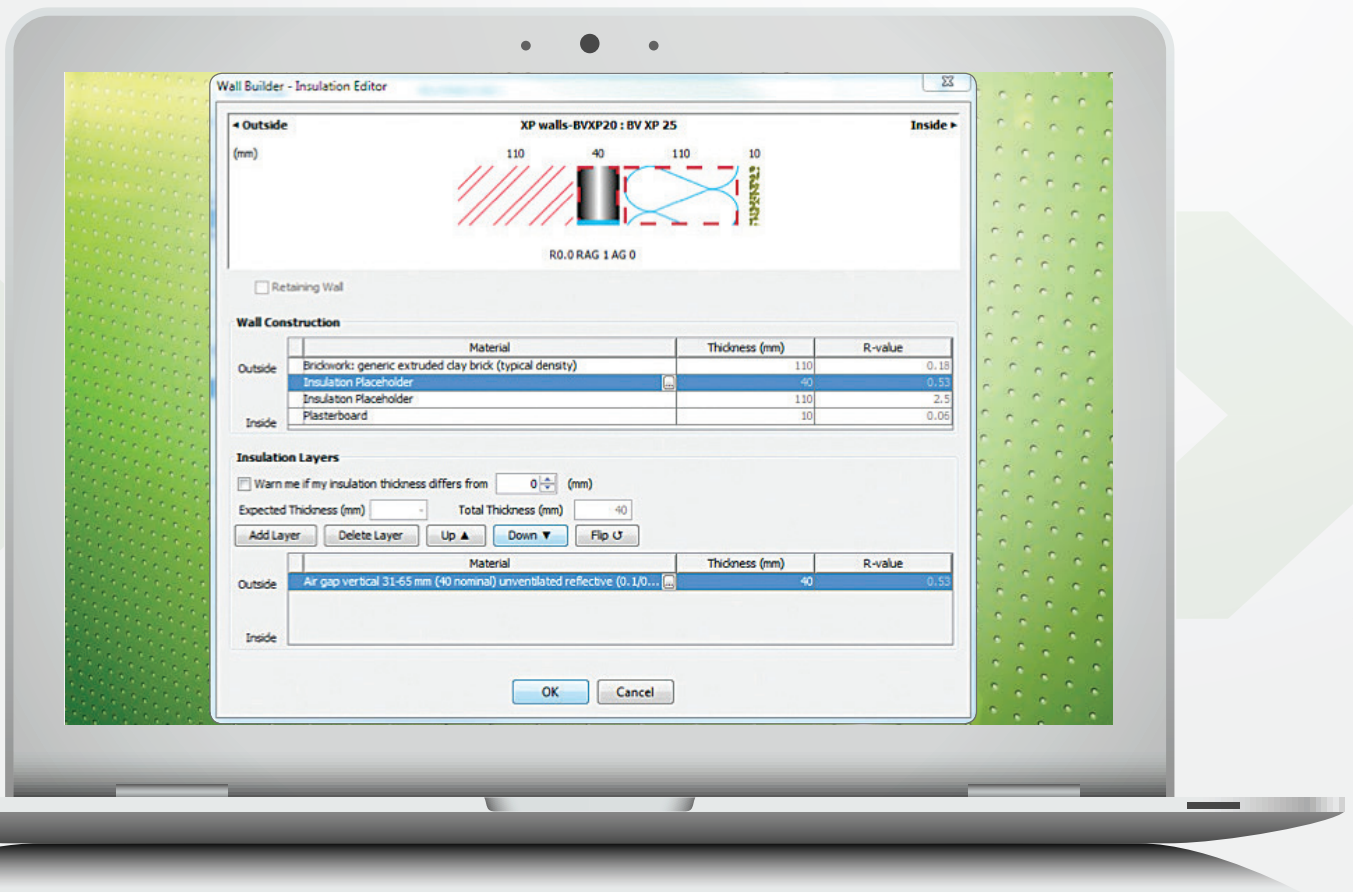
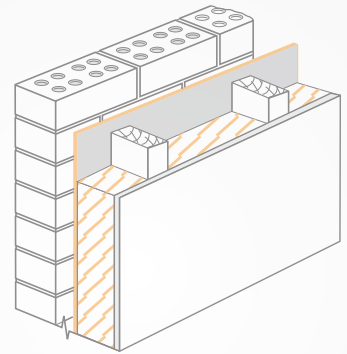
Thermoseal Wall Wrap XP has a reflective and non-reflective surface with the following properties:

- The reflective surface faces outwards and has an emittance of 0.09
- The non-reflective surface faces inwards and has an emittance of 0.9

## BRICK VENEER CONSTRUCTION EXAMPLE

This example uses a Brick Veneer wall with a 110mm extruded brick, Thermoseal Wall Wrap XP, R2.5 wall batts and 10mm plasterboard lining.

- Layer 1: Contains the 110mm extruded brick
- Layer 2: Insulation placeholder contains the 40mm nominal 0.1/0.9 reflective air gap for Thermoseal Wall Wrap XP
- Layer 3: Insulation placeholder contains the wall batt (select required wall insulation: R1.5/R2.0/R2.5/R2.7)
- Layer 4: Is the 10mm plasterboard





# FIRSTRATE5<sup>®</sup> PRODUCT SIMULATION

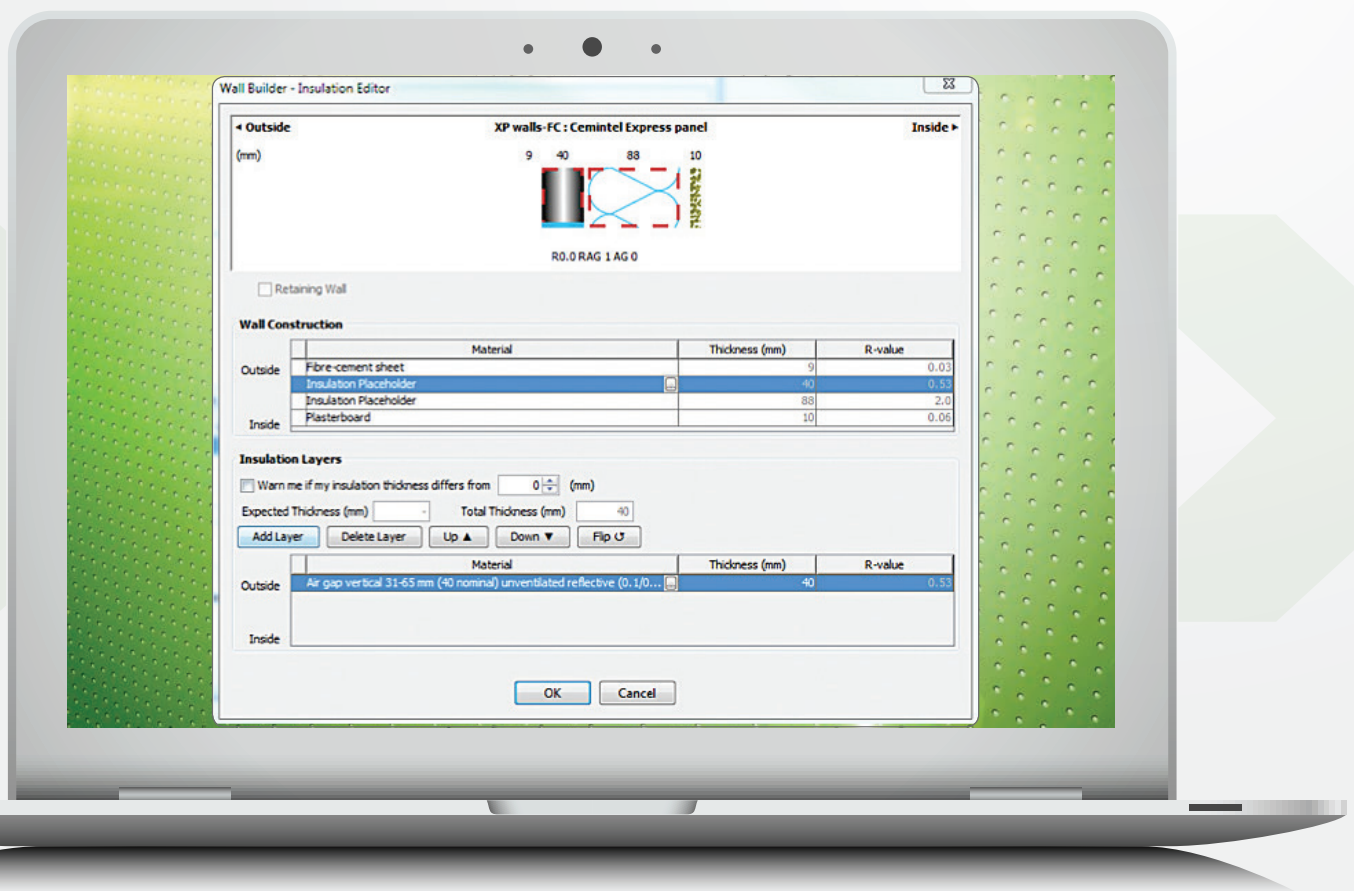
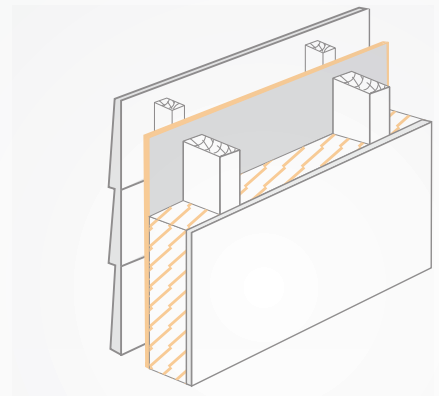
## SIMULATION SPECIFICATION

To simulate this product in FirstRate5 it is as simple as using the Wall Builder and selecting a reflective air-gap of 0.1/0.9 with the appropriate thickness to suit the wall cavity.

## LIGHTWEIGHT CLAD CONSTRUCTION EXAMPLE

This example uses a 9mm Cemintel™ Expresswall™ panel on a 35mm top hat, Thermoseal Wall Wrap XP, R2.0 wall batts and 10mm plasterboard lining.


- Layer 1: Contains the 9mm Cemintel Expresswall panel
- Layer 2: Insulation placeholder contains the 40mm nominal 0.1/0.9 reflective air gap for Thermoseal Wall Wrap XP
- Layer 3: Insulation placeholder contains the wall batt (select required wall insulation: R1.5/R2.0/R2.5/R2.7)
- Layer 4: Is the 10mm plasterboard



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## THERMOSEAL WALL WRAP XP – UNDERSTAND THE XP DIFFERENCE


When the building stud cavity is filled with wall batt insulation, conventional (single sided inward facing) wall wraps are no longer able to contribute an additional air-gap R-Value to the wall system. Thermoseal Wall Wrap XP overcomes this problem by using an outward facing patterned antiglare surface to create a more energy efficient wall system by boosting the performance of the wall batt insulation.



**CONVENTIONAL WALL WRAP WITH NO WALL BATT INSULATION**

Conventional wall wrap installed with no wall insulation works by utilising the empty stud cavity (without wall insulation) to generate a reflective air-gap R-Value.

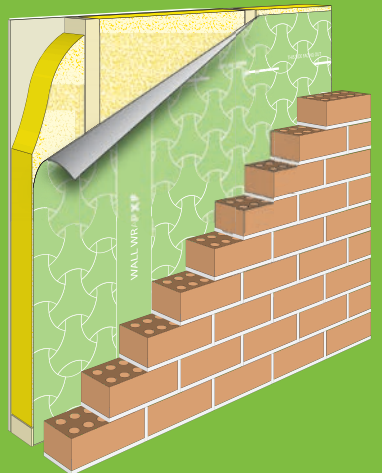
Full R-Value from Wall Wrap	$R_T 1.2$
	Summer



**CONVENTIONAL WALL WRAP WITH R1.5 WALL BATT INSULATION**

Conventional wall wrap installed with wall insulation can no longer contribute a reflective air-gap R-Value now the stud cavity is filled with insulation.

No R-Value from Wall Wrap, only the wall insulation	$R_T 2.0$
	Summer



**WALL WRAP XP WITH R1.5 WALL BATT INSULATION**

Wall Wrap XP installed with wall insulation contributes a reflective air-gap R-Value even with the stud cavity filled with insulation so you get the added benefits of both insulation systems.

Full R-Value from Wall Wrap XP plus the wall insulation	$R_T 2.5$
	Summer

## NEED TO KNOW MORE

For more information or product advice, contact CSR Bradford on **1300 850 305**, email [bradfordenquiries@csr.com.au](mailto:bradfordenquiries@csr.com.au) or visit our website [www.bradfordinsulation.com.au](http://www.bradfordinsulation.com.au) to download a product data sheet.

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