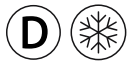
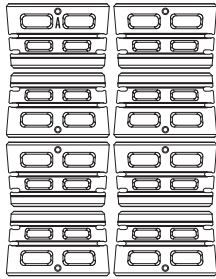




## RAFFINATO 90 & 180 mm

DESCRIPTION: Wall double-sided TEXTURE: Smooth

### PALLET OVERVIEW 90 mm & 180 mm



### COMPATIBLE CAPS

See page 135 for product compatibility.

### NOTES

When building a double-sided wall one pallet will cover an average of 23.53 ft<sup>2</sup>.

See page 136 to 151 for more technical information.

\*Shale Grey is available in Canada only.

Specifications per pallet		Imperial	Metric
90 mm	Cubing	<b>24.61 ft<sup>2</sup></b>	2.29 m <sup>2</sup>
		83.36 lin. ft	25.41 lin. m
	Approx. Weight	2 060 lbs	934 kg
	Minimum radius	8.5 ft	2.6 m
	Number of rows	8	
	Coverage per row	3.08 ft <sup>2</sup>	0.29 m <sup>2</sup>
	Linear coverage per row	10.42 lin. ft	3.18 lin. m



Unit dimensions	in	mm	Units/pallet
Height	3 <sup>9</sup> / <sub>16</sub>	90	64 units
Depth	9 <sup>13</sup> / <sub>16</sub>	249	
Length 1	15 <sup>5</sup> / <sub>8</sub>	397	
Length 2	14 <sup>1</sup> / <sub>4</sub>	362	

Specifications per pallet		Imperial	Metric
180 mm	Cubing	<b>24.61 ft<sup>2</sup></b>	2.29 m <sup>2</sup>
		41.68 lin. ft	12.70 lin. m
	Approx. Weight	2 071 lbs	939 kg
	Minimum radius	8.5 ft	2.6 m
	Number of rows	4	
	Coverage per row	6.15 ft <sup>2</sup>	0.57 m <sup>2</sup>
	Linear coverage per row	10.42 lin. ft	3.18 lin. m



Unit dimensions	in	mm	Units/pallet
Height	7 <sup>1</sup> / <sub>16</sub>	180	32 units
Depth	9 <sup>13</sup> / <sub>16</sub>	249	
Length 1	15 <sup>5</sup> / <sub>8</sub>	397	
Length 2	14 <sup>1</sup> / <sub>4</sub>	362	

Beige Cream

Smooth



Greyed Nickel

Smooth



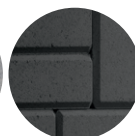
Shale Grey\*

Smooth



Onyx Black

Smooth



Caffè Crema

Smooth

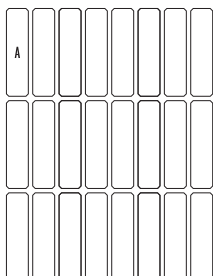




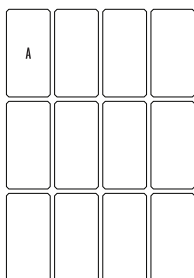
## RAFFINATO 90 & 180 mm

**DESCRIPTION:** Pillars, corners and edges **TEXTURE:** Smooth

### PALLET OVERVIEW - 90 mm



### PALLET OVERVIEW - 180 mm



Specifications per pallet		Imperial	Metric
90 mm	Cubing	<b>48 units</b>	48 units
	Approx. Weight	1 548 lbs	702 kg
	Number of rows	2	
	Pillar height	42 ½ in	1 080 mm



Unit dimensions	in	mm	Units/pallet
Height	3 ⅞	90	48 units
Depth	9 ⅓	249	
Length	14 ⅛	359	

Specifications per pallet		Imperial	Metric
180 mm	Cubing	<b>24 units</b>	24 units
	Approx. Weight	1 529 lbs	694 kg
	Number of rows	2	
	Pillar height	42 ½ in	1 080 mm



Unit dimensions	in	mm	Units/pallet
Height	7 ⅛	180	24 units
Depth	9 ⅓	249	
Length	14 ⅛	359	



### COMPATIBLE CAPS

See page 135 for product compatibility.

### NOTES

See page 136 to 151 for more technical information.

\*Shale Grey is available in Canada only.

Beige Cream

Smooth



Greyed Nickel

Smooth



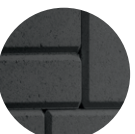
Shale Grey\*

Smooth



Onyx Black

Smooth



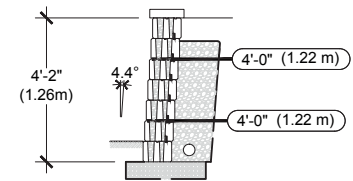
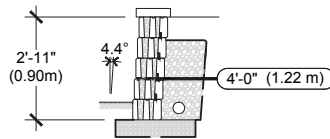
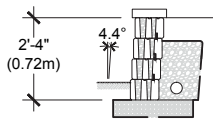
Caffè Crema

Smooth

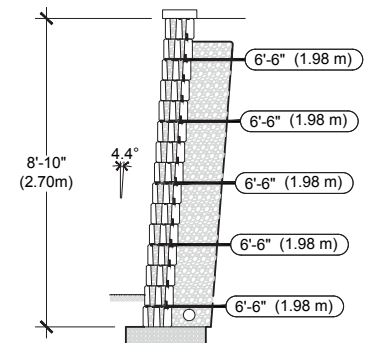
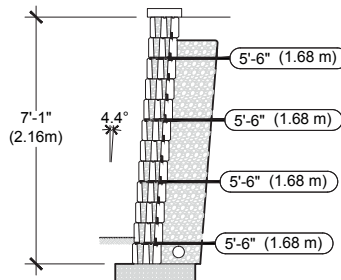
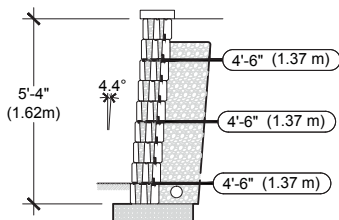


CLEAN SAND/GRAVEL/ SAND AND GRAVEL MIXES ( $\phi=34^\circ$ ,  $\gamma = 120$  pcf)  
GEOGRID: MIRAGRID 3XT BY TENCATE (RFd=1.10, RFcr=1.45, RFid=1.25, Cds=0.9, Ci=0.9)

**CASE N° 1 :**  
No Surcharge  
No Backslope  
No Toe Slope



VISIT [WWW.TECHO-BLOC.COM](http://WWW.TECHO-BLOC.COM) FOR COMPLETE DESIGN CHART DOCUMENT  
(USA AND CANADA VERSIONS)



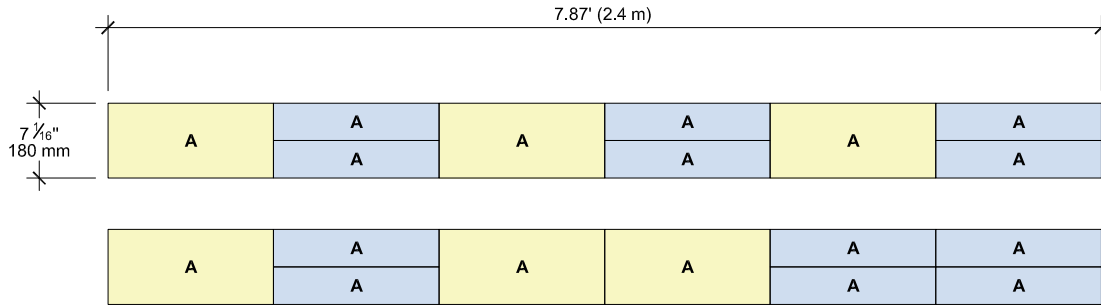
1. The information contained in the design charts is supplied for information purposes only and as such should only be used for preliminary designs.
2. The height (H) of the wall is the total height from the leveling pad to the top of the wall not including the thickness of the cap.
3. Soil parameters: reinforced soil ( $\phi = 34^\circ$ ,  $\gamma = 120$  pcf); retained soil ( $\phi = 34^\circ$ ,  $\gamma = 120$  pcf); foundation soil ( $\phi = 34^\circ$ ,  $\gamma = 120$  pcf)
4. A qualified engineer should be consulted for the final design to be used for construction.
5. The foundation soil must be able to support the wall system. The bearing capacity of the foundation soil, settlement, and global stability must be verified and validated by a qualified geotechnical engineer.
6. The seismic analysis is not included.
7. The design charts do not apply to tiered walls.
8. The charts assume that the walls are constructed in accordance with Techo-Bloc specifications, good construction practice and an adequate drainage system.
9. The geogrid layout has been optimized to satisfy the design requirements of the NCMA's Design Manual for Segmental Retaining Walls, 3rd Edition.
10. The minimum burial depth must be 6 in (150 mm) or 10% of the exposed height, whichever is greater.
11. Engineering judgement should be used when interpolating between heights.
12. Techo-Bloc and its predecessors, successors, beneficiaries, employees, associates, administrators and insurers accepts no liability for the incorrect use of information contained in the design charts.
13. For further information, please contact our technical service department.

# INSTALLATION GUIDE

## RETAINING WALLS - RAFFINATO 90 mm & 180 mm

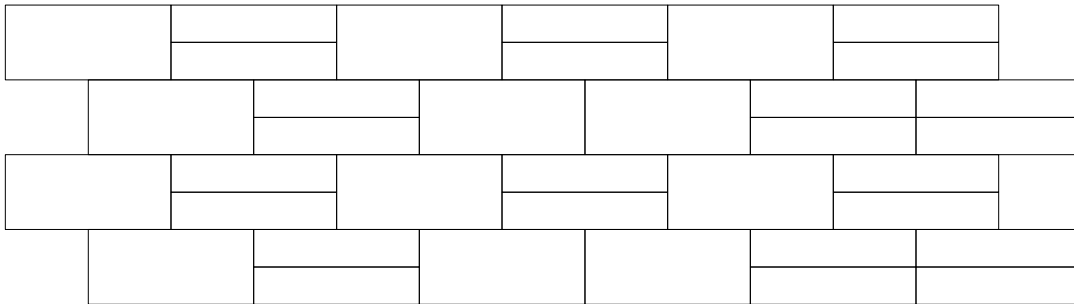
### 1-Row Pattern | Laying Patterns

The single row model shows two examples combination. Each combination is 2.4 m (7.87") long and 180 mm (7 1/16") high. **This model can be used for installing the last row of modules or where other models cannot be used.**



NUMBER OF BLOCKS REQUIRED MODULE

RAFFINATO	A
50 % of the surface - Raffinato 90 mm	6
50 % of the surface - Raffinato 180 mm	3

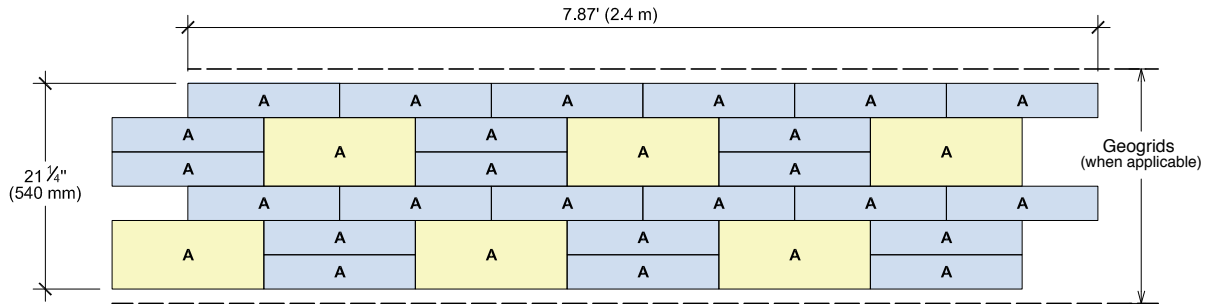


# INSTALLATION GUIDE

## RETAINING WALLS - RAFFINATO 90 mm & 180 mm

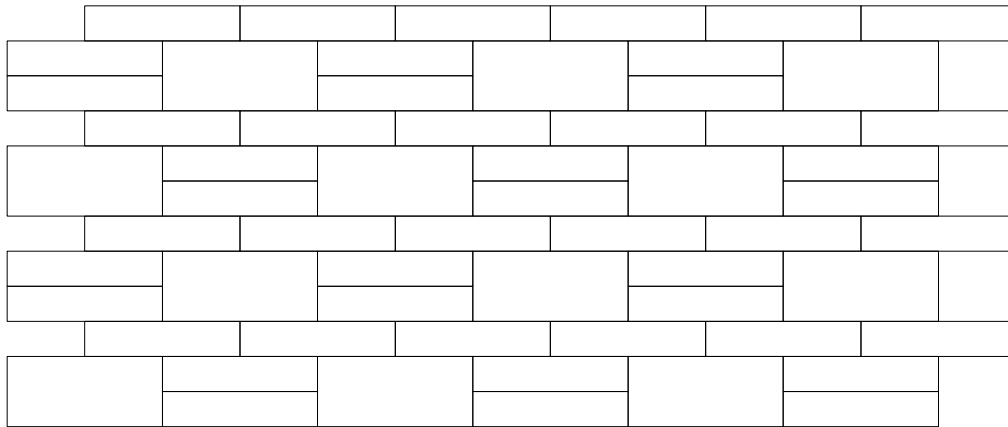
### 3-Row Pattern | Laying Patterns

The 3-row model is 2.4 m (7.87') long and 540 mm (21 1/4") high. This model allows for a graded area at every 540 mm (21 1/4"), which corresponds to the recommended spacing between the layers of geogrid in a Raffinato wall. **This model is recommended when using geogrid.**



NUMBER OF BLOCKS REQUIRED MODULE

RAFFINATO	A
67 % of the surface - Raffinato 90 mm	24
33 % of the surface - Raffinato 180 mm	6

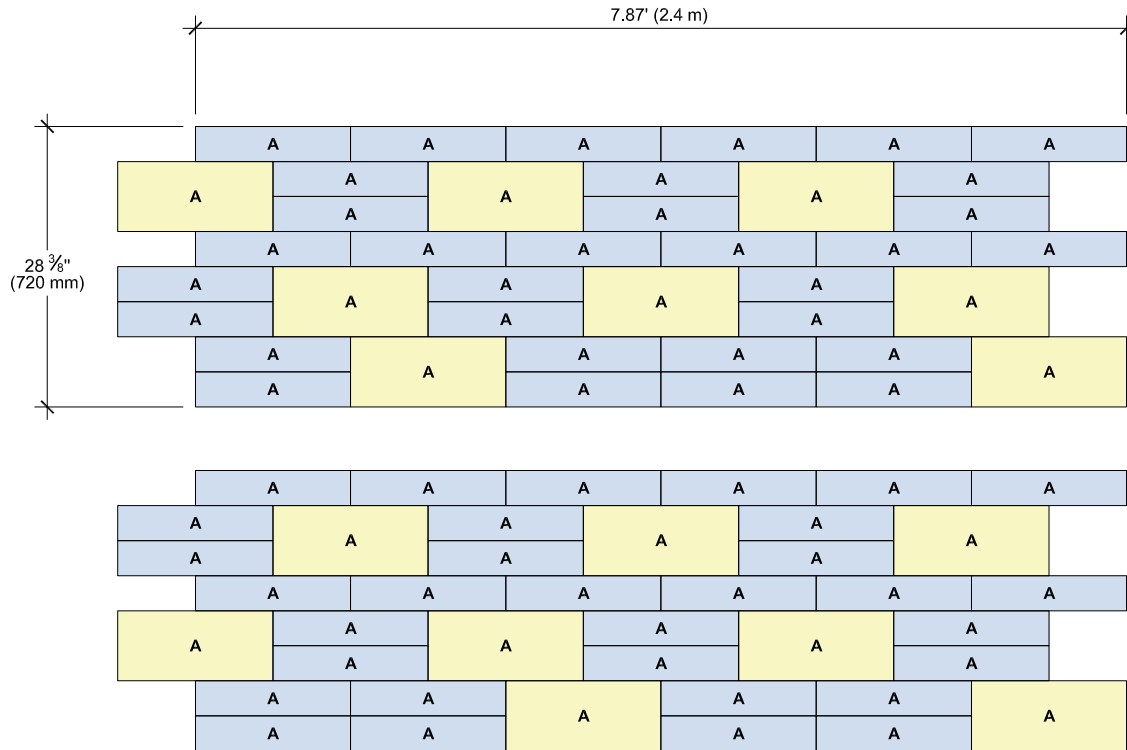


# INSTALLATION GUIDE

## RETAINING WALLS - RAFFINATO 90 mm & 180 mm

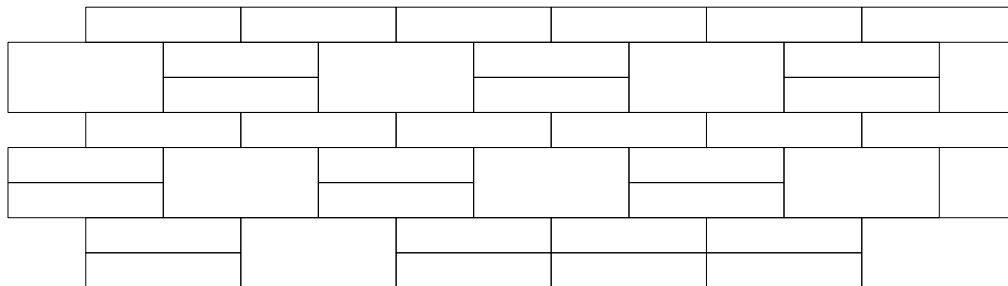
### 4-Row Pattern | Laying Patterns

The 4-row model shows two combination examples. This combination is 2.4 m (7,87') long and 720 mm (28 3/8") high. **This model should only be used where geogrid is not required.**



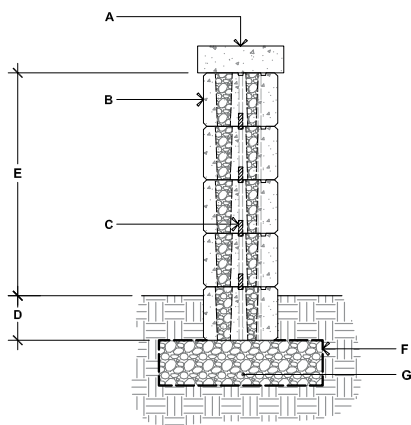
NUMBER OF BLOCKS REQUIRED MODULE

RAFFINATO	A
67 % of the surface - Raffinato 90 mm	32
33 % of the surface - Raffinato 180 mm	8



# INSTALLATION GUIDE

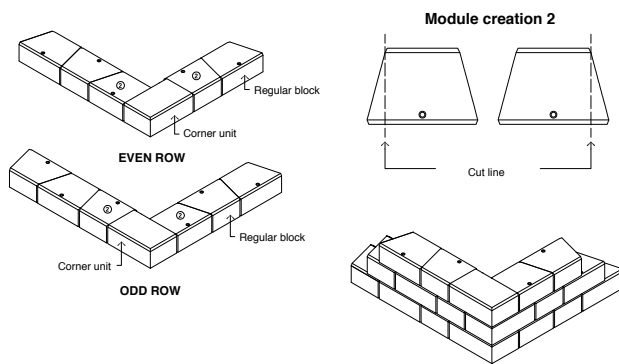
## FREESTANDING WALLS - RAFFINATO 90 mm & 180 mm



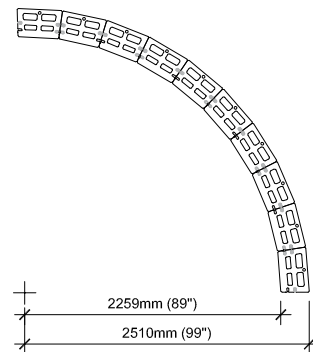
### RAFFINATO 90 mm & 180 mm

- A.** TECO-BLOC CAP UNIT SECURED TO UNIT BELOW WITH FLEXLOCK ADHESIVE
- B.** RAFFINATO 90 mm AND 180 mm DOUBLE-SIDED WALL UNITS SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- C.** CONNECTOR
- D.** EMBEDMENT DEPTH, 6" (150 mm) MIN.
- E.** 29 7/16" (750 mm) MAX.
- F.** GEOTEXTILE
- G.** COMPACTED GRANULAR LEVELING PAD, 6" (150 mm) THICK MIN. THICKNESS ACCORDING TO PROJECT SPECIFIC CONDITIONS

### 90° CORNER OF A DOUBLE-SIDED WALL

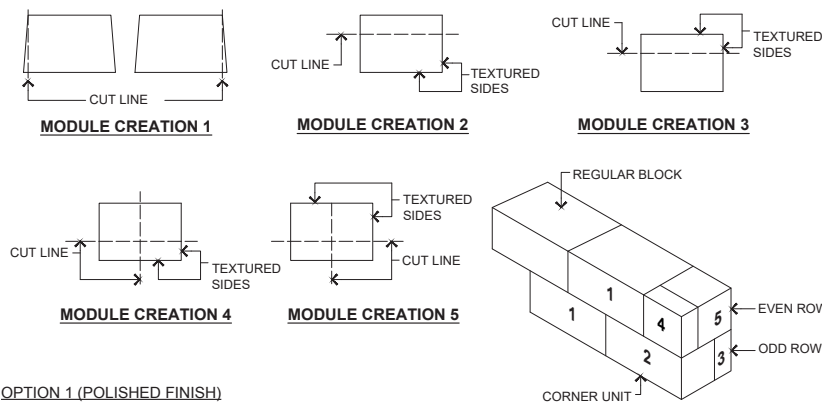


### DOUBLE-SIDED WALL RADIUS



It is the user's responsibility to verify for the quantity of materials required.

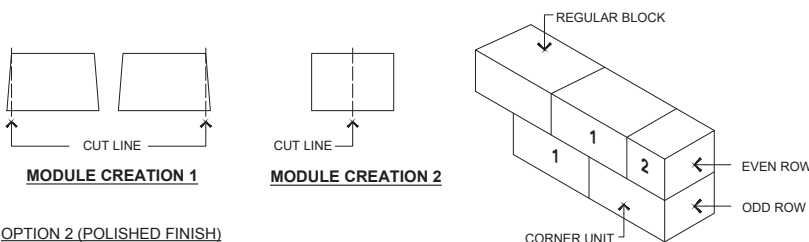
### DOUBLE SIDED WALL - END OF A STRAIGHT WALL



#### GENERAL NOTES

1. Alternate odd and even rows.
2. Stagger joints from one row to the next.
3. Glue all modules at each row with Flexlock adhesive.
4. Cavities, grooves and connectors are not illustrated to avoid overloading the image.

#### OPTION 1 (POLISHED FINISH)

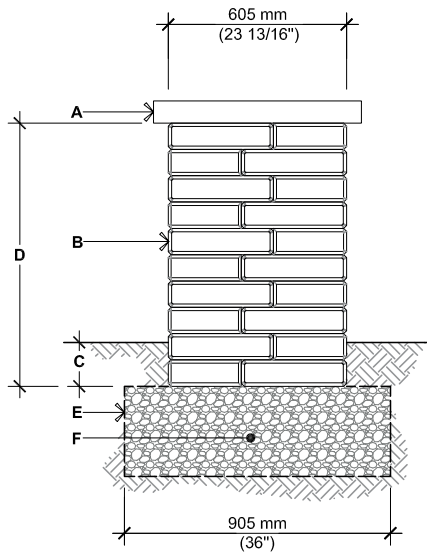


#### OPTION 2 (POLISHED FINISH)

PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

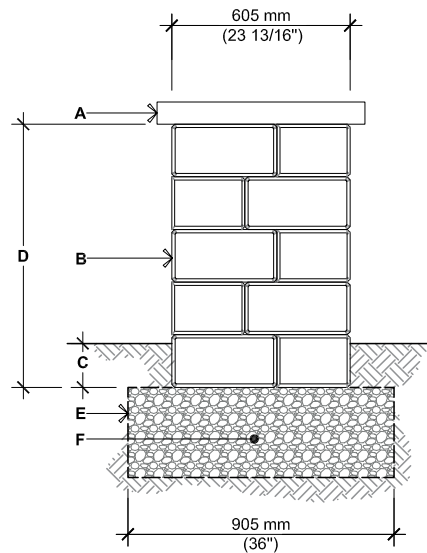
# INSTALLATION GUIDE

## PILLARS - RAFFINATO 90 mm & 180 mm



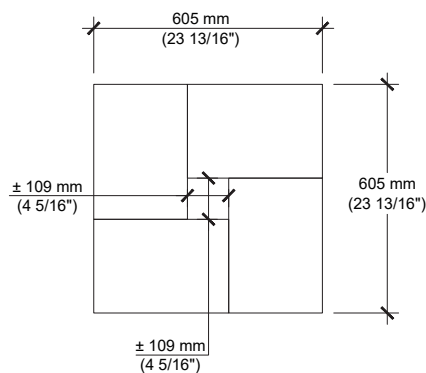
○ RAFFINATO 90 mm

- A.** STONEDGE COLLECTION PILLAR CAP UNIT, SECURE TO UNITS BELOW WITH FLEXLOCK ADHESIVE
- B.** RAFFINATO 90 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- C.** EMBEDMENT DEPTH: 150 mm (6") MIN.
- D.** 1 080 mm (42 ½"), MAXIMUM HEIGHT
- E.** GEOTEXTILE
- F.** COMPACTED GRANULAR BASE 150 mm (6") THICK MIN. THICKNESS ACCORDING TO PROJECT SPECIFIC CONDITIONS



○ RAFFINATO 180 mm

- A.** STONEDGE COLLECTION PILLAR CAP UNIT, SECURE TO UNITS BELOW WITH FLEXLOCK ADHESIVE
- B.** RAFFINATO 180 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- C.** EMBEDMENT DEPTH: 150 mm (6") MIN.
- D.** 1080 mm (42 ½"), MAXIMUM HEIGHT
- E.** GEOTEXTILE
- F.** COMPACTED GRANULAR BASE 150 mm (6") THICK MIN. THICKNESS ACCORDING TO PROJECT SPECIFIC CONDITIONS

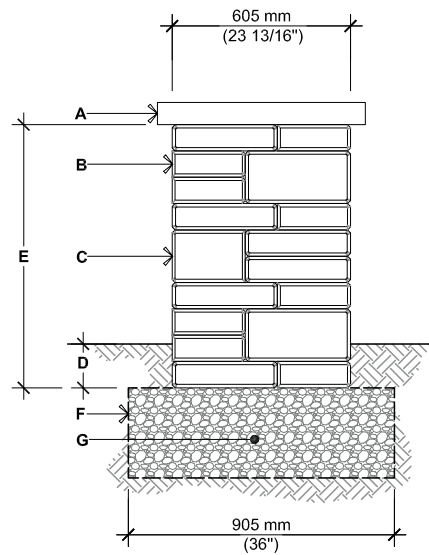
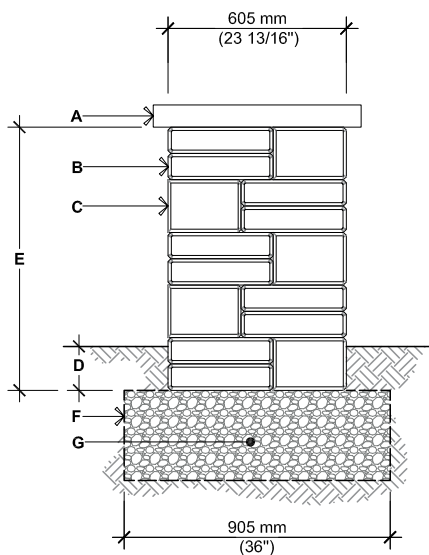


For all possible combinations of pillars and caps, please refer to the correspondence table on page 135



# INSTALLATION GUIDE

## PILLARS - RAFFINATO 90 mm & 180 mm



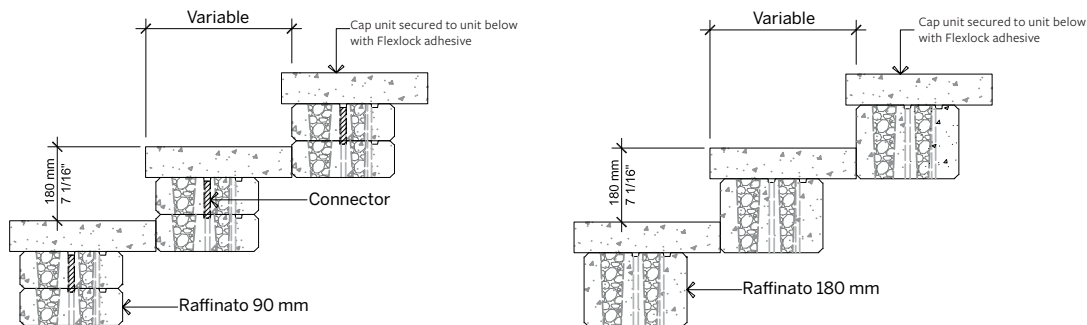
**RAFFINATO 90 mm & 180 mm**  
OPTION A

- A.** STONEDGE COLLECTION PILLAR CAP UNIT, SECURE TO UNITS BELOW WITH FLEXLOCK ADHESIVE
- B.** RAFFINATO 90 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- C.** RAFFINATO 180 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- D.** EMBEDMENT DEPTH: 150 mm (6") MIN.
- E.** 1 080 mm (42 1/2"), MAXIMUM HEIGHT
- F.** GEOTEXTILE
- G.** COMPACTED GRANULAR BASE 150 mm (6") THICK MIN. THICKNESS ACCORDING TO PROJECT SPECIFIC CONDITIONS

**RAFFINATO 90 mm & 180 mm**  
OPTION B

- A.** STONEDGE COLLECTION PILLAR CAP UNIT, SECURE TO UNITS BELOW WITH FLEXLOCK ADHESIVE
- B.** RAFFINATO 90 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- C.** RAFFINATO 180 mm PILLAR UNIT SECURE EACH ROW WITH FLEXLOCK ADHESIVE
- D.** EMBEDMENT DEPTH: 150 mm (6") MIN.
- E.** 1 080 mm (42 1/2"), MAXIMUM HEIGHT
- F.** GEOTEXTILE
- G.** COMPACTED GRANULAR BASE 150 mm (6") THICK MIN. THICKNESS ACCORDING TO PROJECT SPECIFIC CONDITIONS

### STEPS



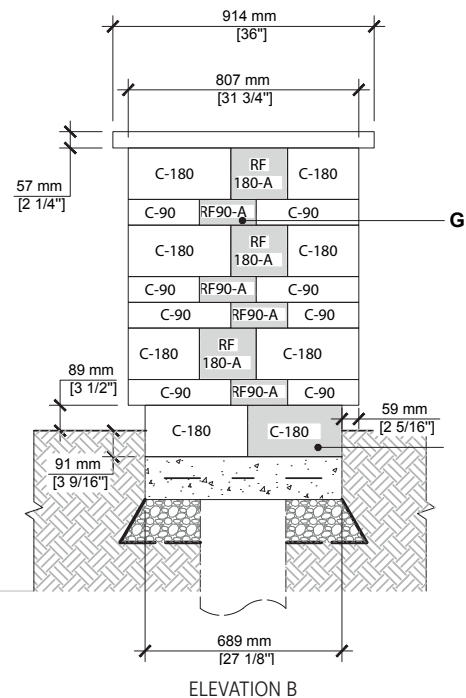
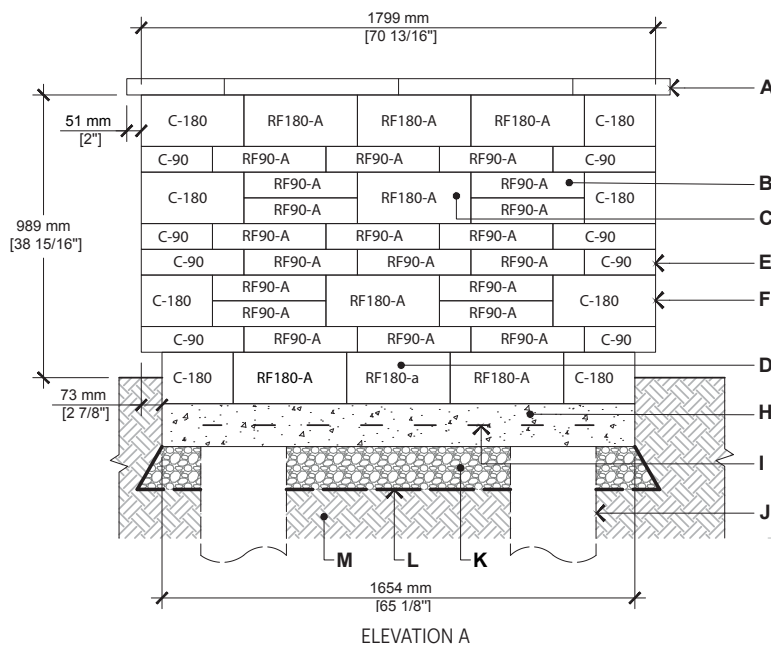
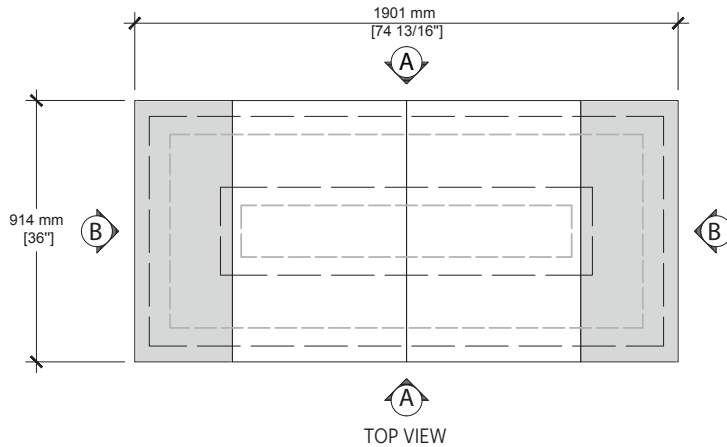
For all possible combinations of pillars and caps, please refer to the correspondence table on page 135

Check with your local Building Codes to determine any restrictions or guidelines regarding the dimensions of steps (including riser height and step tread) as well as handrail specifications.

PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

# INSTALLATION GUIDE

## GRILL ISLAND - RAFFINATO SMOOTH 90 mm & 180 mm



- A.** YORK COUNTER TOP 24" × 36" × 2 1/4" (CUT ON FIELD AS REQUIRED)
- B.** RAFFINATO 90 mm UNIT (A) - LONG FACE EXPOSED (SHOWN WITH UPPERCASE LETTER)
- C.** RAFFINATO 180 mm UNIT (A) - LONG FACE EXPOSED (SHOWN WITH UPPERCASE LETTER)
- D.** RAFFINATO 180 mm UNIT (A) - SHORT FACE EXPOSED (SHOWN WITH LOWERCASE LETTER)
- E.** RAFFINATO 90 mm PILLAR UNIT
- F.** RAFFINATO 180 mm PILLAR UNIT
- G.** RAFFINATO UNIT CUT ON FIELD AS REQUIRED
- H.** CAST IN PLACE CONCRETE SLAB 4350 psi (30 MPa), 5" (125 mm) THICK
- I.** 4X4-4/4 (102X102-MW25.8XMW25.8) WELDED WIRE MESH AND/OR REBAR AS PER SITE CONDITIONS
- J.** 12" (300 mm) DIA. CONCRETE PILLAR, AS PER LOCAL CODE
- K.** 3/4" (20 mm) CLEAN STONE  
6" (150 mm) THICK MIN. AS PER SITE CONDITIONS
- L.** GEOTEXTILE
- M.** NATURAL SOIL OR COMPACTED BACKFILL

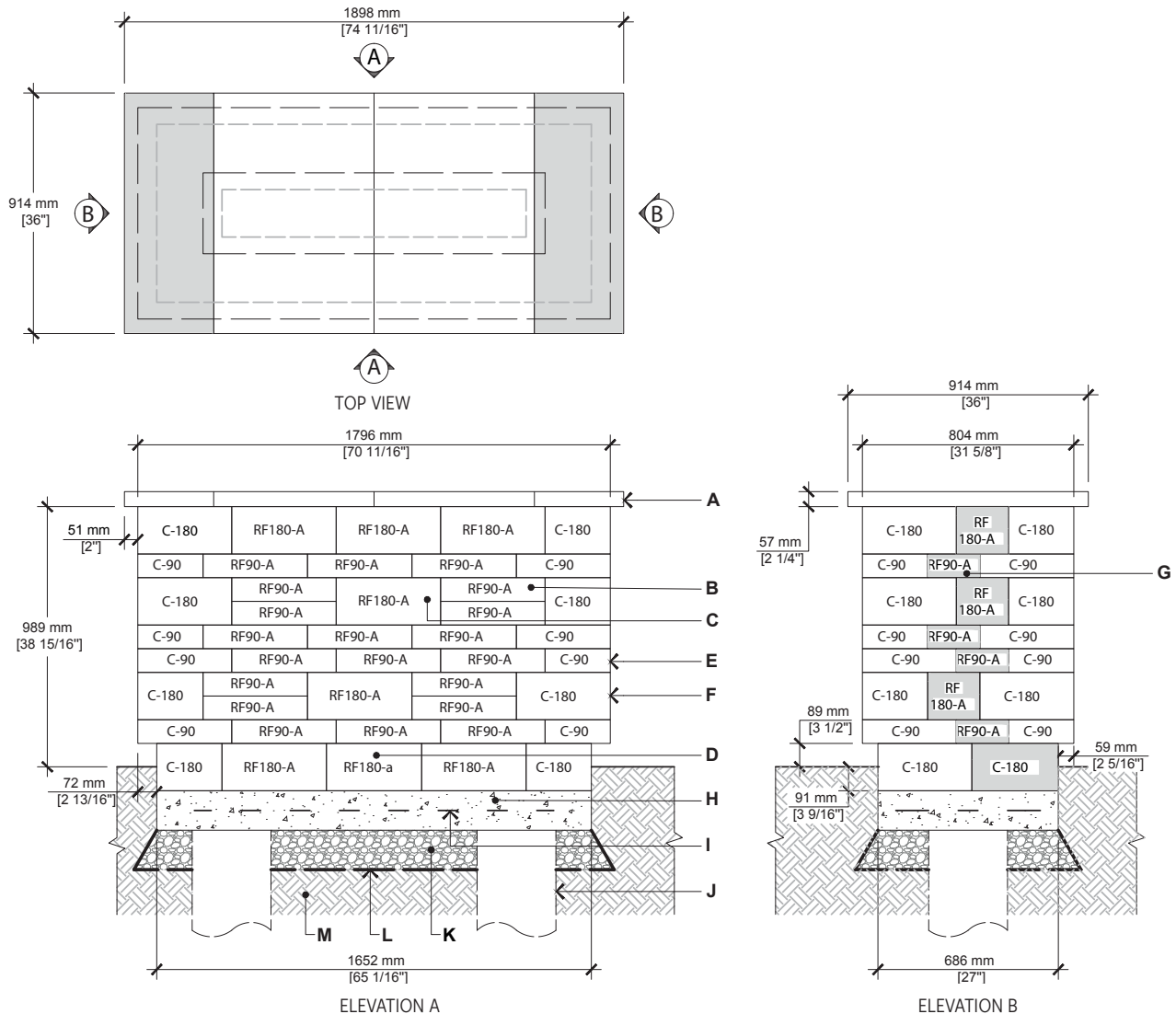
### QUANTITY OF MATERIALS REQUIRED

- York Counter top 24" × 36" × 2 1/4": **4**
- Raffinato 90 mm wall unit: **48 A**
- Raffinato 180 mm wall unit: **22 A**
- Raffinato 90 mm pillar unit: **16**
- Raffinato 180 mm pillar unit: **16**

**NOTE:** Appliances and utilities may vary for each project and are not shown on this drawing. This drawing is shown for inspiration only and surplus or shortage of materials may result. It is the user's responsibility to verify for the quantity of materials required. Secure the blocks using a heat resistant concrete adhesive. The installer must ensure that the installation and use of the grill island comply with local regulations and code requirements. Concrete pillars extending to frost line may be required as per local code. Check your local building code before installing.

# INSTALLATION GUIDE

## GRILL ISLAND - RAFFINATO POLISHED 90 mm & 180 mm



- A.** YORK COUNTER TOP 24" × 36" × 2 1/4" (CUT ON FIELD AS REQUIRED)
- B.** RAFFINATO 90 mm UNIT (A) - LONG FACE EXPOSED (SHOWN WITH UPPERCASE LETTER)
- C.** RAFFINATO 180 mm UNIT (A) - LONG FACE EXPOSED (SHOWN WITH UPPERCASE LETTER)
- D.** RAFFINATO 180 mm UNIT (A) - SHORT FACE EXPOSED (SHOWN WITH LOWERCASE LETTER)
- E.** RAFFINATO 90 mm PILLAR UNIT
- F.** RAFFINATO 180 mm PILLAR UNIT
- G.** RAFFINATO UNIT CUT ON FIELD AS REQUIRED
- H.** CAST IN PLACE CONCRETE SLAB 4350 psi (30 MPa), 5" (125 mm) THICK
- I.** 4X4-4/4 (102X102-MW25.8XMW25.8) WELDED WIRE MESH AND/OR REBAR AS PER SITE CONDITIONS
- J.** 12" (300 mm) DIA. CONCRETE PILLAR, AS PER LOCAL CODE
- K.** 3/4" (20 mm) CLEAN STONE  
6" (150 mm) THICK MIN. AS PER SITE CONDITIONS
- L.** GEOTEXTILE
- M.** NATURAL SOIL OR COMPACTED BACKFILL

### QUANTITY OF MATERIALS REQUIRED

- York Counter top 24" × 36" × 2 1/4" : **4**
- Raffinato 90 mm wall unit: **48 A**
- Raffinato 180 mm wall unit: **22 A**
- Raffinato 90 mm pillar unit: **16**
- Raffinato 180 mm pillar unit: **16**

**NOTE:** Appliances and utilities may vary for each project and are not shown on this drawing. This drawing is shown for inspiration only and surplus or shortage of materials may result. It is the user's responsibility to verify for the quantity of materials required. Secure the blocks using a heat resistant concrete adhesive. The installer must ensure that the installation and use of the grill island comply with local regulations and code requirements. Concrete pillars extending to frost line may be required as per local code. Check your local building code before installing.

PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.