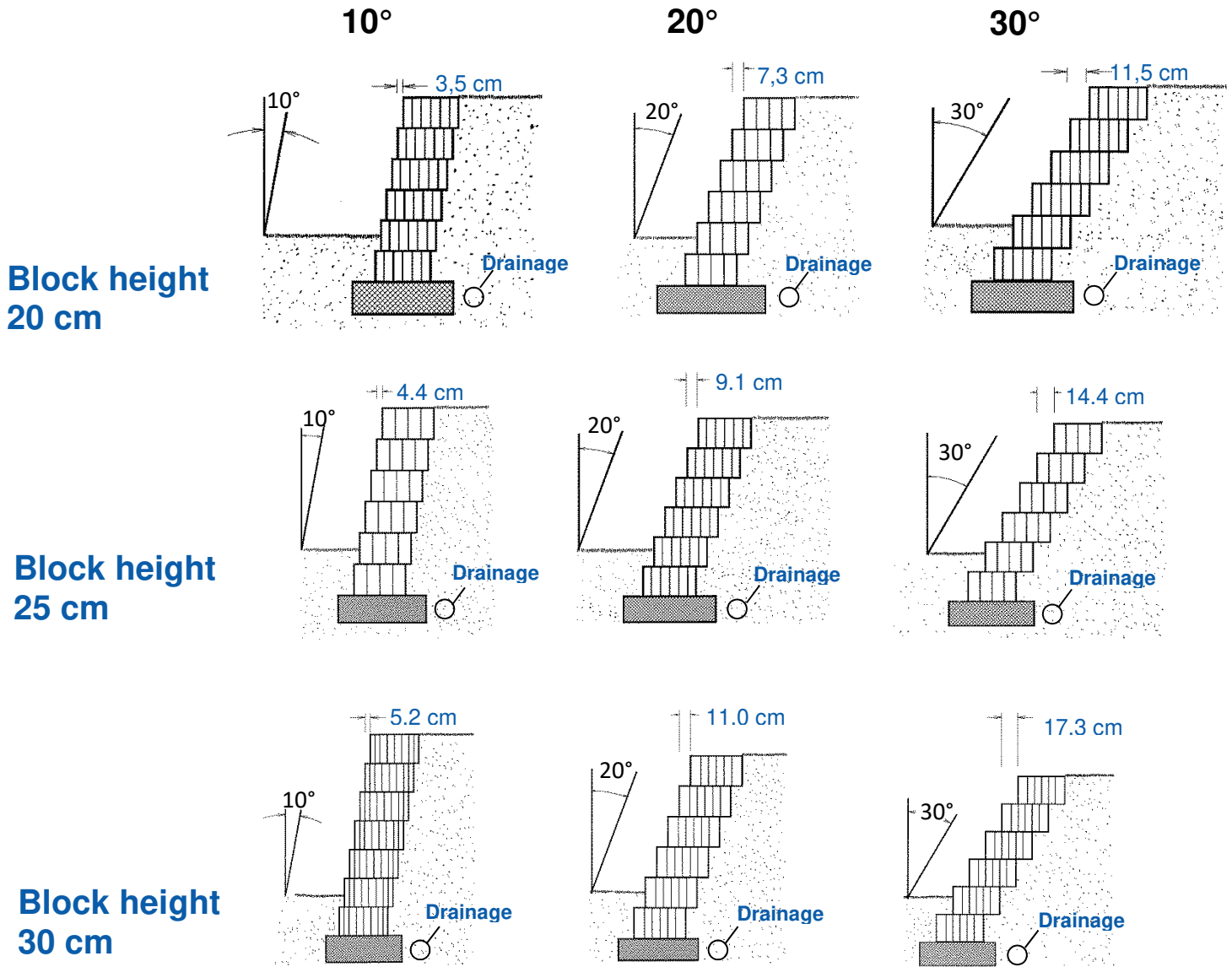


Installation example for various block heights (please read the working instructions first).

Assumption of the following soil parameters: $\gamma_e = 18 \text{ KN/m}^3$, $\varphi = 35^\circ$, $\delta = 2/3\varphi$; $\beta = 0^\circ$; $p = 5,0 \text{ KN/m}^2$



approx. max. construction height in cm (structural survey must be completed according to local regulations)

	Gartenmauer	Rasterstein				Multistein			
	lengthwise	small lengthwise	medium lengthwise	large lengthwise	large crosswise	small lengthwise	small crosswise	large lengthwise	large crosswise
Wall thickness	20 cm	20 cm	30 cm	40 cm	60 cm	24 cm	33 cm	30 cm	45 cm
0° Offset	20 cm	25 cm	50 cm	75 cm	150 cm	40 cm	60 cm	60 cm	90 cm
10° Offset	40 cm	50 cm	100 cm	150 cm	225 cm	60 cm	100 cm	90 cm	150 cm
20° Offset	100 cm	100 cm	150 cm	225 cm	350 cm	100 cm	160 cm	150 cm	240 cm
30° Offset	140 cm	150 cm	275 cm	375 cm	600 cm	200 cm	300 cm	270 cm	420 cm

Working instructions

Slope reinforcement blocks

Foundation recommendations

As a general rule, installing the slope reinforcement blocks requires a simple site preparation, as follows:

Excavate to approx. 40 cm depth and apply and compact an approx. 15 cm deep frost protection layer. The lowest row of the elements should be embedded roughly to the halfway mark in the soil and is then laid level and true on a layer of earth-moist concrete that is at least 10 cm deep. The following rows are now laid dry with the back of the blocks against the soil. Any variations in height (e.g. dimensional tolerances from manufacturing) should be evened out with suitable underlay material or mortar. The slope reinforcement blocks are set next to one another so that the connecting lugs interlock. If the foundation soil is poor and not load-bearing, or for wall heights over 1.00 m, a footing below the frost line should always be used. The foundation depth should then be 80 cm, and the concrete base should be at least 20 cm deep. The footing depth and foundation strength should be verified with a structural survey completed according to local regulations. A drainage system may be required to drain away water.

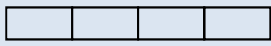

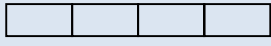
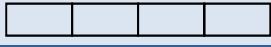
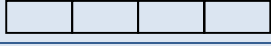








Filling and backfill

We recommend fitting a membrane to the rear side of the wall. The membrane protects the wall from the penetration of moisture. To prevent damage from water accumulation and frost, the slope reinforcement blocks must be filled to at least a third of their depth with lava rock, gravel or ballast. The blocks are then topped off with a suitable soil.

For wall heights over 1.50 m, we recommend filling the lower rows of blocks with tamped concrete and then consolidating by tamping down. An area can also be kept free of concrete for planting. Always ensure proper water drainage.

The slope reinforcement blocks should be backfilled with a frost-free material that is applied in layers and then tamped down to a firm surface. Since cavities should be avoided, backfilling is recommended after each row of blocks. A narrow layer of gravel or stone chippings for water drainage is recommended between the slope reinforcement blocks and the backfill.

For [free-standing walls](#), an offset arrangement of blocks, partial filling with concrete and/or some kind of fixing/clamping system should be used appropriate to the height and verified with an on-site survey. A structural survey and building permit may also be needed depending on the wall height and according to local regulations. Load assumptions according to DIN 1055, wind pressure 0.4 KN/m², wind suction 0.2 KN/m². The footing depth and foundation strength should be verified with a structural survey completed according to local regulations.

	Wall width		Installation with block format	Free standing, approx. max. wall height
C-Line-Block	15 cm			37,5 cm
C-Line-XL-Block	15 cm			60 cm
Antikblock	20 cm			80 cm
Gartenmauer	20 cm			125 cm
C-Line-wall	25 cm			125 cm
Rasterstein	20 cm		small	125 cm
	30 cm		medium	250 cm
	40 cm		small/medium/large	375 cm
	60 cm		large	800 cm
Multistein small	24 cm lengthwise			180 cm
	33 cm crosswise			340 cm
Multistein large	30 cm lengthwise			230 cm
	45 cm crosswise			510 cm

Technical information

Foundation soil

Before concrete products are used, the foundation soil should be examined and evaluated onsite. The foundation soil should be prepared to ensure that sufficient structural strength for the intended use is achieved, as well as an adequate water drainage system.

Colour and structure

Natural raw materials such as sand, gravel, ballast and water are subject to natural variation. The same applies to cement and pigments, which are manufactured from natural materials. The product type and size, weathering and age of the parts will also influence colour and structure. Deviations are therefore unavoidable. In all cases, a mixture of blocks should be laid from multiple pallets. Weathering and mechanical stresses and strains will even out these differences over time.

Blooming

If limestone – a component of cement – is dissolved in water, this can rise to the surface of the concrete. In conjunction with atmospheric carbon dioxide, this produces a brightly coloured deposit on drying that is termed 'blooming'. This is technically not preventable. The practical value is unaffected, however, since weathering (rainwater slowly dissolves this deposit again) and mechanical stresses will at least reduce these areas of blooming over time and may eliminate them entirely.

Dimensional variation

Due to production conditions, dimensions may vary slightly in terms of stone heights. These height differences can be compensated for quickly and easily by placing suitable thin pieces of material (also known as 'glazing shims') underneath.

Layout recommendations for "Rasterplatte"

The foundation should be selected according to local circumstances. As a general rule, a base course of non-binding, water-permeable material should be laid at a depth of 15 to 20 cm. This must be compacted to a firm and level finish. (Do not use fine-grained bedding ballast to fill out cavities.) To bed the slabs, a layer of 2 to 4 mm-size (or 2 to 5 mm-size) ballast is ideal; the bed should be levelled off using a straight edge. Elevation drops can be installed to drain off surface water; water can also be drained off using guttering, however. The **"Rasterplatte"** interlocking paver must be laid with joints of 3 to 5 mm (also between the last slab and the edge of the patio). Do not attempt jointless laying, as this will lead to edge breakage. Avoid soiling (e.g. from earth, clay, mortar, etc.) during laying – cover slabs using a plastic sheet, for example. Joints can be finished by brushing over with silica sand or fine ballast (do not use a slurry). Joints that have been created using spacers can be left open. **"Rasterplatte"** installations must not be compacted and are not suitable for use on surfaces used by vehicles.