

# ACO Building Drainage

## Commercial kitchens

Uniclass L21725	
CI/SfB (52.9)	

Grease management



*Product catalogue*

**Grease separators - EN1825**

**Above ground**





### ACO Building Drainage

Our built environment is becoming ever more complex. Applications are becoming more sophisticated and the increasing pressure of regulations and standards makes achieving design, performance and financial goals ever tougher.

Our mission: to eliminate design risk, to reduce installed and life cost and to deliver exceptional finish and performance in every product application.

Our global resources and fabrication capacity make it possible for us to deliver best value, both with our standard products and with our bespoke designs. Confidence is further assured with quality systems that are in accordance with ISO 9001-2008.

ACO Building Drainage is a division of ACO Technologies plc and part of the worldwide ACO Group. The Group has sales in excess of £700 million worldwide with production facilities in the UK, Germany, France, Switzerland, Denmark, Spain, Poland, Czech Republic, Australia and the USA. In total more than 4,000 people are employed in over 40 countries throughout the world.

#### ACO Building Drainage Enquiries Team:

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- A complete pricing service to merchants, contractors and clients.

#### ACO Building Drainage Customer Services Team:

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- Product availability, delivery lead times, and all other queries including collections, returns and product / service issues.

#### ACO Building Drainage Design Services Team:

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- Technical and installation advice.
- Detailed design and 'Value Engineering' advice.
- Hydraulic calculations and AutoCAD drawings.
- Advice on suitability of ACO equivalent products.

#### ACO Building Drainage Marketing and Media Support

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Email: [abdmarketing@aco.co.uk](mailto:abdmarketing@aco.co.uk)

- For all product brochures, imagery or merchandising material requests.



#### collect:

- Stainless Steel and Galvanised steel Channels
- Stainless Steel Gullies
- Pipe System
- Roof / Balcony Drainage
- Wetroom & Shower Drainage



#### clean:

- Grease Management Systems



#### hold:

- Anti-flood Backflow Protection Systems



#### release:

- Lifting Stations

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**Above ground grease separator:**

**Principles and function**

The function of the grease separator is based on physics. Difference in density between water, fats, oils, grease and solid particles combined with gravity makes heavy particles sink to the bottom and lighter substance such as fats, oils and grease (FOG) float to the top of the separator.



**BS EN 1825**

BS EN1825 is a European standard specifying definitions, nominal sizes, principle of design, performance requirements, marking, testing and quality control of grease separators. The standard applies to separators for the separation of grease and oils of vegetable and animal origin from waste water by means of gravity without any external energy.

**Disposal**

All grease separators require maintenance to remove waste once the separator is full. The LipuMax range of separators need to be emptied completely.

**Disposal via inspection cover**



The waste water is removed from the separator using a suction pipe inserted into the separator by opening the inspection cover. Odours can escape from the separator when emptied out via inspection cover.

**Disposal via direct suction**



For direct suction the separator can be emptied via a suction pipe. The suction pipe should be extended to an accessible location for the disposal tanker and fitted with an appropriate connector. The sealed connection limits/prevents the escape of unpleasant odours during emptying.

**Disposal via pump**



In applications where the waste water has to be transported in excess of 6m upwards in a vertical direction an automatically operated disposal pump is required.

**Grease level inspection window**

All above ground separators have 1 or 2 inspection windows to view grease level.

**Grease level sensor**

An optional grease level sensor warns the user that the grease separator needs emptying.



**Heating rod**

A heating rod is available as an accessory to make the FOG more fluid and easier to dispose when using suction to collect the content of the separator.



**Separator materials**

ACO above ground separators are made from polyethylene (PE)

Benefitting from corrosion-resistant polyethylene construction, ACO offers a 25 year warranty on the material stability and resistance against greasy waste water. The warranty is valid providing that the separator is installed, commissioned and maintained according to manufacturer's instructions.

The polyethylene separator is light, making it easy to transport and install. Polyethylene is an environmentally friendly material as it can be reused following decommissioning of the separator.



**Cleaning**

Cleaning the separator is part of the maintenance procedure. Cleaning has 2 functions:

1. Cleans the inside wall of the separator.
2. Facilitates suction of the waste by breaking up and liquefying the grease layer.



**Cleaning via inspection cover**

The separator is cleaned manually through the inspection cover using a water hose. Odours can escape.



**Manual high pressure cleaning**

A manually operated, high pressure cleaning system inside the separator, can clean the internal walls of the separator without the need to remove the inspection cover, preventing escape of odours.



**Automated high pressure cleaning**

A programmable, automated, high pressure cleaning system removes FOG and sediment from the internal walls of the separator. The program provides for a cleaning and filling cycle using a factory setting, which can be re-programmed to suit the customer's need. There is no need to remove the inspection cover.



**Filling**

Once the separator is cleaned it needs to be filled with fresh water.

**Manual filling device**

A manually operated filling device removes the need to open the inspection cover.



**Automatic filling device**

An automatic filling device is executed with a solenoid valve, which is operated from the control panel. Filling becomes part of the cleaning process.



**Product selection**

There are 4 stages in the ACO above ground separator indicating features and level of automation:

		Basic	Stage 1	Stage 2	Stage 2 with disposal pump	Stage 3	Stage 3 with disposal pump
Disposal – via inspection cover		✓	-	-	-	-	-
Disposal – manual direct suction		-	✓	✓	-	✓	-
Disposal – via pump		-	-	-	✓	-	✓
Cleaning – via inspection cover		✓	✓	-	-	-	-
Cleaning device – high pressure manual		-	-	✓	✓	-	-
Cleaning device – high pressure automatic		-	-	-	-	✓	✓
Filling device – manual		✓	✓	✓	✓	-	-
Filling device – automatic		-	-	-	-	✓	✓

## Separator selection Process

### Stage 1

#### Consider waste water contents

Although all separators accommodate silt, it is often necessary to remove coarse particles which might otherwise cause problems, for example fish waste, which will putrefy if allowed to enter the separator. Such waste can be removed by use of pre-strainer (e.g. see page 37).

**Note:** Gravity Grease Separators are not designed to accommodate output from macerators.



### Stage 2

#### Establish separator size

BS EN 1825 describes 3 methods of calculating the nominal size (NS) of a grease separator:

- Per kitchen equipment and type
- Per quantity of meals
- Per meat processing unit

Sizing methods contained in this product catalogue cover the more common applications only. For other sizing methods, refer to BS EN 1825 Part 2 or contact the ACO Building Drainage Estimating Team on 01462 810421 or email [abdestimating@aco.co.uk](mailto:abdestimating@aco.co.uk)

**Note:** An on-line grease separator sizing tool is available on: <http://catalogue.aco-buildingdrainage.com/Home/Dimensioning-tools/Dimensioning-separators>

### Step 1 - Select FOG density

Common FOG densities are:

NS	Heating rod	Flow rate	Total capacity	Weight empty	Product No.
Animal fat	0.85-0.94	Sesame oil	0.92	Corn oil	0.92
Butter fat	0.91	Sunflower oil	0.92-0.93	Fish oil	0.89-0.94
Coconut oil	0.92-0.93	Vegetable oil	0.95-0.97	Olive oil	0.91

### Step 2 - Select kitchen type

The table below details various types of kitchen, as listed in BS EN 1825.

Kitchen Type	Description	Typical kitchen characteristics
A	<b>Hotel</b> <ul style="list-style-type: none"> <li>• High variety of meals available</li> <li>• á la carte menu</li> </ul>	<ul style="list-style-type: none"> <li>• Market fresh produce</li> </ul>
B	<b>Restaurant</b> <ul style="list-style-type: none"> <li>• Average variety of meals available</li> <li>• Individual preparation of food with prepared cooking processes</li> </ul>	<ul style="list-style-type: none"> <li>• Market fresh, partly prepared produce</li> </ul>
C	<b>Hospital, clinics, care homes</b> <ul style="list-style-type: none"> <li>• Few main menus (2-4)</li> <li>• Prepared in large food containers</li> <li>• Many forms of special foods in small food containers</li> </ul>	<ul style="list-style-type: none"> <li>• Prepared, partly market fresh produce</li> </ul>

**Step 1 - Select kitchen type (continued)**

Kitchen Type	Description	Typical kitchen characteristics
D	<b>Large catering establishment</b> (24h operation)	<ul style="list-style-type: none"> <li>• Market fresh produce, large proportion of canned food</li> <li>• Few menus per day (1-2)</li> <li>• Prepared in few, large food containers</li> </ul>
E	<b>Factory and office, canteens, student refectory</b>	<ul style="list-style-type: none"> <li>• Market fresh, partly prepared produce</li> </ul>

**Step 3 - Calculate nominal size of Gravity Grease, based on meals / day**

3.1	Select kitchen type (See table in step 2)	Typical kitchen characteristics					
		A	B	C	D	E	
3.2	Calculate meals per day where 1 meal = 1 restaurant cover						= 260
3.3	Multiply by: Water volume per meal in litres as stated in BS EN 1825	x 100	x 50	x 20	x 10	x 5	x50  =13,000
3.4	Multiply by: Peak flow coefficient as stated in BS EN 1825	x 5	x 8.5	x 13	x 22	x 20	x8.5  =110,500
3.5	Multiply by: Temperature at inlet °C	<ul style="list-style-type: none"> <li>• x1.0 if temperature &lt;60°C (most cases)</li> <li>• 1.3 ONLY if temperature is &gt;60°C</li> </ul>					x1.0  =110,500
3.6	Multiply by: Factor for detergents, dishwasher powders and rising agents	<ul style="list-style-type: none"> <li>• If never used, go to stage 3.7</li> <li>• x1.3 if occasionally used (most cases)</li> <li>• x1.5 of special circumstances (e.g. hospital)</li> </ul>					x1.3  =143,650
3.7	Multiply by: Factor for fat/oil density in g/cm <sup>3</sup>	<ul style="list-style-type: none"> <li>• x 1.0 if density &lt;0.94g/cm<sup>3</sup> (most cases)</li> <li>• x1.5 only if density &gt; 0.94g/cm<sup>3</sup> ,otherwise go to stage 8</li> </ul>					Olive oil is mainly used therefor x1.0  =143,650
3.8	Establish average daily kitchen operation in seconds (3600 seconds per hour)						11 hours x 3600  =39,600
3.9	Take answer from stage 3.7 and divide answer from stage 3.8						143,650 39,600
3.10	Round up to available NS size Sizes available up to NS 10						3.63 round up to NS 4



## Grease Separator - Product Range Overview



### Lipujet P-O - Up to NS10 (pages 10-15):

- Roto-moulded polyethylene, oval shaped grease separator.
- Nominal sizes 1, 2, 3, 4, 5.5, 7, 8,5 and 10.
- One inspection window with wiper to observe grease level in separator.
- Available in all 4 stages of feature automation level.
- Designed, tested and certified according BS EN 1825.
- On request also available in stainless steel 316.



### Lipujet - P-O - NS 15 - NS30 (pages 16-19):

- Welded polyethylene, oval shaped grease separator.
- Nominal sizes 15, 20, 25, and 30
- Two inspection windows, one for grease level and one for sludge level.
- Available models: basic, stage 1 and stage 3 (with and without disposal pump)
- Designed, tested and certified according BS EN 1825.



### Lipujet - P-R (pages 20-25):

- Welded polyethylene, round shaped grease separator.
- Nominal sizes 2, 4, 7,10, 15 and 20
- One inspection window with wiper to observe grease level in separator.
- Available in all 4 stages of feature automation level.
- Designed, tested and certified according BS EN 1825.
- On request also available in stainless steel 316.



### Lipujet - P-SD (page 27):

- Roto-moulded polyethylene grease separator built up out of 3 lightweight components.
- Nominal sizes: 2 and 4.
- Very useful in applications with narrow access routes.
- Available model: Stage 1 of feature automation level.
- Designed, tested and certified according BS EN 1825.



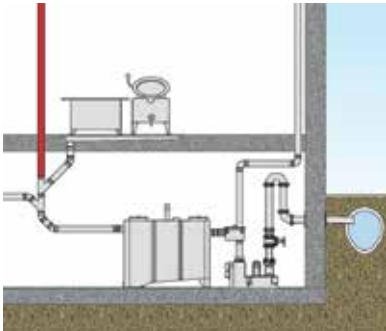
### LipuSmart (pages 28-33):

- Roto-moulded polyethylene, oval shaped grease separator, with integrated sampling pot and lifting station.
- One control unit for both separator and lifting station.
- Nominal sizes: 2, 3, 4, 5.5, 7, 8.5 and 10
- Available models: basic, stage 1 and stage 3 (with and without disposal pump)
- Separator designed, tested and certified according BS EN1825 and lifting station according BS EN 12050-1.



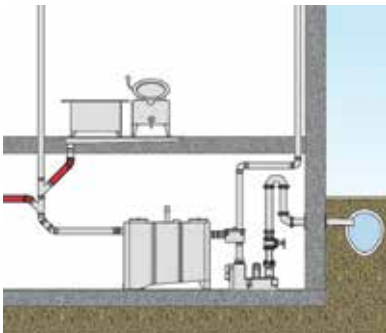
## Installation Design Requirements

# IMPORTANT!



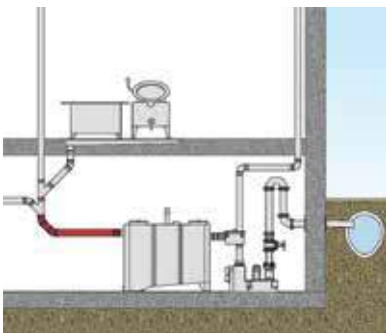
### VENTING:

- Inlet and outlet pipes must be vented.
- Vent stack should pass through the roof. connecting pipes with lengths exceeding 5m require dedicated vent stack.
- Inlet pipes longer than 10m without intermediate vented connection pipes must be vented at the separator inlet point.



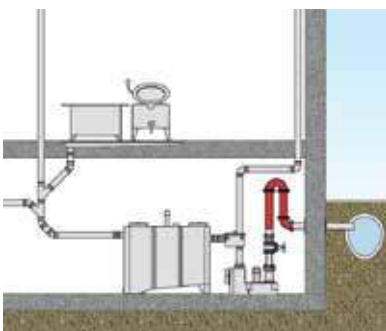
### PREVENTING UPSTREAM GREASE BUILD UP:

- Inlet pipes through unheated rooms must be thermally insulated.
- Install trace heating on the inlet pipe at risk of freezing i.e underground car parks.
- No additional measures required in heated rooms or where inlet pipes are run in frost-free rooms.



### INLET STABILISATION:

- Always use 45° pipe bends when going from vertical to horizontal pipe
- Intermediate section between two 45° pipe bends should be at least 250mm long.
- A stilling section must have a minimum length of 10x the nominal inlet pipe size, i.e. DN100 pipe must have 10x100 = 1000mm stilling section.



### BACKFLOW LOOP:

- The invert of the backflow loop must be positioned higher than the backflow level.

### LIFTING STATIONS:

- A variety of dual pumped lifting stations available for all applications where the separator is below the main sewer connection. Contact ACO Building Drainage Enquiries Team on 01462 810421 or email [abdestimating@aco.co.uk](mailto:abdestimating@aco.co.uk) for further details.

### Useful references:

BS EN 1825 Grease separators - Part 2: Selection of nominal size, installation, operation and maintenance.

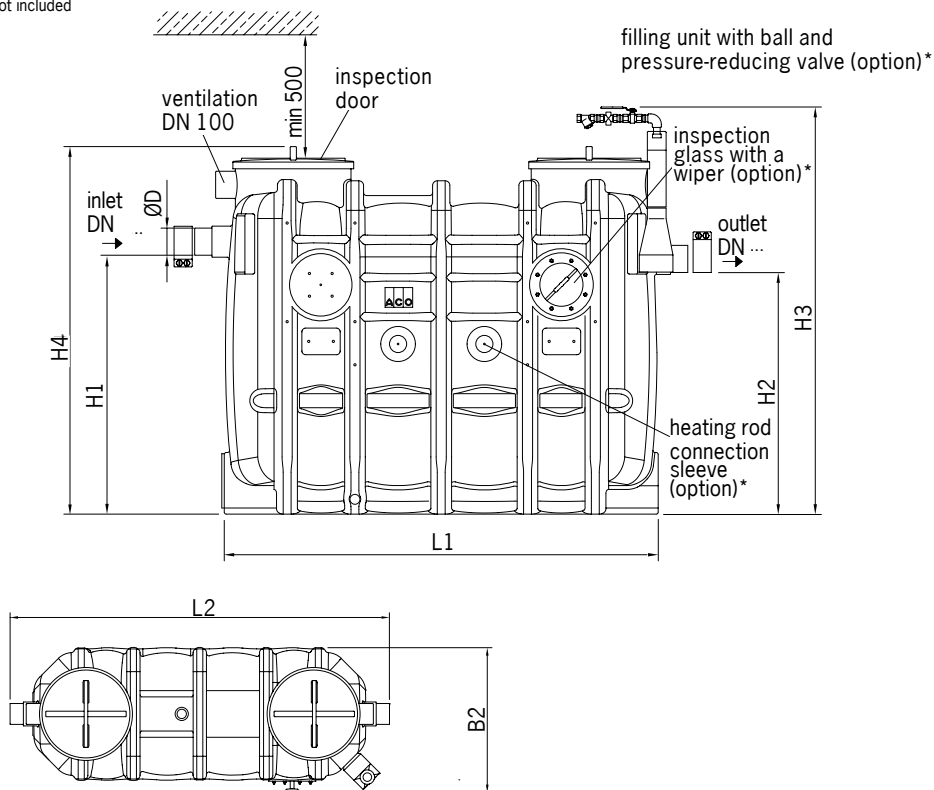
BS EN 12056 Gravity drainage systems inside buildings - Part 4: Waste water lifting plants - layout and calculation.

**Lipujet-P - Technical data**

**Lipujet-P-OB (Basic model)**



\*optional extras not included



**Table of dimensions**

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]							Part No
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H4	L2	B2	D	
1	100	106	100	320	62	382	830	760	1480	1300	1300	770	110	108500
2	100	210	100	440	70	510	1055	985	1680	1500	1300	770	110	108501
3	100	300	150	630	80	710	1055	985	1680	1500	1650	770	110	108502
4	100	400	200	830	95	925	1055	985	1680	1700	2000	770	110	108503
5.5	150	725	360	1430	170	1600	1250	1180	1880	1700	2000	1020	160	108504
7	150	800	400	1600	187	1787	1250	1180	1880	1700	2200	1020	160	108505
8.5	150	940	475	1900	208	2108	1250	1180	1880	1700	2485	1020	160	108506
10	150	1000	520	2000	220	2220	1250	1180	1880	1700	2690	1020	160	108507

**Accessories**

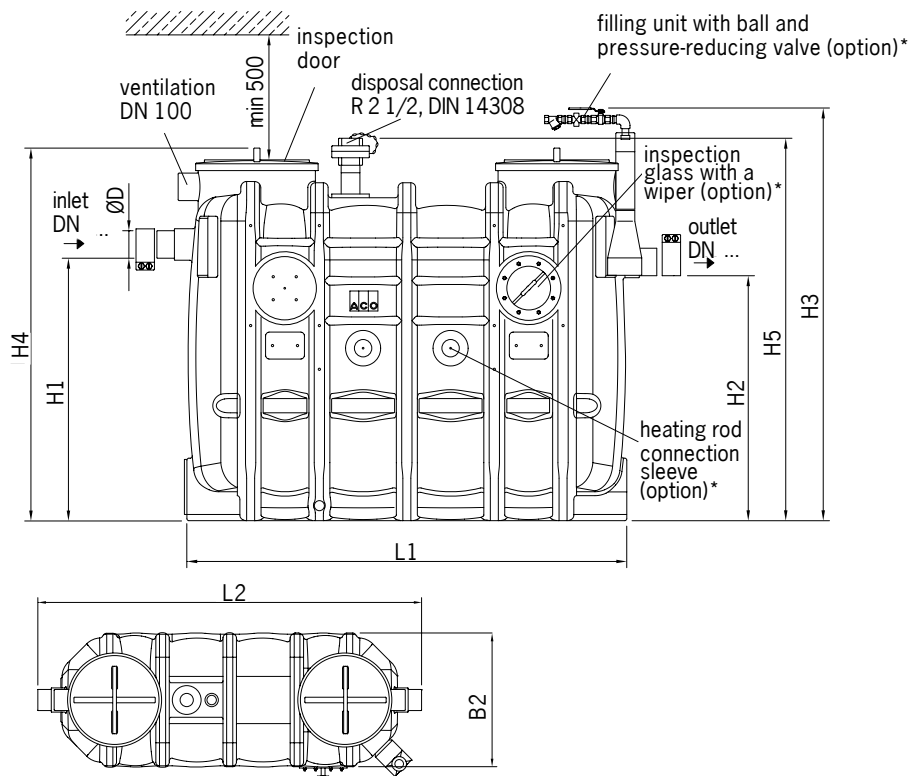
■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-OD (Extension stage 1)**



\*optional extras not included



**Table of dimensions**

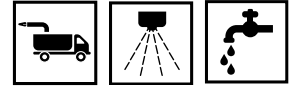
NS	DN	Content [l]			Weight [kg]		Dimensions [mm]						Part No	
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H4	L2	B2		D
1	100	106	100	320	68	388	830	760	1480	1300	1300	770	110	<b>108508</b>
2	100	210	100	440	75	515	1055	985	1680	1500	1300	770	110	<b>108509</b>
3	100	300	150	630	85	715	1055	985	1680	1500	1650	770	110	<b>108510</b>
4	100	400	200	830	100	930	1055	985	1680	1700	2000	770	110	<b>108511</b>
5.5	150	725	360	1430	175	1605	1250	1180	1880	1700	2000	1020	160	<b>108512</b>
7	150	800	400	1600	193	1793	1250	1180	1880	1700	2200	1020	160	<b>108513</b>
8.5	150	940	475	1900	214	2114	1250	1180	1880	1700	2485	1020	160	<b>108514</b>
10	150	1000	520	2000	226	2226	1250	1180	1880	1700	2690	1020	160	<b>108515</b>

**Accessories**

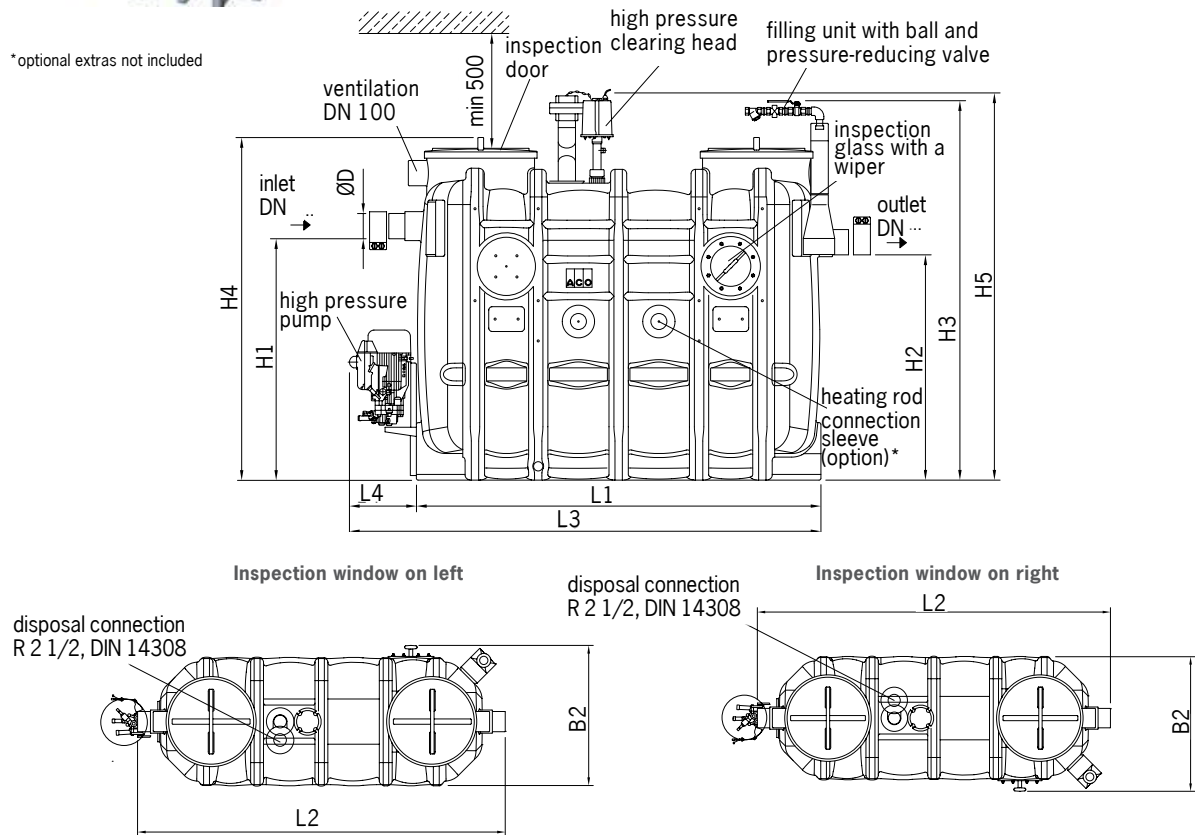
■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-OM (Extension stage 2)**



\*optional extras not included



**Table of dimensions**

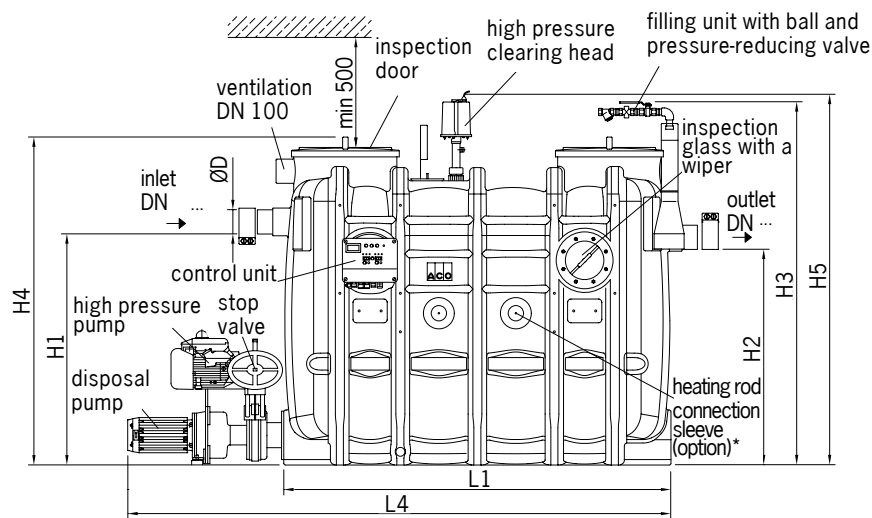
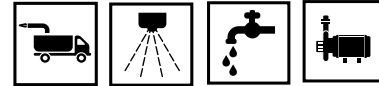
NS	DN	Content [l]			Weight [kg]		Dimensions [mm]								Part No	
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H4	H5	L2	L3	B2	D	Inspection window right	Inspection window left
1	100	106	100	320	95	415	830	760	1300	1500	1300	1400	770	110	108516	108524
2	100	210	100	440	100	540	1055	985	1500	1700	1300	1400	770	110	108517	108525
3	100	300	150	630	120	750	1055	985	1500	1700	1650	1750	770	110	108518	108526
4	100	400	200	830	135	965	1055	985	1500	1700	2000	2060	770	110	108519	108527
5.5	150	725	360	1430	206	1636	1250	1180	1700	1900	2000	2060	1020	160	108520	108528
7	150	800	400	1600	223	1823	1250	1180	1700	1900	2200	2260	1020	160	108521	108529
8.5	150	940	475	1900	243	2143	1250	1180	1700	1900	2485	2550	1020	160	108522	108530
10	150	1000	520	2000	255	2255	1250	1180	1700	1900	2690	2750	1020	160	108523	108531

**Accessories**

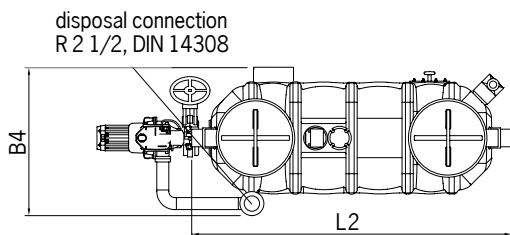
■ For all accessories please refer to pages 34-37

### Lipujet-P - Technical data

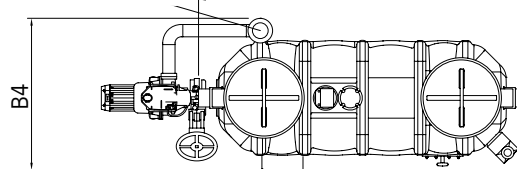
#### Lipujet-P-OMP (Extension stage 2 with disposal pump)



Control panel on left



Control panel on right  
disposal connection R 2 1/2, DIN 14308



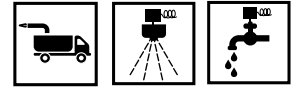
#### Table of dimensions

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]							Part No		
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H4	H5	L2	L4	B4	D	Control panel right	Control panel left
1	100	106	100	320	177	497	830	760	1300	1500	1300	1800	930	110	108532	108540
2	100	210	100	440	182	622	1055	985	1500	1700	1300	1800	930	110	108533	108541
3	100	300	150	630	194	824	1055	985	1500	1700	1650	2150	930	110	108534	108542
4	100	400	200	830	210	1040	1055	985	1500	1700	2000	2460	930	110	108535	108543
5.5	150	725	360	1430	286	1716	1250	1180	1700	1900	2000	2460	1180	160	108536	108544
7	150	800	400	1600	305	1905	1250	1180	1700	1900	2200	2660	1180	160	108537	108545
8.5	150	940	475	1900	325	2225	1250	1180	1700	1900	2485	2950	1180	160	108538	108546
10	150	1000	520	2000	337	2337	1250	1180	1700	1900	2690	2150	1180	160	108539	108547

#### Accessories

■ For all accessories please refer to pages 34-37

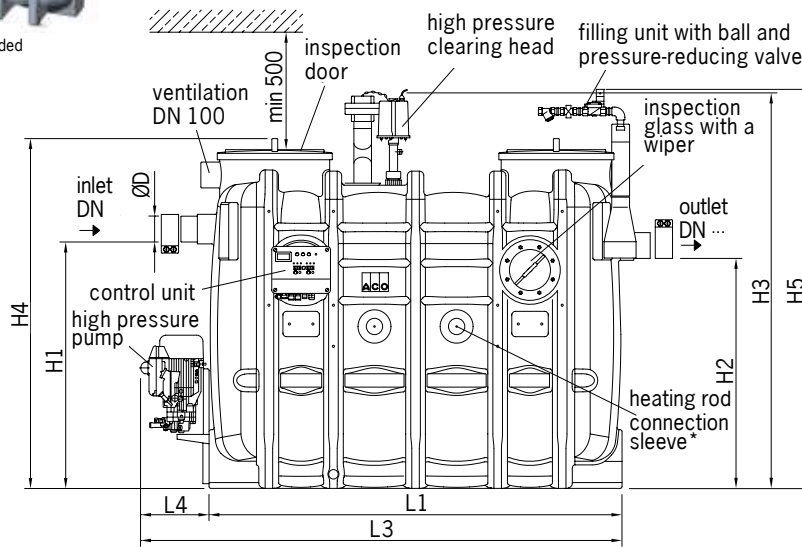
**Lipujet-P - Technical data**



**Lipujet-P-OA (Extension stage 3)**



\* optional extras not included

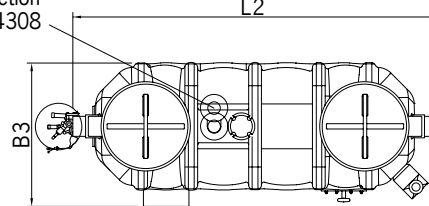
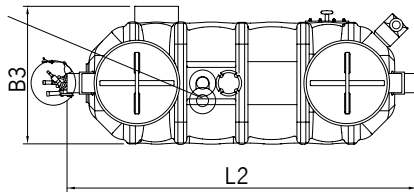


Control panel on left

Control panel on right

disposal connection R 2 1/2, DIN 14308

disposal connection R 2 1/2, DIN 14308



**Table of dimensions**

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]								Part No	
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H4	H5	L2	L3	B3	D	Operational right	Operational left
1	100	106	100	320	100	420	830	760	1300	1500	1300	1400	800	110	108548	108556
2	100	210	100	440	105	545	1055	985	1500	1700	1300	1400	800	110	108549	108557
3	100	300	150	630	120	750	1055	985	1500	1700	1650	1750	800	110	108550	108558
4	100	400	200	830	135	965	1055	985	1500	1700	2000	2060	800	110	108551	108559
5.5	150	725	360	1430	210	1640	1250	1180	1700	1900	2000	2060	1050	160	108552	108560
7	150	800	400	1600	226	1826	1250	1180	1700	1900	2200	2260	1050	160	108553	108561
8.5	150	940	475	1900	247	2147	1250	1180	1700	1900	2485	2550	1050	160	108554	108562
10	150	1000	520	2000	259	2259	1250	1180	1700	1900	2690	2750	1050	160	108555	108563

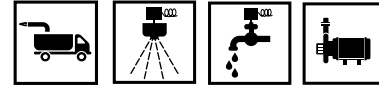
**Accessories**

■ For all accessories please refer to pages 34-37

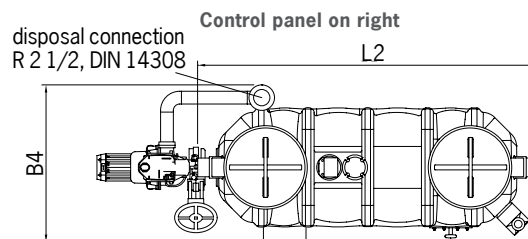
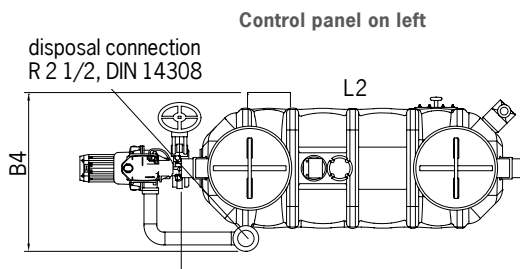
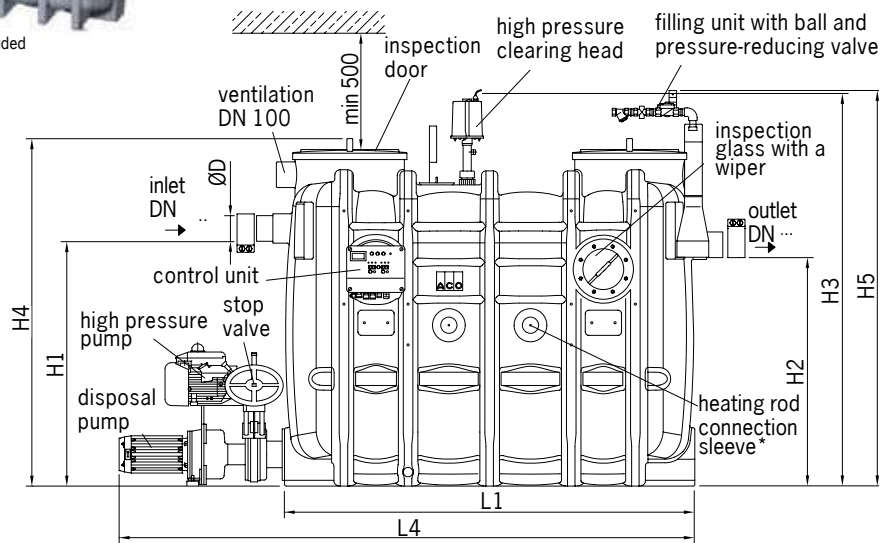


### Lipujet-P - Technical data

#### Lipujet-P-OAP (Extension stage 3 with disposal pump)



\*optional extras not included



#### Table of dimensions

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]							Part No		
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H4	H5	L2	L4	B4	D	Control panel right	Control panel left
1	100	106	100	320	177	497	830	760	1300	1500	1300	1800	930	110	<b>108564</b>	<b>108572</b>
2	100	210	100	440	182	622	1055	985	1500	1700	1300	1800	930	110	<b>108565</b>	<b>108573</b>
3	100	300	150	630	194	824	1055	985	1500	1700	1650	2150	930	110	<b>108566</b>	<b>108574</b>
4	100	400	200	830	210	1040	1055	985	1500	1700	2000	2460	930	110	<b>108567</b>	<b>108575</b>
5.5	150	725	360	1430	286	1716	1250	1180	1700	1900	2000	2460	1180	160	<b>108568</b>	<b>108576</b>
7	150	800	400	1600	305	1905	1250	1180	1700	1900	2200	2660	1180	160	<b>108569</b>	<b>108577</b>
8.5	150	940	475	1900	325	2225	1250	1180	1700	1900	2485	2950	1180	160	<b>108570</b>	<b>108578</b>
10	150	1000	520	2000	387	2337	1250	1180	1700	1900	2690	3150	1180	160	<b>108571</b>	<b>108579</b>

#### Accessories

■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

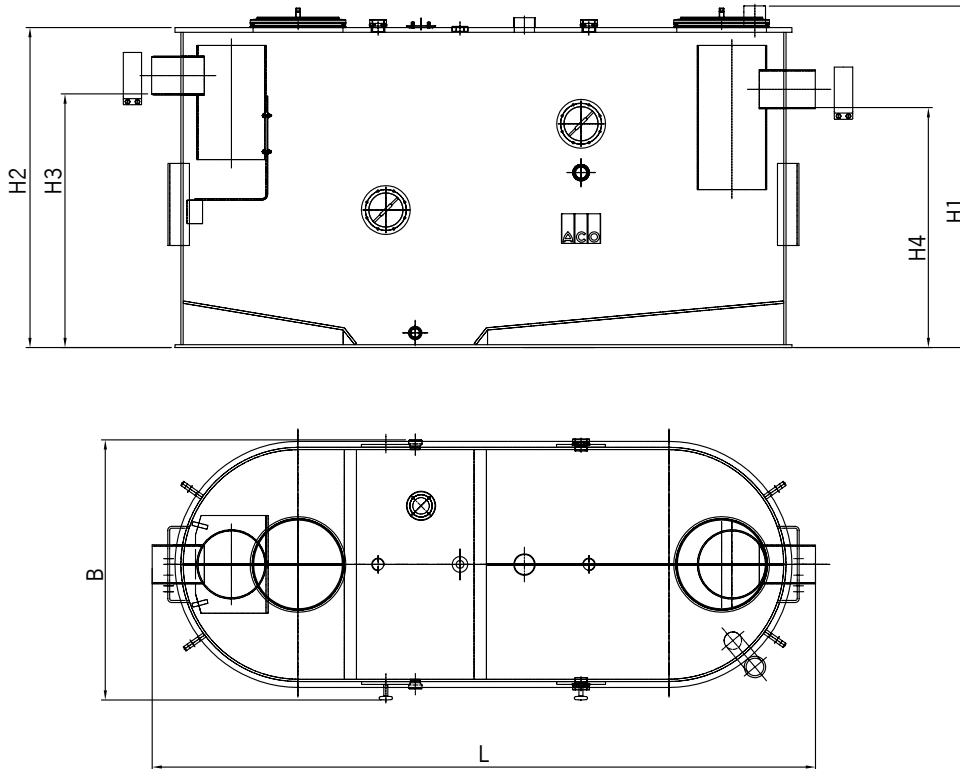
**Lipujet-P-OB (Basic model)**



**Product information**

- Parallel devices on request

**Dimensional drawing**



16

**Table of dimensions**

NS	Inlet/outlet OD [mm]	Sludge trap [l]	Grease storage [l]	Total capacity [l]	Dimensions [mm]						Part No	
					L	B	H1	H2	H3	H4	Inspection window right	Inspection window left
15	200	1580	630	2850	3210	1340	1750	1640	1300	1230	<b>108580</b>	<b>108584</b>
20	200	2070	850	3760	3910	1340	1750	1640	1300	1230	<b>108581</b>	<b>108585</b>
25	200	2550	1070	4660	4610	1340	1850	1740	1300	1230	<b>108582</b>	<b>108586</b>
30	250	3020	1290	5550	5310	1340	1850	1740	1300	1230	<b>108583</b>	<b>108587</b>

**Accessories**

- For all accessories please refer to pages 34-37

## Lipujet-P - Technical data

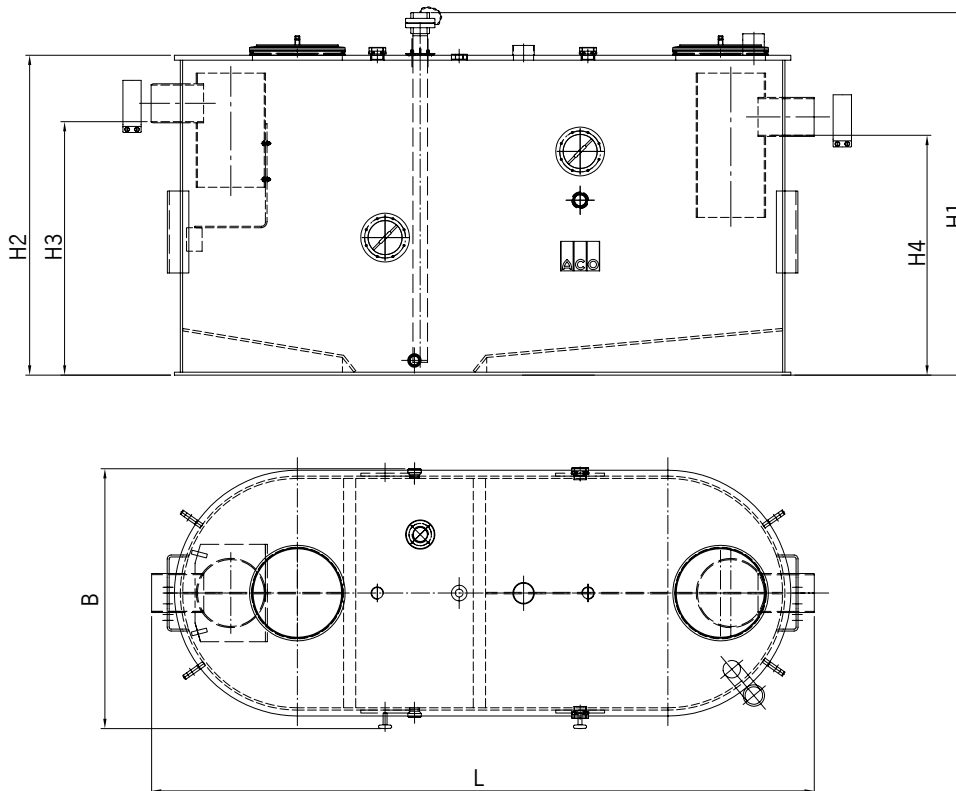
### Lipujet-P-OD (Extension stage 1)



#### Product information

- Disposal connection OD 75mm and coupling Storz B R 2½"

#### Dimensional drawing



#### Table of dimensions

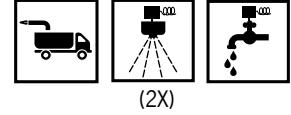
NS	Inlet/outlet OD [mm]	Sludge trap [mm]	Grease storage [mm]	Total capacity [mm]	Dimensions [mm]						Part No	
					L	B	H1	H2	H3	H4	Inspection window right	Inspection window left
15	200	1580	630	2850	3210	1340	1850	1640	1300	1230	<b>108588</b>	<b>108592</b>
20	200	2070	850	3760	3910	1340	1850	1640	1300	1230	<b>108589</b>	<b>108593</b>
25	200	2550	1070	4660	4610	1340	1950	1740	1300	1230	<b>108590</b>	<b>108594</b>
30	250	3020	1290	5550	5310	1340	1950	1740	1300	1230	<b>108591</b>	<b>108595</b>

#### Accessories

- For all accessories please refer to pages 34-37

### Lipujet-P - Technical data

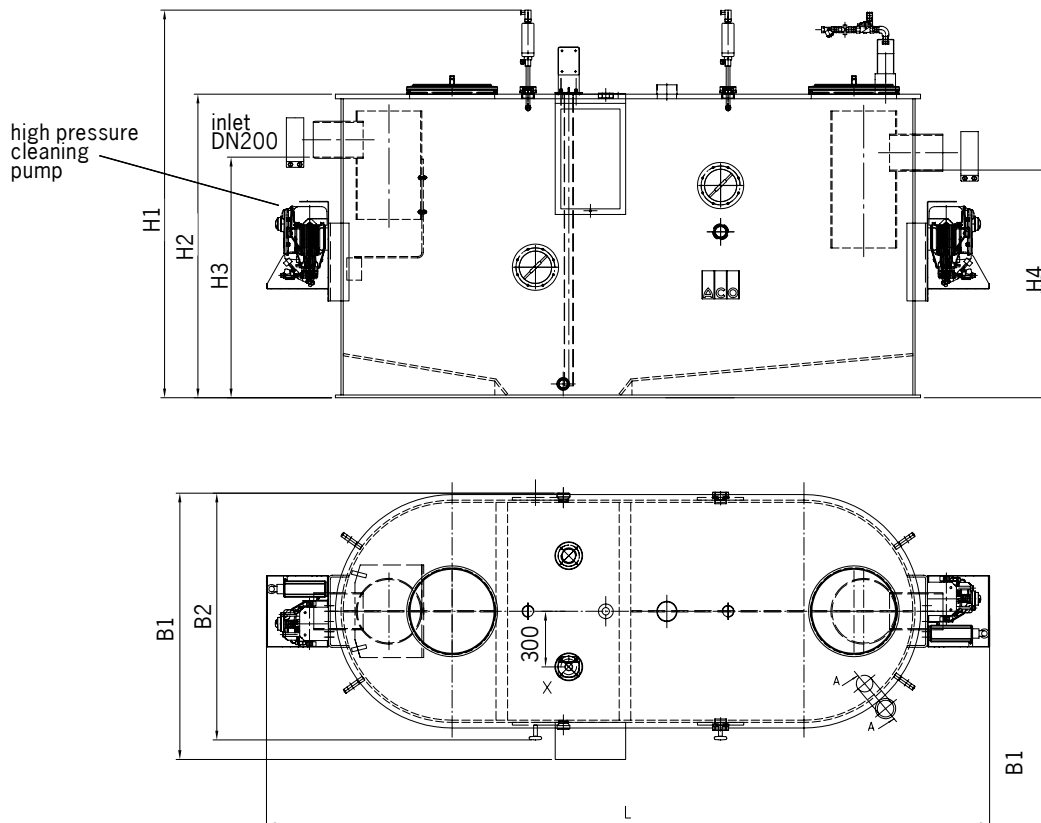
**Lipujet-P-OA (Stage 3)**



**Product information**

- Disposal connection OD 75mm and coupling Storz B R 2½"
- Automatically operated filling device R ¾" (solenoid valve)
- Electric connection 400 V / 50 Hz / 16 A / 7.8 kW

**Dimensional drawing**



**Table of dimensions**

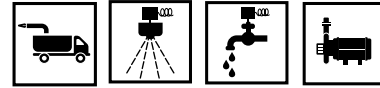
NS	Inlet/outlet OD [mm]	Sludge trap [mm]	Grease storage [mm]	Total capacity [mm]	Dimensions [mm]							Part No	
					L	B1	B2	H1	H2	H3	H4	Control panel right	Control panel left
15	200	1580	630	2850	3210	1530	1340	2090	1640	1300	1230	<b>108596</b>	<b>108600</b>
20	200	2070	850	3760	3910	1530	1340	2090	1640	1300	1230	<b>108597</b>	<b>108601</b>
25	200	2550	1070	4660	4610	1530	1340	2190	1740	1300	1230	<b>108598</b>	<b>108602</b>
30	250	3020	1290	5550	5310	1530	1340	2190	1740	1300	1230	<b>108599</b>	<b>108603</b>

**Accessories**

- For all accessories please refer to pages 34-37

## Lipujet-P - Technical data

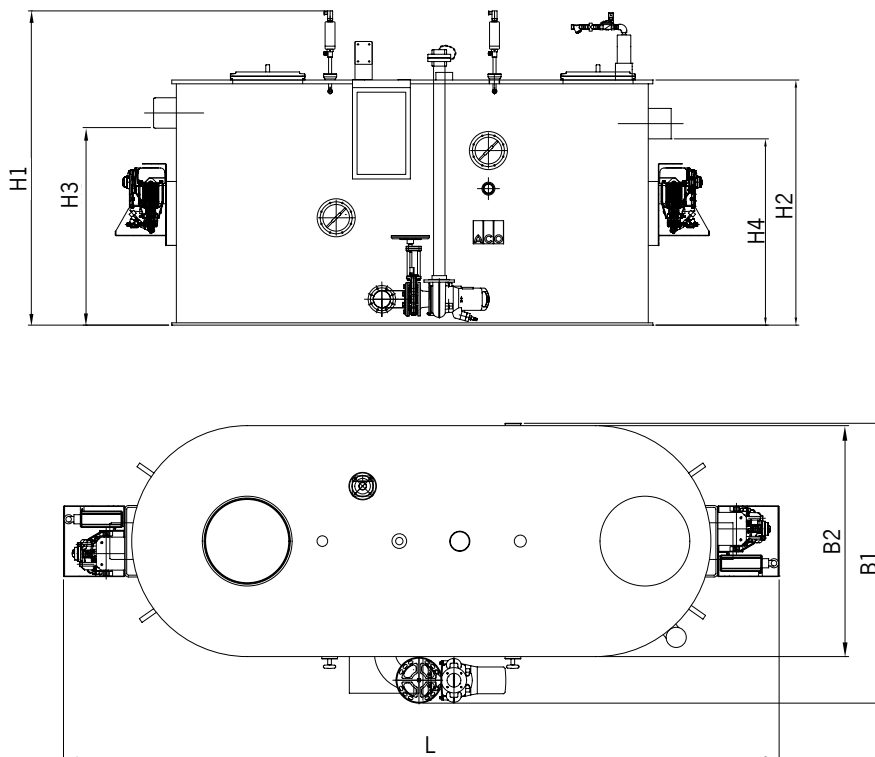
### Lipujet-P-OAP (Extension stage 3 with disposal pump)



#### Product information

- Disposal pump for maximum heights of up to 18 metres with 10 m<sup>3</sup>.h disposal performance
- Automatically operated filling device R 3/4" (solenoid valve)
- Electric connection 400 V / 50 Hz / 16 A / 11.5 kW
- Automatically operated disposal pump 3.7 kW with shut-off valve, disposal connection OD 75mm and coupling Storz B R 2½

### Dimensional drawing



### Table of dimensions

NS	Inlet/outlet OD [mm]	Sludge trap [mm]	Grease storage [mm]	Total capacity [l]	Dimensions [mm]							Part No	
					L	B1	B2	H1	H2	H3	H4	Operating side right	Operating side left
15	200	1580	630	2850	3210	1530	1340	2090	1640	1300	1230	<b>108604</b>	<b>108608</b>
20	200	2070	850	3760	3910	1530	1340	2090	1640	1300	1230	<b>108605</b>	<b>108609</b>
25	200	2550	1070	4660	4610	1530	1340	2190	1740	1300	1230	<b>108606</b>	<b>108610</b>
30	250	3020	1290	5550	5310	1530	1340	2190	1740	1300	1230	<b>108607</b>	<b>108611</b>

### Accessories

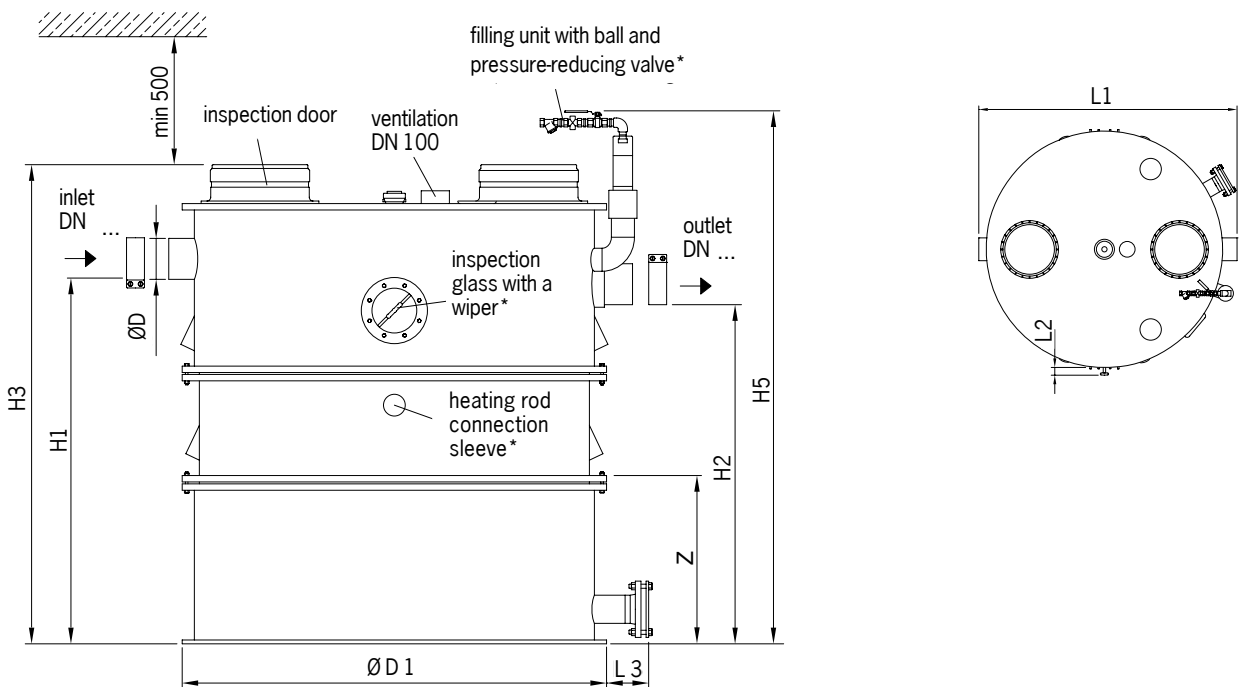
- For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-RB (Basic model)**



\* optional extras not included



**Table of dimensions**

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]									Part No	
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	Z/n*	D		D1
2	100	290	120	680	119	799	975	905	1320	1530	1255	60	150	795/2	110	1020	<b>108612</b>
4	100	500	160	890	134	1024	1240	1170	1580	1780	1255	60	150	820/2	110	1020	<b>108613</b>
7	150	830	400	2120	301	2521	1430	1330	1880	2080	1820	60	150	785/3	160	1660	<b>108614</b>
10	150	1150	400	2450	311	2761	1600	1500	2050	2250	1820	60	150	785/3	160	1660	<b>108615</b>
15	200	1950	800	3610	357	3967	1765	1665	2200	2400	2130	60	150	880/3	200	1915	<b>108616</b>
20	200	2440	800	4070	358	4428	1955	1855	2400	2600	2130	60	150	880/3	200	1915	<b>108617</b>

\*Z = largest separate component (mm)/n= number of separate components

**Accessories**

■ For all accessories please refer to pages 34-37



## Lipujet-P - Technical data

### Lipujet-P-RD (Extension stage 1)



\*optional extras not included

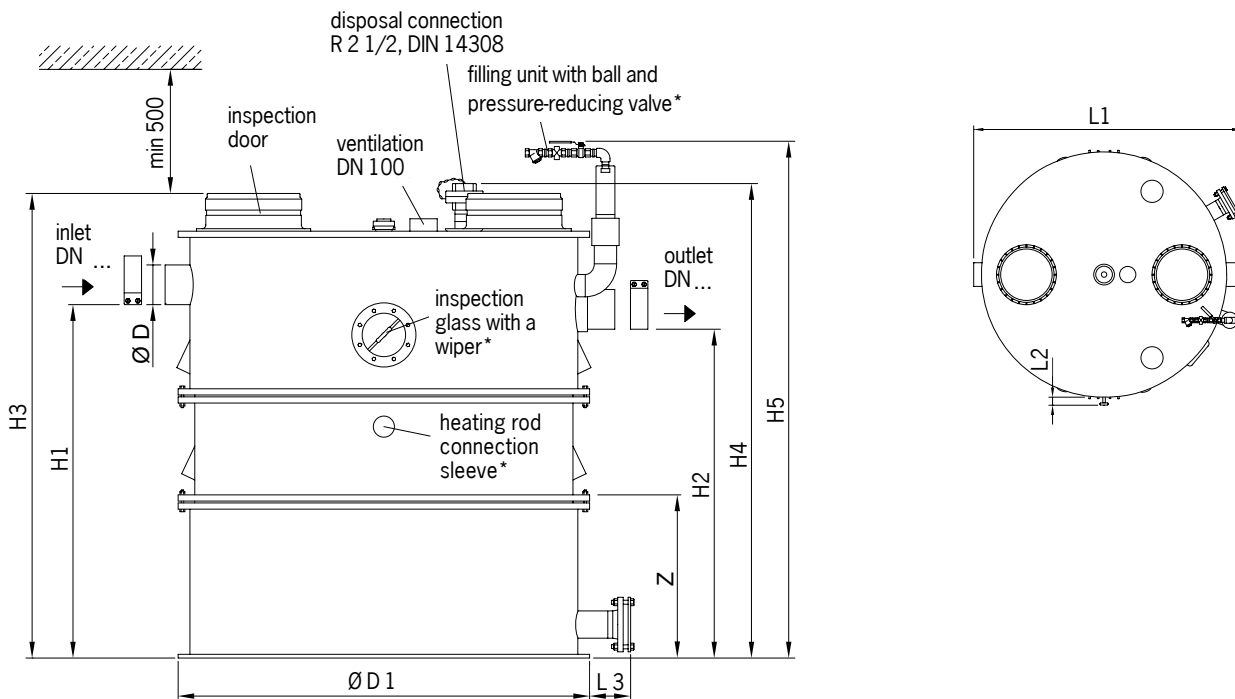


Table of dimensions

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]									Part No	
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	Z/n*	D		D1
2	100	290	120	680	123	805	975	905	1320	1530	1255	60	150	795/2	110	1020	<b>108618</b>
4	100	500	160	890	139	1029	1240	1170	1580	1780	1255	60	150	820/2	110	1020	<b>108619</b>
7	150	830	400	2120	310	2430	1430	1330	1880	2080	1820	60	150	785/3	160	1660	<b>108620</b>
10	150	1150	400	2450	321	2771	1600	1500	2050	2250	1820	60	150	785/3	160	1660	<b>108621</b>
15	200	1950	800	3610	358	3968	1765	1665	2200	2400	2130	60	150	880/3	200	1915	<b>108622</b>
20	200	2440	800	4070	360	4430	1955	1855	2400	2600	2130	60	150	880/3	200	1915	<b>108623</b>

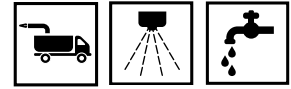
\*Z = largest separate component (mm)/n= number of separate components

### Accessories

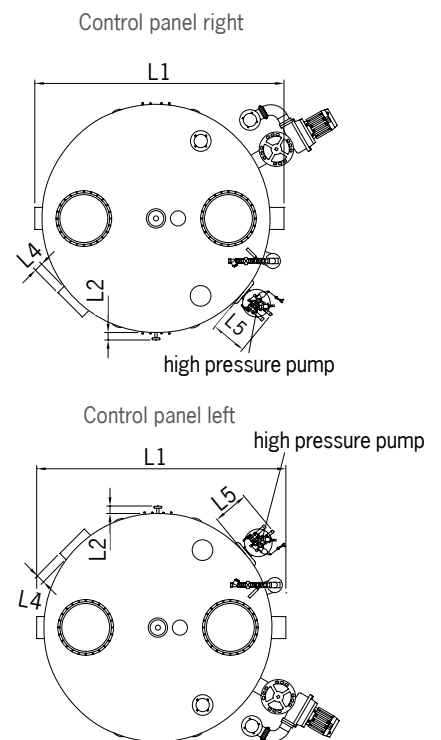
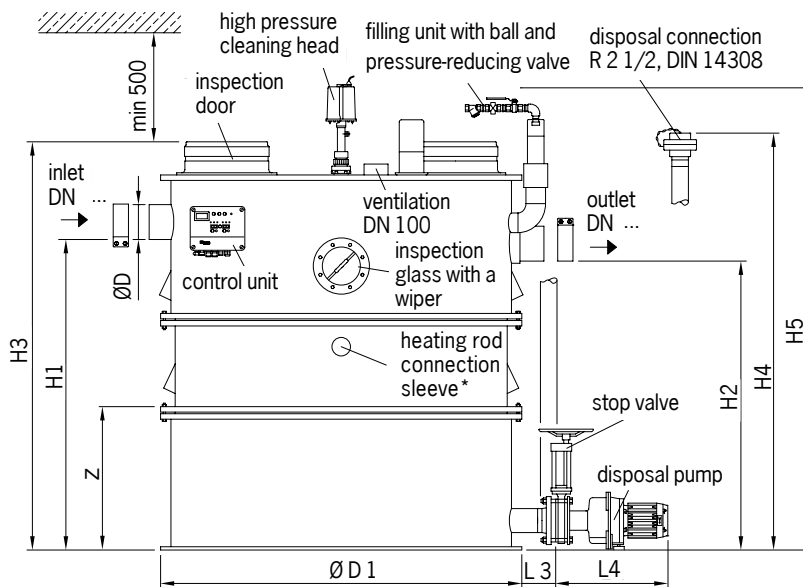
■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-RM (Extension stage 2)**



\* optional extras not included



**Table of dimensions**

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]										Part No		
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	L5	Z/n*	D	D1	Control panel right	Control panel left
2	100	290	120	680	156	836	975	905	1320	1530	1255	60	150	260	795/2	110	1020	<b>108624</b>	<b>108630</b>
4	100	500	160	890	172	1062	1240	1170	1580	1780	1255	60	150	260	820/2	110	1020	<b>108625</b>	<b>108631</b>
7	150	830	400	2120	344	2464	1430	1330	1880	2080	1820	60	150	260	785/3	160	1660	<b>108626</b>	<b>108632</b>
10	150	1150	400	2450	355	2805	1600	1500	2050	2250	1820	60	150	260	785/3	160	1660	<b>108627</b>	<b>108633</b>
15	200	1950	800	3610	391	4001	1765	1665	2200	2400	2130	60	150	260	880/3	200	1915	<b>108628</b>	<b>108634</b>
20	200	2440	800	4070	392	4462	1955	1855	2400	2600	2130	60	150	260	880/3	200	1915	<b>108629</b>	<b>108635</b>

\*Z = largest separate component (mm)/n= number of separate components

**Accessories**

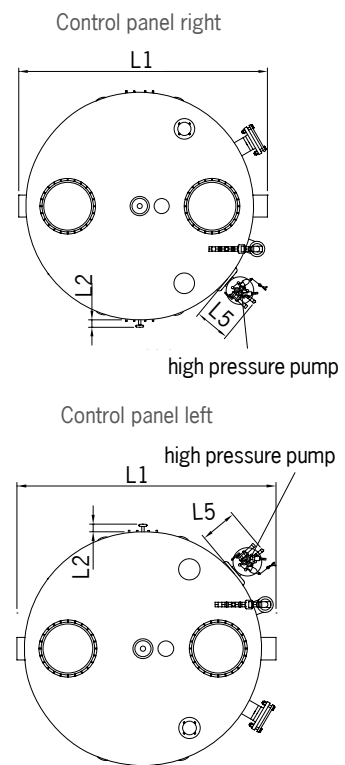
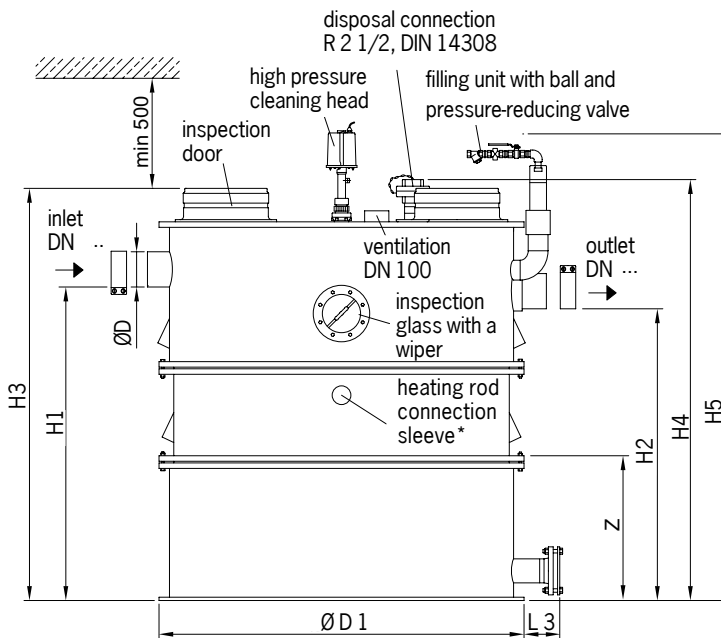
■ For all accessories please refer to pages 34-37

## Lipujet-P - Technical data

### Lipujet-P-RMP (Extension stage 2 with disposal pump)



\* optional extras not included



### Table of dimensions

NS	DN	Content [l]			Weight [kg]		Dimensions [mm]											Part No		
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	L4	L5	Z/n*	D	D1	Control panel right	Control panel left
2	100	290	120	680	139	869	975	905	1320	1530	1255	60	150	260	260	795/2	110	1020	<b>108636</b>	<b>108642</b>
4	100	500	160	890	205	1095	1240	1170	1580	1780	1255	60	150	260	260	820/2	110	1020	<b>108637</b>	<b>108643</b>
7	150	830	400	2120	377	2497	1430	1330	1880	2080	1820	60	150	260	260	785/3	160	1660	<b>108638</b>	<b>108644</b>
10	150	1150	400	2450	388	2838	1600	1500	2050	2250	1820	60	150	260	260	785/3	160	1660	<b>108639</b>	<b>108645</b>
15	200	1950	800	3610	424	4054	1765	1665	2200	2400	2130	60	150	260	260	880/3	200	1915	<b>108640</b>	<b>108646</b>
20	200	2440	800	4070	437	4507	1955	1855	2400	2600	2130	60	150	260	260	880/3	200	1915	<b>108641</b>	<b>108647</b>

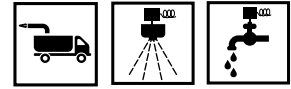
\*Z = largest separate component (mm)/n= number of separate components

### Accessories

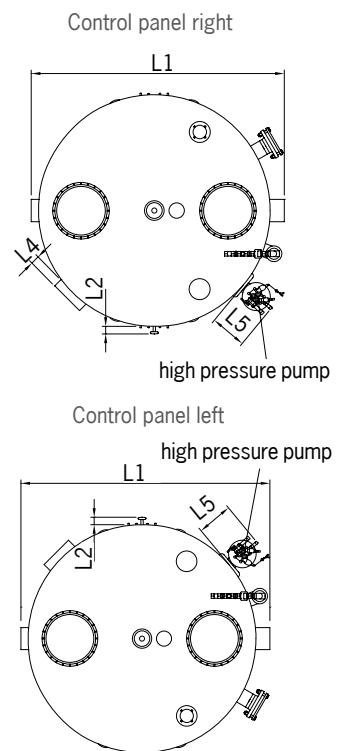
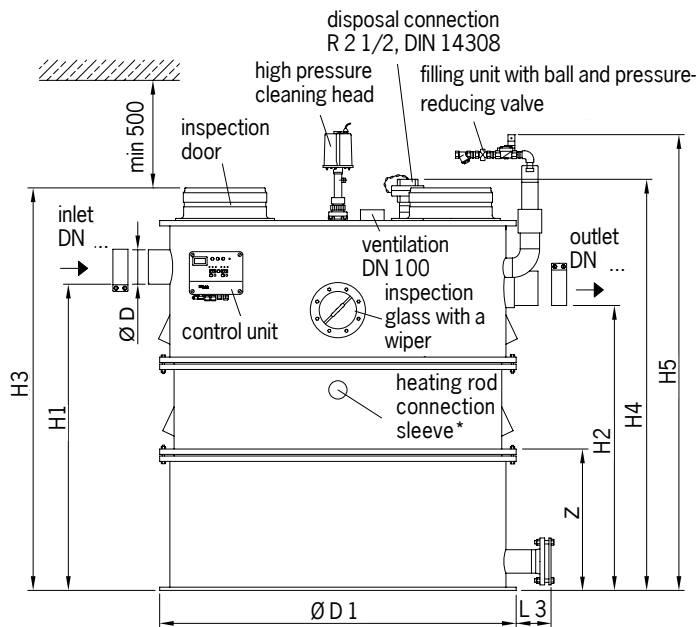
■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-RA (Extension stage 3)**



\*optional extras not included



**Table of dimensions**

NS	DN	content [l]			Weight [kg]		Dimensions [mm]										Part No		
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	L5	Z/n*	D	D1	Control panel right	Control panel left
2	100	290	120	680	165	845	975	905	1320	1530	1255	60	150	260	795/2	110	1020	<b>108648</b>	<b>108654</b>
4	100	500	160	890	181	1071	1240	1170	1580	1780	1255	60	150	260	820/2	110	1020	<b>108649</b>	<b>108655</b>
7	150	830	400	2120	353	2473	1430	1330	1880	2080	1820	60	150	260	785/3	160	1660	<b>108650</b>	<b>108656</b>
10	150	1150	400	2450	364	2814	1600	1500	2050	2250	1820	60	150	260	785/3	160	1660	<b>108651</b>	<b>108657</b>
15	200	1950	800	3610	401	4011	1765	1665	2200	2400	2130	60	150	260	880/3	200	1915	<b>108652</b>	<b>108658</b>
20	200	2440	800	4070	401	4471	1955	1855	2400	2600	2130	60	150	260	880/3	200	1915	<b>108653</b>	<b>108659</b>

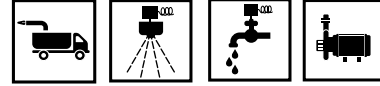
\*Z = largest separate component (mm)/n= number of separate components

**Accessories**

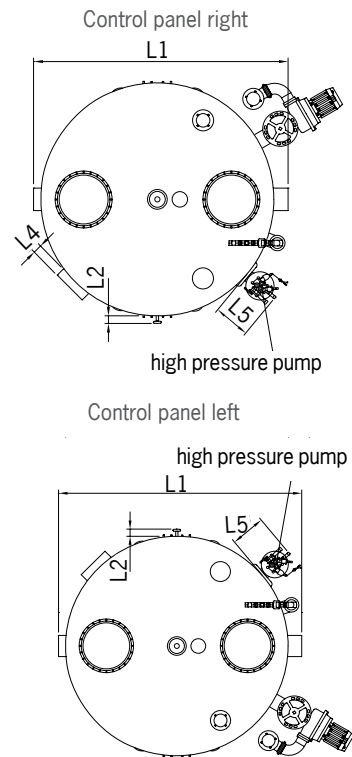
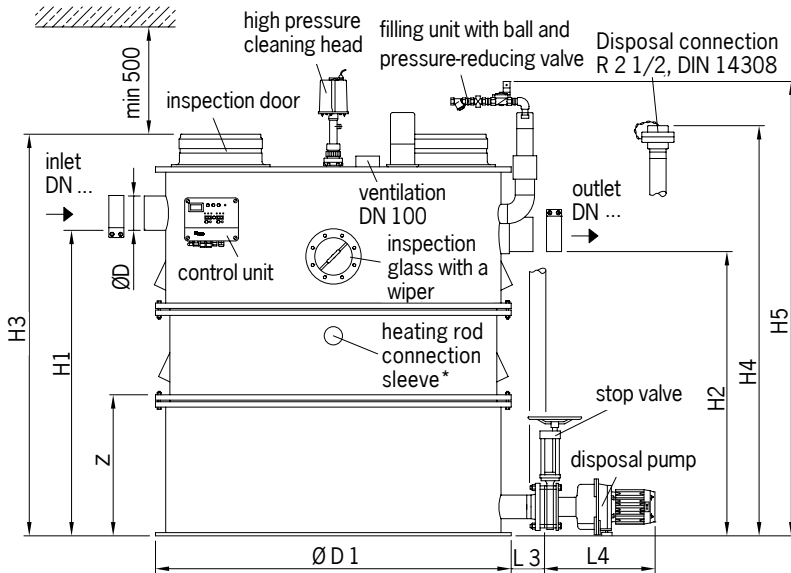
■ For all accessories please refer to pages 34-37

**Lipujet-P - Technical data**

**Lipujet-P-RAP (Extension stage 3 with disposal pump)**



\*optional extras not included



**Table of dimensions**

NS	DN	content [l]			Weight [kg]		Dimensions [mm]										Part No			
		Sludge trap	Grease storage volume	Total	Dry	Full	H1	H2	H3	H5	L1	L2	L3	L4	L5	Z/n*	D	D1	Control panel right	Control panel left
2	100	290	120	680	154	874	975	905	1320	1530	1255	60	150	260	260	795/2	110	1020	<b>108660</b>	<b>108666</b>
4	100	500	160	890	210	1100	1240	1170	1580	1780	1255	60	150	260	260	820/2	110	1020	<b>108661</b>	<b>108667</b>
7	150	830	400	2120	382	2502	1430	1330	1880	2080	1820	60	150	260	260	785/3	160	1660	<b>108662</b>	<b>108668</b>
10	150	1150	400	2450	393	2843	1600	1500	2050	2250	1820	60	150	260	260	785/3	160	1660	<b>108663</b>	<b>108669</b>
15	200	1950	800	3610	442	4052	1765	1665	2200	2400	2130	60	150	260	260	880/3	200	1915	<b>108664</b>	<b>108670</b>
20	200	2440	800	4070	443	4513	1955	1855	2400	2600	2130	60	150	260	260	880/3	200	1915	<b>108665</b>	<b>108671</b>

\*Z = largest separate component (mm)/n= number of separate components

**Accessories**

■ For all accessories please refer to pages 34-37

## Lipujet-S

### Also available in stainless steel

For applications where hygiene is of utmost importance (hospitals, etc), ACO has a range of stainless steel, AISI 316, separators which mirrors the polyethylene grease separator program (above ground, EN 1825)



#### Lipujet S-

- Oval shaped, stainless steel equivalent of the LipuJet P-O polyethylene grease separator.
- Nominal sizes: 1, 2, 3, 4, 5.5, 7, 8.5, and 10.

- EN1825 certified.
- Contact ACO Building Drainage Enquiries team on 01462 810210 or email [abdenquiries@aco.co.uk](mailto:abdenquiries@aco.co.uk) for further details.



#### Lipujet S-R

- Round shape, stainless steel equivalent of the LipuJet P-R polyethylene grease separator.
- Nominal sizes: 2, 4, 7, 10, 15 and 20.

- EN1825 certified.
- Contact ACO Building Drainage Enquiries team on 01462 810210 or email [abdenquiries@aco.co.uk](mailto:abdenquiries@aco.co.uk) for further details.



## Lipujet- Split Design - Technical Data

**Lipujet-P-SD – split-design grease separators  
for free-standing installation with direct suction extraction**



### ACO Product advantages

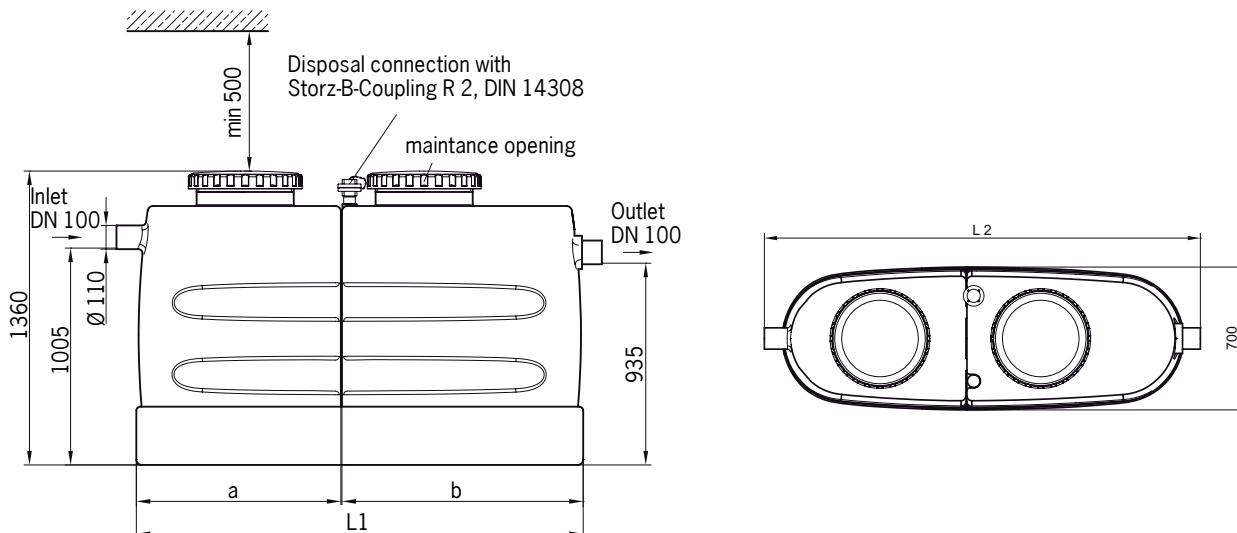
- Very useful in applications with narrow access routes because can be split into three parts
- Easy to transport and assemble
- Integrated suction extraction pipe to reduce odour-emissions during disposal

The figure shows nominal size 4 – the sampling pipe and the lifting plant must be ordered separately.

### Product information

- With draining connection ND 50 and fire hose quick coupling B 2"

### Dimensional drawing



### Table of dimensions

NS	Content [l]			Dimensions [mm]				Weight [kg]		Part No
	Sludge trap	Grease storage volume	Total	L1	L2	a	b	empty	full	
2	210	80	480	1180	1360	510	660	75	555	<b>108672</b>
4	420	160	880	2070	2250	945	1115	115	995	<b>108673</b>

### Accessories

- For all accessories please refer to pages 34-37

### ACO LipuSmart 4-in-1-solution

The ACO LipuSmart integrates the functions of grease separation, sampling, drainage using a lifting plant and a control system for the general system into one product.

Pressure sensors monitor the level of the separator and lifting plant. The plant control unit analyses both sensors and shows the filling level with centimetre precision in the display. If necessary, the pumps are switched on and off or the flood alarm is triggered. The ACO air bubble injection in the separator and the lifting plant prevents the grease layer from hardening in the pneumatic pipe and causing blockages. The optional grease layer thickness measurement sensor, which can be connected to the building control system, guarantees smooth operation.

The LipuSmart pump equipment is a special development whose flow was optimised by ACO in collaboration with the Institute for Process Machines and Plant Equipment (IPAT) so that the pump efficiency could be improved. Further optimization led to a reduction in the sound pressure level; the modified design reduces the risk of blockages significantly.

Unpleasant odours are avoided thanks to the hydro-mechanical high-pressure inner cleaning. The horizontal and vertical rotating orbital cleaning head from extension stage 3 guarantees intensive cleaning of the inside walls. During this process, the compressor generates a pressure of 150 bar which completely homogenises the grease layer.



Flow-optimised pump system



High-pressure pump for high-pressure cleaning and disposal pump



4in1 solution ACO LipuSmart

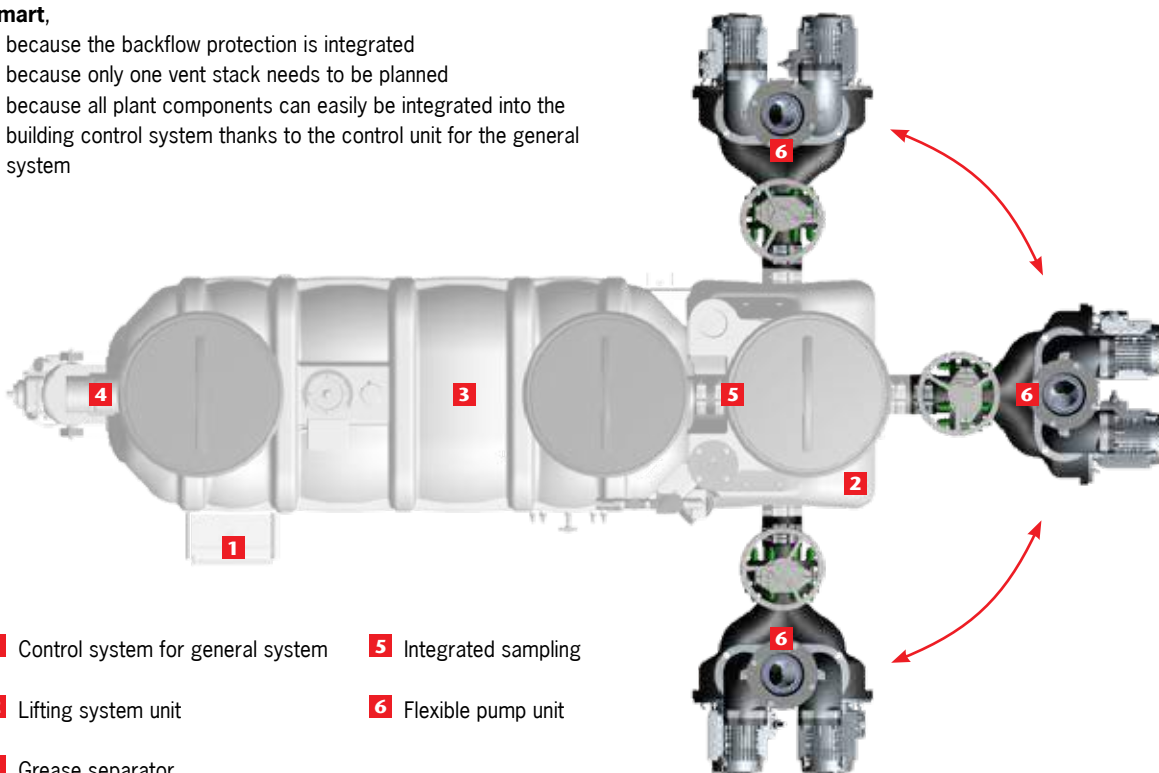
### Entire competence in one product

Thanks to the powerful integrated separator and pump equipment, and the direct sampling option, the ACO LipuSmart greatly reduces the planning and layout work. The control unit for the general system combines the individual control units of the grease separator and the lifting plant into one complete unit. Thanks to its clear menu structure, the graphic presentation of the grease separator disposal processes, a logging function and the signalling unit

with a GSM module, the control unit for the general system facilitates operation of the plant. The Bluetooth interface that is standard from extension stage 3 can also be replaced with the Modbus as an option. The inspection window allows additional control of the grease separator contents.

**Smart,**

- because the backflow protection is integrated
- because only one vent stack needs to be planned
- because all plant components can easily be integrated into the building control system thanks to the control unit for the general system



- 1** Control system for general system
- 2** Lifting system unit
- 3** Grease separator
- 4** Vent stack
- 5** Integrated sampling
- 6** Flexible pump unit

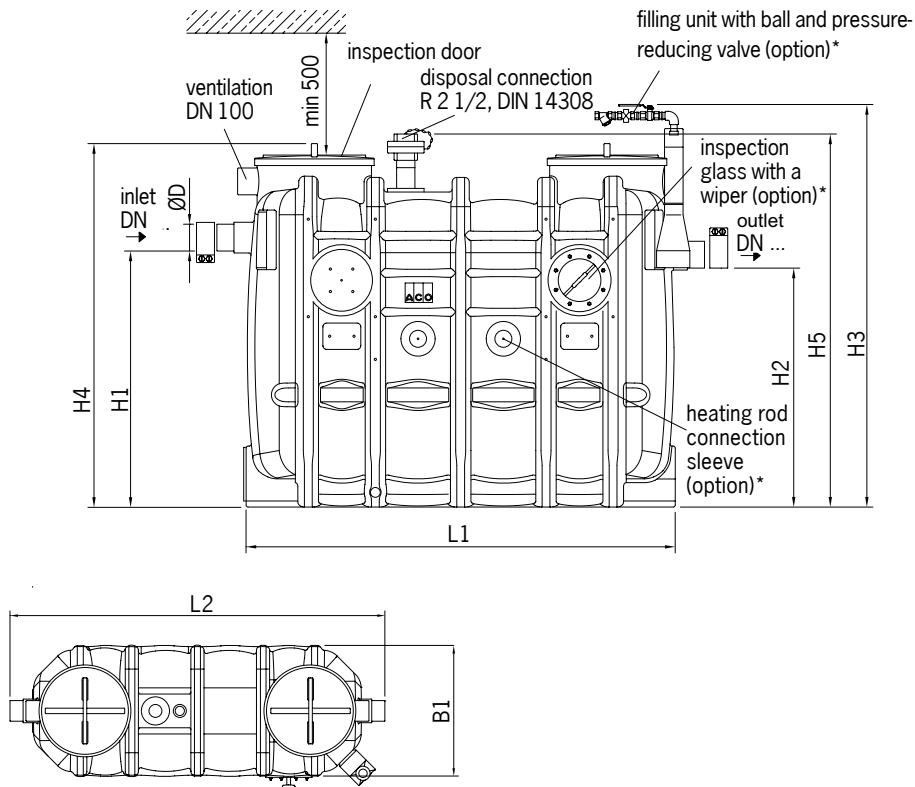


**LipuSmart - Technical Data**

**LipuSmart-P-OB (Basic version)**



\*optional extras not included



30

**Table of dimensions**

NS	DN	Separator content [l]			Lifting plant		Dimensions [mm]								Part No
		Sludge trap	Grease store	Total	Usable volume	P2 Power [kW]	H1	H2	H4	L1	L2	L3	B1	D	
NS 2	100	210	100	440	155	1.5	1055	753	1500	1100	800	1625	742	110	<b>108674</b>
NS 3	100	300	150	630	155	1.5	1055	753	1500	1450	800	1975	742	110	<b>108675</b>
NS 4	100	400	200	830	155	1.5	1055	753	1500	1760	800	2285	742	110	<b>108676</b>
NS 5.5	150	725	360	1430	235	4.0	1250	753	1700	1760	835	2287	960	110	<b>108677</b>
NS 7	150	800	400	1600	235	4.0	1250	753	1700	1960	835	2487	960	160	<b>108678</b>
NS 8.5	150	940	475	1900	235	4.0	1250	753	1700	2250	835	2777	960	160	<b>108679</b>
NS 10	150	1000	520	2000	235	4.0	1250	753	1700	2450	835	2977	960	160	<b>108680</b>

**Accessories**

■ For all accessories please refer to pages 34-37

## LipuSmart - Technical Data

### LipuSmart-P-OD (Extension stage 1)



\* optional extras not included

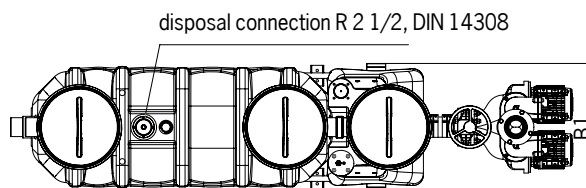
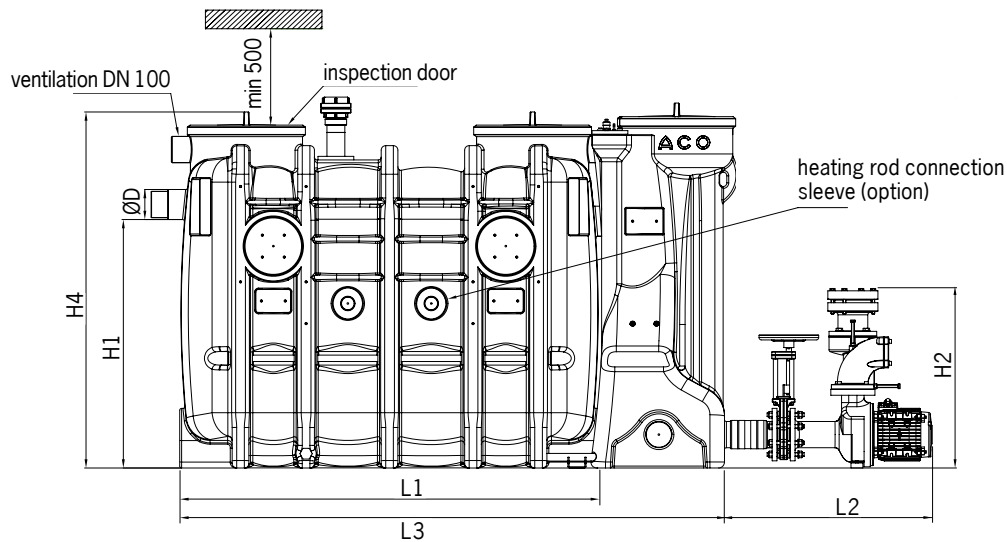


Table of dimensions

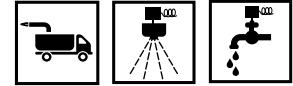
NS	DN	Separator content [l]			Lifting plant		Dimensions [mm]							Part No	
		Sludge trap	Grease store	Total	Usable volume	P2 Power [kW]	H1	H2	H4	L1	L2	L3	B1		D
NS 2	100	210	100	440	155	1.5	1055	753	1500	1100	800	1625	742	110	<b>108681</b>
NS 3	100	300	150	630	155	1.5	1055	753	1500	1450	800	1975	742	110	<b>108682</b>
NS 4	100	400	200	830	155	1.5	1055	753	1500	1760	800	2285	742	110	<b>108683</b>
NS 5.5	150	725	360	1430	235	4.0	1250	753	1700	1760	835	2287	960	110	<b>108684</b>
NS 7	150	800	400	1600	235	4.0	1250	753	1700	1960	835	2487	960	160	<b>108685</b>
NS 8.5	150	940	475	1900	235	4.0	1250	753	1700	2250	835	2777	960	160	<b>108686</b>
NS 10	150	1000	520	2000	235	4.0	1250	753	1700	2450	835	2977	960	160	<b>108687</b>

### Accessories

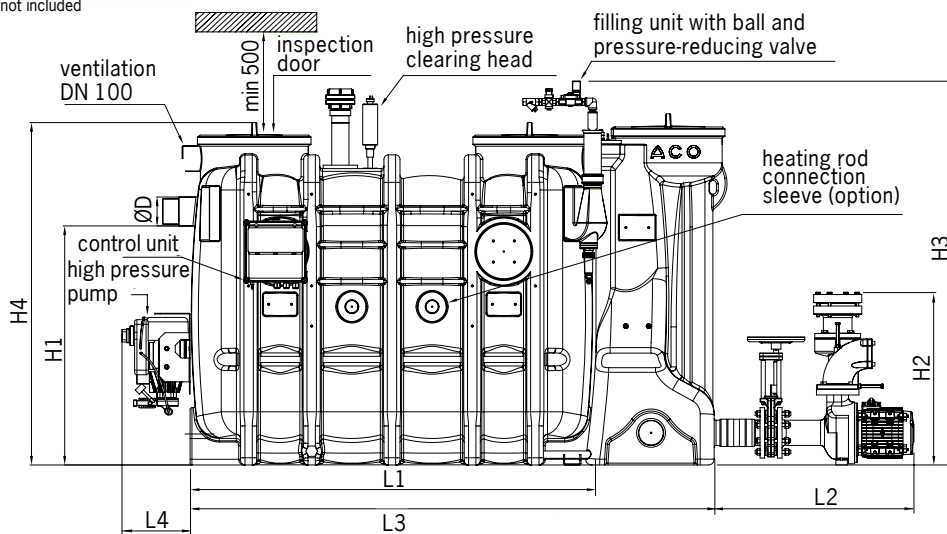
■ For all accessories please refer to pages 34-37

**LipuSmart - Technical Data**

**LipuSmart-P-OA (Extension stage 3)**

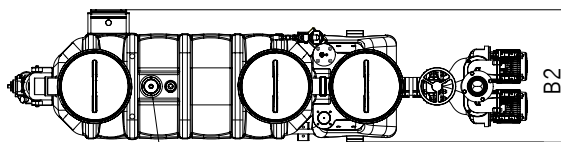


\*optional extras not included

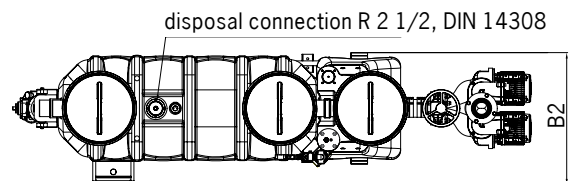


Control panel on left

Control panel on right



disposal connection R 2 1/2, DIN 14308



**Table of dimensions**

NS	DN	Separator content [l]			Lifting plant		Dimensions [mm]									Part No	
		Sludge trap	Grease store	Total	Usable volume	P2 Power [kW]	H1	H2	H3	H4	L2	L3	L4	B2	D	Control panel right	Control panel left
NS 2	100	210	100	440	155	1.5	1055	753	1680	1500	800	1625	300	880	110	<b>108695</b>	<b>108688</b>
NS 3	100	300	150	630	155	1.5	1055	753	1680	1500	800	1975	300	880	110	<b>108696</b>	<b>108689</b>
NS 4	100	400	200	830	155	1.5	1055	753	1680	1500	800	2285	300	880	110	<b>108697</b>	<b>108690</b>
NS 5.5	150	725	360	1430	235	4.0	1250	753	1880	1700	835	2287	300	1130	110	<b>108698</b>	<b>108691</b>
NS 7	150	800	400	1600	235	4.0	1250	753	1880	1700	835	2487	300	1130	160	<b>108699</b>	<b>108692</b>
NS 8.5	150	940	475	1900	235	4.0	1250	753	1880	1700	835	2777	300	1130	160	<b>108700</b>	<b>108693</b>
NS 10	150	1000	520	2000	235	4.0	1250	753	1880	1700	835	2977	300	1130	160	<b>108701</b>	<b>108694</b>

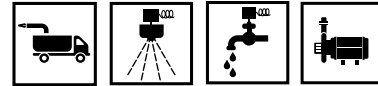
**Accessories**

■ For all accessories please refer to pages 34-37

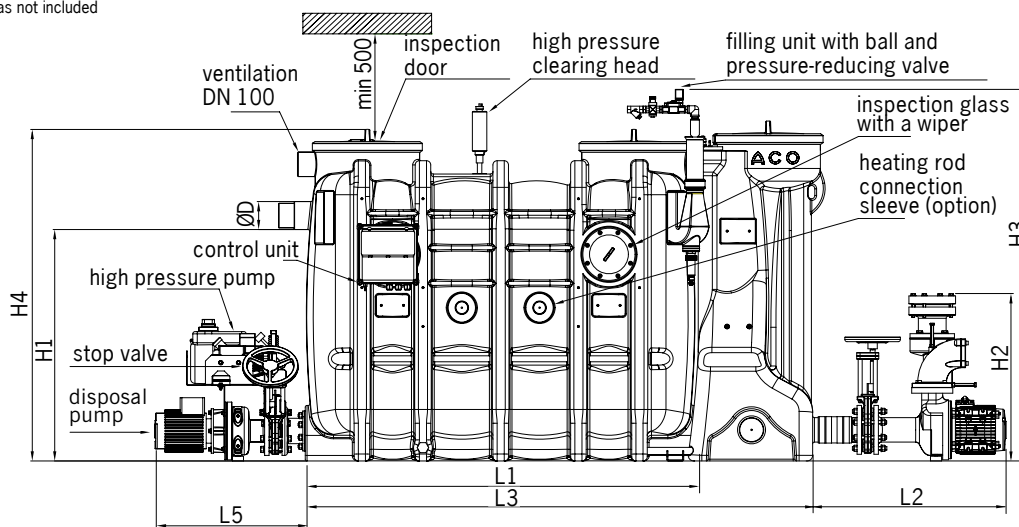


## LipuSmart - Technical Data

### LipuSmart-P-OAP (Extension stage 3)

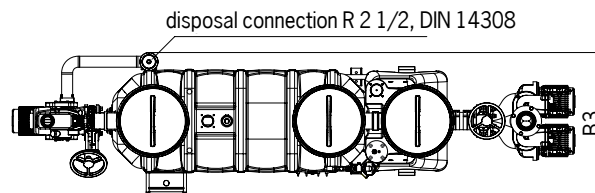
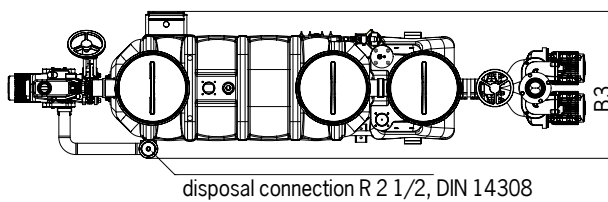


\*optional extras not included



Control panel on left

Control panel on right








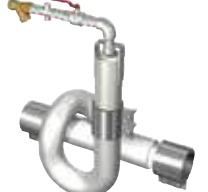




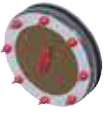
### Table of dimensions






NS	DN	Separator content [l]			Lifting plant		Dimensions [mm]										Part No	
		Sludge trap	Grease store	Total	Usable volume	P2 Power [kW]	H1	H2	H3	H4	L2	L3	L5	B3	D	Control panel right	Control panel left	
NS 2	100	210	100	440	155	1.5	1055	753	1680	1500	800	1625	680	930	110	108709	108702	
NS 3	100	300	150	630	155	1.5	1055	753	1680	1500	800	1975	680	930	110	108710	108703	
NS 4	100	400	200	830	155	1.5	1055	753	1680	1500	800	2285	690	930	110	108711	108704	
NS 5.5	150	725	360	1430	235	4.0	1250	753	1880	1700	835	2287	680	1180	110	108712	108705	
NS 7	150	800	400	1600	235	4.0	1250	753	1880	1700	835	2487	680	1180	160	108713	108706	
NS 8.5	150	940	475	1900	235	4.0	1250	753	1880	1700	835	2777	680	1180	160	108714	108707	
NS 10	150	1000	520	2000	235	4.0	1250	753	1880	1700	835	2977	680	1180	160	108715	108708	

### Accessories

■ For all accessories please refer to pages 34-37

	Designation	To fit	Description	Part No
	Grease level sensor Classic	<ul style="list-style-type: none"> <li>■ LipuSmart-P                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> </ul> </li> <li>■ LipuJet-P                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> <li>□ Round NS 2 – 20</li> </ul> </li> <li>■ LipuJet-S                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> <li>□ Round NS 2 – 20</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ For electronic measurement of grease layer</li> <li>■ Suitable for liquid and/or congealing grease</li> <li>■ Measuring device with cable, length: 3 m</li> <li>■ With two isolated change-over contacts to display full warning (80%) and advance warning of fill level (50%)</li> <li>■ With visual display of fill level</li> <li>■ With heated probe rod to increase operating reliability</li> <li>■ Operating voltage: 230 VAC/5 VA</li> <li>■ Max. consumption: 12 W</li> </ul>	108716
	Grease level sensor Comfort	<ul style="list-style-type: none"> <li>■ LipuSmart-P                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> </ul> </li> <li>■ LipuJet-P                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> <li>□ Round NS 2 – 20</li> </ul> </li> <li>■ LipuJet-S                             <ul style="list-style-type: none"> <li>□ Oval NS 1 – 10</li> <li>□ Round NS 2 – 20</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ To determine the disposal intervals of grease separators</li> <li>■ Suitable for liquid and/or harden fats</li> <li>■ Delineation with colour-touchpanel</li> <li>■ Continuous measure in percent</li> <li>■ With integrated SD-card (4GB) for recording of the measuring process</li> <li>■ With heated sounding stick (temperature is adjustable) to increase the operation safety</li> <li>■ Three free of potential contacts for output of pre-alarm (adjustable), full-alarm (adjustable) and error</li> <li>■ Measuring stick with adjusting scale</li> <li>■ Delineation with plug-in cable connection, 3 m</li> <li>■ Service voltage: 100 240VAC 50/60 Hz, 2 A</li> <li>■ Power: ca. 43 W</li> <li>■ Weight: 2.7 kg</li> </ul>	108717
	Signalling unit with GSM module	<ul style="list-style-type: none"> <li>■ Grease separators extension stage 3</li> <li>■ Grease level sensor</li> </ul>	<ul style="list-style-type: none"> <li>■ Mains-independent</li> <li>■ Visible and audible alarm signals</li> <li>■ 6 digital &amp; 2 analogue freely configurable inputs</li> <li>■ 1 alarm output 12 V</li> <li>■ Includes GSM antenna (2.5 m cable)</li> <li>■ Relaying alarms to mobile phones by SMS</li> <li>■ For mounting outside the ex area</li> <li>■ Housing: 155 x 180 x 103 mm</li> <li>■ Slot for standard SIM card</li> <li>■ Protection type: IP 54 (with mounted antenna plug IP 44)</li> <li>■ Operating voltage: 230 V/AC 50/60 Hz</li> </ul>	108437
	Heating rod	<ul style="list-style-type: none"> <li>■ Grease separators</li> </ul>	<ul style="list-style-type: none"> <li>■ To liquefy grease layer</li> <li>■ Incl. control</li> <li>■ Electrical connection                             <ul style="list-style-type: none"> <li>□ 400 V/50 Hz/16 A/6.0 kW</li> </ul> </li> </ul>	108718

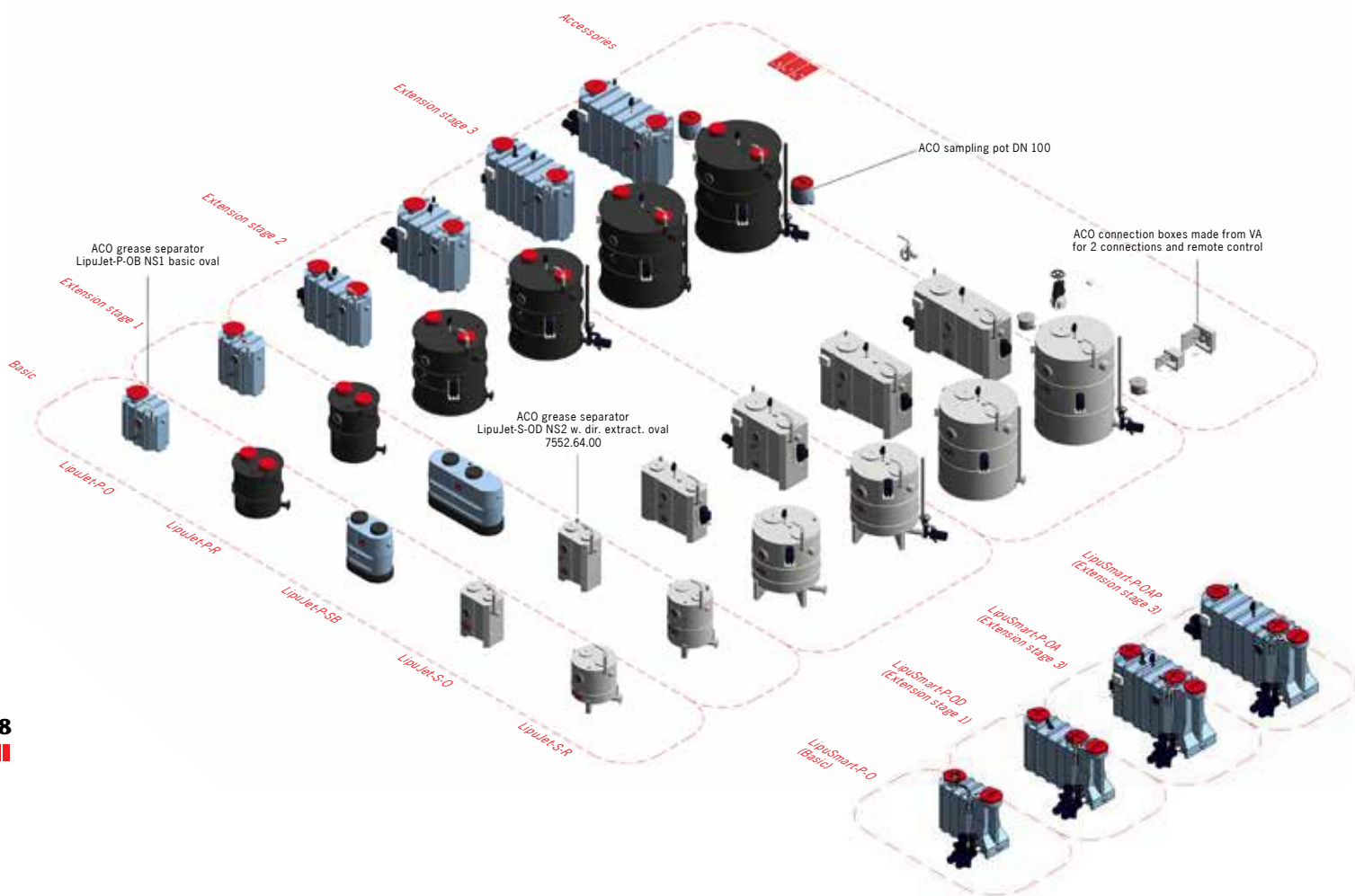
	Designation	To fit	Description	Part No
	Filling device	<ul style="list-style-type: none"> <li>■ LipuSmart-P-OB, -OD</li> <li>■ LipuJet-P-OB, -OD, -RB, -RD</li> </ul>	<ul style="list-style-type: none"> <li>■ Free outlet according to DIN 1988 Part 4</li> <li>■ For connection to drinking water supply</li> <li>■ With ball valve R 3/4"</li> <li>■ With pressure relief valve</li> </ul>	<b>108719</b>
		<ul style="list-style-type: none"> <li>■ LipuJet-P-SB, -SD</li> </ul>	<ul style="list-style-type: none"> <li>■ Free outlet according to DIN 1988 Part 4</li> <li>■ For connection to drinking water supply</li> <li>■ With ball valve R 3/4"</li> <li>■ With pressure relief valve</li> </ul>	<b>108720</b>
	Remote control	<ul style="list-style-type: none"> <li>■ LipuSmart-P-OA, -OAP</li> <li>■ LipuJet-P-OA, -OAP, -RA, -RAP</li> <li>LipuMax-P-DA</li> </ul>	<ul style="list-style-type: none"> <li>■ For inside assembly or mounting in connection boxes</li> <li>■ Control line without local protective conductor</li> <li>□ Up to 50 m: 7 x 1.0 mm<sup>2</sup></li> <li>□ 50 – 200 m: 7 x 1.5 mm<sup>2</sup></li> <li>■ IP 54 protection type</li> <li>■ Weight: 1 kg</li> </ul>	<b>108721</b>
	Remote control	<ul style="list-style-type: none"> <li>■ LipuJet-P-OA, -OAP</li> <li>□ Oval NS 15 – 30</li> </ul>	<ul style="list-style-type: none"> <li>■ For internal fitting or fitting in connection boxes</li> <li>■ Control line without protective conductor on-site</li> <li>□ Up to 50 m: 7 x 1.0 mm<sup>2</sup></li> <li>□ 50 – 200 m: 7 x 1.5 mm<sup>2</sup></li> <li>■ Weight: 1.5 kg</li> </ul>	<b>108722</b>
	Connection box	<ul style="list-style-type: none"> <li>■ Grease separators</li> </ul>	<ul style="list-style-type: none"> <li>■ For disposal connection and remote control</li> <li>■ Made of stainless steel, material grade 304</li> <li>■ Fixing: "on-wall"</li> <li>■ Dimensions (width x height x depth): 500 x 500 x 160 mm</li> </ul>	<b>108431</b>
	In-wall frame	<ul style="list-style-type: none"> <li>■ Connection box</li> <li>□ 7601.80.22</li> </ul>	<ul style="list-style-type: none"> <li>■ Made of stainless steel, material grade 304</li> <li>■ Dimensions (width x height x depth): 421 x 381 x 25 mm</li> </ul>	<b>108432</b>
	Inspection window	<ul style="list-style-type: none"> <li>■ LipuSmart-P-OB, -OD</li> <li>■ LipuJet-P-OB, -OD, -R, -RD</li> </ul>	<ul style="list-style-type: none"> <li>■ Nominal width: DN 200</li> <li>■ With wiper</li> <li>■ Weight: 5 kg</li> </ul>	<b>108723</b>

	Designation	To fit	Description	Part No
	Sampling pot DN 100	<ul style="list-style-type: none"> <li>■ LipuJet-P</li> <li>□ NS 1 – 4</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in horizontal pipelines DN 100 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108724</b>
	Sampling pot DN 150	<ul style="list-style-type: none"> <li>■ LipuJet-P</li> <li>□ NS 5.5 – 10</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in horizontal pipelines DN 150 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108725</b>
	Sampling pot DN 200	<ul style="list-style-type: none"> <li>■ LipuJet-P</li> <li>□ NS 15 – 25</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in horizontal pipelines DN 200 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108726</b>
	Sampling pot DN 100	<ul style="list-style-type: none"> <li>■ LipuJet-P</li> <li>□ NS 1 – 4</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in vertical pipelines DN 100 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108727</b>
	Sampling pot DN 150	<ul style="list-style-type: none"> <li>■ LipuJet-P</li> <li>□ NS 5.5 – 10</li> <li>□ NS 7 – 10</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in vertical pipelines DN 150 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108728</b>

	Designation	To fit	Description	Part No	
	Sampling pot DN 200	<ul style="list-style-type: none"> <li>■ LipuJet-P/</li> <li>□ NS 15 – 25</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in vertical pipelines DN 200 downstream of separator</li> <li>■ Material: PE</li> <li>■ Round shape with                             <ul style="list-style-type: none"> <li>□ Coupling socket seal (material SBR) on inlet and spigot on outlet</li> <li>□ Odour-proof maintenance opening DN 450</li> </ul> </li> <li>■ Weight: 7 kg</li> </ul>	<b>108729</b>	
	Pre Strainer	<ul style="list-style-type: none"> <li>■ All grease separators</li> </ul>	<ul style="list-style-type: none"> <li>■ For installation in horizontal pipelines upstream from separator</li> <li>■ Material: PE</li> <li>■ With stainless steel basket</li> </ul>	<p style="text-align: right;">DN100 NS 1 - 4 Weight: 13.9 kg</p> <p style="text-align: right;">DN150 NS 5.5 - 10 Weight: 14.2 kg</p> <p style="text-align: right;">DN200 NS 15 - 20 Weight: 14 kg</p>	<p style="text-align: right;"><b>108448</b></p> <p style="text-align: right;"><b>108449</b></p> <p style="text-align: right;"><b>108450</b></p>
	Inlet valve DN 100	<ul style="list-style-type: none"> <li>■ Polyethylene separators</li> <li>□ NS 1 – 4</li> </ul>	<ul style="list-style-type: none"> <li>■ Made of PVC</li> <li>■ 110 mm push socket on both sides with lip seal</li> <li>■ Overall dimensions: 176 x 330 mm (L x H)</li> <li>■ Weight: 2.75 kg</li> </ul>	<b>108841</b>	
	Inlet valve DN 150	<ul style="list-style-type: none"> <li>■ Polyethylene separators</li> <li>□ NS 5,5 – 10</li> </ul>	<ul style="list-style-type: none"> <li>■ Made of PVC</li> <li>■ 160 mm push socket on both sides with lip seal</li> <li>■ Overall dimensions: 226 x 510 mm (L x H)</li> <li>■ Weight: 6.5 kg</li> </ul>	<b>108842</b>	
	Inlet valve DN 200	<ul style="list-style-type: none"> <li>■ Polyethylene separators</li> <li>□ NS 15 – 25</li> </ul>	<ul style="list-style-type: none"> <li>■ Made of PVC</li> <li>■ 50 mm push socket on both sides with lip seal</li> <li>■ Overall dimensions: 290 x 740 mm</li> <li>■ Weight: 9.5 kg</li> </ul>	<b>108730</b>	
	Stop valve DN 200	<ul style="list-style-type: none"> <li>■ Grease separators for free-standing installation</li> </ul>	<ul style="list-style-type: none"> <li>■ Made of cast iron</li> <li>■ Valve plate, spindle made of stainless steel, material grade 304</li> <li>■ Length (L): 60 mm</li> <li>■ Spindle travel (H1 – H2): 542 – 743 mm</li> <li>■ Hand wheel diameter: 250 mm</li> </ul>	<b>108731</b>	

## ACO Building Drainage and BIM data on grease separators

The Revit pack for the ACO grease separator includes all structural shapes - circular and oval separators in all materials and all extension stages - from the basic model up to extension stage 3. The packet for ACO LipuSmart also includes all extension stages.



### Revit packet for ACO grease separators

In total there are two Revit packet - for the ACO grease separator and ACO LipuSmart

The grease separators packet is divided into five main groups:

- Stainless steel circular separator
- Stainless steel oval separator
- Plastic circular separator
- Plastic oval separator
- Plastic split separator

In addition, the packet includes various accessory groups:

- Electronic components
- Sampling pots/coarse traps/stop valves
- Additional components

The ACO LipuSmart packet includes all 4in1 solutions in the four different extension stages as well as accessories.

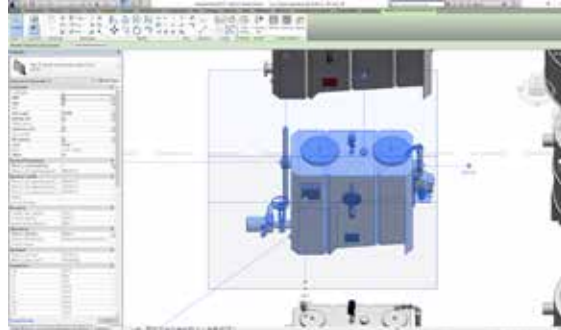
▶ All models are available in the Revit versions 2014/2015/2016/2017

## Details



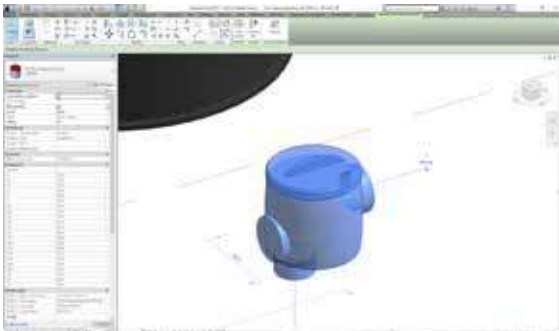
**Detailed image 1**

Overviews of the complete Revit packet for ACO grease separators are grouped according to extension stage. The product overview, including characteristics such as GTIN, article number etc. is located on the right-hand part of the screen.



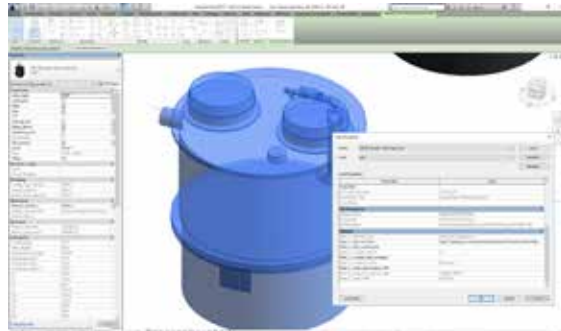
**Detailed image 2**

The example shows the Revit model of the ACO grease separator LipuJet-S-OAP (extension stage 3 with disposal pump) made from stainless steel with all connection facilities. On the left-hand part of the screen you can see the delivery dimensions and other properties of the product such as sludge trap, etc. The switch box is specifically marked as an electronic component.



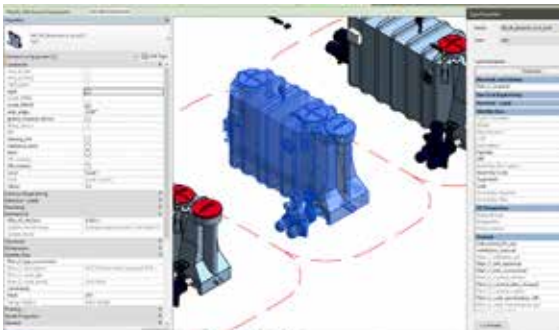
**Detailed image 3**

Revit model of a sampling pot including connection facilities.



**Detailed image 4**

The properties of the product are displayed in this box - this is where you can also find the link to the ACO Online Catalogue and the accompanying data sheet.



**Detailed image ACO LipuSmart**

The respective extension stage and nominal size can be selected in the selection menu. This applies to both grease separators and the ACO LipuSmart. The separator types, which are used most often by TGA specialist planners, can be found in the templates box.



ACO BIM data packet available to download online

<http://aco.co.uk/aco-bim-models>



## Model Specification Clause

All ACO Building Drainage grease separators are NBS specified products. Assistance in completing this clause can be found in ACO Technologies product entries in NBS Plus or a model specification can be downloaded from [www.aco.co.uk](http://www.aco.co.uk)

### EU Conformity

All ACO Grease Separators are fully certified to BS EN 1825:2004 and CE marked in accordance with the Construction Products Regulation.

Declarations of Performance are available via our website [www.aco.co.uk](http://www.aco.co.uk) or on request, please contact ACO Building Drainage Design Services Team on 01462 810431 for further information.



## Operation and Maintenance

### General Information

All Gravity Grease Separators require periodic maintenance to remove the fats, oils and grease (FOG) together with sludge deposits that have been separated from the waste water. Such maintenance is usually undertaken by a specialist waste contractor.



The frequency of maintenance will depend on the volume of FOGs and the volume of sludge that is generated in the food production process. Sludge volume can be significantly reduced by effective use of strainers on sink outlets.

Note. Only waste water containing organic FOG should be discharged to a grease separator. Effluent from the following should NOT be connected to the separator:

- Toilets
- Macerators
- Rainwater
- Light liquids e.g. grease or oil of mineral origin

Macerators have the effect of artificially consuming the sludge capacity of the separator and thereby shortening the service interval to the separator.

Additionally, under certain conditions, the process of maceration can emulsify waste products and prevent them from separating via the natural gravity process, thereby reducing the separation efficiency of the unit.

### Start Up and System Characterization

Before using the separator for the first time, fill with clean water. When first commissioned, it is recommended that the separator is emptied, cleaned and refilled ideally every 2 weeks, or on a monthly basis in order to assess volumes of separated matter for that installation. It is recommended to empty grease separator at least every 4 weeks to prevent FAT to harden and not break down. When the separator is emptied, fill with clean water to immediately allow the separation process to continue. The waste disposal contractor should be able to recommend the optimum servicing frequency.

Thick encrustations of FOG residues can form within the separator body and may therefore require vigorous cleaning methodologies to remove them during the cleaning process.

### Disposal

Sludge traps and separators must be completely emptied and cleaned at least once a month, preferably every two weeks. The separators must subsequently be refilled with water (e.g. drinking water, processed water, treated water from the grease separator), which corresponds with the local inlet regulations.

### Operating log

An operating log should be maintained for each grease separator. The following should be entered in the log: completed inspections, maintenance, checks and disposals. The operating logs should be stored by the operator and should be presented to the locally responsible authority upon request.

### Maintenance

The separator must be maintained annually by a competent person according to the manufacturer's specifications.

**Associated ACO Building Drainage Product Ranges**

**ACO Grease Separators - Below Ground**

ACO's range of below ground, gravity grease separators provide a cost effective solution to remove fats, oils and grease (FOG) from the kitchen waste water. In those circumstances where there is no space inside the building the below ground separator can offer solution if there is enough outside space available. There are 2 versions available, the LipuMax series are produced from roto-moulded polyethylene and the ACO ECO-FPI is

constructed using a spiral wound, twin-walled, high density polyethylene strip material. FPI is constructed using a spiral wound, twin-walled, high density polyethylene strip material. The ACO grease separators have therefore an excellent structural strength guaranteeing a long product life and once decommissioned the polyethylene can be re-used.



**ACO Modular 125+**

ACO Modular 125 Stainless Steel linear drainage is our most requested product range as it is suitable for most applications. ACO modular 125 is manufactured in stainless steel grade 304 as standard and 316 top order. available in a wide range of lengths, constant depths, sloping inverts and gratings 'off the shelf', it can be modified to meet your exact application requirements. Used together with ACO Gully 157 or 218 and ACO Pipe®

it offers the specifier, contractor and user the benefits of a unified system for building drainage and one stop drainage solution with unique advantages - fully tested and classified to BS EN 1433, CE marked, pickle passivated for optimum durability and corrosion resistance, vee-bottomed profiled channel for enhanced flow efficiency, optional grating security locks and lightweight channel sections for sale and easy installation.



**ACO Pipe®**

ACO Pipe® is manufactured from thin-wall austenitic stainless steel in grades 304 and 316 and is pickle passivated for optimum durability and corrosion resistance. ACO Pipe® is available in a wide range of socketed waste pipework products and accessories for above and below ground rainwater and industrial wastewater drainage applications.

Used together with other ACO products it creates a perfect system and one stop sustainable drainage solution with unique advantages to the customer - lightweight, easy installation, low thermal expansion coefficient, sustainable material, hygienic, near zero maintenance. When used with ACO stainless steel gullies and channel systems it provides a unique system for building drainage.



### ACO Engineered Solutions

ACO Engineered Solutions offer the designer / specifier a range of products virtually free from the constraints of 'off the shelf' items. Our engineers are able to offer detailed advice on all aspects of required design solutions, together with hydraulic flow analysis, practical site installation, suitable materials and best practices. ACO engineered solutions enjoy rigorous product management from initial enquiry through to post-delivery.

Examples of ACO Engineered Solution applications include:

- Workable drainage where there is limited invert depths
- Refurbishment situations with replacement channels and point drainage
- Interface with threshold details
- Discreet channel applications
- Radius channel applications



ACO Engineered Solutions  
Product Catalogue

www.aco.co.uk

### ACO Product Overview

ACO Building Drainage specialises in the development of corrosion resistant drainage systems and building products for applications across the internal and external built environments. Engineered to eliminate design risk, to optimise installation and to minimise lifetime ownership cost, every product in the range delivers exceptional levels of performance, finish and durability. Providing specialist drainage, grease management and fire-proofing systems that provide safe and hygienic solutions across a range of sectors including hospitals, chemical production, food and drink manufacture, leisure centres, laboratories and catering facilities, ACO Building Drainage has had unparalleled success over a number of years. In addition ACO provide stainless steel decorative tree grills, laser cut curved gratings and wet room drainage

systems to complement settings that demand the highest aesthetic finish. Our built environment is becoming ever more complex. Applications are becoming more sophisticated and the increasing pressure of regulations and standards make achieving design, performance and financial goals ever tougher.

The technical expertise, global resources and fabrication capacity within the ACO Building Drainage division make it possible for architects, engineers and contractors to realise the highest quality and value when selecting from our standard products, or, when using our engineered solution design service. ACO Building Drainage is a Division of the UK based ACO Technologies plc and part of the worldwide ACO Group.



ACO Building Drainage  
Product Overview

www.aco.co.uk

## ACO Technologies plc

- ACO Building Drainage
- ACO Water Management  
Civils + Infrastructure  
Urban + Building Landscape
- ACO Sport
- ACO Wildlife



### ACO Building Drainage

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**The ACO Group: A strong family you can depend on.**

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