

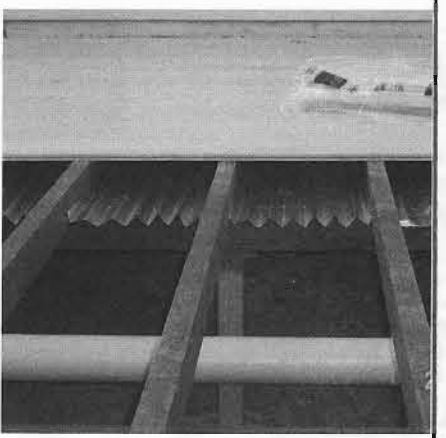
★★★★★ 5 STAR ENERGY RATING AND SMARTFRAME SUB-FLOORS

To enable designers of SmartFrame sub-floor systems to assign Total R-value  $R_T$  the floor for input into energy rating programs or manual calculations, Tilling have complimented their SmartFrame floor systems with the certified CONCERTINA FOIL BATTS™ insulation system developed and marketed by Wren Industries Pty Ltd.

**TECHNICAL SUPPORT**

Because of the importance that Tilling's place on the provision of expert technical support for their SmartFrame range of Engineered Timber Products, there is an accredited FirstRate energy rater on staff.

Designers of sub-floor systems are free to contact the SmartData customer helpline on 1800 337 703 or at smartdata@tilling.com.au to seek advice on how to use the Total R-values  $R_T$  in this Design Guide with the FirstRate software.





**benchmark**  
CERTIFICATION

**Certification Schedule**



**Wren Industries Pty Ltd**  
ABN 35 053 019 202  
139 Herald Street Cheltenham VIC 3192 Australia

This schedule identifies the Certified Product(s) that shall be marked with the Product Certification Mark and the Identification Number. Use of the Product Certification Mark is a claim by the Client that the product(s) comply with:

**AS/NZS 4859.1:2002 Materials for the thermal insulation of buildings  
Part 1: General criteria and technical provisions**

PRODUCT DESCRIPTION	
Product:	Concertina Foil Batts™: Namely, expandable double sided aluminium foil insulation on a base of kraft paper.
Nominal sizes:	1200 x 450; 1200 x 600; 1350 x 450; 1350 x 600 & 1345 x 450 (perforated).
Note: Installation and associated Total R-Values details are contained within Wren documents: WREN DD-1 & WREN DD-2.	

Certification Date: 23 June 2005	Identification No.: XXX
	Copy No.: XXX

Unless withdrawn for any reason this certificate shall expire on:  
23 June 2010

Last Revised Date:  
6 July 2005

**JAS-ANZ**

End of Record

This validity of this Certification Schedule can be checked at website: www.benchmark.com.au It must be read in conjunction with the Certificate of Certification issued by Benchmark Certification. This schedule remains the property of Benchmark Certification and must be returned to Benchmark Certification upon its request.  
Document No. PCF\_07\_Rev 4

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**CONCERTINA FOIL BATTS™ . SUB-FLOOR**

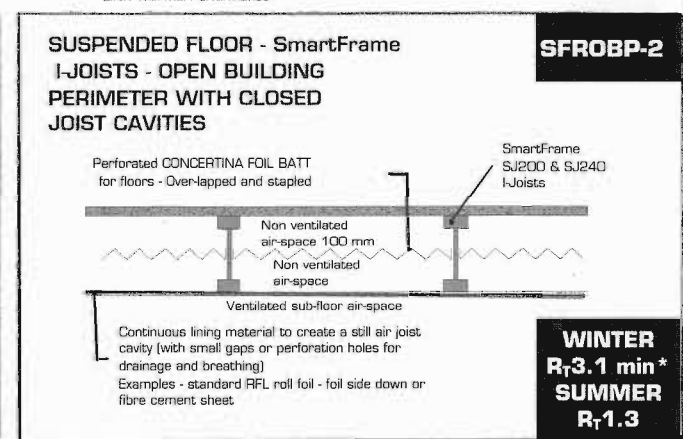
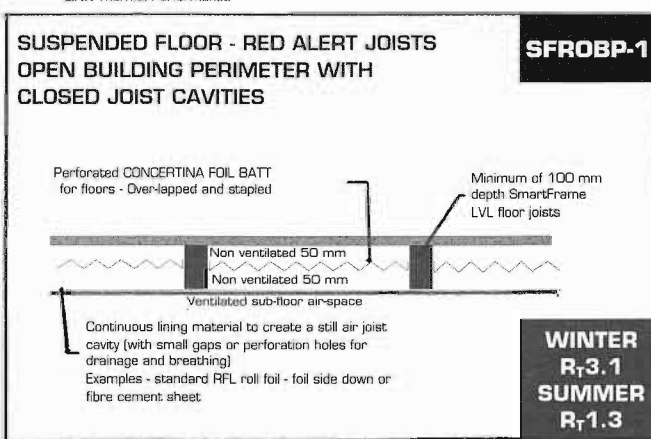
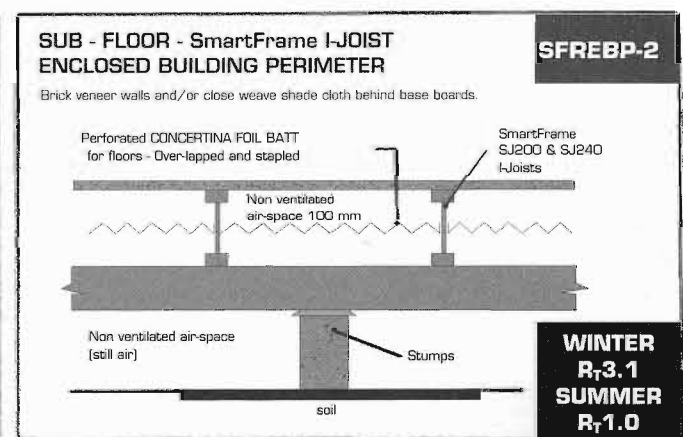
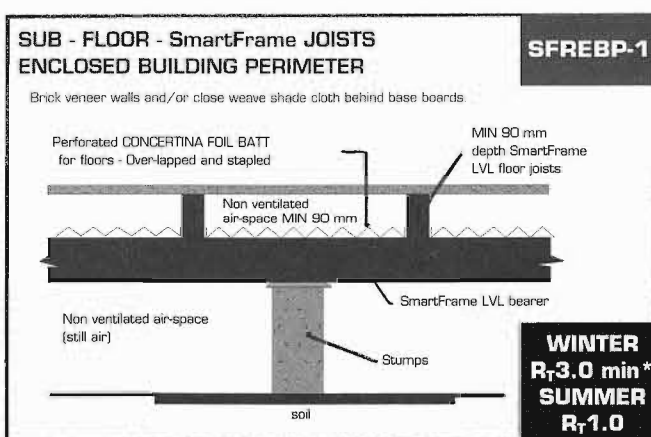


QUICK AND EASY TO INSTALL



EASY TO RETROFIT

Total R-value of the structure ( $R_T$ ) is the sum of all component R-values, including the internal airspaces and the surface air films on either side of the structure. NB: Framing timbers are excluded from the Total R-value ( $R_T$ ), as per AS/NZS 4859.1:2002



\*  $R_T$  value is dependent upon depth of non-ventilated airspace. For  $R_T$  values for alternative joist depths, contact Wren Industries Pty Ltd



"BREATHING" AIRSPACES

Perforated CONCERTINA FOIL BATTS™ allow moisture drainage and maximum breathing of timber flooring, and combined with still airspaces, produce high and consistent thermal performance, reflecting 97% of radiant heat back to the floor. FOIL BATTS do not absorb or retain heat and therefore do not create warm cosy nesting environments for rodents or pests.



ALLOWS GLUEING OF SHEETING

For further information specifically related to the CONCERTINA FOIL BATTS, contact Wren Industries Pty Ltd on (03) 9532 5855, or email info@concertinafoilbatts.com.

Website: www.concertinafoilbatts.com LINK - Thermal Performance