

Access covers



For rectangular shafts and supply ducts

ACO Servokat-GD Access cover





Contents

General information	05
Servokat-GD access cover overview	08
Installation, operation and maintenance instructions	10
DIN standardisation	12
Installation site and classification	12
Materials	13
<hr/>	
Product overview Access covers	41
ACO Servokat-GD Class B 125	42
ACO Servokat-GD Class D 400	44
ACO Servokat-GD Class B 125 specification clauses	46
ACO Servokat-GD Class D 400 specification clauses	47
<hr/>	
Servokat-GD spare parts	49
<hr/>	
ACO Service	50

General information

ACO Access covers are the ideal solution for covering rectangular shafts used in public, industrial and private applications. They are suitable for use in a wide range of applications such as control, maintenance, supply and disposal shafts, cable ducts and cable pulling shafts used in transportation areas, where the shaft has to be protected against the ingress of dirt.

Servokat covers fitted with opening assistance are the most user-friendly solution for maintaining and inspecting frequently used manholes.

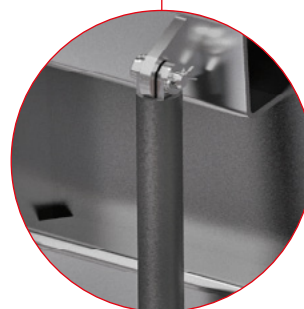
ACO Servokat-GD Access covers

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.

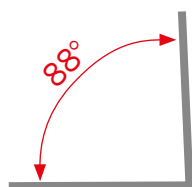
The emergency exit covers are fitted with special locks and reinforced opening tools in accordance with their purpose. This makes the covers very easy to open from below. The locks used in these versions can be operated from above or below.

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.

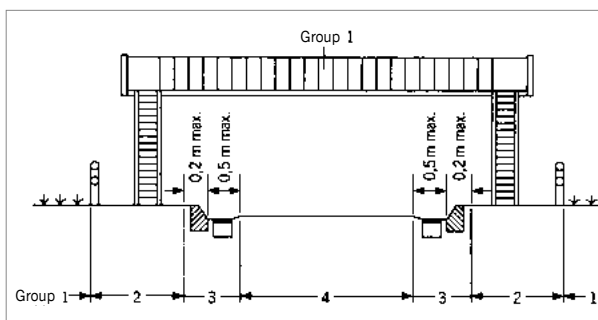


Fig. 1a: Typical cross-section of a road showing some installation site groups

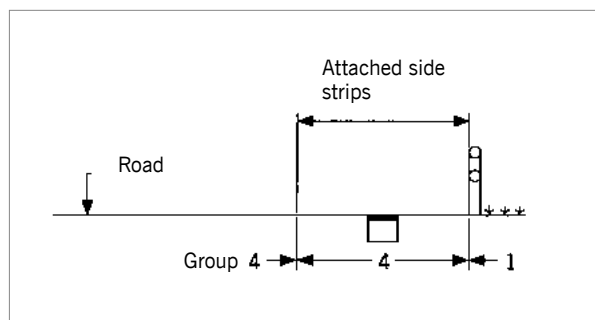


Fig. 1b: Typical details of a side strip showing some installation site groups

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.

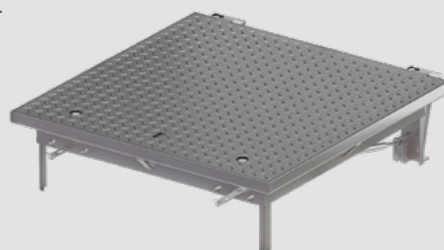
Quality assurance

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.



ACO Servokat-GD Manhole cover product overview

ACO Servokat-GD Manhole covers are the right solution if covers have to be frequently used for maintenance or inspection purposes. One person can easily open a cover fitted with an opening aid.



ACO Servokat-GD Access cover

Class B 125

ACO product advantages

- access cover made from galvanised steel or 1.4301 stainless steel
- watertight
- with hinge
- with screw lock that can be opened and closed from above

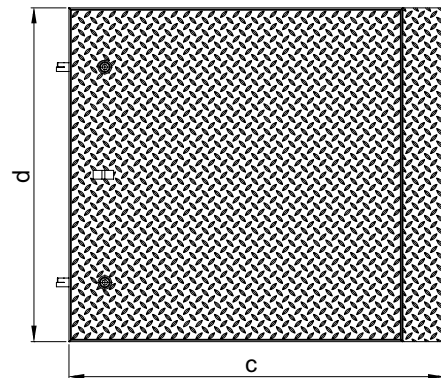
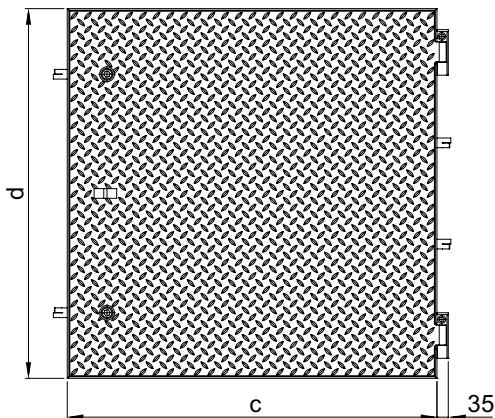
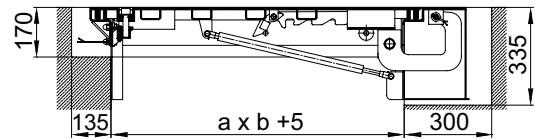
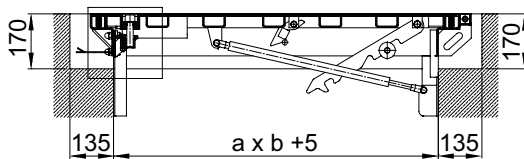
ACO product information

- access cover as per EN 124
- optionally with quick unlocking for emergency exits for opening and closing from above as well as for quick opening from below without using a tool
- includes wrench
- with gas springs as an opening assistance

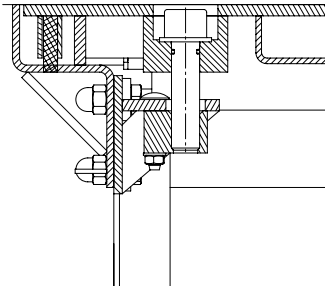
Frame and cover - galvanised steel



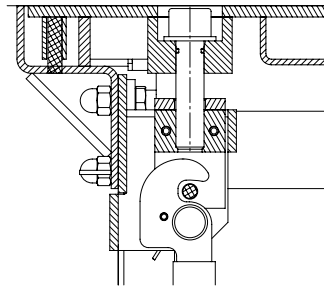
Frame and cover – stainless steel



NORMAL lock version



EMERGENCY EXIT lock version



Ordering information – Galvanised steel

Dimension		Max. Dimension		Height [mm]	Number of locks	Mass [kg]	Lock type NOR-	EMERGEN-
Width (a) [mm]	Length (b) [mm]	Width (c) [mm]	Length (d) [mm]				MAL Article-No.	CY EXIT lock design Article-No.
600	600	744	744	170	1	100	58447	58606
	800	744	944	170	2	120	59923	60162
700	700	844	844	170	1	120	59231	59232
	1400	844	1544	170	2	200	59400	60163
800	800	944	944	170	2	150	58448	58607
	1000	944	1144	170	2	170	59570	60164
1000	1000	1144	1144	170	2	200	58449	59924
	1500	1144	1644	170	2	270	60161	60165
	2000	1144	2144	170	3	340	58751	60166
1200	1200	1344	1344	170	2	260	58450	60167
1500	1500	1644	1644	170	2	350	685254	60168

Ordering information – Stainless steel

Dimension		Max. Dimension		Height [mm]	Number of locks	Mass [kg]	Lock type NOR-	EMERGEN-
Width (a) [mm]	Length (b) [mm]	Width (c) [mm]	Length (d) [mm]				MAL Article-No.	CY EXIT lock design Article-No.
600	600	889	744	335	1	120	59298	59301
	800	889	944	335	2	140	59925	60395
700	700	989	844	335	1	140	59929	59302
	1400	989	1544	335	2	220	60393	60396
800	800	1089	944	335	2	170	58451	59303
	1000	1089	1144	335	2	190	60394	60397
1000	1000	1289	1144	335	2	220	58452	59304
	1500	1289	1644	335	2	290	60169	58608
	2000	1289	2144	335	3	380	59550	60398
1200	1200	1489	1344	335	2	280	59300	60399
1500	1500	1789	1644	335	2	380	59551	60400

ACO Servokat-GD Access cover

Class D 400

ACO product advantages

- access cover made from galvanised steel or 1.4301 stainless steel
- watertight
- with hinge
- with screw lock that can be opened and closed from above

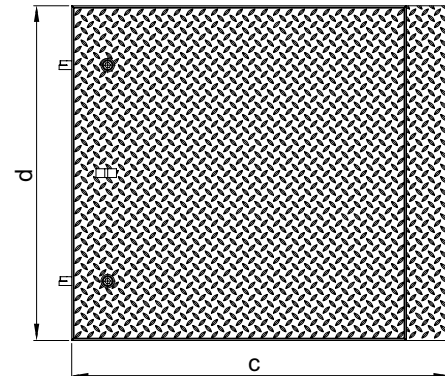
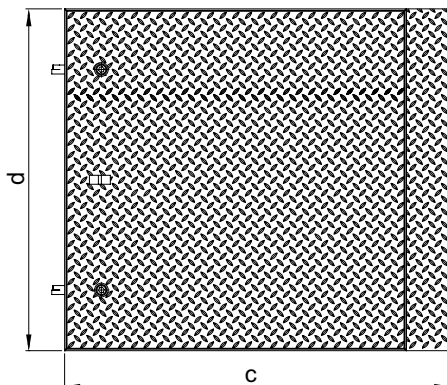
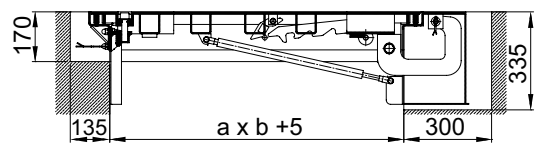
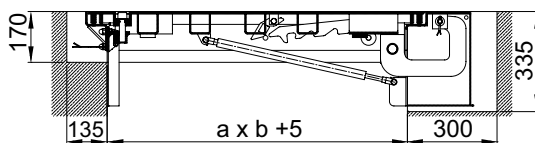
ACO product information

- access cover as per EN 124
- optionally with quick unlocking for emergency exits for opening and closing from above as well as for quick opening from below without using a tool
- includes wrench
- with gas springs as an opening assistance

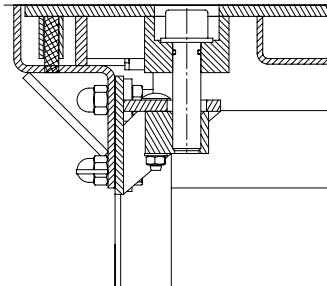
Frame and cover - galvanised steel



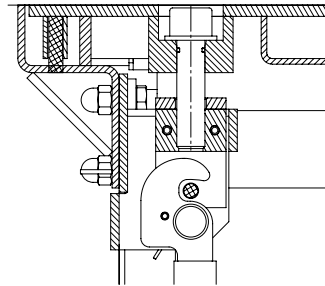
Frame and cover – stainless steel



NORMAL lock version



EMERGENCY EXIT lock version



Ordering information – Galvanised steel

Dimension		Max. Dimension		Height [mm]	Number of locks	Mass [kg]	Lock type NOR-	EMERGEN-
Width (a) [mm]	Length (b) [mm]	Width (c) [mm]	Length (d) [mm]				MAL Article-No.	CY EXIT lock design Article-No.
600	600	889	744	335	1	130	59934	60936
	800	889	944	335	2	150	59935	60937
700	700	989	844	335	1	150	59936	60938
	1400	989	1544	335	2	250	60546	60939
800	800	1089	944	335	2	180	58453	58904
	1000	1089	1144	335	2	200	59937	59554
1000	1000	1289	1144	335	2	240	58454	58711
	1500	1289	1644	335	2	320	58455	59305
	2000	1289	2144	335	3	420	58905	60940
1200	1200	1489	1344	335	2	310	59493	60941
1500	1500	1789	1644	335	2	430	58712	60942

Ordering information – Stainless steel

Dimension		Max. Dimension		Height [mm]	Number of locks	Mass [kg]	Lock type NOR-	EMERGEN-
Width (a) [mm]	Length (b) [mm]	Width (c) [mm]	Length (d) [mm]				MAL Article-No.	CY EXIT lock design Article-No.
600	600	889	744	335	1	130	59938	60457
	800	889	944	335	2	150	60456	60458
700	700	989	844	335	1	150	59870	60460
	1400	989	1544	335	2	250	60459	60461
800	800	1089	944	335	2	180	58611	58713
	1000	1089	1144	335	2	200	58612	60462
1000	1000	1289	1144	335	2	240	58456	59939
	1500	1289	1644	335	2	320	60463	60464
	2000	1289	2144	335	3	420	59155	60465
1200	1200	1489	1344	335	2	310	59940	60466
1500	1500	1789	1644	335	2	440	59519	59520

ACO Servokat-GD Access covers – Specification clauses

Class B 125

Specification

Servokat-GD Access cover
 Class B 125 as per EN 124/DIN 1229
 Class M 125 as per EN 1253
 With opening aid
 Watertight, odour-proof
 Light surface: _____x _____ mm (see Table)
 Frame and cover **made from hot-dip galvanised steel**
 Cover with seal, oil and petrol resistant
 With lock that can be operated from above*
 with quick unlocking for emergency exits with opening and closing
 from above as well as quick opening from below without using a tool**
 With gas spring as an opening assistance
 With safety locking
 With opening and lifting key Article-No. 4143
 Weight: _____ kg
 Article-No.: _____

Specification

Servokat-GD Access cover
 Class B 125 as per EN 124/DIN 1229
 Class M 125 as per EN 1253
 With opening aid
 Watertight, odour-proof
 Light surface: _____x _____ mm (see Table)
 Frame and cover **made from stainless steel**, Material-No. 1.4301
 Cover with seal, oil and petrol resistant
 With lock that can be operated from above*
 with quick unlocking for emergency exits with opening and closing from
 above as well as quick opening from below without using a tool**
 With gas spring as an opening assistance
 With safety locking
 With opening and lifting key Article-No. 4143
 Weight: _____ kg
 Article-No.: _____

* for normal lock version

** for emergency exit lock version

Delete any unnecessary text

ACO Servokat-GD Access cover – Specification clauses

Class D 400

Specification

Servokat-GD Access cover
 Class D 400 as per EN 124/DIN1229
 With opening aid
 Watertight, odour-proof
 Light surface: _____x _____ mm (see Table)
 Frame and cover **made from hot-dip galvanised steel**
 Cover with seal, oil and petrol resistant
 With lock that can be operated from above*
 with quick unlocking for emergency exits with opening and closing from above as well as quick opening from below without using a tool**
 With gas spring as an opening assistance
 With safety locking
 With opening and lifting key Article-No. 4143
 Weight: _____ kg
 Article-No.: _____

Specification

Servokat-GD Access cover
 Class D 400 as per EN 124/DIN 1229
 With opening aid
 Watertight, odour-proof
 Light surface: _____x _____ mm (see Table)
 Frame and cover **made from stainless steel**, Material-No. 1.4301
 Cover with seal, oil and petrol resistant
 With lock that can be operated from above*
 with quick unlocking for emergency exits with opening and closing from above as well as quick opening from below without using a tool**
 With gas spring as an opening assistance
 With safety locking
 With opening and lifting key Article-No. 4143
 Weight: _____ kg
 Article-No.: _____

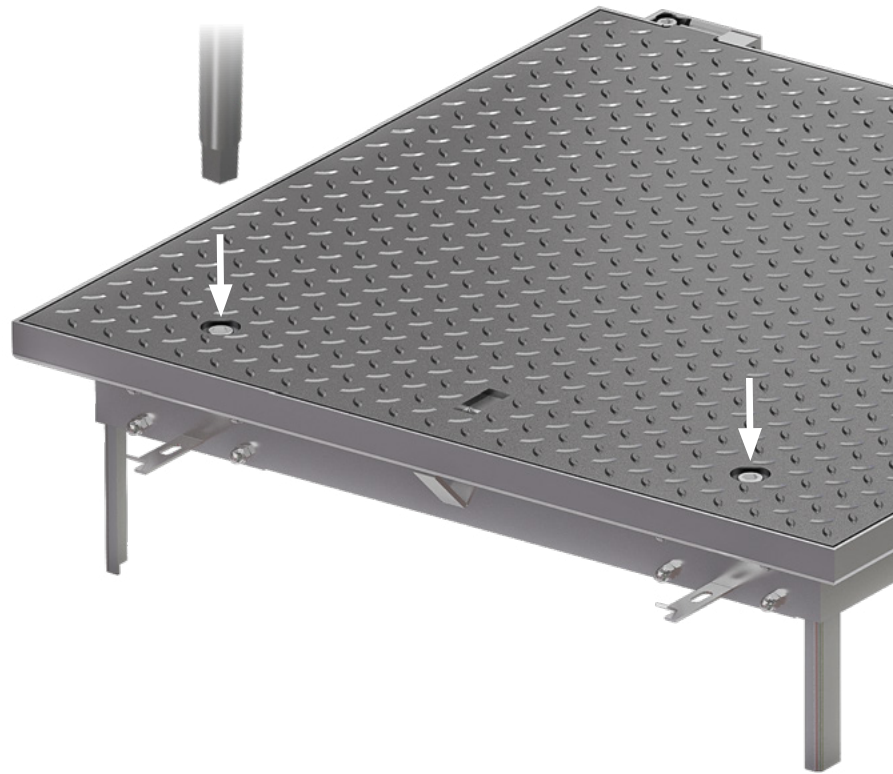
* for normal lock version
 ** for emergency exit lock version
 Delete any unnecessary text

Supplementary components for Servokat-GD Access covers

Lifting and operating lifting key

Article-No. 4143.00.00

Weight approx. 1.3 kg



The ACO service chain

Each project is different and it has its own requirements and challenges. In addition to our products we also offer you our know-how and our services in order to jointly develop customised solutions - from planning to after-completion support.



**Training:
Information
and further training**

At our ACO Academy, we share the know-how from the globally active ACO Group with architects, planners, processors and dealers to whom quality is important. We invite you to profit from it.

**Design:
Planning
and optimisation**

The tendering and planning of drainage solutions allows for many variations. Which concept will lead to the most economical and technically-safest solution? We will help you to find the correct answer.

**Support:
Construction advice
and support**

We will advise and support you on a project-specific basis at your construction site in order to avoid any nasty surprises arising between the planning and realisation of a drainage solution.

**Care:
Inspections
and maintenance**

ACO products have been designed and produced for a long service life. With our after-sales services we can assure you that ACO will still fulfill your high quality requirements even after many years.