

## PRODUCT DESCRIPTION

**BASIC USE** A full-bed calcium silicate masonry unit used for masonry veneer construction.

For interior and exterior use in residential, commercial and institutional applications.

**COMPOSITION AND MATERIAL** Evolution Masonry Units are manufactured calcium silicate masonry units containing no Portland cement. They are pressure-formed and autoclave cured, resulting in high-density, severe weathering modular masonry units, with one or more finished faces. Refer to ARRISCRAFT•NOTE – Calcium Silicate Masonry Units for further information.

They may be site cut, trimmed and finished to custom lengths, shapes or sizes, as necessitated by site conditions.

**SHAPES AND SIZES** Evolution Masonry Units are available in imperial standard sizes.

	HEIGHT	LENGTH	BED
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 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 smooth faced finishes. Profiles such as margins, chamfers, notches and bullnoses are available at a premium price.

**TOLERANCES** Evolution Masonry Units are fabricated to the following tolerances:

- Unit Length:  $\pm 1.5$  mm ( $\pm 1/16$ "
- Unit Height:  $\pm 1.5$  mm ( $\pm 1/16$ "
- Deviations from square, with the measurement taken using the longest edge as the base will be  $\pm 1.5$  mm ( $\pm 1/16$ "
- Bed Depth Thickness:  $\pm 3$  mm ( $\pm 1/8$ "
- Custom Unit Dimensions:  $\pm 3$  mm ( $\pm 1/8$ "

Finished unit heads can be custom ordered or finished on site by the contractor. With Sandblasted finishes, 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 Table 1.A for the expected deviations when ordering finished heads.

Finished Heads - Table 1.A		
Finish	Number of Finished Heads	Reduction in Unit Length
Sandblasted	1 • 2	3/8" • 3/4"

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

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.

Units shall exhibit a texture approximately equal to the approved sample when viewed under diffused daylight illumination at a 6 Metre (20 foot) distance. Minor chipping resulting from shipment and delivery shall not be grounds for rejection. Minor chips shall not be obvious under diffused daylight illumination from a 6 Metre (20 foot) distance.

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

**LIMITATIONS** Manufactured masonry products are generally intended for above grade installations. All manufactured masonry units, regardless of their composition, are inherently absorptive, and none are intended for use below grade. 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. Like all 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 "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 points for moisture to infiltrate the building envelope. As such, it is generally recommended within the industry that longer components, such as quarried 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 FINISHES** Evolution Masonry Units are available from our Cambridge, Ontario manufacturing facility in standard colours and finishes listed in Table 2.A.

CAMBRIDGE Standard Finishes and Colours - Table 2.A	
Colours	Finish
	Sandblasted
<b>Monochromatic</b>	
Carbon	•
Wheat	•
White	•
<i>Monochromatic colours consist of a single hue.</i>	
<b>Striated</b>	
Nutmeg	•
<i>Striated colours are a multi-hue blend.</i>	

Refer to actual colour samples and panels for final colour selection.

Custom colours are also available on a minimum order basis.

Contact your local Arriscraft representative or dealer for additional information.

The standard finishes are described below:

- Sandblasted Finish: A matte textured, relatively fine-grained uniform smooth surface.
- As a manufactured product, Evolution Masonry Units 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.

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

## TECHNICAL DATA

**APPLICABLE STANDARDS** Required properties for calcium silicate masonry 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.

Evolution Masonry Units meet the severe weathering requirements of this standard.

## INSTALLATION

**DELIVERY** - Evolution Masonry Units 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 Evolution Masonry Units in a manner designed to prevent damage and staining of units. Stack units on timbers or platforms at least 76 mm (3") above grade. Place polyethylene or other plastic film between wood and other finished surfaces of units when stored for extended periods of time. Stored units should be covered if exposed to extreme weather conditions.

Do not use de-icing compounds to remove ice from masonry 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** Evolution Masonry Units must be installed using approved materials and techniques for each specific installation.

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 CSAA371: Masonry Construction for Buildings and any local requirements stipulated by the authorities having jurisdiction.

Mortar joints between units in any direction should be 10 mm (3/8") thick. 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 (CSAA3001, Type GU)
- 1 part hydrated lime (ASTM C207, Type S); and
- 6 parts masonry sand (CSAA179).

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 ASTM

C270; Standard Specification for Mortar for Unit Masonry. For further information, refer to ARRISCRAFT•NOTE – Mortar for Masonry Veneer.

Arriscraft recommends construction masonry veneer with proper drainage mechanisms, including clear draining air spaces, through wall flashing membranes and weep hold vents. The air spaces must be at least 1" wide, and kept clear of debris, protrusions, mortar fins and droppings. Weep hold vents should be installed at the same level as through wall flashing membranes and spaced not more than 32" on centre horizontally. Refer to ARRISCRAFT•NOTE – Moisture Management for further information.

Evolution 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.

## AVAILABILITY AND COST

**AVAILABILITY** Evolution Masonry Units are available worldwide.

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 manufacture. Complete warranty information is outlined on the Arriscraft standard form of Product Warranty.

## MAINTENANCE

Evolution Masonry Units should have excess mortar removed from their faces by brushing as they are placed within the wall at the point of tooling.

Clean Evolution Masonry Units in accordance with the cleaning guidelines in ARRISCRAFT•CARE. Some 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•CARE – Cleaning Guidelines and 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.

## RELATED REFERENCES

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](http://www.arriscraft.com).

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

