Pronto Block is an exciting innovation in concrete block construction. With this specially-engineered dry-stacked block system, load-bearing walls can be quickly and easily built, with minimal skilled labour.

Pronto Block offers the possibility of substantial savings in construction time and labour costs, and greatly reduces the waste associated with mixing mortar onsite. Unlike other similar systems Pronto Block features significant new innovations to ensure maximum strength and reliability of a finished wall, and complies with the governing Australian Standards.

The strength and load bearing capacity of Pronto block walls is gained from the core filled, and all walls constructed with Pronto Block must be fully grouted. All finished walls are therefore reinforced concrete walls.

Construction of walls using Pronto Block is quicker than construction of walls using traditional mortared blocks. Furthermore there is very little of the usual onsite mess (sand, cement bags, mortar droppings, etc) so no clean out blocks are necessary and the blocks can be laid wet or dry.

In fact, Pronto Block walls can even be laid in the rain if necessary!
BENEFITS

Experience the difference

Pronto Blocks offer a host of benefits including:

**Fast:** Faster to lay than mortared masonry.

**Easy:** No mortar and no trowel means unskilled labour can be used.

**Clean:** No mortar means no mess – no sand, no cement bags, no mortar droppings, no site clean up.

**All Weather:** Pronto Block can be laid when wet, and therefore they can be laid in the rain (within safety onsite guidelines).

**Code Compliant:** Pronto Block has been designed by engineers to provide proper cover to embedded reinforcement, meeting Australian Standards. This is an essential feature if long-term corrosion and spalling is to be avoided.

**Clever Connections:** Pronto Block connectors have been designed to securely support all reinforcement in its correct location. Horizontal reinforcing bars are firmly held in position by the notches in the connectors. Vertical reinforcing bars are accurately held in position between the specially shaped base of the connectors and the horizontal bars.

**Uncompromising:** Pronto Block provides an opportunity for builders, block layers, landscaping contractors and the handymen to enjoy the numerous benefits of a dry-stack block system without compromising structural adequacy, structural integrity or durability.
All load bearing walls constructed with Pronto Block rely on the composite action of the shell and the core fill grout for their strength in resisting both axial and transverse loads. All walls constructed with Pronto Block must therefore be core filled (grouted). It is essential to provide adequate concrete cover to reinforcement if long-term corrosion is to be avoided in walls that are exposed to the elements and the Pronto Block connectors allow for this.

Most dry-stack block systems do not provide adequate cover to the embedded reinforcement and hence walls constructed using the blocks may not comply with AS Codes. Pronto Block walls are the exception. Pronto Block has been designed by engineers to address this issue. The ends of the blocks have been especially shaped to ensure adequate grout cover, and the plastic connectors have been engineered to ensure that grout can readily and completely fill voids formed by the shaped ends of the blocks. These are the predominant features that differentiate Pronto Block from the rest, and the importance of these features cannot be overstated.

Another important feature of Pronto Block is the chamfer along the inside top edge of both face shells. These chamfers allow grout to fill under the bottom surface of the blocks in overlying courses and thereby maximise the effective load bearing width or thickness of walls constructed using the blocks.

**STRUCTURAL ADVANTAGE**

*Built strong to support solid structures*
Pronto Block PRODUCT GUIDE

PRODUCT RANGE

Block sizes, formats and accessories

Pronto Block is presently available in 140 and 200 thicknesses. In both sizes the range of blocks is sufficient to construct straight walls, ends and corners for walls dimensioned in 200 increments both lengthwise and in height.

140mm Series

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.01M</td>
<td>Stretcher</td>
<td>400 x 200 x 140mm</td>
</tr>
<tr>
<td>15.02M</td>
<td>Full End Block</td>
<td>400 x 200 x 140mm</td>
</tr>
<tr>
<td>15.03M</td>
<td>Half End</td>
<td>200 x 200 x 140mm</td>
</tr>
<tr>
<td>15.04M</td>
<td>Corner Biscuit</td>
<td>60 x 200 x 140mm</td>
</tr>
<tr>
<td>140MC</td>
<td>Connector</td>
<td></td>
</tr>
</tbody>
</table>

200mm Series

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.01M</td>
<td>End Stretcher</td>
<td>400 x 200 x 200mm</td>
</tr>
<tr>
<td>20.02M</td>
<td>Full End Block</td>
<td>400 x 200 x 200mm</td>
</tr>
<tr>
<td>20.03M</td>
<td>Half End</td>
<td>200 x 200 x 200mm</td>
</tr>
<tr>
<td>200MC</td>
<td>Connector</td>
<td></td>
</tr>
</tbody>
</table>
**Step 1**

**Dimensioning**

Dimension wall lengths in 200mm increments whenever possible. This will avoid the need to cut any blocks.

Dimension wall heights in 200mm increments. This can be manipulated to some extent by laying the first course in a bed of mortar of a particular thickness, e.g. a 10mm mortar bed for the first course will add 10mm to the height of a wall.

Be aware that 200 Pronto block is in fact 200mm wide (not 190) and this will not suit the commonly available metal door frames.

The positioning of openings and the dimensions of opening widths should wherever possible suit the 200mm module of the blocks. To a certain extent however blocks can be cut to length to suit an opening width provided the structural integrity of the blocks is not impaired, and provided the sides of the opening are shuttered up prior to grouting.

**Step 2**

**Starter Bars**

Set out starter bars to coincide with the perpends in the wall. (Note: perpends are the vertical joints between the ends of two adjacent blocks.)

The perpends always occur at multiples of 200mm and therefore in any wall the starter bars should be set out at multiples of 200mm starting at the end of the wall.

There are just two exceptions:

Exception No 1. If a bar is required at any corner then it should be positioned at about half the block thickness in from the face of both intersecting walls. Note however that there should never be a starter-bar at the first perpend each way from a corner as this will clash with a face shell on every second course. (Refer Figure 1)

Exception No 2. If the wall contains cut blocks then the set-out at 200mm increments should be commenced from each end up to the location of the cut blocks. (Walls will only contain cut blocks when the length of the wall panel is not a multiple of 200mm).

As a check it is good to remember that all starter bars except corner bars should pass through a plastic connector in either the first course or the second course of blockwork.

**Step 3**

**Laying Blocks**

It is recommended that the first course of blocks be set in a mortar bed as any unevenness or variation in the slab level whatsoever will be reflected throughout the entire height of the wall. Setting the first course in mortar also ensures maximum bearing width at the base of the wall.

When laying the first course in mortar ensure that there is no mortar in the perpends as any mortar in the perpends will cause the length of the wall to grow and this will cause a problem in subsequent courses.

Prior to commencing laying of the first course, accurately set out all of the walls and mark all ends and corners. Whenever possible mark the line of the face of the wall using a chalk line.
Lay the blocks from both ends meeting approximately at mid length. If the set-out is accurately marked and the blocks are laid as described above, then the last block will slip into place without the need for being forcefully installed.

The end blocks contain slots for knock-outs. When constructing a corner, run a small diamond saw down the outside of the block on the appropriate side along the line of the slot and knock out the piece between the cuts so that a plastic connector can be installed to tie it to the end stretcher block in the intersecting wall. This applies to the first course and all subsequent courses. Failure to install connectors at corners could result in blocks becoming displaced during grouting.

When the first course is fully laid, install the plastic connectors at all perpends.

Build up the ends and corners of the walls true to a plumb line on all faces, ensuring all blocks are laid with tight perpends and ensuring all perpends are tied with plastic connectors. Install horizontal reinforcement as required by the engineer. Do not neglect to install corner bars and lap bars when building up ends and corners.

Note that when constructing an end to a straight length of wall, the last block in each course will alternately be a full end block or a half end block.

When constructing a corner in a 200 block wall, one full end block and one biscuit will be required on each course. The side of the full end block should be knocked out even though the plastic connector will only connect the end of the stretcher block to the biscuit. The knock out is required for the continuity of grout and the installation of L bars that lap with the horizontal reinforcement.

Use a string line stretched between the ends or corners of each length of wall to align the top corner of each block, and fill in each course of blocks maintaining tight perpends between all blocks. After the course is laid, install a connector at each perpend. Repeat this procedure on subsequent courses ensuring always that the perpends are tight and that the horizontal reinforcing bars are installed at the specified intervals.

If the gap for the final block on any course is too tight, starting at one end and then the other move each block in the course away from the gap to take up any slack in the perpends and then install the final block. Do not use a hammer to knock the final block into position.

When placing each block use the wedge provided with each connector if necessary to adjust its plumb line or its level. These can be used to lift the block on one side or to lift it at one end as and if required.

Sometimes it will be necessary to tap a block sideways to align it with the block below or with the block at one or both ends. DO NOT USE A HAMMER for this as it can fracture the block. Be aware that any fractured blocks that go undetected may blow out during grouting. When it is necessary to tap the block sideways, use a rubber mallet to move the block.
Make all necessary adjustments to the blocks in one course prior to laying blocks in the next course. This is very important. It should never be necessary to adjust the alignment or plumb of any block below the course being laid. Follow the above procedure for laying blocks in each course until the wall has reached grouting height. Plug any voids created by chips to prevent grout spilling out of the wall. Use 1:6 (cement:sand) mortar for plugging the gaps.

**Step 4**

**Reinforcement**

Refer to the engineer’s drawings for reinforcement requirements, and see above for set-out and installation of starter bars.

All reinforcement bars for Pronto Block walls should be straight or there will be serious issues when it comes to installation. Reject any bent bars.

All vertical bars with the exception of any corner bars should be aligned with perpends and should therefore pass through the plastic connectors. All vertical bars should also lap with starter bars (when installed), therefore it is necessary to mark the positions of starter bars for future reference when installing vertical bars in subsequent lifts of the wall.

Horizontal reinforcement should be installed to the engineer’s specification, but in any case it is recommended that horizontal reinforcement be installed at maximum 600mm centres in any Pronto Block wall. The plastic connectors are castellated to firmly hold N12 bars in position and it is recommended that all horizontal reinforcement consist of N12 bars unless Engineer requires higher grade.

Push horizontal bars into a notch in the connector to secure it in a position; this will help support the vertical reinforcement in its specified position and it will strengthen the wall during construction.

Install 1000 x 1000L bars in corners and lap minimum 600mm with horizontal bars beyond the corner.

Install 1000 x 400L bars at T intersections and lap the 1000mm leg 600 with the horizontal bars in the wall that terminates at the intersection.

After the wall is completed to the required height for grouting, install the vertical bars in the specified position with respect to the outside face of the blockwork. If the wall has been properly constructed, the vertical bars should be firmly held in their correct position by the horizontal bars and the plastic connectors.

When vertical bars are to be located centrally, they should be held in position by alternating rows of horizontal bars.

When vertical bars are to be located on one side or the other, they should be held in position by a horizontal bar on one side and the connector on the other side.

Note that vertical bars should extend at least 600mm beyond the top of the blockwork in a section of the wall for lapping with vertical bars in the subsequent section of wall.
**Step 5**

**Core Filling (Grouting)**

Always use specially formulated grout. This should have a maximum 7mm aggregate and it should have about 230mm slump. A minimum 20MPa compressive strength (f’c) is recommended but always comply with the structural engineer’s specification.

It is recommended that walls be grouted in maximum lifts of about 1.4-2.0m (7-10 courses). As with any block wall, the higher the wall being grouted the greater the pressure of the wet grout and the greater the risk of a blow-out during grouting.

Anyone constructing a wall must also be very mindful of the need to maintain a safe workplace. Stability becomes an increasingly greater concern as the wall height increases, and tall walls will generally require temporary support during construction.

Always thoroughly drench the inside of the blockwork immediately before grouting to prevent water being sucked out of the grout.

Always rod the grout to ensure proper compaction. Do not use mechanical vibration as this could fracture the blocks and result in blow-outs during grouting.

Always be prepared for the potential blow out. Keep materials on hand so that blow-outs can be remedied quickly without unduly delaying the grouting procedure. Stop grouting at about 50mm below the top of the blockwork to form a key for the subsequent section of wall. If there is no subsequent section then top up and finish the top surface of the grout after about 30 minutes.

Upon completion of each grouting operation always clean off the top edges of the block to ensure there will be no issues when the subsequent course of blocks is laid. Also check that none of the blocks in the top course have been displaced laterally, that all of the connectors are pushed down onto their seating, and that the four projecting posts of each connector are free of grout.
WE ARE

Brickworks

Brickworks Building Products is one of Australia’s largest and most diverse building material manufacturers. Under the Brickworks Building Products umbrella are some of Australia’s best known building materials brands. Our products include bricks, pavers, masonry blocks, retaining wall systems, precast concrete panels, concrete and terracotta roof tiles, timber products and specialised façade systems.

With a broad product portfolio and manufacturing and sales facilities across Australia, Brickworks Building Products is uniquely placed to service the demands of the building industry.

With over 1200 staff across Australia and New Zealand, we pride ourselves on our commitment to product, service excellence and our leadership position.