FREESTANDING HOLLOW CORE
DESIGN RESOURCES
Freestanding Hollow Core Resources

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### Block Library

#### F-HC Hollow Core

<table>
<thead>
<tr>
<th>Face Texture</th>
<th>Cobble / Limestone</th>
<th>Ledgestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Weight</td>
<td>913 lb (414 kg)</td>
<td>770 lb (349 kg)</td>
</tr>
<tr>
<td>Block Volume</td>
<td>6.38 ft³ (0.181 m³)</td>
<td>5.38 ft³ (0.152 m³)</td>
</tr>
</tbody>
</table>

#### F-CHC Corner Hollow Core

<table>
<thead>
<tr>
<th>Face Texture</th>
<th>Cobble / Limestone</th>
<th>Ledgestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Weight</td>
<td>1002 lb (455 kg)</td>
<td>972 lb (441 kg)</td>
</tr>
<tr>
<td>Block Volume</td>
<td>7.01 ft³ (0.198 m³)</td>
<td>6.80 ft³ (0.192 m³)</td>
</tr>
</tbody>
</table>

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1. Units for dimensions are inches (mm), typical unless noted otherwise.
2. Confirm block production with licensed Redi-Rock manufacturer.
3. Architectural faces on the blocks have varying texture.
4. Average block weights shown. Actual block volumes and weights may vary.
5. Weights are based upon a concrete density of 143 lb/ft³ (2291 kg/m³).
F-HC HOLLOW CORE

**Face Texture:**
- Cobble / Limestone
- Ledgestone

**Block Weight:**
- 913 lb (414 kg)
- 770 lb (349 kg)

**Block Volume:**
- 6.38 ft³ (0.181 m³)
- 5.38 ft³ (0.152 m³)

**Core Volume:**
- 4.09 ft³ (0.116 m³)

1. Units for dimensions are inches (mm), typical unless noted otherwise.
2. Confirm block production with licensed Redi-Rock manufacturer.
3. Architectural faces on the blocks have varying texture.
4. Average block weights shown. Actual block volumes and weights may vary.
5. Weights are based upon a concrete density of 143 lb/ft³ (2291 kg/m³).
This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site. Final wall design must address both internal and external drainage and all modes of wall stability.
ATTACH PLANGE MOUNTED FENCE POSTS TO CAP UNIT WITH CONCRETE ANCHOR BOLTS (RED HED TRU-BOLT WEDGE ANCHORS OR EQUAL)

SET CAP BLOCK ON TOP F-HC UNIT AND EMBED STEEL REINFORCEMENT IMMEDIATELY AFTER PLACEMENT OF CAST-IN-PLACE CONCRETE

CAST-IN-PLACE CONCRETE IN HOLLOW CORE OF F-HC UNITS AND IN TOP HALF OF VERTICAL CORE SLOT IN PC BLOCKS IMMEDIATELY BELOW F-HC BLOCKS, MINIMUM 28 DAY COMRESSIVE STRENGTH = 6,000 psi

No. 6 HORIZONTAL BARS, CONTINUOUS, 24” OVERLAP ON ENDS TYPICAL, BOTH SIDES OF CENTER CORE

No. 6 VERTICAL BARS, 11 1/2” O.C. TYPICAL, BOTH SIDES OF CENTER CORE

NO. 3 BAR HOOK - WRAP AROUND LIFTING INSERT IN TOP OF BLOCK AND EXTEND INTO HOLLOW CORE AREA OF F-HC BLOCK

RECESSED LIFTING HOOK AREA FILLED WITH CAST-IN-PLACE CONCRETE (WHEN FRESTANDING BLOCKS ARE FILLED)

COVER TOP OF RETAINING BLOCKS AND ALL EXPOSED GEORET WITH 6 mil VISQUEEN PLASTIC LAYER

NO. 57 STONE INFILL IN VERTICAL CORE SLOT, BETWEEN ADJACENT BLOCKS, AND 12” BEHIND BACK OF BLOCKS.

FILL BOTTOM HALF OF VERTICAL CORE SLOT FOR PC BLOCKS IMMEDIATELY BELOW FREESTANDING BLOCKS

ALL REINFORCING STEEL TO CONFORM TO ASTM A706 OR AASHTO M31 GRADE 60.
ALL REINFORCING STEEL TO CONFORM TO ASTM A706 OR AASHTO M31 GRADE 60.

No. 4 BARS, 40" LONG
(TIE TO EMBEDDED HOOKS)

(2) REDI-ROCK R ANCHORS
(11 1/2" FROM EACH END)

END VIEW
CAP BLOCK CAST WITH R-ANCHORS (SPECIALTY BLOCK)

BEND DETAIL
NO. 3 REBAR HOOKS

ATTACH FLANGE MOUNTED FENCE POSTS TO CAP UNIT WITH CONCRETE ANCHOR BOLTS (RED HED TRU-BOLT WEDGE ANCHORS OR EQUAL)

SET CAP BLOCK ON TOP F-HC UNIT AND EMBED STEEL REINFORCEMENT IMMEDIATELY AFTER PLACEMENT OF CAST-IN-PLACE CONCRETE

CAST-IN-PLACE CONCRETE IN HOLLOW CORE OF F-HC UNITS AND IN TOP HALF OF VERTICAL CORE SLOT IN PC BLOCKS IMMEDIATELY BELOW F-HC BLOCKS, MINIMUM 28 DAY COMpressive STRENGTH = 4,000 psi

No. 6 VERTICAL BARS, 11 1/2" O.C.
TYPICAL, BOTH SIDES OF CENTER CORE

No. 6 HORIZONTAL BARS, CONTINUOUS, 24" OVERLAP ON ENDS TYPICAL, BOTH SIDES OF CENTER CORE

No. 3 BAR HOOK - WRAP AROUND LIFTING INSERT IN TOP OF BLOCK AND EXTEND INTO HOLLOW CORE AREA OF F-HC BLOCK

COVER TOP OF RETAINING BLOCKS AND ALL EXPOSED GEOGRID WITH 6 mil VISQUEEN PLASTIC LAYER

NO. 57 STONE INFILL IN VERTICAL CORE SLOT, BETWEEN ADJACENT BLOCKS, AND 12" BEHIND BACK OF BLOCKS. FILL BOTTOM HALF OF VERTICAL CORE SLOT FOR PC BLOCKS IMMEDIATELY BELOW FREESTANDING BLOCKS.
Corner Details

- Trim texture as required for good fit between blocks.
- Cut corner block to allow for continuation of rebar.
- Avoid rib-to-rib joints.
- Position blocks or cut ribs as required.
- Horizontal and vertical rebar, as required.
- Cast-in-place concrete footing, as required.

F-CHC Corner Hollow Core Freestanding Block

F-HC Hollow Core Freestanding Blocks
FLOOD CONTROL WALL SECTION

NOTE: Degree of water tightness depends on many factors. Slight seepage through joints can be expected using standard construction practices. See www.Redi-Rock.com for more information on flood control walls including detailed notes from full scale demonstration project testing.

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NOTE: Flood control structures require long-term maintenance to prevent significant erosion and loss of soil and support for base of wall.

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CONTROL JOINT MATERIAL

BENTONITE/BUTYL RUBBER EXPANDABLE STRIP WATERSTOP BOTH SIDES OF CONTROL JOINT MATERIAL. AFFIX WITH ADHESIVE

HOLES IN CONTROL JOINT MATERIAL FOR REBAR

CUT BLOCK RIB ADJACENT TO WATERSTOP (IF REQUIRED)

BENTONITE/BUTYL RUBBER EXPANDABLE STRIP WATERSTOP. AFFIX TO FOOTING WITH ADHESIVE

CONCRETE FOOTING WITH OR WITHOUT KEYWAY FOR WATERSTOP (PER DESIGN)

CONTROL JOINT MATERIAL

LEAVE CENTER GAP FOR WATERSTOP

PVC RIBBED CENTER BULB WATERSTOP. SECURE TO ADJACENT VERTICAL REBAR WITH WIRE

HOLES IN CONTROL JOINT MATERIAL FOR REBAR

CUT BLOCK RIB ADJACENT TO WATERSTOP (IF REQUIRED)

F-HC FREESTANDING BLOCKS

RIBBED CENTER BULB WATERSTOP CAST INTO FOOTING

CAST IN PLACE CONCRETE FOOTING
COPING ON GRAVITY WALLS

- Cap block cast with R-anchors
- F-HC block
- Setback = 1 5/8" (41 mm) (5" Wall Batter Angle)
- Exposed wall (Height varies with design)
- Bury depth
- Solid bottom block
- Drain (As specified by Engineer)
- Leveling pad (As specified by Engineer)
- Non-woven geotextile fabric (If specified by Engineer based on site soil conditions)
- Backfill per design requirements. Install in lifts and compact per project specifications.
- Middle block (Typical)
- Infill stone (No. 57 or equivalent)
- Fill between adjacent blocks (all blocks)
- Fill vertical core slot (PC blocks)
- Stone to extend at least 12" (305 mm) behind blocks.
- PC retaining block (Typical)
- Move blocks forward during installation to engage shear knobs (Typical)
- Cast-in-place concrete and reinforcing steel
- Hook engaged with lifting insert of retaining block
- Grade to drain surface water away from wall

Blocks as shown are for reference only. Block sizes vary per site-specific design.

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