





### Certificatie

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# European Technical Assessment

ETA-03/0007 Of 08/11/2022

### **General part**

Technical Assessment Body issuing the European Technical Assessment:

**SKG-IKOB Certificatie BV** 

Trade name of the construction product

Product family to which the construction product belongs

Manufacturer

Manufacturing plant(s)

This European Technical Assessment contains

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

This version replaces

YTONG/Hebel internal partition kit with large-sized panels of autoclaved aerated concrete (AAC) for use as non-loadbearing walls Internal partition kits

Xella Nederland BV Mildijk 141 4214 DR Vuren Postbus 23 NL-4200 AA Gorinchem The Netherlands

The list of manufacturing plants is given in Annex C

16 pages including 3 Annexes which form an integral part of this assessment.

EAD 210005-00-0505, march 2019, Internal Partition Kits for Use as Non-loadbearing Walls,

ETA 03/0007, version 4, issued on 29/03/2018



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### **Specific parts**

### 1 Technical description of the product:

The internal partition kit is designed and installed in accordance with the ETA-holder's design and installation instructions.

The kit comprises panels made of autoclaved aerated concrete (AAC 4/600 and AAC 5/750) and thin layer mortar (YTONG/Hebel FIX P200) which are factory-produced as part of the kit by the ETA-holder himself and additional components which are produced by other manufactures delivering to the specification of the ETA-holder, who is responsible for the kit.

The additional components are:

- repair mortar (YTONG/Hebel FIX R200)
- Anchorage Adhesive (YTONG ankerlijm/ YTONG Power Adhesive)
- ancillary materials, provided by the ETA-holder (see also figure of Annex A):
  - Resilient Anchors (galvanised steel)
  - Wooden wedges
  - Angle bracket (galvanized steel)
  - o Rubber block
  - Chipboard screw
  - Joint filler (assembly foam regular polyurethane foam)
  - Joint filler (assembly foam fire resistant polyurethane foam)



# 2 Specification of the intended uses in accordance with the applicable Assessment Document (hereinafter EAD)

#### 2.1 Intended use

The YTONG/Hebel internal partition kit is a kit for buildings, to be assembled on site. The result is an immoveable partition intended to be used as a non-loadbearing wall with fire separating capabilities (see 3.1.2) and/or acoustic insulation (see 3.4.1) and/or thermal insulation properties (see 3.5)

The partition is assessed against the requirements of use category IVb to EAD 210005-00-0505, being zones readily accessible to public and others with little incentive to exercise care. Risk of accidents occurring and misuse. In case of failure risk includes the fall at a lower level, conform type b in figure 1 (see 3.3.1)

Conditions for the intended use are:

- structures capable of giving adequate support and adequate possibilities for fixing;
- an average air temperature in the range from 5 °C to 35 °C with a minimum of 0 °C and a maximum of 50 °C;
- an average daily humidity range 20 % RH to 75 % RH. Maximum air relative humidity only exceeding 85 % RH for short periods of time.

The wall can be provided on site with different type of surface treatments such as plastering or rendering. The internal partition kit is also fitted to be used as substrate for ceramic tiling.

The maximum height of the panels depends on the thickness chosen. Table 1 gives an overview of the possible combinations.

An example of the wall is given in annex 1.

### **Assumed working life**

The provisions made in this ETA are based on an assumed intended working life of the non-load bearing wall achieved within the internal partition kit of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 2.1 Characteristics of the components.

Detailed information on the chemical composition and other identifying characteristics of the components have been deposited with the assessment body SKG-IKOB. The components of the kit are specified by the ETA-holder as follow:

### 2.2.1 Panels

The YTONG/Hebel panels AAC 4/600 and AAC 5/750 are prefabricated and made of autoclaved aerated concrete (AAC). The panels are provided with a reinforcement (for non-structural purposes) for handling during transport. For this purpose each panel contains ribbed reinforcement bars in the longitudinal direction of the panel. In the cross section of the panel the bars are positioned halfway the thickness at distances as shown in the figure of Annex 1.

For identification of the panels product dimensions, characteristics and tolerances are given in table 1, 2 and 3 unless the essential characteristics are mentioned in the DoP.



Table 1 - Product dimensions

Product Characteristics	Test method	YTONG/Hebel Panel AAC 4/600 / AAC 5/750		Unit
Thickness	EN 991	70 and 75	100 and 140	mm
Length	EN 991	2200 – 3000	2200 – 3600	mm
Width	EN 991	498, 598 and 748	498, 598 and 748	mm

### Table 2 - Product characteristics

Product	Test method	YTONG/Hebel Panel	
Characteristics		AAC 4/600	AAC 5/750
Density class	EN 678	600	750
Compressive strength class	EN 679	4,0	5,0

### Table 3 - Tolerances

Tolerances		
Length	± 3 mm	
Width	± 2 mm	
Thickness	± 2 mm	
Deviation of flatness	± 2 mm	
Deviation of parallelism (along sides)	± 2 mm	

### 2.2.2 Thin layer mortar

Trade name YTONG/Hebel FIX P200

Use: mortar applied as (joint)filler for the joints between the panels

Type: cement based dry mortar requiring addition of water.

Compressive strength ≥ 10 N/mm<sup>2</sup> (EN 1015-11)

Flexural strength ≥ 2,5 N/mm<sup>2</sup> (EN 1015-11)

### 2.2.3 Repair mortar

Trade name YTONG/Hebel FIX R100

Use: filler for grooves such as required for the incorporation of conduits (such as for electricity purposes)

Type: cement based dry mortar requiring addition of water.

### 2.2.4 Anchorage Adhesive

Commercial name: YTONG Ankerlijm / YTONG Power Adhesive Use: adhesive to fix the resilient anchors to the adjecent structure

Type: MS-polymer based adhesive

### 2.2.5 Ancillary materials

- o Resilient Anchors (galvanized steel)
- Wooden wedges
- Angle brackets (galvanized steel)
- o Rubber blocks (granulated rubber)
- o Chipboard screws (galvanized steel

See figure 2 of annex A for geometry and dimensions of the ancillary materials above.

- Joint filler (assembly foam regular polyurethane foam)
- Joint filler (assembly foam fire resistant polyurethane foam)

### 2.3 Working life

The assumed working life of the YTONG/Hebel internal partition kit with large-sized panels of autoclaved aerated concrete is for the intended use 25 years, provided that the assembled product is subject to appropriate installation, use and maintenance. The indication of 25 years cannot be interpreted as a guarantee given by Xella Nederland bv, but should only be regarded as a means for choosing the right products in relation to the expected economically reasonable working life of the works.



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

The assessment of fitness for use has been made in accordance with EAD 210005-00-0505 used as an EAD.

### 3.1 BWR 2 - Safety in case of fire

### 3.1.1 Reaction to fire

The reaction to fire of the YTONG/Hebel panels is classified as **class A1**. The reaction to fire of the thin layer mortar YTONG/Hebel FIX P200 is also classified as **class A1**.

(Autoclaved aerated concrete (AAC) and mortar with inorganic binder are mentioned in the Annex of EC decision 94/611/EG modified by EC decision 2000/605/EG as material allowing to be classified in class A1 without testing)

### 3.1.2 Resistance to fire

The resistance to fire of the internal partition according to this kit, in function of the thickness of the wall and the material used as joint filler between partition and adjacent structure, is classified according table 4.

Table 4 - Classification of resistance to fire

Table 4 - Classification of resistance to file					
Classification of resistance to fire					
	Thickness	Joint filler			
Partition type		Assembly foam	Assembly foam		
	[mm]	Regular polyurethane foam	Fire resistant polyurethane foam		
AAC 4/600	70	No performance assessed	E 120 / EI 60 <sup>1</sup> )		
	75	No performance assessed	E 120 / EI 60 <sup>2</sup> )		
	100	No performance assessed	E 180 / EI 120		
	140	No performance assessed	E 180 / EI 120 <sup>3</sup> )		
AAC 5/750	70	No performance assessed	E 120 / EI 60 <sup>1</sup> )		
	75	No performance assessed	E 120 / EI 60 <sup>2</sup> )		
	100	No performance assessed	E 180 / EI 120 <sup>3</sup> )		
	140	No performance assessed	E 180 / EI 120 <sup>3</sup> )		

<sup>1)</sup> Exchanging the assembly foam by mineral wool as joint filler the classification of the resistance to fire of the 70 mm panel will upgrade from E 120 / El 60 to E 120 / El 120

### 3.2 BWR 3 - Hygiene, health and the environment

3.2.1 Content, emission and/or release of dangerous substances No performance assessed

### 3.2.2 Water vapour permeability

The water vapour diffusion coefficient ( $\mu$ -value) of the AAC panels is 5/10 according to table A.10 of EN 1745 is **5/10** or as is indicated on the DoP of the wall panels.

(The value 5 is intended to be used for diffusion into the panel, the value 10 is intended to be used for diffusion out of the panel.)

The designer shall consider the relevant needs for ventilation, heating and insulation to minimise condensation in service.

### 3.3 BWR 4 - Safety in use

### 3.3.1 Sill height

The sill height was assessed at 1,5 m

3.3.2 Resistance to damage and functional failure from horizontal loads Internal partitions according to this kit have a satisfactory resistance to **Use category IVb**.

For description of the use category IVb and used test method see Table 5a.

<sup>2)</sup> The classification is based upon test performed using a wall panel with AAC 4/600 and thickness 70 mm

The classification is based upon test performed using wall panel AAC 4/600 and thickness 100 mm



Table 5a - Use category IVb

Table oa Bee category IVE				
Classification resistance to structural damage from dynamic loads				
Use category	Description Test method us			
The system has been assessed for  Use category IVb	Use category IVb is described as «Zones readily accessible to public and others with little incentive to exercise care. Risk of accidents occurring and misuse. In case of failure, risk includes the fall to a floor at lower level, cf type b in figure 1»	The system is tested with:  • a soft body energy level (up to 1.5 m above pedestrian level) of 500 Nm  • a hard body energy level of 10 Nm.		

Internal partition according to this kit have a satisfactory resistance to Use category IV

For description use category IV, used test method and measured maximum deflection see Table 5b.

Table 10 - Use category IV

Table 10 – Ose Category IV				
Resistance to functional failure from impact loads				
Use category	Description	Test method used	Deflection measured	
The system has been assessed for: Use category IV	Use category IV (IVa and IVb) is described as "Zones readily accessible to public and others with little incentive to exercise care. Risk of accidents occurring and misuse. In case of failure, risk includes the fall to a floor at lower level, cf type b in figure 1"	The resistance to functional failure from soft body impact load of the system is tested with energy level of 120 Nm (3x).	For a height of 3000 mm of the test specimen (thickness 70 mm) the maximum deflection during impact measured is 9,7 mm.	

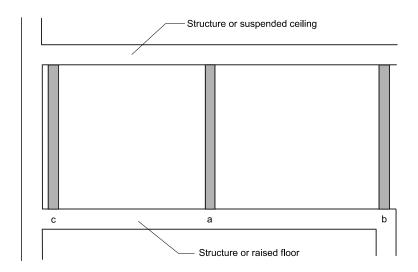


Figure 1 – Use category IVb conform type b

3.3.2 Resistance to damage and functional failure from eccentric loads Internal partitions according to this kit have a satisfactory resistance to **Loading use category b**.

For description of loading use category b and used test method see Table 6.



Table 6 - Loading use category b

table of Leading dee eategery s				
Resistance to structural damage from eccentric loads				
Loading use category	Test method used			
The system has been assessed for:  Loading use category b	Loading use category b is described as	The system is tested with:		
	«Very heavy object such as (sanitary or heating equipment) boilers, large bookshelves»	an eccentric vertical 24 h load of 4000 N.		

- 3.3.3 Resistance to horizontal linear static loads No performance assessed
- 3.3.4 Resistance to functional failure from point loads parallel or perpendicular to the surface No performance assessed
- 3.3.5 Rigidity of partitions to be used as a substrate for ceramic tiling Internal partition according to this kit have all a satisfactory rigidity in order to be used as substrate for ceramic tiling.

The testing of the rigidity has been performed by soft body impact load with energy level 120 Nm (3x) and 240 Nm (1x) requirements are satisfied tested.

- 3.3.6 Safety against personal injuries by contact
  When properly installed, the YTONG internal partition does not contain sharp or abrasive components liable to cause personal injury.
- 3.3.7 Resistance to deterioration caused by physical agents, chemical agents and biological agents
- 3.3.7.1 Protection against deterioration caused by hygrothermal conditions

  No performance assessed as the movement caused by differential temperatures on the partition within the range indicated under the intended use would be too small and insufficient to cause any noticeable bowing or deformation of the surface.
- 3.3.7.2 Protection against deterioration caused by corrosion

  The partition has a sufficient protection against corrosion since all ancillary metal materials are made of galvanised steel (hot-dip zinc Z275 coating) and the in house use is a non-aggressive environment.
- 3.3.7.3 Protection against deterioration caused by cleaning agents
  The partition has a sufficient protection against cleaning agents
- 3.3.7.4 Protection against deterioration caused by biological agents

  The use of the partition does not encourage infestation as there is no food in materials used.

### 3.4 BWR 5 - Protection against noise

### 3.4.1 Airborne sound insulation

Table 7 provides an indication of airborne sound insulation values for internal partition according to this kit.

Table 7 – Airborne sound insulation

Partition type	Thickness	Measured	Laboratory sound insulation (ISO 717-
	[mm]	mass per unit area	1)
		[kg/m²]	100 Hz - 3150 Hz
			Rw (C;Ctr) [dB]
	70	52,5	
AAC 4/600 AAC 5/750	75	56,2	
	100	75,0	34(-2;-3) <sup>1)</sup>
	140	75,0	34(-2,-3)
	70	57,3	
	75	61,4	
AAC 5/750	100	81,8	37(-1;-3) 2)
	140	81,8	37(-1,-3)-/



<sup>1)</sup> this value is generated by testing the most unfavourable one of the four types mentioned, being the AAC 4/600 thickness 70 mm

<sup>2)</sup> this value is generated by testing the most unfavourable one of the two types mentioned, being the AAC 5/750 with thickness 100 mm.

### 3.4.2 Sound absorption

No performance assessed, whereas the sound absorption depends on the surface treatment to be applied.

### 3.5 ER 6 – Energy economy and heat retention

### 3.5.1 Thermal resistance

Table 8 provides an indication of thermal resistance of the internal partition according to this kit.

Table 8 – Thermal resistance R<sub>T</sub> calculated according EN-ISO 6946

		9
Partition type	Thickness [mm]	<i>R</i> ⊤ [(m²⋅K)/W]
	70	0,71
AAC 4/600	75	0,75
AAC 4/000	100	0,91
	140	0,91 1)
AAC 5/750	70	0,62
	75	0,64
	100	0,77
	140	0,77 2)

<sup>&</sup>lt;sup>1)</sup> this value is generated by testing the most unfavourable one of the three types mentioned, being the partition type AAC 4/600 with thickness 100 mm.

### Note:

The design thermal conductivity  $\lambda_U$  used for the determination of the thermal resistance  $R_T$  is calculated from the basic  $\lambda$ -value, which is determined from the  $\lambda_{10,dry}$ -values (P =50%) given in table A10 of EN 1745, which relate  $\lambda_{10,dry}$  to density.

The value of the moisture conversion factor  $F_m$  is calculated for the intended interior application of the partition, using the formula  $F_m = e^{fu(u^2-u^1)}$  with  $f_u = 4$  (kg/kg) and  $u_2-u_1 = 0.02$  (kg/kg). The value of the moisture conversion factor  $F_m$  for interior application is 1,083.

If in the DoP the thermal performance of the AAC is declared, these values are to be used in order to give a realistic evaluation of the partition.

### 3.5.2 Thermal inertia

Table 9 provides information on heat capacity of the wall panels in order to perform a thermal inertia calculation for the building.

Table 9 – Heat capacity of the AAC panels

Partition type	Thickness [mm]	Heat capacity, c [kJ/(kg.K)] according to EN12602
	70	1,05
AAC 4/600	75	1,05
AAC 4/000	100	1,05
	140	1,05
AAC 5/750	70	1,05
	75	1,05
	100	1,05
	140	1,05

<sup>&</sup>lt;sup>2)</sup> this value is generated by testing the most unfavourable one of the three types mentioned, being the partition type AAC 5/750 with thickness 100 mm.



# 4 Assessment and verification of consistency of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the decision 98/213/EC – Commission Decision of date 9<sup>th</sup> March 1998 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards internal partition kits, published in the Official Journal of the European Union (OJEU) L80/42 of 18/03/1998, see http://eur-lex.europa.eu/JOIndex.do) of the European Commission1, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Internal partition kits	For uses subject to reaction to fire requirements	A (without testing)	4
Internal partition kits	For fire compartmentation	Any	3
Internal partition kits	For uses liable to present 'safety-in-use' risks and subject to such regulations	_	3



# 5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

### Tasks of the manufacturer:

### Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European Technical Assessment. The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European Technical Assessment.

The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at SKG-IKOB.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

### Other tasks of the manufacturer

### Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

### (a) Technical data sheet:

- Field of application:
- Building elements for which the YTONG/Hebel internal partition kit with large-sized panels of autoclaved aerated concrete are suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the products
- Construction of the YTONG/Hebel internal partition kit with large-sized panels of autoclaved aerated concrete including the necessary components and additional products with clear indication whether they are generic or specific.

### (b) Installation instruction:

- Steps to be followed
- Except for aesthetic reasons no special maintenance is required. Damages however should principally be repaired. In general the partition can easily be repaired using the repair mortar as mentioned in this document.

Issued in Geldermalsen, the Netherlands on 08.11.2022

The original English version is signed on behalf of SKG-IKOB by

SKG-IKOB, Certification Manager ir. H.A.J. van Dartel

ETA 03-0007-5-2022-11-08 -- page 10 of 16

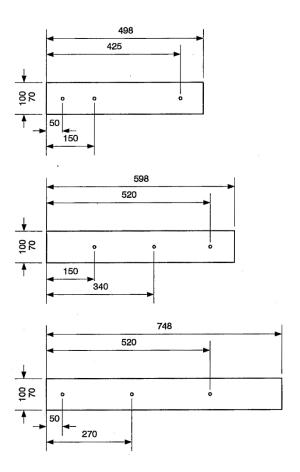


### **Index Annexes**

Annex A – Description of product(s)	12
Annex B – Installation details	12
Annex C – List of manufacturing plants	12



### Annex A – Description of product(s)



### Ytong/Hebel wall panels AAC 4/600 / AAC 5/750 Thickness 70, 75, 100 or 140 mm

Width 498, 598 or 748 mm

Figure 1 – Cross section of the Ytong/Hebel wall panels and indicative the location of the non structural reinforcement

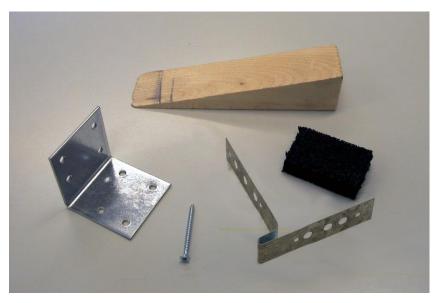


Figure 2 - Ancillary materials

### Wooden wedge

### Rubber block

Material: granulated rubber Dimensions: 60 mm x 40 mm x15 mm 60 mm x 40 mm x 20 mm

### **Resilient anchor**

Material: galvanized steel Steel strip 22 mm x 0,7 mm Length: 90-6-16-90 mm SV (Z275)

### Angle bracket

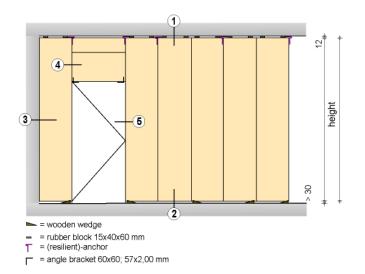
Material: galvanized steel Steel sheet 57 mm x 2,00 mm 60 mm x 60 mm SV (Z275)

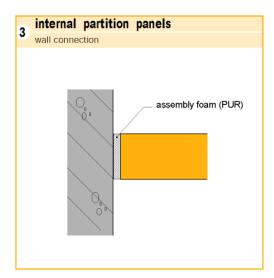
### Self drilling screw

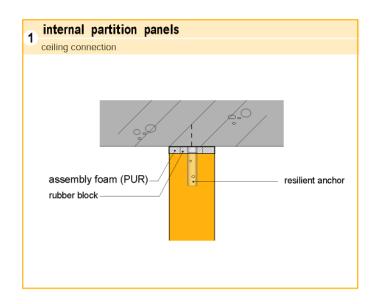
Type: Chip board screw Galvanized steel Ø 5,0 mm Length 70 mm

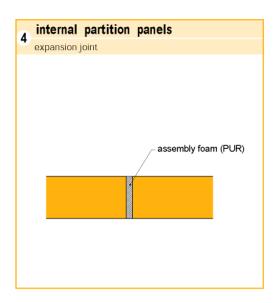


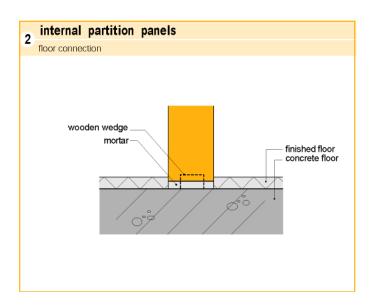
### YTONG non-loadbearing internal partion - schematic details











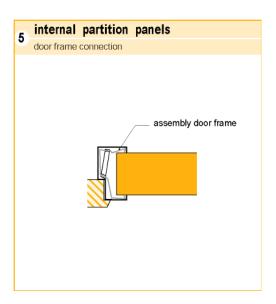


Figure A.1 - Example of Internal partition with YTONG/Hebel panels



### Annex B - Installation details

Installation details and application details for the man on site are given by the manufacturer in the Manufactures Installation Guidance document which is part of the documentary material for the ETA and which shall always accompany the kit delivered on site.

The essential parts of the installation details and application are mentioned hereafter. These may be supplemented with country specific additions in separate documents.

### B.1 General

The non-load bearing wall is made on site by installing the panels of the internal partition kit in vertical position. The vertical joints between the panels are made with the YTONG/Hebel FIX P200. Expansion joints are made with joint filler assembly foam. Depending on the required resistance to fire an assembly foam of the type fire resistant polyurethane is to be used.

### B.2 Installation of the panels

The panels are installed side by side in vertical position respecting that the thickness of the joints is 2mm with a tolerance of  $\pm 1$  mm. The joints are made by applying the YTONG/Hebel FIX P200 in a sufficient amount, using the appropriate equipment along one longitudinal side of the panel. For the preparation of the thin layer mortar the prescriptions as on the packaging of the mortar are to be followed. The work life of the YTONG/Hebel FIX P200 after mixing is 4 hours.

### B.3 Design details

Design details are given in figure A.1 of annex A.

### B.3.1 Floor connection

The panels are generally installed on the rough concrete floor. After being lifted up to the required height position with the help of a crowbar, and the eventual necessary adjustment of the front and the side in perpendicular position, the panels are fixed with wooden wedges at the bottom and the sides. After a sufficient hardening of the adhesive (> 48 h) the wedges placed at the sides are removed and the space at the bottom is being filled with no-slump mortar.

### **B.3.2** Ceiling connection

Two blocks of granulated rubber are fixed with adhesive or nails at the upside of each panel at a distance of 100 mm from both edges. The wedging of the panels is carried out until the thickness of the rubber blocks is decreased approximately 3 mm.

The remaining space between partition and ceiling is to be filled with the joint filler (assembly foam of the type regular or of the type fire resistant polyurethane foam.).

Each second panel and also the first and last panel of a of partition is always fixed to the ceiling with a resilient anchor. The fixing of the anchor to the panel is made by mastic or appropriate mechanical fixings.

The fixing of the anchor to the ceiling has to be made by mechanical means or by an adhesive, YTONG Ankerlijm/ YTONG Power Adhesive, both appropriate for the substrate

### **B.3.3** Wall connection

Between partition and adjacent structure a joint of approximately. 10 - 15 mm width is to be respected and is to be filled with the joint filler (regular assembly foam of fire resistant polyurethane foam.).

### **B.3.4** Corners

Corners and connections with other adjacent structures are carried out in a flexible way following the same procedure as described in Annex B.3.3 Wall connection.

For partition parts having a length smaller or equal to the width of the panel, the joint can also be made in a non-flexible way using the adhesive YTONG/Hebel FIX P200. Additional temporary mechanical fixings such as nails may be applied to protect this joint during the construction phase.

### **B.3.5** Doorframes

Preference should be given to the application of door frames that span from floor to ceiling. Door frames combined with a filling part of AAC in the space between frame and ceiling however can also be applied, provided that the width of the frame is not exceeding the length of 1250 mm.

For the installation of a filling slab of AAC the following procedure is to be followed.

Angle brackets of galvanised steel are mechanically fixed on both sides of the adjacent panels
of the door frame at the required height using self-drilling screws. The positioning of the
brackets should be centred in respect to the thickness of the panel.



- 2. The filling panel is cut to the required dimensions from a regular wall panel. The joints shall be made with thin layer mortar or an expansion joint.
- 3. The filling slab is then mechanically fixed at the brackets using one self-drilling screw for each bracket.

### **B.3.6** Expansion joints

Expansion joints are necessary in ongoing partitions at distances about two times the height of the wall with a maximum of 5.0 m. The joint is to be filled with the joint filler (assembly foam of the type regular or of the type fire resistant polyurethane foam). The expansion joint should be continued in the finishing of the wall.

### B.4 Finishing

The repair of damaged panels and the filling up of grooves such as required for the incorporation of conduits (such as for electricity purposes) is carried out by using the repair mortal YTONG/Hebel FIX R100 or by using a filler based upon a binder of modified gypsum. After treatment of the joints and local irregularities in the surface with YTONG/Hebel FIX R100 the partition is fit as substrate to be finished with ceramic tiling, wall-paper, or other thin finishing coats. The finishing coat is to be applied taking into account of the prescriptions of the specific finishing coat.



### Annex C - List of manufacturing plants

Factory 1. Xella Cellenbeton Nederland bv Industrieweg 14, 7944 HS Meppel, the Netherlands

Factory 2. Xella Cellenbeton Nederland bv Mildijk 141, 4114 DR Vuren, the Netherlands

Factory 3. Xella Deutschland GmbH Landstraße 51, 04838 Laußig, Germany

Factory 4. Xella Chech, s.r.o. U Keramičky 449 ,334 42 Chlumčany, Chech Republic

Factory 5. Xella Polska Sp. z o.o. Zakład Ytong w Ostrołęce Księdza Antoniego Pęksy 16, 07-401 Ostrołęka, Polen

Factory 6. Türk Ytong San. A.Ş. - Dilovası Fabrikasi
GEBKİM Gebze V (Kimya) İhtisas OSB, Nevzat Göçer Cd. No: 2
Dilovası 41455 Kocaeli, Turkey

Factory 7. Türk Ytong San. A.Ş. - Antalya Fabrikasi Organize Sanayi Bölgesi 07190 Antalya, Turkey