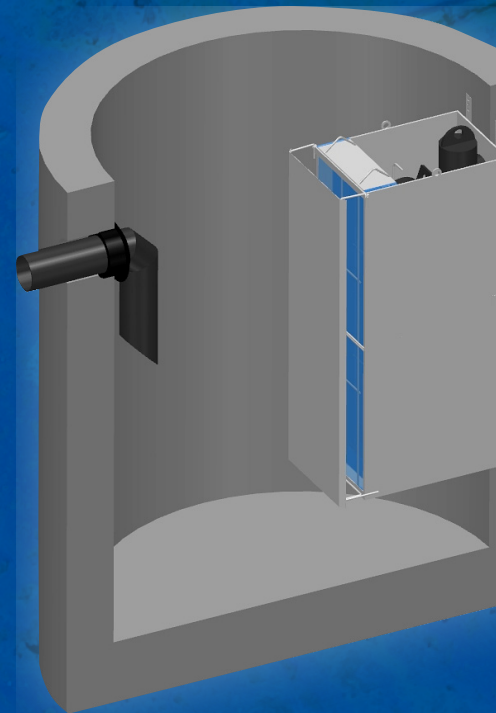


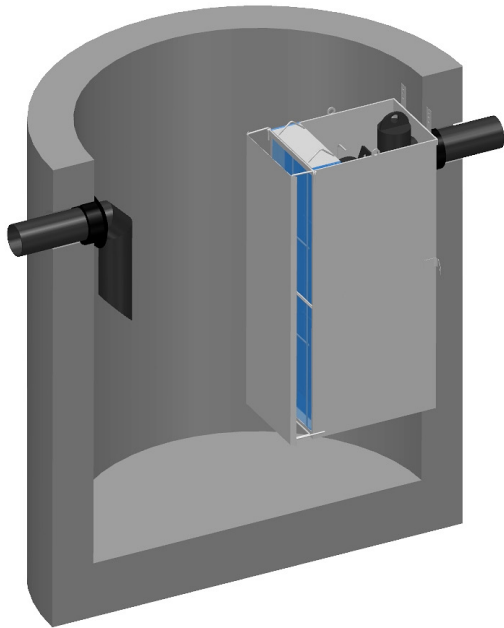
ECOLINE-B

HIGH PERFORMANCE, COST
EFFECTIVE BELOW GROUND OIL
WATER SEPARATION

PRODUCT OVERVIEW
INSTALLATION MANUAL
OPERATION & MAINTENANCE



TODAY'S ENVIRONMENTAL LEGISLATION IS HARD ENOUGH TO COMPLY WITH.



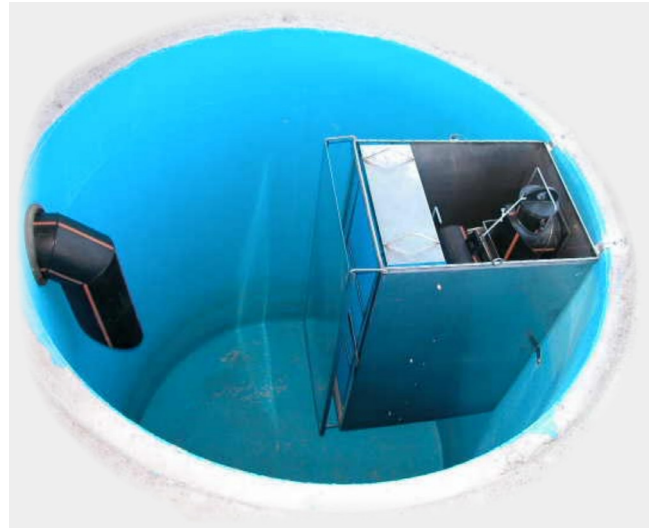
ecoLine-b meets tomorrow's standards today

It's not just the **ecoLine's** long maintenance intervals and low wastedisposal costs that make it such a good investment, but the fact that it is designed with future standards in mind.

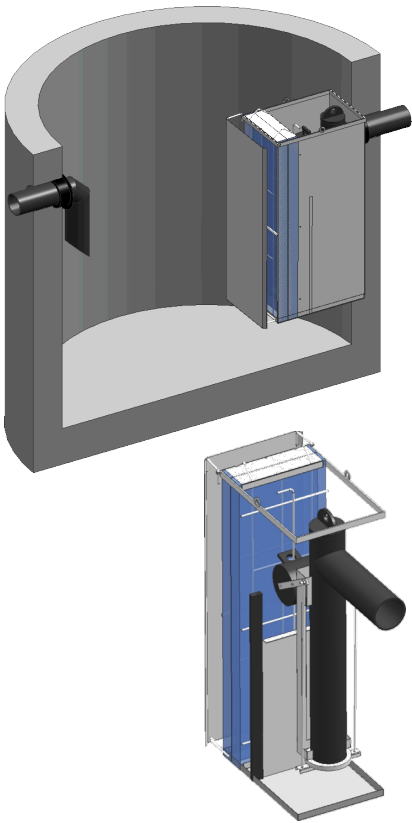
The **ecoLine-b** far exceeds the strict European standards (EN858) for performance (less than 5ppm of free oil) and far surpasses US requirements. The outstanding independent testing certificates demonstrate that ecoLine-b will provide clean water that exceeds today's environmental standards. **ecoLine-b** also allows for tighter, future environmental discharge compliance guidelines to be met with little or no modification to the system.

Stop throwing money down the black hole of conventional oil/water separators. Put it where you can access it!

All basic elements of the **ecoLine-b** system can be accessed from ground level. This minimizes confined entry requirements for routine cleaning and maintenance. Annual maintenance cost savings range from 30% to 50% lower than those of conventional separator systems. All internal stainless steel components can be factory installed in a standard precast concrete structure, which accelerates the installation of the **ecoLine-b** Oil/Water Separator. This provides the first substantial cost savings in the form of reduced construction site labor. The **ecoLine-b** components can be designed in a modular way, which means these units can be installed into existing concrete tanks, even if the manholes are very small.



WORKING PRINCIPLE



The ecoLine-b oil/water separator is designed to separate non-emulsified light liquids or low-water-soluble fluids with a specific gravity below 0.95 (gasoline, diesel, heating oils and other mineral oils) from effluent discharge. A two-step separation process, gravity separation and removal of small oil particles by coalescing media elements, produces high removal efficiencies.

Purification Step 1: Gravity Separation

The optional upstream grit chamber removes solids from the influent, thus ensuring unimpeded functioning of the oil separator itself. The grit trap is the first concrete tank of a standard two-tank design. The grit chamber also compensates for influent temperature fluctuations, influent oil concentration influxes and initializes the separation of light fluids.

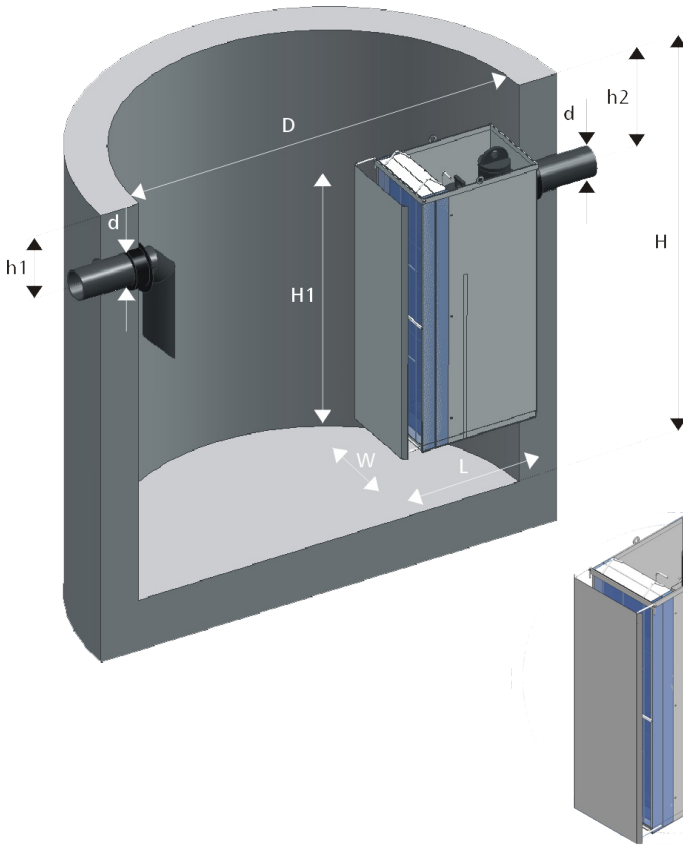
Purification Step 2: Enhanced Coalescing Media

In the residual oil media, fine droplets that are too small to be separated by gravity alone are accumulated into bigger drops that rise to the surface. This coalescing media is made of durable reticular (i.e. "net-like") soft polyurethane foam. The media-cartridge is very easy to lift out and reinstall once it is cleaned/rinsed with a garden hose. The outlet structure features a venting pipe that provides an effluent sampling port. The separated water that leaves the ecoLine-b, has a residual contamination of free petroleum content of less than 5 mg/liter.

Spill Control:

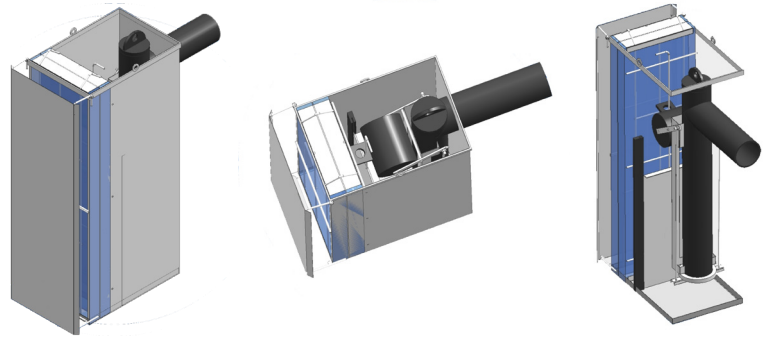
The automatic shut-off valve closes the outlet pipe when the maximum oil storage capacity (230mm/9inch oil depth) is reached.

ECOLINE-B MODEL SIZES



ecoLine-b offers a full range of below ground oil water separators from 16gpm (1l/s) to 1600gpm (100l/s).

Larger models are available upon request. Grit chamber shall be sized depending on the particular application.



Item no.	Item	Flow rate		D		H		h1		h2		d		H1		W		L		Weight	
		[l/s]	[gpm]	[mm]	[ft]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[kg]	[lb]
104145	ecoLine-b NS01	1	16	1200	4	1000	39	225	9	275	11	110	4	630	25	300	12	570	22	20	44
101872	ecoLine-b NS03	3	50	1200	4	1500	59	225	9	275	11	110	4	1000	39	300	12	520	20	26	59
101873	ecoLine-b NS06	6	100	2000	6	1500	59	225	9	275	11	125	5	1000	39	450	18	520	20	30	66
101874	ecoLine-b NS10	10	160	2000	6	2000	79	250	10	300	12	160	6	1000	39	450	18	670	26	39	85
101875	ecoLine-b NS15	15	240	2000	6	2000	79	270	11	320	13	200	8	1000	39	450	18	840	33	48	106
101876	ecoLine-b NS20	20	320	2500	8	2000	79	320	13	370	15	200	8	1100	43	450	18	930	37	51	113
102016	ecoLine-b NS40	40	630	Available upon request. Sizing of grit chamber and separation chamber depending on application.				838	33	888	35	315	12	1250	49	905	35,5	760	30	91	201
102017	ecoLine-b NS50	50	790					838	33	888	35	315	12	1250	49	905	35,5	910	36	105	232
102018	ecoLine-b NS70	70	1100					838	33	888	35	315	12	1250	49	905	35,5	1360	53,5	120	265
104034	ecoLine-b NS100	100	1600					838	3	888	35	400	15,7	1500	59	915	36	1830	72	180	396

Place manhole access opening directly above filter and spill control valve.

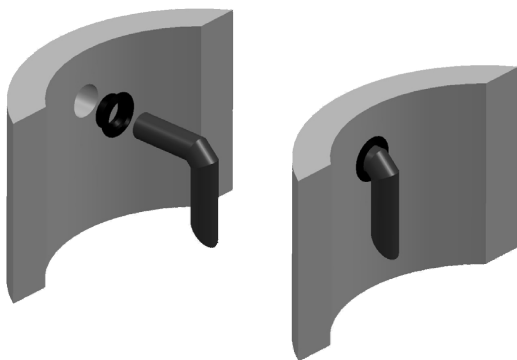
- Min. maintenance access opening:
- NS03: 24in (600mm)
 - NS10: 32in (800mm)
 - NS20-70: 40in (1000mm)

INSTALLATION

Before the ecoLine-b is put into service, the system **MUST** be filled with clean water. Any material left behind from installation (e.g. mortar, soil,...) must be removed prior to filling the tanks with fresh water.

Important: Fill the separator via the grit chamber until the separation chamber is full and water leaves the separator through the outlet structure. Make sure that the spill control valve is secured in an open position (see Fig.2). The separator is now ready for operation.

Installation of the inlet pipe



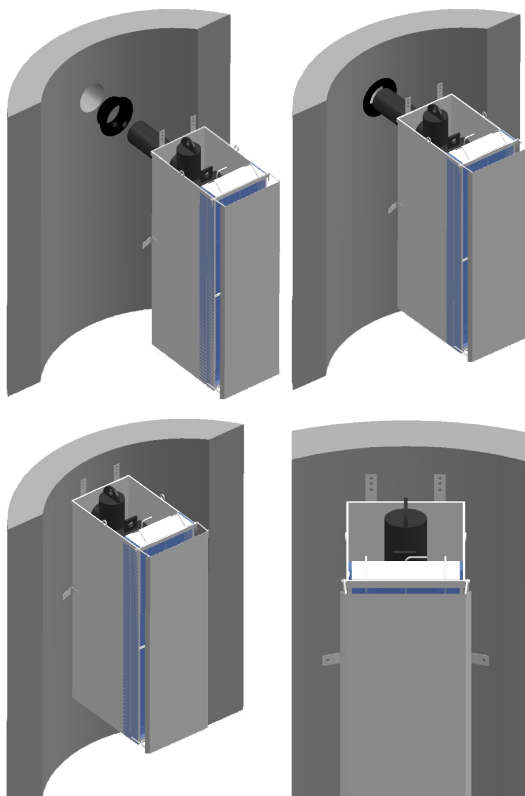
Components required:

- oil resistant boot (compression gasket, not in our scope of supply)
- HDPE inlet-pipe

Core hole for inlet pipe at predetermined elevation.

Insert compression gasket at the inside of the manhole. Lubricate and push the HDPE pipe from the inside of the manhole into the inlet boot.

Installation of the ecoLine-b outlet structure



Components required:

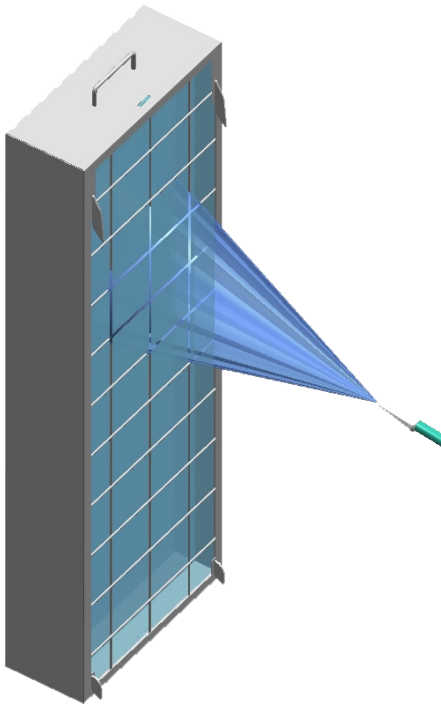
- coalescing outlet structure
- oil resistant boot (compression gasket, not in our scope of supply)
- mounting material (4 stainless steel bolts 8mm and anchors, not in our scope of supply).

Core outlet opening at predetermined elevation.

Insert compression gasket at the inside of the manhole. Then lubricate and push the HDPE pipe of the coalescing outlet structure from the inside of the manhole into the outlet boot.

Use the 4 mounting brackets as a template to drill 4 anchor holes using a 8mm masonry drill bit to desired depth. Make sure not to perforate concrete tank wall. Insert anchors and secure.

OPERATION & MAINTENANCE



General

Maintenance of your ecoLine-b unit will strongly depend on the particular application. We recommend to visually inspect the system on a weekly basis in the first month of use and to increase or decrease maintenance intervals accordingly.

Maintenance of the Grit Chamber

Remove sludge and oil from the system periodically.

Maintenance of the Separation Chamber

Remove accumulated oil on a regular basis, but no later than when an oil layer of 100mm/4 inches has developed.

Maintenance of Enhanced Coalescing Media

The enhanced coalescing media cartridge has to be cleaned periodically. Since the maintenance intervals strongly depend on each particular application, check the condition of the permanent filter element weekly during the first 60 days of operation. The filter media can be cleaned/rinsed with a garden hose. Recycle the wash-water to the separator.

Over time, UV radiation and sun light will degrade the coalescing media. It is, therefore, strongly recommended that the media inside the cartridges not be left outdoors for extended periods of time after cleaning. Some exposure to UV radiation and sunlight will not harm the system.

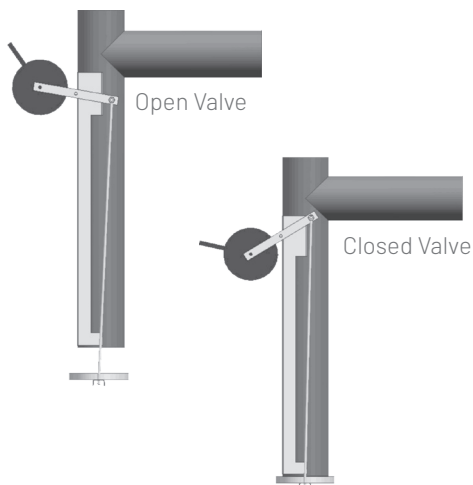
Temperature range of operation

Above freezing to 158°F (70°C) - permanent temperature

Material

Stainless Steel Grade 304 and high grade polyethylene

SPILL CONTROL



ecoLine-b separators are equipped with a spill control mechanism in the outlet pipe. The calibrated float will lose buoyancy in oil as it accumulates, hence shutting down the outlet pipe of the separator. The valve will be completely shut when the maximum oil storage capacity is reached (230mm/9inches).

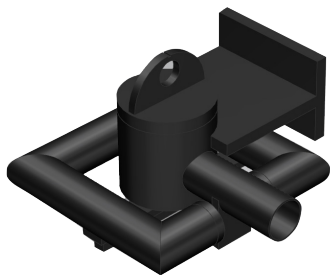
In the event of a spill, remove the accumulated oil from the system and fill the unit with clean water.

To reset the valve mechanism, pull the stainless steel string of the valve.

OPTIONAL EQUIPMENT

ecoLine-b separators can be equipped with an optional oil level sensor (ecoWarn). The ecoWarn unit will activate an alarm once the maximum oil storage capacity of the system is reached.

In the event of a spill, remove the accumulated oil from the system and fill the unit with clean water. To reset the valve mechanism, pull the stainless steel string of the valve.



Automatic Oil Draw-Off Device

As an option you can also order the ecoLine-b with an automatic oil draw-off device.

This built-in ADD mechanically removes accumulated light liquids from the water surface and stores them in an external oil recipient or oil drum (to be supplied by operator).

Collected oil is free of any water (99.7% pure)

For further information about the working principle of the ADD, please see our brochure and O&M manual "ADD HDPE".



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Illustrations may differ from the original.
Version 07/2022: Subject to errors, technical changes and typographical errors.

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