

KERBSTONE INSTALLATION GUIDELINES

Concrete kerbstone elements are concrete products intended to separate surfaces at the same level or at different levels, to physically or visually edge or confine these surfaces, to form, alone or in combination with other elements, water drainage chutes, to separate surfaces intended for different types of traffic. Kerbstones prevent the base layer at the edge of the pavement from sinking out from under the pavement and, on the other hand, prevent the protrusion of grass roots, thus ensuring the stability of the pavement.

The kerbstones produced in the Republic of Estonia must comply with the requirements of EVS-EN 1340:2003+AC:2006.

Two methods are used in road construction for verges: installation using lump products (plastic flanges, non-shrink grout or pressed concrete, natural stone) and cast-in-place extrusion (concrete).

The individual kerbstones are divided into glueable and countersunk. This guide deals with the installation of countersunk concrete kerbstones. According to the area of use, kerbstones are divided into roadway kerbstones and pavement kerbstones.

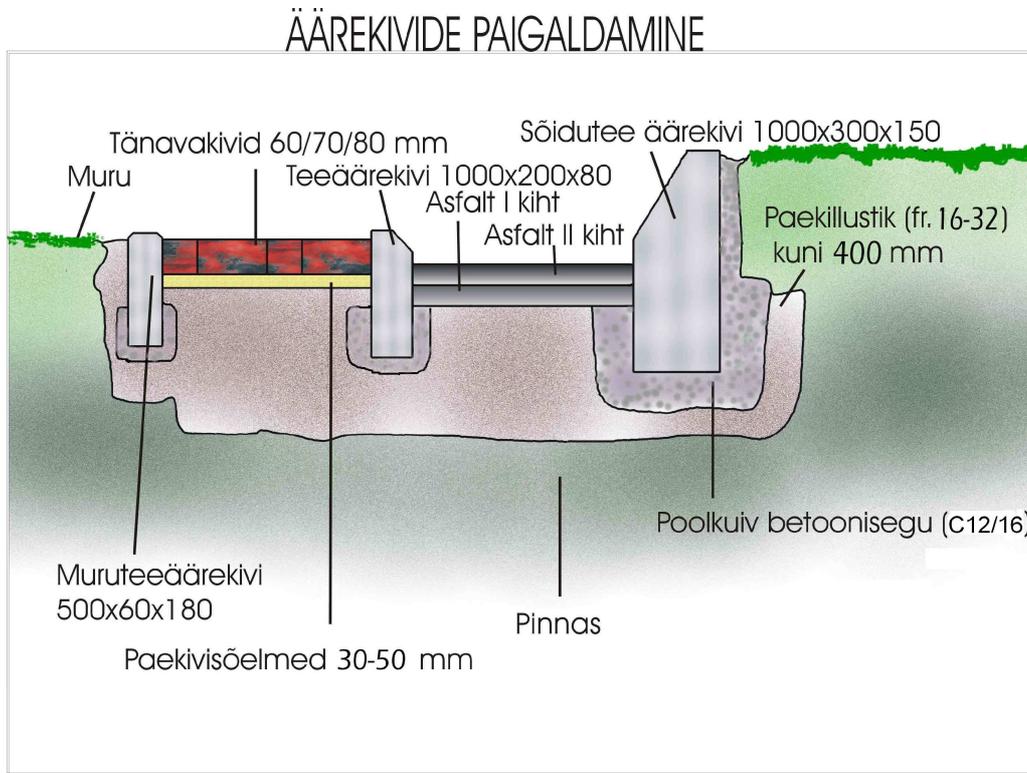
Roadway kerbstones are used to delineate car parks, streets and driveways. The dimensions of the roadway kerbstones are 1000 × 290 × 150 mm. These kerbstones will be left 100–150 mm out of the pavement, depending on the project. Roadway kerbstones can be made with both granite and limestone crushed stones' filling.

Pavement kerbstones are divided into roadside and lawn kerbstones. They are used to enclose pavements or low-intensity use roadways, lawns and other spaces, as well as flower beds. The 1000 × 200 × 80 mm roadside kerbstones can be “submerged” (levelled with the road surface) or left no more than 100 mm above the road surface. The lawn kerbstone is a 500 × 180 × 60 mm slab kerbstone and is generally installed with a protrusion of no more than 10 mm from the road surface, unless there is a need to separate areas of different height levels.

Marking. The installation of kerbstones starts with the marking of the road or site. In the case of a steeper slope, the kerbstones must be laid exclusively on a crushed stone base, with concrete to prevent the materials pouring out. The work continues with the digging of a cast-in into the stones. It is advisable to make the width of the cast-in not less than 500 mm, so that the stones can be compacted afterwards with a stamp or a vibratory device. The heights of the bottom of the cast-in shall be gauged below the project surface of the site by the required projection of the kerbstone, the thickness of the base layer and the placement layer. As a rule, the kerbstones are placed before the pavement stones, taking into account the size of the stones that will fit the width of the future pavement, if possible, in order to reduce the need for cutting the stones.

The base layer of the kerbstones shall be built up to a thickness of 150–400 mm from crushed stone, with fractionation of 8–16 mm or 16–32 mm, properly compacted, layer-by-layer. Lawn kerbstones that work in lightweight conditions can be laid on a coarser gravel and sand. If the kerbstone is to work in difficult conditions, and always in the case of roadway kerbstones, a layer of soil moist concrete is used as an installation layer, with a layer thickness

of 30–60 mm under the kerbstone, depending on the type of kerbstone. The surface of the concrete is smoothed by a string to 5–10 mm above the base layer of the stone, leaving a fitting space to the height of the stone.



ÄÄREKIVIDE PAIGALDAMINE – INSTALLATION OF KERBSTONES

Tänavakivid – Pavers

Sõidutee äärekivi – Roadway kerbstone

Muru – Lawn

Teeäärekivi – Roadside kerbstone

Asfalt I kiht – Asphalt layer 1

Paekillustik – Crushed slate

kuni 400 mm – up to 400 mm

Muruteeäärekivi – Lawn kerbstone

Paekivisõelmed – Crushed slate screenings

Pinnas – Soil

Poolkuiv betoonisegu – Semi-dry concrete mixture

The kerbstones are installed according to the string. When installing metre-long kerbstones on concrete, the stones are supported on both sides near the ends with small concrete blocks to fix the stones.

The distance can be determined using a portable metal spacer plate with correct thickness. See the following figure for slope and phase dimensions. The distance between the end faces of the two kerbstones must be 2–6 mm.

Once the stone is in place, the positioning is checked with a spirit level from the back of the stone in relation to the vertical axis and from the top of the stone in relation to the horizontal axis, taking into account the specified slope. The cast-in of pavement stones is then filled to the top of the base layer with crushed stones and then compacted. The compaction of surroundings of kerbstones, installed on top of concrete, must not be carried out before the concrete has reached 70% of its strength, i.e. usually on the second or third day. Due to the heavy weight of roadway kerbstones (up to 100 kg each), it is advisable to install them in pairs, using special kerbstone pliers wherever possible.

When handling kerbstones, be sure to wear thick leather work gloves! For cutting stones, a diamond-disc machine tool is used, or a 230 mm disc angle cutter for smaller quantities. The stone guillotine cannot be used for kerbstone processing due to its low accuracy. Safety goggles and hearing protectors must be worn to protect against noise and dust!

