ENVIROCON
CAPTURING CONCRETE EXCESS

INTERBLOC+

INSTALLATION GUIDE

ISSUE NUMBER: 04
REVISION DATE: NOVEMBER 2025

OVERVIEW, SAFETY REQUIREMENTS,
AND BEST-PRACTICE INSTRUCTIONS

www.envirocon.co.nz

0800 468 375


BRUNO

INSTALLATION GUIDE

INTRODUCTION

Interbloc+ is a modular, large-format concrete block wall systems designed for fast, safe, and efficient installation. A trained installer can place upwards of 25m² of wall per hour, while inexperienced installers typically achieve 15m² per hour.

Interbloc and Interbloc+ are segmental retaining wall systems designed to provide stability against lateral earth pressure by their own mass. The product can also be utilised in a mechanically stabilized earth (MSE) wall system by using cast-in or sandwiched geofabrics. The system can achieve internal stability against lateral loads by either interlocking of the shear keys of two block layers or by reinforcements running vertically through existing prefabricated holes

This Guide Contains:

- Pre-start and safety requirements
- Block specifications
- Tools and equipment
- Delivery and site handling requirements
- Full block installation sequence
- Safe Working Method Statement (SWMS)
- Terms and Conditions

Anyone undertaking an Interbloc+ installation should read this guide thoroughly before works begin. It supersedes informal discussions and provides the recommended best-practice approach.

BLOCK SPECIFICATION & REFERENCE

GENERAL NOTES

These drawings are provided solely as preliminary guidance for wall design and are not suitable for final design or construction without further evaluation.

All site-specific walls must be certified and approved by an engineer licensed in the region where construction will occur, in accordance with New Zealand Standards and relevant building codes. Where applicable, building consent should also be obtained.

The user assumes full responsibility for verifying the accuracy and proper application of the details provided in this document.

DENSITY STANDARDS FOR WEIGHT AND VOLUME CALCULATIONS

Concrete densities typically range from 2200 to 2500 kg/m³ in accordance with standard construction practices. It is important to note that variations in dimensions of 1 to 3 mm may result in different volume calculations, which can subsequently affect the estimated weight. These values are provided as estimates, as actual weights may vary based on the specific concrete mix used, any additives, and adherence to relevant New Zealand standards and policies.

CONCRETE TYPE

Interbloc is primarily manufactured using high quality, certified, excess concrete. 100% of blocks are 20 MPa or greater, and 50% of blocks are 30 MPa or greater. Concrete is tracked from source and each block carries a unique barcode for tracking. You can find out more information about this in our articles on excess concrete, and quality.

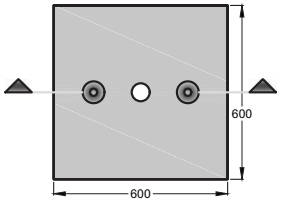
FOOT ANCHOR

- 2.5t x 120mm SwiftLift™ Foot Anchor.
- 1.3t x 120mm SwiftLift™ Foot Anchor.

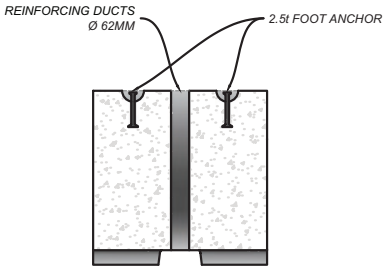
- Compliance: NZ GPG 2018.
- System: Fully engineered with cast-in lifting anchors, recess formers, and lifting clutches.
- Working Load Limit (WLL): 2.5 or 1.3 tons.
- Factor of Safety (FoS): 4 for high tensile steel, exceeding NZ GPG 2018 minimum requirements.

600 FLAT TOP BLOCK

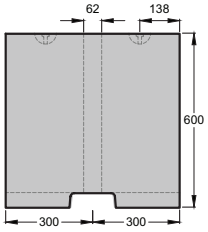
DESCRIPTION	METRIC
Width	600 mm
Height	600 mm
Depth	600 mm
Face Area	0.36 m²
Volume(±)	0.206 m^3
Weight (±)	500 kg



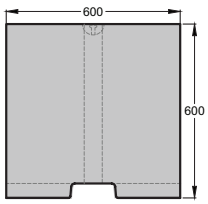
PLAN



CROSS SECTION



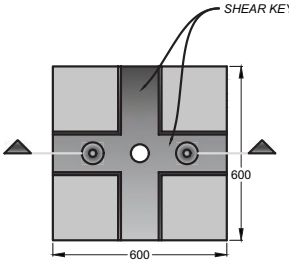
FRONT ELEVATION



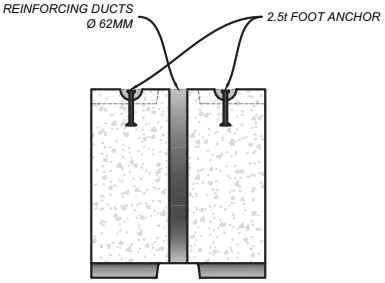
SIDE ELEVATIONS

600 STANDARD BLOCK

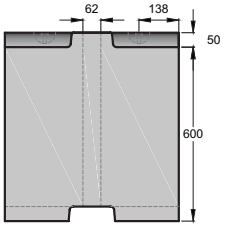
DESCRIPTION	METRIC
Width	600 mm
Height	600 mm
Depth	600 mm
Face Area	0.36 m²
Volume (±)	0.214 m^3
Weight (±)	500 kg



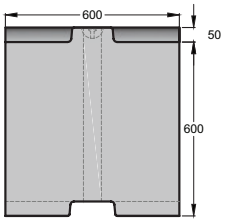
PLAN



CROSS SECTION



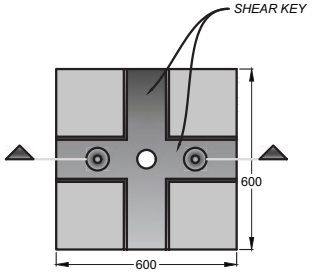
FRONT ELEVATION



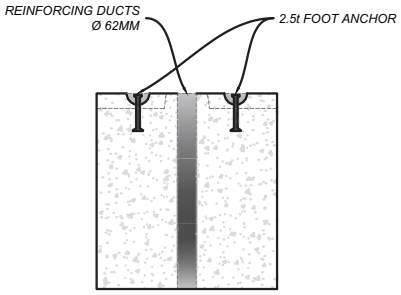
SIDE ELEVATIONS

600 FLAT BOTTOM BLOCK

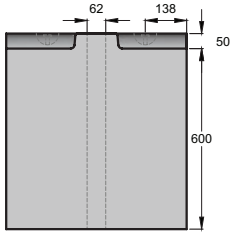
DESCRIPTION	METRIC
Width	600 mm
Height	600 mm
Depth	600 mm
Face Area	0.36 m²
Volume (±)	0.221 m^3
Weight (±)	500 kg



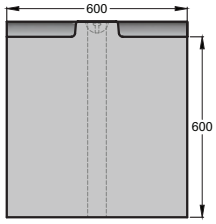
PLAN



CROSS SECTION



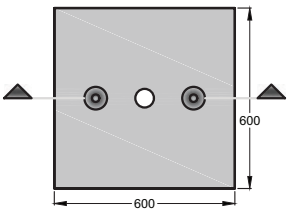
FRONT ELEVATION



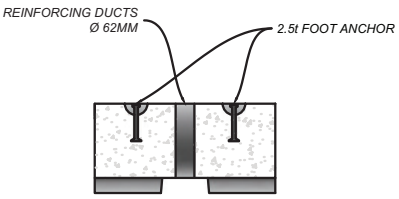
SIDE ELEVATIONS

600 CAPPER BLOCK

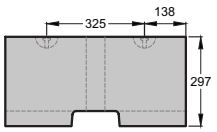
DESCRIPTION	METRIC
Width	600 mm
Height	297 mm
Depth	600 mm
Face Area	0.18 m²
Volume (±)	0.096 m^3
Weight (±)	220 kg



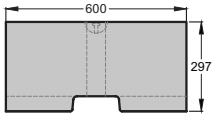
PLAN



CROSS SECTION



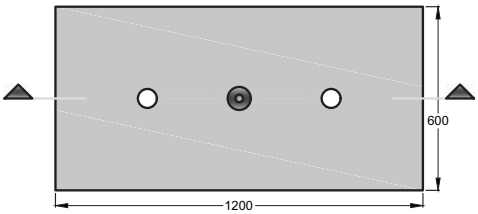
FRONT ELEVATION



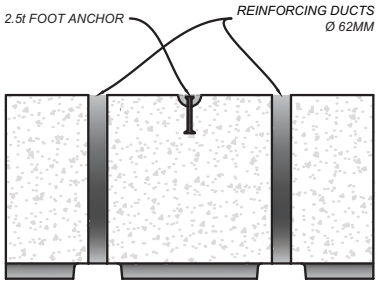
SIDE ELEVATIONS

1200 FLAT TOP BLOCK

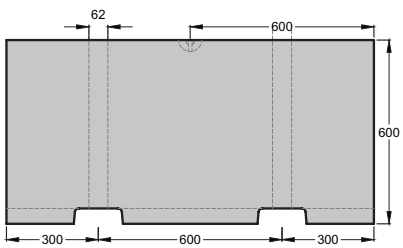
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.72 m²
Volume (±)	0.413 m^3
Weight (±)	1.00 TN



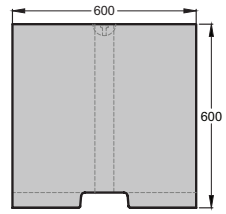
PLAN



CROSS SECTION



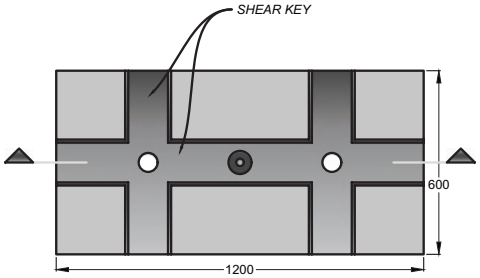
FRONT ELEVATION



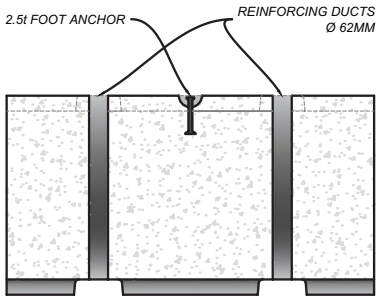
SIDE ELEVATIONS

1200 STANDARD BLOCK

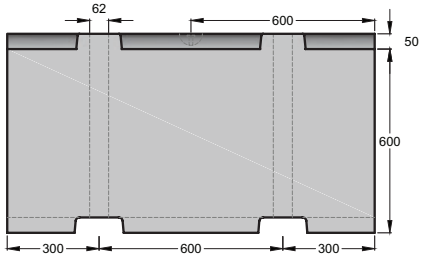
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.72 m²
Volume (±)	0.428m^3
Weight (±)	1.00 TN



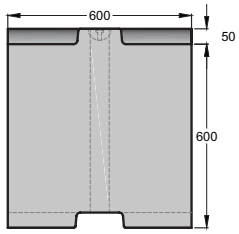
PLAN



CROSS SECTION



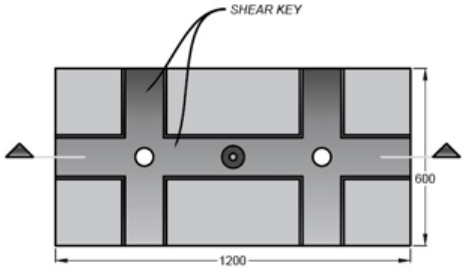
FRONT ELEVATION



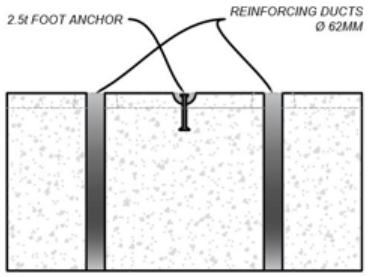
SIDE ELEVATIONS

1200 FLAT BOTTOM BLOCK

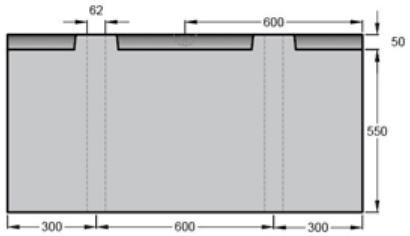
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.72 m²
Volume (±)	0.443 m³
Weight (±)	1.00 TN



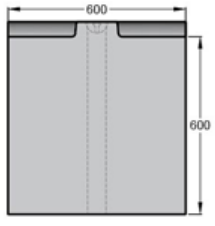
PLAN



CROSS SECTION



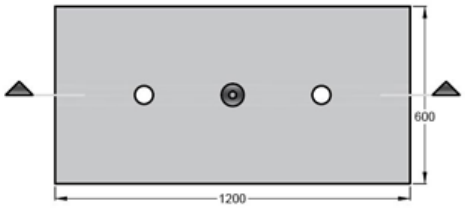
FRONT ELEVATION



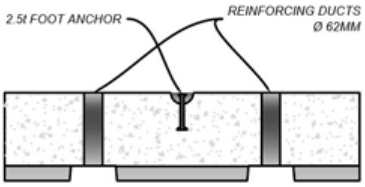
SIDE ELEVATIONS

1200 CAPPER BLOCK

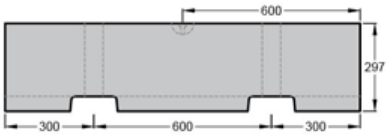
DESCRIPTION	METRIC
Width	1200 mm
Height	297 mm
Depth	600 mm
Face Area	0.36 m²
Volume (±)	0.192 m³
Weight (±)	440 kg



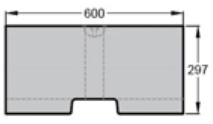
PLAN



CROSS SECTION



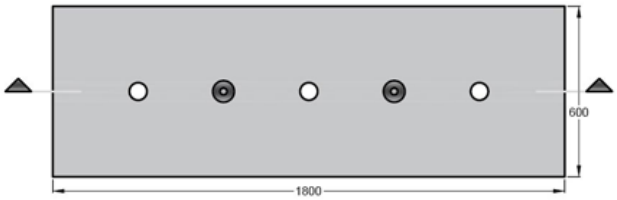
FRONT ELEVATION



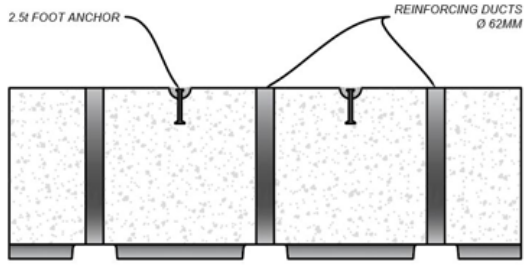
SIDE ELEVATIONS

1800 FLAT TOP BLOCK

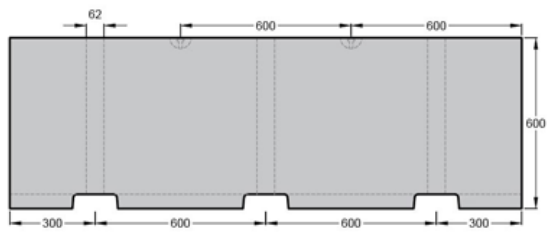
DESCRIPTION	METRIC
Width	1800 mm
Height	600 mm
Depth	600 mm
Face Area	1.08 m²
Volume (±)	0.620 m^3
Weight (±)	1.50 TN



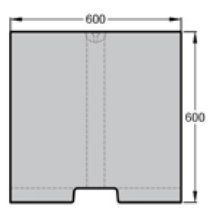
PLAN



CROSS SECTION



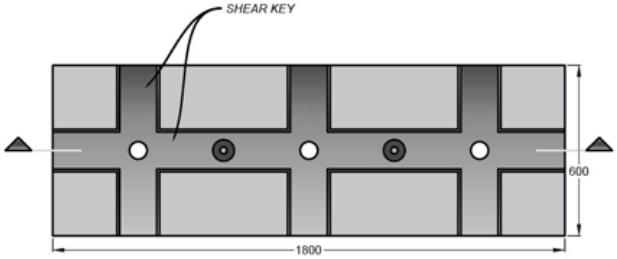
FRONT ELEVATION



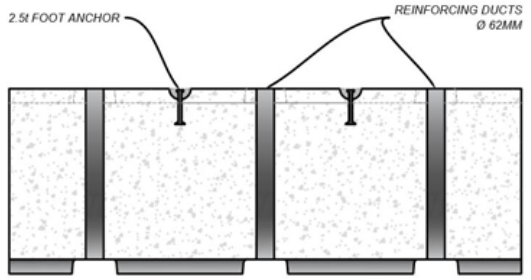
SIDE ELEVATIONS

1800 STANDARD BLOCK

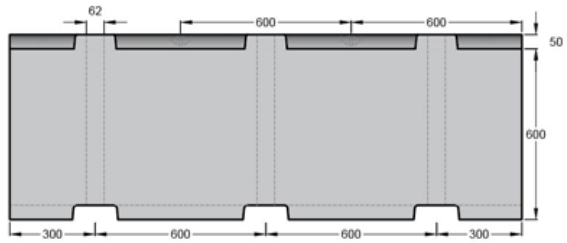
DESCRIPTION	METRIC
Width	1800 mm
Height	600 mm
Depth	600 mm
Face Area	1.08 m²
Volume (±)	0.642 m^3
Weight (±)	1.50 TN



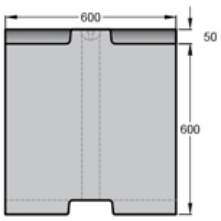
PLAN



CROSS SECTION



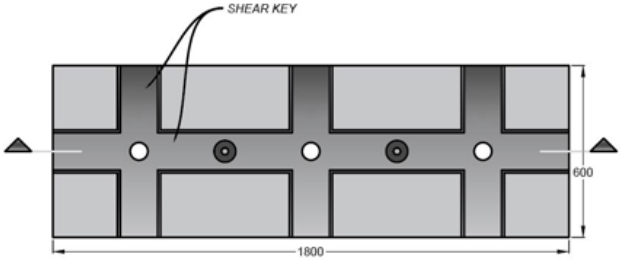
FRONT ELEVATION



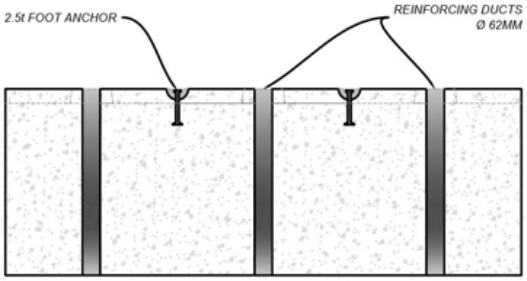
SIDE ELEVATIONS

1800 FLAT BOTTOM BLOCK

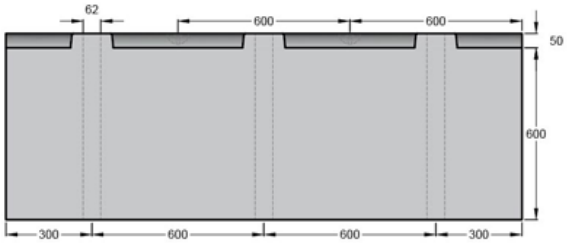
DESCRIPTION	METRIC
Width	1800 mm
Height	600 mm
Depth	600 mm
Face Area	1.08 m^2
Volume (±)	0.665 m^3
Weight (±)	1.50 TN



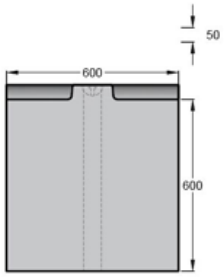
PLAN



CROSS SECTION



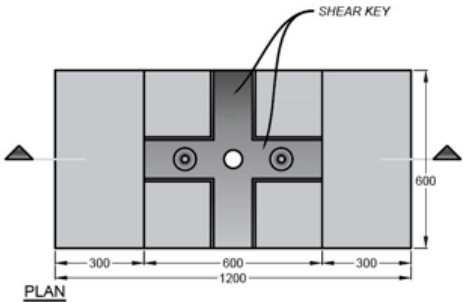
FRONT ELEVATION



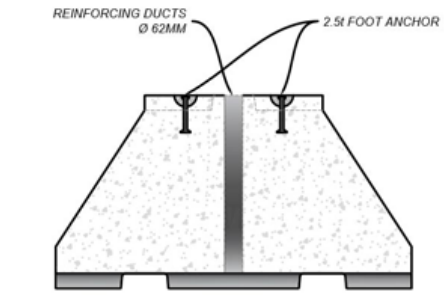
SIDE ELEVATIONS

1200 BASE BLOCK

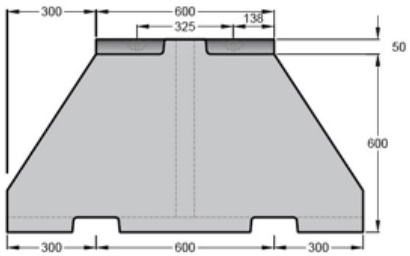
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.58 m²
Volume (±)	0.339 m^3
Weight (±)	780 kg



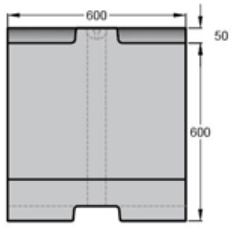
PLAN



CROSS SECTION



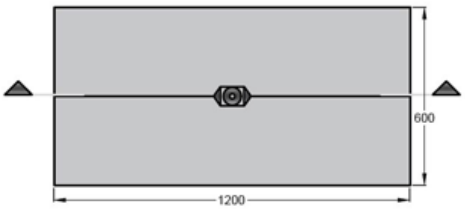
FRONT ELEVATION



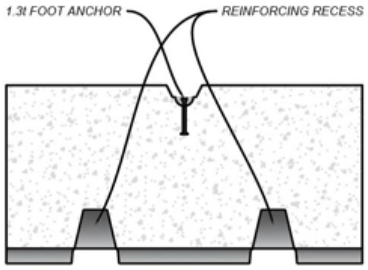
SIDE ELEVATIONS

1200 TOP BLOCKS

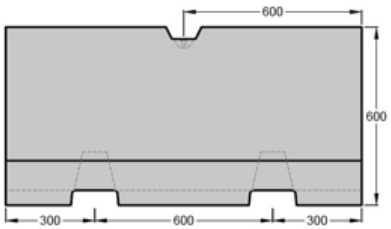
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.72 m²
Volume (±)	0.254m^3
Weight (±)	585 kg



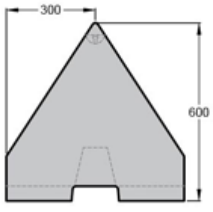
PLAN



CROSS SECTION



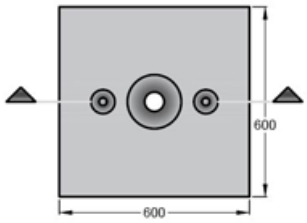
FRONT ELEVATION



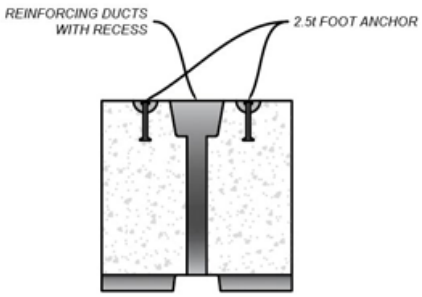
SIDE ELEVATIONS

600 FLAT TOP RECESS BLOCK

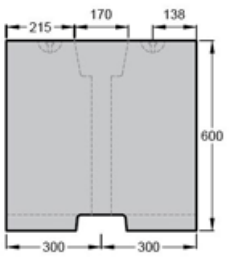
DESCRIPTION	METRIC
Width	600 mm
Height	600 mm
Depth	600 mm
Face Area	0.36 m²
Volume(±)	0.205 m^3
Weight (±)	470 kg



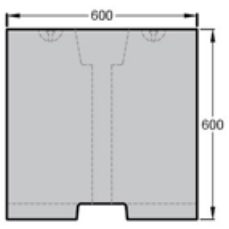
PLAN



CROSS SECTION



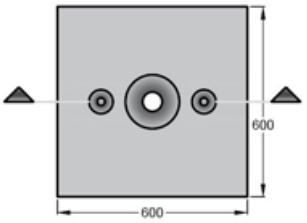
FRONT ELEVATION



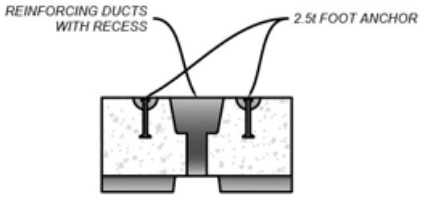
SIDE ELEVATIONS

600 CAPPER RECESS BLOCK

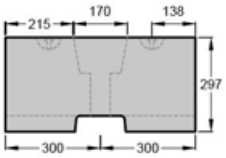
DESCRIPTION	METRIC
Width	600 mm
Height	297 mm
Depth	600 mm
Face Area	0.18 m²
Volume(±)	0.097 m^3
Weight (±)	225 kg



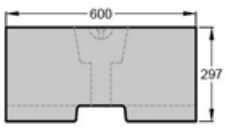
PLAN



CROSS SECTION



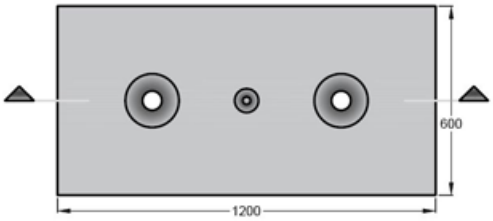
FRONT ELEVATION



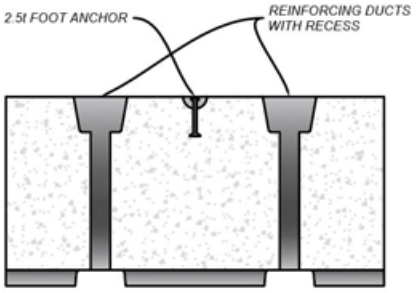
SIDE ELEVATIONS

1200 FLAT TOP RECESS BLOCK

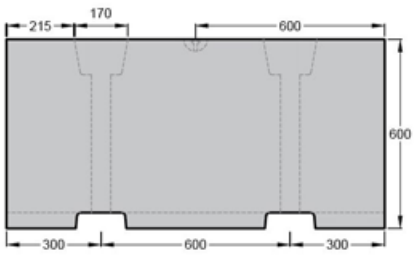
DESCRIPTION	METRIC
Width	1200 mm
Height	600 mm
Depth	600 mm
Face Area	0.72 m²
Volume (±)	410 m^3
Weight (±)	0.94 TN



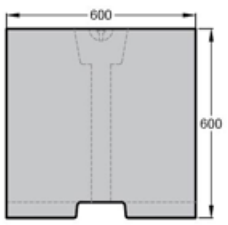
PLAN



CROSS SECTION



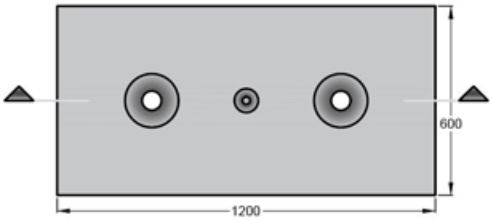
FRONT ELEVATION



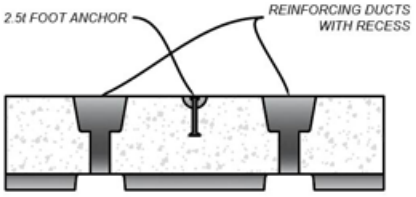
SIDE ELEVATIONS

1200 CAPPER RECESS BLOCK

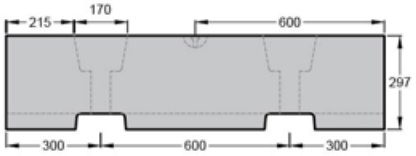
DESCRIPTION	METRIC
Width	1200 mm
Height	297 mm
Depth	600 mm
Face Area	0.36 m²
Volume (±)	0.192 m^3
Weight (±)	440 kg



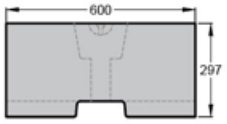
PLAN



CROSS SECTION



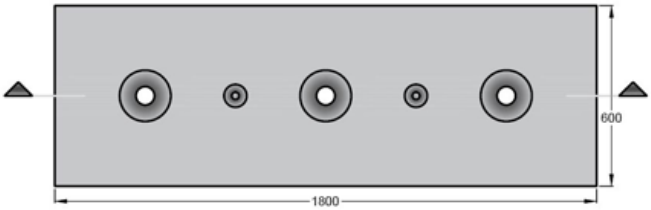
FRONT ELEVATION



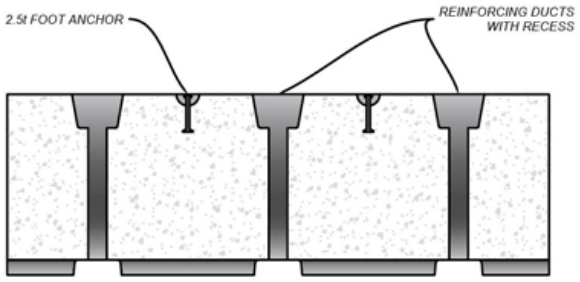
SIDE ELEVATIONS

1800 FLAT TOP RECESS BLOCK

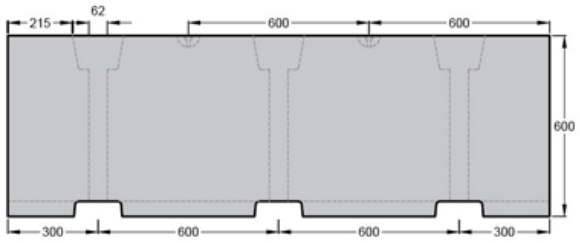
DESCRIPTION	*METRIC*
• *Width*	*1800 mm*
• *Height*	*600 mm*
• *Depth*	*600 mm*
• *Face Area*	*1.08 m²*
• *Volume (±)*	*0.615 m³*
• *Weight (±)*	*1.415 TN*



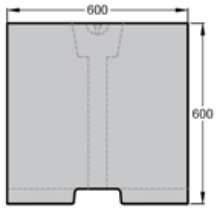
PLAN



CROSS SECTION



FRONT ELEVATION



SIDE ELEVATIONS


INTERBLOC
AU Des Reg #: 2015110644
NZ Des Reg #: 424354

PRE-START REQUIREMENTS

TOOLS & EQUIPMENT NEEDED

A successful installation requires the proper tools and lifting equipment to ensure both safety and efficiency.

Lifting Equipment

Installations rely on heavy lifting machinery capable of handling blocks up to one tonne in weight. A 3-tonne forklift is the most cost-effective and operationally flexible solution. Forklifts should be fitted with a lifting boom and certified lifting chains, rated at a minimum of two tonnes. Only approved lifting devices—such as the 2.5-tonne and 1.3-tonne Ancon or Reid Klaw—should be used with the cast-in anchors embedded in the blocks.

Vertical Reinforcing Tools

Where reinforcing is required, installers will need a torque wrench, spanners, a hammer drill, and diamond-tipped drill bits compatible with the duct size. A hole-cleaning kit and an approved epoxy dispenser (such as Hilti or Ramset) are also required for properly securing starter bars.

General Tools

A string line is essential for achieving straight alignment along the base course. Pinch bars and crowbars assist with small block adjustments once placed. A hand brush or battery-powered blower is used to clear debris from block surfaces between courses, ensuring accurate stacking and shear-key engagement.

Personal Protective Equipment (PPE)

Installers must wear high-visibility clothing, leather gloves, steel-toed boots, hearing protection, and safety glasses. Additional PPE—such as waterproof gear, sunscreen, or dust masks—may be required depending on the site environment. Workers conducting tasks at height must use approved harnesses.

HEALTH & SAFETY REQUIREMENTS

Interbloc and Interbloc+ installations require strict adherence to safety protocols. All workers must complete a site induction prior to commencing work. A Safe Working Method Statement (SWMS) must be reviewed, highlighting hazards associated with lifting, manual handling, machinery operation, working at heights, and environmental conditions.

Core Lifting Safety Principles

Installers must never stand beneath or near a suspended block. All lifting equipment must be inspected regularly and kept in good working condition. Only approved lifting Klaws may be used with the cast-in lifting anchors, as unapproved devices may cause anchor failure and void any product warranty. Blocks must not be transported long distances or over uneven terrain using lifting anchors. Where blocks are expected to be lifted frequently throughout their service life, dual-anchor blocks must be used.

Working Environment & Site Hazards

The SWMS outlines the correct procedures for mitigating hazards such as:

- Vehicular traffic and moving plant
- Manual handling risks
- Slips, trips, and falls
- Inclement weather
- Working at heights
- Hot work associated with grinders
- Use of epoxy adhesives

Workers must maintain situational awareness, observe exclusion zones, and ensure constant communication with machinery operators.

PRE-START SITE CHECKLIST

Before installation begins, a complete site inspection must be carried out to ensure that all conditions meet the requirements for a safe and efficient installation.

Site Access

Installers must verify that trucks can enter and exit the site safely, including having sufficient turning space. Forklifts and other lifting equipment must have unrestricted access to the block lay-down area and the installation location.

Foundations

For concrete foundations, the pad must be clean, level, and free of debris. The location and spacing of steel reinforcing within the pad must be identified, particularly when drilling is required for vertical reinforcing kits. For non-concrete foundations, the ground must be well-compacted and firm enough to support the blocks and machinery.

Surrounding Structures

The installation area must be completely clear to avoid obstructions. Installers must verify that sufficient space exists between any adjacent structures, with a recommended allowance of approximately 5 mm of creep per block. If reinforcing kits are being used, vertical clearance must be available for the entire height of the wall.

Other Requirements

Installers must confirm that the block layout matches the site, including overall footprint. Any required design modifications must be made before block dispatch begins. If the customer has provided survey points or datum references, these must be checked for accuracy.

DELIVERY & HANDLING

Proper planning for block delivery and storage is crucial for an efficient installation.

Block Lay-Down Area

- You will need to ensure you have sufficient space to store the blocks between unloading the truck and installing the blocks.
- Each block takes up 0.72m2, blocks can be stacked to a max of 4 blocks high only if you have level ground.
- You may need to consider site specific H&S requirements, blocks may be stack to a max of 2 or 3 blocks high so an individual can hook the lifting klaw during installation.
- Avoid placing blocks on muddy or soft ground, this will cause the block to be unstable and will affect the aesthetics of the block.
- Place the blocks as close of feasible to the place they will be installed. This will increase the speed of installation and reduce double handling of blocks.
- Consider how the blocks are stored - blocks used at the base of the wall should be easily accessible first.
- A forklift is the most cost effective and efficient way of unloading trucks, handling blocks onsite, and installing the blocks.

Customer Collection Requirements

If you opt to collect the blocks yourself or have organised your own freight. There are a couple of key points you need to keep in mind:

- You need to arrange for the collection of blocks well before we are due on site for installation.
- Contact Envirocon Dispatch before sending any trucks. Pick ups need to be scheduled in our dispatch system.
- Drivers must contact the Dispatch Coordinator before arriving on site to confirm pick up times.
- If this is not done, the truck may not be loaded and turned away.
- Drivers must have the job reference number on them.
- Payment terms must have been met before loading can commence.
- Drivers must have correctly rated chains for securing blocks.
- Drivers must arrive on time.
- Drivers must not arrive before you scheduled time.
- Drivers will not be loaded early.
- Drivers must use corner protectors.

Truck types that are acceptable:

- Flat deck
- No high metal lips on edge (5cm is too high)
- Curtain siders
- No tow trucks
- No fixed side trucks

- Drivers are required to sign for the load before leaving
- Trucks must have a clean truck deck area
- Drivers are not allowed to smoke on site

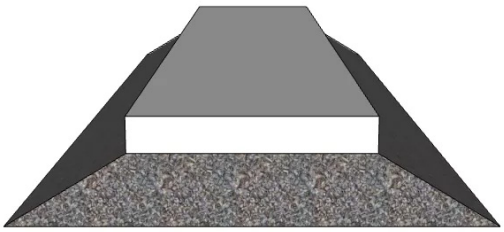
Drivers must follow Envirocon's site safety rules:

- 10km/h speed limit on site
- Everyone must have appropriate high-viz
- Everyone must wear steel toed shoes
- You must know your maximum tonnage and not overload your ratings
- You must have a current COF
- Your vehicle must be mechanically sound
- The load must be strapped properly
- You need to always follow instructions given by

Dispatch Staff

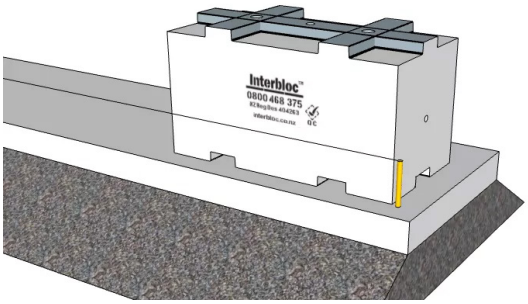
- No parking overnight on Envirocon premises
- Drivers must be visible to the Dispatcher when blocks are being loaded onto the truck.
- The forklift driver must always have line of sight of drivers. There is a risk of blocks being dislodged off the deck as they are pushed to the edge.

INSTALLING THE BLOCKS



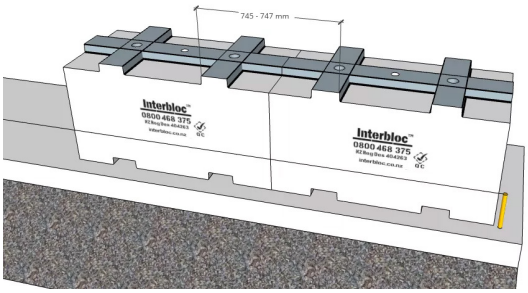
01 PREPARING THE FOUNDATION

A clean, level foundation is required for optimal wall performance. Before placing the first block, the concrete pad should be swept thoroughly. A string line is then installed along the length of the wall to act as a reference guide for alignment.



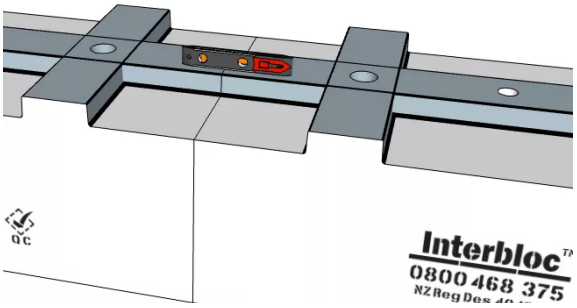
02 PLACING THE FIRST BLOCK

Placement begins at a corner, if present. The first block must be positioned precisely, maintaining a uniform 10 mm gap from the string line. Ensuring accurate placement of this block is essential, as it sets the alignment for the entire wall.



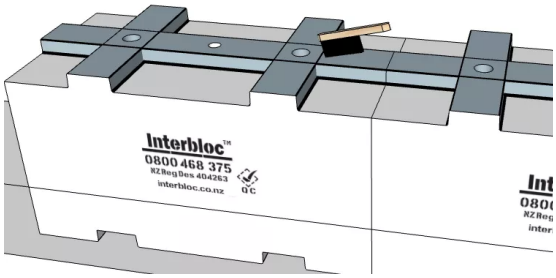
03 PLACING SUBSEQUENT BLOCKS

Each subsequent block must be positioned so that the interlocking groove spacing falls between 745 mm and 747 mm. This spacing ensures proper engagement between layers and prevents binding at height. Blocks must be set level and flush across the entire base course.



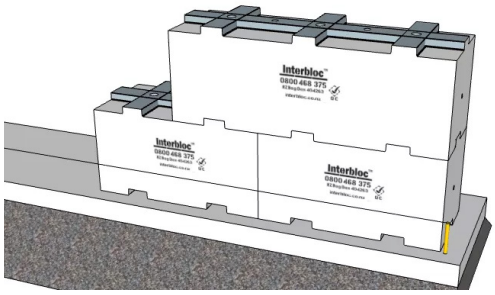
04 ADJUSTING BLOCK POSITION

If a block requires adjustment, installers can use a pinch bar or crowbar to gently pivot or shift it into place. Care must be taken not to damage the lifting anchors or interlocking keys during adjustment.



05 BUILDING ADDITIONAL LAYERS

A clean, level foundation is required for optimal wall performance. Before placing the first block, the concrete pad should be swept thoroughly. A string line is then installed along the length of the wall to act as a reference guide for alignment.

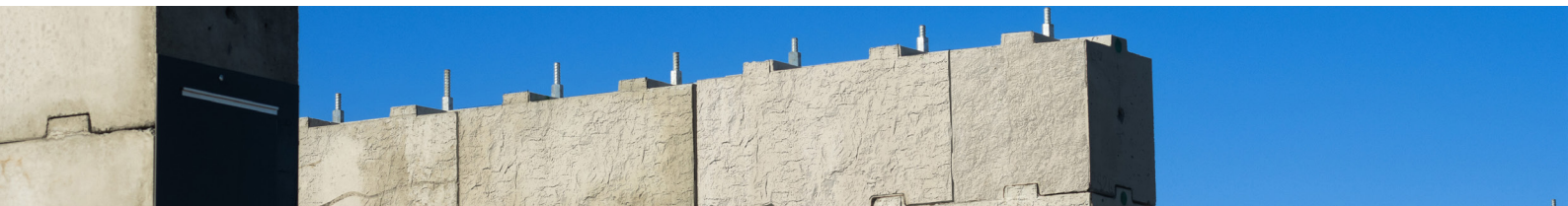


06 LEVELLING EACH LAYER

Minor variations in block height may require the use of shims. Shimming should be completed as needed to maintain a level wall during construction.

07 REINFORCING INSTALLATION (IF REQUIRED)

Where vertical reinforcing is specified, installers must follow all engineering instructions and use approved materials. Ducts must be drilled cleanly and cleared of dust prior to the injection of epoxy. Starter bars must be seated correctly following epoxy installation, and reinforcement must be tightened to the torque values specified in the engineering design.



ENVIROCON

CAPTURING CONCRETE EXCESS

+64 0800 468 375
www.envirocon.co.nz

At Envirocon, we lead the way in sustainable construction with our innovative precast concrete block system, designed to support the circular economy by transforming surplus concrete into durable, reusable building solutions.

As the country's first accredited construction product stewardship scheme, we create ultra-low embodied carbon products that can be reused, recycled, or repurposed at the end of their life, and our buyback guarantee keeps concrete in circulation and out of landfills.