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*The Essence of Natural Rock*

## SPECIFICATION FOR REDI-ROCK® 28" 41" and 60" SERIES WALL SYSTEM

### PART 1: GENERAL

#### 1.1 Scope

Work includes furnishing and installing concrete retaining wall units to the lines and grades designated on the construction drawings and as specified herein.

#### 1.2 Reference Standards

ASTM C94 Ready-Mixed Concrete  
ASTM C1372 Segmental Retaining Wall Units

#### 1.3 Delivery, Storage, and Handling

- A. Contractor shall check the materials upon delivery to assure proper material has been received.
- B. Contractor shall prevent excessive mud, wet cement and like materials from coming in contact with the SRW units.
- C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project.

### PART 2: MATERIALS

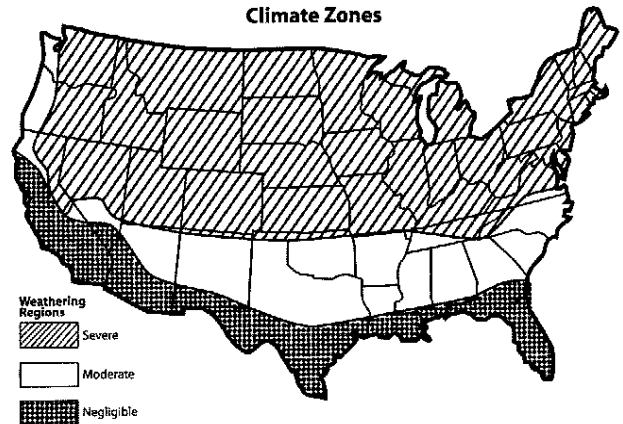
#### 2.1 Wall Units

- A. Wall units shall be Redi-Rock® as produced by a licensed manufacturer.
- B. Wall units shall be made with Ready-Mixed concrete in accordance with ASTM C94, latest revision, and per the following chart:

Climate	Air Content	28 Day Compressive Strength, psi	Slump*
Negligible	1½%-4½%	4300	5" ± 1 ½"
Moderate	3%-6%	4300	5" ± 1 ½"
Severe	4½%-7½%	4300	5" ± 1 ½"

\*Higher slumps are allowed if achieved by use of appropriate admixtures.  
Notwithstanding anything stated above, all material used in the wall units must meet applicable ASTM and local requirements for exterior concrete.

Climate Zones



- C. Exterior block dimensions shall be uniform and consistent. Maximum dimensional deviations shall be 1% excluding the architectural surface. Maximum width (face to back) deviation including the architectural surface shall be 1.0 inch.
- D. Exposed face shall be finished as specified. Other surfaces to be smooth form type. Dime-size bug holes on the block face may be patched and/or shake-on color stain can be used to blend into the remainder of the block face.

#### 2.2 Leveling Pad and Free Draining Backfill

- A. Leveling pad shall be crushed stone. See detail sheet defining Leveling Pad options for drain placement in the bottom of the foundation leveling pad.
- B. Free Draining Backfill material shall be washed stone and shall be placed to a minimum of 1' width behind the back of the wall and shall extend vertically from the Leveling Pad to an elevation 4" below the top of wall.
- C. Backfill material shall be approved by the geotechnical engineer. Site excavated soils may be used if approved unless otherwise specified in the drawings. Unsuitable soils with a PL>6, organic soils and frost susceptible soils shall not be used within a 1 to 1 influence area.
- D. Non-woven geotextile cloth shall be placed between the Free Draining Backfill and retained soil if required.

# SPECIFICATION FOR REDI-ROCK® 28" SERIES WALL SYSTEM

- E. Where additional fill is needed, Contractor shall submit sample and specifications to the Engineer for approval.

## 2.3 Drainage

- A. Internal and external drainage shall be evaluated by the Professional Engineer who is responsible for the final wall design.

## 2.4 Geogrid Connection (Type 1AT)

- A. Fiberglass rod used in the Type 1AT Geo-Grid connection shall be 7/16" diameter. Only fiberglass rod obtained from an authorized Redi-Rock® dealer shall be used.

## PART 3: CONSTRUCTION OF WALL SYSTEM

### 3.1 Excavation

- A. Contractor shall excavate to the lines and grades shown on the construction drawings.

### 3.2 Foundation Soil Preparation

- A. Native foundation soil shall be compacted to 95% of standard proctor or 90% of modified proctor prior to placement of the Leveling Pad material.
- B. In-situ foundation soil shall be examined by the Engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable, compacted material.

### 3.3 Leveling Pad Placement

- A. Leveling Pad shall be placed as shown on the construction drawings.
- B. Leveling Pad shall be placed on undisturbed native soils or suitable replacements fills.
- C. Leveling Pad shall be compacted to 95% of standard proctor or 90% of modified proctor to ensure a level, hard surface on which to place the first course blocks. Pad shall be constructed to the proper elevation to ensure the final elevation shown on the plans.
- D. Leveling Pad shall have a 6 inch minimum depth for walls under 8 feet in height and a 12 inch minimum depth for walls over 8 feet. Pad dimensions shall extend beyond the blocks in all directions to a distance at least equal to the depth of the pad or as designed by Engineer.
- E. For steps and pavers, a minimum of 1" - 1 1/2" of free draining sand shall be screeded smooth to act as a placement bed for the steps or pavers.

### 3.4 Unit Installation

- A. The first course of wall units shall be placed on the prepared Leveling Pad with the aesthetic

surface facing out and the front edges tight together. All units shall be checked for level and alignment as they are placed.

- B. Ensure that units are in full contact with Leveling Pad. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.
- C. The backfill in front and back of entire base row shall be placed and compacted to firmly lock them in place. Check all units again for level and alignment. All excess material shall be swept from top of units.
- D. Install next course of wall units on top of base row. Position blocks to be offset from seams of blocks below. Blocks shall be placed fully forward so knob and groove are engaged. Check each block for proper alignment and level. Backfill to 12 inch width behind block with Free Draining Backfill. Spread backfill in uniform lifts not exceeding 9 inches. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Hand-operated plate compaction equipment shall be used around the block and within 3 feet of the wall to achieve consolidation. Compact backfill to 95% of standard proctor (ASTM D 698, AASHTO T-99) density within 2% of its optimum moisture content.
- E. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
- F. Allowable construction tolerance at the wall face is 2 degrees vertically and 1 inch in 10 feet horizontally.
- G. All walls shall be installed in accordance with local building codes and requirements.

### 3.5 Geogrid Installation

- A. See Wall Installation instructions.

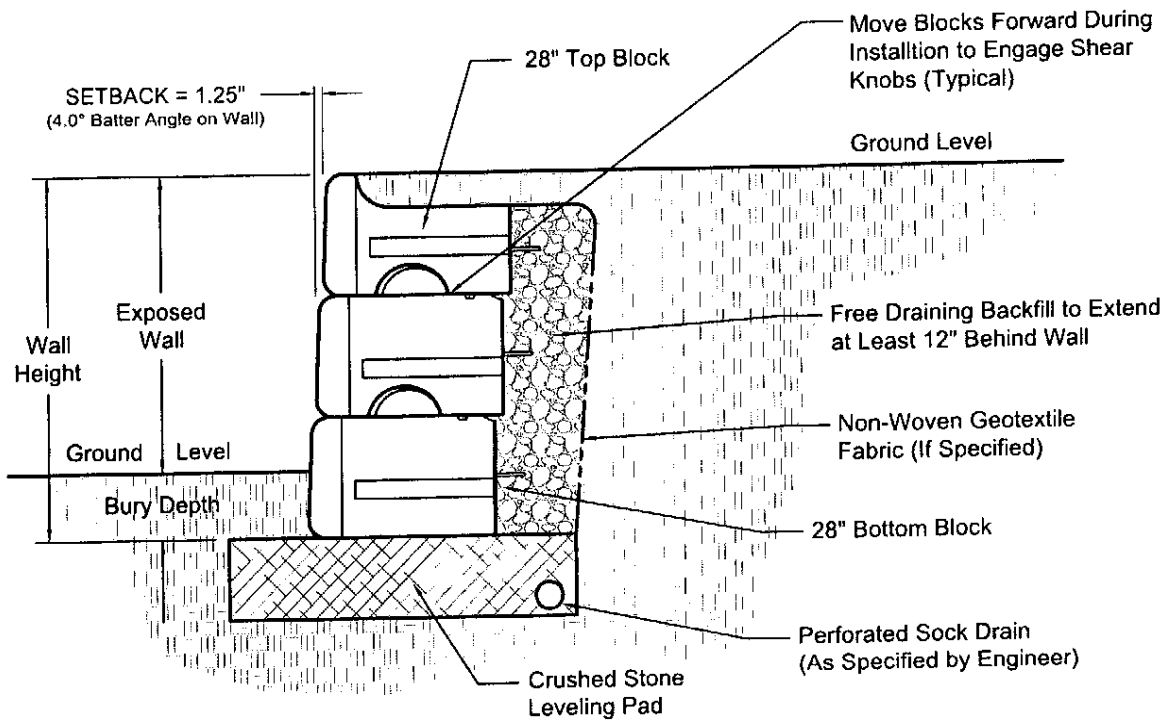
## PART 4: AVAILABILITY

Redi-Rock® International  
05481 South US-31,  
Charlevoix, MI 49720  
1-866-222-8400  
[www.redi-rock.com](http://www.redi-rock.com)  
[info@redi-rock.com](mailto:info@redi-rock.com)

## Typical Gravity Wall with 28" Blocks

No Scale

Note:  
Load Condition A Shown  
(No Backslope - No Surcharge)



See Redi-Rock.com for Detailed  
Section Drawings of Each Condition  
Shown in the Design Charts

DRAWN BY J. JOHNSON	12/08/06	Redi-Rock® International, LLC	
CHECKED BY		DRAWING FILE Typical 28 In Block Gravity Wall.dwg	REVISION --
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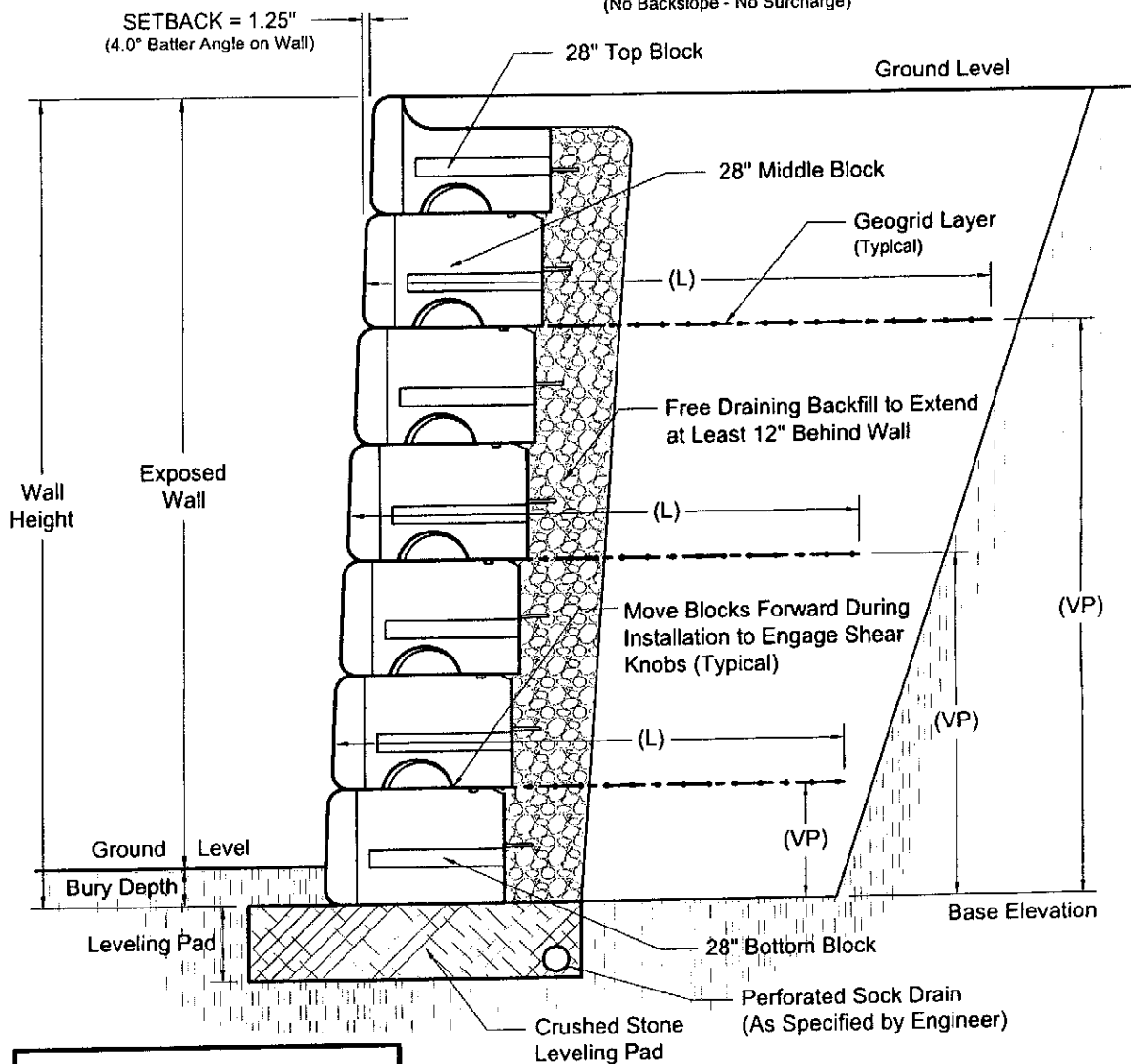
## Typical Geogrid Wall with 28" Geoconnector Blocks

No Scale

(VP) = Vertical placement of geogrid layers. Measurements are from the base elevation.

(L) = Length of geogrid. Measurements are from the face of the block.

Note:  
Load Condition A Shown  
(No Backslope - No Surcharge)



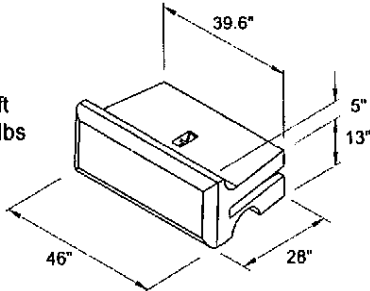
See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

DRAWN BY J. JOHNSON		01/03/07		Redi-Rock® International, LLC	
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APPROVED BY		DRAWING FILE Typical 28 in Block Reinforced Wall.dwg		---	
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## 28" Series Blocks

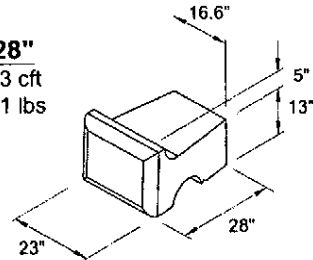
### Top - 28"

Volume = 8.55 cft  
Weight = ±1223 lbs  
C of G = 15.06"



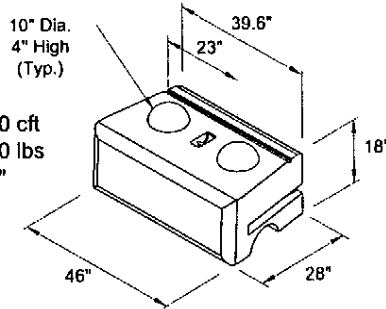
### Half Top - 28"

Volume = 4.13 cft  
Weight = ±591 lbs



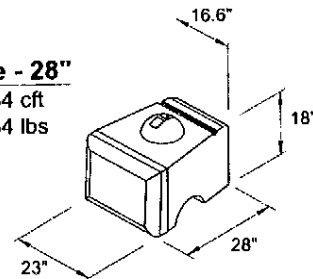
### Middle - 28"

Volume = 11.40 cft  
Weight = ±1630 lbs  
C of G = 14.18"



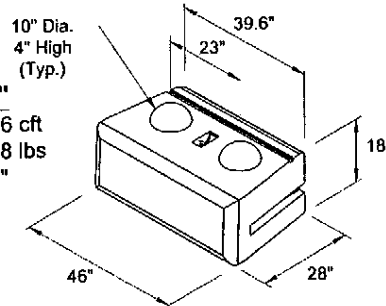
### Half Middle - 28"

Volume = 5.34 cft  
Weight = ±764 lbs



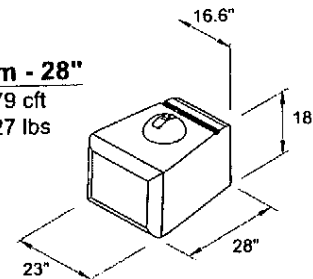
### Bottom - 28"

Volume = 12.36 cft  
Weight = ±1768 lbs  
C of G = 14.23"



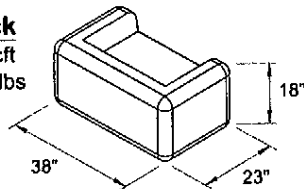
### Half Bottom - 28"

Volume = 5.79 cft  
Weight = ±827 lbs



### 23" End Block

Volume = 6.79 cft  
Weight = ± 970 lbs  
C of G = 12.29"



#### NOTES:

Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.

Center of Gravity is measured from the back of the block.

Half blocks include a fork lift slot on one side.

Actual weights and volumes will may vary.

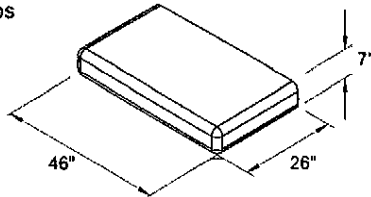
Weight shown is based on 143 pcf concrete.

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ISSUE DATE			

## Steps Used with 28" Series Blocks

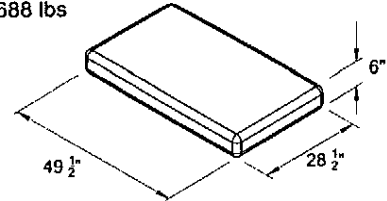
### 3-Sided Straight Step

Volume = 4.58 cft  
Weight = ±655 lbs



### 4-Sided 6" Cap Block

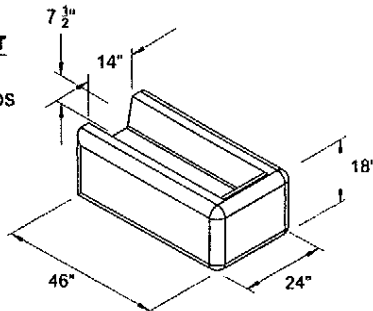
Volume = 4.81 cft  
Weight = ±688 lbs



## Corner Block Finished on Three Sides Perimeter Free-Standing Series Used with 28" Series Blocks

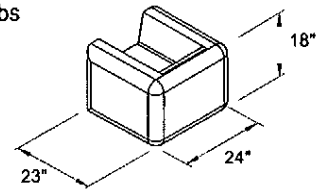
### Garden Corner

Volume = 8.26 cft  
Weight = ±1182 lbs



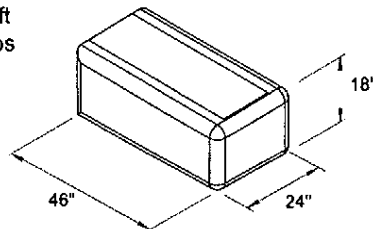
### Half Garden Corner

Volume = 4.25 cft  
Weight = ±607 lbs



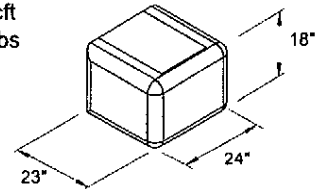
### Top Corner

(available with textured top)  
Volume = 10.44 cft  
Weight = ±1493 lbs



### Half Top Corner

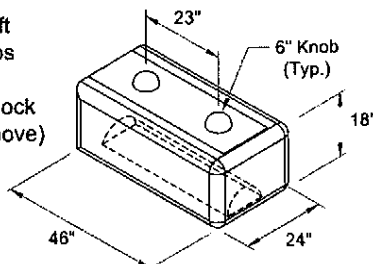
(available with textured top)  
Volume = 5.19 cft  
Weight = ±742 lbs



### Middle Corner

Volume = 10.51 cft  
Weight = ±1502 lbs

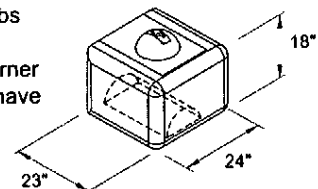
(Bottom Corner Block does not have groove)



### Half Middle Corner

Volume = 5.28 cft  
Weight = ±755 lbs

(Half Bottom Corner Block does not have groove)



#### NOTES:

Cobblestone face is 24" wide and limestone face is approximately 23" wide.

Volume calculations are based on the blocks as shown.

Actual weights and volumes will may vary.

Weight shown is based on 143 pcf concrete.

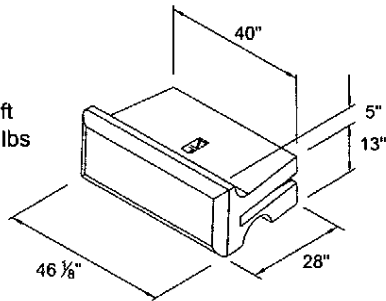
DRAWN BY J. JOHNSON	01/18/07	Redi-Rock® International, LLC	
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ISSUE DATE			

# REDI ROCK

## 41" SERIES BLOCKS

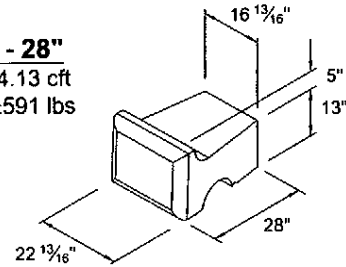
### Top - 28"

Volume = 8.55 cft  
Weight = ±1223 lbs  
C of G = 15.06"



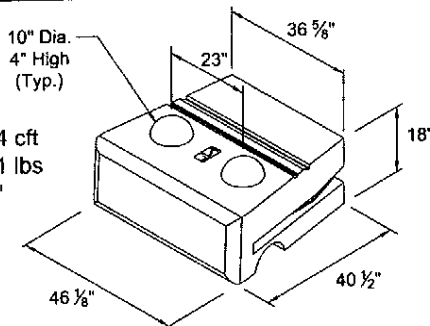
### Half Top - 28"

Volume = 4.13 cft  
Weight = ±591 lbs



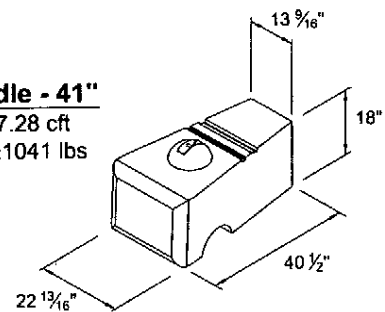
### Middle - 41"

Volume = 16.44 cft  
Weight = ±2351 lbs  
C of G = 20.92"



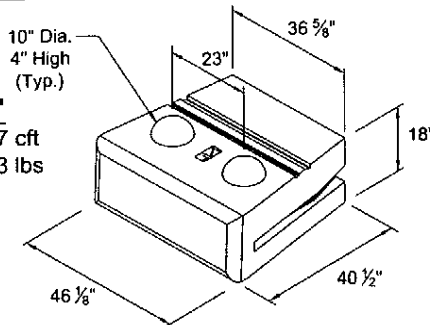
### Half Middle - 41"

Volume = 7.28 cft  
Weight = ±1041 lbs



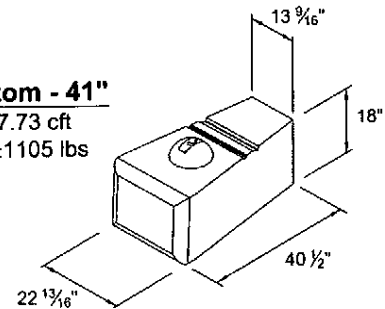
### Bottom - 41"

Volume = 17.37 cft  
Weight = ±2483 lbs  
C of G = 21.3"



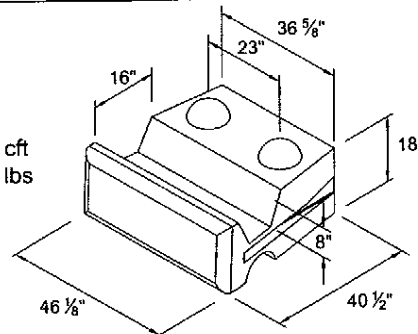
### Half Bottom - 41"

Volume = 7.73 cft  
Weight = ±1105 lbs



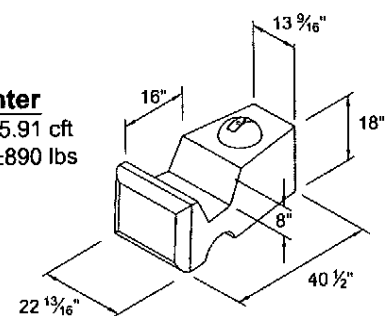
### Planter

Volume = 14.12 cft  
Weight = ±2020 lbs  
C of G = 19.35"



### Half Planter

Volume = 5.91 cft  
Weight = ±890 lbs



#### NOTES:

Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.

Center of Gravity is measured from the back of the block.

Half blocks may include a fork lift slot on one side.

Actual weights and volumes may vary.

Weight shown is based on 143 pcf concrete.

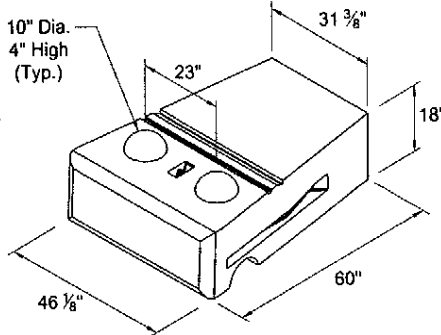
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# REDI ROCK

## 60" BLOCKS

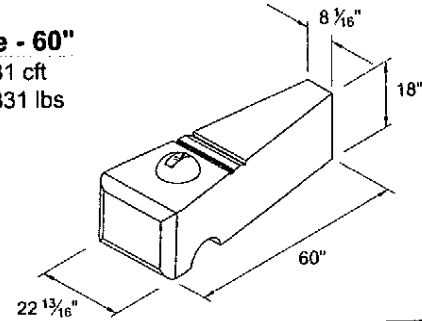
### Middle - 60"

Volume = 23.0 cft  
Weight = ±3290 lbs  
C of G = 31.28"



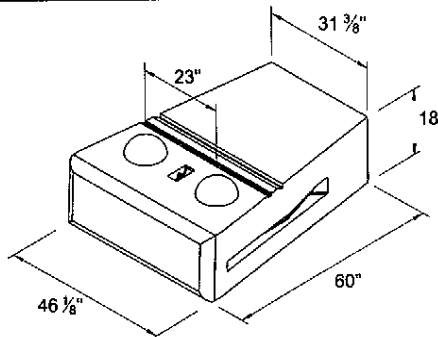
### Half Middle - 60"

Volume = 9.31 cft  
Weight = ±1331 lbs



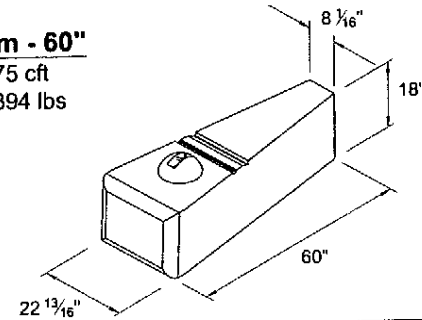
### Bottom - 60"

Volume = 23.9 cft  
Weight = ±3420 lbs  
C of G = 31.90"



### Half Bottom - 60"

Volume = 9.75 cft  
Weight = ±1394 lbs



#### NOTES:

The 60" block is typically used as a bottom block in a larger wall. See the 41" Series for additional blocks and steps.

Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.

Center of Gravity is measured from the back of the block.

Half blocks may include a fork lift slot on one side.

Actual weights and volumes may vary.

Weight shown is based on 143 pcf concrete.

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APPROVED BY		DRAWING FILE 60in Block Details 011209.dwg	REVISION ---
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