

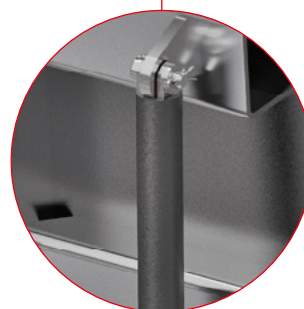
ACO Servokat-GD Access covers

ACO Servokat-GD Access covers (gas actuated) are the right solution when covers have to be frequently used for maintenance or inspection purposes. As the cover is fitted with an opening assistance it can be opened by just one person without having to use any additional lifting tools.

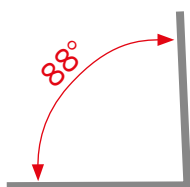
The emergency exit covers are fitted with special locks and reinforced opening tools in accordance with their purpose. This makes the covers very easy to open from below. The locks used in these versions can be operated from above or below.

In the case of covers open to the weather, appropriate measures must be planned by the customer to protect the cover against freezing up on-site, e.g. by installing self-regulating heating strips.

■ Gas spring opening assistance



■ Cover is automatically locked in place by safety catch when opened



■ 88° opening angle for quick and safe entering and exiting

Easy to open

Access covers



■ Screw-lock with lifting key to open or close from above

■ With optional lock for emergency exiting - can be quickly unlocked from below

■ Watertight thanks to a circumferential seal

■ Surface has a diagonally-ribbed corrugated structure

■ Galvanised steel or 1.4301 stainless steel

Installation, operating and maintenance instructions

Being a manufacturer of duct castings, we also provide general proposals for the installation of manhole covers and upper parts to be used in transport areas. The special installation design must always be determined by the planning department after taking into account all of the local conditions. The specific installation, operating and maintenance instructions for the respective products must also be adhered to separately.

- Check that all parts are in a perfect condition, never install damaged parts!
- Use lifting gear suitable for transporting, loading and unloading.
- Only use suitable tools to operate the cover/grate.
- Always abide by the load limits during site operation
- Access covers with loosely fitting covers are only suitable for applications where excessive pressure cannot be generated at the shaft or outlet end. There is always a risk that loosely fitting covers might be forcefully ejected by overpressure at the shaft or outlet end. We recommend using products with covers that are safe to operate for these applications.

Installation

- In principle, the covers must always be installed so that they are flush with the surrounding transport area. We recommend a slightly elevated installation for day-to-day waterproofing and the use of backflow-proof covers, provided that the transport area permits the use of the later.
- The cover fillings of covers with a selectable surface that will be used on-site must meet the respective traffic and weather conditions.
- Servokat-GD access cover must always be properly moulded in concrete or high-strength shaft grouting, e.g. Ebralit.
- In order to prevent the frames from being deformed during installation, the frames for rectangular manhole covers are only be installed in concrete with the cover screwed tightly in place if screw-down versions are being used. In the case of non-screw-down designs, the position of the cover relative to the frame must be secured in such a way so that it cannot shift during the casting/concreting-in process.

Rattle-free seating of the cover must be checked and the frame must be reoriented whenever necessary prior to the casting in concrete or manhole grouting mortar. The release for use by transport is only to be given after the mortar or concrete has set.

- The version fitted with an emergency exiting system in the Servokat GD manhole cover must be protected against freezing-up if it is installed out in the open. This can be realised through the use of heating strips.
- Suitable expansion joints must be used to protect manhole covers and upper parts against compressive stress caused by thermal expansion of the surrounding surface layer.

Operation / Maintenance

- Only suitable tools are to be used to open or close the cover or grate.
- Always clean the surface of the cover and the frame and, if fitted, check the lock / screws / hinge as well as the seals for correct functioning and for any signs of damage before closing the manhole cover. Change whenever necessary.
- Maintain covers with lock / screws at least once a year, i.e. clean and grease the screws / hinge.

EN standardisation

Standards - design and test principles as well as dimensional standards - are the basis for the planning and construction used in drainage engineering. Upper parts and manhole covers are transport area components. Traffic safety therefore makes rules necessary that ensure that the drainage items used in the installation sites are always suitable. Of great importance are not just the static loads, but also the dynamic loads that result from the size and number of load changes due to the stress caused by the traffic. Specific consequences for the construction are caused by stress. Upper

parts / covers are deemed to be transport safe when they fulfill the defined design features. These include the installation depth, the cover's surface design and the weight (mass). Decades of experience and know-how based on this are now reflected in the appropriate standards.

Gully tops and manhole tops for vehicular and pedestrian areas EN 124

Installation site and classification

The class of covers and upper parts suitable for use depends on the installation site. The various installation sites are listed below in Groups Nos. 1 to 6. Figs. 1a and 1b show the position of some of these groups in a road. Which class of covers or upper parts should be used for each group is shown as a guideline in brackets. The choice of the relevant class is left to the user / planner. Select the next highest class if you have any doubts.

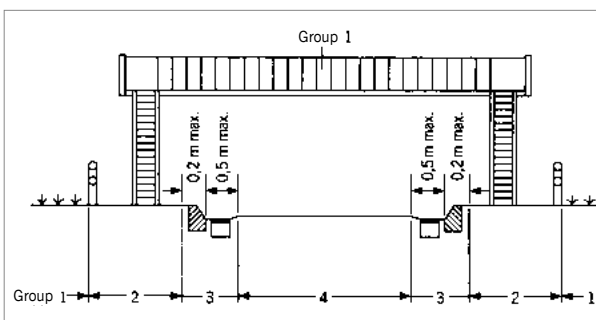


Fig. 1a: Typical cross-section of a road showing some installation site groups

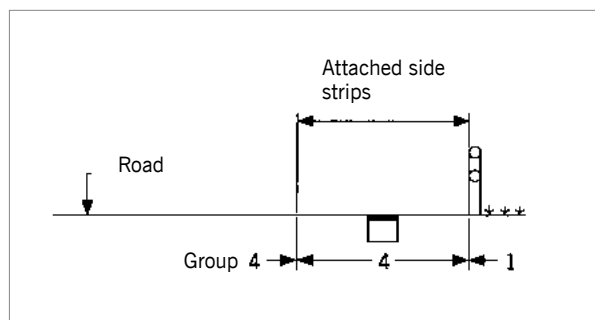


Fig. 1b: Typical details of a side strip showing some installation site groups

Group 1 (at least Class A 15)	Transport areas that can only be used by pedestrians and cyclists
Group 2 (at least Class B 125)	Pavements, pedestrian precincts ¹⁾ and similar spaces, car parks and car parking decks
Group 3 (at least Class C 250)	For upper parts used in gutter areas (Fig. 1a), which extend, when measured from the kerbstone, by a maximum of 0.5 m into the road and 0.2 m into the pavement
Group 4 (at least Class D 400)	Carriageways from main roads (also footpaths), hard shoulders on roads (Figs. 1a and 1b) and parking areas that are suitable for all types of road vehicles
Group 5 (at least Class E 600)	Areas that are suitable for high wheel loads, e.g. docking zones, aviation areas
Group 6 (at least Class F 900)	Areas suitable for special high wheel loads, e.g. aviation areas

¹⁾ Area reserved for pedestrian traffic and is occasionally used for the purpose of unloading supplies or cleaning or can be used in emergencies

Materials

Selectable surfaces

Access covers with a selectable surfaces are designed in such a way that their surfaces can be largely adapted to the surrounding layer, e.g. by the provision of on-site surface finishes. The on-site filling must satisfy the relevant traffic and environmental requirements.

The test load required in compliance with EN 124 is guaranteed in the delivery state.

Fire behaviour

Our access covers – with the exceptions of seals – are all made from standardised materials.

- Steel
- Reinforced concrete
- Stainless steel

These materials are Class A1 non-combustible construction materials as per DIN 4102. Refer to DIN 1986, Part 4 for the fire behavior of our products.

The application areas mentioned here apply analogously.

Illustrations, weights and dimensions

The illustrations, weights and dimensions are non-binding. A guarantee for their correctness can not be given. All of the dimensions are shown in mm. We reserve the right to make product changes without giving prior notice.

Quality assurance

Manhole covers are a part of the transport areas. Your traffic and operating safety depends directly on the quality of the manhole covers being used. A quality management system certified to EN ISO 9001 and the resulting seamless self-monitoring of materials and production are self-explanatory to us for ensuring continual high quality.