

Installation

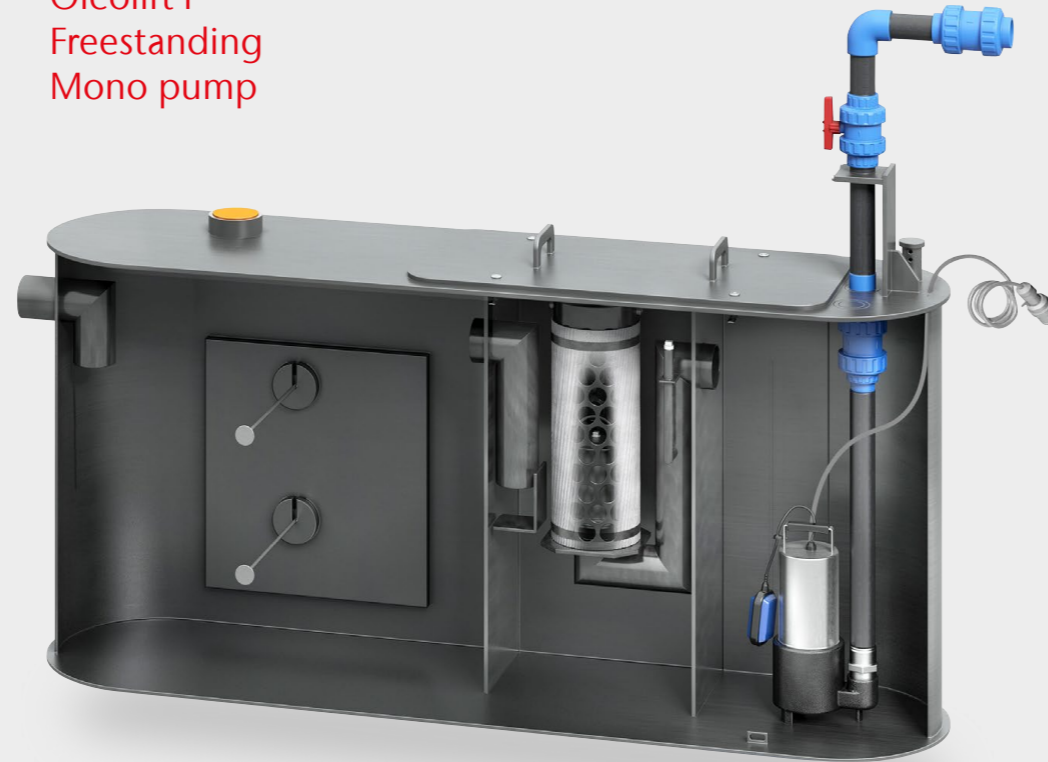
and Operation Manual

Oleolift P Freestanding

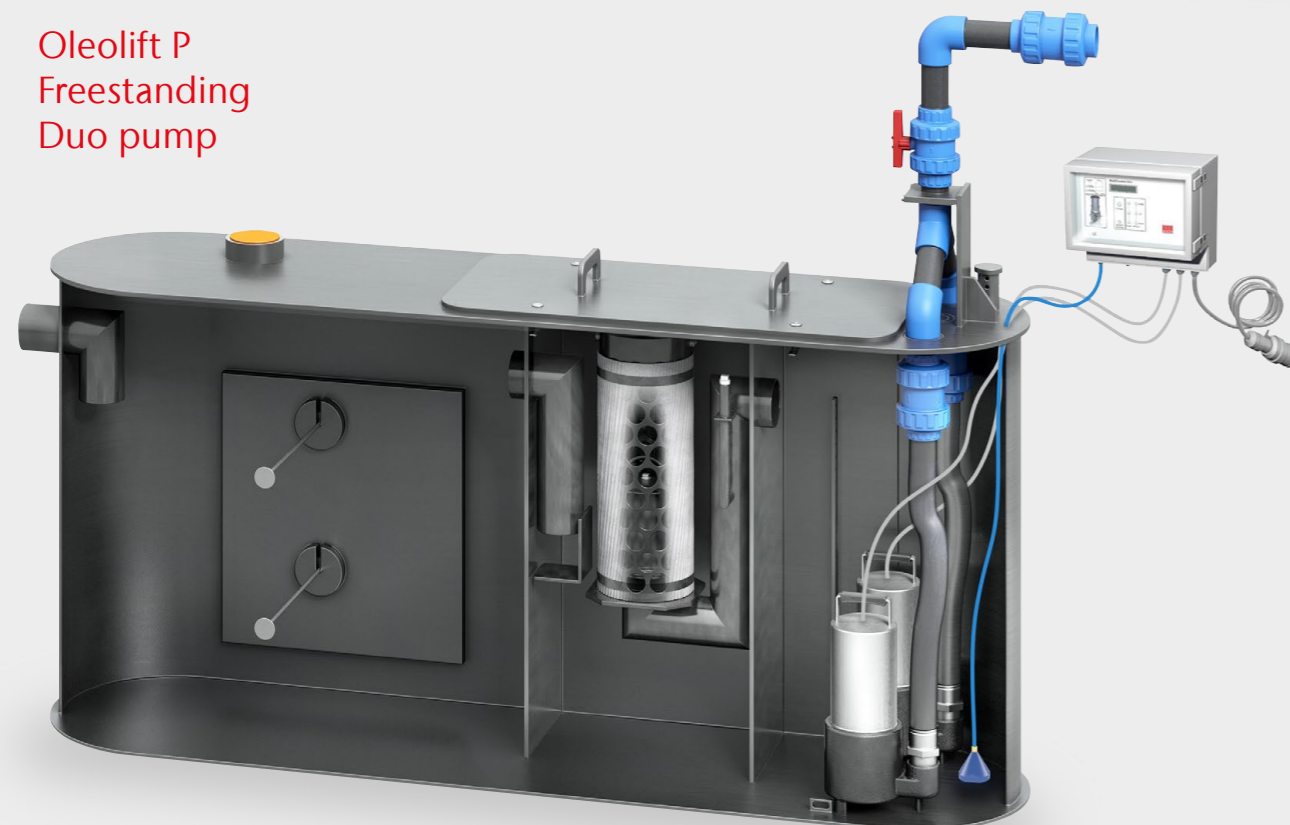
Note

Light liquid separator (separator class I according to EN 858-1) with integrated sludge trap, sampler, pump station and optional alarm systems for freestanding installation

Oleolift P Freestanding Mono pump



Oleolift P Freestanding Duo pump



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Terms and Conditions

For safe and proper use, read carefully through the instructions and all other documents enclosed with the product, pass them on to the end user and retain until the end of the product's life.

1. Introduction

ACO Industries s.r.o. (hereinafter ACO) thanks you for your trust and provides you with a product (light liquid separator Oleolift-P, hereinafter referred to as “the plant”) that incorporates state-of-the-art technology and has undergone quality controls prior to delivery.



1.1. ACO Service

For additional information regarding the plant or accessories, ordering spare parts and services like, maintenance contracts or general inspections, please contact your local ACO dealership or ACO Service.

Local dealership/service contact information

Target group

The target group for these operating instructions is technically - trained personnel. The personnel must have the appropriate qualifications listed in Chapter 1.2, “Personnel qualifications”. The operator must closely regulate areas of responsibility, competence and monitoring of personnel. Any lack of knowledge on the part of the personnel must be rectified through training and instruction by adequately - trained, skilled personnel. Training on the system should be carried out only under the supervision of technical, skilled personnel.

Warranty

The manufacturer provides this guarantee for 24 months from delivery. Specific warranty conditions for pumps are in Appendix 1.

1.2. Maintenance, cleaning and control of the oil separation part

ACO recommends that you take out a maintenance contract. This guarantees professional and on-schedule completion of maintenance work by ACO product specialists (ACO Service).

Please consult the table below for the required qualifications for testing, inspection and maintenance are listed below (these could vary depending on local law):

Activities	Person	Knowledge
Layout, operational changes	Planners	Knowledge of building systems and services, evaluation of wastewater technology applications. Layout of light liquid separators and drainage systems. Normative specifications and directives.
Below ground installation	Skilled people	Specific knowledge of civil engineering works.
Sanitary installation	Skilled people	Installing, fixing and connecting of pipes.
Electrical installation	Electrician	Work on electrical connections to power supply must be carried out by qualified electricians only.
Operation monitoring	Operator	No specific requirements.
Operating the plant, self-monitoring, servicing	Properly qualified, competent people	"Expert assessors" in accordance with DIN 1999-100*.
Emptying and cleaning	Properly qualified, competent people	Approved disposal contractor.
General inspection before commissioning and every five years	Qualified people	"Properly qualified, competent people" according to DIN 1999-100**.
Disposal	Skilled people	Appropriate and environmentally - friendly disposal of materials and substances, knowledge of recycling.

*Definition of "properly qualified, competent people" in accordance with DIN 1999-100: Properly qualified, competent personnel are people from the owner, operator or designated third parties, who by virtue of their training, knowledge and practical experience ensure that they can execute assessments, inspections or tests and inspections in the respective field properly.

The qualified, competent person can acquire the expertise for the operation and maintenance of the separator plant in a training course followed by on-site instruction, which is offered e.g. by the relevant manufacturers, professional associations, chambers of skilled trades as well as the expert organisations active in the field of separation technology.

**Definition of "properly qualified, competent people" in accordance with DIN 1999-100: Properly qualified, competent people are employees of companies independent of the operating company/owner, experts or other institutions, who verifiably have the required technical knowledge for the installation operation, maintenance and general inspection of separation plants to the scope named here and have the equipment required to test separation plants and whose independence with regard to its auditing activities is ensured. Independence is ensured, in particular, when the properly qualified, competent person has not implemented any installation and/or remedial measures on the same plant nor executed any self-monitoring.

Verification of technical qualification can be deemed to have been furnished when the requirements e.g. in accordance with RAL-GZ 968 for the assessment group GI-L or equivalent requirements, are fulfilled.

Enter the tests, inspections, maintenance work and test results in the operating log, such as:

- Inspections by the operator company
- Sampling
- Measuring water consumption, sludge and grease layer thickness, pH value and temperature
- Maintenance and general inspections
- Disposal (draining and cleaning)

IMPORTANT

If defects are determined during inspection or tests, then the plant may only be initially put back into service when these defects have been remedied.

2. Intended use

2.1. Area of use

The plant serves to retain light liquids of mineral origin from wastewater. In areas where the handling of light liquids with a mineral origin or mixtures of light liquids may endanger the environment, separator plants for treatment or as retention devices must be provided.

Discharge into public sewerage or combined sewerage systems

The system can be used in the application areas listed below:

- Treatment of mineral, oil-contaminated rainwater from paved areas where mineral oil products containing up to 100% biodiesel and biofuel oil and/ or 10% ethanol are handled
- Traffic areas (car parks and roads)
- Protection of plants and areas in or on which mineral oil products containing up to 100% biodiesel and biofuel oil and/or up to 10% ethanol are handled (retention)
- Pre-separation of light liquids from wastewater which undergoes more stringent treatment to limit hydrocarbons before being discharged into public sewerage systems
- Treatment of wastewater - containing mineral oil (industrial wastewater), which is produced under operating conditions similar to EN 858-1,2 for industrial processes, the cleaning of oil-contaminated parts and the cleaning of oil-contaminated floor surfaces (workshop floors are only allowed after checking individual cases)

In these cases, the treated discharge water from the plant is intended to be discharged into public sewerage or combined sewerage systems.

Discharge into a body of water

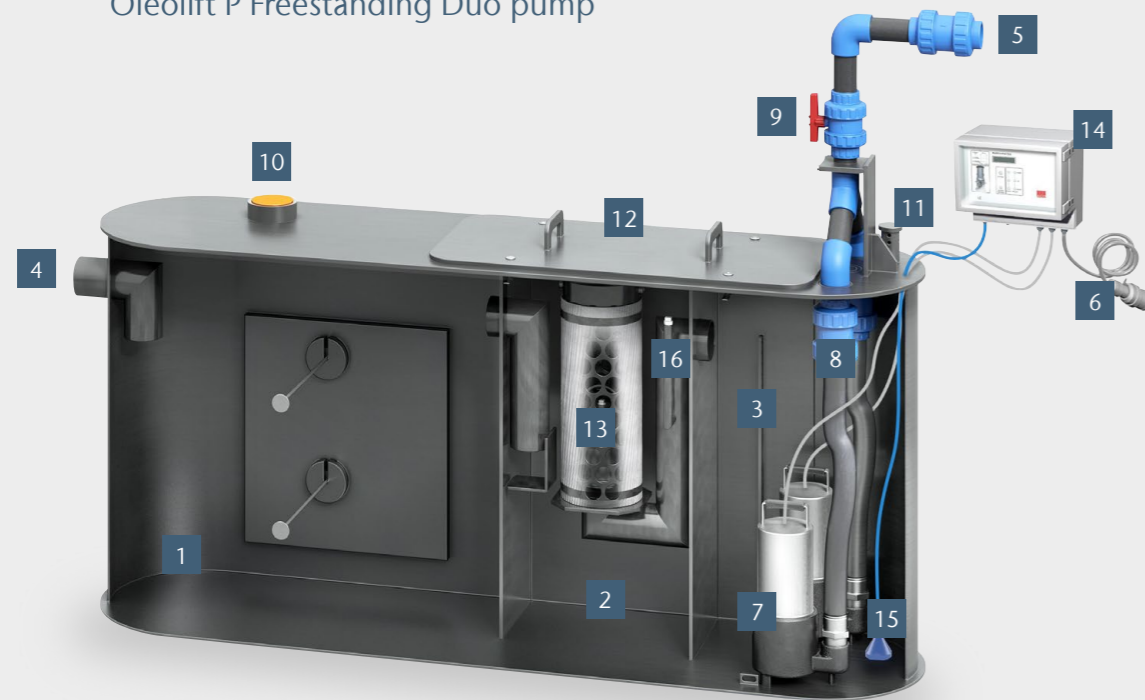
If the discharge water is to be discharged into a body of water, this is only possible in individual cases after the permissibility of such a discharge or any additional requirements that may be necessary have been clarified with the competent water authority.

Special introduction

The use of the plants for the treatment of wastewater arising from workshop drainage and from the draining, dismantling, compacting and shredding of end-of-life vehicles is only possible in specific cases after the permissibility of such a discharge has been clarified with the competent water authority, since in these cases other pollutants in addition to hydrocarbons may be present in concentrations that cannot be adequately treated in a plant.

2.2. Product description

Oleolift P Freestanding Duo pump

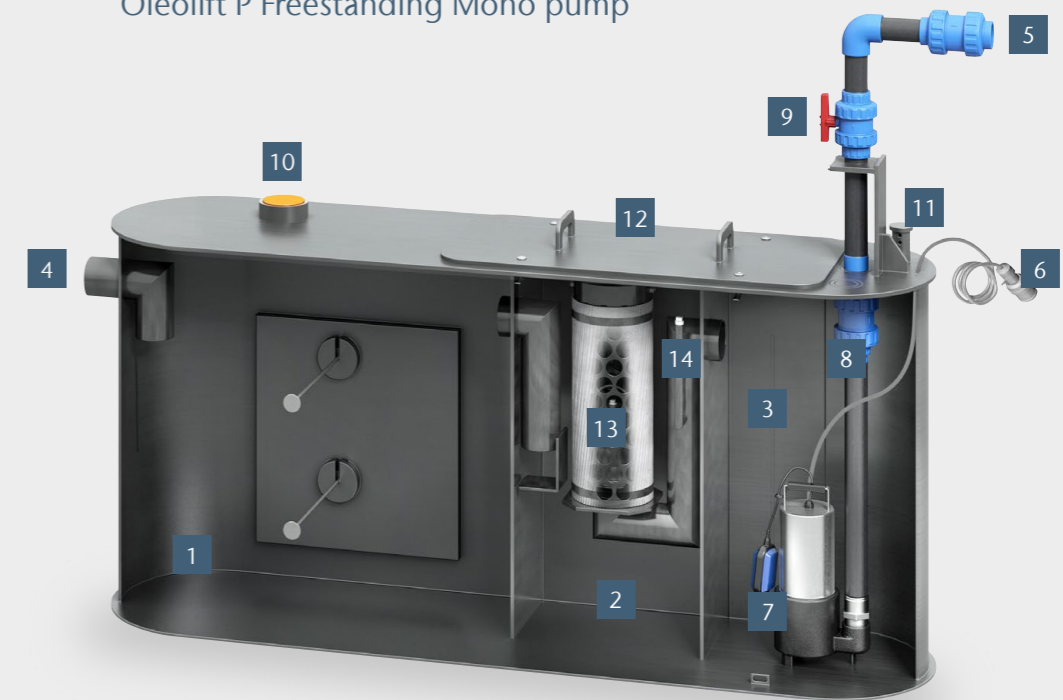


- | | |
|---|---|
| 1 Sludge trap | 11 Ventilation of pump section
(could be connected to separate ventilation system) |
| 2 Separation part | 12 Unit cover |
| 3 Pump section | 13 Coalescence unit with inserted closing device (floater) |
| 4 Inlet | 14 Control unit ACO Multicontrol Duo pump |
| 5 Outlet | 15 Pressure bell – water level probe |
| 6 Power supply socket | 16 Sampler |
| 7 Two pumps | |
| 8 Ball check valve (one for each pump) | |
| 9 Closing valve | |
| 10 Ventilation connection for separation part | |

NOTE

The duo pump version is controlled by the control unit and water level probe (pressure bell). Water levels in the pump's section are factory preset and mentioned in Chapter 2.3.1.

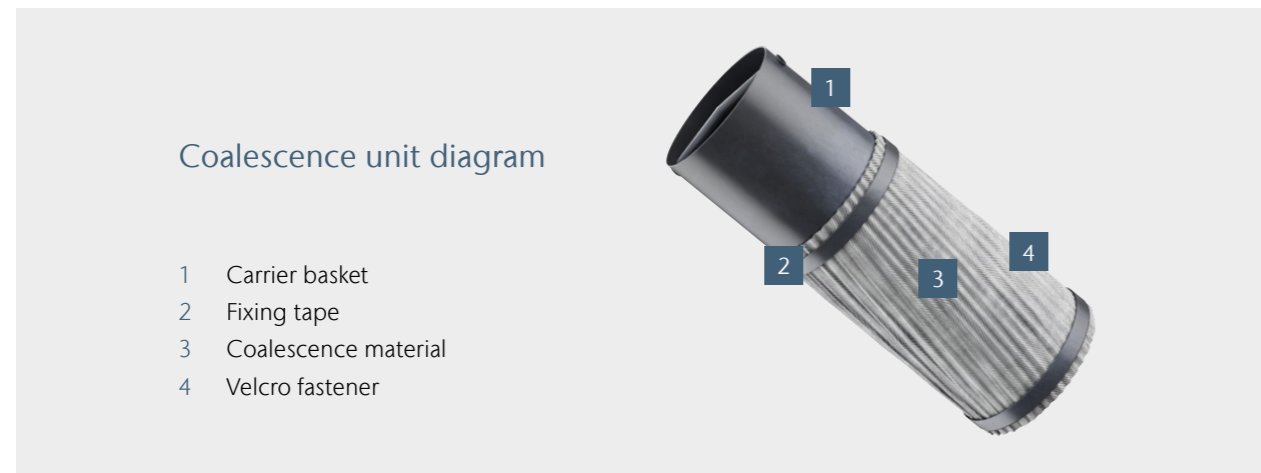
Oleolift P Freestanding Mono pump



- | | |
|---|---|
| 1 Sludge trap | 11 Ventilation for pump chamber part
(could be connected to separate ventilation system) |
| 2 Separation part | 12 Unit cover |
| 3 Pump section | 13 Coalescence unit with inserted closing device (floater) |
| 4 Inlet | 14 Sampler |
| 5 Outlet | |
| 6 Power supply socket | |
| 7 Pump with integrated float switch | |
| 8 Ball check valve | |
| 9 Closing valve | |
| 10 Ventilation connection for separation part | |

NOTE

The mono pump version is controlled by the pump's integrated float switch (ON-OFF regime) which is factory preset.



Coalescence unit diagram

- 1 Carrier basket
- 2 Fixing tape
- 3 Coalescence material
- 4 Velcro fastener

2.3. Installation and initiation

Install as close as possible to the point of waste water incidence, in well-ventilated, frostfree rooms, circulation or storage areas. Easily accessible for installation, operation, disposal, maintenance and cleaning.

Step by step installation

1. Place the separator on an even surface.
2. Connect inlet (4) and outlet (5) piping, and pay attention to the direction of the flow.
3. Connect the ventilation pipe (10) of the separation part to the building's ventilation system.
4. If necessary, cut the upper part of the pump's section ventilation (11) and connect it to the separate building ventilation system (different than the oil separation and ventilation system).
5. Remove the coalescence unit (13) and floater from the separator.
6. Fill the unit with water through the inlet (4) pipe until the water runs into the pump's section (3).
7. Insert the floater and coalescence unit into the float cage. The floater is in the right position if its top plate is visible at the water level.
8. Check for the free movement of the floater.
9. Check to see if the type label is well fixed.
10. Connect the electric socket (6).
11. Check the correct functioning of the pump(s) (7) by filling the pump's with water.

The separator is ready to use.

2.3.1. Alarm device installation and factory settings of water levels in pumping section

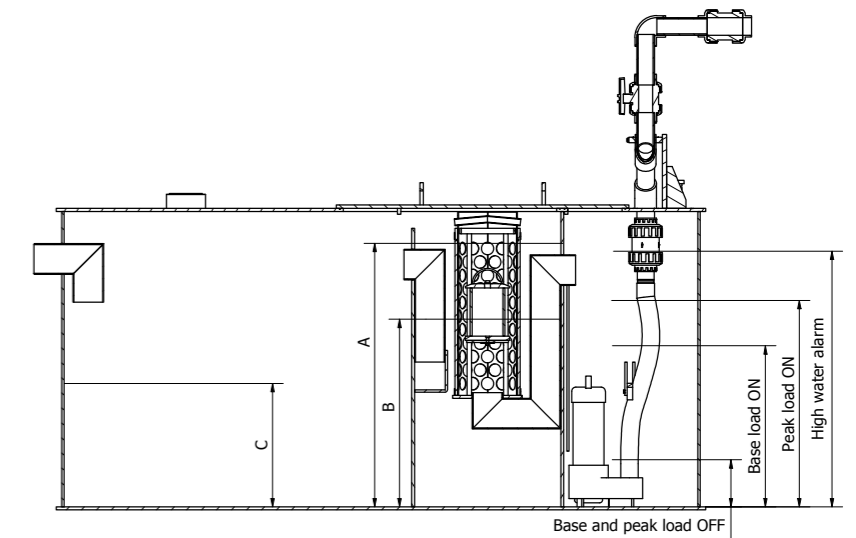
In case of Alarm device installation (optional accessory), follow separate Installation instructions of alarm device.

1. Drill holes through the top of the unit on marked points (crosses).
2. Install cable glands (part of the installation set).
3. Install alarm sensor's cables through the cable glands and position sensors to correct level of the cetric socket.

Alarm device levels and pumping chamber levels (Duo pump version)

NOTE

The mono pump version is controlled by the pump's integrated float switch (ON-OFF regime) which is factory preset.



Volumes and levels chart

Art. Nr. Of Oleolift	NS	Sludge trap volume (l)	A Max. overflow (mm)	B Max. oil level (mm)	C Max. sludge level (mm)	OFF (mm)	Base load (mm)	Peak load (mm)	Alarm (mm)	Type of pump
418601.P106	3	300	955	580	405	100	550	750	910	AL-05LNF
418601.P111	3	300	955	580	405	100	550	750	910	AL-21.5NF
418601.P120	3	300	955	580	405	140	550	750	910	AL-22NF
418601.P0	3	300	955	580	405	-	-	-	-	-
418601.P206	3	300	955	580	405	100	550	750	910	AL-05LN
418601.P211	3	300	955	580	405	100	550	750	910	AL-21.5N
418601.P220	3	300	955	580	405	140	550	750	910	AL-22N
418602.P106	3	600	955	580	405	100	550	750	910	AL-05LNF
418602.P111	3	600	955	580	405	100	550	750	910	AL-21.5NF
418602.P120	3	600	955	580	405	140	550	750	910	AL-22NF
418602.P0	3	600	955	580	405	-	-	-	-	-
418602.P206	3	600	955	580	405	100	550	750	910	AL-05LN
418602.P211	3	600	955	580	405	100	550	750	910	AL-21.5N
418602.P220	3	600	955	580	405	140	550	750	910	AL-22N
418604.P106	6	600	1140	655	470	100	680	880	1090	BF-22UNF
418604.P111	6	600	1140	655	470	140	680	880	1090	AL-22NF
418604.P120	6	600	1140	655	470	140	680	880	1090	AL-23ANF
418604.P0	6	600	1140	655	470	-	-	-	-	-
418604.P206	6	600	1140	655	470	100	680	880	1090	BF-22UN
418604.P211	6	600	1140	655	470	140	680	880	1090	AL-22N
418604.P220	6	600	1140	655	470	140	680	880	1090	AL-23AN
418605.P106	6	1200	1245	755	525	100	780	980	1190	BF-22UNF
418605.P111	6	1200	1245	755	525	140	780	980	1190	AL-22NF
418605.P120	6	1200	1245	755	525	140	780	980	1190	AL-23ANF
418605.P0	6	1200	1245	755	525	-	-	-	-	-
418605.P206	6	1200	1245	755	525	100	780	980	1190	BF-22UN
418605.P211	6	1200	1245	755	525	140	780	980	1190	AL-22N
418605.P220	6	1200	1245	755	525	140	780	980	1190	AL-23AN
418607.P106	10	1000	1155	765	480	160	690	890	1100	BF-32APNF
418607.P111	10	1000	1155	765	480	150	690	890	1100	AL-33ANF
418607.P0	10	1000	1155	765	480	-	-	-	-	-
418607.P206	10	1000	1155	765	480	160	690	890	1100	BF-32APN
418607.P211	10	1000	1155	765	480	150	690	890	1100	AL-33AN
418607.P220	10	1000	1155	765	480	160	690	890	1100	BF-35PN

2.4. Biannual maintenance, cleaning and control of the oil separation part

IMPORTANT

- Maintenance, cleaning and control of the oil separation part must be done by a competent person according to Chapter 1.2.
- If defects are identified during tests or inspections, then the light liquid separator plant must not be put back into service until these defects have been remedied.

2.4.1. Maintenance

Maintenance of the separator should be done by an expert according to Chapter 1.2 (a trained person in the company or an external specialist), and it must include at least the following points:

- Sludge trap - setting up and measuring the sludge volume.
- Separator - measuring of the oil volume.
- The floater function - checking the coalescence unit for flow continuity and whether the water levels before and after the coalescence unit differ.

2.4.2. Discharge and cleaning

Arrange the timing of the cleaning in such a way that during the cleaning process, either no water or a very small amount of wastewater flows in. Discharge is recommended:

- If either half of the volume of the sludge trap is filled or 80% of the storage capacity of the oil is filled.
- If the heading-up water in the separator is high due to a blockage in the coalescence unit.
- To perform a complete cleaning every half of a year, unless local authorities state differently.

2.4.3. Cleaning the coalescence unit

Open the separator and remove the coalescence unit. Clean the coalescence unit on the spot from which the water flows into the separator again. It is not necessary to remove the coalescence material from the carrier basket, because it is possible to do the cleaning in the assembled state.

- Wash (hose down) with a current of at least ¾ inch, and a maximum pressure of 10 bars.
- Wash with a high-pressure unit of a maximum 90 bars and a water temperature of 80°C; the nozzle distance from the coalescence filter should be approximately 15 cm.
- Use detergent only if necessary.

2.4.4. A complete cleaning

- Separator - pump out completely the contents of the separator.
- Floater - remove from the float cage, clean, check and set aside.
- Coalescence unit – remove and clean as described above.
- The sensors of the idOil 20 or idOil 30 alarm (if applicable) - clean and check when triggered in accordance with the manufacturer's instructions, assembly and operating instructions "idOil 20" or "idOil 30".

2.4.5. Repeated service

- Separator - fill the unit with water through the inlet pipe until the water starts to run into the pump section.
- Floater - place into the cage in the floating position.
- Coalescence unit - put on the float cage.
- Cover - cover the separator.

2.5. Quarterly maintenance of pumps and related components

IMPORTANT

- Tests, maintenance or inspections (following prior draining and cleaning) must be done by a competent person according to Chapter 1.2.
- If defects are identified during tests or inspections, then the light liquid separator plant must not be put back into service until these defects have been remedied.
- Following inspections, maintenance and test results, any defects and remedial works must be documented in the operating log.
- Even components that are not directly part of the separator plant must also be serviced and maintained regularly, otherwise the proper operation of the separator plant cannot be ensured.
- To prevent damages caused by leaking water, it is recommended to make a daily visual check of the unit or equip the unit with an optional overflow alarm device to control an eventual leakage or overflow caused by a malfunctioning pump or other problem.

Scope of maintenance

- Test that the ball valve and gate valve move smoothly and do not leak. Grease and reset if necessary.
- Test the functioning of the ball valve backflow preventer. Open and clean while controlling the seating of the ball and seal.
- Execute an internal cleaning for the pump station chamber.
- Check the function of the submerged pumps.
- Check the pump parts for wear.
- Check and clean the pressure bell and its connection hose (Duo pump version).
- Check and clean the float switch and its cable (Mono pump version).
- Check the function of the level switch program. The switching points are factory preset (see Chapter 2.3.1).

Detailed operational instructions for pump units are in appendix 1.

2.6. Troubleshooting

IMPORTANT

- Tests, maintenance and inspections (following prior draining and cleaning) must be done by a competent person according to chapter 1.2.
- If defects are identified during tests or inspections, then the light liquid separator plant must not be put back into service until these defects have been remedied.
- Following inspections maintenance and test results, any defects and remedial works must be documented in the operating log.
- Even components that are not directly part of the separator plant must also be serviced and maintained regularly, otherwise the proper operation of the separator plant cannot be ensured.
- To prevent damages caused by leaking water, it is recommended to make a daily visual check of the unit or equip the unit with an optional overflow alarm device to control an eventual leakage or overflow caused by malfunctioning pump or other problem.

2.6.1. Safety instruction

WARNING Electric shock

- Work on electrical connections must be executed only by qualified electricians.
- Disconnect the control unit (Duo pump version) or the unit/pump (Mono pump version) from the power supply before troubleshooting or any service and maintenance work

CAUTION Flooding and risk of infection in case of improper sanitary installation

- Work on sanitary equipment must be carried out by qualified personnel only.
- Only use original spare parts.
- Only have prefabricated pumping station repairs executed by ACO or an ACO Service partner.
- Prevent contact with wastewater and wear protective equipment.
- Never execute work on the connections and pipes unless they are depressurised.

Burns due to hot surfaces

- Allow the pump motors to cool.

2.6.2. Troubleshooting chart

Malfunction	Cause(s)	Actions
Submerged pump not functioning	Power consumption too high (automatic shut-off)	Acknowledge malfunction If the malfunction remains, contact ACO Service
	Control unit without power supply	Restore power supply (electrician)
	Automatic mode not switched on	Switch on automatic mode
	Pump motor is defective	Submerged pump replacement required (ACO Service)
Submersible pump does not pump, pumps too little or tank is full	Submerged pump obstructed	Submerged pump maintenance required (ACO Service)
	Ball valve or gate valve in the pressure pipe is not fully open or is closed	Fully open the ball valve or stop valve in the pressure pipe
	Pressure pipe obstructed	Clean the pressure pipe
	Impeller (submerged pump) obstructed	Submerged pump maintenance required (ACO Service)
Submerged pump only runs in manual operation	Pump parts are worn	Submerged pump repair required (ACO Service)
	Control line of the level switching is leaking, incorrectly laid, kinked or obstructed	Check the control line
	Pressure bell blocked	Clean the pressure bell
Knocking noises or vibrations in the pressure pipe when switching off the submerged pump(s)	Closed back pressure bell defective	Replace the closed pressure bell
	Stop delay period of the submerged pumps is too short	Increase submerged pumps after-running period

Detailed operational instructions for pump units are in Appendix 1.

2.7. Operational instructions for pumps

Detailed operational instructions for pumps are in Appendix 1.

2.8. Operational instructions ACO Multicontrol Duo pump for control unit

Detailed operational instructions for the control unit and pressure bell are in Appendix 2.

ACO. creating
the future of drainage



Every ACO product supports
the ACO system chain



ACO Industries Tábor s.r.o.

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