BENDERS **LANDSCAPING** I WALLING SYSTEMS

USER INSTRUCTIONS

Bender Boston antik

A walling stone with a granite look

A walling stone that has the character of granite. One side is uneven and tumbled, the other smooth and tumbled. The walling stones have locking plugs that make it possible to build both sloping and perpendicular retaining walls with or without geomesh. Freestanding walls up to 60 cm high can also be built or as a gate post using Boston corner stones or end stones. Bender Boston tumbled opens up countless possibilities that invite you to create walling solutions uniquely suited to your kind of garden.

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SEE ALSO "WALL BUILDING TIPS AND TRICKS"

Overview:

1. Boston perpendicular retaining wall without geomesh. Rec. height, max. 50 cm *(fig. 4)*
2. Boston perpendicular retaining wall with geomesh. Rec. height, max. 80 cm *(fig. 5)*
3. Boston sloping (4 degrees) retaining wall without geomesh. Rec. height, max. 80 cm *(fig. 6)*
4. Boston sloping (4 degrees) retaining wall with geomesh. Rec. height, max. 1.5 m *(fig. 7)*
5. Boston freestanding wall. Rec. height, max. 60 cm *(fig. 8)*
6. Examples of corner and end structures *(fig. 9)*
7. Stated rec. max. heights are above ground level.
8. Number of locking plugs per square metre, approx. 38. For fitting *(fig. 1-3)*

Wall block
350x200x150 mm
Art nr 25510xxB

Top block
350x200 x150 mm
Art nr 25511xxB

Corner block
350x200x150 mm
Art nr 25512xxB

End block
150x200x150 mm
Art nr 25513xxB

Boston Locking plug
Art nr 2914000

Geogrid X-35
25x1,25 m
Art nr 2912720

NB! When cutting stones, you must use safety goggles, hearing protection and respiratory protection.

Retaining wall instructions

1. For the wall's foundations, excavate a trench that is around 30 cm deep and 50 cm wide. Lay underlayment fabric in the trench. Fill with a layer of crushed rock (grade 0-32 mm) or similar. Compact using a plate compactor. Level out with an around 3 cm thick layer of a finer grade of gravel (stone dust). Lay the wall's first course in the middle of the trench. About 10% of total wall height must be below the ground level. If the ground slopes, start from the lowest point. Fill with a drainage layer of 8 – 16 mm fine crushed stone (or similar) to a width of at least 15 cm behind the wall. Also backfill the space at the front of the blockstones. Check that the first course is level or rakes slightly in towards the slope. This is so that margins can be maintained when compacting the fill behind the wall. Where a drainage pipe is used, this must be located behind the wall and have an even drop that leads water away from the wall. As a fill behind the drainage layer, you can use the same material as for the foundations. Compact. Use a light plate compactor, operating weight 80 – 125 kg. Use it carefully and not so near the wall that the wall moves.

2. Fit locking plug (vertical or sloping walls) – see figs. 1 and 2. If geogrid is used, the first grid must always be positioned between the first and second courses. As shown in fig. 3, lay the grid over the locking plug. Tension the geogrid well and fill with materials so that this is maintained. Maintaining an offset bond pattern, continue with a number of courses of blockstones up to the next geogrid level as per fig. 5. Compact the backfill continuously. Where ground conditions are variable and difficult, geogrid is recommended even for low walls.
3. Finish the top course with Boston top blocks. Glue them with Benders' concrete glue or similar. Posts, as well as start, end and corner blocks, are also always to be glued.
4. If you backfill with soil at the top courses, fold underlayment fabric against the back of the blockstones and out along the backfill. This is to avoid material shifting and discolouration of the wall.

NB! These details apply to stable foundation installation conditions. However, they are still only intended as guidelines. Further technical advice may be needed in respect of geological variations in site and ground conditions. Benders' information is free and is not to be regarded in the same way as, for example, an authoritative construction drawing. Nonetheless, the information is of great use in all relevant building projects.

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Fig 1. Fitting of Bender Låsplugg (locking plug), vertical wall. Fit two locking plugs per blockstone.

Fig 2. Fitting of Bender Låsplugg (locking plug), sloping wall. Fit two locking plugs per blockstone.

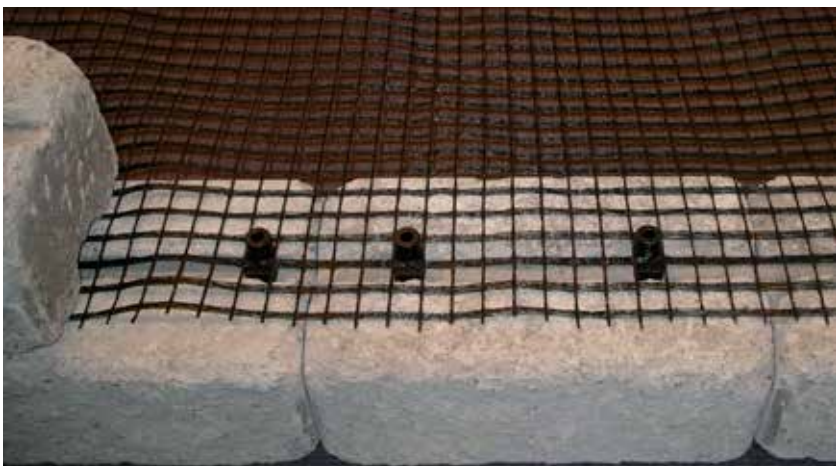

Fig 3. Fitting Bender Geonät (geogrid) to the first course. Secure the grid over the locking plugs. Have the plugs protruding from the third row of the grid. This is so that, without being visible, there is as much grid between the courses as possible. The grid is also then as secure as possible.

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Fig 4. Cross section, perpendicular retaining wall (up to 0.5 m) without geogrid.

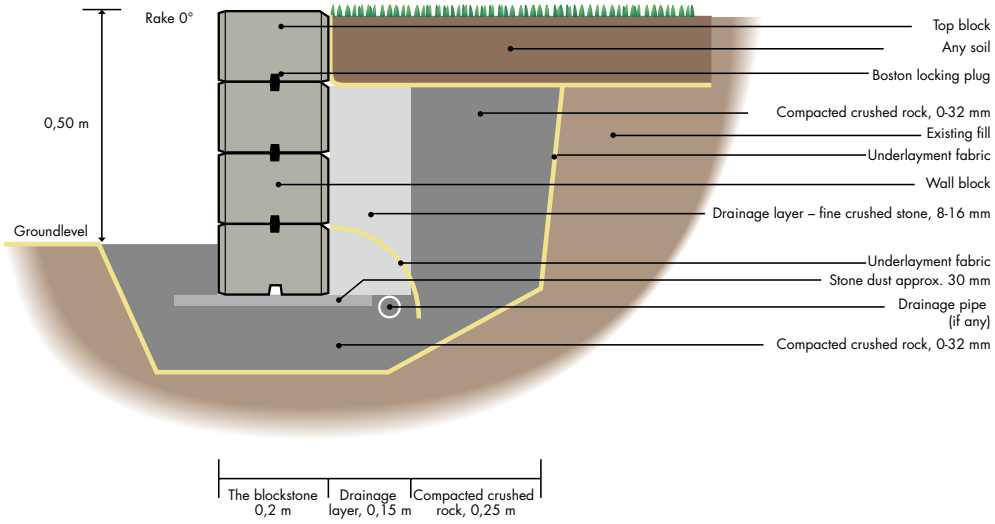
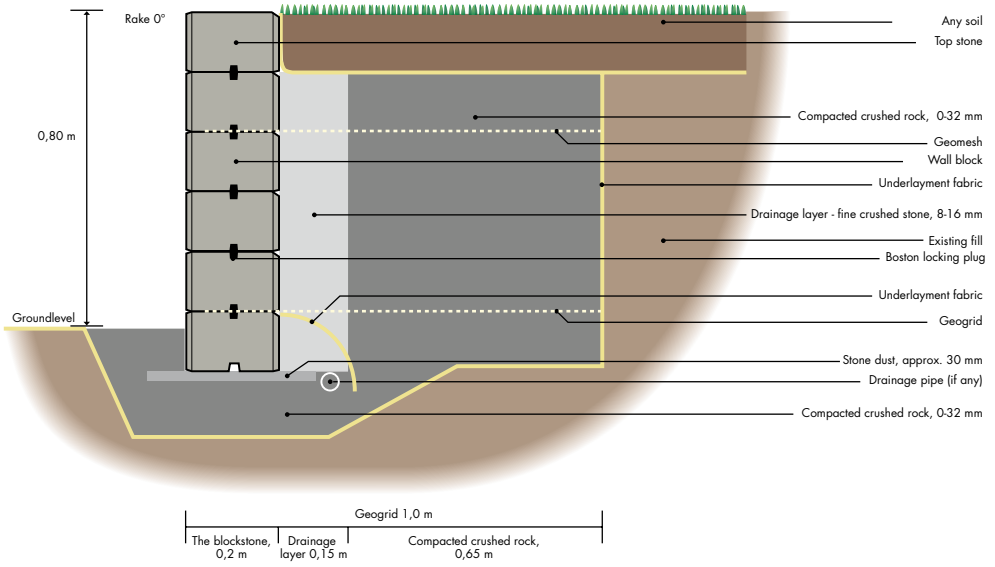


Fig 5. Cross section, perpendicular retaining wall (up to 0.8 m) with geogrid.



Important!
If the ground behind the wall slopes or is subject to loads (e.g. vehicles of various types), geomesh must always be used. For geomesh dimensioning, contact Benders' customer support.

Wall glueing
The top course, as well as corners, starts and ends, must always be glued. Rec. adhesive, PL800, PU700 or similar.

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Fig 6. Cross section, sloping retaining wall (up to 0.8 m) without geogrid. Fit two locking plugs per blockstone.

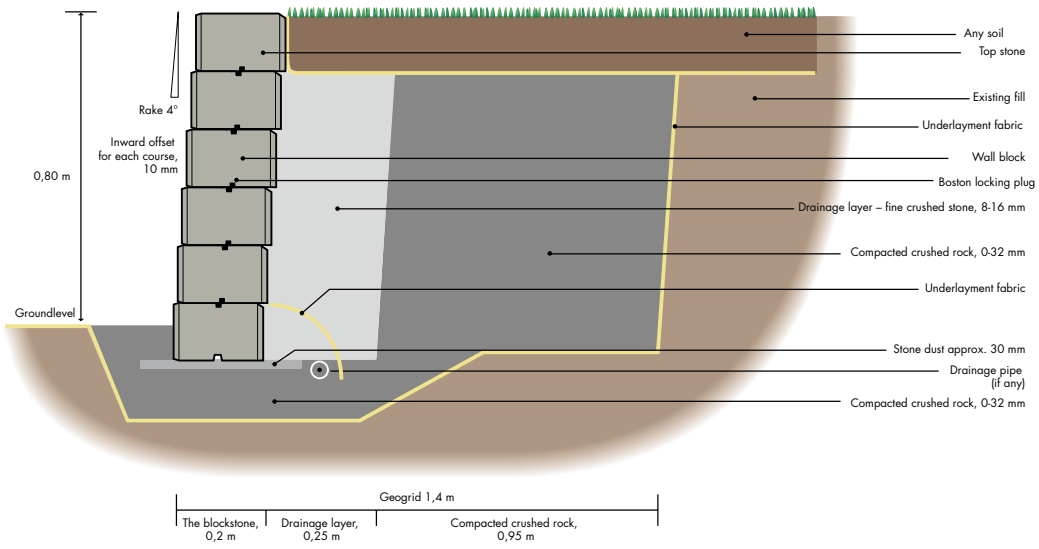

Fig 7. Cross section, sloping retaining wall (up to 1.5 m) with geogrid. Fit two locking plugs per blockstone.

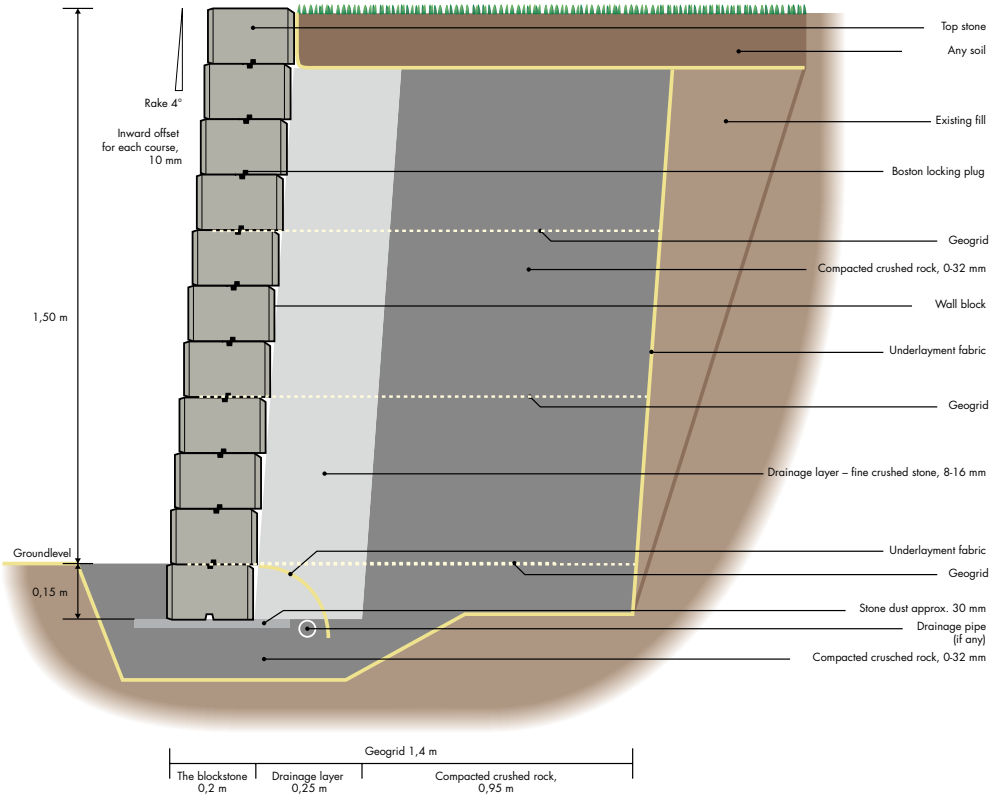

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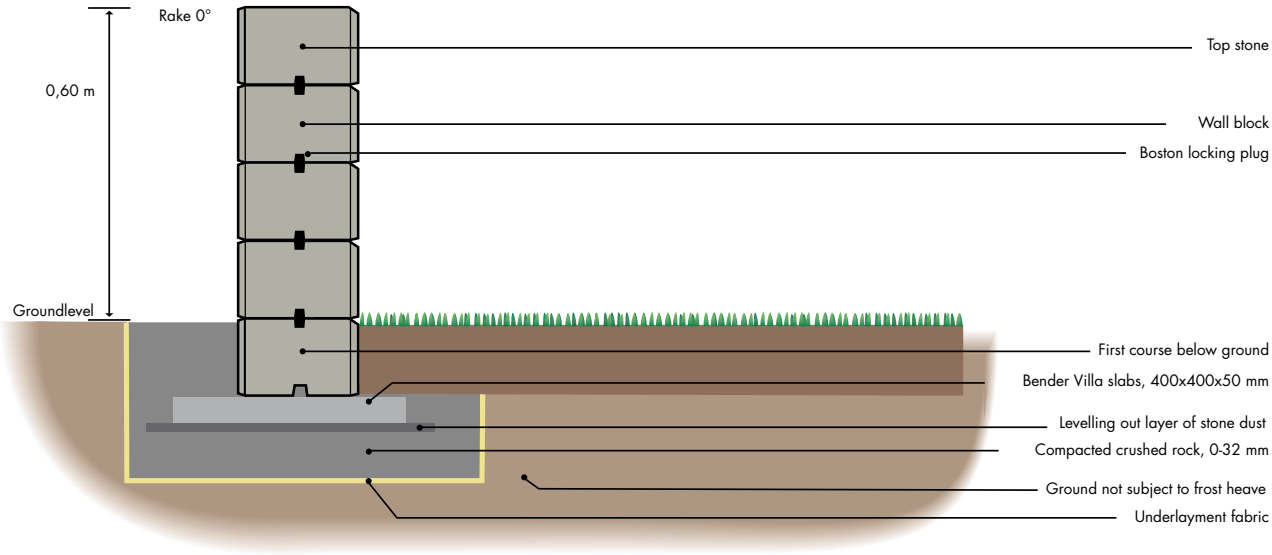
Fig 8. Cross section, freestanding wall up to 0.6 m. Fit two locking plugs per blockstone.



Freestanding wall instructions – Rec. height, max. 60 cm

1. For the wall's foundations, excavate a trench that is around 40 cm deep and 60 cm wide. Lay underlayment fabric in the trench. Fill with at least 15 cm thick layer of crushed rock (grade 0 – 32 mm) or similar. Compact well using a plate compactor. Level out with an around 3 cm thick layer of a finer grade of gravel (stone dust) for laying the concrete slabs (fig. 8). Use a spirit level and a straight edge to check that the slabs are level and stable.

2. Start by glueing the wall's first course to the concrete slabs. Use Benders' concrete glue. The top of the wall's first course should now be at ground level (fig. 8). Depending on whether there is to be planting or some form of paving next to the wall, use crushed rock, stone dust or soil to fill on both sides of the first course. The wall's foundations are now complete.

3. Using an offset bond pattern and locking plug, build to the desired height (max. 60 cm). Corners can be built with or without corner blocks. If corner blocks are used, they must all be thoroughly glued. Finish the wall with Boston top block. You can also use our special coping stone, Bender Megatäck patina. Thoroughly glue the first and last course. Intermediate courses need only be glued intermittently. If the wall is finished with Bender Megatäck patina, other top blocks are unnecessary.

4. Where ground conditions are difficult, it is recommended that a concrete slab is poured as foundations for the wall.

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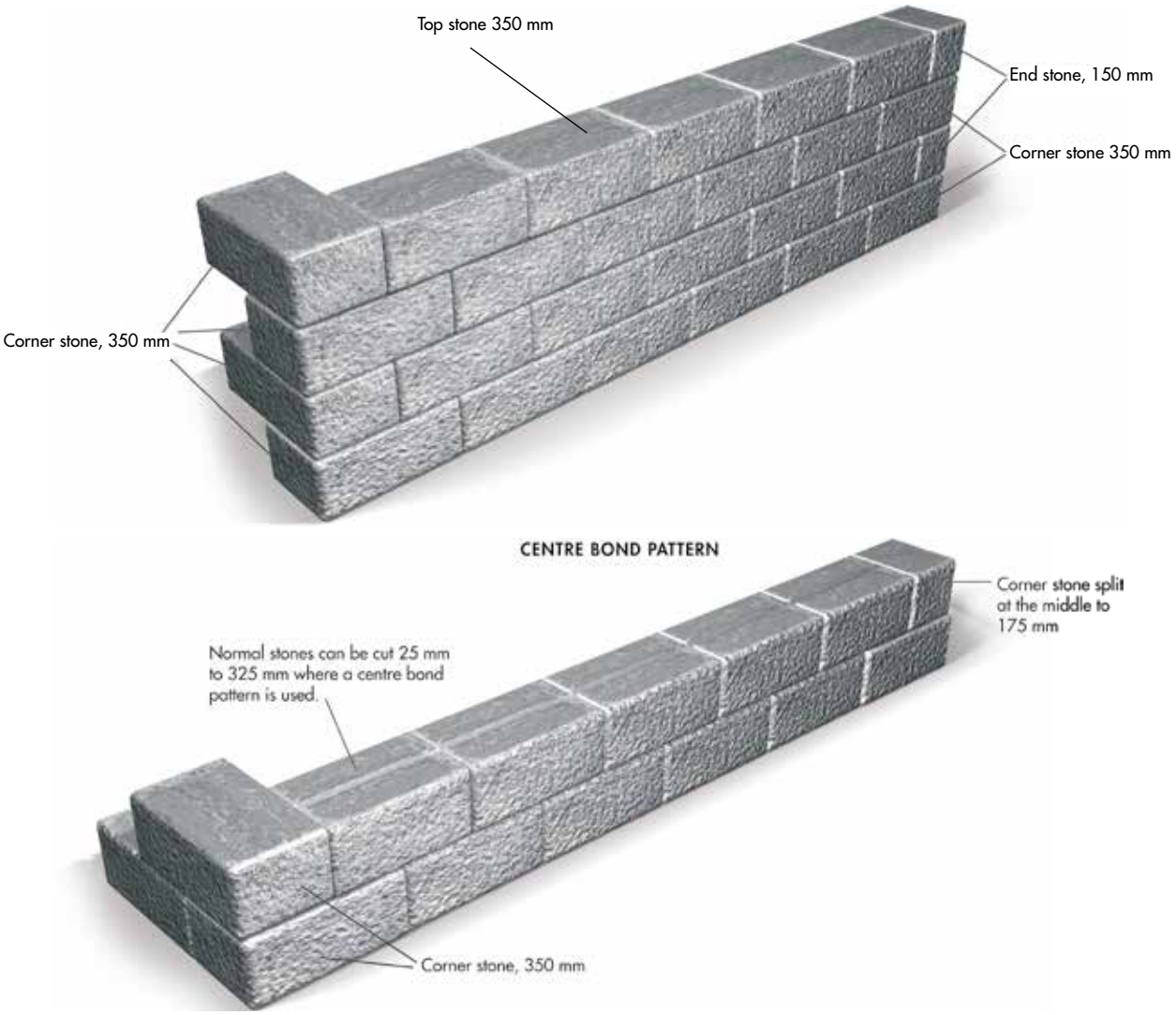
Fig 9. Examples of corner and end structures.



Important!
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Wall glueing
The top course, as well as corners, starts and ends, must always be glued. Rec. adhesive, PL800, PU700 or similar.