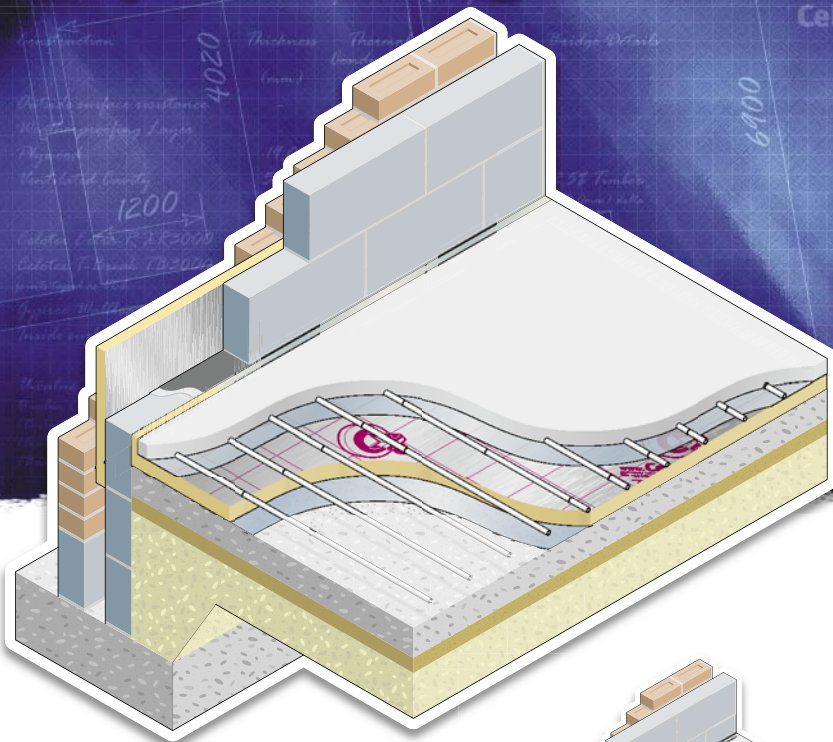
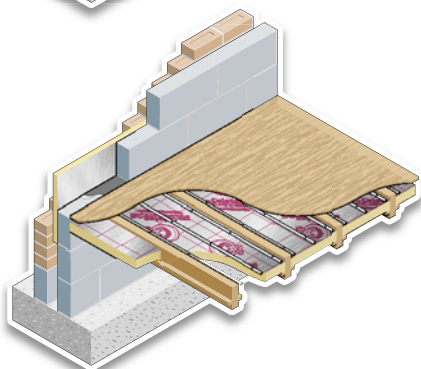
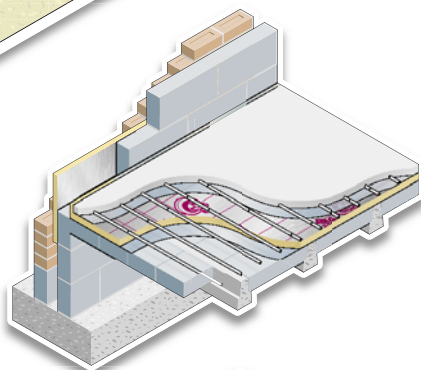


Underfloor heating



Use **Celotex Fast-R™ FF3000**, **Celotex tuff-R™ GA3000**, **Celotex Extra-R™ XR3000** and **Celotex T-Break™ TB3000** high performance thermal insulation with underfloor heating applications to minimise insulation thickness and give the following benefits:

- § Minimal downward heat loss into the structure
- § Easy to cut boards to fit in most spaces
- § The foam structure can be used to clip the pipe system into
- § Provides reliable long term energy savings for building structures
- § Excellent dimensional stability
- § Conveniently sized boards for handling indoors



Installation guidelines for concrete slab floor application only

- § Install a damp proof membrane below the slab OR apply a liquid waterproofing membrane to the top surface of the slab.
- § The damp proof membrane must provide continuity with the damp proof course in the surrounding walls.
- § Level the surface of the slab; it should be smooth and free of projections.
- § Use a thin layer of sand blinding on a rough tamped slab to ensure that the insulation boards are continuously supported.

Installation guidelines for concrete slab and beam & block floor applications

- § Use **Celotex T-Break™ TB3000** boards as upstands to fit around floor perimeters to eliminate thermal bridging at screed edges. The upstand depth should be equal to the sum of the slab insulation and the screed thickness. The upstand thickness should not exceed the combined thickness of the wall plaster and the skirting.
- § Lay the insulation boards directly onto the prepared slab with all joints tightly butted.
- § Install a polythene membrane over the insulation.
- § Lay a proprietary underfloor heating system, generally comprising pipework in coils. Pipe retaining clips may be inserted directly into the **Celotex** insulation.
- § Apply the screed over the **Celotex** insulation boards to a thickness recommended by the manufacturer of the underfloor heating system (normally 75 mm).
- § Compact the screed solidly when laid.
- § Allow the screed to dry thoroughly before an impermeable surface, such as a vinyl floor finish, is applied. (Consult a specialist flooring contractor).
- § These recommendations are suitable for normal domestic floor loadings. If higher loadings are required it may be necessary to increase the screed thickness and provide reinforcement within the screed.

Installation guidelines for suspended timber floors application

- § Install joists in the conventional manner, with solid or diagonal strut bracing as necessary. (NB diagonal bracing may lead to thermal bridging).
- § Fix battens to the sides of the joists to support the insulation.
- § Cut the **Celotex tuff-R GA3000** insulation to achieve a tight fit, then push the boards firmly down between the joists.
- § Insulate the gaps between the joists and walls to prevent thermal bridging.
- § Lay a proprietary underfloor heating system, generally comprising pipework in coils, to the manufacturer's guidelines.
- § Install either chipboard or softwood floor boarding directly onto the joists.
- § For exposed floors, e.g. garage or car port ceilings, it may be easier to insulate from below. Install the underfloor heating system in accordance with the manufacturer's installation instructions. Fix **Celotex** insulation boards directly to the underside of the joists with galvanised clout nails at 400 mm maximum centres. Finish with an appropriate fire protection board fixed to the soffit.
- § An additional layer of 100 mm mineral wool insulation can be installed between the joists to provide acoustic insulation.

U-value calculations

For U-value calculations, please refer to the application specific page for the installation required.

Product descriptions

Celotex T-Break™ TB3000 is a thin, foil faced insulation board with un-reinforced core foam and thicknesses ranging from 12 to 30 mm. The **T-Break** name stems from the design function of the range; which is to provide simple solutions to overcome localised thermal bridges. **Celotex** is unique in being able to offer boards as thin as 12 mm to the market for this purpose.

Always install Celotex T-Break TB3000 in accordance with the instructions supplied by Celotex Limited.

Standard board dimensions

1200 mm x 2400, 450, 300 & 150 mm*
(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with
BS EN 13823: 2002 = Class D/s2/d0
Surface spread of flame in accordance with
BS 476: 1997 Part 7 = Class 1

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
TB3012	12	0.50
TB3020	20	0.85
TB3025	25	1.05
TB3030	30	1.30

Celotex tuff-R™ GA3000 has long been at the heart of the **Celotex** product range, providing a range of thermal insulation solutions to the builder. The **Celotex tuff-R GA3000** product is a foil faced thermal insulation board which has core foam uniquely reinforced with glassfibre. These products still feature the best reaction-to-fire performance (Euroclass D/S2/d0) measured in accordance with new European Standards of any similar product on the market.

Always install Celotex tuff-R GA3000 in accordance with the instructions supplied by Celotex Limited.

Standard board dimensions

1200 mm x 2400 mm*
(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with
BS EN 13823: 2002 = Class D/s2/d0
Surface spread of flame in accordance with
BS 476: 1997 Part 7 = Class 1

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
GA3035	35	1.50
GA3040	40	1.70
GA3045	45	1.95
GA3050	50	2.15
GA3055	55	2.35
GA3060	60	2.60
GA3065	65	2.80
GA3070	70	3.00
GA3075	75	3.25
GA3080	80	3.45
GA3090	90	3.90

**Note:* Products listed above are generally available ex-stock.

Other sizes and thicknesses are available, subject to minimum order quantity. Please check for availability before ordering.

Celotex Extra-R™ XR3000 is new to the **Celotex** range and is manufactured on our latest state-of-the-art restrained rise production line featuring our own unique jointless laydown technology. This technology enables us to offer thicker boards with no visible seams in the foam core. This foil faced product will be targeted at 'cut-to-fit' applications for insulation between rafters or joists and will enable users to achieve lower U-values with a single layer of insulation than has been previously possible and will help designers meet the present – and future – requirements of Approved Document L (2006) of the Building Regulations

Always install Celotex Extra-R XR3000 in accordance with the instructions supplied by Celotex Limited.

Standard board dimensions

1200 mm x 2400 mm*

(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with BS EN 13823: 2002 = Class E
Surface spread of flame in accordance with BS 476: 1997 Part 7 = Class TBA

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
XR3100	100	4.30
XR3110	110	4.75
XR3120	120	5.20
XR3130	130	5.65
XR3140	140	6.05
XR3150	150	6.50

Celotex tuff-R CW3000 provides a simple cavity wall insulation solution with a foil faced thermal insulation board which has core foam uniquely reinforced with glassfibre. These products feature the best reaction-to-fire performance (Euroclass D/S2/d0) measured in accordance with new European Standards of any similar product on the market.

Always install Celotex tuff-R CW3000 in accordance with the instructions supplied by Celotex Limited.

Standard board dimensions

1200 mm x 450 mm*

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with BS EN 13823: 2002 = Class D/s2/d0
Surface spread of flame in accordance with BS 476: 1997 Part 7 = Class 1

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
CW3035	35	1.50
CW3040	40	1.70
CW3045	45	1.95
CW3050	50	2.15
CW3055	55	2.35
CW3060	60	2.60
CW3065	65	2.80
CW3070	70	3.00
CW3080	80	3.45
CW3090	90	3.90

Product descriptions

Celotex fast-R FF3000 is new to the **Celotex** range and will be manufactured on our latest state-of-the-art restrained rise production line featuring our own unique jointless laydown technology. This technology enables us to offer thicker boards with no visible seams in the foam core. This foil faced product is targeted specifically at 'under screed' floor applications – including underfloor heating systems – where the higher density and compressive strength both prove valuable to the installer.

Always install Celotex Tempchek Deck TD3000 in accordance with the instructions supplied by Celotex Limited.

Standard board dimensions

1200 mm x 600 mm*

(with grid markings to assist installation)

Physical properties

Thermal resistance (R) values for Celotex products are declared in accordance with BS EN 13165: 2001. These R-values equate to a Thermal Conductivity (λ_p) value of 0.023 W/mK.

Fire

Reaction to fire in accordance with
BS EN 13823: 2002 = Class F

Surface spread of flame in accordance with
BS 476: 1997 Part 7 = TBA

Product range

Product code	Thickness (mm)	R-value (m ² K/W)
FF3050	50	2.15
FF3060	60	2.60
FF3070	70	3.00
FF3080	80	3.45
FF3090	90	3.90



Celotex Limited makes no warranty, express or implied as to their characteristics under any variations from such conditions in actual constructions.

All products are supplied subject to our standard terms and conditions of sale, a copy of which is available on request.

Typical details shown in this brochure are provided for guidance only and are not to scale. **Celotex Limited** makes no warranty, express or implied as to the suitability of such details for any particular project. It is the responsibility of the designer to ensure that any design or construction details used are suitable for the project, having due regard to the environmental and structural factors which are beyond the control of **Celotex Limited**

Notwithstanding the foregoing, nothing herein stated shall exclude or restrict:

- 1 The liability of **Celotex Limited** in respect of death or personal injury pursuant to the relevant provisions of the *Unfair Contract Terms Act 1977*, or
- 2 The liability of **Celotex Limited** in respect of any damage caused by a defect to the extent that such comes within the relevant provisions of the *Consumer Protection Act 1987*.