

ABOVE GROUND POLYETHYLENE (HDPE) OIL WATER SEPARATOR CLASS I MANUAL

Oil-water separator:

The "Metusan" oil-water separator operates on the principle of gravity, leveraging the fact that oil is lighter than water and will naturally float, while solids are heavier and therefore sink. This system only requires periodic removal of solids and oils for the rest of the effective lifespan.

Oil-water separators are gravity-based devices designed to separate lightweight liquids, such as mineral oils, fuels, and hydrocarbons, as well as suspended solids from contaminated water before it is released into the sewer system. Light liquids, such as oil, have a specific density less than 1 [water], while solids, in the form of sludge, have a specific density greater than 1.

Fields of usage:

Gas stations, Parking areas, Truck yards, Car dealerships, Auto repair shops, Car wash, Bus garage, Military hangar and storage facility, Fire station, Engine cleaning, workshops, vehicle recovery, Airport aprons, Railway – Metro stations, Container terminals, Industrial facilities, oil facilities with risk of accidental oil spills.

Requirement:

Municipal sewer regulations, as well as state environmental laws, outline specific scenarios mandating the use of oil-water separators. These regulations play a crucial role in reducing water pollution, ensuring clean water for present society, and preserving the environment for future generations.

Working principles:

Oil-water separators that are used in the construction industry operate on the principle of gravity. Oils, with a specific gravity ranging from 0.8 to 0.94, are lighter than water (1) and naturally rise to the surface. Conversely, solids, which have a specific gravity higher than water, sink to the bottom. Initially, oil-water separators were basic large containers, typically made of concrete, where this separation process occurred.

The duration that polluted water remains in the separator, flowing from the inlet to the outlet, is referred to as retention time. A key factor in effective separation is the size of the container; larger containers provide a longer retention time, leading to enhanced separation efficiency.

Advantages:

The Metusan oil-water separators boast a contemporary design aligned with the European standard EN858 compliance. These separators offer industry-leading oil separation efficiency within a space-saving tank. Equipped with a mechanical valve, they automatically shut off when the maximum oil capacity is reached, safeguarding the sewer system, equipment, and the environment.

These units come with a 20-year structural warranty that provides protection against leaks, ensuring both reliability and affordability.

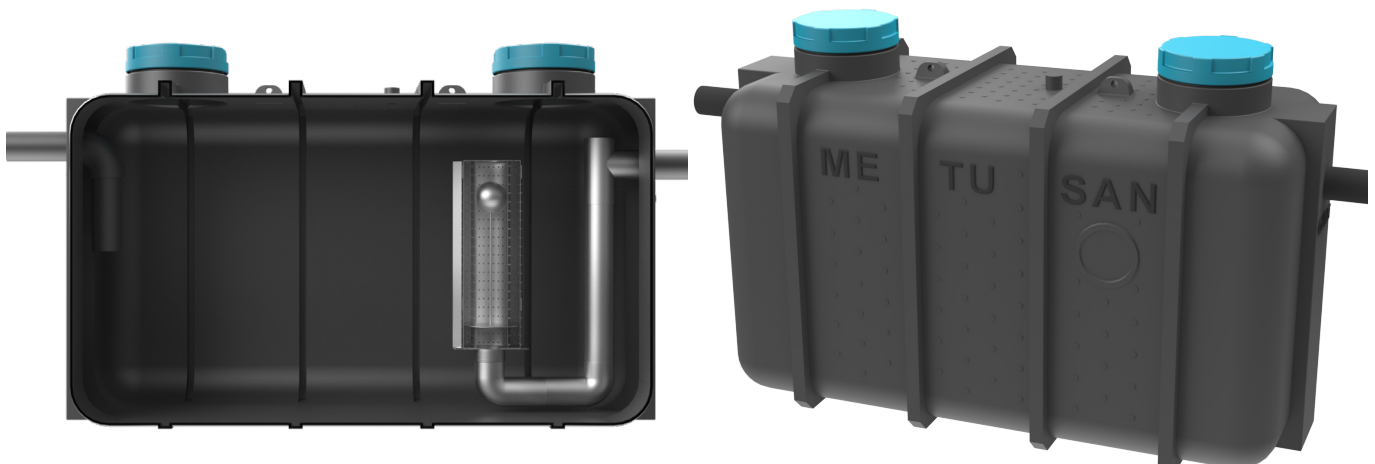
Coalescer:

Coalescence is the phenomenon where two or more droplets or particles merge upon contact, forming a single, larger droplet or particle.

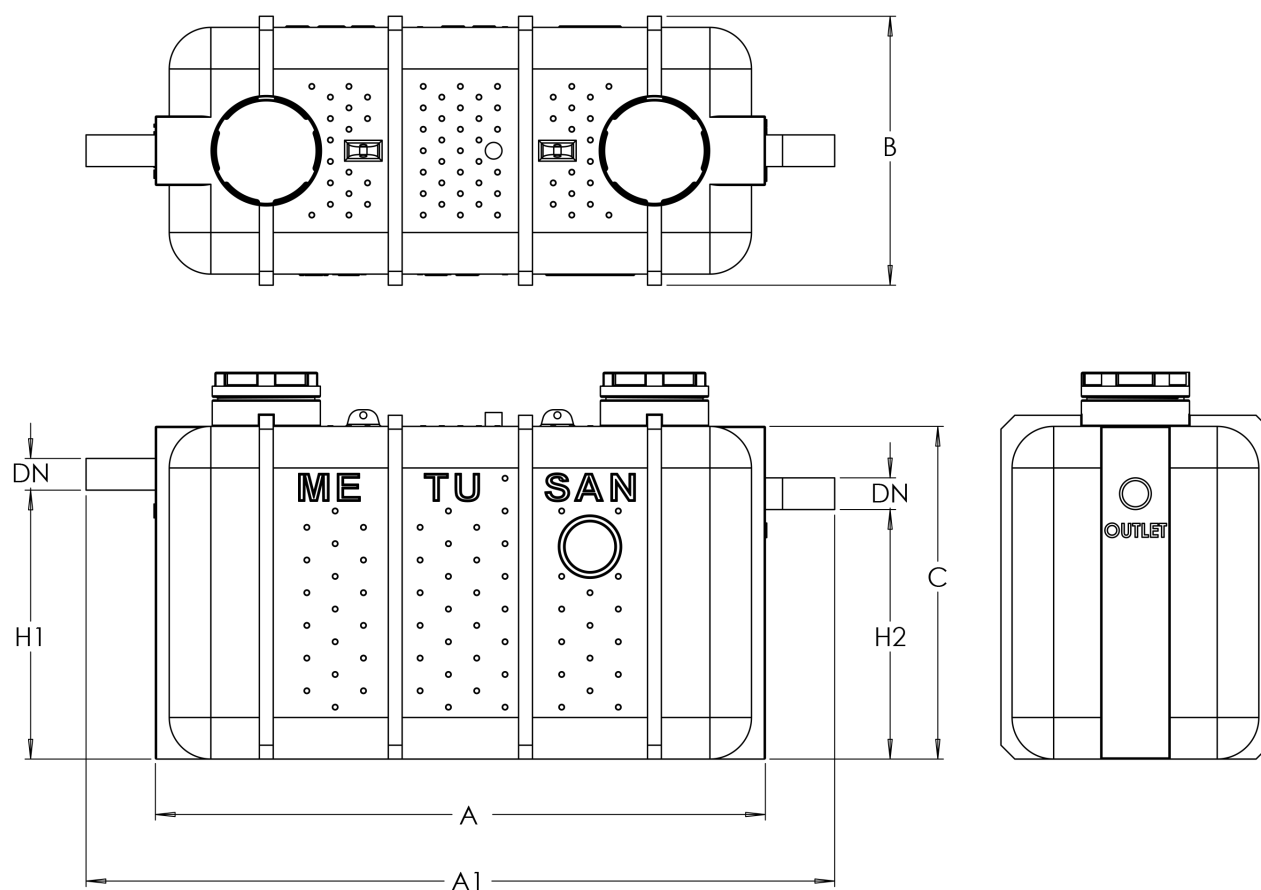
In oil-water separators, coalescence units facilitate the merging of fine oil particles into larger ones, which then float to the surface. However, contaminated water often contains solid particles that can potentially clog these coalescence units. Regular, scheduled maintenance is essential to prevent such clogs.

The presence of easily cleanable coalescence units offers a significant advantage to end users, ensuring efficient operation and extending the life of the equipment.

Manual oil water separator according to EN 858 class I, is made of environmentally friendly recycled high-density polyethylene (HDPE) with a monolithic rotomolded body and features an integrated sludge trap. It is free standing and suitable for installation on floor or in floor type applications, at the places free from frost. Easy removable, gasketed access covers designed for maintenance and disposal purposes. One-piece rotomolded body, which is resistant against waste oil and aggressive wastewaters do not leak and completely water tight, Inner and outer surfaces of the unit are smooth enough to avoid residues and facilitate easy cleaning. Lightweight construction ensure easy transport and installation. Transport handles are good for handling with forklifts. It is equipped with a 304 grade/316 grade stainless steel float system that automatically closes when the device reaches its capacity, specially designed and cleanable with coalescing filters for further separation processes, inlet and outlet connections compliant with SML cast iron and plastic pipe connections according to EN 877 standards, optionally equipped with an oil level monitoring alarm device and a sampling shaft.



TECHNICAL SPECIFICATIONS



PRODUCT DIMENSIONS

Code	NS (lt/sec)	DN	Total Volume (lt)	Oil Volume (lt)	Sludge Trap (lt)	A	A1	B	C	H1	H2
34213	3	100	1089	150	360	1360	1540	890	1390	970	900
34217	7	100	1762	350	580	2200	2380	890	1390	970	900
342113	13	150	3124	650	1030	2700	3100	950	1600	1470	1400
342120	20	200	4960	1000	2220	2900	3300	1300	1800	1470	1400

Dimensions are in mm.