



Gidrolica

Production of drainage systems

*Installation instructions for Gidrolica plastic gutters
load class D400-E600*

Technical Guide

Installation instructions for Hidrolica plastic channels load class D400-E600

For maximum service and the most efficient operation of surface drainage systems, the following installation and operating requirements are recommended.

1. Installation of storm-water channels should be carried out starting from the point of water discharge. Installation should begin with the installation of a channel with a vertical spillway or a sump unit at the bottom mark of the route, from which a line for laying drains can be drawn using a cord.

2. Drains are laid in a prepared trench. The bottom of the trench is compacted, after which a leveling layer of sand (5 cm) and an underlying layer of crushed stone 10 cm thick are laid.

3. A waterproofing material (glassine, plastic film) is laid on the prepared base, after which concrete bedding is made of cement concrete B25 F200 W6 (GOST 26633-91). The thickness of the base depends on the expected load on the channel during operation (Table 1). Concrete is laid down to a level 5-10 mm below the design level of the bottom of the channel (Fig. 1).

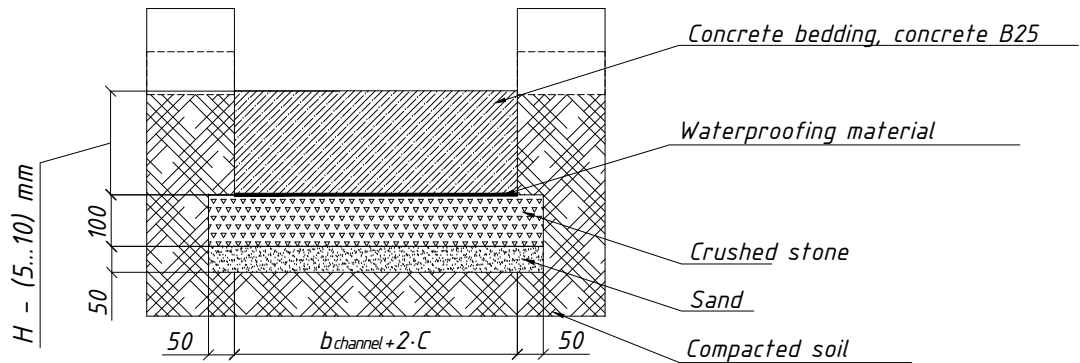
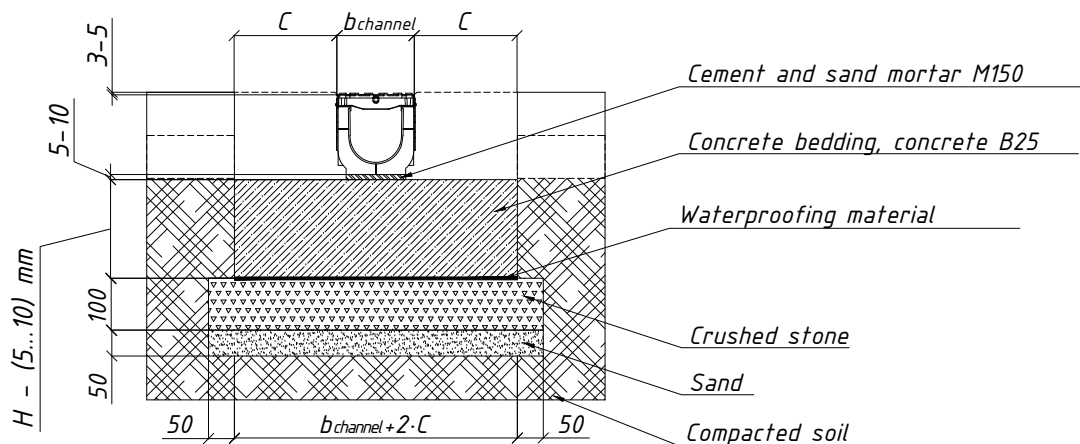


Table 1. Dimensions of concrete shell depending on load class (according to EN1433)

Load class	D400	E600
Width of concrete shell, C , mm	150	200
Thickness concrete shell, N , mm	200	200
Concrete bedding class	B25	B25

4. After the concrete base is installed, the formwork of plywood panels is installed.

Then, on the formed concrete base, an equalizing layer of cement-sand mortar M150 with a thickness of 5-10 mm across the width of the channel base is laid. This layer is necessary in order to bring the level of the top of the channel to the desired design mark. The level of the sewer grate should be 3-5 mm below the level of the adjacent coating.



5. After installing the sump unit and the adjacent channel in the design position, it is necessary to perform grouting of the walls of the shell. At the time of concrete pouring and setting, grates or spacers must be installed in the channels and in the sump unit to avoid deformation of the channel walls under pressure of concrete. Grates must be wrapped with foil to protect against contamination.

In order to avoid displacement of the channels, concrete pouring of the shell should be carried out in horizontal layers without intentional gap with one laying direction in all layers. Each subsequent layer of concrete mixture should be laid before the setting of concrete in the previous layer.

7. To seal the joint of the concrete shell of the channel and the adjoining coating of asphalt concrete, the bitumen-polymer jointing tape BRIT-A should be used. Sealing occurs under the influence of a high-temperature asphalt mixture, as a result of which the tape melts and forms a protective layer.

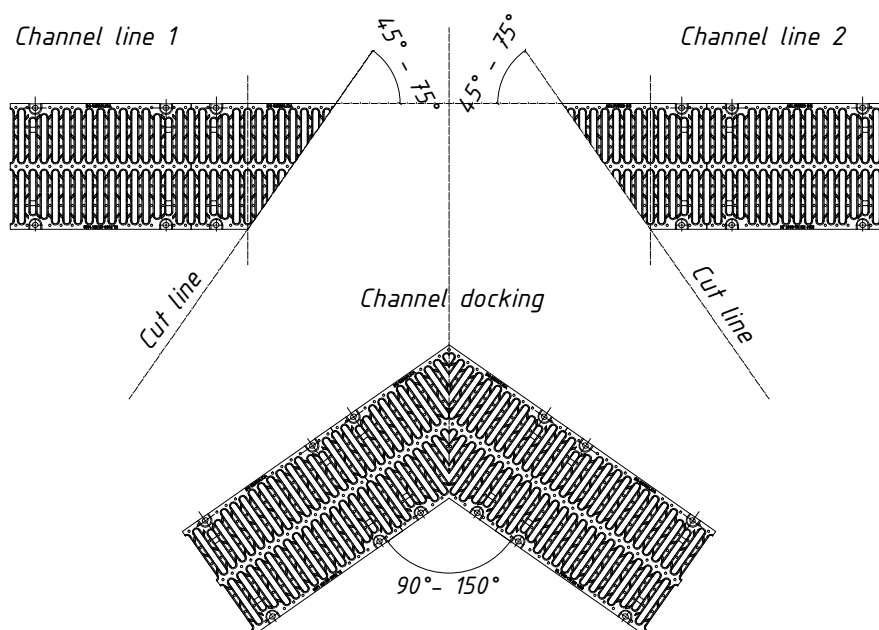
8. To preserve the properties of concrete and accelerate the strength gaining, freshly laid concrete should be covered with a film until concrete gets strength of at least 70%.

9. To ensure the normal operation of the entire linear drainage system, it is necessary to clean the basket for sump units. After the initial installation, it is necessary to tighten all the bolts on the channel with a torque wrench. The first control of the compounds should be carried out within 4 weeks. In the future, it is necessary to regularly check the bolts on each grate and, if necessary, the bolts should be tightened. Inspections should be carried out at least once a year - for areas with low traffic and once every half a year - with intensive traffic.

10. When connecting a run-off to the sewage system through the provided pipes (vertical or horizontal drain), before installing the entire system, it is necessary to remove the walls of the channel or sump unit and the plug pipe, after which the expected pipe joint should be sealed and connected with a discharge pipe.

11. The tongue-and-groove linear connection of the channels does not require additional sealing joints.

12. If an L-shaped connection of plastic drainage channels is needed, it is necessary to cut a hole according to the intended pattern in the side wall of the adjacent channel and dock the channel. Seal the joint with a sealant. The plug should be installed from the end of the adjacent channel. When connecting the channels at an arbitrary angle, it is necessary to cut the channel and the grill at the junction at an angle equal to half the desired angle.



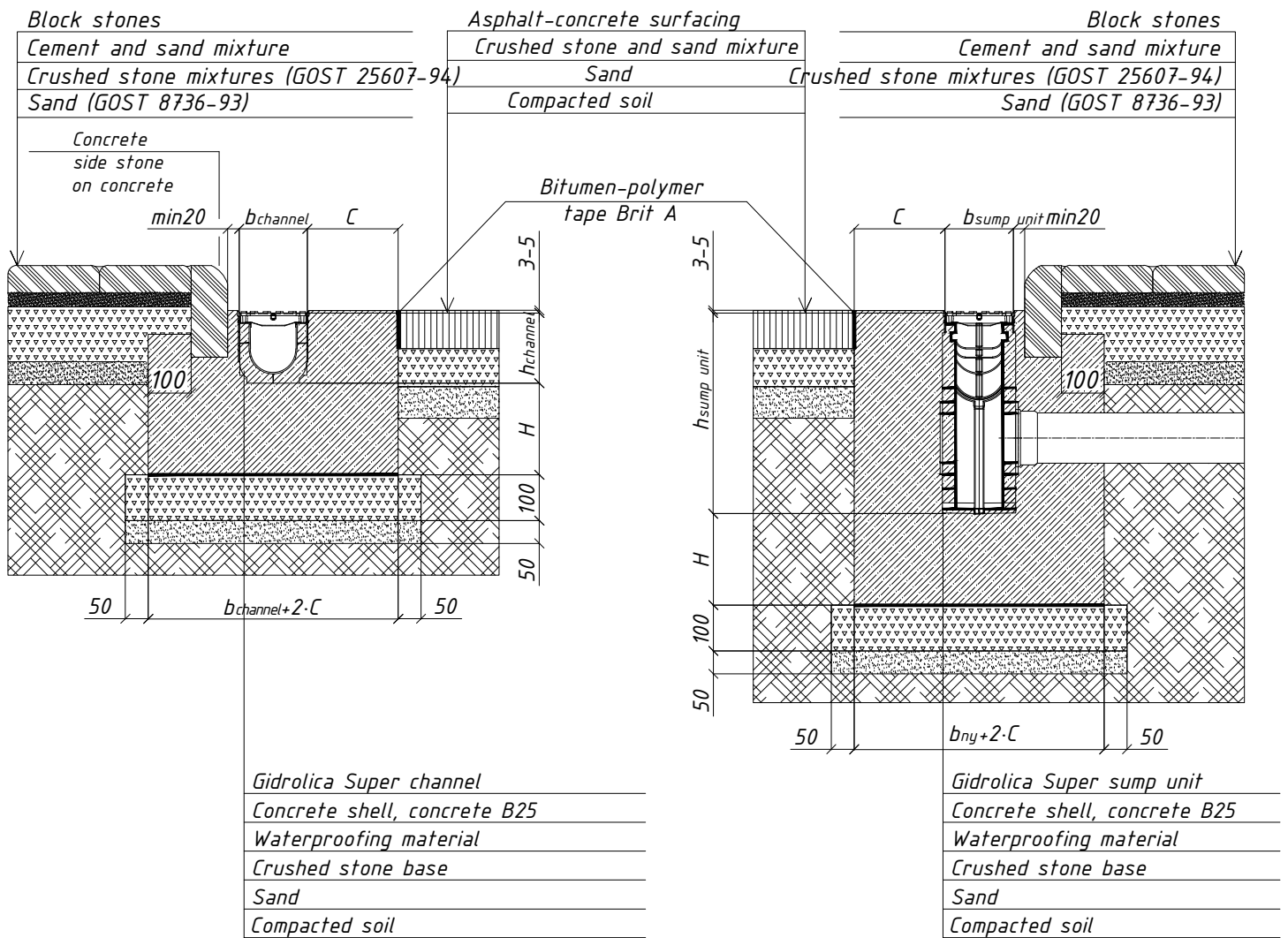


Fig. 2. Laying scheme of a channel / sump unit near a curbstone

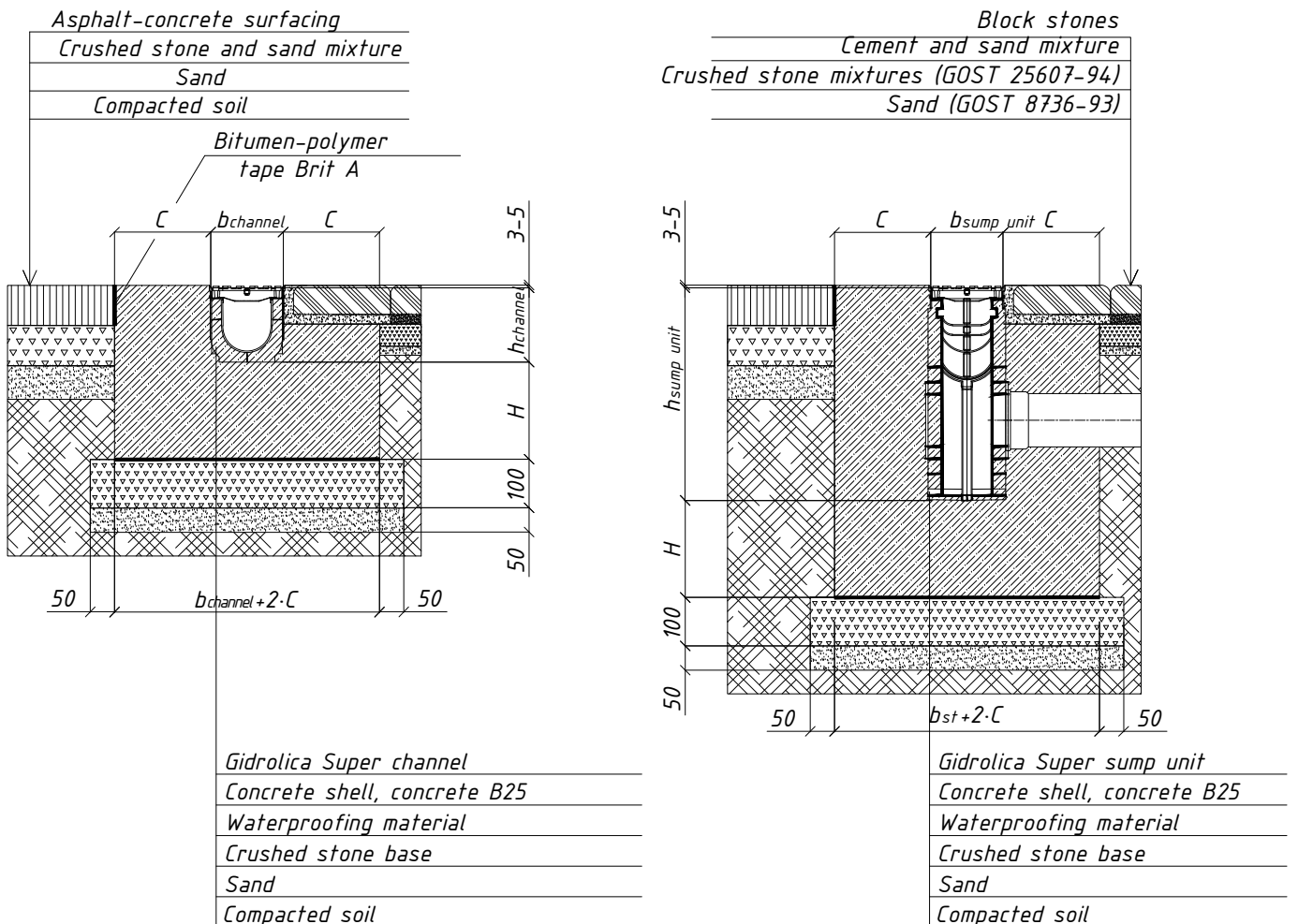


Fig. 2 Laying scheme of a channel / sump unit in a block-stone / asphalt-concrete surfacing