

ACTIS HYBRID SOLUTIONS AND SYSTEMS

FOR ROOF, WALL, CEILING & FLOOR APPLICATIONS



ACTIS
TOMORROW'S INSULATION TODAY



	Timber dimensions (mm)	Timber centres (mm)	Other insulation	Reflective breather membrane	HControl Hybrid	Hybris	Boost [®] Hybrid	Calculated U-values W/m ² K	Reference	
TIMBER FRAME WALL										
External Timber Frame with Brick Cladding										
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	184 x 38	15% timber bridging (as standard)			✓	✓	✓	0.13	PF60	
HCONTROL HYBRID + 100 FOAM BOARD (λ = 0.022 W/mK) + BOOST [®] HYBRID	140 x 38		✓		✓	✓	✓	0.13	PF61	
HCONTROL HYBRID + 90mm HYBRIS + BOOST [®] HYBRID	140 x 38				✓	✓	✓	0.14	PF23	
HCONTROL HYBRID + 105mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	140 x 38				✓	✓		0.16	PF56	
HCONTROL HYBRID + 100mm FOAM BOARD (λ = 0.022 W/mK)	140 x 38		✓		✓			0.16	PF62	
120mm FOAM BOARD (λ = 0.022 W/mK) + BOOST [®] HYBRID	140 x 38		✓				✓	0.16	PF63	
HCONTROL HYBRID + 105mm HYBRIS	140 x 38					✓	✓		0.18	PF24
BOOST [®] HYBRID + 125mm HYBRIS	140 x 38						✓	✓	0.18	PF49
HCONTROL HYBRID + 50mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	89 x 38				✓	✓			0.20	PF58
90mm HYBRIS + BOOST [®] HYBRID	114 x 38						✓	✓	0.21	PF64
125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	140 x 38				✓		✓		0.22	PF55
HCONTROL HYBRID + 50mm HYBRIS	89 x 38					✓	✓		0.23	PF50
HCONTROL HYBRID + REFLECTIVE BREATHER MEMBRANE	72 x 47				✓	✓			0.25	PF57
125mm HYBRIS	140 x 38						✓		0.26	PF47
HCONTROL HYBRID	72 x 47					✓			0.30	PF39
External Timber Frame with Timber Cladding										
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	184 x 38	15% timber bridging (as standard)			✓	✓	✓	0.13	PF65	
HCONTROL HYBRID + 105mm HYBRIS + BOOST [®] HYBRID	140 x 38				✓	✓	✓	0.14	PF66	
HCONTROL HYBRID + 105mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	140 x 38				✓	✓		0.16	PF67	
125mm HYBRIS + BOOST [®] HYBRID	140 x 38					✓	✓	0.19	PF68	
125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	140 x 38				✓	✓		0.23	PF69	
HCONTROL HYBRID + REFLECTIVE BREATHER MEMBRANE	72 x 47				✓	✓		0.26	PF70	
External Timber Frame with Timber Cladding (example Dormer Cheek)										
HCONTROL HYBRID + 50mm HYBRIS + BOOST [®] HYBRID	89 x 38	15% timber bridging (as standard)			✓	✓	✓	0.17	PF71	
HCONTROL HYBRID + 90mm HYBRIS	140 x 38				✓	✓		0.19	PF72	
HCONTROL HYBRID+ BOOST [®] HYBRID	72 x 47				✓		✓	0.22	PF73	
90mm HYBRIS + BOOST [®] HYBRID	114 x 38					✓	✓	0.22	PF74	
50mm HYBRIS + BOOST [®] HYBRID	72 x 47					✓	✓	0.28	PF75	
105mm HYBRIS	120 x 47					✓		0.29	PF76	
HCONTROL HYBRID	72 x 47					✓		0.30	PF77	
Ashlar Wall										
HCONTROL HYBRID + 50mm HYBRIS	89 x 38	600			✓	✓		0.21	PF78	
140mm HYBRIS	150 x 47					✓		0.22	PF79	
HCONTROL HYBRID	72 x 47					✓		0.29	PF80	
MASONRY WALL										
Solid Wall (Internal Insulation)										
HCONTROL HYBRID + 90mm HYBRIS	120 x 47	600			✓	✓		0.18	PF81	
105mm HYBRIS	120 x 47					✓		0.27	PF82	
22mm INSULATED PLASTERBOARD (λ = 0.04 W/mK) + HCONTROL HYBRID	38 x 38mm battens		✓		✓			0.28	PF83	
HCONTROL HYBRID	38 x 38mm battens				✓			0.30	PF40	
Cavity Wall (Internal Insulation)										
HCONTROL HYBRID + 75mm HYBRIS	120 x 47	600			✓			0.18	PF84	
90mm HYBRIS	100 x 47					✓		0.28	PF85	
22mm INSULATED PLASTERBOARD (λ = 0.04 W/mK) + HCONTROL HYBRID	38 x 38mm battens		✓		✓			0.27	PF86	
Solid Wall (External Insulation)										
90mm HYBRIS + BOOST [®] HYBRID	120 x 47	600				✓	✓	0.20	PF87	
60mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	89 x 38				✓		✓	0.29	PF88	



	Timber dimensions (mm)	Timber centres (mm)	Other insulation	HControl Hybrid	Hybris	Boost [®] Hybrid	Calculated U-values W/m ² K	Reference
PITCHED ROOF								
Warm Pitched Roof (with insulation at sloping ceiling)								
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	200 x 47	600		✓	✓	✓	0.13	PF52
205mm HYBRIS + BOOST [®] HYBRID	250 x 47				✓	✓	0.13	PF89
HCONTROL HYBRID + 170mm HYBRIS	225 x 47				✓	✓	0.13	PF90
HCONTROL HYBRID + 50mm HYBRIS + BOOST [®] HYBRID	125 x 47				✓	✓	0.18	PF51
HCONTROL HYBRID + 90mm HYBRIS	150 x 47				✓	✓	0.18	PF31
125mm HYBRIS + BOOST [®] HYBRID	175 x 47					✓	0.18	PF53
185mm HYBRIS	225 x 47					✓	0.17	PF59
HCONTROL HYBRID + 60mm FOAM BOARD (λ = 0.022 W/mK)	125 x 47			✓	✓		0.18	PF34
BOOST [®] HYBRID + 85mm FOAM BOARD (λ = 0.022 W/mK)	150 x 47			✓		✓	0.18	PF42
Cold Pitched Roof (with insulation at horizontal ceiling)								
90mm + 155mm HYBRIS	100 x 35	400			✓		0.13	PF54
HCONTROL HYBRID + 90mm + 90mm HYBRIS	100 x 35			✓	✓		0.13	PF91
185mm HYBRIS	100 x 35				✓		0.15	PF92
90mm + 105mm HYBRIS	100 x 35				✓		0.16	PF37
FLAT ROOF								
Cold Flat Roof								
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	200 x 47	600		✓	✓	✓	0.13	PF93
HCONTROL HYBRID + 130mm FOAM BOARD (λ = 0.022 W/mK)	200 x 47			✓	✓		0.13	PF94
125mm HYBRIS + BOOST [®] HYBRID	200 x 47				✓	✓	0.18	PF95
HCONTROL HYBRID + 105mm HYBRIS	200 x 47				✓	✓	0.18	PF96
Warm Flat Roof								
HCONTROL HYBRID + 120mm FOAM BOARD (λ = 0.025 W/mK)	200 x 47	600	✓	✓			0.13	PF97
HCONTROL HYBRID + 70mm FOAM BOARD (λ = 0.025 W/mK)	200 x 47		✓	✓			0.18	PF98
FLOORS								
Suspended Timber Floor								
HCONTROL HYBRID + 125mm HYBRIS	200 x 47	400		✓	✓		0.13	PF99
155mm HYBRIS + BOOST [®] HYBRID	200 x 47				✓	✓	0.13	PF100
155mm HYBRIS	200 x 47				✓		0.16	PF101
105mm HYBRIS	150 x 47				✓		0.20	PF102
Solid Floor with Timber Floor on Battens*								
HCONTROL HYBRID	50 x 50mm battens	600		✓			0.22	PF103
75mm HYBRIS	100 x 47				✓		0.24	PF104
Exposed Floor								
HCONTROL HYBRID + 155mm HYBRIS + BOOST [®] HYBRID	200 x 47	400		✓	✓	✓	0.11	PF105
HCONTROL HYBRID + 155mm HYBRIS	200 x 47			✓	✓		0.13	PF106
50mm HYBRIS + 155mm HYBRIS + BOOST [®] HYBRID	200 x 47				✓	✓	0.11	PF107
155mm HYBRIS	200 x 47				✓		0.18	PF108

* U-values calculated with perimeter/area ratio = 0.5

Other solutions are available please contact Actis at solutions@insulation-actis.com or 01249 462 888.

U-value calculations have been made according to EN ISO 6946, BR 443, BBA IB3. The solutions offered do not have a condensation risk according to BS 5250.

Calculations are based on slightly ventilated / ventilated roof build-ups and vented wall build-ups, and use standard construction products ie standard plasterboard, standard vapour control layer, standard breather membrane and standard foil faced foam board unless **HControl Hybrid, Boost[®] Hybrid** or a **reflective breather membrane** is used.

TIMBER FRAME WALL WITH BRICK CLADDING

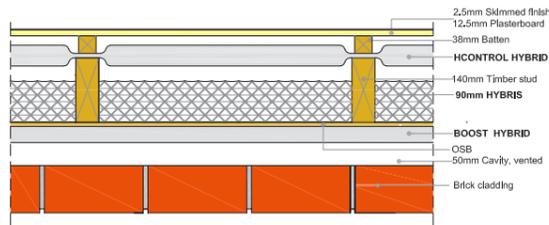
HYBRIS is fitted between studs, faced internally with HCONTROL HYBRID, the vapour control layer and externally with OSB and BOOST[®] HYBRID, the breather membrane. A 50mm cavity separates the timber frame from the outer brick leaf.

HYBRID SYSTEM SOLUTION

PF23: HCONTROL HYBRID + 90mm HYBRIS + BOOST[®] HYBRID



U-VALUE REACHED: 0.14 W/mK



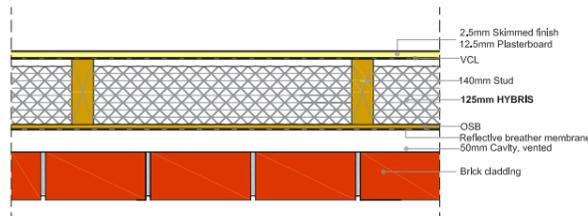
OTHER HYBRID CONFIGURATIONS

PF55: 125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE



U-VALUE REACHED: 0.22 W/mK

HYBRIS



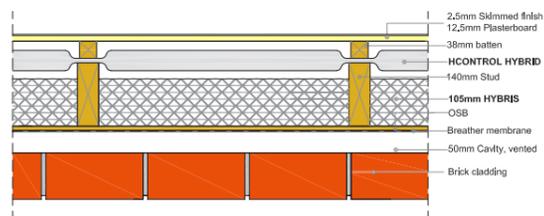
Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	0.13	PF60
HCONTROL HYBRID + 100 FOAM BOARD (λ = 0.022 W/mK) + BOOST [®] HYBRID	0.13	PF61
HCONTROL HYBRID + 90mm HYBRIS + BOOST [®] HYBRID	0.14	PF23
HCONTROL HYBRID + 105mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.16	PF56
HCONTROL HYBRID + 100mm FOAM BOARD (λ = 0.022 W/mK)	0.16	PF62
120mm FOAM BOARD (λ = 0.022 W/mK) + BOOST [®] HYBRID	0.16	PF63
HCONTROL HYBRID + 105mm HYBRIS	0.18	PF24
BOOST [®] HYBRID + 125mm HYBRIS	0.18	PF49
HCONTROL HYBRID + 50mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.20	PF58
90mm HYBRIS + BOOST [®] HYBRID	0.21	PF64
125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.22	PF55
HCONTROL HYBRID + 50mm HYBRIS	0.23	PF50
HCONTROL HYBRID + REFLECTIVE BREATHER MEMBRANE	0.25	PF57
125mm HYBRIS	0.26	PF47
HCONTROL HYBRID	0.30	PF39

PF24: HCONTROL HYBRID + 105mm HYBRIS

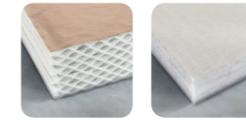


U-VALUE REACHED: 0.18 W/mK

HCONTROL HYBRID HYBRIS

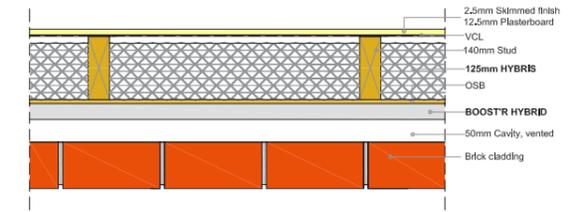


PF49: 125mm HYBRIS + BOOST[®] HYBRID



HYBRIS BOOST[®] HYBRID

U-VALUE REACHED: 0.18 W/mK



TIMBER FRAME WALL WITH TIMBER CLADDING

HYBRIS is fitted between studs, faced internally with HCONTROL HYBRID, the vapour control layer and externally with OSB and BOOST[®] HYBRID, the breather membrane, then a batten cavity before the external cladding.

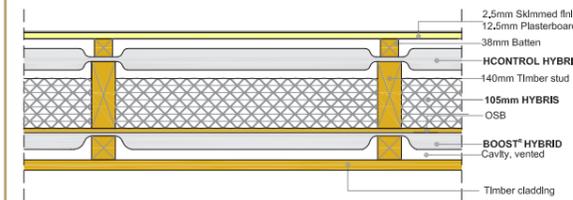
HYBRID SYSTEM SOLUTION

PF66: HCONTROL HYBRID + 105mm HYBRIS + BOOST[®] HYBRID



HCONTROL HYBRID HYBRIS BOOST[®] HYBRID

U-VALUE REACHED: 0.14 W/mK



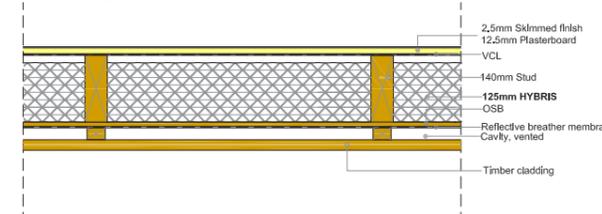
OTHER HYBRID CONFIGURATIONS

PF69: 125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE



U-VALUE REACHED: 0.23 W/mK

HYBRIS

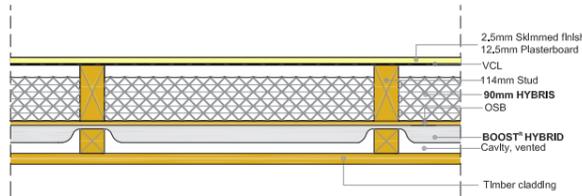


Products used	U-value (W/m ² K)	Reference
External Timber Frame with timber cladding		
HCONTROL HYBRID + 125mm HYBRIS + BOOST [®] HYBRID	0.13	PF65
HCONTROL HYBRID + 105mm HYBRIS + BOOST [®] HYBRID	0.14	PF66
HCONTROL HYBRID + 105mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.16	PF67
125mm HYBRIS + BOOST [®] HYBRID	0.19	PF68
125mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.23	PF69
HCONTROL HYBRID + REFLECTIVE BREATHER MEMBRANE	0.26	PF70
External Timber Frame with timber cladding (example Dormer Cheek)		
HCONTROL HYBRID + 50mm HYBRIS + BOOST [®] HYBRID	0.17	PF71
HCONTROL HYBRID + 90mm HYBRIS	0.19	PF72
HCONTROL HYBRID + BOOST [®] HYBRID	0.22	PF73
90mm HYBRIS + BOOST [®] HYBRID	0.22	PF74
50mm HYBRIS + BOOST [®] HYBRID	0.28	PF75
105mm HYBRIS	0.29	PF76
HCONTROL HYBRID	0.30	PF77

PF47: 90mm HYBRIS + BOOST[®] HYBRID



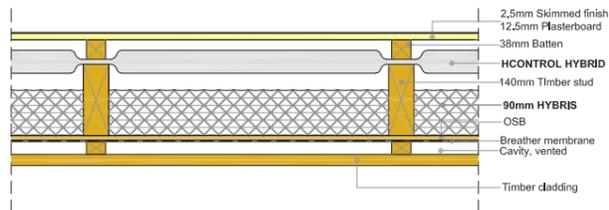
**U-VALUE REACHED:
0.22 W/mK**



PF72: HCONTROL HYBRID + 90mm HYBRIS



**U-VALUE REACHED:
0.19 W/mK**



ASHLAR WALL

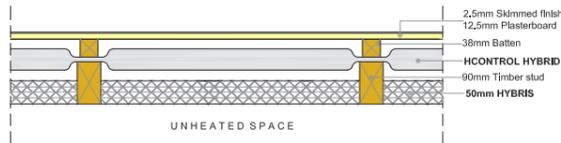
HYBRIS is fitted between studs and/or HCONTROL HYBRID onto the internal face of the studs, before standard plasterboard.

Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 50mm HYBRIS	0.21	PF78
140mm HYBRIS	0.22	PF79
HCONTROL HYBRID	0.29	PF80

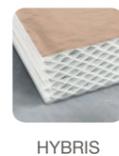
PF78: HCONTROL HYBRID + 50mm HYBRIS SOLUTION



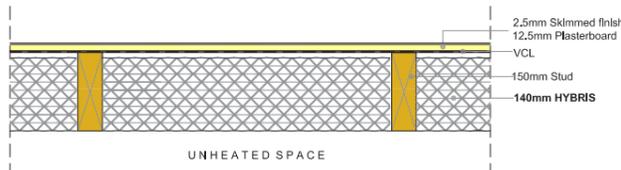
**U-VALUE REACHED:
0.21 W/mK**



PF79: 140mm HYBRIS SOLUTION



**U-VALUE REACHED:
0.22 W/mK**



SOLID WALL WITH INTERNAL INSULATION

HCONTROL HYBRID and/or HYBRIS is installed on the internal side of a solid wall. Internal finish is standard plasterboard.

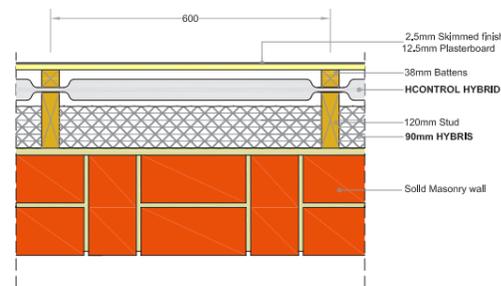
The existing solid masonry wall must be non-absorbent, in good condition, have a low moisture content and low driving rain load on the outside. If the existing wall does not meet these requirements, these solutions are not feasible. Please contact Actis Technical Department for further information.

Products used	U-value (W/m ² K)	Reference
Solid Wall		
Internal insulation		
HCONTROL HYBRID + 90mm HYBRIS	0.18	PF81
105mm HYBRIS	0.27	PF82
22mm INSULATED PLASTERBOARD (λ = 0.04 W/mK) + HCONTROL HYBRID	0.28	PF83
HCONTROL HYBRID	0.30	PF40
Cavity Wall		
Internal Insulation		
HCONTROL HYBRID + 75mm HYBRIS	0.18	PF84
90mm HYBRIS	0.28	PF85
22mm INSULATED PLASTERBOARD (λ = 0.04 W/mK) + HCONTROL HYBRID	0.27	PF86

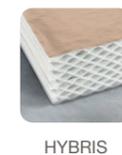
PF81: HCONTROL HYBRID + 90mm HYBRIS



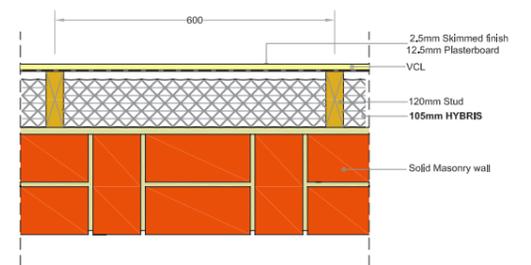
**U-VALUE REACHED:
0.18 W/mK**



PF82: 105mm HYBRIS



**U-VALUE REACHED:
0.27 W/mK**



SOLID WALL WITH EXTERNAL INSULATION

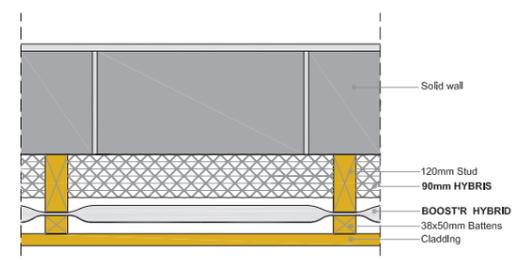
BOOST[®] HYBRID and/or HYBRIS is installed on the external side of a solid wall, then a batten cavity before the external cladding.

Products used	U-value (W/m ² K)	Reference
Solid Wall		
External insulation		
90mm HYBRIS + BOOST [®] HYBRID	0.20	PF87
60mm HYBRIS + REFLECTIVE BREATHER MEMBRANE	0.29	PF88

PF87: 90mm HYBRIS + BOOST[®] HYBRID



**U-VALUE REACHED:
0.20 W/mK**



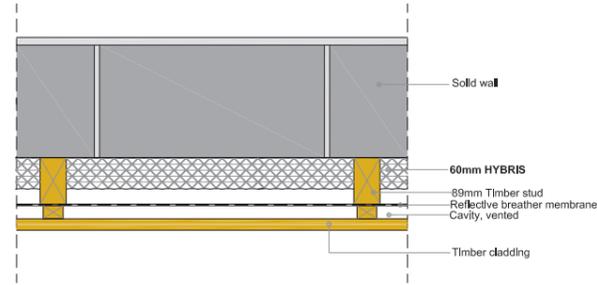
External insulation

PF88: 60mm HYBRIS + REFLECTIVE BREATHER SOLUTION



U-VALUE REACHED:
0.29 W/mK

HYBRIS



PITCHED ROOF SOLUTIONS

WARM PITCHED ROOF WITH INSULATION AT SLOPING CEILING

BOOST^{TR} HYBRID is used as a breather membrane, **HYBRIS** is fitted between rafters and **HCONTROL HYBRID** is the vapour control layer, installed under rafter. Internal finish is standard plasterboard.

Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 125mm HYBRIS + BOOST ^{TR} HYBRID	0.13	PF52
205mm HYBRIS + BOOST ^{TR} HYBRID	0.13	PF89
HCONTROL HYBRID + 170mm HYBRIS	0.13	PF90
HCONTROL HYBRID + 50mm HYBRIS + BOOST ^{TR} HYBRID	0.18	PF51
HCONTROL HYBRID + 90mm HYBRIS	0.18	PF31
125mm HYBRIS + BOOST ^{TR} HYBRID	0.18	PF53
185mm HYBRIS	0.17	PF59
HCONTROL HYBRID + 60mm FOAM BOARD (λ = 0.022 W/mK)	0.18	PF34
BOOST ^{TR} HYBRID + 85mm FOAM BOARD (λ = 0.022 W/mK)	0.18	PF42

HYBRID SYSTEM SOLUTION

PF52: HCONTROL HYBRID + 125mm HYBRIS + BOOST^{TR} HYBRID

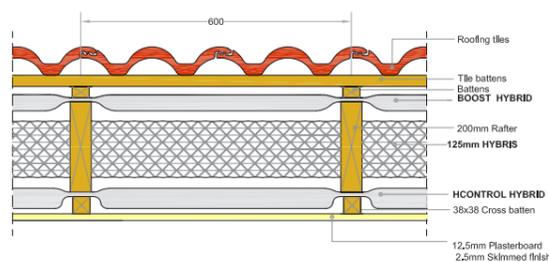


U-VALUE REACHED:
0.13 W/mK

HCONTROL HYBRID

HYBRIS

BOOST^{TR} HYBRID



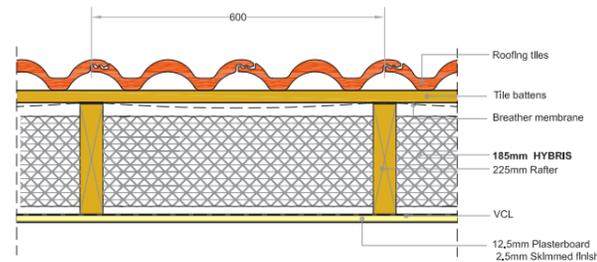
OTHER HYBRID CONFIGURATIONS

PF59: 185mm HYBRIS



U-VALUE REACHED:
0.17 W/mK

HYBRIS



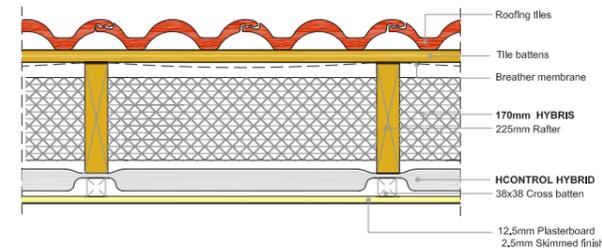
PF90: HCONTROL HYBRID + 170mm HYBRIS



U-VALUE REACHED:
0.13 W/mK

HCONTROL HYBRID

HYBRIS



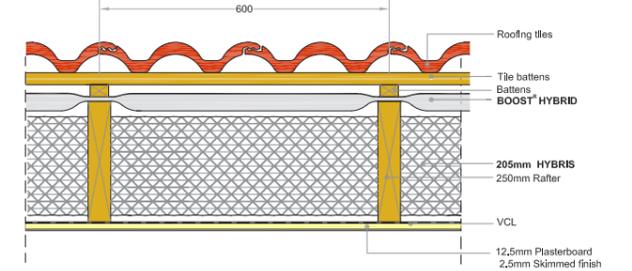
PF89: 205mm HYBRIS + BOOST^{TR} HYBRID



U-VALUE REACHED:
0.13 W/mK

HYBRIS

BOOST^{TR} HYBRID



COLD PITCHED ROOF WITH INSULATION AT HORIZONTAL CEILING

HYBRIS is installed between and over ceiling joists, or directly onto the boarded floor of the loft space.

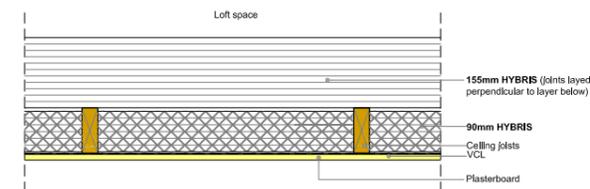
Products used	U-value (W/m ² K)	Reference
90mm + 155mm HYBRIS	0.13	PF54
HCONTROL HYBRID + 90mm + 90mm HYBRIS	0.13	PF91
185mm HYBRIS	0.15	PF92
90mm + 105mm HYBRIS	0.16	PF37

PF54: 90mm + 155mm HYBRIS



U-VALUE REACHED:
0.13 W/mK

HYBRIS



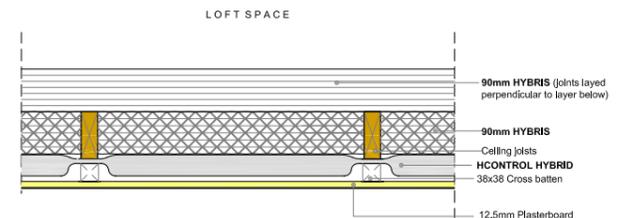
PF91: HCONTROL HYBRID + 90mm + 90mm HYBRIS



U-VALUE REACHED:
0.13 W/mK

HCONTROL HYBRID

HYBRIS



COLD FLAT ROOF

HCONTROL HYBRID, HYBRIS or BOOST^{TR} HYBRID can be installed but please note in accordance with BS5 250 it is crucial to introduce 50mm cross ventilation together with a VCL. However, the construction may still be vulnerable to condensation, for example in Scotland cold flat roofs are not recommended.

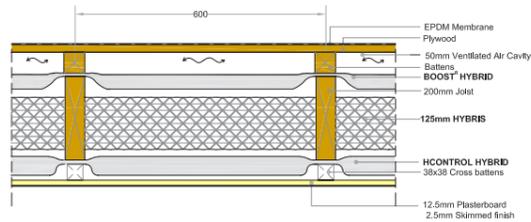
Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 125mm HYBRIS + BOOST^{TR} HYBRID	0.13	PF93
HCONTROL HYBRID + 130mm FOAM BOARD (λ = 0.022 W/mK)	0.13	PF94
125mm HYBRIS + BOOST ^{TR} HYBRID	0.18	PF95
HCONTROL HYBRID + 105mm HYBRIS	0.18	PF96

HYBRID SYSTEM SOLUTION

PF93: HCONTROL HYBRID + 125mm HYBRIS + BOOST^{TR} HYBRID



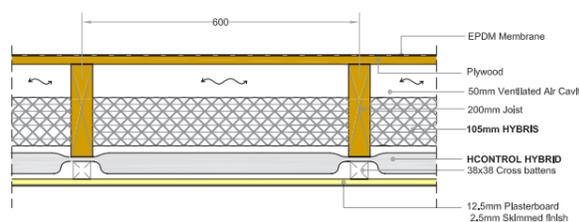
U-VALUE REACHED: 0.13 W/mK



PF96: HCONTROL HYBRID + 105mm HYBRIS



U-VALUE REACHED: 0.18 W/mK



WARM FLAT ROOF

HCONTROL HYBRID can be installed to reduce the thickness of rigid board insulation, but only if specific circumstances apply, please contact ACTIS for further details.

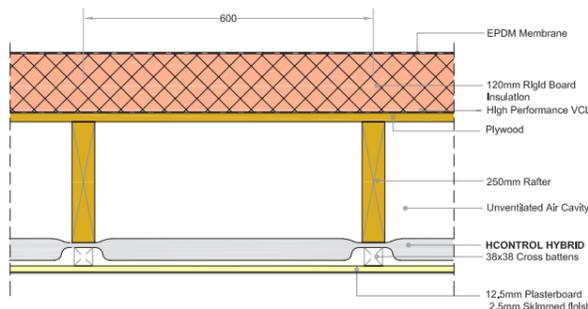
Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 120mm FOAM BOARD (λ = 0.022 W/mK)	0.13	PF97
HCONTROL HYBRID + 70mm FOAM BOARD (λ = 0.022 W/mK)	0.18	PF98

PF97: HCONTROL HYBRID + 120mm FOAM BOARD SOLUTION



U-VALUE REACHED: 0.13 W/mK

HCONTROL HYBRID



SUSPENDED TIMBER FLOOR

HYBRIS is fitted between joists and can be faced internally with **HCONTROL HYBRID**, the vapour control layer or externally with **BOOST^{TR} HYBRID**, the breather membrane.

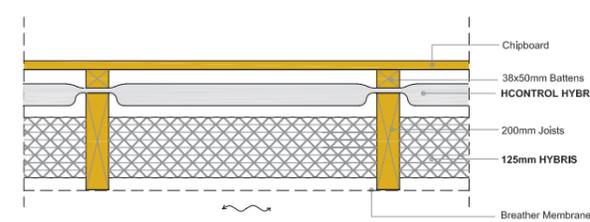
Products used	U-values calculated from perimeter/area ratio						Reference
	0.2	0.3	0.4	0.5	0.6	0.7	
Ratio							
HCONTROL HYBRID + 125mm HYBRIS	0.11	0.12	0.12	0.13	0.13	0.13	PF99
155mm HYBRIS + BOOST^{TR} HYBRID	0.12	0.13	0.13	0.13	0.14	0.14	PF100
155mm HYBRIS	0.14	0.15	0.15	0.16	0.16	0.16	PF101
105mm HYBRIS	0.17	0.18	0.19	0.20	0.20	0.21	PF102

The following examples are based on perimeter/area ratio being 0.5:

PF99: HCONTROL HYBRID + 125mm HYBRIS



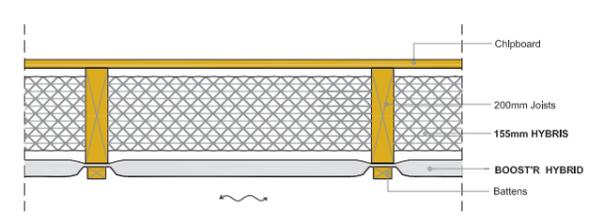
U-VALUE REACHED: 0.13 W/mK



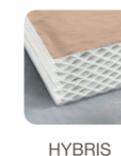
PF100: 155mm HYBRIS + BOOST^{TR} HYBRID



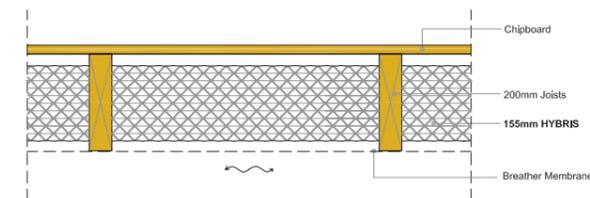
U-VALUE REACHED: 0.13 W/mK



PF101: 155mm HYBRIS SOLUTION



U-VALUE REACHED: 0.16 W/mK



SOLID FLOOR WITH TIMBER FLOOR ON BATTENS

HYBRIS or HCONTROL HYBRID is installed in the void provided by 1 layer of battens fitted directly onto a solid floor.

Products used	U-values calculated from perimeter/area ratio						Reference
Ratio	0.2	0.3	0.4	0.5	0.6	0.7	
HCONTROL HYBRID	0.17	0.19	0.21	0.22	0.22	0.23	PF103
75mm HYBRIS	0.19	0.21	0.23	0.24	0.25	0.26	PF104

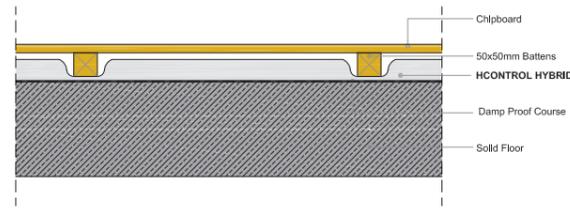
The following examples are based on perimeter/area ratio being 0.5:

PF103: HCONTROL HYBRID



U-VALUE REACHED:
0.22 W/mK

HCONTROL HYBRID

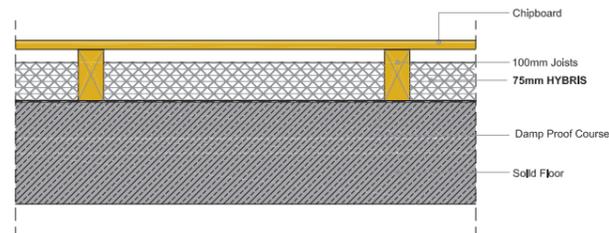


PF104: 75mm HYBRIS



U-VALUE REACHED:
0.24 W/mK

HYBRIS



EXPOSED TIMBER FLOOR

HYBRIS is fitted between joists and can be faced internally with HCONTROL HYBRID, the vapour control layer and/or externally with BOOST^{TR} HYBRID, the breather membrane.

Products used	U-value (W/m ² K)	Reference
HCONTROL HYBRID + 155mm HYBRIS + BOOST ^{TR} HYBRID	0.11	PF105
HCONTROL HYBRID + 155mm HYBRIS	0.13	PF106
50mm HYBRIS + 155mm HYBRIS + BOOST ^{TR} HYBRID	0.11	PF107
155mm HYBRIS	0.18	PF108

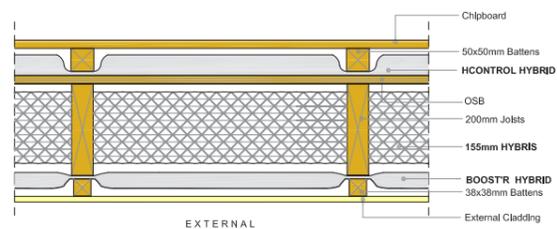
HYBRID SYSTEM SOLUTION

PF105: HCONTROL HYBRID + 155mm HYBRIS + BOOST^{TR} HYBRID SOLUTION



U-VALUE REACHED:
0.11 W/mK

HCONTROL HYBRID HYBRIS BOOST^{TR} HYBRID



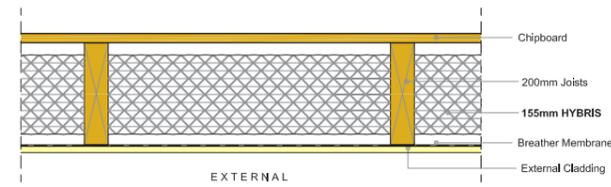
OTHER HYBRID CONFIGURATIONS

PF108: 155mm HYBRIS SOLUTION



U-VALUE REACHED:
0.18 W/mK

HYBRIS

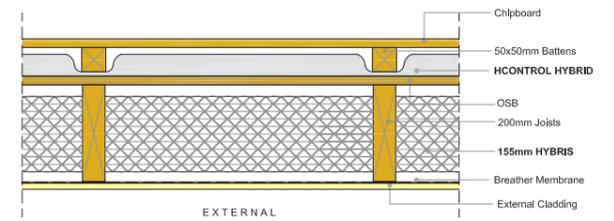


PF106: HCONTROL HYBRID + 155mm HYBRIS SOLUTION



U-VALUE REACHED:
0.13 W/mK

HCONTROL HYBRID HYBRIS

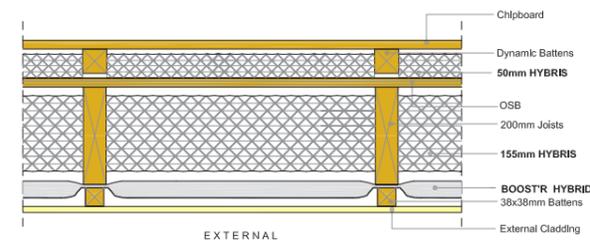


PF107: 50mm HYBRIS + 155mm HYBRIS + BOOST^{TR} HYBRID SOLUTION



U-VALUE REACHED:
0.11 W/mK

HYBRIS BOOST^{TR} HYBRID



BUILDING REGULATIONS

Schemes		Legislation	U-Value W/m ² K					
		Act	Wall			Roof		
			External	Cavity	Party	Ceiling	Pitched	Flat
England								
New Build	Notional	2010 BRegs Part L1A	0.18			0.13		
	Limiting		0.30		0.20	0.20		
Existing	New & replaced	2010 BRegs Part L1B	0.28			0.16	0.18	
	Retained		0.30	0.55		0.16	0.18	
	Retained threshold		0.70			0.35		
Wales								
New Build	Notional	2010 BRegs Part L1A	0.18			0.13		
	Limiting		0.21		0.20	0.15		
Existing	New & replaced	2010 BRegs Part L1B	0.21			0.15		
	Conversion&Renovation		0.30	0.55		0.16	0.18	
	Retained threshold		0.70			0.35		
Scotland								
New Build	Notional	Technical Handbook Section 6	0.17		0.20	0.11		
	Limiting (average)		0.22			0.15		
	Limiting (individual)		0.70			0.35		
Existing	Extensions (Wall>0.70, Roof>0.25)	Technical Handbook Section 6	0.17			0.11	0.13	
	Extensions (Wall<0.70, Roof<0.25)		0.22			0.15	0.18	
	Conversions (average)		0.30			0.25		
	Individual elements		0.70			0.35		

BUILDING REGULATIONS

Building Regulations require thermal elements within a building envelope to meet certain U-values. The target U-value depends on type of element, use of building and whether it is a new or an existing construction.

England, Wales and Scotland are now each responsible for their own Building Regulations and target U-values can therefore differ throughout the UK. The above table gives a summary of requirements for domestic buildings at time of printing (February 2017). If required this information can be confirmed with your local Building Control.

GOOD PRACTISE GUIDANCE

The solutions provided may require an independent vapour control layer or breather membrane product to reduce the risk of interstitial condensation. Where a vapour control layer is required, a product with a vapour resistance $Z > 500 \text{ MNs/g}$ should be used. Both vapour control layer and breather membrane need to be continuous and all joints sealed with adequate tape, to avoid air infiltration. To allow moist air to disperse into the atmosphere, the void between breather membrane and outer covering needs adequate ventilation. Please also refer to the installation guidelines.

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