

Introduction

ACO Passavant GmbH (hereafter referred to as „ACO“) would like to thank you for the confidence you have placed in us. You have purchased an ACO product, which is a state-of-the-art solution that was tested prior to delivery as part of our quality control process to ensure it is in proper condition.



Illustrations in this manual are provided for basic understanding and may vary depending on the system model and installation situation.

Service

Please feel free to contact ACO Service if you require further information.

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Warranty

For information on warranties, see „General Terms and Conditions“,

 <http://www.aco-haustechnik.de/agb>.

Use of symbols

Symbols are used to draw your attention to particular information in these operating instructions as follows:



Tips and additional information to make your work easier



Bullet point



Steps to be carried out in the specified order



References to further information in these operating instructions and in other documents



Warnings

Grease Separator LipuMobil-P

for mobile and fixed stationary application in frost-free areas

EN

**LipuMobil-P-B
Type 0,8**



**LipuMobil-P-D
Type 0,8
(with discharge tank)**



Abbreviations: P = polyethylene _ B = basic model , D = direct disposal

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1 For your safety



Read the safety instructions before installing and operating the grease separator, in order to prevent personal injuries and damage to property.

1.1 Personnel qualifications




Activities	Person	Knowledge
Layout, operational changes	Planners	Knowledge of building systems and services, evaluation of wastewater technology application cases. Layout of grease separators and drainage systems. Normative specifications and directives
Installation	Skilled persons	Sanitary installation
Operation Monitoring	Operator	No specific requirements
Daily grease extraction, weekly disposal and cleaning	Properly qualified personnel	Approved disposal contractor *
Disposal	Qualified technicians	Correct, environmentally compatible disposal of materials and substances, knowledge regarding recycling

*Definition of “properly qualified technicians”:

Properly qualified personnel are personnel of the operator or designated third parties, who by virtue of their training, knowledge and practical experience ensure that they carry out assessments or tests and inspections in the respective field properly.


1.2 Personal protective equipment

Personal protective equipment must be made available to the personnel.

Mandatory sign	Meaning
	Safety footwear provides good slip resistance, especially in wet conditions, as well as a high degree of penetration resistance (e.g. in case of nails) and protects the feet from falling objects (e.g. during transport).
	Protective gloves protect the hands from infection and from minor bruising and cut injuries.
	Protective clothing protect the skin from infection and from minor bruising and cut injuries.

1.3 Warnings

Warnings are indicated in these operating instructions by the following warning symbols and signal words.

Warning symbol and signal word		Explanation	
	CAUTION	Injuries	Hazard with a low degree of risk which, if not prevented, may lead to minor or moderate injuries.
	ATTENTION	Damage to property	Hazard which, if not prevented, can result in the damage of products and their functions or an item/property in the surrounding area.

1.4 Transport and storage

ATTENTION Observe the following with regard to storage and transportation:

- Store the system in frost-free rooms.
- Check the load bearing capacity of the lifting gear: It must be at least equivalent to the indicated weight plus safety margin.
- When using a crane or crane hook to transport the system:
 - Fasten the belts to the pallet or to system components that can bear the load.
 - Never stand under a suspended load.
 - Make sure that no other people can access any part of the danger area.
 - Avoid swinging movements during transportation.

1.5 Disposal

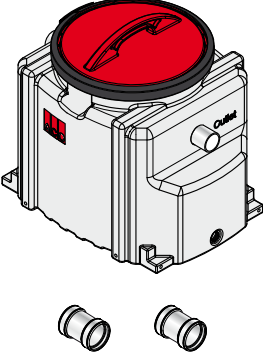
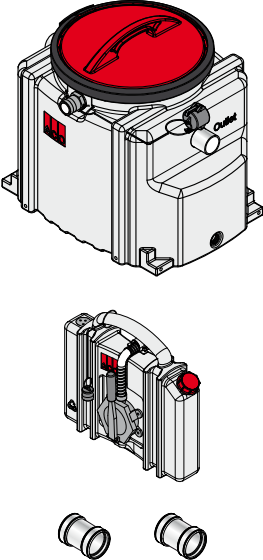
When decommissioning the system, empty it completely and clean it.

Incorrect disposal constitutes an environmental hazard. Comply with regional disposal regulations.

- Separate components by materials
- Recycle components

2 Product description

2.1 Scope of delivery

	Unit	Illustration	Weight
<p>LipuMobil-P-B Article no.: 3700.04.00</p>	<ul style="list-style-type: none"> ■ Grease separator consisting of: <ul style="list-style-type: none"> □ tank □ clamping ring □ cover sealing ■ 2 x sliding coupling DN 50 		<p>📖 Chap. 5.0 “Technical Data”</p> <p>0,2 kg</p>
<p>LipuMobil-P-D Article no.: 3700.04.10 (operating side right) Article no.: 3700.04.20 (operating side left)</p>	<ul style="list-style-type: none"> ■ Grease separator consisting of: <ul style="list-style-type: none"> □ tank, operating side right or left □ clamping ring □ cover sealing ■ Grease storage tank (installed on right or left operating side) ■ 2 x sliding coupling DN 50 		<p>📖 Chap. 5.0 “Technical Data”</p> <p>📖 Chap. 5.0 “Technical Data”</p> <p>0,2 kg</p>

2.2 Product features

2.2.1 LipuMobil-P-B

Technical features

- Tank of polyethylene, material PE-LLD
- For free standing installation in frost-free areas
- One-piece tank
- Tank with cover with sealing for odour prevention
- Inlet and outlet baffle
- One inspection opening, diameter Ø 350 mm
- Horizontal connection DN/OD 50 mm for connection with on-site inlet and outlet piping
- Horizontal connection R ¾" sealed, for connection with discharge valve on-site (optional)
- Connection bores for four transportation wheel (optional)
- Cover of polyethylene, material PE-HD, one-piece
- Clamping ring of stainless steel, powder-coated, one-piece

Operating features

- Daily disposal of separated grease through inspection opening
- Weekly disposal and cleaning of tank after previous disconnection of inlet and outlet piping

2.2.2 LipuMobil-P-D

Technical features

- Tank (additionally to LipuMobil-P-B):
 - dip tube (for extraction of grease into separator grease storage tank)
 - horizontal connection nozzle (left or right operating side) with blind coupling, for connection of a grease storage tank
- Grease storage tank
 - tank of polyethylene, material PE-LLD
 - for free-standing installation in frost-free areas
 - one-piece tank with carrying handle
 - tank odour-proof
 - horizontal connection coupling with blind cover, for connection with grease separator
 - manual pump for grease extraction from grease separator

- transparent suction hose for visual inspection
- ventilation with activated carbon filter
- cap

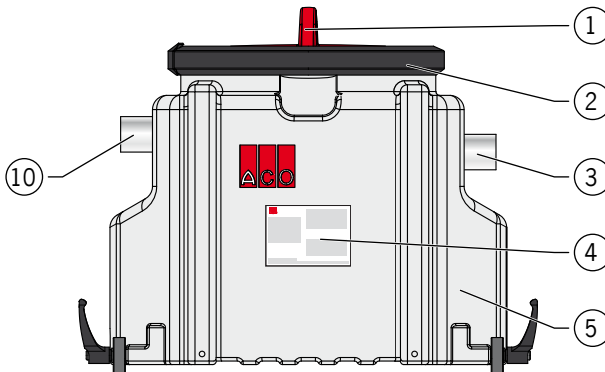
Operating features

- Daily grease extraction into grease storage tank and disposal of storage tank content into larger collection barrel (option) without odour
- Weekly disposal and cleaning of tank after previous disconnection of inlet and outlet piping

2.3 Components

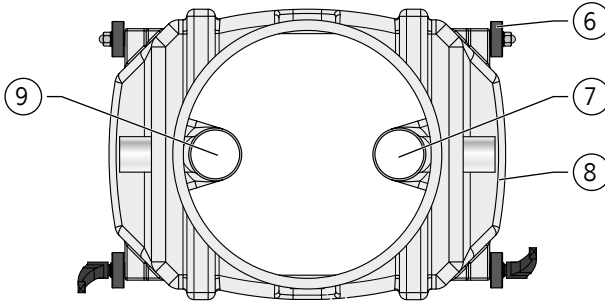
2.3.1 LipuMobil-P-B

(includes also optional available transportation wheels)



LipuMobil-P

Product description

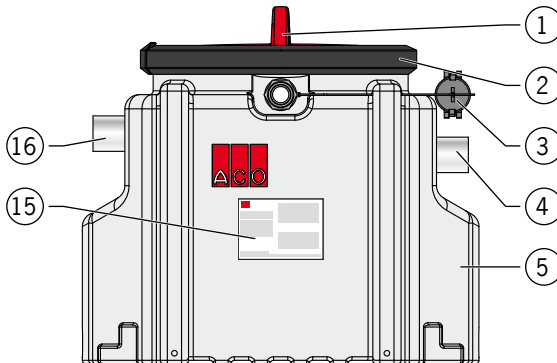


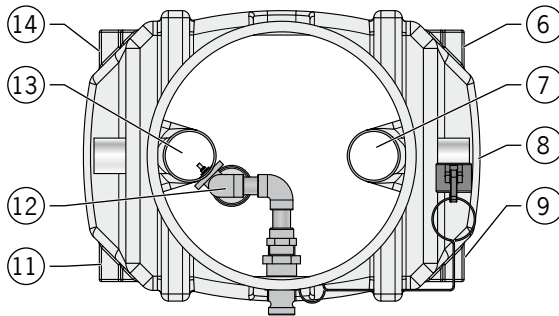
- | | |
|--|---|
| 1 = Cover with sealing ring | 7 = Dip tube (outlet) |
| 2 = Clamping ring | 8 = Connection R $\frac{3}{4}$ " (frontal, at ground level) closed, for discharge connection (discharge valve optionally, article no. 3700.04.40) |
| 3 = Connection DN/OD 50 mm for outlet piping | 9 = Dip tube (inlet) |
| 4 = Type sign | 10 = Connection DN/OD 50 mm for inlet piping |
| 5 = Tank | |
| 6 = Transportation wheels (optionally, article no. 3700.04.30) * | |

* Only two of the four wheels include fasteners for tank fixation.

2.3.2 LipuMobil-P-D

Grease separator body (Illustration: operating side right)



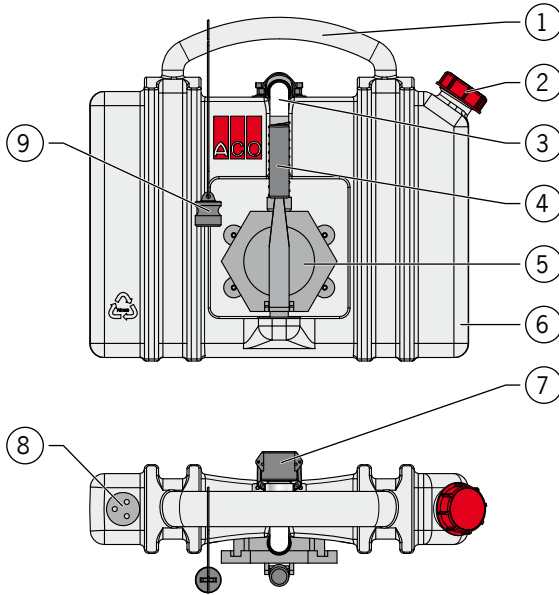


- | | |
|---|--|
| 1 = Cover with sealing | 10 = Horizontal connection nozzle (operating side right or left) for connection of grease storage tank |
| 2 = Clamping ring | 11 = Connection bores for transportation wheels (option) |
| 3 = Blind cover for coupling | 12 = Dip pipe for grease extraction |
| 4 = Connection DN/OD 50 mm for outlet piping | 13 = Dip pipe (inlet) |
| 5 = Tank | 14 = Connection bores for transportation wheels (option) |
| 6 = Connection bores for transportation wheels (option) | 15 = Type sign |
| 7 = Dip tube (outlet) | 16 = Connection DN/OD 50 mm for inlet piping |
| 8 = Connection R $\frac{3}{4}$ " (frontal, at ground level) closed, for discharge connection (discharge valve optionally, article no. 3700.04.40) | |
| 9 = Connection bores for four transportation wheel (transportation wheel optionally, article no. 3700.04.30) | |

LipuMobil-P

Product description

Grease storage tank



1 = Carrying handle

2 = Cap with sealing

3 = Transparent suction hose

4 = Operating lever

5 = Manual pump

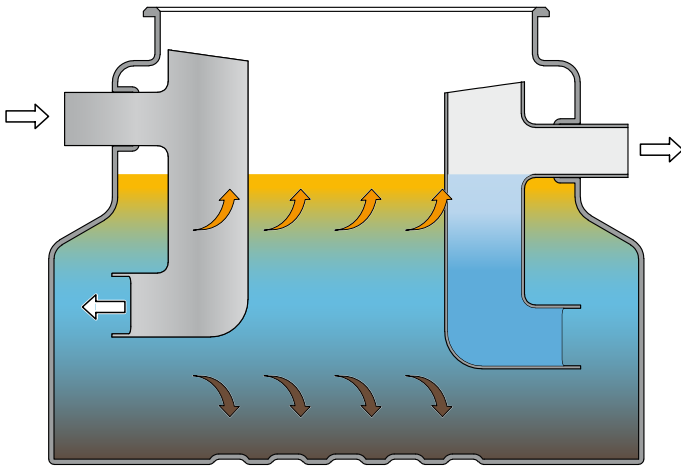
6 = Tank

7 = Connection coupling

8 = Ventilation with activated carbon filter or
ventilation opening

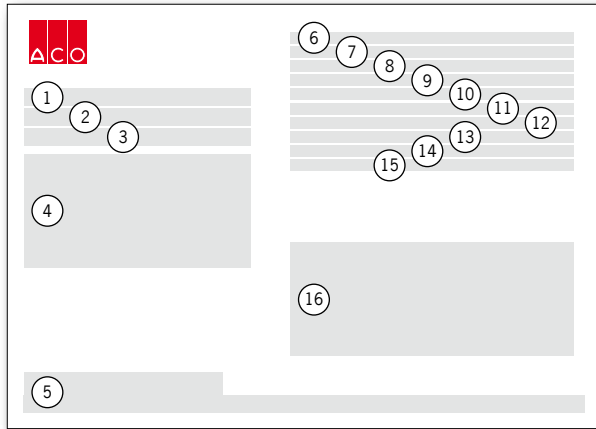
9 = Blind cover

2.4 Functional principle



Grease separators work purely physically as per the gravity principle (difference in density). Fats, oils and grease (=FOGs) of animals or vegetables have a lower density than water and will collect on the surface. Heavy substances sink to the bottom into the sludge trap.

2.5 Product identification (type sign)



1 = LipuMobil-P -B or -D

2 = Build year (week/year)

3 = Article number

4 = -

5 = Manufacturer's address

6 = Grease separator

7 = -

8 = Type 0,8

9 = Total content

10 = Sludge storage capacity

11 = Grease storage capacity

12 = -

13 = -

14 = Operating side right or left

15 = Article number

16 = Serial number

3 Installation

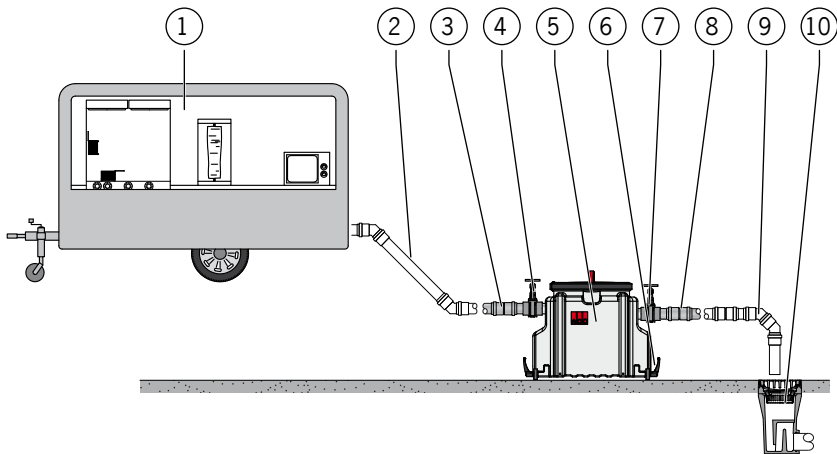
ATTENTION

- Make sure the staff members have required qualification, 📖 Chap. 1.1 “Personnel qualifications”.
- National regulations with respect to installation area have to be taken into account.

3.1 Installation examples

3.1.1 LipuMobil-P-B

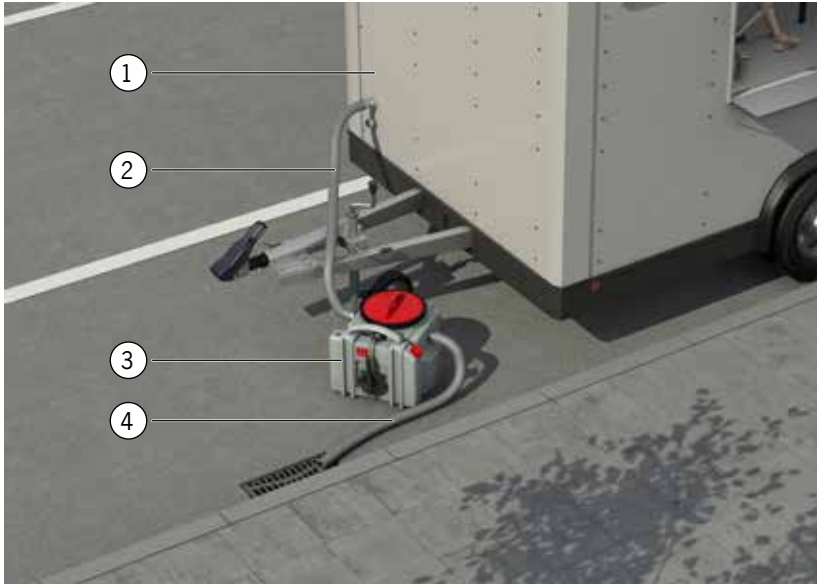
The example shows the installation with a mobile grill wagon. Depending on the local conditions, the installed components may differ.



- | | |
|-----------------------------|------------------------------------|
| 1 = Grill wagon | 6 = Transportation wheels (option) |
| 2 = Inlet piping (on site) | 7 = Shut-off valve (option) |
| 3 = Double socket | 8 = Double socket |
| 4 = Shut-off valve (option) | 9 = Outlet piping (on site) |
| 5 = LipuMobil-P-B | 10 = Public gully |

3.1.2 LipuMobil-P-D

The example shows the installation with a mobile grill wagon. Depending on the local conditions, the installed components may differ.



1 = Grill wagon

2 = Inlet piping on site

3 = LipuMobil-P-D

4 = Outlet piping on site

3.2 Erection installation

3.2.1 Erection specifications

- If possible near the source of wastewater generation in well-ventilated, frost-free areas, public thoroughfares and storage spaces. Easy accessible for assembly, operation, disposal, cleaning and maintenance works.
- Horizontal floor suitable for bearing the corresponding load.

3.2.2 Connection requirements

Inlet pipe requirements

- Wastewater is to be fed into the grease separator in a free fall of at least 2% (1:50).
- Intake pipes must be made of materials resistant to fatty acids (e.g. PP, PE).

Outlet pipe requirements

- Outlet piping has to be installed with slope towards a public gully.
- Outlet pipes must be made of materials resistant to fatty acids (e.g. PP, PE).

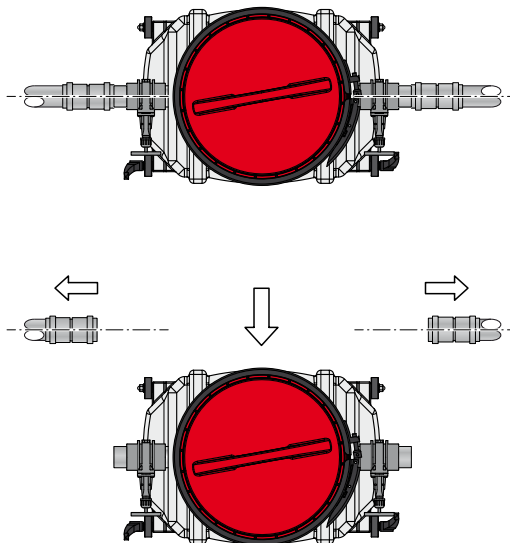
Disassembly

ATTENTION Simple disassembly of connections (e.g. through usage of double sockets) for disposal of tank content has to be respected.

scope of delivery, there are two double sockets.




The installation of shut-off valves in both inlet and outlet connection of the separator prevents the leaking of contents during transportation of the separator. Shut-off valves are optionally available from ACO.



3.3 Installation of accessories

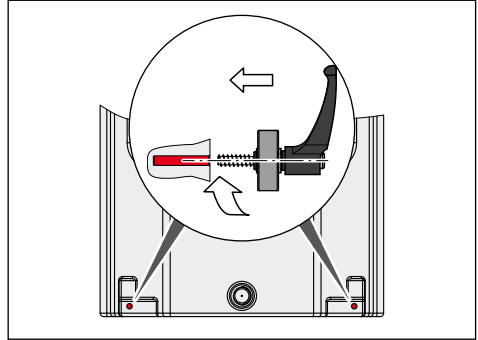
Wheels for transport

Four wheels are optionally available from ACO (article no. 3700.04.30), requirement  service@aco.com.



The front ends of the tank include connection bores at ground level to the left and to the right for the thread bolts of the wheels.


- Place tank on the ground with on front end showing up
- Turn in wheel vertically and hand-tight.



ATTENTION Through pressing of the fasteners towards the tank and simultaneous rotating it to the left or to the right, the following will be achieved:

- Release of wheels through left rotating
- Fixation of wheels through right rotating
- Neutra position of fastener through rotating both to the right or to the left

Discharge valve

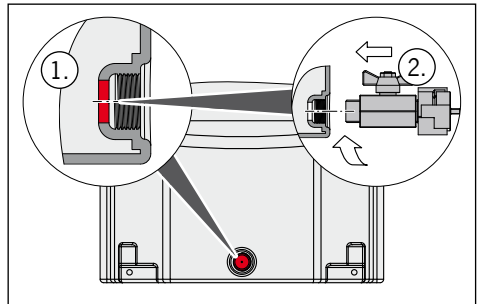
A discharge valve is available from ACO (article no. 3700.04.40), requirement  service@aco.com.



Both front ends of the tank include at ground level for installation of a discharge valve at centric position

- Drill open socket (—) maximum $\varnothing 20$ mm (1).
- Seal in threaded sleeve of discharge valve (2).

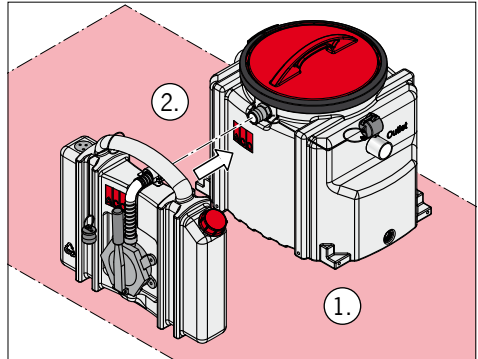
ATTENTION Discharge valve has to be protected from external impacts (e.g. this could lead to leakage problems).



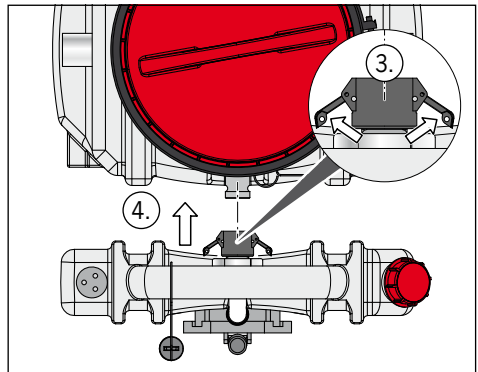
3.4 Mounting of LipuMobil-P-D

Separator and grease storage tank are not combined ex works.

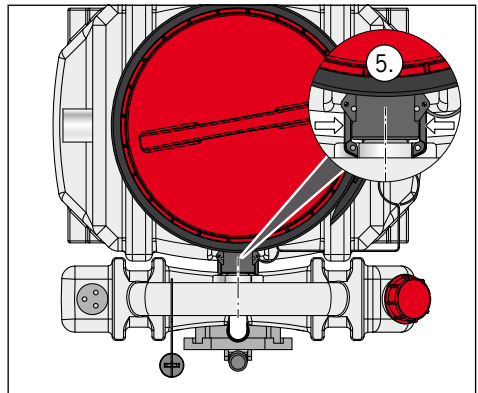
- Place both separator and storage tank on the same level (1).
- Connect coupling of tank with nozzle of separator (2).



- Release clamping level of connection coupling (3) and remove (potentially available) blind cap.
- If blind cover of coupling has been mounted: open clamping lever of coupling blind cover and remove the hose nozzle.
- Move storage tank with coupling over nozzle (4).



- Close Clamping lever of connection nozzle (5).




4 Operation



CAUTION

Danger of contamination when in direct contact with wastewater

- Wear protective gear,  Chap. 1.2 “Personal protective equipment“.

ATTENTION If a discharge valve or the transport wheels (both are options) have been installed, this poses a risk if not handled with care (tearing of components).

4.1 Commissioning

The commissioning has to be recorded.

- Clean device.
- Open valves in both inlet and outlet pipe (if available).
- Fill separator with water until operating level (outlet invert) has been reached:
 - through inlet pipe (sink)
 - or through inspection opening.
- Close inspection opening
- Check body for leakage problems.

Separator is now operational.


4.2 Disposal and cleaning

Requirements:

- The separated grease has to be removed on a daily base.
- At least every week and after each change of installation area, the separator has to be completely emptied and cleaned.



Date and address of disposal contractor has to be noted in the operating log.

Barrels with 60 litres are optionally available from ACO (article no. 7600.00.15), requirement  service@aco.com.

This barrel can be used to store the grease until its maximum capacity has been reached. The barrel then needs to be transported to (or carried away by) a disposal contractor. It is recommended to keep at least two barrels on site.

4.3 LipuMobil-P-B

4.3.1 Daily works

- Stop inflow.
- Open inspection cover.
- Remove grease level from water surface.
- Close inspection cover and restart wastewater inflow.

4.3.2 Weekly works

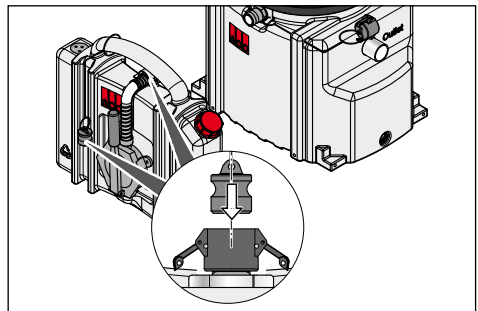
- Stop inflow.
- Close shut-off valves in both inlet and outlet pipe (if available).
- Remove grease separator from pipe system.
- Discharge grease into collecting barrel (also available from ACO).
- Clean separator and keep occurring wastewater in tank itself.
- Re-insert separator into pipe system.
- Open valves in inlet and outlet pipe.
- Restore wastewater inflow.

4.4 LipuMobil-P-D

ATTENTION To avoid problems with odour, the openings on both storage tank and separator have to be closed:

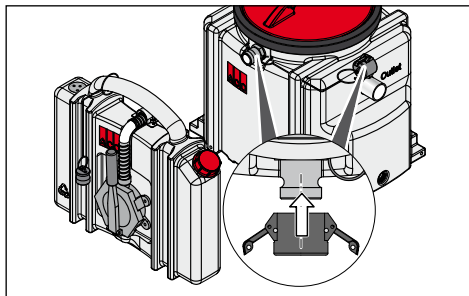
Grease storage tank:

- Seal connecting coupling with blind cap.



Separator:

- Seal hose nozzle with blind cover of the coupling.



Daily, respectively weekly works

- Stop wastewater inflow.
- Close shut-off valves in both inlet and outlet pipe (if available).
- Pressing of the operating lever and discharge of FOGs from the separator tank.
- When maximum capacity of grease storage tank has been reached (visual control via transparent suction hose respectively when pressing of pumps get difficult, maybe filling status has to be checked manually), repeat process several times:
 - Release clamping lever of connecting coupling and remove grease storage tank from separator.
 - Depose content of storage tank into separate barrel/container.
- After last disposal process, clean storage tank and pour cleaning water into separator.
- Remove blind cover from connection coupling (grease storage tank).
- Remove blind cover of coupling from hose nozzle (separator).
- Move grease storage tank with connection coupling over connection nozzle of separator tank, fasten clamping lever.
- Open valves in inlet and outlet pipe.
- Restore wastewater inflow.

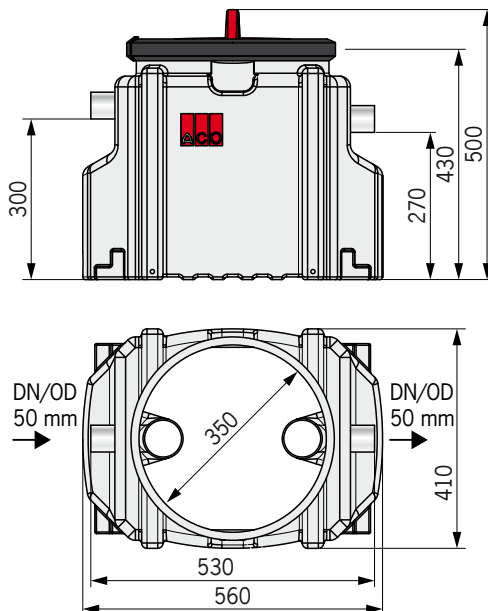
5 Technical data

5.1 LipuMobil-P-B

5.1.1 Specifications

Subject	Value/Designation
Grease storage volume maximum:	15 litres
Sludge storage volume maximum:	16 litres
Total content:	48 litres
Weight:	7 kg
Article number:	3700.04.00

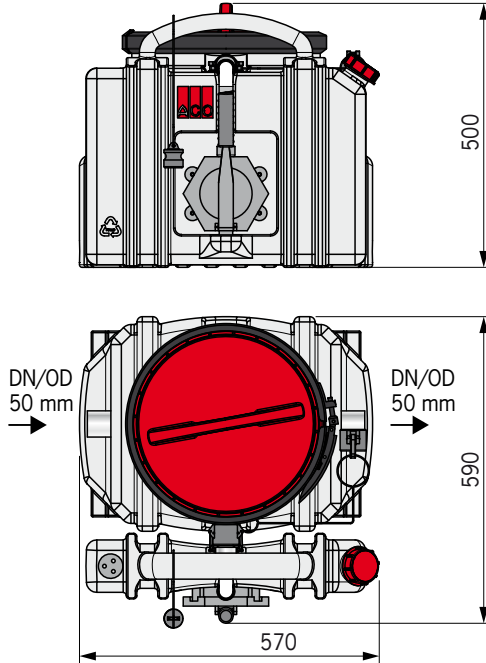
5.1.2 Technical dimensional drawing



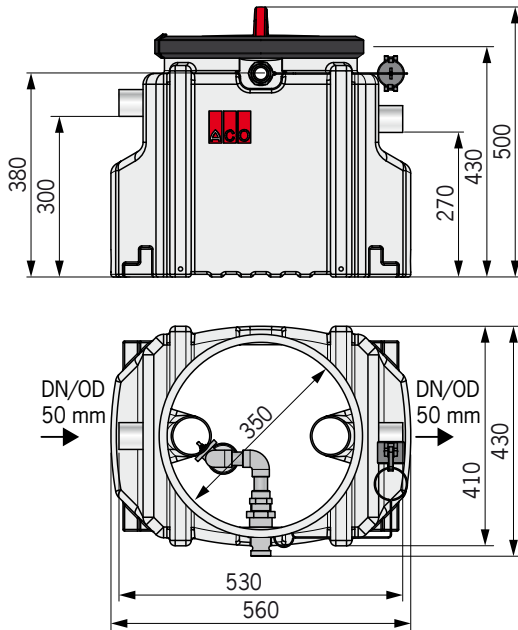
5.2 LipuMobil-P-D

5.2.1 Technial dimensional drawing

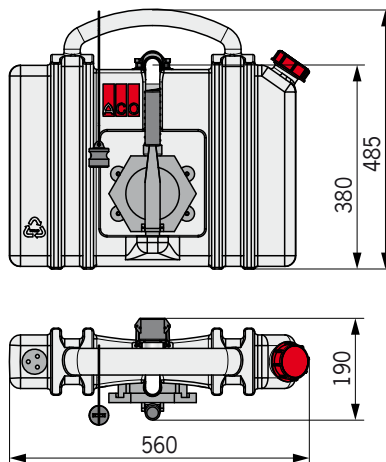
Total assembly (Illustration: operating side right)



Separator tank (Illustration: operating side right)










Grease storage tank



5.2.2 Specifications

	Subject	Value/Designation
Storage tank	Total content:	10 litres
	Weight (empty):	4 kg
	Weight (filled):	14 kg
Separator	Grease storage volume maximum:	15 litres
	Sludge storage volume maximum:	16 litres
	Total content:	48 litres
	Weight (empty):	7,5 kg
	Weight (filled):	55,5 kg
	Article number:	3700.04.10/operating side right
	Article number:	3700.04.20/operating side left

5.3 Spare parts

	Package	Illustrations	Article no.
LipuMobil-P-B	<ul style="list-style-type: none"> ■ Replacement cover with clamping ring 	 Chap. 2.3.1 "LipuMobil-P-B" / Pos. 1 + 2	0169.05.17
	<ul style="list-style-type: none"> ■ Sealing ring for cover 	 Chap. 2.3.1 "LipuMobil-P-B" / Pos. 1 without cover	0169.05.18
LipuMobil-P-D	<ul style="list-style-type: none"> ■ Service set 	 Chap. 2.3.2 "LipuMobil-P-D, Separator tank" / Pos. 1 without cover and "LipuMobil-P-D, Storage tank" / Pos. 8	0169.05.19
	<ul style="list-style-type: none"> ■ Manual pump 	 Chap. 2.3.2 "LipuMobil-P-D, Storage tank" / Pos. 5	0169.05.20
	<ul style="list-style-type: none"> ■ Coupling 	 Chap. 2.3.2 "LipuMobil-P-D, Storage tank" / Pos. 7	0169.05.21
	<ul style="list-style-type: none"> ■ Suction hose 	 Chap. 2.3.2 "LipuMobil-P-D, Separator tank" / Pos. 12	0169.05.22
	<ul style="list-style-type: none"> ■ Sealing set 	 Chap. 2.3.2 "LipuMobil-P-D, Separator tank" / Pos. 3 and "LipuMobil-P-D, Storage tank" / Pos. 9	0169.05.23

5.4 Accessories

Components	Abbil Illustration	Weight	Article no.
<ul style="list-style-type: none"> ■ Set of transport wheels: <ul style="list-style-type: none"> □ 2x wheels with fastener □ 2x wheels without fastener 		3,5 kg	3700.04.30
<p>ATTENTION Installation of wheels increases total height of all dimensions by 3 mm.</p>			
<ul style="list-style-type: none"> ■ Discharge valve R$\frac{3}{4}$" 		0,1 kg	3700.04.40
<ul style="list-style-type: none"> ■ Barrels, 60 litre 		5,0 kg	7600.00.15
<ul style="list-style-type: none"> ■ Shut-off valve DN 50 		0,4 kg	0175.18.33

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