ISOBLOC
INSULATED MASONRY

Installation Guide

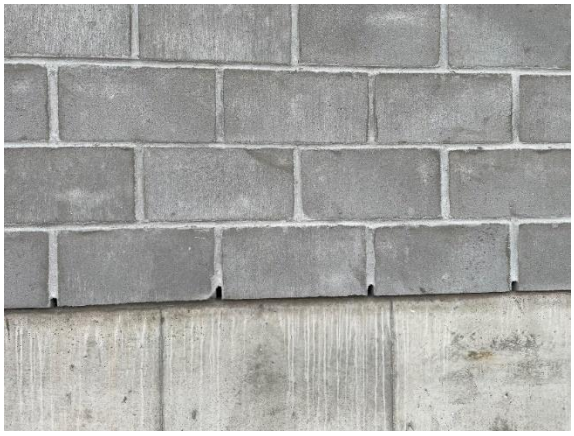
An Isobloc wall is constructed in the same way as standard concrete blocks. However, some special features apply. This guide covers the steps and precautions to take when installing an Isobloc wall.

An installation video is also available at the following link:

Préparations

1. It is important to inspect each block to ensure it is in good condition before installation. Check that the concrete parts are free of cracks and that the polystyrene is properly in place and in good condition.
2. Ensure that the condition of the surfaces/supports previously implemented under other sections or contracts is acceptable and allows the work to be carried out
3. Clean the surface before installing the first row.
4. If required, install the flashing and the starter insulation strip (supplied by Isobloc) under the first row. Refer to the plans and specifications.

Example of starting block assembly



Example of weep holes

Installing the blocks:

1. Place enough mortar under the first row to ensure good alignment and level. The initial mortar joint should be between 6 and 20 mm thick.
2. Begin laying each row at the corners of both ends of the wall section.
For a stretcher pattern, use alternating left and right corners. The corners must be perfectly level in all directions.
3. The part of the block with the pipes must be placed on the outside of the building because this part is used to evacuate water that could enter during bad weather.
4. Make a weep hole in the lower part of all the blocks on the first row to allow water to drain away.
5. Apply mortar to both sides of the block.
Be careful not to put mortar on the polystyrene and not to block the channels. These channels are used for ventilation and drainage. They must not be blocked.

6. It is very important that the polystyrene is level to ensure continuity. The insulation must be well tongued and there must be no gaps between the units. The plates can be replaced for an aesthetic finish but it is important to ensure the continuity of the insulation.
7. The polystyrene cores must be free of mortar. Remove any excess mortar so that no mortar falls inside during installation.
8. Create expansion joints at the locations indicated in the plans and specifications. The blocks will be cut at the location of these joints. Refer to the plans and specifications.
9. Cut the Isoblocs to the required size using a concrete saw.

Example of overlap and continuity of insulation after cutting the rough opening

Recommended working method:

1. Organize the work area by distributing the whole blocks and corner blocks in the correct location.
2. Place the blocks so that they are easy to pick up and on the right side to avoid having to turn them over during installation.
3. It is ideal to work in a team of 2 masons: 1 who spreads the mortar on the top and side of the blocks and one who carries out the installation.
4. To check for level and alignment, draw a line on the inside of the polystyrene. The line should be on the insulation, not the concrete slab, to make installation easier.
5. The level and alignment must be checked regularly to ensure that the wall has not shifted and is straight. Styrofoam installed crookedly will create alignment difficulties.

Laying blocks around the openings:

1. Around the openings. Ideally, the Isoblocs should extend beyond the edges and then cut to the required size. This ensures stability and a straight cut.
2. To install the lintels, cut the polystyrene along the length of the angle iron to ensure stable support.

3. For the rows above the lintels, cut a gap to allow the angle iron to pass through and place the block, making sure to maintain the alignment of the insulation and the concrete slabs.
4. Fill cavities and cutouts with sprayed urethane to ensure insulation continuity. Make sure to fill all voids, including between the two lintels.

Joint finishes:

1. Pull the joints to make a nice finish when the mortar is slightly hardened
   * To ensure that all mortar joints have the same color, smooth them when they are the same firmness. Note that the firmer the joints are when smoothed, the darker the color will be.
2. Check that all joints are properly filled, both inside and outside, to ensure watertightness, aesthetics and mechanical resistance.

Storage:

1. Store Isobloc blocks on a flat, dry and stable surface, protected from the weather.
2. If required, protect pallets with a tarpaulin to prevent exposure to the elements.
3. Avoid storing pallets directly on the ground to prevent contamination or moisture buildup.
4. Do not stack pallets on top of each other.
5. Keep items in packaging until installation.

Winter conditions:

1. For installation in winter conditions, refer to the plans and specifications, as well as the document entitled " Recommended Practices and Guide Specifications for Cold Weather Masonry Construction" published by IMIAC. Available at the link below: *https://imiweb.org/wp-content/uploads/2017/02/TB-Cold-Weather-Masonry-Construction.pdf*

Protection of the work:

1. Always protect the blocks by covering the last row to prevent water from seeping behind the blocks.
2. Install temporary protection on the openings until the joinery is installed.

Cleaning:

1. Remove mortar splashes immediately before they harden.
2. Use a soft brush and clean water to clean the pads.
3. Avoid any acidic or abrasive products that could damage the concrete or polystyrene.

Installation of additional accessories:

1. Fiberglass rods:
   Insert fiberglass rods every 2 rows and every 2 blocks for a ULC-certified 2-hour fire-resistant wall;
   or every 4 rows and every 4 blocks alternating for a traditional wall.
   Refer to plans and specifications for exact project spacing.
2. Fasteners for connection to the supporting structure:
   If Isobloc is used as a covering, it must be attached to the structure using the fasteners provided for this purpose, in accordance with the requirements of the engineer or architect. Refer to the plans and specifications for the spacing and type of fastener required for the project.
3. Starter strip
   Install the insulation strip under the first row of blocks before applying mortar. Fix or glue it and install the first row afterwards.
4. Flashings for moisture protection:
   Refer to plans and specifications for the location and type of flashing required for the project.

For any questions, do not hesitate to contact the Isobloc team or visit the website for other resources.

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