The Redi-Rock 60" (1520 mm) Retaining Blocks are machine-placed, wet-cast, precast modular block units manufactured from first-purpose, non-reconstituted concrete and intended for constructing dry-stacked modular retaining wall systems. The block units are manufactured from structural-grade concrete mixes in accordance with ASTM C94 or ASTM C685 that produce a finished unit with excellent resistance to freeze-thaw, deicing chemical exposure, and submerged conditions in both fresh water and salt water applications. All Redi-Rock Retaining wall products are manufactured and distributed through an international network of individually-owned, licensed precast concrete manufacturers.

### DIMENSIONAL PROPERTIES

<table>
<thead>
<tr>
<th>Dimensions (1)</th>
<th>Middle</th>
<th>Bottom</th>
<th>Half Middle</th>
<th>Half Bottom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (Front of Block)</td>
<td>18 ± 3/16 (457 ± 5)</td>
<td>18 ± 3/16 (457 ± 5)</td>
<td>18 ± 3/16 (457 ± 5)</td>
<td>18 ± 3/16 (457 ± 5)</td>
</tr>
<tr>
<td>Length (Front of Block)</td>
<td>46 3/8 ± 3 (1172 ± 13)</td>
<td>46 3/8 ± 3 (1172 ± 13)</td>
<td>67 3/4 ± 3 (2131 ± 13)</td>
<td>67 3/4 ± 3 (2131 ± 13)</td>
</tr>
</tbody>
</table>

(1) All dimensions are inches (mm).

### CONCRETE MIX PROPERTIES (3)

<table>
<thead>
<tr>
<th>Freeze-Thaw Exposure Class (4)</th>
<th>Minimum 28 Day Compressive Strength (5)</th>
<th>Maximum Water-Cement Ratio</th>
<th>Nominal Maximum Aggregate Size</th>
<th>Aggregate Class Designation (6)</th>
<th>Air Content (7)</th>
<th>Maximum Water-Soluble Chloride Ion (Cl⁻) Content in Concrete, Percent by Weight of Cement (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODERATE</td>
<td>4,000 psi (27.6 MPa)</td>
<td>0.45</td>
<td>1 inch (25 mm)</td>
<td>3M</td>
<td>4.5% ± 1.5%</td>
<td>0.015</td>
</tr>
<tr>
<td>SEVERE</td>
<td>4,000 psi (27.6 MPa)</td>
<td>0.45</td>
<td>1 inch (25 mm)</td>
<td>3S</td>
<td>6.0% ± 1.5%</td>
<td>0.015</td>
</tr>
<tr>
<td>VERY SEVERE</td>
<td>4,500 psi (30.0 MPa)</td>
<td>0.40</td>
<td>1 inch (25 mm)</td>
<td>4S</td>
<td>6.0% ± 1.5%</td>
<td>0.015</td>
</tr>
</tbody>
</table>

(3) Concrete mix properties are in general accordance with ACI 318 durability requirements. Research has shown that concrete manufactured to these standards demonstrates good durability and performance. When these requirements are followed, specific freeze-thaw testing of the concrete is typically NOT required.

(4) Exposure class is as described in ACI 318. “MODERATE” describes concrete that is exposed to freezing and thawing cycles and occasional exposure to moisture. “SEVERE” describes concrete that is exposed to freezing and thawing cycles and in continuous contact with moisture. “VERY SEVERE” describes concrete that is exposed to freezing and thawing cycles and in continuous contact with moisture and exposed to deicing chemicals. Exposure class should be specified by owner/purchaser prior to order placement. Longer lead times may be required for block units manufactured for “severe” and “very severe” exposure classes.

(5) Test method ASTM C39.

(6) Defined in ASTM C33 Table 3 Limits for Deleterious Substances and Physical Property Requirements of Coarse Aggregate for Concrete.

(7) Test method ASTM C231.

(8) Test method ASTM C1218 at age between 28 and 42 days.

(9) The total cementitious material also includes ASTM C150, C595, C845, and C1157 cement. The maximum percentages shall include:

(a) Fly ash or other pozzolans in type IP, blended cement, ASTM C595, or ASTM C1157.

(b) Slag used in the manufacture of an IS blended cement, ASTM C595, or ASTM C1157.

(c) Silica fume, ASTM C1240, present in a blended cement.

(10) Fly ash or other pozzolans and silica fume shall constitute no more than 25 and 10 percent, respectively, of the total weight of the cementitious materials.

(11) Prescriptive limits shown may be waived for concrete mixes that demonstrate excellent freeze/thaw durability in a detailed and current testing program.
Redi-Rock 60" (1520 mm) Retaining Blocks

**DESIGN PROPERTIES**

<table>
<thead>
<tr>
<th>HORIZONTAL SETBACK / WALL FACE BATTER OPTIONS</th>
<th>BLOCK TO BLOCK INTERFACE SHEAR (13)</th>
<th>INFILLED UNIT WEIGHT FOR WALL STABILITY CALCULATIONS (14)</th>
<th>MINIMUM CONSTRUCTION RADIUS (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 inch (254 mm) KNOB</td>
<td>V = 6,081 + N tan 44° ± 11,276 lb/ft (88,4 + N tan 44° ± 164.5 kN/m)</td>
<td>60&quot; (1520) BOTTOM RETAINING UNIT</td>
<td>CONCAVE CURVE 14 ft 6 in (4.42 m)</td>
</tr>
<tr>
<td>7 ½ inch (190 mm) KNOB</td>
<td>V = 1,178 + N tan 54° ± 10,970 lb/ft (17,2 + N tan 54° ± 160.1 kN/m)</td>
<td>60&quot; (1520) MIDDLE RETAINING UNIT</td>
<td>CON VEX CURVE 14 ft 6 in (4.42 m)</td>
</tr>
<tr>
<td>½ inch (10 mm) NO SETBACK (NO BATTER) (12)</td>
<td>V = 1,178 + N tan 54° ± 10,970 lb/ft (17,2 + N tan 54° ± 160.1 kN/m)</td>
<td>LIMESTONE / COBBLESTONE BLOCKS</td>
<td>134 lb/ft³ (2146 kg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LEDGESTONE BLOCKS</td>
<td>132 lb/ft³ (2114 kg/m³)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>128 lb/ft³ (2050 kg/m³)</td>
</tr>
</tbody>
</table>

(12) Special consideration should be given to the design of vertical retaining walls subject to active lateral earth pressure.


(14) The infilled unit weights shown here are based on full width units and an assumed concrete unit weight of 100 lb/ft³ (1692 kg/m³) and an assumed soil unit weight of 90 lb/ft³ (1429 kg/m³). They are reference values. Several factors can cause the unit weights of both concrete and infill soil to vary. The designer should use sound engineering judgement when assigning an infilled unit weight value for analysis.

(15) The minimum construction radius stated is applicable to both concave and convex curved retaining wall sections. Increases to this minimum radius are required to account for wall batter. Special consideration should be given to block selection, facing batter, and wall height when selecting the minimum radius for the final wall alignment.

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**MIDDLE - 60" (1520)**

**HEIGHT (BACK)**

**LENGTH (FRONT)**

**WIDTH (FACE TEXTURE)**

**HALF MIDDLE - 60" (1520)**

**HEIGHT (BACK)**

**LENGTH (FRONT)**

**WIDTH (FORM LINE TO BACK)**

**BOTTOM - 60" (1520)**

**HEIGHT (BACK)**

**LENGTH (FRONT)**

**WIDTH (FACE TEXTURE)**

**HALF BOTTOM - 60" (1520)**

**HEIGHT (BACK)**

**LENGTH (FRONT)**

**WIDTH (FORM LINE TO BACK)**

*Revised 052015*