

JUWÖ Evolved SmartWall™

Systems, solutions and external wall insulation.

Evolved Supplies Ltd offer as part of their External Wall Insulation Systems a range of EWI products designed to provide significant improvements in the thermal performance to all new residential and commercial properties. Evolved SmartWall (EWI) systems are designed to enable various types of insulation to be adhesively and mechanically fixed to the blocks.

Insulation Systems include:

- Breathable Expanded Graphite Polystyrene – excellent thermal performance and vapour open.
- Rockfibre – maintains excellent fire and acoustic performance of the blocks
- Woodfibre – natural insulant providing an environmentally friendly option.
- Standard Expanded Polystyrene – for thermal improvement only.

Evolved Supplies SmartWall External Wall Insulation Systems are complimented by an extensive range of decorative options using silicone textured render coatings to provide decorative as well as waterproof coatings. Brick slips can also be applied directly to the insulation.

The Evolved SmartWall Breathable systems are designed to enable vapour movement to pass through the insulation materials as quickly as possible offering greater vapour movement, working in conjunction with the SmartWall blocks to provide a healthy living environment.

- Excellent water repellent and self-cleansing characteristics in the case of Nano Silicon Topcoat
- Large range of colours including light pastel shades
- Brick effect render also available
- The appearance of a delicately smoothed facade surface of different grain sizes
- Vapour open technology with the Graphite E.P.S, Rockfibre & Woodfibre options.

The Evolved External Wall systems are applied by approved contractors only.



JUWÖ Evolved SmartWall™ U Values

U values have been calculated to 2 decimals places

SmartWall can also be finished using an insulated render system. The system we use is a three coat render system with the decorative topcoat of render being a through coloured system and is viable as a smooth or textured finish. SmartWall can be used in conjunction with the Future Foundation system to provide the complete thermal envelope.



SmartWall EWI Finish

EWI Insulation Thickness mm	SmartWall 190 U value W/m ² K	SmartWall 240 U Value W/m ² K	SmartWall 365 U Value W/m ² K
No Insulation	0.52 W/m ² K	0.42 W/m ² K	0.20 W/m ² K
60mm	0.26 W/m ² K	0.24 W/m ² K	0.14 W/m ² K
80mm	0.23 W/m ² K	0.20 W/m ² K	0.13 W/m ² K
100mm	0.20 W/m ² K	0.18 W/m ² K	0.12 W/m ² K
110mm	0.19 W/m ² K	0.17 W/m ² K	0.12 W/m ² K
120mm	0.18 W/m ² K	0.16 W/m ² K	0.11 W/m ² K
130mm	0.17 W/m ² K	0.16 W/m ² K	0.11 W/m ² K
140mm	0.16 W/m ² K	0.15 W/m ² K	0.11 W/m ² K
150mm	0.15 W/m ² K	0.14 W/m ² K	0.10 W/m ² K
160mm	0.14 W/m ² K	0.14 W/m ² K	0.10 W/m ² K
180mm	0.13 W/m ² K	0.13 W/m ² K	0.09 W/m ² K

SmartWall Insulated Render Finish

20mm	0.46 W/m ² K	0.38 W/m ² K	0.19 W/m ² K
30mm	0.42 W/m ² K	0.35 W/m ² K	0.18 W/m ² K
50mm	0.37 W/m ² K	0.32 W/m ² K	0.17 W/m ² K
70mm	0.33 W/m ² K	0.29 W/m ² K	0.16 W/m ² K
100mm	0.29 W/m ² K	0.26 W/m ² K	0.15 W/m ² K



Technology

Table of U values for external walls

Calculated values incl. 20mm exterior render + 15mm interior plaster*

Thermal conductivity $\lambda_r = W/(mK)$	Heat transfer coefficients (U values) in W/m^2K for a wall thickness of					
	190mm	240mm	300mm	365mm	425mm	490mm
0.07			0.22	0.18	0.16	0.14
0.75				0.19	0.16	0.14
0.08			0.25	0.21	0.18	0.16
0.09			0.28	0.23	0.20	0.17
0.10			0.30	0.25	0.22	0.19
0.11	0.49	0.41	0.33	0.28	0.24	0.21
0.12		0.43	0.36	0.30	0.26	0.23
0.13		0.47	0.38	0.32	0.28	0.25
0.14		0.50	0.41	0.34	0.30	0.26
0.16		0.55	0.46	0.39	0.34	0.30
0.18		0.63	0.52	0.44	0.38	0.34
0.21		0.71	0.59	0.50	0.44	0.39
0.24		0.80	0.66	0.56	0.49	0.44
0.27		0.87	0.73	0.62	0.55	0.48
0.33		1.02	0.86	0.73	0.65	0.57
0.39		1.15	0.98	0.84	0.74	0.66

* if plasterboard is being used, then a parging coat needs to be applied to the internal face of the external SmartWall block.



Certified for Environmental Product Declaration EPD EN 14025



Certified to the highest European standard

Institut Bauen und Umwelt e.V. promotes the production and use of environmentally friendly building products. We have been granted an ecological certificate from them. This was based on a positive overall rating of the products in an assessment of their environmental effects.

All of our Blocks are manufactured with a minimal amount of primary energy and the finished house saves heat energy through its outstanding insulating properties. The proven solid monolithic wall structures retain their value extremely well. Should demolition become necessary, the waste is sorted and returned to production where it will be used for building roads or resurfacing tennis courts.