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Special steel and
stainless steel covers
with opening assistance



Special covers with opening assistance

for securing individual, safe and user-friendly access to underground infrastructure.



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L SERIES

Manhole cover with opening assistance

High-technology special manhole covers manufactured specifically to fit your needs, with an opening assistance for regular, safe operation.

The manhole covers, whose shape, load class, material, safety level, etc. can be tailored to your requirements, can be used in all supply and disposal sectors to provide access or pass equipment in and out.

Utilize our many years' experience in access solutions. Our experienced staff will be happy to advise you.



L SERIES

Manhole cover with opening assistance

Example of an L series cover



Cover sealing

Water tight surface, backwater proof, overflow proof and gas tight versions available

Secure locking

Screw sash locks with choice of bolt head

Ergonomics

Opening assistance based on gas pressure struts or robust mechanical springs

Operator safety

Sturdy Safety Blocking Systems that can only be released by hand to prevent the lid slamming shut unintentionally

Durability

Rugged, structurally tested steel construction

Cover support

Damping insert and anti-slide device in the cover

Operator safety

Various systems such as fall protection (e.g. slot in or folding guardrail) or fold-out safety grate

More options

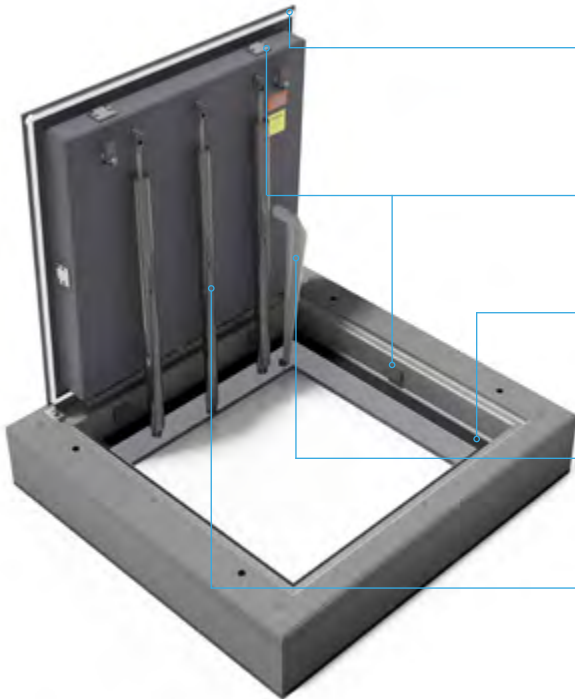
Cover can be opened from above or below as an emergency exit, heat insulation, heating tape and thermostat, etc.



L SERIE for heavy duty vehicle traffic

Manhole cover with mechanical opening assistance

Example of a heavy duty vehicle-manhole cover of the L-Serie



Cover sealing

Watertight surface, backwater proof, overflow proof and gas tight versions available

Heavy duty vehicle traffic

Special points for sliding safety bolts also for absorption of the occurring powers

Cover support

Damping inserts and anti-slide device in the cover

Operator safety

Sturdy safety blocking systems that can only be released by hand to prevent the lid slamming shut unintentionally

Ergonomics

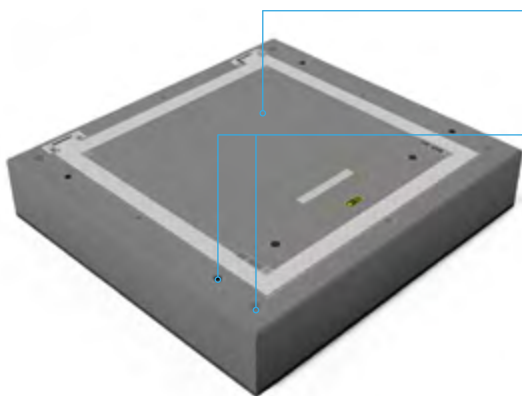
Opening assistance based on gas pressure struts or robust mechanical springs (Maintenance free)

Heavy duty vehicle traffic

Robust and statically checked design with composite construction technology

Easy installation

Spezielles Stahlbetonfertigteile mit Höhenverstellerschrauben und Verfüllröhrchen



Maintenance free, mechanical stainless steel opening assistance with 10 years of guarantee in case of correct application

Available widths: 800 mm and 1000 mm – length: free selectable from 1000 mm delivered in segments

Further options

Opening of the cover from above and below as emergency exit, heat insulation, heating tape and thermostat or hinged safety grating as fall protection possible



LY SERIES

Manhole cover with hydraulic drive

Hydraulic manhole covers are ideal when large access openings need to be opened and closed frequently.

The electrohydraulic drive means that even manhole covers that have a large surface area or are extremely heavy due to their load class can be opened and closed reliably, safely and in a user-friendly way without requiring any external lifting equipment.

The LY series also offers broad scope for customising the design in terms of dimensions, load classes, materials and surface finishes. Its scope of application ranges from covers that can be walked over, e.g. for a wood chip bunker, through to heavy-duty covers used at airports.

Additional equipment can be fitted, such as heated joints, warning lights, safety grates, folding guardrails, etc.

We'll deliver the ideal solution for your project, from design and installation right through to maintenance. Utilize our many years' experience in hydraulically powered manhole covers.



LY SERIES with folding fall-in protection

Manhole cover with hydraulic drive

Example of an LY series cover



Cover sealing

Surface water tight, backwater proof, overflow proof and gas tight versions available

Cover support

Damping insert

Ergonomics

Hydraulic cylinder



Durability

Rugged, structurally tested steel construction

Safety blocking systems

Sturdy suspension device that can only be released by hand to prevent the lid slamming shut unintentionally

Operator safety

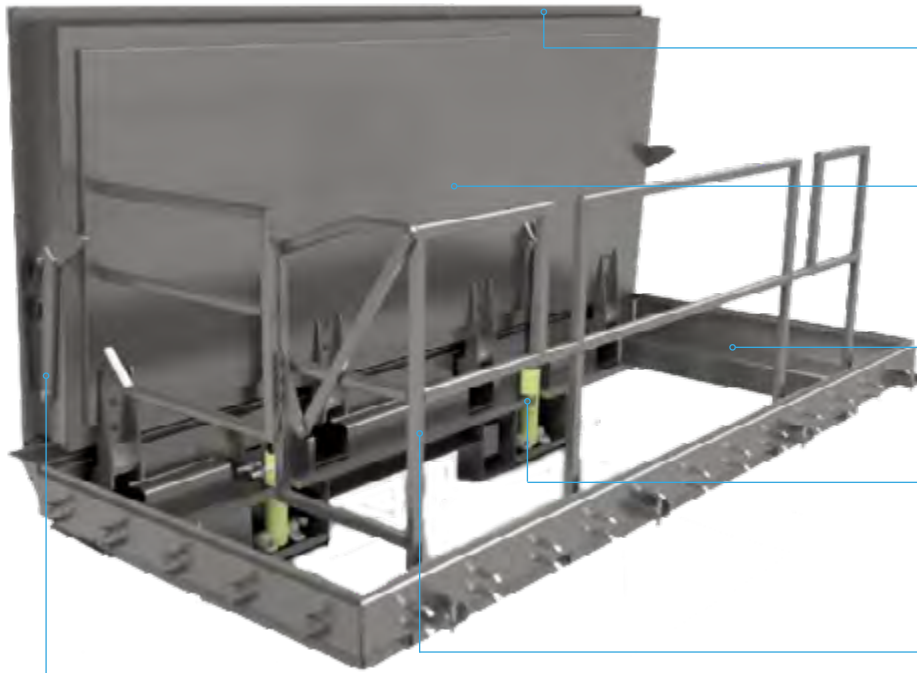
Various systems such as fall protection (e.g. slot in or folding guardrail) or fold-out safety grate



LY series with folding or slot in guardrail

Manhole cover with hydraulic drive

Example of an LY series cover



Cover sealing

Surface water tight, backwater proof, overflow proof and gas tight versions available

Durability

Rugged, structurally tested steel construction

Cover support

Damping insert

Ergonomics

Hydraulic cylinder

Operator safety

Various systems such as fall protection (e.g. slot in or folding guardrail) or fold out safety grate

Operator safety

Sturdy Safety Blocking System that can only be released by hand to prevent the lid slamming shut unintentionally



Emergency exits / Escape routes

There is no single standard that regulates the specifics of the cover design when using manhole covers serving as emergency exits that have been installed horizontally.

When planning emergency exits, therefore, it is particularly important to ensure that they can be operated easily at any time of year, while taking account of the national regulations.

Emergency exits are used in all manner of different structures, such as railway stations, multistorey car parks and event venues. Covers serving as emergency exits are used with a hydraulic drive, including an emergency solution in the event of a power cut. A design that uses a mechanical counterweight drive is also possible upon consultation.

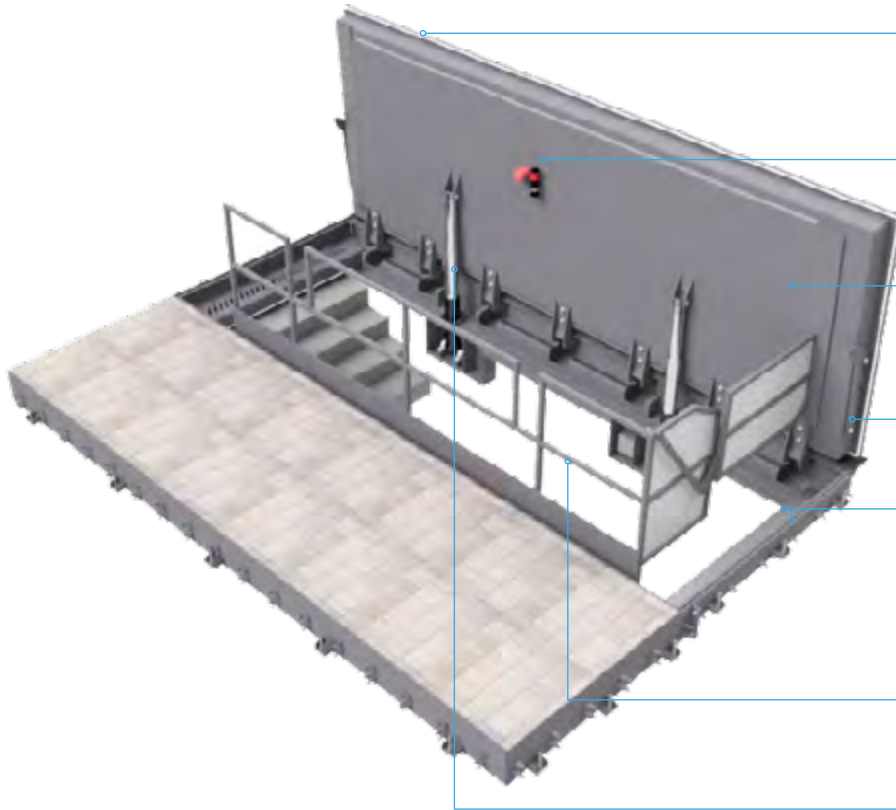
We offer the full spectrum of design options here too, just like with the L and LY series manhole covers.



Emergency exits / Escape routes

Manhole cover with hydraulic drive

Example of an emergency exit with choice of surface finishes



Cover sealing

Surface water tight, backwater proof, overflow proof and gas tight versions available

Safety

Warning light

Durability

Rugged, structurally tested steel construction

Operator safety

Sturdy Safety Blocking System that can only be released by hand to prevent the lid slamming shut unintentionally

Cover support

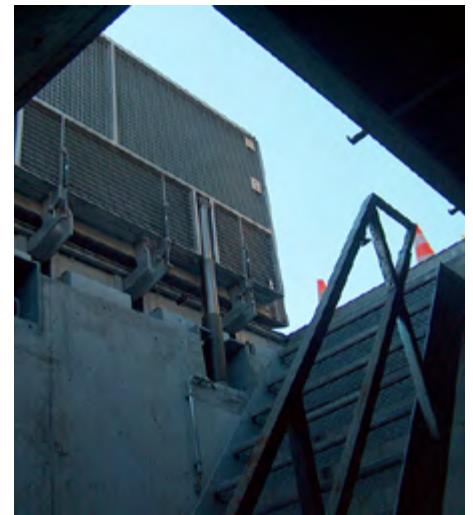
Damping insert

Operator safety

Various systems such as fall protection (e.g. slot in or folding guardrail) or fold out safety grate

Ergonomics

Hydraulic cylinder



Smoke extraction flaps for buildings

Hydraulically powered smoke extraction flaps that open automatically are used to extract smoke quickly and safely from buildings in the event of a fire.

The flaps are connected to a fire alarm system, meet all the necessary fire protection requirements and help to save lives when they are deployed.

Needless to say, these smoke extraction flaps can also work perfectly in a power cut.

All manner of different versions and additional equipment such as an acoustic alert, flashing warning light, matching with surface conditions, etc. are possible and customisable.



Smoke extraction flaps for buildings

Manhole cover with hydraulic drive

Example of a smoke extraction flap



Safety

Warning light

Durability

Rugged, structurally tested steel construction

Cover support

Damping insert

Cover sealing

Surface water tight, backwater proof, overflow proof and gas tight versions available

Operator safety

Sturdy Safety Blocking System that can only be released by hand to prevent the lid slamming shut unintentionally

Ergonomics

Hydraulic cylinder

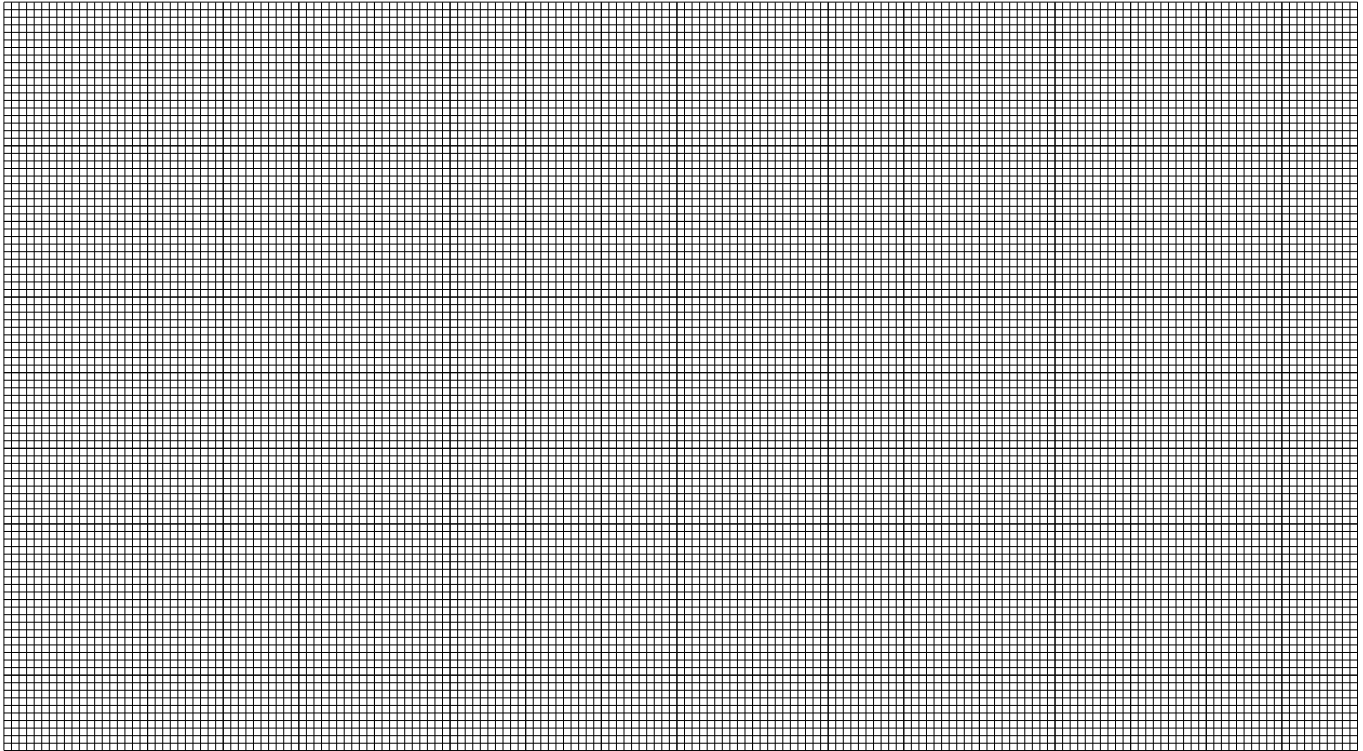


Special covers with opening assistance

with choice of surface finish



Sketch



Notes

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Checklist

Manhole covers with opening assistance

Customer

Date

Place of installation

Area of application

- Entrance Steps Ladder

- Exit Emergency exit
- Opening for equipment access in and out / Opening for assembly
- Opening for filling (e.g. wood chip bunker)
- Inspection manhole
- District heating
- Smoke extraction
- Other

- Cover outdoors Cover indoors
- Exposed to aggressive media: Above Below

Materials

- Galvanised steel
- Stainless steel 1.4301 1.4571

Dimensions and load class

- Shape Rectangular Circular Polygonal Other
- Number of covers.....
- Clear width a = mm b =mm

Design details

- Short side of the frame designed to serve as the top step

- Location of hinges Long side Short side

- Cover Single part
- Multipart: -part
 - Symmetrical parts
 - Asymmetrical parts (e.g. 1/3 to 2/3 etc.)
- With integrated inspection opening
 - Location.....

Area of location

- Installation location (road, footpath, industrial estate, pumping station, green space, etc.)
-
- Public space Yes No
- Explosion protection zone Zone 1 Zone 2
- Road Unpaved surface/footpath
- How often do vehicles pass over the cover?
- Rarely Often Very often
- How often is the cover opened?
- Rarely Often Very often
- Ceiling thickness
- Material bunker
- Manhole/concrete upstand

Surfaces

- Chequer plate
- Concrete, broom-finished
- PU coating (for aggressive media)

- Cover for matching surface conditions on site
- Clear inner vertical dimension.....mm
- Material.....

Load class

- Can be walked on
- Can be driven on by cars
- Can be driven on by HGVs Up to 7.5 t SLW 30 SLW 60
- Heavy-duty traffic Airport Port Container terminal

- Surface watertight
- Flood proof up tom water column
- Backwater proof up tobar
- Gas tight for gases not under pressure
- With inner channel all the way round and drainage pipe (to be connected on site)
- Visual and/or acoustic warning system inside the cover
- Signal/alarm contact inside the cover

Checklist

Manhole covers with opening assistance

Design details (CONTINUED)

- | | |
|--|---|
| <input type="checkbox"/> With ventilation
<input type="checkbox"/> In accordance with EN 124: A = 140 cm ²
<input type="checkbox"/> Free area of the ventilation A =cm ² | <input type="checkbox"/> With heated joints (heating tape) and thermostat |
| <input type="checkbox"/> Frame as a precast reinforced concrete part
Overall dimensions xmm
Depth height.....mm | <input type="checkbox"/> Underside of cover has laminated thermal insulation to reduce the build-up of condensation

<input type="checkbox"/> Underside of cover has noise insulation |

Note: a device to prevent hose rupture is integrated into each hydraulic cylinder as standard.

Safety devices

- | | |
|---|--|
| <input type="checkbox"/> Fall protection when cover open | <input type="checkbox"/> No fall protection |
| <input type="checkbox"/> Grating | <input type="checkbox"/> With hinge
<input type="checkbox"/> With torsion spring bars for easier operation
<input type="checkbox"/> If the cover is opened, the grating is to make safe the manhole access opening
<input type="checkbox"/> If the cover is opened, the grating is to swivel up together with the cover (emergency exit)
<input type="checkbox"/> In the case of large gratings: inspection opening required |
| <input type="checkbox"/> Guardrail | <input type="checkbox"/> Slot-in guardrail
<input type="checkbox"/> Folding guardrail <input type="checkbox"/> Mechanical <input type="checkbox"/> Automatic |
| <input type="checkbox"/> Mechanical safety catch (standard) | <input type="checkbox"/> No safety catch |
| <input type="checkbox"/> Option: wind protector, acting on both sides (only for large and lightweight covers) | |

Operation

- | |
|---|
| <input type="checkbox"/> From above |
| <input type="checkbox"/> Key switch or button integrated into the lockable frame box as a wired remote control |
| <input type="checkbox"/> Key switch or button in a separate stainless steel column or control cabinet |
| <input type="checkbox"/> Wired remote control |
| <input type="checkbox"/> Electronic/mechanical system controlling access to the operating element (e.g. transponder system or profile cylinder) |
| <input type="checkbox"/> Separate hydraulic connection with quick-release coupling for opening with a third-party unit (standard) |
| <input type="checkbox"/> Other..... |
| <input type="checkbox"/> From below |
| <input type="checkbox"/> Operating button <input type="checkbox"/> Emergency OPEN button <input type="checkbox"/> Hand pump
<input type="checkbox"/> Manual hand lever for opening via pressure accumulator (only for emergency exits) |

Hydraulic unit

- | |
|---|
| <input type="checkbox"/> Electrical, stationary (400 V / 2.2 kW) |
| <input type="checkbox"/> Electrical, mobile (12 V, 24 V) |
| <input type="checkbox"/> With integrated or separate hand pump |
| <input type="checkbox"/> With pressure accumulator (only for emergency exits) |

Installation

- Installation location for unit and electrical controls (near cover)
- | | |
|--|-----------------------------------|
| <input type="checkbox"/> Dry room | <input type="checkbox"/> Wet room |
| <input type="checkbox"/> Installation support with grouting, electrical and hydraulic connections or complete assembly by EJ | |



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