


PRODUCT DESCRIPTION

BASIC USE Calcium Silicate Masonry Products used in full-bed masonry veneer construction for both interior and exterior applications. Appropriate for use in residential, commercial and institutional building projects.

For thin-clad adhered masonry veneer assembly applications, refer to ARRISCRAFT•DATA 04 73 15 / 04 43 13.16 Thin-Clad Adhered Masonry Veneer Assembly.

COMPOSITION AND MATERIAL Calcium Silicate Masonry Products describes **Renaissance® Masonry Units**, **Evolution Masonry Units**, **Calcium Silicate Building Stone**, and **Calcium Silicate Brick**. Calcium Silicate Masonry Products are manufactured calcium silicate units containing no Portland cement. They are pressure-formed and autoclave cured, resulting in high-density, severe weathering modular units, with one or more finished faces. Refer to ARRISCRAFT•NOTE – Calcium Silicate Masonry Units for further information. The units may be site cut, trimmed and finished to custom lengths, shapes or sizes, as required on site.

SHAPES AND SIZES Cambridge produced **Renaissance® Masonry Units** are available in a variety of standard sizes:

CODE	HEIGHT	LENGTH	BED	CODE	HEIGHT	LENGTH	BED
Renaissance® Masonry Units (Metric)				Renaissance® Masonry Units (Imperial)			
REN19	190 mm	590 mm	90 mm	REN358	3-5/8"	23-5/8"	3-5/8"
REN19C	190 mm	390 mm	90 mm	REN758	7-5/8"	23-5/8"	3-5/8"
REN29	290 mm	590 mm	90 mm	REN1158	11-5/8"	23-5/8"	3-5/8"
REN29C	290 mm	390 mm	90 mm				

Renaissance® Masonry Units are also available in custom shapes and sizes, up to a maximum length of 590 mm (23-5/8") and face rise of 290 mm (11-5/8"). Bed depths are limited to a maximum of 90 mm (3-5/8") with rocked faced finishes and 115 (4-5/8") with sandblasted finishes. Profiles such as chamfers, notches and bullnoses are available at a premium price. Refer to the Renaissance® Custom Profile Guide for further information or contact your local Arriscraft representative or dealer.

A factory applied coating may be present on the long mortar beds of the units. Consider the need to order finished beds for application where they may be exposed.

CODE	HEIGHT	LENGTH	BED
Evolution Masonry Units			
ELN35	92 mm (3-5/8")	803 mm (31-5/8")	92 mm (3-5/8")
ELN75	194 mm (7-5/8")	803 mm (31-5/8")	92 mm (3-5/8")

Evolution Masonry Units are available in a variety of standard sizes: Evolution Masonry Units are also available in custom shapes and sizes, up to a maximum length of 803 mm (31-5/8") and face rise of 194 mm (7-5/8"). Bed depths are limited to a maximum of 90 mm (3-5/8") with sandblasted finishes. Profiles such as chamfers, notches and bullnoses are available at a premium price.

CODE	HEIGHT	LENGTH	BED
Citadel® Building Stone		Texture: Tumbled finish	
CIT/ FRE23	60mm (2-3/8")	Various lengths up to 600 mm (23-5/8")	92 mm (3-5/8")
CIT/ FRE52	133 mm (5-1/4")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
CIT81	206 mm (8-1/8")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
Edge Rock Building Stone		Texture: Split-faced finish	
SHA/UL50	125 mm (4-15/16")	Various lengths up to 803 mm (31-5/8")	83 mm ± 6 mm (3 1/4" ± 1/4")
EDG102	260 mm (10-1/4")	Various lengths up to 600 mm (23-5/8")	90 mm ± 13 mm (3 1/2" ± 1/2")
Fresco Building Stone		Texture: Split-faced and Tumbled finish	
CIT/ FRE23	60 mm (2-3/8")	Various lengths up to 600 mm (23-5/8")	92 mm (3-5/8")
CIT/ FRE52	133 mm (5-1/4")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
FRE81	206 mm (8-1/8")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
Laurier Building Stone		Texture: Rocked finish	
LAU23	60 mm (2-3/8")	Various lengths up to 600 mm (23-5/8")	95 mm (3-3/4")
LAU52	133 mm (5-1/4")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
LAU81	206 mm (8-1/8")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
LAU11	279 mm (11")	Various lengths up to 600 mm (23-5/8")	90 mm (3-1/2")
Shadow Stone® Building Stone		Texture: Split-faced finish	
SHA/UL22	59 mm (2-5/16")	Various lengths up to 600 mm (23-5/8")	92 mm ± 6 mm (3-5/8" ± 1/4")
SHA/UL50	125 mm (4-15/16")	Various lengths up to 803 mm (31-5/8")	83 mm ± 6 mm (3-1/4" ± 1/4")
SHA75S	194 mm (7-5/8")	Various lengths up to 600 mm (23-5/8")	86 mm ± 6 mm (3-3/8" ± 1/4")
Urban LedgeStone Building Stone		Texture: Split-faced finish	
SHA/UL22	59 mm (2-5/16")	Various lengths up to 600 mm (23-5/8")	92 mm ± 6 mm (3-5/8" ± 1/4")
UL35	92 mm (3-5/8")	Various lengths up to 803mm (31-5/8")	83 mm ± 6 mm (3-1/4" ± 1/4")
SHA/UL50	125 mm (4-15/16")	Various lengths up to 803 mm (31-5/8")	83 mm ± 6 mm (3-1/4" ± 1/4")

Calcium Silicate Building Stone is available in a variety of standard sizes:

Shipped material also includes a percentage of shorter random length units which can be used by the installer in creating the ashlar bond patterns and around openings and at internal corners. Contact your local Arriscraft representative or dealer for additional information.

Calcium Silicate Brick is available in a variety of standard sizes:

CODE	HEIGHT	LENGTH	BED
Contemporary Brick Texture: Split-faced finish			
CON31	79 mm (3-1/8")	Various lengths up to 772 mm (30-3/8")	90 mm (3-1/2")
Tumbled Vintage Brick Texture: Tumbled finish			
TVB31	79 mm (3-1/8")	257mm (10-1/8")	90 mm (3-1/2")
Architectural Linear Series Brick Texture: Weathered finish			
LS22	57 mm (2-1/4")	Various lengths up to 600 mm (23-5/8")	95 mm (3-3/4")
Avanti			
AV158	1-5/8"	Random, up to 600 mm (23-5/8")	3-5/8"

TOLERANCES Calcium Silicate Masonry Products are fabricated to the following tolerances:

Renaissance® Masonry Units and Evolution Masonry Units:

- Unit height and length: +/- 1.5 mm (+/- 1/16")
- Deviation from square, with the measurement taken using the longest edge as the base: +/- 1.5 mm (+/- 1/16")
- Unit bed: +/- 3 mm (+/- 1/8")
- Custom unit dimensions: +/- 3 mm (+/- 1/8")

Finished unit heads can be custom ordered or finished on site by the contractor. With Sandblasted finish, about 15% of units randomly placed on skids come with one acceptable head. Units ordered with finished heads will deviate from the standard dimension. Refer to the table below for the expected deviations when ordering finished heads.

*Evolution Masonry Units supplied in Sandblasted finish only.

FINISHED HEADS		
Finish	Number of Finished Heads	Reduction in Unit Length
Sandblasted*	1-2	10 mm—19 mm (3/8"—3/4")
Rocked	1-2	19 mm—38 mm (3/4"—1-1/2")

Due to the nature of these finishing operations, the custom dimensions tolerance of +/- 3 mm (+/- 1/8") will apply.

Calcium Silicate Building Stone and Calcium Silicate Brick:

- Unit height: +/- 1.5 mm (+/- 1/16")
- Unit bed: +/- 3 mm (+/- 1/8")*

*Split, rocked, or tumbled units, by the nature of their random finish, may have dimensional variations exceeding this value.

Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a distance of 6 m (20 feet). Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips found on *finished* faces shall not be obvious under diffused daylight illumination from a 6 m (20 foot) distance. Chips found on *unfinished* faces are not grounds for rejection.

Split and rocked faces are inspected for cracks and blemishes only, as chippage considerations do not apply when the desired surface texture and unit shape are intended to be uneven.

LIMITATIONS Manufactured masonry products are generally intended for above grade installations. Manufactured masonry veneer units, regardless of their composition, are inherently absorptive, and as such, are not

intended for use below grade. Manufactured units installed below grade will wick moisture from the soil that is in contact with the masonry units and create a condition known as "rising damp" in the masonry veneer.

In colder climates, masonry walls at grade may become exposed to de-icing compounds. As with other types of manufactured masonry units, calcium silicate masonry units should not be installed where they will be directly exposed to de-icing compounds used to melt snow and ice from pavements. For information about installing masonry at grade refer to the Arriscraft "At-Grade Design Ideas" brochure.

The function of caps and copings is to prevent moisture from entering the building envelope through the top of the wall. As most manufactured masonry units are produced in relatively short lengths, if they are used as a cap or coping material, more mortar joints are required between the individual units. These mortar joints are the most likely entry point for moisture to infiltrate the building envelope. As such, it is generally recommended within the industry that longer components, such as quarried stone, cast stone, or metal parapet cap flashing, be used to reduce the number of joints thereby limiting the areas that may allow moisture infiltration of the building envelope.

COLOURS AND PATTERNS

Renaissance® Masonry Units are available from our Cambridge, Ontario manufacturing facility in the following standard colours:

	Colours	Finish	
		Sandblasted	Rocked
Monochromatic	White	•	•
Monochromatic Range	Blacksmith	•	•
	Carbon	•	•
Striated	Nutmeg	•	•
Range	Bedford	•	•
	Birchbark	•	•
	Driftwood	•	•
	Ironstone	•	•
	Sandrift	•	•

Evolution Masonry Units are available from our Cambridge, Ontario manufacturing facility in the following standard colours:

	Colours	Finish
		Sandblasted
Monochromatic	White	•
Monochromatic Range	Carbon	•
Striated	Nutmeg	•

- **Monochromatic** colours consist of a single hue.
- **Monochromatic Range** colours consist of a single hue with a subtle distribution of tones that vary from unit to unit.
- **Striated** colours are multi-hued blend.
- **Range** colours are multi-hued blend and will contain a distribution of colours or shades that vary from unit to unit.



Calcium Silicate Building Stone is available in the following standard colours:

PRODUCT	COLOURS
Citadel®	Cashmere, Charcoal, Driftwood, French Country, Greige, Infinity, Moonstone, Silverado, Traditional Grey
Edge Rock	Driftwood, Glacier, *Steel Grey,
Fresco	Cashmere, Charcoal, Driftwood, French Country, Greige, Infinity, Moonstone, Silverado, Traditional Grey
Laurier	Charcoal, Ivory White, Mahogany, Midnight Grey, **Onyx, Opal, Walnut,
Shadow Stone®	Avalanche, Charcoal, Driftwood, **Glacier, Steel Grey, Tacoma
Urban LedgeStone	Avalanche, Charcoal, Driftwood, Steel Grey, Tacoma

*Edge Rock in colours Driftwood and Steel Grey is offered in a SHA/UL50 and EDG102 combination.

**Available in LAU23 and LAU52 only

***Available in SHA/UL50 only

Calcium Silicate Brick is available in the following standard colours:

Refer to actual colour samples and panels for final colour selection. Colours within each product group may be blended in a wall to achieve a more natural appearance. Information pertaining to common colour blends for each product line is available upon request. Not all colours within a product group are available in all sizes. Contact Arriscraft for a detailed listing of colours and sizes available. Custom colours are also available on a minimum order basis. Contact your local Arriscraft representative or dealer

PRODUCT	COLOURS
Contemporary Brick	Alpine White, Ivory White, Mystic Grey, Weathered Oak
Tumbled Vintage Brick	Alpine White, Ivory White, Mystic Grey, Weathered Oak
Architectural Linear Series Brick	Charcoal, Midnight Grey, Obsidian, Opal, Georgetown (Special), Mahogany (Special), Millstone (Special), Walnut (Special)
Avanti	Black Coral, Coastal Frog, Ocean Mist, Seashell

for additional information.

As a manufactured product, Arriscraft masonry unit products are monitored for colour consistency. Slight variations between batches may occur, and it is recommended that the installer mix units from different skids during installation.

FINISHES Standard surface finishes for Calcium Silicate Masonry Products

include:

- Sandblasted finish: A matte textured, relatively fine-grained uniform smooth surface.
- Rocked finish: A bold rustic finish resulting from hand-chiseling the masonry unit to a set bed depth.
- Split-faced finish: A surface finish resulting from mechanically splitting a manufactured masonry unit to achieve a rough, stone-like texture. Some split-faced units may have split fronts and backs.
- Tumbled finish: A finish resulting from splitting, and either tumbling or mechanically aging the pieces to create the rusticated look.
- Weathered finish: A rusticated and bruised finish.

Consultants should review samples prior to selecting a particular colour and finish.

TECHNICAL DATA

APPLICABLE STANDARDS Required properties for Calcium Silicate Masonry Products are described in ASTM C73, Standard Specification for Calcium Silicate Face Brick (Sand-Lime Brick). This standard classifies calcium silicate products as either moderate-weathering or severe-weathering depending on the material's tested physical properties of compressive strength and 24-hour absorption.

Calcium Silicate Masonry Products meet and exceed the requirements necessary to comply with the severe-weathering classification.

INSTALLATION

DELIVERY Calcium Silicate Masonry Products are delivered to the site in protective packaging.

HANDLING Lift skids with proper and sufficiently long slings or forks with protection to prevent damage to units. Protect edges and corners.

STORAGE Store Calcium Silicate Masonry Products in a manner designed to prevent damage and staining of units. Stack units on timbers or platforms at least 75 mm (3") above grade. If skids are stored outdoors for an extended period of time, unwrap the skids and tarp over them to encourage airflow between units. Place polyethylene or other plastic film between wood and other finished surfaces of unpackaged units. Stored units should be covered if exposed to extreme weather conditions.

Do not use de-icing compounds to remove ice from masonry veneer surfaces.

PREPARATORY WORK It may be advantageous under hot, dry weather or windy conditions to pre-dampen the units prior to placement in the wall. Damp units should be surface dry at the time of placement.

For additional information when constructing in hot or cold weather refer to the ARRISCRAFT•TECH bulletins titled Hot Weather Masonry Construction and Cold Weather Masonry Construction.

INSTALLATION Arriscraft Masonry products must be installed using approved materials and techniques for each specific installation. Refer to the ARRISCRAFT•CADD Library for applicable details.

Construct masonry veneer with an adequate number of elastic movement joints, properly located to accommodate differential movement. Refer to ARRISCRAFT•NOTE – Building Movement Joints for further information.



Construct masonry veneer in accordance with CSA A371, Masonry Construction for Buildings in Canada, and any local requirements stipulated by the authorities having jurisdiction.

Mortar joints between units in any direction should be consistent to the following thicknesses:

JOINT	PRODUCTS
10 mm (3/8")	Edge Rock, Shadow Stone®, Urban Ledge-stone, Renaissance®, Contemporary Brick, Tumbled Vintage Brick, Architectural Linear Series Brick, Avanti
13 mm (1/2")	Citadel®, Fresco, Laurier

Mortar for unit masonry veneer should be a Type N Portland cement-lime mix, proportioned to a 1:1:6 ratio. The ratio refers to:

- 1 part Portland cement (CSA A3001, Type GU)
- 1 part hydrated lime (ASTM C207, Type S—Special)
- 6 parts masonry sand (CSA A179-14)

When properly combined with the appropriate quantity of water, it will produce a general-purpose mortar, exhibiting good workability and board life in its plastic state, and good durability and flexibility in its hardened state, and conforming to CSA A179-14, Mortar and Grout for Unit Masonry. For further information, refer to ARRISCRAFT•NOTE – Mortar for Masonry Veneer.

Project specific considerations may necessitate the use of other mixes at the designer's discretion. For applications where flexural strength is of particular importance to the design, consult with our Technical Services Department for further recommendations.

Arriscraft recommends constructing masonry veneer with proper drainage mechanisms, including clear draining air spaces, through wall flashing membranes and weep hole vents. The air spaces must be at least 25 mm (1") wide, and kept clear of debris, protrusions, mortar fins and droppings. Weep hole vents should be installed at the same level as through wall flashing membranes and spaced not more than 600 mm (24") on center horizontally. Refer to ARRISCRAFT•NOTE – Moisture Management for further information.

Arriscraft Masonry Units must be connected to a structural substrate with an approved masonry connection system, designed by the consultant for each specific installation. Refer to ARRISCRAFT•NOTE – Connectors – Part I, Masonry Ties.

BOND PATTERNS Calcium Silicate Building Stone are each installed using different bonding patterns. These are typically described as a percentage ratio, from the smallest to the largest sized units, as follows: Refer to the Arriscraft Mason's Instructions for illustrations of each recommended bond pattern.

PRODUCT	2-UNIT	3-UNIT	4-UNIT	5-Unit
Citadel®		25:50:25		
Edge Rock	75:25			
Fresco		25:50:25		
Laurier		20:50:30	10:40:30:20	
Shadow Stone® (without EDG102)		20:50:30	20:20:40:20	
Shadow Stone® (without UL35)			15:40:30:15	
Shadow Stone®				10:20:40:20:10
Urban Ledge-stone (Ashlar)		20:50:30		
Urban Ledge-stone (Coursed)		22:33:45		

Standard bond patterns may also be modified by changing the ratio of small to large units. Contact your local Arriscraft representative or dealer for specific information on custom bond patterns.

AVAILABILITY AND COST

AVAILABILITY Calcium Silicate Masonry Products are available worldwide, as full-bed masonry units. Delivery times for orders will vary based on the complexity of what is required. Arriscraft cannot be responsible for delays due to fire, acts of God, or any other cause beyond its control or which could not be reasonably foreseen.

Contact Arriscraft for a list of dealers in your area.

COST Quoted on a project basis for job-specific manufacturing to project requirements.

WARRANTY

Arriscraft warrants its products against deterioration for the life of the building, provided the products have been erected and used according to accepted masonry standards, within the guidelines of local building codes and as recommended by the manufacturer. Complete warranty information is outlined on the Arriscraft standard form of Product Warranty.



MAINTENANCE

Calcium Silicate Masonry Products should have excess mortar removed from their faces by brushing as they are placed within the wall. Clean masonry units in accordance with the cleaning guidelines in ARRISCRAFT•CARE. Various masonry detergents and cleaning systems can change the colour of masonry products. Acid-based cleaning agents will darken the colour of the masonry units.

Always pre-test cleaning agents and methods on the job-site mock-up panel or a small inconspicuous area of the wall. The Consultant and/or Owner should approve the test area prior to the start of full-scale cleaning operations.

Refer to ARRISCRAFT•NOTE – Cleaning Masonry for further information.

Arriscraft does not recommend the application of water repellent or graffiti-proofing sealers to its masonry products.

TECHNICAL SERVICES

Arriscraft offers consultation services to assist with the preparation of details, specifications and with pricing. Enquiries are addressed promptly and without obligation.

Arriscraft distributes an integrated technical information system including:

- ARRISCRAFT•CADD: sample details which are available in .dwg, .dxf, and .pdf formats.
- ARRISCRAFT•DATA: product data sheets.
- ARRISCRAFT•NOTE: technical discussions with respect to building construction issues.
- ARRISCRAFT•SPEC: master guide specification Sections.

All of these technical resources are available to be downloaded from the Arriscraft web site at www.arriscraft.com.

Arriscraft also makes available samples for colour and finish, coursing charts and copies of test reports upon request.

