

JUWO SMARTWALL BUILDING SYSTEMS

*Monolithic Building System
for the Future*





**JUWO Evolved SmartWall™
Single Skin Monolithic Building
System to suit all types of buildings**



Why should I build a brick house from JUWÖ SmartWall™?

Comfortable living climate in winter and summer

A comfortable living climate is characterised by:

- Pleasant room temperature in every season
- Ideal humidity
- Dry walls
- Healthy indoor air

Bricks create a pleasant indoor climate thanks to their excellent thermal insulation and long-term heat storage. In a brick house it is always nice and warm and you feel comfortable. The interplay of insulation and heat storage is unique in the monolithic brick wall.

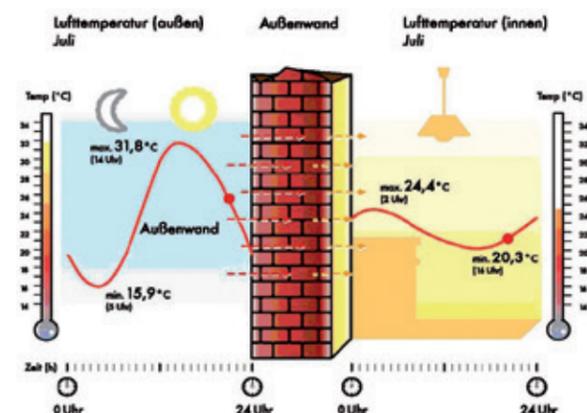
Increasingly important! Pleasantly cool in summer: bricks have the unique property of offering high thermal insulation combined with high storage mass. This natural air conditioning keeps the temperature in the house relatively constant and protects against heat in summer. No other building material achieves this in this form.



Interestingly, all other masonry manufacturers (lightweight concrete, aerated concrete, etc.) also bring up the argument with the storage mass. Compared to light wooden structures, the advantage is also real. The fact is, however, that the brick has significantly more mass, assuming the same thermal insulation, and can therefore store significantly more heat or coolness.

Clear advantage for the monolithic wall

Only the monolithic wall is able to store the coolness of the night and the warmth of the day and release it to the inside at a later time. The insulation of an additionally insulated facade initially prevents the heat of the summer day from hitting the masonry and heating it up. But it also prevents the coolness of the night from cooling down the wall. It's getting warmer every day. After several summer days, it can no longer be avoided that it stays hot inside. The heat can no longer escape through the insulation in the other direction. Compensation through the coolness of the night does not even come into the house. A ventilation system doesn't really help either. This is why it often stays unbearably hot for a long time in additionally insulated houses in summer.



Lowest moisture content of all comparable building materials

The more moisture, the worse the thermal insulation. The rule of thumb is: Every percent more moisture reduces the thermal insulation by approx. 10%. Bricks are dried and then burned in the fire. They have the fastest drying time and the lowest residual moisture of all comparable building materials whose final drying time is up to 3 years and more. That is, bricks provide thermal insulation from the start.

Monetary benefits right from the start

- Highly insulating bricks save real money. Do not be fooled by superficially cheaper building materials.
- Gain of living space through slim walls from 30 cm wall thickness. The new bricks of the RX®series are ideal for almost all applications from a wall thickness of 30 cm due to their superlative building physics values. Building owners gain living space and property developers considerable yield advantages.
- Since the brick is dry and does not shrink, the wall can be plastered without a long wait. Manufacturers of binder-bound building materials, on the other hand, recommend a waiting period of at least 6 months. The four-digit savings in scaffolding costs alone are considerable.
- Thanks to the dry bricks, the thermal insulation works right from the start. This directly saves a lot of heating costs.
- Follow-up costs due to mould are virtually impossible.
- Due to the dimensional stability of the bricks and in connection with the recommended plasters, the risk of subsequent crack formation is significantly reduced.

Sustainability - "Green Deal" since 1862. Bricks for future® made by JUWÖ

- Building ecologically and sustainable - preferably monolithic (plaster inside, brick, plaster outside - done).
- A brick house is built to last. Its long service life without the need for maintenance is true sustainability.
- The facade made of monolithic masonry without artificial insulation systems is free of harmful biocides (treatment with biocides in ETICS systems against fungal and algal infestation is problematic).
- Thermal insulation composite systems are more vulnerable than a plastered monolithic wall and the service life is limited (max. 30 - 40 years). The facade must then be disposed of as hazardous waste. This is not only ecological nonsense, but also very expensive. The insulation madness will bring big problems in this context in the future!
- The transport of raw materials to production and the end product to the construction site is essential for the CO footprint. JUWÖ and Zeller have been deeply rooted at their locations for generations and mainly deliver regionally and the raw materials are mined on site. The demolition material from a brick house can be stored in conventional rubble landfills or reused as recycled building material. Solutions for recycling broken bricks (e.g. in road construction or as a tennis court surface) already exist and are constantly being improved.
- In all plants we use electricity from renewable energies.

- The Fresenius Institute confirms: JUWÖ clay can even be used as healing earth.
- Random samples of the bricks are checked twice a year for harmful substances by independent institutes. Since the beginning of these measurements in 2007, all values are, firstly, harmless and, secondly, without significant deviations.
- Awarded by the Eco Institute, which confirms the harmlessness of bricks filled with Rockwool and glass wool.
- All JUWÖ bricks also have a state-of-the-art environmental product declaration (EPD) in accordance with ISO 14025 and EN 15804. In contrast to the now unmanageable jungle of certification bodies and labels, this is recognized throughout Europe, very demanding and serious.
- Together with the Fraunhofer Institute, JUWÖ is running an extensive research project on the use of green hydrogen for brick production.
- Last but not least, JUWÖ created the JUWÖ Arboretum back in the 1990s. In the tree garden there are over 600 trees, shrubs and grasses on almost 10,000 m² and enrich nature.
- More than 18 hectares of vineyards, which have been earmarked for future raw material extraction for generations and generations, not only ensure excellent wine but also store CO₂ year after year. In addition, 2 there are almost 33 hectares of other agricultural land and biotope.
- Bricks are also completely carbon-free, now and in the future. If humanity is to be decarbonized from 2050, everything that releases CO₂ again - including wooden houses - would be an environmental problem.
- Guaranteed wood-free - JUWÖ bricks are purely mineral and protect the increasingly valuable resource of the forest.
- JUWÖ plans to set up a solar park on initially 6 hectares and then on a total of 25 hectares of its own land in the immediate vicinity of the Wöllstein plant. Step by step and depending on the technical possibilities, we are replacing our previous energy mix with a sustainable, decentralized power supply in our own hands.
- Since 2021 we have been offering professional and reputable 2 optional CO compensation as part of a certified carbon footprint management system according to EN14064-1.



High thermal insulation - protect the climate with bricks

The (right from the start) excellent thermal insulation of your house is guaranteed by:

- Solid and dry brick construction
- Constant innovation in highly insulating bricks.

JUWÖ bricks meet current and future requirements for maximum thermal insulation.

Info! Actual thermal insulation even higher:

The bricks, which are relatively heavy due to their high raw density, store the heat rays of the sun longer than all other building materials and thus save additional heating energy. This effect was scientifically proven by Prof. Fehrenberg, for example, when examining two rental properties with brick walls: one building was additionally insulated, the other not. Previously, the heating costs of both buildings were largely identical. Since then, they have been around 13% higher in the modernized building than in the non-refurbished building. Explanation: The bricks store the sun's rays and thus prevent heat energy losses. This effect is lost with additional external insulation. (Source: World on Sunday)

JUWÖ bricks have extremely high compressive strength values

Due to the special Wöllsteiner clay in connection with a special production process, the extremely thermally insulating JUWÖ bricks also have extremely high compressive strength values.

This puts JUWÖ at the forefront among brick manufacturers. This is especially true for the top thermal insulation blocks of the non-tile competition. This can show a maximum compressive strength class 2. JUWÖ bricks are therefore many times more pressure-resistant.

Did you know that?

14 N/mm² corresponds to a load of over 130 tons, ie a highly thermally insulating ThermoPlan®S9 carries the load of more than 3 fully loaded 40 to trucks including trailers. Of course, most buildings do not necessarily need these high compressive strength values. But it is helpful for many constructive details and it simply gives a good feeling.

Minimal follow-up costs and valuable

Term at least 100 years - guaranteed increase in value. A house made of bricks requires almost no maintenance work for decades and therefore has very low follow-up costs. But a brick house is also a safe investment that you can use and experience in real life, now, and not in a virtual, abstract, and maybe never.

Effective noise protection

A heavy brick wall offers high soundproofing.

Safe fire protection

A brick house offers the highest level of fire protection and safety through:

- Non-combustible bricks
- Solid solid construction
- Long resistance times
- No toxic fumes

Universal usability

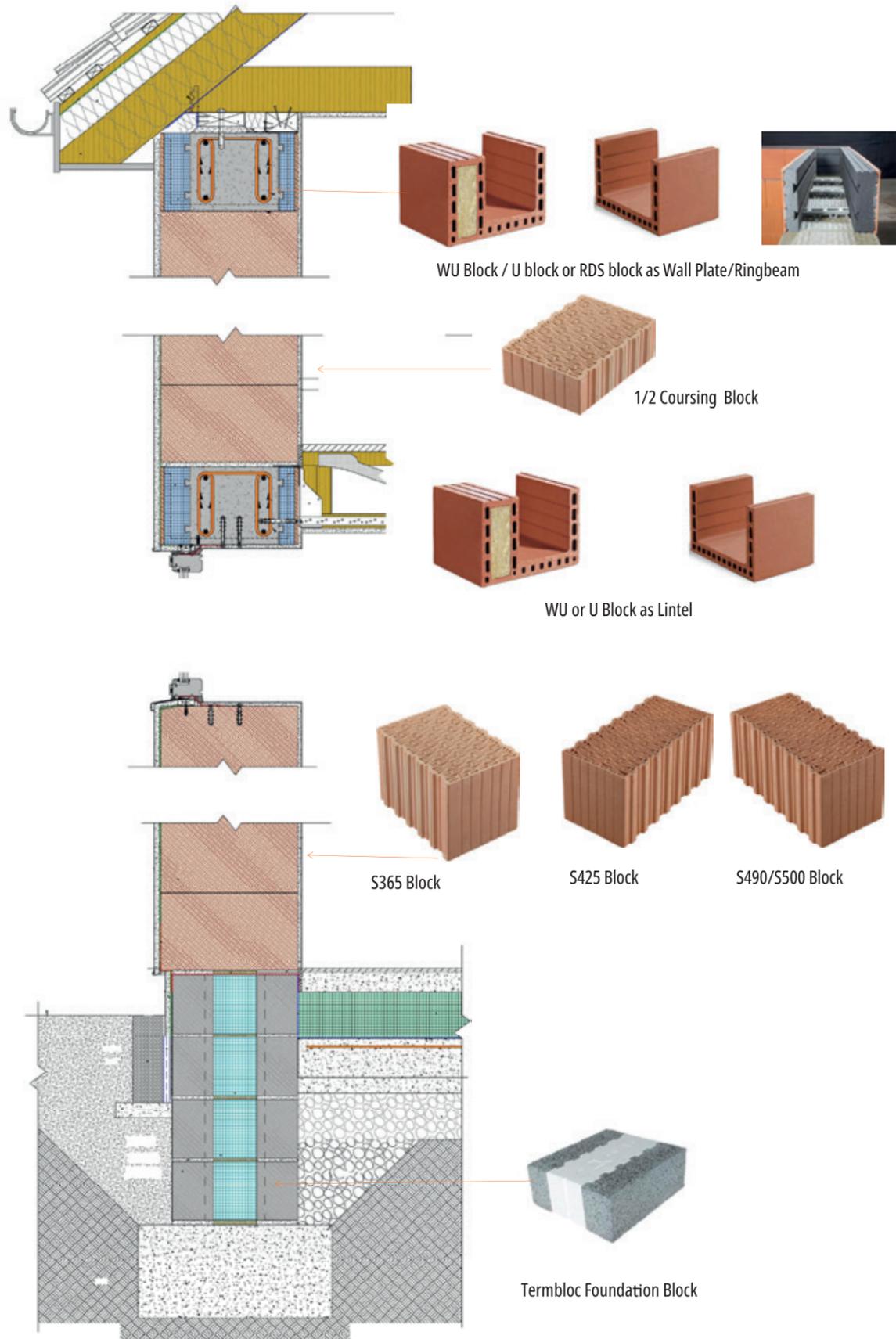
Bricks can be used universally and flexibly from single-family houses to multi-storey buildings.

JUWÖ Honey: Ours

The JUWÖ BrickBees will soon take care of that employee and hobby beekeeper Christopher Silz from the Digital/ Media team, who looks after a total of 5 bee colonies in the JUWÖ Arboretum. There, and in the surrounding vineyards, where we had already planted honey flower seeds last year, the bees will collect plenty of nectar.



JUWO SmartWall™ 'S' System



TYPICAL WALL SECTION

JUWO SmartWall™ 'S' Series to achieve 0.20 - 0.13 U value



The Juwo SmartWall "S" System uses nothing but Clay and encapsulated air to create a highly efficient Monolithic Single Skin construction that provides the required Insulation performance for your build whatever the required U value is.

Simple to install. No additional insulation required to provide the required U value, therefore No Cavities, No wall Ties reducing the build time by over 60% and less materials required on site, plus uses less cement and sand, and less water due to the Thin Bed adhesive method of build and there isn't any perpend jointing required, unless there is a straight line joint or a cut in the block where a simple application of our LM21 Insulating mortar is applied to maintain the insulation performance and the structural integrity of the system.

Type	S365/7.5 (248 (L) x 365 (W) x 249(H) [250mm Coursing]	S425/7.5 (248 (L) x 425 (W) x 249(H) [250mm Coursing]	S490/7.5 (248 (L) x 490 (W) x 249(H) [250mm Coursing]	S500/8 (248 (L) x 500 (W) x 249(H) [250mm Coursing]
Lambda Value	0.075 W/mK	0.075 W/mK	0.075 W/mK	0.080 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 8 - Mean 10 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1396 Eqn. 3.4) f_b MPa</small>	7.50 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.50 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.50 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	10 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	F 90 A	F 90 A	F 90 A	F 90 A
U Values W/m ² K <small>Based on a Build up of: * Render / Brickslip * Juwo SmartWall * Plaster Internal * Plasterboard</small>	Plaster Finish 0.20 W/m ² K Plasterboard 0.20 W/m ² K	Plaster Finish 0.18 W/m ² K Plasterboard 0.17 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.16 W/m ² K
U Values W/m ² K <small>Based on a Build up of: * Render / Brickslip * Juwo SmartWall * Insulated PIR Plasterboard Internal</small>	0.18 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.15 W/M ² K <small>Plus 32.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.15 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>
U Values W/m ² K <small>Based on a Build up of: * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard</small>	Plaster Finish 0.19 W/m ² K Plasterboard 0.19 W/m ² K	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.15 W/m ² K
U Values W/m ² K <small>Based on a Build up of: * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal</small>	0.18 W/M ² K <small>Plus 22mm PIR Insulated Plasterboard</small>	0.15 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.13 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterblock</small>

Please Note ** U Values quoted above are none construction specific. Individual U value Calculation on your construction can be provide on request

JUWO SmartWall™ 'MZ' System

JUWO SmartWall™ 'MZ' Series to achieve 0.18 - 0.12 U value

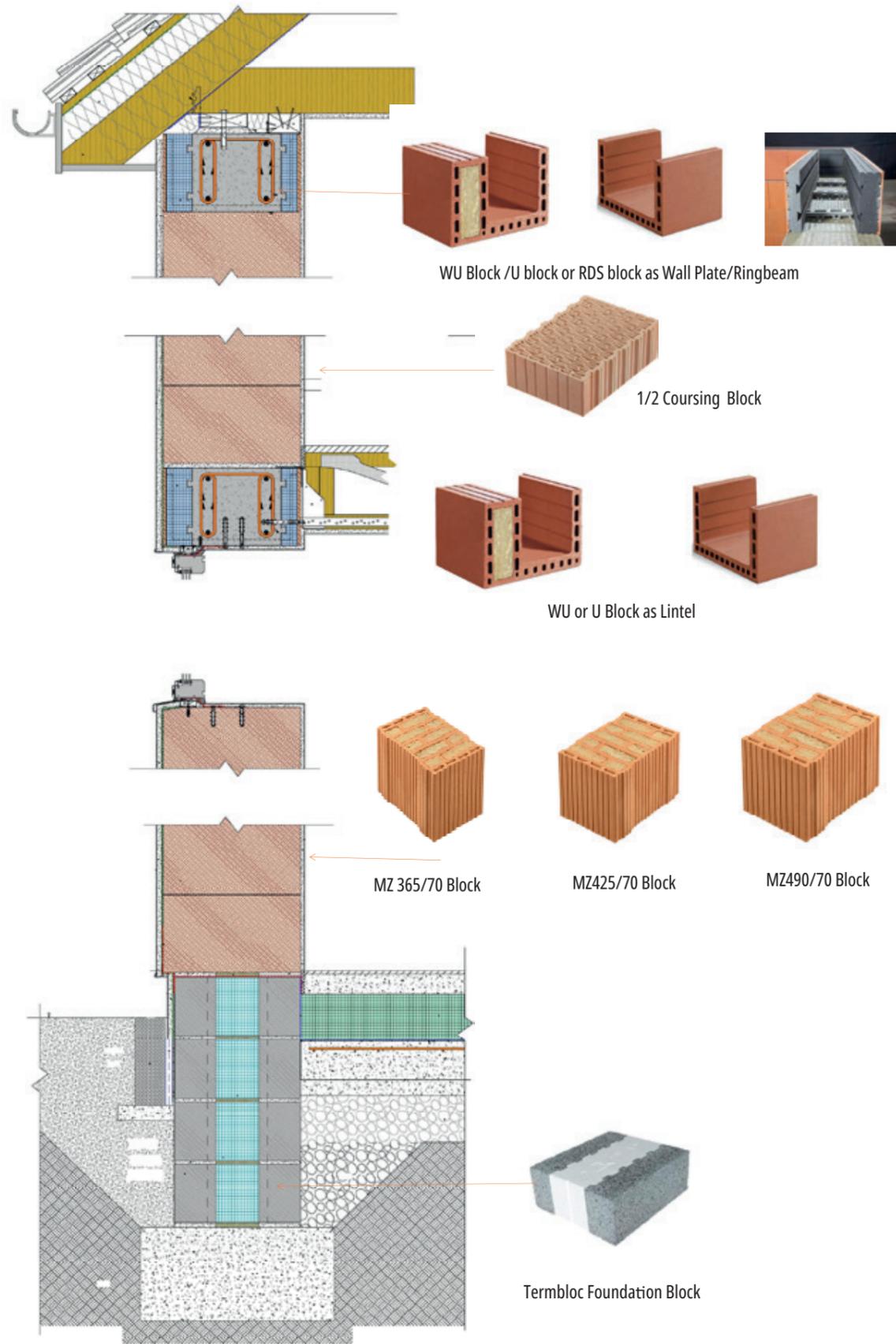
MZ70 Range



The Juwo SmartWall “MZ” System incorporates Mineral Wool into the Clay surrounds to create a highly efficient Monolithic Single Skin construction that provides the required Insulation performance for your build whatever the required U value is.

The Juwo SmartWall “MZ” system is another innovation, with insulating material filling the block, effectively saving energy to protect the environment and to reduce the operating costs of your project be it a house, apartments or commercial development. Simple to install. No additional insulation required to provide the required U value, No Cavities therefore No wall Ties, reducing the build time by over 60%.

Less materials required on site, using less cement and sand plus less water as the system uses Thin Bed adhesive methods of build and there isn't any perpend jointing required, unless there is a straight line joint.



TYPICAL WALL SECTION

Type	MZ365/70 (248 (L) x 365 (W) x 249(H) [250mm Coursing])	MZ425/70 (248 (L) x 425 (W) x 249(H) [250mm Coursing])	MZ490/70 (248 (L) x 490 (W) x 249(H) [250mm Coursing])
Lambda Value	0.070 W/mK	0.070 W/mK	0.070 W/mK
Strength Class	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1996 Eqn. 3.4) 0 MPa</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	Firewall A +M 90	Firewall A +M 90	Firewall A +M 90
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.19 W/m ² K Plasterboard 0.18 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.14 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.17 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.15 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.13 W/M ² K Plus 27.5mm PIR Insulated Plasterboard
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.18 W/m ² K Plasterboard 0.18 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.13 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.16 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.14 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.12 W/M ² K Plus 27.5mm PIR Insulated Plasterboard

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JUWO SmartWall™ 'MZ' Series to achieve 0.18 - 0.12 U value



Juwo SmartWall MZ65 Range

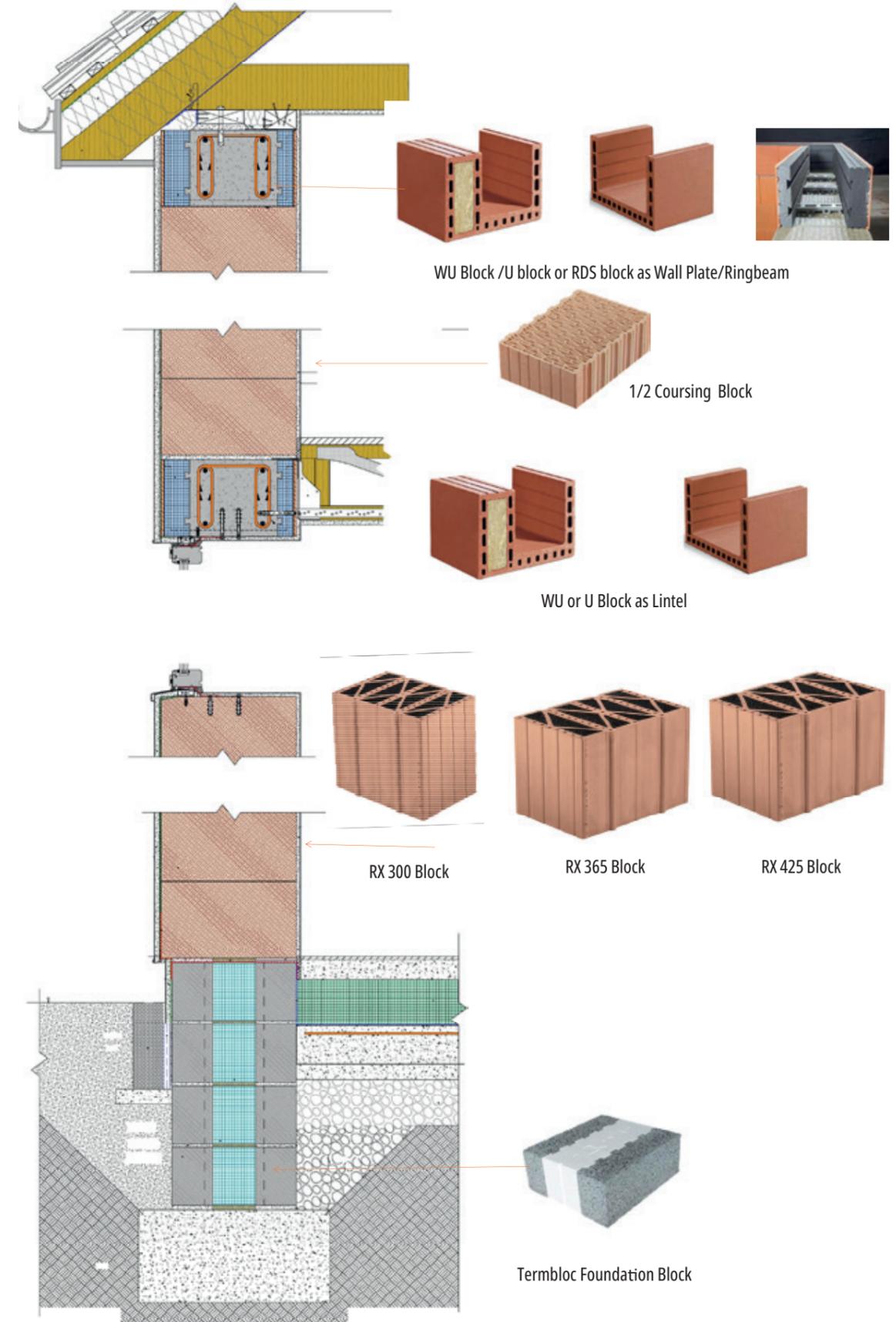
Same make up as the MZ70 range but with a Thermal Conductivity of 0.65 W/mK to improve the energy efficiency of your project within the same width of block.

MZ65 Range

Type	MZ365/65 (248 (L) x 365 (W) x 249(H) [250mm Coursing])	MZ425/65 (248 (L) x 425 (W) x 249(H) [250mm Coursing])	MZ490/65 (248 (L) x 490 (W) x 249(H) [250mm Coursing])
Lambda Value	0.065 W/mK	0.065 W/mK	0.065 W/mK
Strength Class	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1996 Eqn. 3.4) (N/mm²)</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	10.00 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	Firewall A +M 90	Firewall A +M 90	Firewall A +M 90
U Values W/m ² K <small>Based on a Build up of: * Render / Brickslip * Juwo SmartWall * Plaster Internal * Plasterboard</small>	Plaster Finish 0.18 W/m ² K Plasterboard 0.17 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.13 W/m ² K Plasterboard 0.13 W/m ² K
U Values W/m ² K <small>Based on a Build up of: * Render / Brickslip * Juwo SmartWall * Insulated PIR Plasterboard Internal</small>	0.16 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.12 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>
U Values W/m ² K <small>Based on a Build up of: * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard</small>	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K	Plaster Finish 0.13 W/m ² K Plasterboard 0.13 W/m ² K
U Values W/m ² K <small>Based on a Build up of: * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal</small>	0.15 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.13 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.12 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>

Please Note ** U Values quoted above are none construction specific. Individual U value Calculation on your construction can be provide on request

JUWO SmartWall™ 'RX' System



TYPICAL WALL SECTION

JUWO SmartWall™ 'RX' Series to achieve 0.21 - 0.15 U value



The Juwo SmartWall "RX" Range

The Juwo SmartWall "RX" system has been developed to add a new dimension in providing

- Higher Thermal Insulation
- Higher Compressive Strength
- Higher Sound Insulation
- Higher Fire Protection

Using PoroTec Insulation bead that is 98% air securely bonded to the clay provides no fire issues because the oxygen supply is cut off in the closed system.

RX65-G Range

Type	RX300/65-G (248 (L) x 300 (W) x 249(H) [250mm Coursing])	RX365/65-G (248 (L) x 365 (W) x 249(H) [250mm Coursing])	RX425/65-G (248 (L) x 425 (W) x 249(H) [250mm Coursing])
Lambda Value	0.065 W/mK	0.065 W/mK	0.065 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²
Density Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1996 Eqn. 3.4) 10 MPa</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	F 60	F 60	F 60
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.21 W/m ² K Plasterboard 0.21 W/m ² K	Plaster Finish 0.18 W/m ² K Plasterboard 0.17 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.15 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.18 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.16 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.20 W/m ² K Plasterboard 0.20 W/m ² K	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.17 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.15 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.13 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>

JUWO SmartWall™ 'RX' Series to achieve 0.18 - 0.12 U value



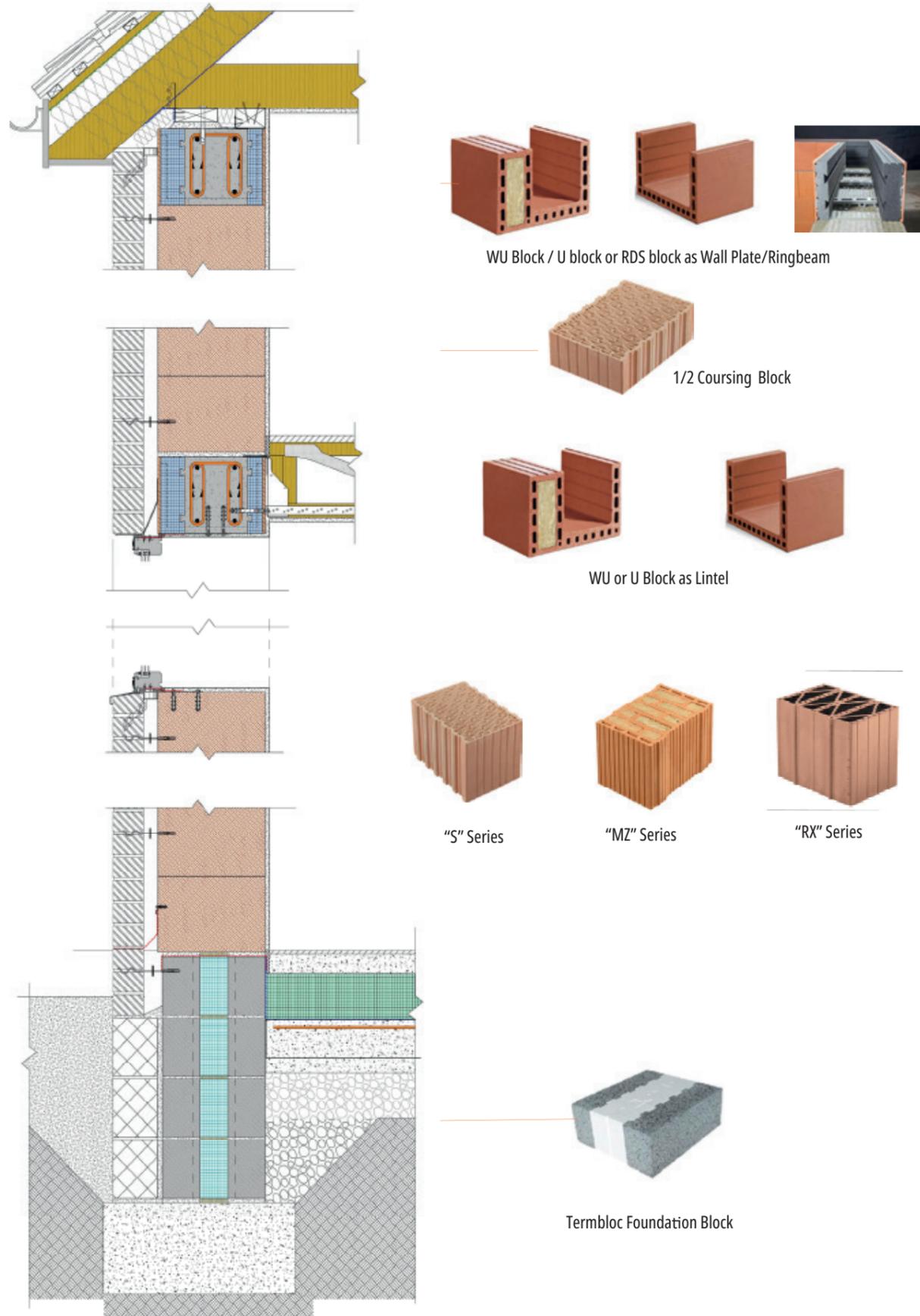
The Juwo SmartWall RX 60 Range

The Juwo SmartWall RX60 system offers the same values as the RX65-G system but with an improved Lambda thermal Conductivity value.

RX60 Range

Type	RX300/60 (248 (L) x 300 (W) x 249(H) [250mm Coursing])	RX365/60 (248 (L) x 365 (W) x 249(H) [250mm Coursing])	RX425/60 (248 (L) x 425 (W) x 249(H) [250mm Coursing])	RX500/60 (248 (L) x 500 (W) x 249(H) [250mm Coursing])
Lambda Value	0.060 W/mK	0.060 W/mK	0.060 W/mK	0.060 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²			
Density Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³
Mean unit strength <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	F 60	F 60	F 60	F 60
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.20 W/m ² K Plasterboard 0.19 W/m ² K	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.13 W/m ² K	Plaster Finish 0.12 W/m ² K Plasterboard 0.12 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Render / Brickslip * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.17 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.13 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.11 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.19 W/m ² K Plasterboard 0.18 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.13 W/m ² K	Plaster Finish 0.12 W/m ² K Plasterboard 0.12 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.16 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.14 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.12 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>	0.11 W/M ² K <small>Plus 27.5mm PIR Insulated Plasterboard</small>

JUWO SmartWall™ 'Monolithic Cavity Wall' System



JUWO SmartWall™ 'Monolithic Cavity Wall System'

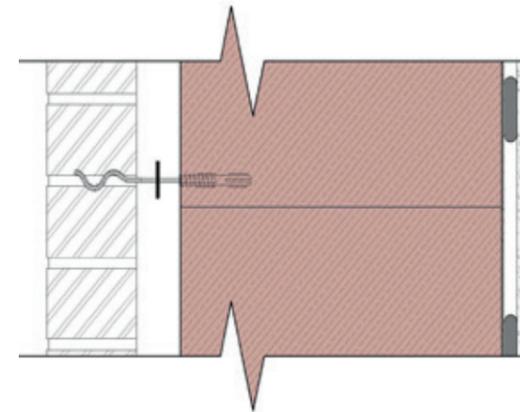


When you have a requirement to construct a Brick Outer face, as opposed to a Render or Brick Slip external finish, Juwo SmartWall has a system to allow you to use this with a Monolithic Single Skin inner leaf which creates your Insulation U value requirements. By simply adding a cavity with wall ties developed to suit the brick size you are using, be it the standard UK brick size (215x102x65) or a European brick size (240x115x71), which works with the Juwo SmartWall block coursing height of 250mm.

There are two types of Wall Ties available.

Type 1 is the Uni-Perfo Plug Tie which is a simple plug and screw tie that is fixed at any point to the Juwo SmartWall block and bonds into the 10mm mortar bed of the UK brick.

Type 2 is the Uni-Perfo Strap Tie which fixes into the thin bed mortar joint in the Juwo SmartWall block and bonds into the 10mm mortar bed of the European brick.



Type 1 Uni-Perfo Plug Wall Tie (For UK Bricks)

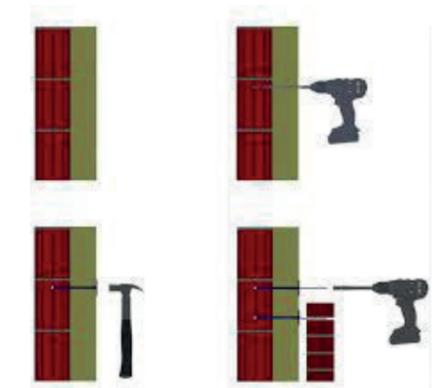
Simply drill a hole into the Juwo SmartWall block Cavity side at any point required and fix a Uni-Perfo Blue (140mm) plug into it. If required use the Insert Tool to push the Blue plug into the pre-drilled hole.

Using the Wall Tie fixing tool to screw the Uni-Perfo Wall Tie into the Blue Plug.

The twisted end is bonded into the Brick 10mm mortar bed.

If any additional insulation is being used, the Blue Plug fixing goes through the insulation and into the Juwo SmartWall with the Blue Plug trapping the additional insulation in place.

See information of Uni-Perfo Plugs & Wall Ties sizes required where insulation is being used for the correct sizes.



JUWO SmartWall™ 'Monolithic Cavity Wall' System

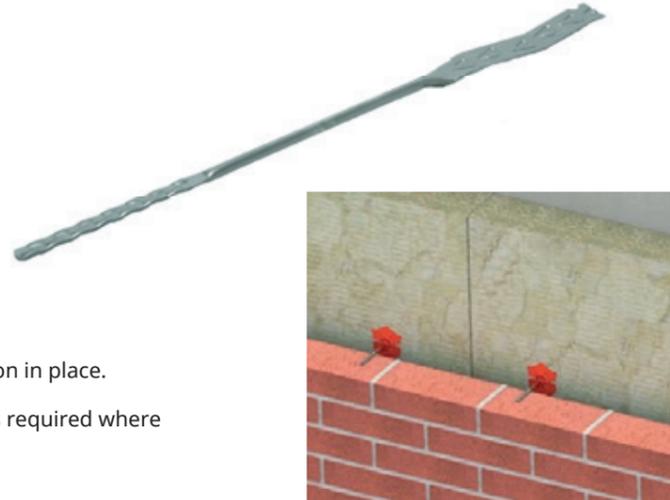
Type 2 Uni-Perfo Strap Wall Tie (For European Bricks)

Lay the flatten end onto the Juwo SmartWall block adhesive bed Cavity side at the required point.

The twisted end is bonded into the Brick 10mm mortar bed.

If any additional insulation is being used with the Uni-Perfo Strap Wall Tie, the tie goes through the insulation and into the Juwo SmartWall as above, and is held back with a surface clip holding the additional insulation in place.

See information of Uni-Perfo Strap Wall Ties sizes required where insulation is being used for the correct sizes.



Juwo SmartWall "S" Series

Type	S365/7.5 (248 (L) x 365 (W) x 249(H)) [250mm Coursing]	S425/7.5 (248 (L) x 425 (W) x 249(H)) [250mm Coursing]	S490/7.5 (248 (L) x 490 (W) x 249(H)) [250mm Coursing]	S500/8 (248 (L) x 500 (W) x 249(H)) [250mm Coursing]
Lambda Value	0.075 W/mK	0.075 W/mK	0.075 W/mK	0.080 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 8 - Mean 10 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1296 Eqs. 3.4) N/MPa</small>	7.50 MPa	7.50 MPa	7.50 MPa	10 MPa
Fire Performance	F 90 A	F 90 A	F 90 A	F 90 A
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.19 W/m ² K Plasterboard 0.19 W/m ² K	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.15 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.18 W/M ² K Plus 22mm PIR Insulated Plasterboard	0.15 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.13 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.14 W/M ² K Plus 27.5mm PIR Insulated Plasterboard

JUWO SmartWall™ 'MZ' Series

Type	MZ365/70 (248 (L) x 365 (W) x 249(H)) [250mm Coursing]	MZ425/70 (248 (L) x 425 (W) x 249(H)) [250mm Coursing]	MZ490/70 (248 (L) x 490 (W) x 249(H)) [250mm Coursing]
Lambda Value	0.070 W/mK	0.070 W/mK	0.070 W/mK
Strength Class	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1296 Eqs. 3.4) N/MPa</small>	10.00 MPa	10.00 MPa	10.00 MPa
Fire Performance	Firewall A +M 90	Firewall A +M 90	Firewall A +M 90
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.18 W/m ² K Plasterboard 0.18 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.13 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.16 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.14 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.12 W/M ² K Plus 27.5mm PIR Insulated Plasterboard

Type	MZ365/65 (248 (L) x 365 (W) x 249(H)) [250mm Coursing]	MZ425/65 (248 (L) x 425 (W) x 249(H)) [250mm Coursing]	MZ490/65 (248 (L) x 490 (W) x 249(H)) [250mm Coursing]
Lambda Value	0.065 W/mK	0.065 W/mK	0.065 W/mK
Strength Class	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²	Class 8 - Mean 12.5 N/mm ²
Density Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³	0.60 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1296 Eqs. 3.4) N/MPa</small>	10.00 MPa	10.00 MPa	10.00 MPa
Fire Performance	Firewall A +M 90	Firewall A +M 90	Firewall A +M 90
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Plaster Internal * Plasterboard	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K	Plaster Finish 0.13 W/m ² K Plasterboard 0.13 W/m ² K
U Values W/m ² K <i>Based on a Build up of:</i> * Brick - Cavity * Juwo SmartWall * Insulated PIR Plasterboard Internal	0.15 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.13 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.12 W/M ² K Plus 27.5mm PIR Insulated Plasterboard

Please Note ** U Values quoted above are none construction specific. Individual U value Calculation on your construction can be provide on request

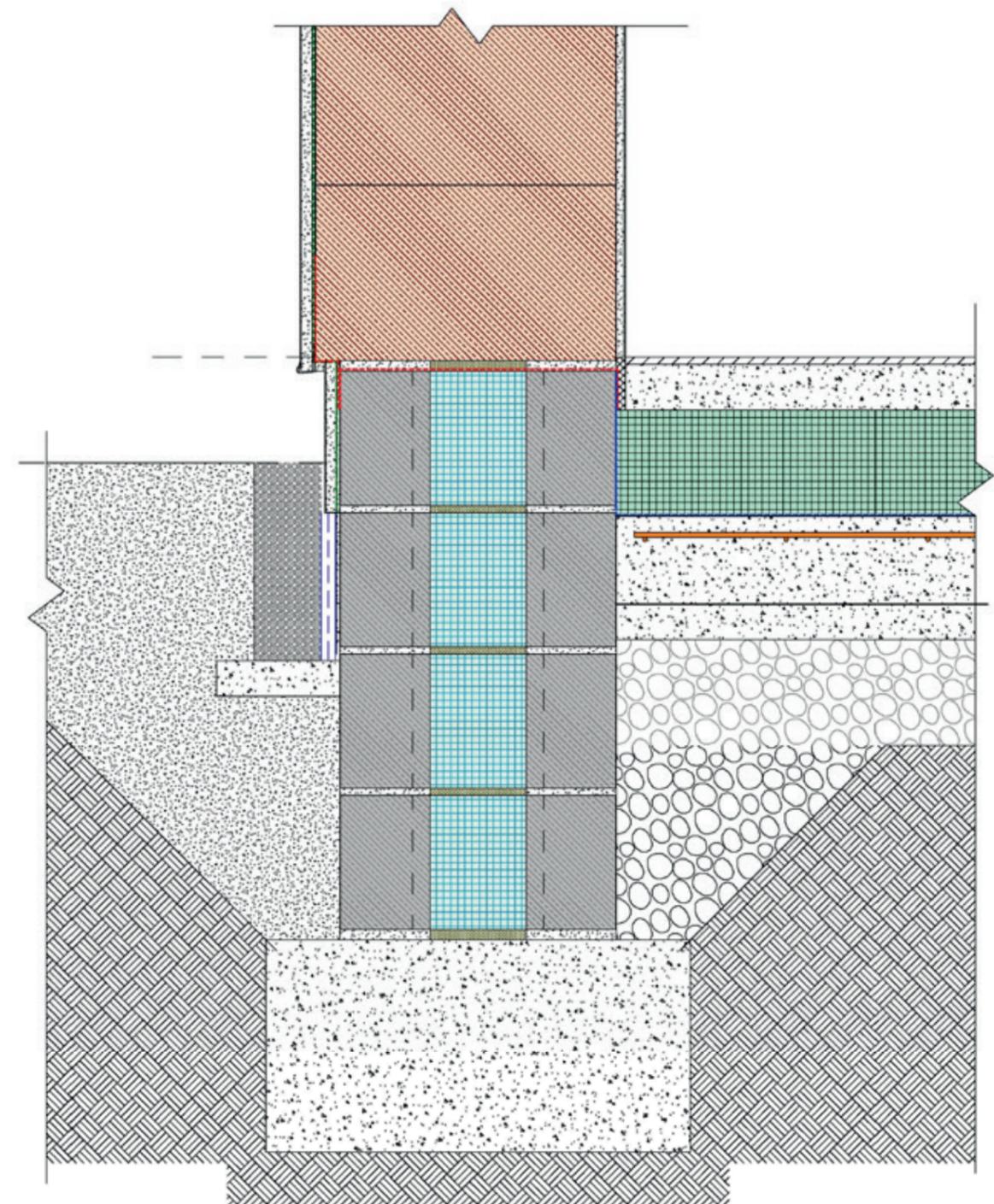
JUWO SmartWall™ 'RX' Series

Type	RX300/65-G (248 (L) x 300 (W) x 249(H)) [250mm Coursing]	RX365/65-G (248 (L) x 365 (W) x 249(H)) [250mm Coursing]	RX425/65-G (248 (L) x 425 (W) x 249(H)) [250mm Coursing]
Lambda Value	0.065 W/mK	0.065 W/mK	0.065 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²	Class 6 - Mean 7.5 N/mm ²
Density Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1996 Eqn. 3.4) 0 MPa</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	F 60	F 60	F 60
U Values W/m ² K <i>Based on a Build up of:</i>	Plaster Finish 0.20 W/m ² K Plasterboard 0.20 W/m ² K	Plaster Finish 0.17 W/m ² K Plasterboard 0.16 W/m ² K	Plaster Finish 0.15 W/m ² K Plasterboard 0.14 W/m ² K
	<i>* Brick - Cavity</i>		
	<i>* Juwo SmartWall</i>		
	<i>* Plaster Internal</i>		
	<i>* Plasterboard</i>		
U Values W/m ² K <i>Based on a Build up of:</i>	0.17 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.15 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.13 W/M ² K Plus 27.5mm PIR Insulated Plasterboard
	<i>* Brick - Cavity</i>		
	<i>* Juwo SmartWall</i>		
	<i>* Insulated PIR</i>		
	<i>Plasterboard Internal</i>		

Type	RX300/60 (248 (L) x 300 (W) x 249(H)) [250mm Coursing]	RX365/60 (248 (L) x 365 (W) x 249(H)) [250mm Coursing]	RX425/60 (248 (L) x 425 (W) x 249(H)) [250mm Coursing]	RX500/60 (248 (L) x 500 (W) x 249(H)) [250mm Coursing]
Lambda Value	0.060 W/mK	0.060 W/mK	0.060 W/mK	0.060 W/mK
Strength Class	Class 6 - Mean 7.5 N/mm ²			
Density Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³	0.55 Kg/dm ³
Mean unit strength <small>(For use with BS EN 1996 Eqn. 3.4) 0 MPa</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>	7.5 MPa <small>** MPa are identical to N/mm² and MN/m²</small>
Fire Performance	F 60	F 60	F 60	F 60
U Values W/m ² K <i>Based on a Build up of:</i>	Plaster Finish 0.19 W/m ² K Plasterboard 0.18 W/m ² K	Plaster Finish 0.16 W/m ² K Plasterboard 0.15 W/m ² K	Plaster Finish 0.14 W/m ² K Plasterboard 0.13 W/m ² K	Plaster Finish 0.12 W/m ² K Plasterboard 0.12 W/m ² K
	<i>* Brick - Cavity</i>			
	<i>* Juwo SmartWall</i>			
	<i>* Plaster Internal</i>			
	<i>* Plasterboard</i>			
U Values W/m ² K <i>Based on a Build up of:</i>	0.16 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.14 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.12 W/M ² K Plus 27.5mm PIR Insulated Plasterboard	0.11 W/M ² K Plus 27.5mm PIR Insulated Plasterboard
	<i>* Brick - Cavity</i>			
	<i>* Juwo SmartWall</i>			
	<i>* Insulated PIR</i>			
	<i>Plasterboard Internal</i>			

Please Note ** U Values quoted above are none construction specific. Individual U value Calculation on your construction can be provide on request

JUWO SmartWall™ 'Termbloc Foundation System'



Termbloc Foundation Block

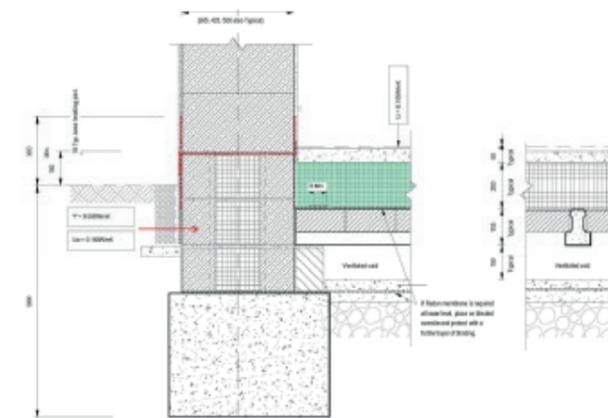
SmartWall™ Leca® Termbloc & Ligeblok Fondation Block System



SmartWall™ Leca® Termbloc

SmartWall Leca® Termblocks are ideal for construction due to their low weight combined with the block's insulating properties and high strength.

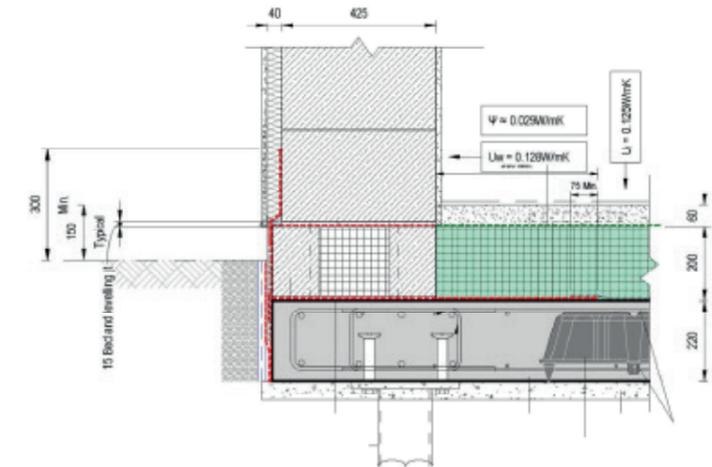
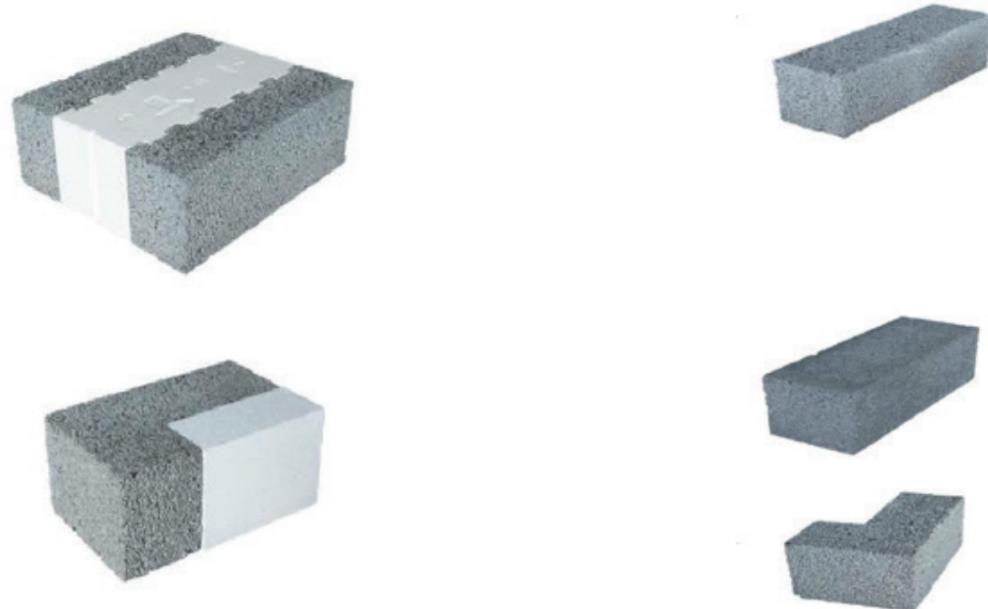
SmartWall Leca® Termbloc



SMARTWALL Leca Termbloc - Insulated Foundation Block On Strip Foundation - Beam & Block



WALL BASE ON STRIP FOUNDATION



WALL BASE ON RAFT FOUNDATION
On Beam or Micro Screw Piling

SmartWall™ Leca® Termbloc

SmartWall Leca® Termbloc are ideal for construction due to their low weight combined with the block's insulating properties and high strength.

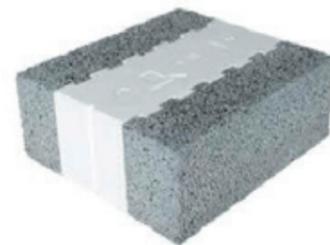
- > Wide range covers all tasks
- > Low weight improves the working environment
- > Good properties in terms of moisture, fire, sound insulation and strength lifting

SmartWall Leca® Termbloc

Width	Height	Length	Weight per piece	U Value W/m2K
33 cm	19 cm	50 cm	16.8 kg	0.27 W/m2K
35 cm	19 cm	50 cm	20.4 kg	0.23 W/m2K
39 cm	19 cm	50 cm	20.5 kg	0.18 W/m2K
45 cm	19 cm	50 cm	17.7 kg	0.14 W/m2K
49 cm	19 cm	50 cm	22.0 kg	0.14 W/m2K

FLEX CORNER BLOCK

Width	Height	Length	Weight per piece
39 cm	19 cm	25 cm	10.0 kg



SmartWall Leca® LIGEBLOK

Ligeblok blocks are ideal for construction due to their low weight combined with the block's insulating properties and high strength.

- > Wide range covers all tasks
- > Low weight improves the working environment
- > Good properties in terms of moisture, fire, sound insulation and strength lifting

Leca® blocks 600

LIGEBLOK

Width	Height	Length	Weight per piece
10 cm	19 cm	49 cm	6.4 kg
12 cm	19 cm	49 cm	7.9 kg
15 cm	19 cm	49 cm	10.0 kg
19 cm	19 cm	49 cm	12.7 kg
23 cm	19 cm	49 cm	15.4 kg
29 cm	19 cm	49 cm	19.5 kg
33 cm	19 cm	49 cm	22.2 kg
35 cm	19 cm	49 cm	25.2 kg
29 cm	19 cm	25 cm	10.0 kg
39 cm	19 cm	25 cm	14.0 kg



FLEX CORNER BLOCK

Width	Height	Length	Weight per piece
39 cm	19 cm	25 cm	10.0 kg



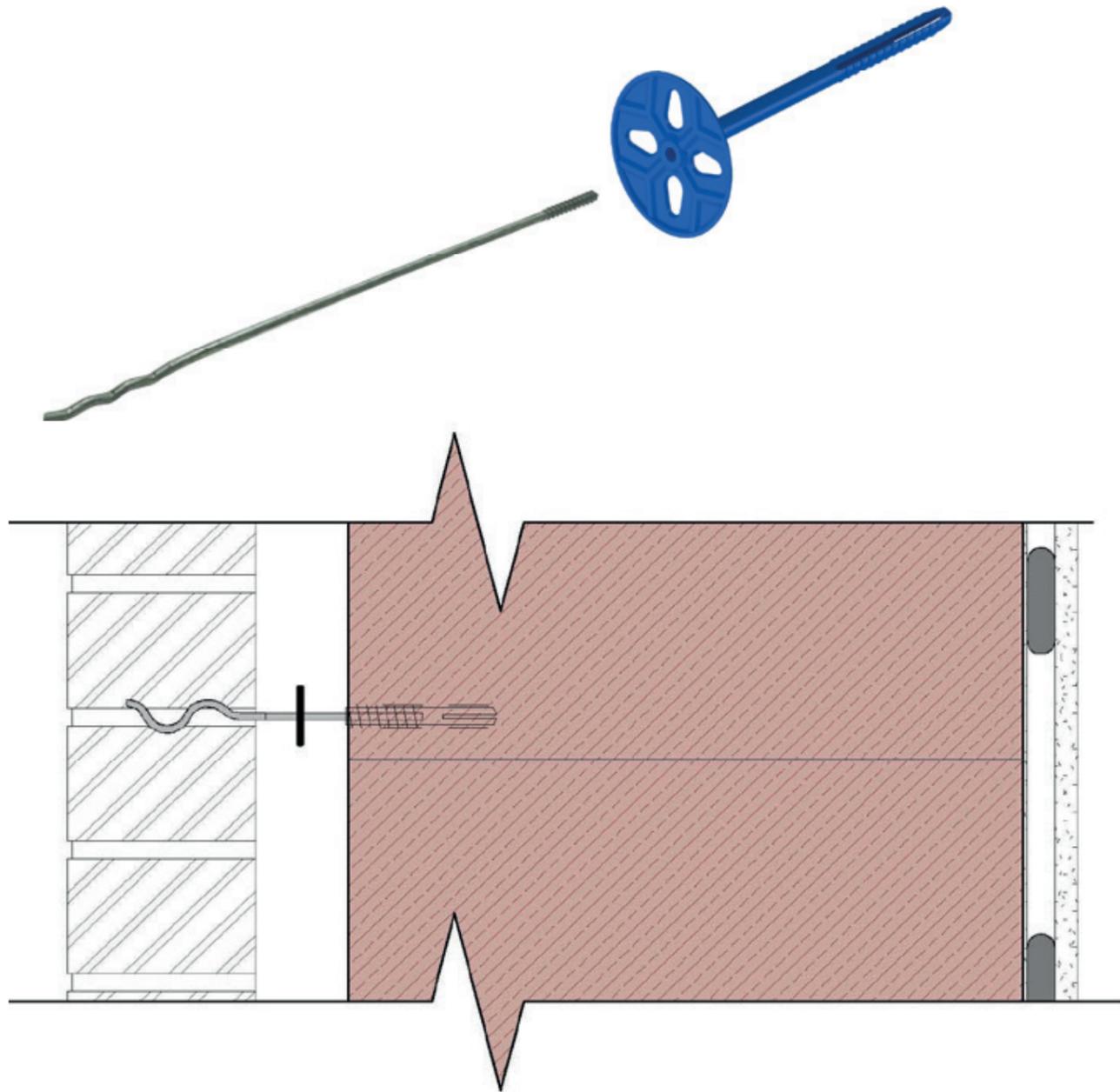
Leca® bricks

Width	Height	Length	Weight per piece
11 cm	5.7 cm	23 cm	1.0 kg



Uni-Perfo Plug Wall Tie

The Uni-Perfo Plug Tie is a simple plug and screw tie that is fixed at any point into the Juwo SmartWall block and bonds into the 10mm mortar bed of the brick. Suitable for UK Brick sizes

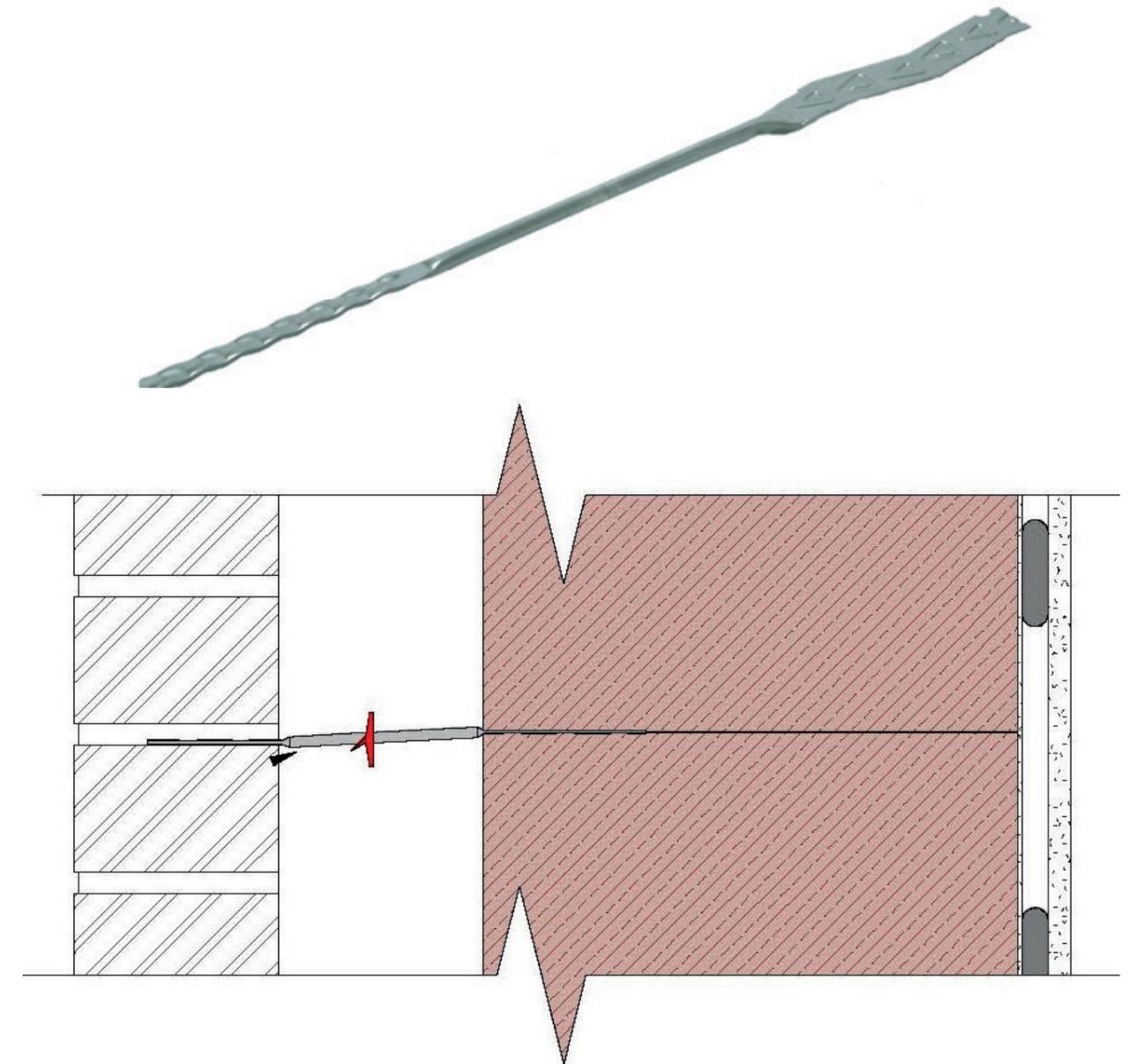


If any additional insulation is being used the Blue Plug fixing goes through the insulation and into the Juwo SmartWall with the Blue Plug trapping the additional insulation in place.

See information of Uni-Perfo Plugs & Wall Ties sizes required where insulation is being used for the correct sizes.

Uni-Perfo Wall Tie Strap

The Uni-Perfo Wall Tie Strap for Thin Bed mortar joints into the Juwo SmartWall block and bonds into the 10mm mortar



If any additional insulation is being used the Uni-Perfo Wall Tie Strap goes through the insulation and into the Juwo SmartWall with a clip trapping the additional insulation in place.

See information of Uni-Perfo Wall Ties Straps sizes required where insulation is being used for the correct sizes.



**EVOLVED
SMARTWALL™**



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