TECHNICAL PRINCIPLES OF INSTALLATION OF STANDARD SERIES COVERS

Concrete-alloy frame h.160 mm, cast iron frame ("C" frame) h. 160 mm - frame with smooth outer wall

- Classic frame mounting. The manhole frame and any balancing rings will be mounted on a manhole cone or cover plate in a mortar bed or grout of high strength material with a minimum strength of 45Mpa and resistance to chemical and de-icing agents. The individual elements shall be bonded with a minimum of 10 mm of this material over the entire seating area.
- Frame pick-up. A 'duct hatch ripper' is required for this type of installation. The frame is mounted directly on the manhole cone or cover plate in a mortar bed of plain concrete and included in the entire roadway composition. After the entire construction is completed, the manhole cover is stripped and mechanically pulled to grade. For this type of installation, the product shall be without a pin in the hinge. The joint formed to join the manhole and frame shall be treated with a high strength grout with a minimum strength of 45Mpa and resistance to chemical and de-icing agents.
- Fitting into the milled hole. For information on this fitting, contact the manufacturer's technical assistance.

cast iron frame ("L" frame) h. 100 mm - frame with foot

- Installation of cast iron frame with foot. The manhole frame and any balancing rings will be mounted on a manhole cone or cover plate in a mortar bed or grout of high strength material with a minimum strength of 45Mpa and resistance to chemical and de-icing agents. The individual elements shall be bonded with a minimum of 10 mm of this material. The cover frame and the ring shall then be bonded together with high-strength cementitious grout so that the foot of the cover frame is a minimum of 20-30 mm below the level of the grout over the entire seating area.

Spreading frames diameter 1000 mm h.180 mm and 1200 mm h.200 mm - frame with large seating area

- Assembly of the spreading frames. The expansion rings, if any, shall be set on a shaft cone or cover plate in a mortar bed or grout of high strength material with a minimum strength of 45Mpa and resistance to chemical and de-icing agents. The individual elements shall be bonded with a minimum of 10mm of this material over the entire seating and external area under the future frame. When fitted directly to the cone, the outer surface of the cone must be treated. The spreader frame shall be set on a mortar or grout mix with the same parameters and shall also be bonded to the sub-base material around the shaft.

Self-leveling frame 130-150 mm - floating frame

- Installation of the floating (self-levelling) frame. The recommended difference between the end of the shaft and the ground level is 130 mm - 150 mm. Any levelling rings will be set on the manhole cone or cover plate in a mortar bed or grout of high strength material with a minimum strength of 45Mpa and resistance to chemical and de-icing agents over the entire settlement area to form a firm base for the final asphalt layer. A carrier with formwork for the type of self-levelling frame used shall be fitted into the manhole opening. The excavation shall be backfilled with hot mix asphalt and sufficiently compacted, particularly in the immediate vicinity of the formwork over the entire footprint of the future frame, to prevent subsequent subsidence in the asphalt. The formwork jig shall be removed and the self-levelling hatch inserted into the prepared hole. The frame shall be pressed into the asphalt layer. The entire embedment process must always be in hot asphalt. When paving with a finisher, it is also possible to proceed without using a hatch and instead work with closed formwork all the time. Installation at temperatures below 5 degrees Celsius must be consulted with the manufacturer beforehand! The hatch frame must always be dry and frost-free during installation. Without previous experience in fitting floating frames, we recommend requesting technical advice from the manufacturer.
- The self-levelling frame cannot be used in temporary operation.

General principles

- **We do not recommend the use of flexible buffers and flexible joints such as rubber or plastic buffer rings.**
- **The seating area between the lid and the frame must always be properly cleaned.**
- **All parts when fitting hatches must be treated with a primer designed for this purpose before asphalting.**
- **Asphalt fusion tapes are required to join old and new asphalt concrete.**
- **If asphalt contamination occurs on the lid and frame surfaces, these deposits must be removed.**
- **It is always possible to request a technical consultation before fitting our products - Compliance with the recommended installation procedures affects the warranty conditions.**