Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-23/6782 of 23/05/2023
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	JUBHome WALL
Product family to which the construction product belongs:	Non-load-bearing permanent shuttering Kits/Systems based on Hollow Blocks or Panels of insulating materials or concrete
Manufacturer:	JUB d.o.o. Dol pri Ljubljani 28 1262 Dol pri Ljubljani Slovenia
Manufacturing plant(s):	JUB d.o.o. Obrat EPS Nova vas Nova vas 56 1385 Nova vas Slovenia
This UK Technical Assessment contains:	23 pages including 10 Annexes which form an integral part of this assessment
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	ETAG 009 *Non-load-bearing permanent shuttering Kits/Systems based on Hollow Blocks or Panels of insulating materials or concrete*

1. Technical description of the product

1.1 Definition of product

The JUBHome WALL is a non-load-bearing permanent shuttering system based on EPS leaves connected with PP spacers and accessory parts applicable as formwork for plain, reinforced concrete walls and concreting.

The shuttering elements are generally used for external load-bearing walls as well as for internal load-bearing walls. The thickness of the inner shuttering leaf is always 75 mm; the thickness of the outer shuttering leaves is 75, 165, 240 and 300 mm. The elements with inner and outer shuttering leaves of 75 mm thickness could be applied as internal walls.

The thickness of the concrete core is 150 mm. Concrete (EN 206: 2013 + A2: 2021) for concreting the concrete core is not part of the JUBHome WALL system.

Finishes are not part of the JUBHome WALL shuttering system.

1.2 Base materials for products

The shuttering elements consist of inner and outer shuttering EPS leaves and PP spacers which connect both leaves. These elements are moulded together on production plant and create formwork. For the shuttering leaves, expanded polystyrene (manufactured from NEOPOR(1) F4 SPEED by BASF) is used. PP spacers are manufactured from polypropylene BORMODTM BF970MO by Borealis or recycled polypropylene RENOPROPYLEN PPC 100 U Schwarz by RENO GmbH.

(1) Registered trademark

1.3 Shuttering elements

The JUBHome WALL system consists of the following elements:

- Standard (linear) elements (Annex 1),
- Corner elements (Annex 2),
- T elements (Annex 3),
- Lintel elements (Annex 4),
- End leaves (Annex 5),
- Adjustment elements (Annex 6).

For the elements, expanded polystyrene 13163-T(1)-L(2)-W(2)-S(2)-P(5)-BS200-DS(N)5-DS(70,-)-TR200-CS(10)150-WL(T)3,5 according to BS EN 13163: 2012 + A1: 2015 is used. The bending strength of the EPS leaves shall be more than 200 kPa (BS 200) measured according to EN 12089: 2013. The relative changes in length, width and thickness under specified temperature and humidity conditions (measured according EN 1604: 2013) shall not exceed more than 1 % after exposing them for 48 h at 70°C (DS(70,-)1), according to EN 13163: 2012 + A2: 2016.

The density of the EPS for elements is 30 $kg \cdot m^{-3}$.

The declared value of thermal conductivity is $\lambda D = 0.031\ W \cdot m^{-1} \cdot K^{-1}$ measured according to EN 12667: 2001 and EN 12939: 2001.

The material characteristics, dimensions and tolerances of the shuttering elements not indicated in Annexes 1 to 7 are given in the technical documentation of the UKTA.

2. Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

2.1 Intended use

The shuttering kit is intended to be used for construction of internal walls as well as external walls above or below ground which are load bearing (structural) or non-load bearing (non-structural), including those which are subjected to fire regulations. When using this type of construction below ground, a waterproofing according to applicable national rules shall be provided, depending on whether ground water not exerting pressure or ground water exerting pressure is to be dealt with. The waterproofing shall be protected from mechanical damage by a smash-resistant protective layer.

According to EOTA TR 034 the following use categories apply:

- Category IA 2: Product with no direct contact to (e. g. covered products) but possible impact on indoor air.
- Category S/W 3: Product with no contact to and no impact on soil water, ground- and surface water.

The provisions made in this UKTA are based on an assumed intended working life of the shuttering kit of at least 50 years, provided that the shuttering system in end use conditions is subjected to an appropriate use and maintenance.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer or the technical assessment body. They are to be regarded only as a means for the specifiers to choose the appropriate criteria for shuttering kits in relation to the expected economically reasonable working life of the works.

For the intended use it is essential to protect this type of construction against effects of weather.

2.2 Manufacturing

The shuttering elements are manufactured in accordance with the provisions of the UK Technical Assessment using the automated manufacturing process as confirmed by inspection of the plant.

The UK Technical Assessment is issued for the product based on agreed data/information, deposited with the British Board of Agrément, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to the British Board of Agrément before the changes are introduced. The British Board of Agrément will decide whether such changes affect the UKTA and consequently the validity of the UKCA marking based on the UKTA and if so whether further assessment or alternations to the UKTA, shall be necessary.

2.3 Installation

2.3.1 General

The manufacturer shall ensure that the requirements in accordance with sections 1, 2, and 3 are made known to those involved in planning and execution. The installation guide is deposited with British Board of Agrément and shall be present at every construction site. If the manufacturer's instructions contain provisions which differ from those stated here, the specifications of the UKTA shall apply.

After installation of the shuttering elements (see clause 2.3.2), only the ready mixed concrete according to EN 206: 2013 + A2: 2021 is brought in and compacted (see clause 2.3.3). In end use conditions, concrete walls of a continuous type [(2)] of plain or reinforced concrete will be formed according to EN 1992-1-1: 2004 + A1: 2014, EN 1998-1: 2004 + A1: 2013 (chapter 5, large lightly reinforced walls) or according to corresponding national regulations. In end use conditions the EPS-shuttering leaves are the main part of the thermal insulation of the walls.

(2) see ETAG 009 (used as UKAD).

2.3.2 Installation of the shuttering elements

The shuttering elements are put together on site in layers without mortar or adhesive. Detailed instructions are shown to the installation guide of the certificate holder.

Afterwards levelling to the subsoil is performed (foundation, bottom plate, and slabs). Voids between the shuttering leaves and the uneven subsoil shall be sealed with PU foam before concreting.

Subsequently, according to the installation guide of the UKTA holder, the walls shall be interlocked to floor height, levelled, and fastened by special elements, see Annexes 5 and 6. The supporting system for stabilisation and concreting shall be arranged at 1.00 m to maximum 1.25 m, to be connected over the entire wall height with the shuttering elements and to be fastened to the floor (basement).

The necessary reinforcement according to the structural analysis shall also be installed in an appropriate way.

Corner joint(s) shall be formed according to Annex 2 and the T joint shall be formed according to Annex 3.

The values of thermal resistance respectively thermal conductivity shall be laid down according to the relevant national technical regulation.

Further information is given in the installation manual.

2.3.3 Concreting

To produce normal concrete with a minimum compressive strength class C20/25, EN 206: 2013 + A2: 2021 shall apply. The consistency of concrete on compacting by shaking shall be within the lower consistency range F3 and on compacting by poking within the upper consistency range F3. The maximum aggregate size shall not exceed 8 mm. The concrete shall have rapid or middle strength development according to EN 206: 2013 + A2: 2021. Placing the concrete shall be performed only by persons who were instructed in the functions and in the proper handling of the shuttering system.

The declared maximum filling height is 1.5 m (4 lines of the shuttering) at once. Placing the concrete shall be performed in layers of 0.36 m at a maximum vertical concreting rate of 1 m/h.

Regarding the admissible tolerances the requirements and provisions contained in the national annexes where the building shall be executed as well as the manufacturer's information shall be considered.

If equivalent national rules are not available, the following instructions shall be considered:

Horizontal day joints shall be arranged preferably at the height of the floor. If day joints cannot be avoided within the height between the floors, vertical composite reinforcement bars shall be installed. The composite reinforcement shall comply the following requirements:

- Two adjacent composite reinforcement bars shall not be situated in the same plane parallel to the surface of the wall.
- The distance between two composite reinforcement bars in the direction of the wall shall be at least 750 mm and not larger than 500 mm.
- The total section area of the composite reinforcement bars shall not be less than 1/2000 of the section area of the concrete.
- Anchorage length of the composite reinforcement bars on both sides of the day joint shall at least be 200 mm.

Before the further placing of concrete, cement laitance and detached / loose concrete shall be removed, and the day joints shall be sufficiently pre-wetted. At the time of concreting, the surface of the older concrete shall be slightly moist, so that the cement paste of the newly brought in concrete can bond well with the older concrete.

If no day joint is planned, placing of the concrete in layers may only be interrupted until the concrete layer brought in last is not solidified yet, so that a good and even bond is still possible between the two concrete layers. When using suitable internal vibrators, care shall be taken that the vibrating cylinder can still penetrate the already compacted lower concrete layer.

The concrete may fall freely only up to a maximum height of 2.00 m, beyond that the concrete shall be placed by discharge pipes or concreting tubes with the outer diameter of 80 mm at the most and shall be led directly to the place of installation.

Cones from pouring shall be avoided by short distances of the places of fill in. Planning shall allow for sufficient spaces in the reinforcement for discharge pipes or concreting tubes.

After concreting, the inclination of walls shall be according to standard EN 13670:2009.
The floor slab may only be placed on walls made of shuttering elements if a sufficient strength of the infill concrete has been reached.

2.3.4 Ducts crossing and situated inside the wall

Horizontally passing ducts shall be installed according to the installation guide of the UKTA holder and shall be considered when designing the wall.

Horizontal ducts situated inside the wall cores shall be avoided. If necessary, these shall be considered when designing the wall.

Also, vertical ducts in the concrete core shall be considered, if their diameter exceeds 1/6 of the thickness of the concrete core and the distance of the pipes is less than 2.0 m.

2.3.5 Reworking and finishes

Walls of the type JUBHome WALL shall be protected by finishes (e. g. rendering, plasters, cladding, panelling, coatings). Finishes are not part of the kit and therefore not considered in this UKTA. Preferably, for external surfaces the used rendering systems should meet the requirement of UKAD 040083-00-0404. The cladding, panelling, or their substructures shall be anchored in the concrete core. The execution of the rendering shall be performed according to applicable national rules.

The protection by finishes should be implemented preferably within one month after erecting the structural structure due to the detrimental influence of weather and UV-radiation on the surface of the EPS leaves.

2.3.6 Fixing of objects

Fixing of objects in the shuttering leaves is not possible. The part of the fixings which is relevant for the mechanical resistance shall be in the concrete. The influence of the fixing to the reduction of the thermal resistance must be considered according to EN ISO 6946: 2017.

3. Performance of the product and references to the methods used for its assessment

The assessment of the fitness of the shuttering system for the intended use has been made in compliance with ETAG 009 (used as UKAD), Guideline for European technical approval of non-load-bearing permanent shuttering Kits/Systems based on Hollow Blocks or Panels of insulating materials or concrete.

The UKTA is issued for the shuttering kit JUBHome WALL based on agreed information, deposited with the British Board of Agrément, which identifies the shuttering kit that has been assessed and evaluated. Changes to the production process, the kit or the components which could result in this deposited information being incorrect, shall be notified to the British Board of Agrément before the changes are introduced. The British Board of Agrément will decide whether such changes affect the UKTA and consequently the validity of the UK marking based on the UKTA, and, if so, whether further assessment and/or alterations to the UKTA shall be necessary.

3.1. Mechanical resistance and stability (BWR 1)

3.1.1 Resulting structural pattern

In end use conditions walls made with shuttering elements JUBHome WALL are walls of a continuous type according to ETAG 009 (used as UKAD).

3.1.2 Efficiency of filling

Considering the instructions of chapter 3.2 and the installation guide of the UKTA holder, the efficient filling without bursting of the shuttering and without voids or any uncovered reinforcement in the concrete core is possible.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.1.3 Possibility of steel reinforcement

The instructions in the installation guide of the UKTA holder are appropriate to install steel reinforcement for walls according to EN 1992-1-1: 2004 + A1: 2014, EN 1998-1:2004 + A1: 2013 (chapter 5, large lightly reinforced walls) or corresponding national rules.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.2. Safety in case of fire (BWR 2)

3.2.1 Reaction to fire of the shuttering elements from polystyrene

Shuttering elements JUBHome WALL made of expanded polystyrene (EPS) fulfil the requirement of class E according to EN 13501-1: 2018.

3.2.2 Resistance to fire

The fire resistance can be determined according to ETAG 009 (used as UKAD), therefore there are no tests conducted to determine the fire resistance of the walls erected using the shuttering elements.

The walls must be exposed to the fire on only one site.

According to ETAG 009 (used as UKAD), the first column for the continuous type of system, walls made of shuttering elements with a concrete core thickness of 150 mm or more, meets the criteria of REI 120 for load bearing walls and respectively EI 120 for non-load bearing walls (see dimensions of concrete core in annex to draft of UKTA).

The classification of the shuttering elements is only valid when the following assumption shall be fulfilled according to ETAG 009 (used as UKAD).

The strength of concrete shall be between the range of C16/20 and C50/60 according to standard EN 206: 2013 + A2: 2021. In lack of availability of Designated standard EN 206: 2013 + A2: 2021, alternatively concrete according to national rules, valid in the place of use, with a compressive strength which fits in the interval given above, is also considered as appropriate.

A normal weight concrete is defined in EN 206: 2013 + A2: 2021 or EN 1992-1-1: 2004 + A1: 2014. As far as Designated standards EN 206: 2013 + A2: 2021 or EN 1992-1-1: 2004 + A1: 2014 are not in force, an equivalent concrete according to national rules, valid in the place of use, is acceptable.

The design must take into consideration the secondary effects of fire. Constraints especially, introduced by thermal strain, should be sufficiently low and appropriate building joints should be foreseen. The rules, valid in place of use, govern. Structural requirements on work in normal conditions, valid in the place of use, may require larger dimensions. Concrete cover for the reinforcement must be observed according to the rules valid in the place of use.

Note: The classifications of the walls constructed with the shuttering system JUBHome WALL regarding to fire resistance are valid only for walls without openings (for example windows or doors).

3.3. Health, hygiene, and the environment (BWR 3)

3.3.1 Content and/or release of dangerous substances

Regarding dangerous substances, there may be additional legislative requirements falling outside of the scope of this document. These requirements must be complied with as appropriate.

3.3.2 Water vapour permeability

The tabulated value of the water vapour diffusion resistance coefficient of expanded polystyrene (EPS), according to EN ISO 10456: 2007/AC: 2009 is p = 60.

The design values for the water vapour diffusion resistance factor of concrete depending on density and type are tabulated in EN ISO 10456: 2007/AC: 2009 (Table 3).

Using this value to verify the annual moisture balance or the maximum amount of interstitial condensation according to EN ISO 13788: 2012 will be good practice.

3.3.3 Water absorption

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.3.4 Watertightness

No performance assessed.

3.4. Safety and accessibility in use (BWR 4)

3.4.1 Bond strength and resistance to impact load

Under end use conditions, the EPS shuttering leaves are durable fixed by PP spacers. The bond strength is at least equal to the resistance of the EPS shuttering leaves against the pressure of fresh concrete.

Concrete walls (without consideration of the finishes), erected with shuttering system JUBHome WALL and designed according to EN 1992-1-1: 2004 + A1: 2014, or in lack of availability of EN 1992-1-1: 2004 + A1: 2014 according to national design rules, lead to the assumption that concrete infill insures an adequate resistance of the complete wall under normal used impact loads.

3.4.2 Resistance to filling pressure

To resist the filling pressure the bending strength of the EPS-shuttering leaves shall be more than 200 kPa (BS 200).

The pull-out strength between spacers and EPS-shuttering leaves shall be at least 1600 N.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.4.3 Safety against personal injury by contact

Delivered on site, the shuttering elements do not have sharp or cutting edges. Due to the soft surface of the shuttering leaves, there is no risk of abrasion or of cutting people.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.5. Protection against noise (BWR 5)

3.5.1 Airborne sound isolation

On basis of the laboratory test performed according to EN ISO 10140-1: 2021, EN ISO 10140-2: 2021, EN ISO 10140-4: 2021, and EN ISO 10140-5: 2021 the airborne sound insulation of the wall structure with a concrete core thickness of 150 mm is (see Table 1):

Table 1: Sound reduction index Rw of walls

Total thickness of wall (mm)	Rw (C;C_{tr}) (dB)
300	47 (-5; -7)
390	47 (-2; -4)
465	49 (-2; -3)
525	50 (-1; -3)

3.5.2 Sound absorption

No performance assessed.

3.6. Energy economy and heat retention (BWR 6)

3.6.1 Thermal resistance

Assuming a minimal declared value of thermal conductivity of = 0.031 $W \cdot m^{-1} \cdot K^{-1}$, see clause 1.3, for the expanded polystyrene and for concrete infill of = 2.3 $W \cdot m^{-1} \cdot K^{-1}$ (according to EN ISO 10456: 2007/AC: 2009) the values of declared thermal resistance of the shuttering elements have been determined by numerical calculations. Table 2 gives some declared values of thermal resistance RD. In the calculation of the total thermal transmittance, the thickness of the inner EPS leaf 75 mm is used and 18.3 PP spacers per 1 m^2 of the wall have been considered.

Table 2: Thermal resistance R_D ($rn^2 \cdot K \cdot W^{-1}$) of the wall at different thicknesses of outer EPS leaves

Thickness of concrete core (mm)	Thickness of outer EPS leaf (mm)			
	75	165	240	300
150	4.881	7.767	10.247	12.176

3.6.2 Influence of moisture transfer on insulating capacity of wall.

Using values from 3.4.2, the verification of the annual moisture balance of the maximum amount of interstitial condensation according to EN ISO 13788: 2012 will be on safe side.

3.6.3 Thermal inertia.

The values of heat capacity of concrete and expanded polystyrene are tabulated in EN ISO 10456: 2007/AC: 2009.

3.7. Sustainable use of natural resources (BWR 7)

No performance assessed.

3.8 Aspects of durability and serviceability.

3.8.1 Resistance to deterioration

Physical agent

The relative changes of the EPS-leaves (see chapter 1.3) in length, width and thickness under specified temperature and humidity conditions shall not exceed more than 1 % after exposing them for 48 h at 70°C (DS(70, -)1, according to EN 13163: 2012 + A2: 2016).

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

Chemical agent

Expanded polystyrene is chemically inert and would only be at risk from petrol or diesel or similar solvents. JUBHome WALL does not contain any visible steel components.

The finishes of the wall are not part of the UKTA. Determination of the cleaning agent of the surface is not possible.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

Biological agent

The application of EPS as thermal insulating material for decades has shown that it sufficiently protects against fungi, bacteria, algae, and insects.

EPS does not provide a food value and in general it does not contain voids suitable for habitation by vermin and does not include biocide.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

3.8.2 Resistance to normal use damage

Normal use impacts

Concrete walls (without consideration of the finishes), erected with shuttering system JUBHome WALL and designed according to EN 1992-1-1: 2004 + A1: 2014, or in lack of availability of EN 1992-1-1: 2004 + A1: 2014 according to national design rules, lead to the assumption that concrete infill insures an adequate resistance of the complete wall under normal used impact loads.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

Incorporation of ducts

The instructions in the installation guide of the UKTA holder are appropriate to produce horizontal perforations through the walls, which are necessary for passing through ducts, see also clause 4.2.4 of the installation guide.

The requirements according to ETAG 009 (used as UKAD) are met satisfactorily.

Fixings of objects

Fixing of objects in the shuttering leaves is not possible. The part of fixings which is relevant for the mechanical resistance shall be in the concrete.

4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1. System of assessment and verification of constancy of performance

According to ETAG 009 (used as UKAD) and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011) as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 2+ applies.

5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1. UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of Certificate of Conformity of Factory Production Control
- UKTA number

On behalf of the British Board of Agrément 	
Date of Issue: 23 May 2023	**Hardy Giesler** Chief Executive Officer

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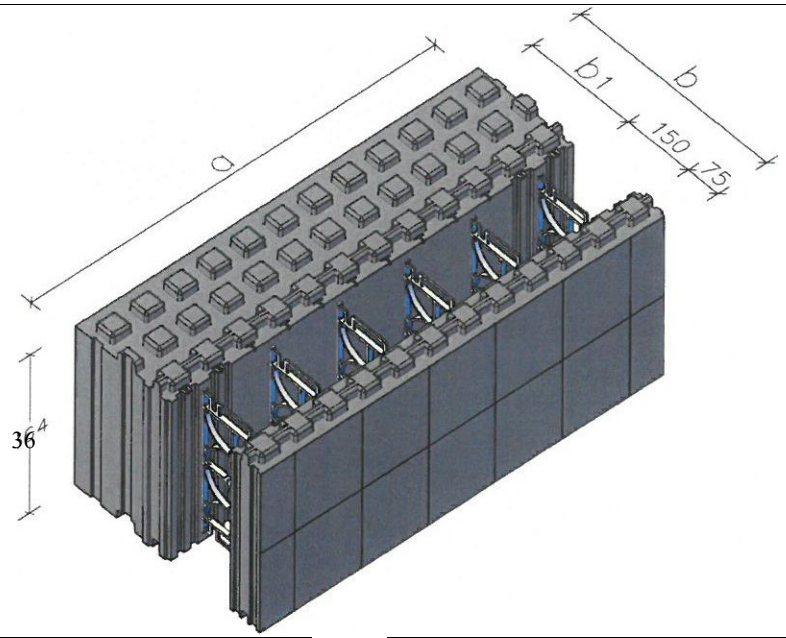
ANNEXES

This annex applies to the product described in the main body of the UK Technical Assessment.

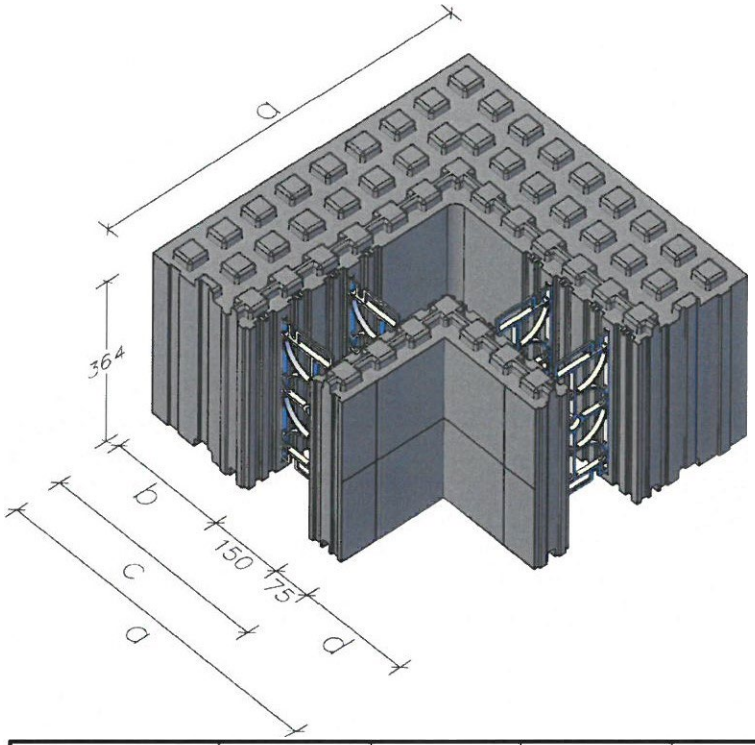
Annex 1	Types of standard elements.
Annex 2 (1 of 2)	Types of corner elements
Annex 2 (2 of 2)	Types of corner elements
Annex 3	Types of T elements
Annex 4	Types of lintel elements
Annex 5	End leave elements type Z and V
Annex 6	The adjustment elements
Annex 7	PP spacer
Annex 8	Vertical cross section
Annex 9	The supporting system for stabilisation and concreting
Annex 10	The supporting system under lintels and on the end of wall



Element type	a (mm)	(mm)	b (mm)
300-1-075	75	75	300
300-1-150	150		
300-1-300	300		
300-1-600	600		
300-1-900	900		
390-1-075	75	165	390
390-1-150	150		
390-1-300	300		
390-1-600	600		
390-1-900	900		

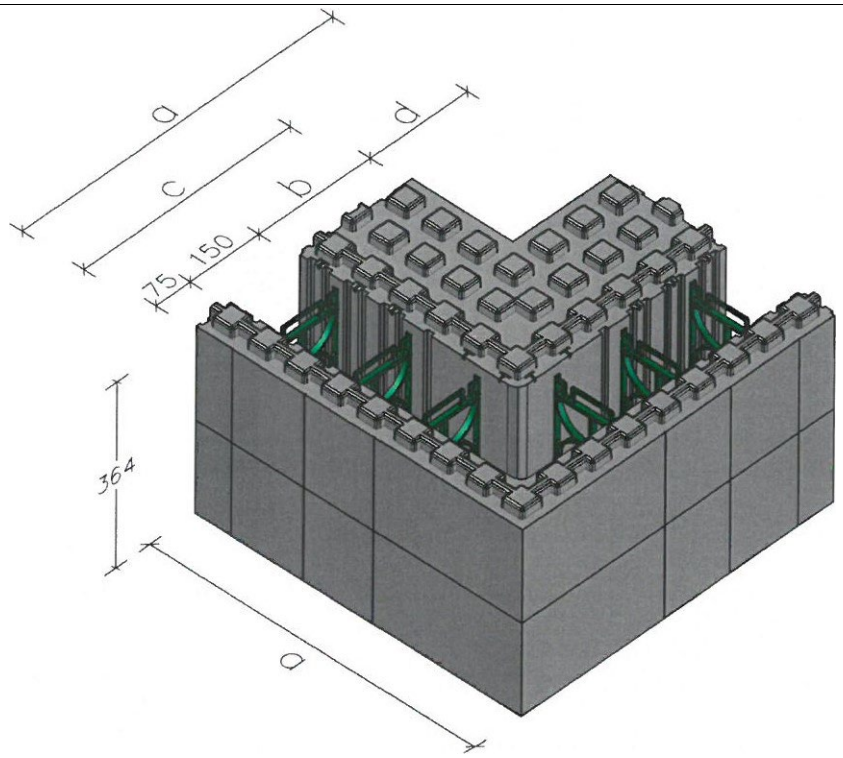
Element type	a (mm)	(mm)	b (mm)
465-1-075	75	240	465
465-1-150	150		
465-1-300	300		
465-1-600	600		
465-1-900	900		
525-1-075	75	300	525
525-1-150	150		
525-1-300	300		
525-1-600	600		
525-1-900	900		

JUBHome WALL	**Annex 1**
Types of standard elements	



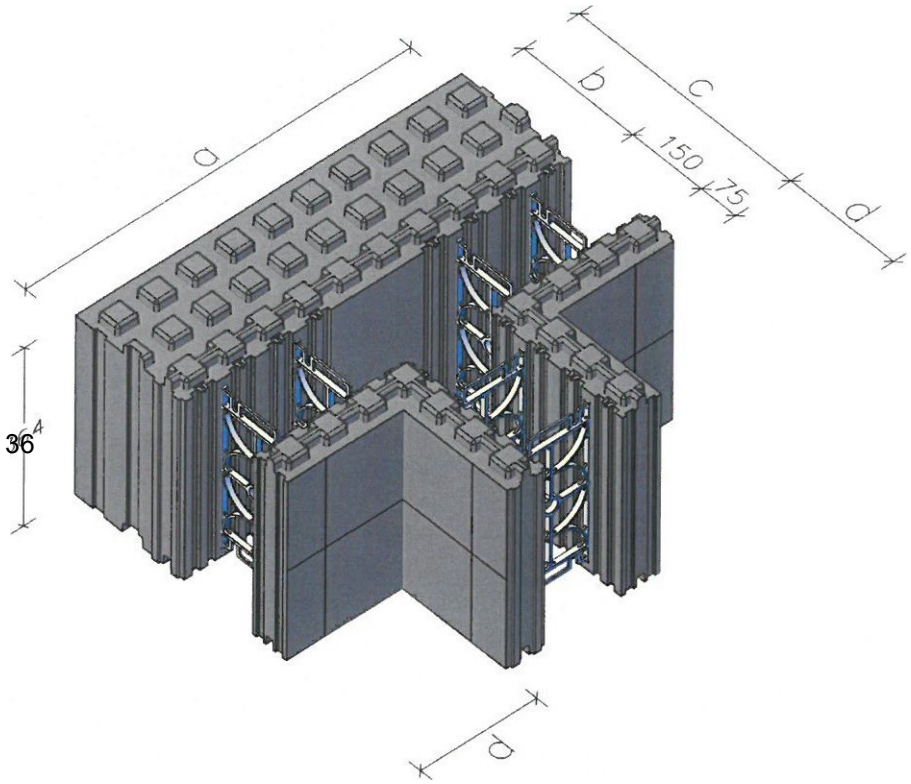
Element type	**a** (mm)	**b** (mm)	**c** (mm)	**d** (mm)
300-L-375	375	75	300	75
300-L-525	525			225
390-LZ-465	465	165	390	75
390-LZ-615	615			225
465-LZ-540	540	240	465	75
465-LZ-690	690			225
525-LZ-600	600	300	525	75
525-LZ-750	750			225

JUBHome WALL	**Annex 2 (1 of 2)**
Types of corner elements	



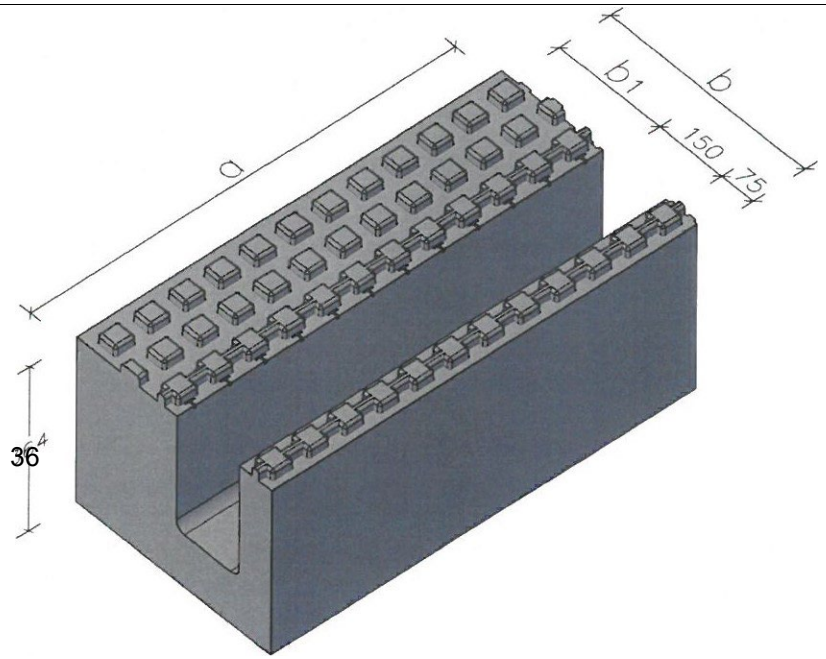
Element type	**a** (mm)	**b** (mm)	**c** (mm)	**d** (mm)
390-LN-450	450	165	390	60
390-LN-600	600			210
465-LN-525	525	240	465	60
465-LN-675	675			210
525-LN-600	600	300	525	75
525-LN-750	750			225

JUBHome WALL	**Annex 2 (2 of 2)**
Types of corner elements	



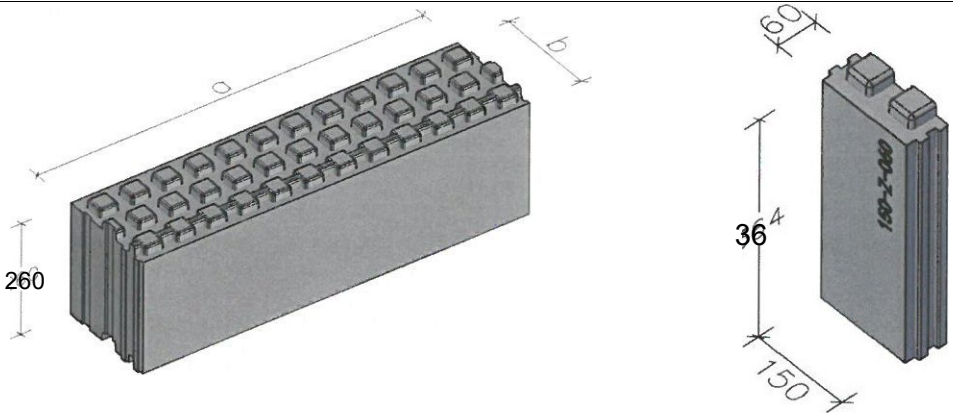
Element type	a (mm)	b (mm)	c (mm)	d (mm)
300-T-450	450	75	300	75
300-T-750	750			225
390-T-450	450	165	390	75
390-T-750	750			225
465-T-450	450	240	465	75
465-T-750	750			225
525-T-450	450	300	525	75
525-T-750	750			225

JUBHome WALL	**Annex 3**
Types of "T" elements	



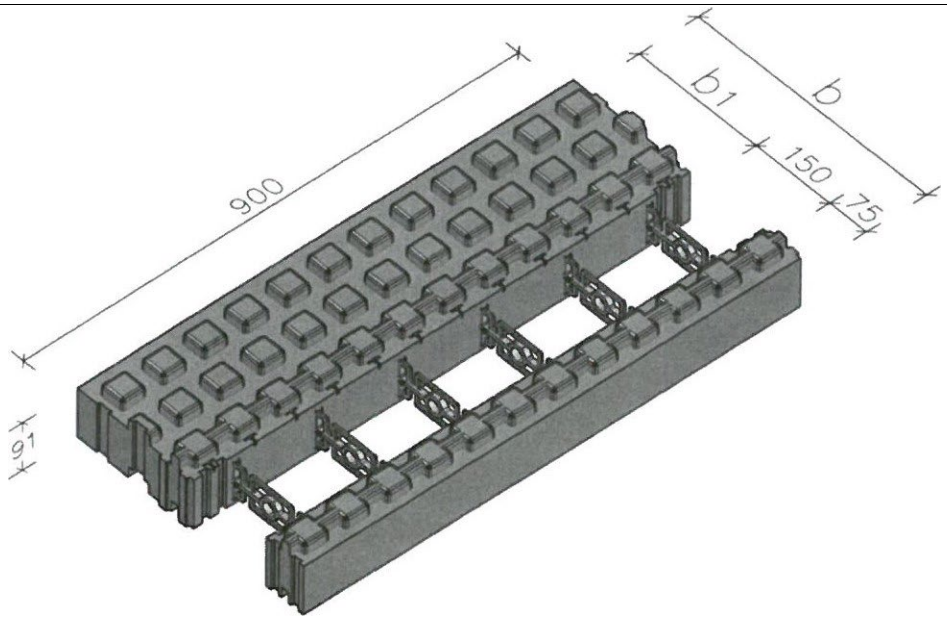
Element type	**a** (mm)	**b1** (mm)	**b** (mm)
300-P-675	675	75	300
390-PD-675	675	165	390
390-PL-675			
465-PD-900	900	240	465
465-PL-900			
525-PD-900	900	300	525
525-PL-900			

JUBHome WALL	**Annex 4**
Types of lintel elements	



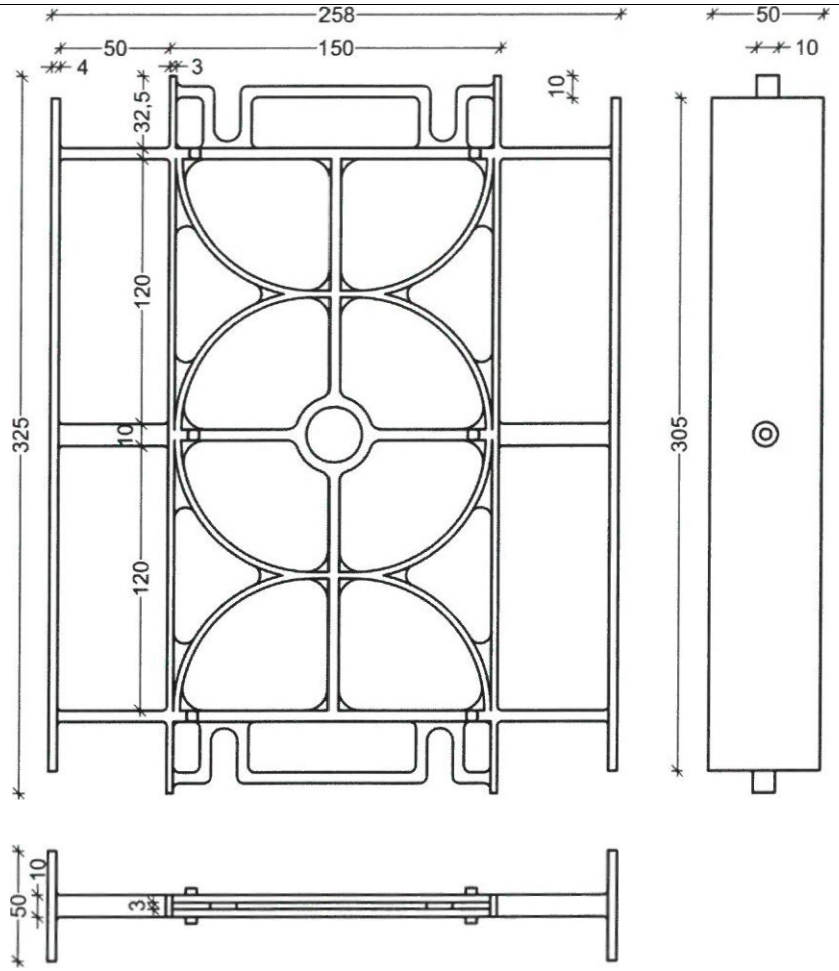
Element type	a (mm)	b (mm)
390-v-075	75	165
390-v-150	150	
390-v-300	300	
390-v-600	600	
390-v-900	900	
465-v-075	75	240
465-v-150	150	
465-v-300	300	
465-v-600	600	
465-v-900	900	
525-v-075	75	300
525-v-150	150	
525-v-300	300	
525-v-600	600	
525-v-900	900	

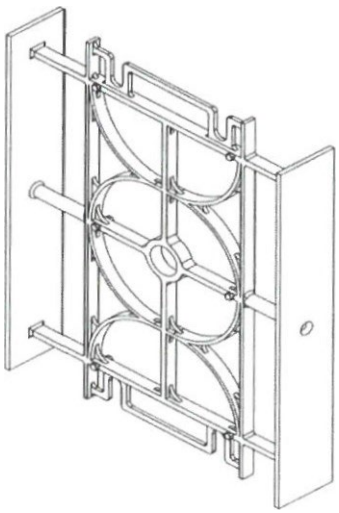
JUBHome WALL	**Annex 5**
End leave elements type Z and V	



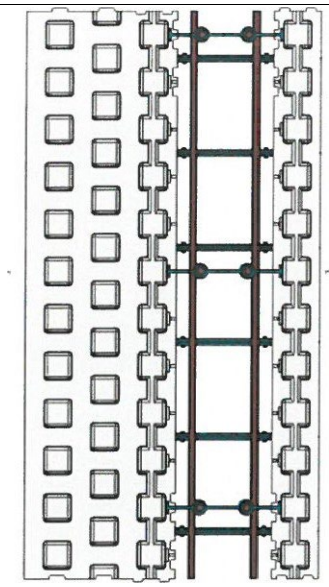
Element type	(mm)	(mm)
300-1R-900	75	300
390-1R-900	165	390
465-1R-900	240	465
525-1R-900	300	525

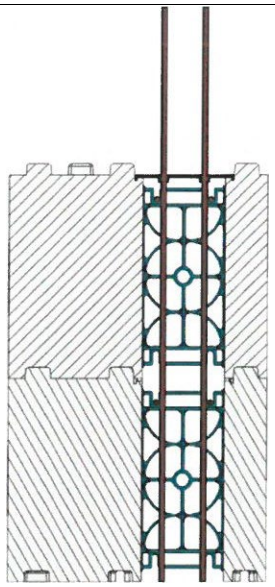
JUBHome WALL	**Annex 6**
The adjustment elements	

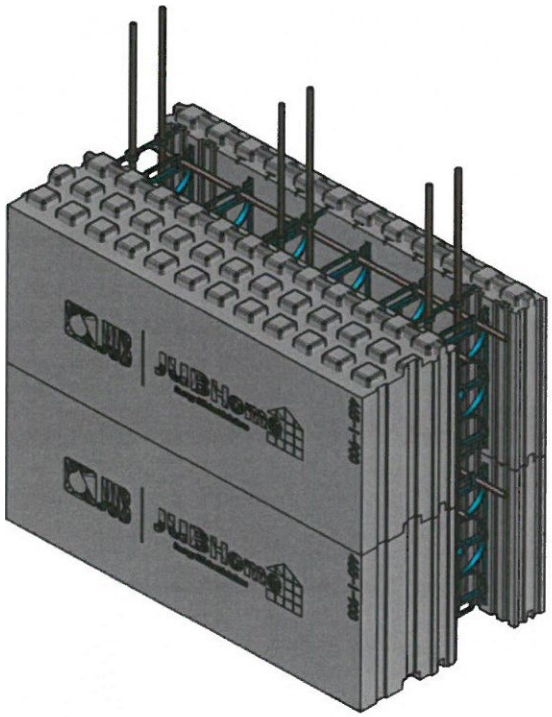




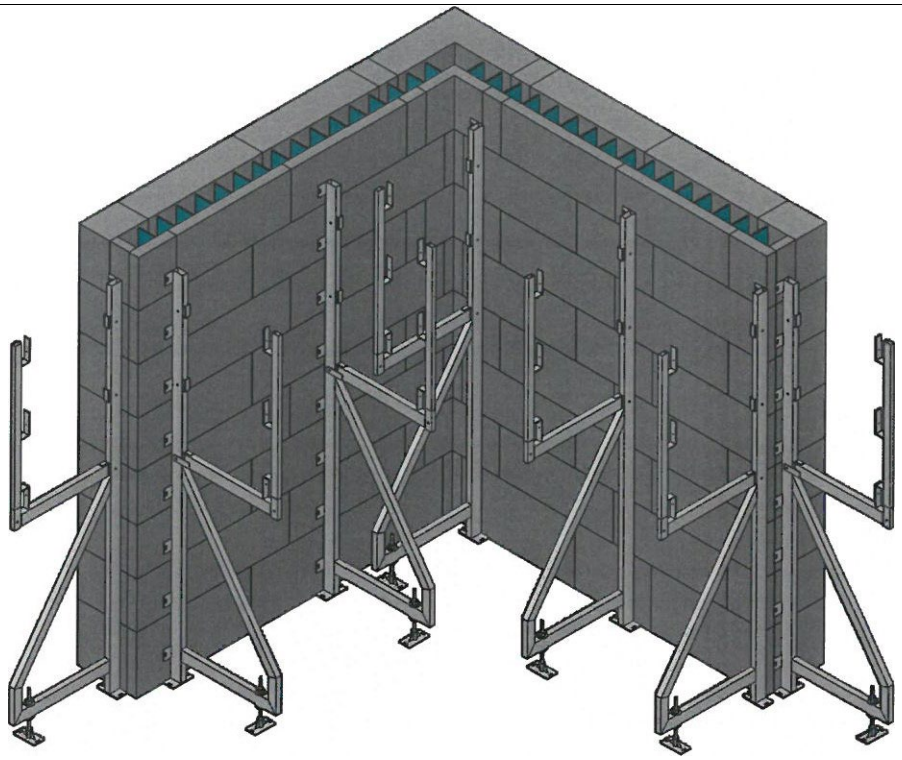
JUBHome WALL	**Annex 7**
PP spacer	

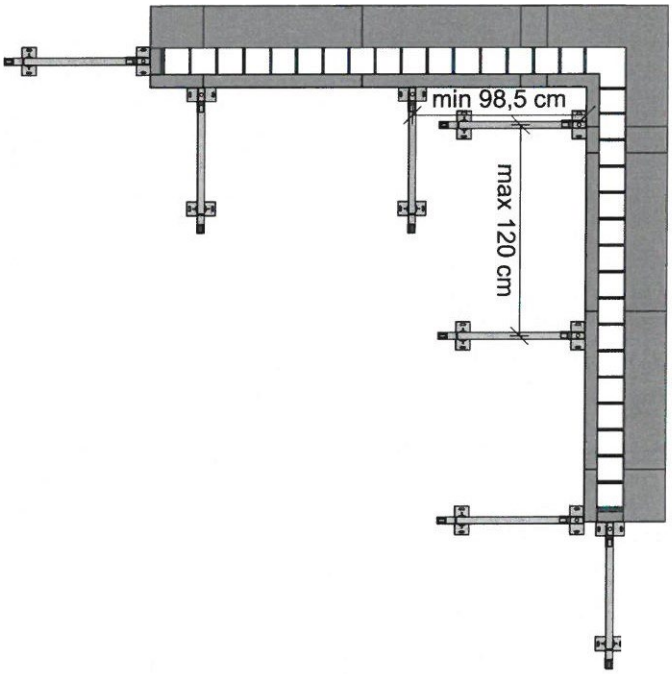






JUBHome WALL	**Annex 8**
Vertical cross section	





JUBHome WALL	**Annex 9**
The supporting system for stabilization and concreting	

JUBHome WALL	**Annex 10**
The supporting system under lintels and on the end of wall	

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