Xella Aircrete North America, the leading manufacturer of Hebel® Autoclaved Aerated Concrete (AAC) is an amazingly innovative building material that has been used in Europe for more than 80 years and in the US for more than 15 years. Products and systems have been developed for all types of the construction industry: Industrial, commercial, high-rise buildings, schools, hospital and more.

Hebel® AAC is a lightweight concrete that is formed into blocks and reinforced panels for a wide range of loadbearing and non-loadbearing construction applications. It is manufactured from sand, cement, recycled material, lime, gypsum, aluminium paste and water. It is moulded, cut and steam pressure cured in an autoclave before being packed, ready for transport.

Hebel® AAC delivers more benefits than the traditional materials such as strength, acoustics, fire and pest resistance and is installed faster, saving valuable construction time.

More than 6,000 employees for Xella’s total 97 plants and offices throughout 30 countries worldwide, including North America, Europe and Asia.

Hebel Aerated Concrete provides contractors with strong, easy-to-install blocks and reinforced panels that are one-third the weight of traditional concrete and replace traditional multi-step construction processes. In addition, Hebel is energy efficient, fire resistant and long lasting, which, over time, will reduce energy, insurance and maintenance costs to building owners. A wide range of industries can benefit from Hebel’s custom blocks and reinforced panels, including those in the commercial, educational, hospitality, industrial, institutional, governmental and residential markets.
Fire Resistant
HEBEL AAC has proven to remain fully intact and withstand the stress of fire for up to 4 hours without any impairment to its stability. Even under intense heat, HEBEL AAC remains tightly sealed against smoke and gas, emitting no toxic fumes.

Thermal Insulation
Buildings constructed of HEBEL AAC provide substantial energy savings in both hot and cold climates. The unique closed cellular structure and the thermal mass contribute to a high R-value and air-tightness which reduce heating and cooling costs and improve indoor air quality. Buildings have seen savings on air conditioning up to 35% by using HEBEL AAC.

Acoustic Insulation
The solid wall construction of a building made of Hebel AAC provides exceptional acoustic insulation. Its porous structure and high surface mass, coupled with its ability to dampen mechanical vibration energy, greatly reduces outside environmental.

Resistance to humidity
Your works are always protected against moisture. It allows the passage of water vapor, reducing condensation. It is an inert material.

Green Building
Hebel and green building attributes
• Recyclable, inert & non-toxic.
• Energy saving, manufacturing through occupancy.
• Excellent life-cycle cost.
• Durable, natural finish options.
• Supports LEED credits.

Add up USGBC LEED Credits with Hebel

Physical Properties
The physical properties of HEBEL Autoclaved Aerated Concrete are unique to any other building material. Properties such as thermal insulation and fire resistance can not be met by another product alone.
- Speed of Construction
- Thermal Insulation & Energy Savings
- Superior Fire Resistance
- Sustainable
- Relatively high strength for a low density
- Workability
- Acoustic Performance
- Precision

This product meets Standards and Evaluation issued by:
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Hebel® Vertical Load-Bearing Wall Panels
Autoclaved Aerated Concrete

Uses and applications
Hebel AAC Hebel® Vertical Load Bearing exterior and interior walls for residential, hotels, commercial and modular buildings.

The thickness and panel length (height) vary depending on the design requirements and constraints of the project.

Construction Advantages
- 4 Hour Fire Rating
- Moisture Resistant
- Mold Resistant
- Lightweight
- Pest and Rot Resistance
- Non-Toxic

Application:
- Commercial
- Residential
- Industrial

Certifications:
NOM, ONNCCE, ASTM, UL, IAPMO, ACI, USGBC, TDI.

This product is friendly to the environment, ecological, non-toxic and sustainable; And also grants LEED points.
Hebel® Vertical Load-Bearing Wall Panels
Autoclaved Aerated Concrete
Technical Sheet

1.1 Vertical Load Bearing Wall Panel

General Features

Hebel® AAC (Autoclaved Aerated Concrete) Wall Panels are lightweight, fire resistant, fast and easy to install. Hebel® AAC Vertical Load-Bearing Wall Panel is a reinforced (Grade 70 steel) element spanning with full story height. The Hebel® Load Bearing Panel system is based on a standard two feet wide module. The thickness and panel length (height) vary depending on the design requirements and constraints of the project.

Uses

Hebel® AAC load bearing Wall Panels are used to build load-bearing and non load-bearing exterior and interior walls for hotels, commercial and any modular buildings.

Table 1: Physical and design properties.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Unit</th>
<th>ACC-4 Class</th>
<th>ACC-6 Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive Strength (f' aac)</td>
<td>psi</td>
<td>580</td>
<td>870</td>
</tr>
<tr>
<td>Nominal Density</td>
<td>pcf</td>
<td>31</td>
<td>37</td>
</tr>
<tr>
<td>Design Weight</td>
<td>pcf</td>
<td>37</td>
<td>45</td>
</tr>
<tr>
<td>Drying Shrinkage</td>
<td>%</td>
<td>&lt;0.02</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Thermal Expansion Coefficient</td>
<td>1/°F</td>
<td>4.4 X10^-6</td>
<td>4.4 X10^-6</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td>psi</td>
<td>295,800</td>
<td>377,000</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>BTU-in/ft²-°F</td>
<td>0.9124</td>
<td>0.9811</td>
</tr>
<tr>
<td>Allowable Bearing Stress</td>
<td>psi</td>
<td>348</td>
<td>523</td>
</tr>
</tbody>
</table>

Table 2: Hebel® wall panel design weight.

<table>
<thead>
<tr>
<th>Thickness *</th>
<th>Design Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>in</td>
<td>lb/ft²</td>
</tr>
<tr>
<td>6</td>
<td>5.906</td>
</tr>
<tr>
<td>7</td>
<td>6.889</td>
</tr>
<tr>
<td>8</td>
<td>7.874</td>
</tr>
<tr>
<td>10</td>
<td>9.843</td>
</tr>
<tr>
<td>12</td>
<td>11.811</td>
</tr>
</tbody>
</table>

Table 3: Hebel® wall panel R-Value.

<table>
<thead>
<tr>
<th>Thickness *</th>
<th>R-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>in</td>
<td>ft² h °F/ BTU</td>
</tr>
<tr>
<td>6</td>
<td>6.02</td>
</tr>
<tr>
<td>7</td>
<td>7.02</td>
</tr>
<tr>
<td>8</td>
<td>8.02</td>
</tr>
</tbody>
</table>

Table 4: Hebel® wall panel fire rating.

<table>
<thead>
<tr>
<th>Material</th>
<th>Thickness</th>
<th>Fire Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hebel® Wall Panel</td>
<td>≥ 4</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 5: Hebel® wall panel acoustic performance.
2 Design Considerations

2.1 General Considerations

- The Hebel® AAC Vertical Load-Bearing Wall Panel system includes the following components: Full height load-bearing wall panels (2 ft. wide), Jamb Panels (adjacent to a window, door or mechanical opening which supports a lintel panel), Lintels Panels (load bearing or nonload bearing panel over window or door openings) and Sill Panels (located below a window or mechanical opening) see Fig. 2.

- Hebel® Wall Panels can be used as structural load-bearing and shear walls and shall be designed in compliance with safety and specified by ACI 318-11 and guidelines of ACI 523.4/R-09 and ACI 530-11.

- The design of Hebel® AAC Load Bearing wall panel should consider wind loads according to Local Building Codes.

- Slenderness ratio must be revised as follows: Hebel® wall in vertical arrangement: Panel slenderness ratio: \( l/t \leq 30 \) where \( l = \) Panel length and \( t = \) Panel thickness.

- Vertical grooved joints between panels require reinforcement according to structural design (5/8) in rebars minimum.

- Fitting panels should not be less than 16 in. wide. If more than one fitting panel is required on a wall, at least two normal (non-fitting) panels shall be installed between them.

All Hebel® components are identified on shop drawings for every project.

3 Installation Guide

3.1 General Installation Guidelines

Before Installation of Hebel® Wall Panels

- Check foundation
  - Foundation must be designed according to Local Building Codes. Verify the levelness of slab or foundation.
  - Before concrete is poured, check foundation dimensions and wall vertical reinforcement (spacing) to comply with shop drawings. Ensure the pipes, drains and other utility installations have been placed properly.

- Clear the unloading and provisional storage area
  - Unload panels using forklift, nylon straps, slings or pallet fork on a crane cable. Consult your OSHA safety manual for "rigging" or other safety considerations.
  - Insure adherence to OSHA Guidelines - Leading Edge Subpart M (Fall Protection).
  - Panels should always be stored away from other construction activities, and on a flat-grade area that is not susceptible to standing water, erosion or settling.
  - Place panels over wood blocks (panels must not be in contact with ground) and keep the material covered and banded until ready for installation.

- Check material and installation logistics
  - Verify dimensions, positions and quantity of the panels according to shop drawings. Define sequence of panel installation.
  - Define type of installation equipment (crane or similar).

---

The components listed herein represent a typical panel installation. However, other items might be needed during a Hebel® Vertical Load-Bearing Wall Panel Installation. Due to design or installation requirements, lintel panels may be

---

Fig. 2: Hebel® wall panels system elements.
Evaluate quantity of personnel required.

Set delivery schedule to match the erection sequence. Excessive handling of Hebel® AAC panels may damage the element.

Chips and spalls can be repaired. If any panel reinforcing is visible, contact an authorized Hebel® AAC representative.

All damaged surface areas may be repaired using a compatible Hebel® AAC patching compound.

Hebel® AAC panels that have surface or minor cracks are usable. Contact an authorized Hebel® AAC representative when cracks extend completely through the panel.

Check for material, tools and equipment

Available for purchase from Xella
- Hebel® Thin-bed Mortar
- Hebel® Repair Mortar
- Corrugated Nails
- Hebel® Nails (4” or 6”)
- WKV Lifting Clamp [For Rent]
- Helifix Anchors [8mm]
- Mortar Trowel

Provided by the Contractor / Owner
- Temporary Bracing
- Crane and Accessories
- Fine Grout Mortar
- Nails, threaded rod, nut, couples, washers, etc.
- 6 ft. Carpenter’s Level
- ½”Ø A370 Thru-bolts
- Choker & Shackle
- Mixing Tub / Paddles
- Wood Guide Templates
- Reinforcing Bars

Review shop drawings and ensure that everyone is using the latest version (see revision number). Drawings must be approved for construction in order to begin panel installation.

Panel Identification
Every panel can be easily identified by a reference number

3.2 Preparation

Shop Drawings
Shop Drawings include the following information: Wall panel layout, wall elevations, sections and details, general notes, revision date and number, panel schedule indicating panel number (see Fig. 3), quantity of panels and dimensional information (length, width and thickness).

Lifting Equipment Hebel® Lifting Clamp Type WKV
(Manufactured by Van de Blij B.V.)

The WKV clamp is designed specifically for vertical and horizontal (lintels) installation of Hebel® wall panels. The clamp has a constant clamp force lock [torque wrench principle].
Every day, before using the clamp, check the clamp pressure using the pressure cylinder (manometer) and record the reading in the log. Important: Each manometer is dedicated to a specific lifting clamp type. Verify the lifting and manometer shipped has the same identification numbers. Test the lifting clamp pressure at least twice every day prior to start of panel installation (start of the day and at the mid-day). The clamp pressure should be as follows:

110 bar < Clamp Pressure < 140 bar

If the pressure is either lower or higher than the values in the range, the clamp must be checked by an authorized service representative.

If the manometer shows the correct pressure, you may use the clamp. Record the details in the log and keep the log with the manometer and the clamp. The pressure must be recorded in the log daily.

Template Layout

The purpose of the template is to establish a true and square plan within the building perimeter and to determine control points around the building in order to assess the accuracy of panel placement as installation progresses.

Suggested Material and Equipment (Included but not limited)

- 2” x 4” high grade lumber for use as a panel template guide.
- Level or Transit-Level.
- Masonry screws (Hilti KWIK-CON II or ITW Tapcon)
- 2” x 4” wood cleats.
- Chalk-line, tape measure, etc.
- Metal square.

Note: All slabs which are intended to remain exposed at the completion of the project must be protected with felt paper (30# min) to prevent staining from mortar droppings.
### Temporary Bracing

The temporary bracing used for the installation of Hebel® Vertical Load Bearing Wall Panels may be accomplished in accordance with the following schedules:

**Table 7: Bracing specifications (wind load).**

<table>
<thead>
<tr>
<th>Schedule &quot;A&quot;</th>
<th>Schedule &quot;B&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Speed: 40 mph</td>
<td>Wind Speed: 50 mph</td>
</tr>
<tr>
<td>Wind Load (</td>
<td>w</td>
</tr>
<tr>
<td>Wind Pressure (</td>
<td>w</td>
</tr>
</tbody>
</table>

\(^1\text{The wind load criteria is in accordance with the Standard Practice for Bracing Masonry Walls under Construction.}\)

#### Table 8: Bracing type specification for wall height ≤ 12 ft.

<table>
<thead>
<tr>
<th>Element</th>
<th>Wall Height &lt; 12´-0&quot;</th>
<th>See Fig. 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>2&quot;x4&quot; - &quot;T-Brace&quot; with 10d common nails Ø 12 in OC and installed Ø 6 ft OC (walls &amp; openings &lt; 6 ft wide). For openings &gt; 6 ft wide, provide bracing Ø each side.</td>
<td>2&quot;x4&quot; - &quot;T-Brace&quot; with 10d common nails Ø 12 in OC and installed Ø 4 ft OC (walls &amp; openings &lt; 4 ft wide). For openings &gt; 4 ft wide, provide bracing Ø each side.</td>
</tr>
<tr>
<td>E2</td>
<td>2&quot;x4&quot;x12&quot; Cleat fasten to concrete slab with (2) 1/4&quot; Ø x 3 1/4&quot; tapcons. Fasten to Hebel® wall/floor panels with (3) 6x1 10Wakai Hit nails or (2) Hebel® AAC nails (4&quot; or 6&quot; long.) (Note: Pre-drill 1/4&quot; holes through wood cleats for Wakai Hit nails or Hebel® AAC Nails)</td>
<td>Fasten &quot;T-Brace&quot; to cleat with (3) 16d common nails.</td>
</tr>
<tr>
<td>E3</td>
<td>2&quot;x 4&quot; lumber continuous with 12d common nails Ø 5 in. or Hebel® AAC nails Ø 10 in.</td>
<td></td>
</tr>
</tbody>
</table>

#### Table 9: Bracing type specification for wall height > 12 ft.

<table>
<thead>
<tr>
<th>Element</th>
<th>Wall Height &gt; 12´-0&quot;</th>
<th>See Fig. 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4</td>
<td>Fasten top of Pipe-Bracing Ø 6 ft OC with (1) 1/2&quot; Ø A307 Thru-Bolt Use a 1/4&quot;x5&quot;x 5&quot; plate washer on the outside wall surface.</td>
<td>Design Pipe-Bracing for a Maximum Load = 700 lb (Tension/Compression)</td>
</tr>
<tr>
<td>E5</td>
<td>Fasten bottom of Pipe-Bracing to concrete slab with (1) 1/2&quot; Ø ITW Trubolt wedge anchor w/ (1) 2 1/4&quot; embed. Fasten to Hebel® floor panels w/ (1) 1/2&quot; Ø A307 Thru-Bolt Use a 1/4&quot;x5&quot;x5&quot; plate washer on the bottom floor surface.</td>
<td>Design Pipe-Bracing for a Maximum Load = 1000 lb (Tension/Compression)</td>
</tr>
<tr>
<td>E3</td>
<td>2&quot;x4&quot; lumber continuous with Hebel® AAC nails Ø 8 in.</td>
<td>Temporary bracing shall remain in place until shear key grouting (vertical joints), floor or roof system and concrete bond beams have been completed and at least 24 hours old.</td>
</tr>
</tbody>
</table>

**Note:** Temporary bracing shall remain in place until shear key grouting (vertical joints), floor or roof system and concrete bond beams have been completed and at least 24 hours old.
3.3 Wall Panel Installation

Vertical Lifting and Installation

1. Identify the panel that will be laid according to previous logistics and template layout (see section 3.2).

2. Unpack panels. Verify panels are in a stable position prior to cutting the banding (see Fig. 14).

3. Check spacing of vertical reinforcement between panels.

4. Prepare thin bed mortar to be used on setting the first row of panels and on joints between panels.

5. Attach clamp to crane hook.

6. Move the clamp to the end of the wall panel to be lifted.

7. Open the clamp sufficiently, depending on the thickness of the wall panel, by turning the hand wheel counterclockwise.

8. Rotate the clamp 90° on the handle so that the jaws of the clamp point toward the wall panel. The jaws of the clamp must be placed in the center of the wall panel.

9. Set the clamp with the inner side of the clamp fully against the wall panel (see Fig. 15).

10. Apply pressure to the clamp by turning the hand wheel of the clamp clockwise until you feel a “click” and the green windows (on clamp wheel face) are visible (do not turn it any further after this).

11. First panel: Prior to lifting a vertical panel with the clamp, apply Hebel® thin bed mortar on slab for installing the first row of panels and 10 minutes (maximum) from final setting of panel (see Fig. 16). Subsequent panels: Apply Hebel® thin bed mortar on slab for installing the first row of panels and on vertical joint between panels (width of panels) 10 minutes (max) from final setting of panel (see Fig. 16 & 17).

12. Carefully hoist the wall panel up and maneuver it into position. Panel rotates to vertical position for panel installation (see Fig. 18).

13. The panel is lowered at its final position, stabilized and guided into place by installer. Always plumb the panel with a 6 ft level prior to being “nailed off” with (2) corrugated nails on top of flat joints between panels and bracing installation (see Fig. 19 to 22). Use shim plates if necessary.

14. Install temporary bracing according to section 3.2. Temporary bracing shall remain in place until concrete bond beam and shear key grouting is complete and floor slabs or roof panels are already installed (see Fig. 12 & 13).
15. When the wall panel has been positioned correctly, the clamp can be removed from the panel by opening the clamp sufficiently. Do this by turning the hand wheel counterclockwise (see Fig. 22).

16. Clamp is released and returning to lift next panel from staging area (steps 6 to 15 - subsequent panels -).

17. Proceed to pour fine grout mortar into cells (joints between panels) to complete installation. Allow the escape of trapped air by drilling a hole (½") at the bottom of cells (6” above slab).

18. Approximately 30 minutes after panels are set in place, scrap the excess mortar from all the joints. Clean up the excess mortar and dispose of properly or use it for patching.

19. Patching of minor chips and spalls should occur immediately following scraping of the excess mortar from the walls. All interior wall joints should be skim coated with Hebel® thin-bed mortar as part of the surface preparation for the interior finishes.

20. Remove all wall templates from the slab the day after the panels have been installed and bond beams completed. Scrap away and remove all excess mortar at bed joints.
Horizontal Lifting and Installation

21. Mark the center of the wall panel (lintel) to be lifted.

22. Open the clamp, lower it completely on the panel at the marked centerline and apply pressure to close the clamp.

23. Now carefully hoist the wall panel up and maneuver it into its final position. Apply thin bed mortar to adjacent panels (joints) before lintel setting.

24. When the wall panel (lintel) has been positioned correctly, the clamp can be removed from the panel by opening the clamp sufficiently. Do this by turning the hand wheel counterclockwise.

3.4 Panels Cutting

According to shop drawings, identify Hebel® Load-bearing Wall Panels to be cut. Hebel® panels can be cut to length to fit openings (jamb panels, sill panels, etc.) or frame heights.

Permissible cutting lengths are a function of the project dimension. Along its length, Hebel® wall panels can be cut 1/3 the width:

Cutting procedures:

Important: Wear work gloves, protective helmet & visor, goggles, hearing and respiratory protection. Do not smoke or work near open fires. Read equipment instruction manual.

a) Prepare a flat surface for cutting site.

b) Check dimension of cuts to be made.

c) For transversal cuts, wood pieces must be placed along the sides of the cut and at the edges of the panel.

d) For longitudinal cuts, wood pieces must be placed at every 9 ft. minimum for 6 to 12 in thick panels and at every 6 ft. for panels 4 to 5 in thick.

e) Check for full contact between wood pieces and panel. Wedge if necessary.

f) Place a ruler as a guide and trace the cut dimensions.

g) Proceed with panel cutting, verifying that cutting dimensions comply with specifications. Transversal cuts can be performed with panel in vertical position using groove edge as support. Longitudinal cuts must be made with panel in horizontal position; if full thickness is to be cut, perform cut from both sides.

h) Apply anticorrosive paint to the exposed rebar tips.

4 Renders and Finishes

4.1 Products

Most finish systems for exterior AAC (Autoclaved Aerated Concrete) load bearing walls panels consist of three main components: base coat, reinforcing mesh, and a finish coat.

IMPORTANT

- Check the clamp pressure with the special test-cylinder every day before using.
- Tampering with the clamp is not permitted. The clamp has been calibrated in the factory.
- It is strictly forbidden at any time for people to be under the load during lifting.
- The maximum load-bearing capacity of the clamp may never be exceeded.
- Never put hands, arms, feet, head or legs under the load, or between the jaws of the clamp.
- The load must always be hoisted, it may not be dragged along the ground.
- Avoid sudden movement to prevent accidental release of the load.
- In freezing weather, do not attempt to lift panels on which ice has formed.
Surface preparation: Rasp joints and other areas where the Hebel® AAC surface is out of plane to a smooth in-plane surface. Surface must be clean, free of dirt, oil and any other foreign matter. Loose or damaged material must be removed. Apply a tinted primer (acrylic based) in case of acrylic base-coats.

Hebel® Base-Coat: Apply a layer [¼” thickness minimum] of Hebel® Base Coat (cement-based or acrylic) or acrylic base-coats (Hebel®, products or similar), according to manufacturer instructions. Reinforce base-coat using Fiberglass mesh embedded in 100% of the surface area [see Fig. 26].

Finish Coat: Apply ready-mix acrylic based products or elastomeric paints as decorative and protective finish coat -top-coat- (Sto AAC products or similar).

Apply finish directly over the primed wall surface. Apply finish by spraying or troweling with a stainless steel trowel, depending on the finish specified (see Fig. 26).
5 Fasteners

Fasteners
Anchors used with AAC shall be made of plastic or nylon. Wood, fiber, lead, metal or expansion anchors are not recommended. Use power drills to make holes for fasteners and masonry drill-bits recommended (diameter) on table 10 | drill-bit diameter may differ from recommended by fastener manufacturer; specifications have been adapted for AAC. Percussion drilling or inverting the rotation direction when drilling shall be avoided. The anchor shall penetrate tightly in the hole to avoid rotation when placing the screw. When using Fischer anchors, the external finish layer surrounding the hole should be removed to allow the anchor to fully penetrate into the AAC element.

Hebel® AAC Nail
Hebel® galvanized AAC nails are designed specifically to provide a definitive anchorage in the AAC. Hebel® AAC nails are directly hammered-into the AAC element – no drilling is required.

Screws
Always use screws of the diameter recommended on table 10. Minimum length of screw is defined by the anchor length plus the thickness of the finish layer and the thickness of the element to be fixed.

Precautions
Load values (pull-out strength) shown in chart shall be used only as a reference guide; field testing is suggested according to project requirements. The load values (lb) shown in chart are for direct pull-out and a safety factor of 5 is included in them. Full penetration of screws into the anchor is assumed to obtain such load values.
### Fasteners & Nails

**Autoclaved Aerated Concrete Technical Sheet**

<table>
<thead>
<tr>
<th>Anchor / Nail</th>
<th>Drill Bit for Masonry</th>
<th>Screw</th>
<th>Load Value* (pull-out strength)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Ø Diam</td>
<td>Ø in</td>
<td>Lb</td>
</tr>
<tr>
<td>Hebel AAC Nails®</td>
<td>Available at Xella AAC Texas, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hebel AAC Nail 4 in.</td>
<td>4”</td>
<td>1/4”</td>
<td>Fixed directly with hammer</td>
</tr>
<tr>
<td>Hebel AAC Nail 6 in.</td>
<td>6”</td>
<td>5/16”</td>
<td>Not Required</td>
</tr>
<tr>
<td>Universal Plastic Anchor</td>
<td>Available at Construction Depots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchor TP 14 - 1/4”</td>
<td>1 1/2”</td>
<td>1/4”</td>
<td>3/16”</td>
</tr>
<tr>
<td>Anchor TP 56 - 5/16”</td>
<td>1 1/2”</td>
<td>5/16”</td>
<td>5/16”</td>
</tr>
<tr>
<td>Anchor TP 38 - 3/8”</td>
<td>2”</td>
<td>3/8”</td>
<td>5/16”</td>
</tr>
</tbody>
</table>

Note: For use in solid walls (Anclo® or similar).

### THORSMAN®
Available at Construction Depots

| Anchor Red TP 2X | 1 1/8” | 1/4” | 3/16” | #8 | 37 | --- |
| Anchor Brown TP 2B | 1 1/2” | 5/16” | 5/16” | #10 | 42 | --- |
| Anchor Blue TP 3 | 1 1/4” | 3/8” | 5/16” | #12 | 62 | --- |

### TOX VLF®
Available at www.demandproducts.com

| Anchor 6/70 | 2 3/4” | 1/4” | 1/4” | Anchor with screws included (pre-assembled) | 66 | --- |
| Anchor 8/80 - 8/135 | 3 3/4” | 5/16” | 5/16” | 102 | --- |
| Anchor 10/100 - 10/160 | 4” | 3/8” | 3/8” | 120 | --- |

### HILTI® Plastic Anchors
Available at Hilti Shops and Construction Depots

| Anchor HUD-1 (10x50) | 2” | 3/8” | 3/8” | 5/16” | 71 | 90 |
| Anchor HUD-1 (12x60) | 2 1/6” | 1/2” | 7/16” | 3/8” | 185 |

More Products: www.us.hilti.com

### FISCHER®
Available at Xella AAC Texas, Inc.

| Anchor GB 10 | 2” | 3/8” | 3/8” | 1/4” | 126 | --- |
| Anchor GB 14 | 3” | 5/8” | 5/8” | 3/8” | 165 | 225 |
| Anchor GB140R | 3 3/4” | 3/8” | 3/8” | 5/16” | 210 |

Notes:

1) Anchors without screws, except TOX VLF anchors.
2) Drill bit diameter change between AAC-4 and AAC-6 classes. Notes:
   3) Available at Xella Aircrete North America, Inc.
   4) Available at Hilti Shops, Home Depot, Lowe’s, etc.
   5) Available at www.demandproducts.com
   6) For AAC-4 (block & panel) use 1/4” drill bit.
   7) For AAC-6 (block & panel) use 1/2” drill bit.
   8) Safety Factor (SF)=5. Use masonry drill bits.

**Table 10: Anchoring into Hebel® AAC Masonry Components.**