

Löffelstein®

Retaining Systems

The dry stacking, interlocking retaining system.



John Orr Technical College - Empire Road

SABS
ISO 9001

Product features

Löffelstein® is a dry stacking, interlocking retaining system. It is unique because of its versatility, adaptability and plantability.

- Structurally stable - no need for additional concrete infill
- All Löffelstein® systems are available in vertical and heavy duty applications
- Ideally suited for retaining cut or fill slopes between 3 and 15m high.
- Three basic block sizes - L300/L500/L750.

Löffelstein® heavy duty - where wall heights exceed 3,5m. This block's thickened base prevents it being crushed under the wall's own mass. This specially engineered block is employed as a facing to geosynthetic reinforced slopes or for geonail or rock-anchored cut slopes. The L750 block is used for critical path design applications where certain design criteria call for maximum mass per m².

Löffelstein® vertical - two undercut corners permit wall construction at an angle of 87°. It can be used in conjunction with the standard block in restricted areas, and in the construction of higher structures, used in conjunction with geosynthetic reinforcement, cement stabilization, geonailing, rock anchors or other soil stabilization methods. When compared with conventional retaining structures, such custom designed walls can contribute to dramatic savings in time and money.

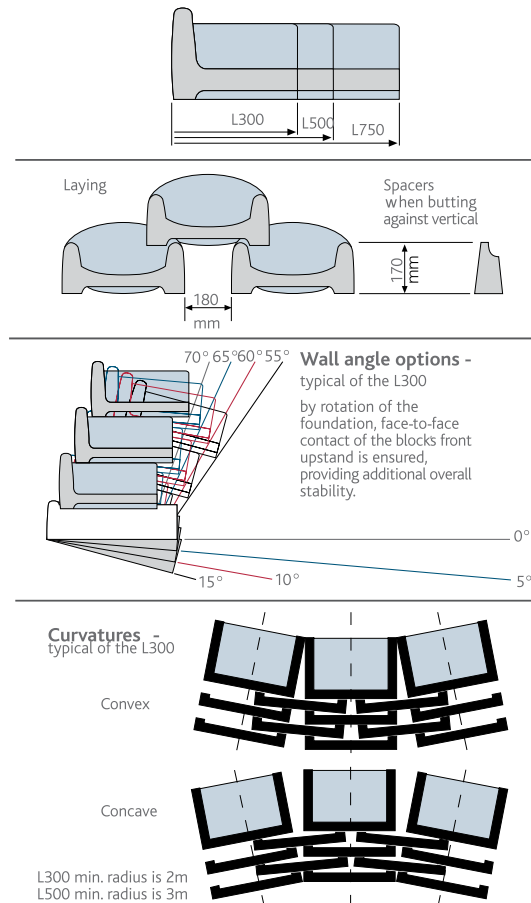
Foundations - must be designed to suit individual projects. In most instances a simple concrete foundation will suffice.

Laying - at 180mm spacings, lay the first course of blocks on the level base/angled base. Interlocking blocks of the second course are then centrally stacked to span two blocks of the lower course. Align the blocks horizontally with a straight edge spirit level. Adjust minor level variations in blocks by trimming the higher sides with a chipping hammer, or lifting the lower side and packing stabilized soil underneath. Align long straight lengths of walling by securing a fish line around the outermost lying blocks and pulling the face of each block almost against the line. Fill preceding blocks with a suitable plant supportive soil. Compaction behind the blocks is critical.

Curvatures - with the smallest possible radius of 2m for L300 and 3m for L500. Convex curvatures get smaller as an inclined structure rises. The first course is laid out to a maximum spacing of 190mm at the front and a corresponding smaller spacing at the back to suit the required radius. Concave curvatures get bigger as you build an inclined structure. Therefore, the first course is laid out with a minimum of spacing to suit the radius at the front and a correspondingly reduced spacing between the backs of the blocks. Depending on the accuracy of laying and the actual layout of curvatures, you may experience difficulties with the interlock or spacing of blocks after erecting four or five courses. To rectify this you should fill the completed preceding row of blocks with soil, tamper it down hard and reset in accordance with the first course's layout. Engineered designs - before construction consider soil conditions, cohesion of material, overall slope stability, foundation requirements and choice of reinforcement.

Planting - completed structure. Take care in the choice of plants, in order to minimise possible maintenance problems. Indigenous ground covers are recommended.

Technical advice - the structural stability of a gravity retaining system depends on soil conditions, wall angle, overall slope stability and slope angle (surcharge) on the top and the base of the wall. NB - Structures exceeding 1,2m in height necessitate engineered designs and the submission of plans to the local authority. Note - This leaflet serves only as a guideline.



Technical Data	L300	L500	L750
Mass per block - approx.	34kg	52kg	82kg
Length	300mm	500mm	750mm
Width	450mm	450mm	450mm
Height	170mm	170mm	170mm
No. of units per linear metre	1.6	1.6	1.6
No. of blocks per m ² (not influenced by the wall's angle)			
- Straight line	9.5	9.5	9.5
- Curved structures	10-12	10-12	10-12
Variable wall angle options			
- Maximum std blocks	70°		
- Maximum std blocks	87°		