

Alfa Laval Access Tank Cover - Oval Type O

Quality manway cover for side mounting

Intro

The Alfa Laval Access Tank Cover - Oval Cover Type O is a stainless steel manway cover that provides a secure fit for openings of tanks or containers. It offers a quick, easy and convenient means of entry and egress to interiors of static tanks. It also provides a closeable means of access to the interior of the vessel, situated above or below the liquid level on the side of the tank.

Application

The Access Tank Cover - Oval Cover Type O is designed for use in a wide range of applications across the dairy, food, beverage, wine and many other industries.

For installation on the of tanks or vessels.

Benefits

- Versatility to cover all tank needs
- Swing flexibility due to optional hinge, for opening inwards, outwards or sideways

Standard design

The construction of Alfa Laval Tank covers varies, depending on the model. The Access Tank Cover - Oval Cover Type O consists of electropolished stainless steel cover and brushed frame with seals in EPDM, NBR, FPM or Q (silicone). To enable physical entry into the tank, the tank cover swings inwards or outwards, depending upon the model. Tank covers can be positioned above and below liquid level to meet different application requirements. Optional external and internal hinges are available to meet various requirements.

Alfa Laval Tank covers are available in AISI 304 or AISI 316L stainless steel. Surface finishes include electro-polished lid and brushed frame and vary from Ra 0.8 to Ra 3.0. In addition, 3.1 Material Certifications in accordance with EN 10204 are supplied with the cover. For more information, please refer to documentation and the Tank cover selection guide (.pdf 1 250 KB)

Working principle

Open the cover by loosening the handle. This range includes covers with various openings. For inspection purposes there are covers with inwards opening. If it is necessary to physically enter the tank there are covers with outwards and/or side-swing openings.

The 544x440 oval cover must be ordered according to the tank diameter in steps from 1.5 to 4 m. The 510x370 oval cover must be ordered according to the tank diameter in steps from 1.3 to 4 m. For a tank diameter between 1.5 and 2.1 m, the steps are 50 mm. If the tank diameter is between two steps, the higher diameter should be chosen when the tank diameter is 20 mm above one step. For tank diameter between 2.1 and 4.0 m, the steps are 100 mm. If the tank diameter is between two steps, the higher diameter should be chosen when the tank diameter is 40 mm above one step.



Certificates

3.1 (cover and frame are supplied with material certificate 3.1 according to EN10204)

PHYSICAL DATA

| Materials | |
|--------------------------|----------------------------------|
| Steel parts: | 1.4301 (304) or 1.4404 (316L) |
| Plastic parts: | Nylon |
| Seal: | EPDM, NBR, FPM or Silicone |
| Cover finish | |
| Internal: | Electropolished Less Ra 0,8µm |
| Frame | |
| Internal: | Brushed Ra≥3.0 µm |
| External: | Ra≥3.0 µm |
| Temperature | |
| NBR | -30° / 110° C |
| SILICON (Q) | -50° / 200° C |
| (EPDM, not oil or fat) | -15° / 90° C |
| (FPM flourinated rubber) | -10° / 250° C |

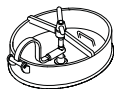
Covers placed below liquid level

| Cover shape | Type | Function | Pressure Range* bar |
|-------------|-------------|-------------|---------------------|
| Oval | O-440X320IO | Static tank | 1.3 |
| Oval | O-490X395IO | Static tank | 2.7 |
| Oval | O-440X320IO | Static tank | 1.3 |
| Oval | O-510X370IO | Static tank | 3.2 |
| Oval | O-544X440IO | Static tank | 2.8 |
| Oval | O-542X446IO | Static tank | 2.8 |
| Oval | O-658X532IO | Static tank | 4 |

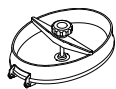
* Calculated max. pressure (bar).



O-440x320IO
External hinge



O-490x395IO



O-440x320IO
Internal hinge



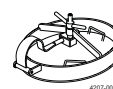
O-544x440IO



O-510x370IO



O-542x446IO



O-658x532IO

Alfa Laval Access Tank Cover – Oval Cover Type LKD 542 x 446

Tank covers

Introduction

The Alfa Laval Access Tank Cover – Oval Cover Type LKD 542 x 446 is a stainless steel tank cover that provides a secure fit for openings of tanks or containers as well as quick, easy and convenient entry and egress to tank interiors. It is engineered for use on the side of tanks or vessels.

Application

The Access Tank Cover – Oval Cover Type LKD 542 x 446 is mainly designed for use in the beverage, and brewery industries. It is especially suitable for use on tanks or containers that require a closeable means of access to the interior of the vessel. It features an angled, shaped frame to ensure a shadowless installation.

Benefits

- The angled frame design makes the cover more cleanable
- Can withstand up to 2.8 bar static pressure

Standard design

The construction of the Access Tank Cover – Oval Cover Type LKD 542 x 446 varies, depending on the model. To enable visual inspection and/or physical entry into the tank, the tank cover swings inwards and outwards. The tank cover can be positioned above or below the liquid level to meet different application requirements.

Working principle

Open the cover by loosening the handle. For inspection purposes, the cover can then be turned into the tank. If physical entry into the tank is required, the cover can either be removed at the double hinge or swung out of the tank, depending on the model. Hygienically positioned, the seal is not affected by positive or negative pressure in the tank.

Certificates

3.1 (cover and frame are supplied with material certificate 3.1 according to EN10204)



TECHNICAL DATA

Pressure

| | |
|---------------------------------|-------------------|
| Max. static pressure: | 2.8 bar (280 kPa) |
| Max. positive working pressure: | 0 bar (0 kPa) |
| Max. negative working pressure: | 0 bar (0 kPa) |
| Test pressure: | 4.2 bar (420 kPa) |

PHYSICAL DATA

Materials

| | |
|---------------------------------|--------------------------------|
| Steel parts: | 1.4301 (304) or 1.4404 (316L) |
| Plastic parts: | Nylon |
| Seals (FDA): (Lip seal design): | EPDM, NBR, FPM or Q (silicone) |

Standard surface finish:

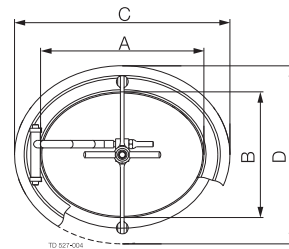
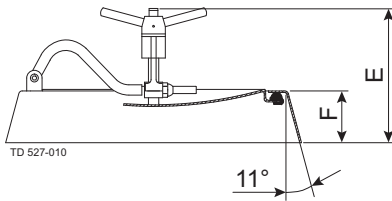
| | |
|-------------------------------------|--------------|
| Product wetted surfaces: | Acid Pickled |
| Other frame and lid surfaces: | Ra 0.8µm |
| Other support and spindle surfaces: | Ra 3.0µm |

Temperature:

| | |
|---------------|---------------|
| EPDM: | -15° / 90° C |
| NBR: | -30° / 110° C |
| SILICONE (Q): | -50° / 200° C |
| FPM: | -10° / 250° C |

| | |
|---------|-------|
| Weight: | 12 kg |
|---------|-------|

Dimensions (mm)



| Type | LKD 542 x 446 |
|------|---------------|
|------|---------------|

| | |
|-----------------|-----|
| A | 461 |
| B | 362 |
| C | 542 |
| D | 446 |
| E | 202 |
| F | 76 |
| t | 4 |
| Cover thickness | 3 |

Alfa Laval Access Tank Cover – Oval Cover Type LKD 532 x 432

High-quality oval manway tank cover for hygienic applications

Intro

The Alfa Laval Access Tank Cover - Oval Cover Type LKD 532 x 432 is a stainless steel tank cover that provides a secure fit for openings of tanks or containers as well as quick, easy and convenient entry and egress to tank interiors.

Engineered for use on side of tanks or vessels in hygienic applications, the tank cover can be installed with an optional hinge that enables either right- or left-hand opening.

Application

The Access Tank Cover - Oval Cover Type LKD 532 x 432 is designed for use in hygienic applications across the dairy, food, and beverage industries. It is especially suitable for use on tanks or containers used for the production of dairy products.

Benefits

- Hygienic design
- Available as a 3-A approved version
- Can withstand static pressure up to 2.5 bar

Standard design

The construction of Access Tank Cover - Oval Cover Type LKD 532 x 432 varies, depending on the model. To enable visual inspection and/or physical entry into and egress out of the tank, the tank cover swings inwards and outwards. The tank cover can be positioned above or below the liquid level to meet different application requirements.

Working principle

Open the cover by loosening the handle. For inspection purposes, the cover can then be turned into the tank. If physical entry into the tank is required, the cover can either be removed at the double hinge or swung out of the tank, depending on the model. Hygienically positioned, the seal is not affected by positive or negative pressure in the tank.

Certificates



Authorized to carry
the 3A symbol



TECHNICAL DATA

| Pressure | |
|---------------------------------|--------------------|
| Max. static pressure: | 2.5 bar (250 kPa) |
| Max. positive working pressure: | 0 bar (0 kPa) |
| Max. negative working pressure: | 0 bar (0 kPa) |
| Test pressure: | 3.75 bar (375 kPa) |

PHYSICAL DATA

| Materials | |
|----------------|--------------------------------|
| Steel parts: | 1.4301 (304) or 1.4404 (316L) |
| Plastic parts: | Nylon |
| Seals (FDA): | EPDM, NBR, FPM or Q (silicone) |

| Standard lid surface finish: | |
|--|--------------------------|
| Product wetted surfaces: | Acid Pickled Ra 0.8µm |
| Other frame and lid spindle surfaces: | Ra 0.8µm |
| External support and spindle surfaces: | Ra 3.0µm |

| 3A surfaces finish: | |
|--|---|
| Product wetted surfaces: | Electro polished Ra 0.8µm (0.4µm lid wetted surface) |
| Other frame and lid spindle surfaces: | Ra 0.8µm (0.4µm lid wetted surface) |
| External support and spindle surfaces: | Ra 3.0µm |

| Temperature | |
|--------------------|---------------------|
| Temperature range: | -30° / 110° C (NBR) |

| Temperature: | |
|---------------|---------------|
| EPDM: | -15° / 90° C |
| NBR: | -30° / 110° C |
| SILICONE (Q): | -50° / 200° C |
| FPM: | -10° / 250° C |

Dimensions (mm)



| Type | LKD 532 x 432 |
|-----------------|---------------|
| A | 532 |
| B | 432 |
| C | 663 |
| E | 265 |
| F | (100) (60) |
| t | 12 |
| Cover thickness | 3 |

Alfa Laval Access Tank Cover – Oval Cover Type LKD 440 x 320

High-quality oval manhole tank cover for hygienic applications

Intro

The Alfa Laval Access Tank Cover – Oval Cover Type LKD 440 x 320 is a stainless steel tank cover that provides a secure fit for openings of tanks or containers. It is engineered for use on the side of tanks or vessels in hygienic applications.

Application

The Access Tank Cover – Oval Cover Type LKD 440 x 320 is designed for use in hygienic applications across for the food, beverage, personal care and wine industries. It is especially suitable for tanks used for the production of wine and juice.

Benefits

- Versatility to cover all tank needs
- Hygienic design
- Available as a 3-A approved version

Standard design

The construction of Access Tank Cover – Oval Cover Type LKD 440 x 320 enables visual inspection into the tank. The tank cover swings outwards and can be positioned above or below the liquid level to meet different application requirements.

Available in standard and pressure models for use both above and below the liquid level, the tank cover complies with the U.S. Food and Drug Administration (FDA) and the European 1935/2004/EC Declarations of Conformity.

Working principle

Open the cover by loosening the handle. For inspection purposes, the cover can then be turned into the tank. If physical entry into the tank is required, the cover can either be removed at the double hinge or swung out of the tank, depending on the model. Hygienically positioned, the seal is not affected by positive or negative pressure in the tank.

Certificates

3.1 (cover and frame are supplied with material certificate 3.1 according to EN10204)



TECHNICAL DATA

Pressure

| | |
|---------------------------------|--------------------|
| Max. static pressure: | 1.5 bar (150 kPa) |
| Max. positive working pressure: | 0 bar (0 kPa) |
| Max. negative working pressure: | 0.5 bar (50 kPa) |
| Test pressure: | 2.25 bar (225 kPa) |

PHYSICAL DATA

Materials

| | |
|----------------|--------------------------------|
| Steel parts: | 1.4301 (304) or 1.4404 (316L) |
| Plastic parts: | Nylon |
| Seals (FDA): | EPDM, NBR, FPM or Q (silicone) |

Standard surface finish:

| | |
|-------------------------------|--------------|
| Product wetted surfaces: | Acid Pickled |
| Other lid and frame surfaces: | Ra 0.8µm |
| External support and spindle: | Ra 3.0µm |

3A surface finish:

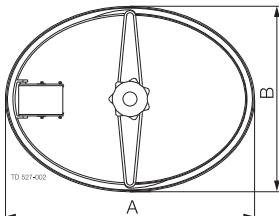
| | |
|-------------------------------|-------------------------------------|
| Product wetted surfaces: | Electropolished |
| Other lid and frame surfaces: | Ra 0.8µm (0.4µm lid wetted surface) |
| External support and spindle: | Ra 3.0µm |

Temperature

| | |
|--------------------|---------------------|
| Temperature range: | -50°C / 200°C (Q) |
| Temperature range: | -15°C / 90°C (EPDM) |
| Temperature range: | -10°C / 250°C (FPM) |
| Temperature range: | -30°C / 110°C (NBR) |

| | |
|---------|--------|
| Weight: | 7.8 kg |
|---------|--------|

Dimensions (mm)



| Type | LKD 440 x 320 |
|-----------------|---------------|
| A | 440 |
| B | 320 |
| E | 160 |
| F | 60 |
| t | 8 |
| Cover thickness | 2 |

Alfa Laval Access Tank Cover - Circular Cover Type LKDC

High-quality cover for hygienic applications for top mounting

Introduction

The Alfa Laval Access Tank Cover - Circular Cover Type LKDC is a high-quality opening that provides quick, easy and convenient entry and egress to tank interiors. Available with a variety of surface finishes and seal materials, the Circular Cover Type LKDC securely fit the openings of low- or non-pressurized tanks.

Application

The Access Tank Cover - Circular Cover Type LKDC stainless steel manway cover is used on the top of tanks or containers across the dairy, food, beverage, and biopharm industries, where a hygienic closeable mean of access to the interior of the tank is required.

Benefits

- Covering all tank needs
- Hygienic design
- Available as a 3-A approved version
- Can be supplied with safety grid

Standard design

To enable visual inspection and/or physical entry into the tank, the tank cover swings outwards. The LKDC Tank covers needs to be positioned above the liquid level.

The Alfa Laval Access Tank Cover - Circular Cover Type LKDC is available in AISI 304 or AISI 316L stainless steel with EPDM, NBR, FPM or Q (silicone) seal materials. Surface finishes include electropolished, brushed and acid pickled finishes and vary from Ra 0.4 to Ra 0.8 to meet the exceptionally high quality requirements of hygienic processes. In addition, a 3.1 Material Certification in accordance with EN 10204 is supplied. For more information, please refer to documentation and the Tank cover selection guide.

Working principle

The Alfa Laval Access Tank Cover - Circular Cover Type LKDC is supplied with a unique replaceable, self-sealing double lip seal to prevent fluids from spraying out, for instance, during CIP cleaning and similar processes or during travel on mobile tanks.

The seals are produced in compliance with 3-A recommendations. Open the cover by loosening the handle.

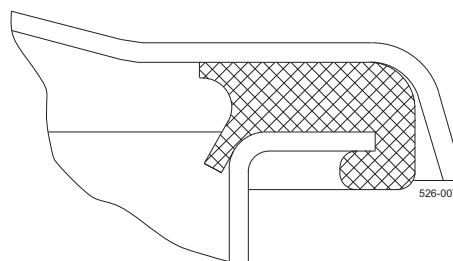


Fig. 2. Double lip seal

Certificates

3.1 certificate

TECHNICAL DATA

Pressure

Working pressure: No pressure

PHYSICAL DATA

Materials

Lid and frame: 1.4301 (304) or 1.4404 (316L)
 Plastic parts: Nylon
 Seals: EPDM or NBR or FPM or Q (silicone)

Finish

Surface finish: Acid Pickled
 Product wetted surfaces: Ra 0.8µm (Excluding welding zone)
 Other frame and lid surfaces: Ra 0.8µm (Excluding welding zone)

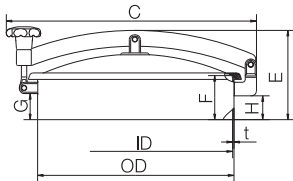
3A finish

3A surface finish: Acid pickled
 Product wetted surfaces: Ra 0.4µm
 Other frame and lid surfaces: Ra 0.4µm (Excluding external welding zone)

Temperature

Min. temperature: - 20°C
 Max. temperature (NBR): -30° / 110° C (NBR)
 Max. temperature (Q) gasket: -50° / 200° C
 Max. temperature (EPDM, not for oil and fat): -15° / 90° C
 Max. temperature (FPM flourinated rubber): -10° / 250° C

Dimensions (mm)

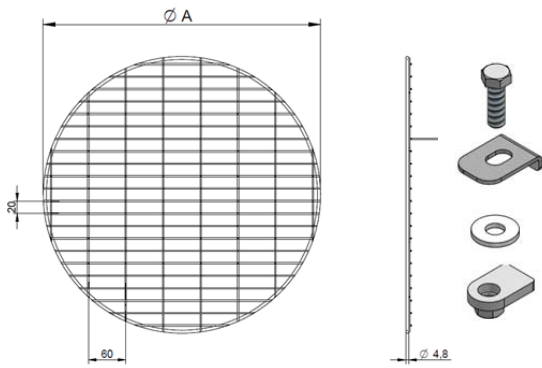


| Size/OD | 202 | 306 | 404 | 454 | 454 | 518 | 518 | 620 | 620 |
|-----------------|-----|-----|-----|------|------|------|------|------|------|
| ID | 198 | 302 | 400 | 448 | 448 | 512 | 512 | 614 | 614 |
| F | 85 | 100 | 100 | 100 | 200 | 100 | 200 | 100 | 200 |
| t | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| C | 354 | 457 | 555 | 609 | 609 | 675 | 675 | 778 | 778 |
| G | 50 | 64 | 64 | 65 | 165 | 63 | 162 | 62 | 162 |
| H | 44 | 57 | 59 | 60 | 160 | 58 | 158 | 59 | 159 |
| E | 156 | 146 | 178 | 201 | 301 | 197 | 297 | 203 | 303 |
| Cover thickness | 1.5 | 1.5 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| Weight (kg) | 3.4 | 6.3 | 8.3 | 12.2 | 15.8 | 14.4 | 17.7 | 18.8 | 24.3 |

Option

Wire safety grid

For installation in non-3A approved LKDC manhole covers.



4 pcs screw, M8x25

4 pcs bracket

4 pcs washer

4 pcs support

Dimensions:

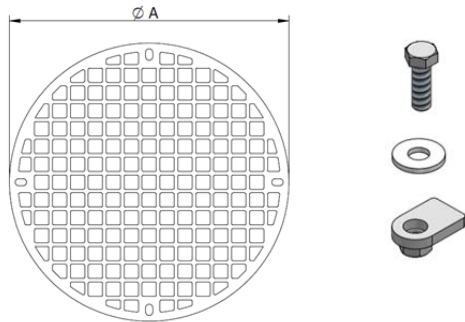
| LKDC | ØA | |
|------|-----|-------|
| | mm | inch |
| 202 | 190 | 7.48 |
| 306 | 298 | 11.73 |
| 404 | 390 | 15.35 |
| 454 | 445 | 17.52 |
| 518 | 498 | 19.61 |
| 620 | 598 | 23.54 |

Material: 316L

Option

Laser-cut safety grid

For installation in non-3A approved LKDC manhole covers.



4 pcs screw, M8x25

4 pcs washer

4 pcs support

Dimensions:

| LKDC | ØA | |
|------|-----|-------|
| | mm | inch |
| 202 | 190 | 7.48 |
| 306 | 296 | 11.65 |
| 404 | 390 | 14.96 |
| 454 | 436 | 17.17 |
| 518 | 500 | 19.68 |
| 620 | 605 | 23.82 |

Material: 316L

Alfa Laval Access Tank Cover - Circular Cover Type C

Quality tank cover for various applications

Intro

The Alfa Laval Access Tank Cover - Circular Covers Type C are a range of stainless steel manway cover that provides a secure fit for openings of tanks or containers. It offers a quick, easy and convenient means of entry and egress to tank interiors. It also provides a closeable means of access to the interior of the vessel, situated above or below the liquid level for tank top installation.

Application

The Access Tank Cover - Circular Cover Type C is designed for use on static tanks, process tanks, palletized road tankers and standard road tankers in a wide range of applications across the dairy, food, beverage and many other industries.

Benefits

- Versatility to cover all tank needs
- Swing flexibility due to optional hinge, for opening inwards, outwards or sideways

Standard design

The construction of Alfa Laval Access Tank Cover - Circular Cover Type consists of an AISI 304 or 316L stainless steel frame and cover, plastic or stainless steel handle and seal (EPDM, NBR, FPM, Silicone).

To enable visual inspection and/or physical entry into the tank for stainless steel covers, the tank cover swings inwards, outwards or sideways, depending upon the model. Tank covers can be positioned above and below liquid level to meet different application requirements. The CG type glass lid cover functions as an inspection or access port to the tank through a glass lid. It makes it possible to inspect the interior of the tank or the product without opening the tank.

Electro-polished and acid pickled surface finishes (<math><Ra 0.8 \mu m</math>) on the wetted part meet hygienic process quality requirements. 3.1 Material Certification in accordance with EN 10204 is supplied.

Optional stainless steel handle and relief valve are available for certain models.

Working principle

Open the cover by loosening the handle. This range includes covers with various openings.

Certificates

3.1 (cover and frame are supplied with material certificate 3.1 according to EN10204)



TECHNICAL DATA

Options:

SS handle on request.

Relief valve

PHYSICAL DATA

Materials

Steel parts: 1.4301 (304) or 1.4404 (316L)

Plastic parts: Nylon

Seal: EPDM

Glass part: Sodalime tempered glass (max. temperature 120 °C)

Cover finish: Electro polished

Internal: Ra 0.8 µm

Frame: Acid Pickled

Internal: Ra 0.8µm - 3µm

Temperature:

EPDM: -15° / 90° C

NBR: -30° / 110° C

SILICONE (Q): -50° / 200° C

FPM: -10° / 250° C

| Cover shape | Type | Function | Pressure Range* (bar) | Relief Valve (option) |
|-------------|------------------|--------------------------------|-----------------------|-----------------------|
| Circular | C-202 | Static tank | 0,4 | x |
| Circular | C-202A | Static tank | 0,4 | |
| Circular | C-202B | Static tank | 0,4 | |
| Circular | C-306 | Static tank | 0,1 | x |
| Circular | C-404 | Static tank | 0 | x |
| Circular | C-404SB | Static tank | 0 | x |
| Circular | C-404ASB | Static tank | 0 | x |
| Circular | C-404BSB | Static tank | 0 | x |
| Circular | C-404CC | Palletized road tanker | 1,0 | |
| Circular | C-404H6 | Static tank | 1,2 | |
| Circular | C-404AH4 | Static tank | 0,2 | x |
| Circular | C-418 | Static tank | 0,6 | |
| Circular | C-454 | Static tank and road tanker | 0 | x |
| Circular | C-454A | Road tanker | 0,1 | x |
| Circular | C-454SB | Static tank | 0 | x |
| Circular | C-518MH | Road tanker | 0 | x |
| Circular | C-518SBAR | Static tank | 0,1 | x |
| Circular | C-518 / C-518SB | Static tank | 0 | x |
| Circular | C-518A | Road tanker | 0,1 | x |
| Circular | C-620A / C-620SB | Static tank | 0 | x |
| Circular | CG-404 | Static tank with glass opening | 0 | |
| Circular | CG-454 | Static tank with glass opening | 0 | |
| Circular | CG-518 | Static tank with glass opening | 0 | |

* Calculated max. pressure (bar)

Alfa Laval Access Tank Cover - Circular Cover Type LKDC - LP

High-quality circular manway tank cover for hygienic applications

Introduction

The Alfa Laval Access Tank Cover - Circular Cover Type LKDC – LP is a stainless steel manway cover that provides a secure fit for openings on top of tanks or containers that require quick, easy and convenient entry and egress to vessel interiors.

It is engineered to withstand vacuum conditions created during cleaning procedures or during production under low pressure conditions up to 1 bar.

Application

The Access Tank Cover - Circular Cover Type LKDC – LP is designed to cover openings on top of tanks or containers in hygienic applications across the dairy, food, beverage, brewery, wine, juice, personal care, pharmaceutical and many other industries.

Benefits

- Cost efficient solution for low pressure tanks
- Hygienic design
- Safe and easy handling with safety pin and springs on the handles

Standard design

To enable visual inspection and/or physical entry into the tank, the tank cover swings outwards. Tank covers may be positioned above and below liquid level to meet different application requirements.

It consists of AISI 304 or AISI 316L stainless steel lid and frame and EPDM seals, handles, springs and safety pin. Acid-pickled surface finishes meet the high-quality requirements of hygienic processes; product wetted surfaces are $Ra \leq 0.8 \mu m$. Other surfaces are $Ra \leq 1.2$.

The Alfa Laval Access Tank Cover - Circular Cover Type LKDC – LP is supplied with a unique replaceable, self-sealing double lip seal to prevent fluids from spraying out, for example, during Cleaning-in-Place and similar processes, or during travel on mobile tanks or road tankers. The seals are produced in compliance with 3-A recommendations.

Certificates

3.1 (cover and frame are supplied with material certificate 3.1 according to EN10204)



TECHNICAL DATA

Pressure

Working pressure: -1 to 1 bar

Please note: the low pressure cover can stand up to 1 bar and is not PED approved.

Temperature

Temperature range: -10 - 150 °C

PHYSICAL DATA

Materials

Lid and frame: 1.4301 (304) or 1.4404 (316L)

Plastic parts: Nylon Seals

(standard): EPDM Seals

(optional): NBR or FPM or Q (silicone)

Surface finish: Acid Pickled

Product wetted surfaces: Ra≤0.8 μm

Other surfaces: Ra≤1.2 μm

Temperature:

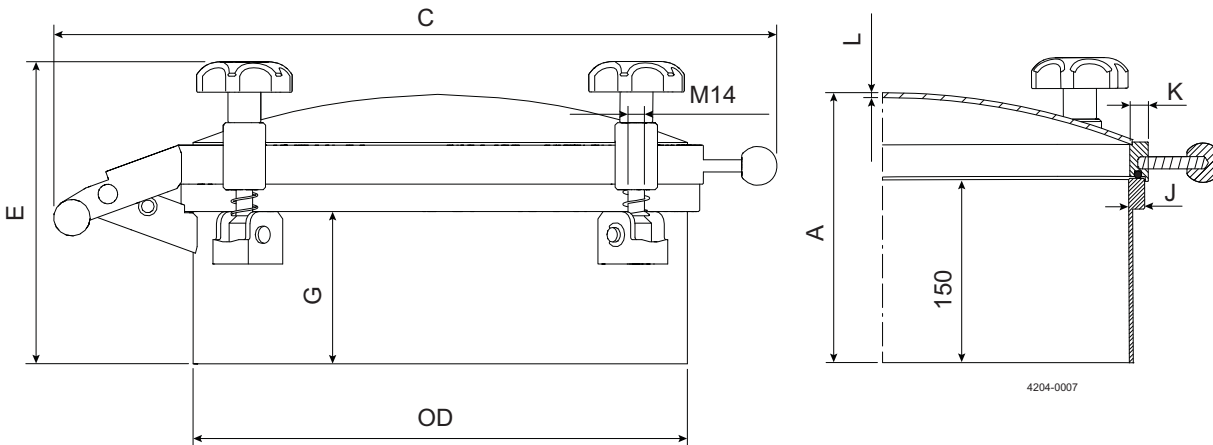
EPDM: -15° / 90° C

NBR: -30° / 110° C

SILICONE (Q): -50° / 200° C

FPM: -10° / 250° C

Dimensions (mm)



| Size | 300 | 400 | 450 | 498 | 600 |
|-------------------|------|------|------|------|------|
| OD | 306 | 406 | 458 | 506 | 608 |
| C | 483 | 594 | 661 | 701 | 807 |
| A | 211 | 221 | 231 | 232 | 247 |
| E | 236 | 236 | 236 | 236 | 236 |
| G | 82 | 82 | 67 | 67 | 67 |
| K | 15 | 15 | 18 | 18 | 18 |
| J | 13 | 13 | 14 | 14 | 14 |
| Frame height | 150 | 150 | 150 | 150 | 150 |
| Frame thickness H | 3 | 3 | 4 | 4 | 4 |
| Weight (kg) | 15.6 | 21.3 | 28.1 | 32.8 | 43.6 |
| No.off handles | 3 | 4 | 4 | 6 | 6 |

Alfa Laval Access Tank Cover – Circular Cover Type HLSD-2

Tank covers

Intro

The Alfa Laval Access Tank Cover – Circular Cover Type HLSD-2 is an outward-opening manway cover that provides a secure fit for openings on top of pressurized tanks and containers. It is approved for use on pressure vessels according to PED 2014/68/EU.

The HLSD-2 offers a quick, easy and convenient means of entry and egress to tank interiors. It also provides a closable means of access to the interior of the vessel, situated above or below the liquid level.

Application

The Access Tank Cover – Circular Cover Type HLSD-2 is designed for use in hygienic applications across the dairy, food, beverage, biotechnology, pharmaceutical and many other industries.

Benefits

- Versatility to cover all tank needs
- Hygienic design
- Easy to handle

Standard design

The Access Tank Cover – Circular Cover Type HLSD-2 consists of stainless steel lid, frame, hinge, swing bolt and seals. It is designed for installation in pressure vessels according to AD 2000-Merkblätt. The cover is not pressure tested and must be tested as a part of the pressure vessel. The HLSD-2 meets the PED 2014/68/EU, Fluid Group 1 and 2 and hazard category IV.

Working principle

The Alfa Laval Access Tank Cover – Circular Cover Type HLSD-2 lid is secured in the closed position by swing bolts. Together with the seal in the cover, the swing bolts ensure complete tightness. Attached to the frame by a rigid hinge, the cover secures the exact location of the cover in the closed position and is designed to stop the cover at an angle of 20-30° beyond the vertical position when opening.

Certificates

- 3.1 Certificate (EN10204)
- EC unit verification module G according to PED 2014/68/EU
- FDA declaration §177.2600 for seal material
- ASME BPE Certificate (option)



TECHNICAL DATA

Sizes

200 mm, 300 mm, 400 mm, 450 mm, 500 mm and 600 mm.

| Pressure | |
|--|------------------------------|
| Max. allowable pressure: | According to selection table |
| Min. allowable negative pressure: | Full vacuum |
| Max. test pressure P _{test} : | According to selection table |

PHYSICAL DATA

| Materials | |
|-----------------------------|--|
| Product wetted steel parts: | 1.4404 (AISI 316L) |
| Other steel parts: | 1.4301 (AISI 304) |
| Seal: | EPDM, FPM, Silicone, FEP covered silicone, FEP covered FPM, PFA covered silicone |

| Standard surface finish: | |
|--------------------------|-------------------------|
| Outside | Semi bright Ra 1.6µm |
| Inside | Ra 0.8µm |

| Temperature | |
|--------------------|------------------|
| Temperature range: | -10°C to + 250°C |

Options

- A. Spring to assist opening.
- B. Arrangement for securing cover in open and closed position.
- C. Bracket for indication unit.
- D. Handle in stainless steel.
- E. Guide for cover for vertical installation. Please define positioning of the hinge (right or left hand side).
- F. Sight glass DIN 28120.
- G. Sight glass DIN11851.
- H. Safety grid.
- I. Special surface finish.
- J. Frame height G = 300 mm.
- K. Seal of Q (silicone), FPM, FEP covered silicone, PFA covered silicone, FEP covered FPM.
- L. Conical frame, different frame thickness and frame height available on request.

Selection table

| Size mm | A mm | Number of bolts | Max. allowable pressure PS (bar) at design temperature T _d (°C) | | | | | Max. test pressure P _{test} bar | Cover thickness (SL)* mm | Cover radius mm |
|------------|---------|--------------------|---|-----------|-----------|-----------|-----------|--|--------------------------------|--------------------|
| | | | 50 °C | 100 °C | 150 °C | 200 °C | 250 °C | | | |
| 200 | 208 | 4 | 14.7 | 13.0 | 11.8 | 10.8 | 10.0 | 21.1 | 8 | 500 |
| | | | 7.6 | 6.7 | 6.4 | 6.1 | 6.0 | | | |
| 300 | 308 | 4 | 9.4 | 8.4 | 7.5 | 6.9 | 6.4 | 13.5 | 5 | 500 |
| | | | 6 | 9.4 | 8.4 | 7.5 | 6.9 | | | |
| | | 400 | 408 | 4 | 4.4 | 3.8 | 3.7 | 3.5 | 3.4 | 10.1 |
| 6 | 6.6 | | | | 5.8 | 5.5 | 5.3 | 5.2 | | |
| 450 | 458 | 6 | 8.7 | 7.7 | 7.4 | 7.1 | 6.8 | 14.3 | 6 | 500 |
| | | | 8 | 5.2 | 4.6 | 4.4 | 4.2 | | | |
| | | 8 | 7.0 | 6.1 | 5.9 | 5.7 | 5.5 | 12.5 | 5 | 500 |
| 10 | 8.7 | | 7.7 | 7.1 | 7.0 | 6.8 | 14.5 | 6 | 500 | |
| 500 | 508 | 6 | 4.2 | 3.7 | 3.6 | 3.4 | 3.3 | 9.8 | 4 | 500 |
| | | | 8 | 5.7 | 5.0 | 4.8 | 4.6 | | | |
| | | 10 | 7.5 | 6.9 | 6.6 | 6.3 | 6.2 | 12.0 | 5 | 500 |
| 6 | 3.0 | | 2.6 | 2.5 | 2.4 | 2.3 | 6.9 | 4 | 500 | |
| 600 | 608 | 8 | 4.0 | 3.5 | 3.3 | 3.2 | 3.1 | 7.7 | 4 | 500 |
| | | | 10 | 5.0 | 4.4 | 4.2 | 4.0 | | | |
| | | 12 | 6.0 | 5.3 | 5.0 | 4.9 | 4.7 | 8.8 | 5 | 500 |
| | | | 14 | 7.0 | 6.1 | 5.9 | 5.7 | 5.4 | 10.0 | 5 |

Dimensions (mm)

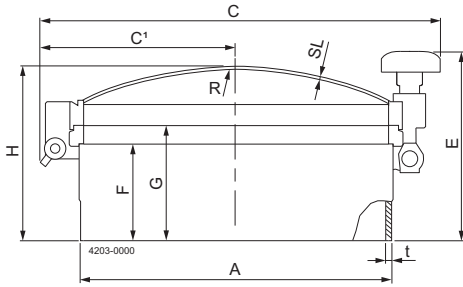


Fig. 2. Dimensions

| Size | 200 mm | 300 mm | 400 mm | 450 mm | 500 mm | 600 mm |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| A | 208 | 308 | 408 | 458 | 508 | 608 |
| C ₁ | 154 | 204 | 254 | 279 | 309 | 359 |
| C | 320 | 420 | 520 | 570 | 625 | 725 |
| E | 237 | 237 | 247 | 247 | 247 | 247 |
| F | 125 | 125 | 125 | 125 | 125 | 125 |
| G | 150 | 150 | 150 | 150 | 150 | 150 |
| H | 185 | 198 | 226 | 240 | 251 | 285 |
| R | 500 | 500 | 500 | 500 | 500 | 500 |
| SL see selection table | | | | | | |
| t* | 4 | 4 | 4 | 4 | 4 | 4 |

* Dimension only for guidance, measured before grinding and polishing

O-ring gaskets (HLS-2)

| | |
|--------------------------------|------------------------------------|
| Silicone | |
| Colour: | transparent |
| Temperature: | -50°C to +200°C FDA / USP Class VI |
| EPDM | |
| Colour: | black |
| Temperature: | -50°C to +150°C FDA / USP Class VI |
| Viton (FPM) | |
| Colour: | green |
| Temperature: | -20°C to +200°C FDA |
| FEP covered Silicone | |
| Colour: | shell: transparent, core: red |
| Temperature: | -60°C to +200°C FDA / USP Class VI |
| FEP covered Viton (FPM) | |
| Colour: | shell: transparent, core: black |
| Temperature: | -20°C to +200°C FDA / USP Class VI |
| PFA covered Silicone | |
| Colour: | shell: transparent, core: red |
| Temperature: | -60°C to +230°C FDA / USP Class VI |

