Technical Sheet and Installation Guide
Hebel® Wall Panel
Autoclaved Aerated Concrete
About Hebel®

Hebel® is a registered trademark of Xella Group, a German technology. In the USA, we are now part of Bexel International Group, manufacturing Autoclaved Aerated Concrete products, following the highest quality standards of the industry. Hebel® offers the most efficient solution in construction systems, more than 80 years in the market support us. We have been present in America since 1994.

Hebel® is distinguish by being a high-quality, innovative option that combines various properties in a single material. The benefits are reflected from the construction phase, it is up to 5 times lighter than traditional concrete, and has a significant impact on reducing construction time, as well as generating great savings in steel, concrete and labor.

We promote sustainability with high energy efficiency in all types of buildings.

Our systems provide high thermal performance, maximum fire resistance, acoustic insulation and resistance to humidity.

Hebel® is committed to providing to the United States with environmentally responsible building solutions that conserve material an energy usage. We are members of the Green Building Council.

Hebel® Autoclaved Aerated Concrete offers to 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.

Our building systems offer low insurance and maintenance cost to the building owner. A wide range of projects can benefit from Hebel® blocks and reinforced panels, including those in the commercial, educational, hospitality, industrial, institutional, governmental and residential segments.

Due to the AAC qualities, Hebel® has national and international recognized certifications, their manufacturing process is carefully monitored at all stages, in order to guarantee the best quality for our customers.

Its properties take any project to a higher category, managing to build a better quality life, comfort and savings for a lifetime. At Hebel® we care to offer a full experience with a 360 service for each project specification.

The Hebel® Plant is located in Nuevo León, México and its USA offices are located in San Antonio, TX., from where we serve the USA market.
**Benefits**

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thermal Insulation</strong></td>
<td>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. <strong>Buildings have seen savings on air conditioning up to 35% by using HEBEL AAC.</strong></td>
</tr>
<tr>
<td><strong>Resistance to humidity</strong></td>
<td><strong>Protects against moisture.</strong> It allows the passage of water vapor, reducing condensation.</td>
</tr>
</tbody>
</table>
| **Green Building**                                                     |  ● Recyclable, inert & non-toxic  
  ● Energy saving  
  ● Durable  
  ● LEED credits |
| **Easy treatment**                                                     | Can be *easily cut, drilled and grooved* with manual or power tools.  
  |
| **Lightweight**                                                        | Its lightweight nature allows a *faster and more efficient construction.* |
| **Acoustic Insulation**                                                | Provides exceptional acoustic insulation. Its porous structure and high surface mass, coupled with its ability to dampen mechanical vibration energy, *greatly reduces sound transmission from exterior - interior and room-to-room.* |
| **Pest resistance**                                                    | Not a food source for termites or vermin and no cavity construction. **Eliminates the chance of harbouring pests.** |

**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 cannot 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:

- UL 530-13
- ACI 523.4-R09
- ASTM C 1693-11
- ASTM C 1660-09
- ENERGY STAR®
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Autoclaved Aerated Concrete

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Hebel® Wall Panel
Autoclaved Aerated Concrete

Uses and applications
The Hebel wall panel system uses its excellent thermal, fire resistance, and lightness features to be one of the best options as curtain wall solution in industrial and commercial projects. The process is simpler and quicker than conventional methods.

Construction Advantages
- Superior Fire rating.
- Speed of Construction.
- Durability (Low maintenance)
- Lightweight (37pcf)
- Lightweight equipment needed to install.
- 5 people crew to install.
- Custom made.
- Workability.

Application:
- Commercial
- Industrial
- Hospitality
- Assisted Living
- Dorms
- Fire walls

Certifications:
UL, IAPMO, TDI.

More benefits of Hebel® Wall Panel
- Fire resistance.
- Strength and security.
- Wind load capacity.
- Acoustic performance.
- Thermal performance.
- Pest and rot resistant.
- Not Mildew.
- Low maintenance.
- Friendly to the environment and Sustainable.
- Grants LEED points.
Hebel® Wall Panel
Autoclaved Aerated Concrete
1 Technical Sheet

1.1 Hebel® Wall Panel

General Features
Lightweight, fire resistant*, water penetration resistant**, pest resistant, fast and easy to install, versatile and affordable. Hebel AAC Wall Panel is a steel reinforced element. Reinforcement is Grade 70 steel covered with an anti-corrosive coat. Manufactured according to ASTM C1693/ASTM C1694.

* Under ASTM E119-95 UL
** ASTM E514

Uses
Hebel® Wall Panel can be used with steel or concrete structures as curtain walls in horizontal and/or vertical arrangement. Suitable for commercial and industrial buildings.

Dimensions

<table>
<thead>
<tr>
<th>Length</th>
<th>Width: 24 in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Thickness:</td>
<td>4, 5, 6, 7, 8, 10 and 12 in.</td>
</tr>
</tbody>
</table>

Table 1: Physical and Design Properties.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Unit</th>
<th>AAC-4 Class</th>
<th>AAC-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 X 10⁻⁴</td>
<td>4.4 X 10⁻⁴</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/ft⁻¹-h⁻¹°F</td>
<td>0.9124</td>
<td>0.9811</td>
</tr>
</tbody>
</table>

Table 2: Wall Panel Weight.

<table>
<thead>
<tr>
<th>Thickness* in</th>
<th>Design Weight AAC-4</th>
<th>Design Weight AAC-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>12.3</td>
<td>14.7</td>
</tr>
<tr>
<td>5</td>
<td>15.3</td>
<td>18.4</td>
</tr>
<tr>
<td>6</td>
<td>18.4</td>
<td>22.1</td>
</tr>
<tr>
<td>7</td>
<td>21.5</td>
<td>25.8</td>
</tr>
<tr>
<td>8</td>
<td>24.6</td>
<td>29.3</td>
</tr>
<tr>
<td>10</td>
<td>30.7</td>
<td>36.8</td>
</tr>
<tr>
<td>12</td>
<td>36.8</td>
<td>44.2</td>
</tr>
</tbody>
</table>

*Nominal dimension. **Considering a 24 in panel width.

Table 3: Hebel® Wall Panel R’ Value.

Fire Performance

Non-Bearing reinforced Wall panels AAC-4 ans 4” and 5” AAC-6

<table>
<thead>
<tr>
<th>Material</th>
<th>Fire Rating Hrs.</th>
<th>UL Design Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Bearing reinforced AAC-4 ans 4” and 5” AAC-6</td>
<td>4</td>
<td>U920</td>
</tr>
</tbody>
</table>

Note: Testing performed at Underwriters Laboratories Inc. under ASTM E119 (UL/ANSI 263) “Fire Tests of Building Construction and Materials”.

Table 5: Hebel® Wall Panel fire rating.
Elastomeric sealant
Chasing of panel on site (connector area)
Connector type A-15 or A-20
Steel column
Hebel® Horizontal wall panel

Isometric View
Fig. 2: Typical connection in Hebel® Horizontal Wall Panels using type “A” connector.

Isometric View
Fig. 3: Typical connection in Hebel® Horizontal Wall Panels using type “C” connector.

Isometric View
Fig. 4: Typical bottom connection in Hebel® Vertical Wall Panels using type “B” connector.

Isometric View
Fig. 5: Typical middle connection in Hebel® Vertical Wall Panels using type “C” connector.
2 Design Considerations

2.1 General Considerations

- **Hebel® Wall Panel** can be used as a partition or curtain wall and shall be designed in order to comply with safety and serviceability requirements as specified by ACI 318-95 and following guidelines of ACI 523.4 R-09.

- Main structure (steel or concrete) should be designed according to Local Building Codes.

The design of Hebel® Wall Panel should consider wind loads according to Local Building Codes and the slenderness ratio must be revised as follows:

a) **Hebel® Wall in horizontal arrangement:**

- Maximum quantity of panels installed without brackets: 20 pieces (maximum total height: 40 ft).
- Panel slenderness ratio: 
  \[ \frac{l}{t} \leq 40 \]
  
  Where: \( t = \) Panel thickness, \( l = \) Panel length, \( b = \) Panel width.

b) **Hebel® Wall in vertical arrangement:**

- Maximum height of wall: 60 ft
- Panel slenderness ratio:
  
  For single unit walls or top course of a multi-course wall 
  \[ \frac{l}{t} \leq 40 \]

  For multi-course walls, except the course on top 
  \[ \frac{l}{t} \leq 35 \]

  Where: \( t = \) Panel thickness, \( l = \) Panel length, \( b = \) Panel width.

- 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.

- Maximum capacity for steel connectors can be checked in Table 1.

---

**Fig. 5b: Summary of connectors for Hebel® Wall Panel installation.**

<table>
<thead>
<tr>
<th>Type A</th>
<th>Connector types A-15 &amp; A-20 for installation of Hebel® horizontal wall panels.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type B</td>
<td>Connector for Hebel® vertical wall panel installation (lower end of panel)</td>
</tr>
<tr>
<td>Type C</td>
<td>Connector for installation of Hebel® wall panel.</td>
</tr>
<tr>
<td>Type D</td>
<td>Connector for installation of Hebel® vertical wall panels (corners).</td>
</tr>
<tr>
<td>Type E</td>
<td>Connector for installation of Hebel® vertical wall panels (intermediate joints).</td>
</tr>
<tr>
<td>Type F</td>
<td>Connector for installation of Hebel® vertical wall panels.</td>
</tr>
<tr>
<td>Type G</td>
<td>Connector for installation of Hebel® vertical wall panels.</td>
</tr>
<tr>
<td>Type H</td>
<td>Connector for installation of Hebel® vertical wall panels (upper end).</td>
</tr>
</tbody>
</table>

Notes:

- Steel for APS, nails and connector ASTM A-36.
- Use series AWS E-70XX welding.
- All elements must be galvanized (2.9 mils., coating 515 gr/m²) according to ASTM A-123-89-A.
- Fire walls in all surface of the joints apply Hebel thin bed (vertical and horizontal).

Galvanized round nail 7” long.
3 Installation Guide

3.1 General Installation Guidelines

Before Installation of Hebel® Wall Panels.

1. Check Foundation.
   - Foundation must be designed according to Local Building Codes. Verify the level of slab foundation.

2. Check Structure
   - Check plumb and alignment of columns/structure.
   - Complete visual inspection of entire supporting structure for panels (bracing, etc.).

3. Clear the Unloading and Provisional Storage Area
   - Flat surfaces are required for unloading pallets, preferably close to final position.
   - Place pallets over wood blocks (panels must not be in contact with ground).

4. Check Material and Installation Logistics
   - Verify dimensions, positions and quantity of the panels according to construction drawings.
   - Define sequence of panel installation.
   - Define type of installation equipment (crane or similar).
   - Evaluate quantity of personnel required (see Table 6: Average efficiency for Hebel® Wall Panel Installation).

5. Check for Metal Accessories.
   - Hebel® connectors for wall panel installation.
   - If type “A” (A-15 or A-20) connector will be used, fix connection steel angles to the structure (steel or concrete), spaced as indicated in construction drawings.
   - Steel frames required for span over doors, windows and vents.

3.2 Installation Guide

1. Installation of Hebel® Horizontal Wall Panels
   a) Mark center of panels on the tongue side.
   b) Unpack panels using scissors or hammer ax.
   c) Identify the panel that will be laid according to previous logistics.
   d) Chase tongue areas where connectors will be placed.
   e) Place lifting gear at the center of the panel over tongue side and proceed with lifting.

<table>
<thead>
<tr>
<th>Item</th>
<th>Average Efficiency (crew/day)</th>
<th>Personal Required</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hebel® Horizontal Wall Panel</td>
<td>75</td>
<td>4 men installing 2 assistants for lifting gear</td>
<td>When installation of steel structure allows for continuous installation of Hebel® Wall Panels.</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td></td>
<td>When installation of structure does not allow for continuous installation of Hebel® Wall Panels.</td>
</tr>
<tr>
<td>Hebel® Vertical Wall Panel</td>
<td>25</td>
<td>1 welder and assistant 1 coordinator 2 assistants for lifting gear 1 assistant for connector placement</td>
<td>When bottom anchorage is with continuous steel angle</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td></td>
<td>When bottom anchorage is with steel channel or double steel angle</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td></td>
<td>When bottom anchorage is with connector Type B</td>
</tr>
</tbody>
</table>

Table 6: Average efficiency for Hebel® Wall Panel installation.
f) Place cement sand mortar bed (1:4) for leveling the first row of panels. If required, use wedges while setting mortar bed.

g) Set the panel with the tongue side up.

h) When placing first row of panels, use provisional clamps to fix panel to structure while connector is placed.

i) If type “C” connector is used, just place it in its final position and nail to panel (see Fig 9). The type of connector to be used should be specified in construction drawings.

j) This procedure is followed for the next panels (see Fig. 10).

k) Seal vertical joints between panels using backer rod and caulking.

l) Seal horizontal joints between panels with caulking.

Cautions

- Handle panels with care to avoid damage.
- Panels must be flush with the support structure before nailing.
- Clean the groove side of panels.
- Make chases needed prior to installation.

2. Installation of Hebel® Vertical Wall Panels

a) Unpack panels using scissors or hammer ax.

b) Identify the panel that will be laid according to previous logistics.

c) Chase tongue areas where connectors will be placed.

d) If needed, place cement sand mortar bed (1:4) for leveling the first row of panels. Wedges can be used to adjust panels while setting mortar bed.
e) Turn down the panel over wood blocks and place the lifting hook into lateral hole all Hebel® Vertical Wall Panels are manufactured with a lateral hole (see Fig. 11).

f) Lift the panel and place it in its final position.

g) Check alignment and plumb using a mason’s level.

h) Place bottom connector (type “B”) over tongue side, nail to the panel using galvanized 7” nails and fix to the foundation using a powder-actuated fastening tool and pins for concrete (see application requirements, see fig 13).

i) Place the upper connector (middle connector if two or more rows will be installed) (see Fig. 14). The type of connector to be used should be specified in construction drawings.

j) This procedure is followed for the next panels.

k) Once the first row of panels is installed, proceed with installation of second row of panels, as required, using middle and upper connectors (see Fig. 15 and Fig. 16).

l) Seal joints between panels with elastic caulking.

m) Seal joints at corners using backer rod and elastic caulking.

Cautions

- Handle panels with care or fork-lift to avoid damage.

- Panels must be flush with the support structure before nailing.

- Clean the groove side of the panels.

- Make chases needed prior to installation.
3. Cutting Panels
According to construction drawings, identify Hebel® Wall Panels prepared to be cut. Hebel® Wall Panels can be cut to length to fit openings or frame heights.

Permissible cutting lengths are in function of the project dimensions. Along its length, Hebel® Wall Panels can be cut 1/3 the width.

Cutting Procedures
a) Prepare a flat surface for cutting site.

b) Check dimensions 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 and 5 in. thick.

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

f) Trace the cut dimensions and place a ruler as a guide.

g) Proceed with panel cutting, verifying that cutting dimensions comply with specifications.

h) Apply anticorrosive paint at exposed reinforce bar tips.

4. Openings
Steel frames are required at openings for doors, windows, vents, etc. (see Fig. 18). Opening locations and steel profiles must be specified in construction drawings.

5. Surface Patching
Use Hebel® Repair Mortar to patch chips, breaks and other imperfections on surfaces of Hebel® Wall Panels.

Hebel® Repair Mortar is mixed in a plastic bucket, adding water (see instructions on the bag) and mixed with a stirrer using a power drill or by manual means (depending on quantity to be used). It is applied using a spatula.

6. Renders and Finishes
Hebel® Wall Panel can be finished with elastomeric paints (Block filler, primer and elastomeric paint), Hebel® Stucco, acrylic finishes, cement based finishes, etc. Joints between panels will be visible. For plane surfaces without visible joints, call Hebel® for technical assistance.

7. Application Requirements

Tools
- Hammer ax
- Rubber mallet
- Sanding float
- Mason’s level
- Brush
- Chasing tool
- Plastic bucket
- Stirrer for power drill
- Spatula
- Scissors for unpacking
- Clamps

Equipment
- Saw with 14” or 16” diamond.
- Vertical wall panel lifting hook
- Horizontal wall panel lifting gear
- Powder-actuated fastening tool (HILTI DX36M or similar)
- Crane
- 1/2” Power drill
- Safety gear (goggles, dust mask, gloves, hard hat)

Additional Material
Additional material needed, available through Litecrete, Inc.:

- Hebel® Repair Mortar
- Connectors and nails

Additional material needed, not available, through Litecrete, Inc.:

- Backer rod
- Caulking
- Cement-sand mortar
- Panel wedges
- 4x4 in. wood blocks, 2 ft. long
- Anticorrosive paint
4 Hebel® Repair Mortar

4.1 Technical Sheet

Description
Hebel® Repair Mortar is a dry-mixed (ready mix) component consisting of inorganic aggregates in a fine powder, Portland cement and additives to improve the mortar’s properties.

Use
Hebel® Repair Mortar may be used on Hebel® blocks and panels for patching and aesthetic repairs.

Mixing the Repair Mortar

For each pound of mortar add approximately 6 ounces of water. Use a plastic bucket for mixing. A variable speed drill with the Hebel® stirrer is used for mixing the repair mortar with water. Follow instructions printed on the bag.

Helpful Hints For Using Hebel® Repair Mortar

- Working life of mixture is about 4 hours.
- Do not wipe away any excess mortar that exudes from the patching area right away as it might smear. Let it set partially and then scrape off with a spatula and sand down.
- It is recommended to wear safety equipment (gloves, dust mask, etc.) since Repair mortar contains cement and this may cause irritation to the skin, eyes or breathing.

Delivery, Storage and Use of Hebel® Repair Mortar

Repair mortar comes dry from the factory and is packed in sealed sacks. Sacks should be protected against damage, placed in a dry area and protected against moisture or freezing.

Do not apply if temperature is below 4°C (39°F) or in rainy conditions.

Tools
- Stirrer for Power drill
- Plastic bucket
- 1/2” Power drill

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 7. 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.

Precautions: Hebel® Repair mortar contains Portland cement. May be irritating to eyes and nose. Avoid eye contact or prolonged contact with skin. Use safety gear: gloves, dust mask and goggles.

Hebel® AAC Nail:
Hebel® galvanized AAC nails are designed specifically to provide a definitive anchorage in the AAC.

Screws
Always use screws of the diameter recommended on table 7. 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**

### Hebel AAC Nails®
- **Hebel AAC Nail 4 in.**
  - Length: 4"  
  - Ø Diam: 1/4"
  - Min. Penetration: 3 in.
  - Drill Bit for Masonry: 3/4"
  - Screw: Not Required
  - Load Value (pull-out strength): 51 Lb

- **Hebel AAC Nail 6 in.**
  - Length: 6"  
  - Ø Diam: 5/16"
  - Min. Penetration: 5 in.
  - Drill Bit for Masonry: 3/4"
  - Screw: Not Required
  - Load Value (pull-out strength): 88 Lb

### Dry Wall Screw
- **8 x 3"**
  - Length: 3"  
  - Ø Diam: -
  - Screw: Not pre-drilling is required
  - Load Value (pull-out strength): 35 Lb

- **8 x 2½"**
  - Length: 2½"  
  - Ø Diam: -
  - Screw: Not pre-drilling is required
  - Load Value (pull-out strength): 33 Lb

### Universal Plastic Anchor
- **Anchor TP 14 - 1/4"**
  - Length: 11/16"  
  - Ø Diam: 1/4"
  - Drill Bit for Masonry: 3/8"
  - Screw: #10
  - Load Value (pull-out strength): 22 Lb

- **Anchor TP 56 - 5/16"**
  - Length: 11/2"  
  - Ø Diam: 5/16"
  - Drill Bit for Masonry: 3/8"
  - Screw: #12
  - Load Value (pull-out strength): 26 Lb

- **Anchor TP 38 - 3/8"**
  - Length: 2"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Screw: #10
  - Load Value (pull-out strength): 44 Lb

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

### THORSMAN®
- **Anchor Red TP 2X**
  - Length: 13/4"
  - Ø Diam: 1/4"
  - Drill Bit for Masonry: 3/16"
  - Screw: #8
  - Load Value (pull-out strength): 37 Lb

- **Anchor Brown TP 2B**
  - Length: 11/2"
  - Ø Diam: 5/16"
  - Drill Bit for Masonry: 3/8"
  - Screw: #10
  - Load Value (pull-out strength): 49 Lb

- **Anchor Blue TP 3**
  - Length: 1¼"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Screw: #12
  - Load Value (pull-out strength): 73 Lb

### TOX VLF®
- **Anchor 6/70**
  - Length: 2 3/4"
  - Ø Diam: 1/4"
  - Drill Bit for Masonry: 1/4"
  - Anchor with Screws Included: 66 Lb

- **Anchor 8/80 - 8/135**
  - Length: 3 3/16"
  - Ø Diam: 5/16"
  - Drill Bit for Masonry: 5/16"
  - Anchor with Screws Included: 102 Lb

- **Anchor 10/100 - 10/160**
  - Length: 4 3/8"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Anchor with Screws Included: 120 Lb

**Note:** Available at www.demandproducts.com

### HILTI® Plastic Anchors
- **Anchor HUD-1 (10x50)**
  - Length: 2"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Screw: 7/16"
  - Load Value (pull-out strength): 128 Lb

- **Anchor HUD-1 (12x60)**
  - Length: 2 3/4"
  - Ø Diam: 1/2"
  - Drill Bit for Masonry: 1/2"
  - Screw: 7/16"
  - Load Value (pull-out strength): 185 Lb

**More Products:** www.us.hilti.com

### FISCHER®
- **Anchor GB 10**
  - Length: 2"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Screw: 1/4"
  - Load Value (pull-out strength): 126 Lb

- **Anchor GB 14**
  - Length: 3"
  - Ø Diam: 5/8"
  - Drill Bit for Masonry: 5/8"
  - Screw: 3/8"
  - Load Value (pull-out strength): 165 Lb

- **Anchor S10H80R**
  - Length: 3 3/8"
  - Ø Diam: 3/8"
  - Drill Bit for Masonry: 3/8"
  - Screw: 5/16"
  - Load Value (pull-out strength): 123 Lb

**Notes:**
- **1** Anchors without screws, except TOX VLF anchors.
- **2** Drill bit diameter change between AAC-4 and AAC-6 classes.
- **3** Available at Litecrete, Inc.
- **4** Available at Hilti Shops and Construction Depots.
- **5** Available at www.demandproducts.com
- **6** For AAC-6 (Block & Panel) use 1/4" drill bit. For AAC-6 (Block & Panel) use 1/2" drill bit. *Safety Factor [SF]=5. Use masonry drill bits.Anchors do not include screws (except TOX anchors).
- **7** IMPORTANT: Information has been adapted considering Autoclaved Aerated Concrete (AAC) material and may differ from original fastener manufacturer.

<table>
<thead>
<tr>
<th>Anchor / Nail Description</th>
<th>Length (in)</th>
<th>Ø Diam (in)</th>
<th>Drill Bit for Masonry (in)</th>
<th>Screw</th>
<th>Load Value (pull-out strength)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hebel AAC Nail 4 in.</td>
<td>4</td>
<td>1/4</td>
<td>Fixed directly with hammer</td>
<td>Not Required</td>
<td>51 Lb</td>
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<tr>
<td>Hebel AAC Nail 6 in.</td>
<td>6</td>
<td>5/16</td>
<td></td>
<td>Not Required</td>
<td>88 Lb</td>
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<tr>
<td>Dry Wall Screw 8 x 3&quot;</td>
<td>3</td>
<td>-</td>
<td>Not pre-drilling is required</td>
<td>Not Required</td>
<td>35 Lb</td>
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<tr>
<td>Dry Wall Screw 8 x 2½&quot;</td>
<td>2½</td>
<td>-</td>
<td>Not pre-drilling is required</td>
<td>Not Required</td>
<td>33 Lb</td>
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<td>Universal Plastic Anchor</td>
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<td>Anchor TP 14 - 1/4&quot;</td>
<td>1 1/4</td>
<td>1/4</td>
<td>1/4</td>
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<td>22 Lb</td>
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<tr>
<td>Anchor TP 56 - 5/16&quot;</td>
<td>1 1/2</td>
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<td>5/16</td>
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<td>Anchor TP 38 - 3/8&quot;</td>
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<td>3/8</td>
<td>5/16</td>
<td>1/4</td>
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<td>Anchor Red TP 2X</td>
<td>1 3/4</td>
<td>1/4</td>
<td>3/16</td>
<td>#8</td>
<td>37 Lb</td>
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<tr>
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<td>5/16</td>
<td>1/4</td>
<td>#10</td>
<td>49 Lb</td>
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<tr>
<td>Anchor Blue TP 3</td>
<td>1 3/4</td>
<td>3/8</td>
<td>5/16</td>
<td>#12</td>
<td>73 Lb</td>
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<td>TOX VLF®</td>
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<tr>
<td>Anchor 6/70</td>
<td>2 3/4</td>
<td>1/4</td>
<td>1/4</td>
<td>#12</td>
<td>66 Lb</td>
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<tr>
<td>Anchor 8/80 - 8/135</td>
<td>3 3/16</td>
<td>5/16</td>
<td>5/16</td>
<td>#12</td>
<td>102 Lb</td>
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<tr>
<td>Anchor 10/100 - 10/160</td>
<td>4 3/8</td>
<td>3/8</td>
<td>3/8</td>
<td>#12</td>
<td>120 Lb</td>
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<td>Anchor HUD-1 (10x50)</td>
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<td>3/8</td>
<td>3/8</td>
<td>5/16</td>
<td>71 Lb</td>
</tr>
<tr>
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<td>2 3/4</td>
<td>1/2</td>
<td>7/16</td>
<td>3/8</td>
<td>128 Lb</td>
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<td>Anchor GB 10</td>
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<td>3/8</td>
<td>3/8</td>
<td>1/4</td>
<td>126 Lb</td>
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<tr>
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<td>3</td>
<td>5/8</td>
<td>5/8</td>
<td>3/8</td>
<td>165 Lb</td>
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<td>3 3/8</td>
<td>3/8</td>
<td>3/8</td>
<td>5/16</td>
<td>123 Lb</td>
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</tbody>
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Table 7: Anchoring into Hebel® Wall Panel.