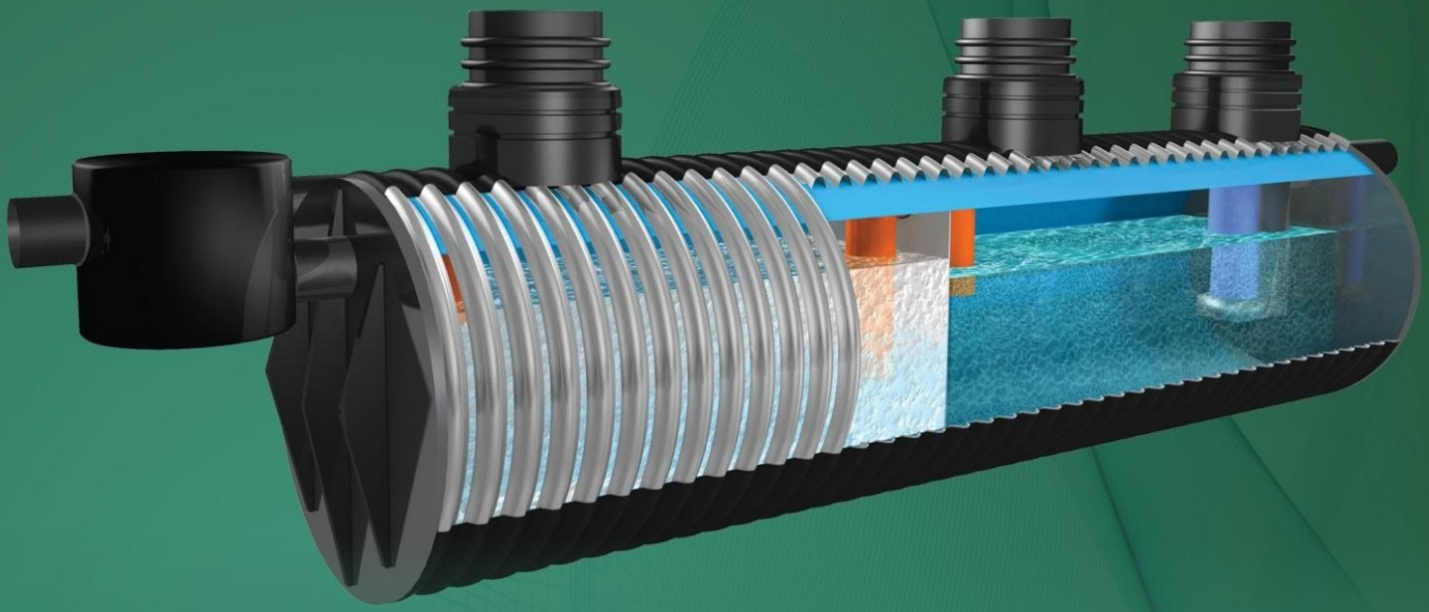
PALADERI
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TECHNICAL DATA SHEET · PALASTORM

PALAGREEN first-flush treatment systems

Single-block steel and polyethylene unit for grit and oil separation of runoff from yards, car parks, roads and storage areas, compliant with Italian Legislative Decree D.Lgs. 152/2006 and UNI EN 858.

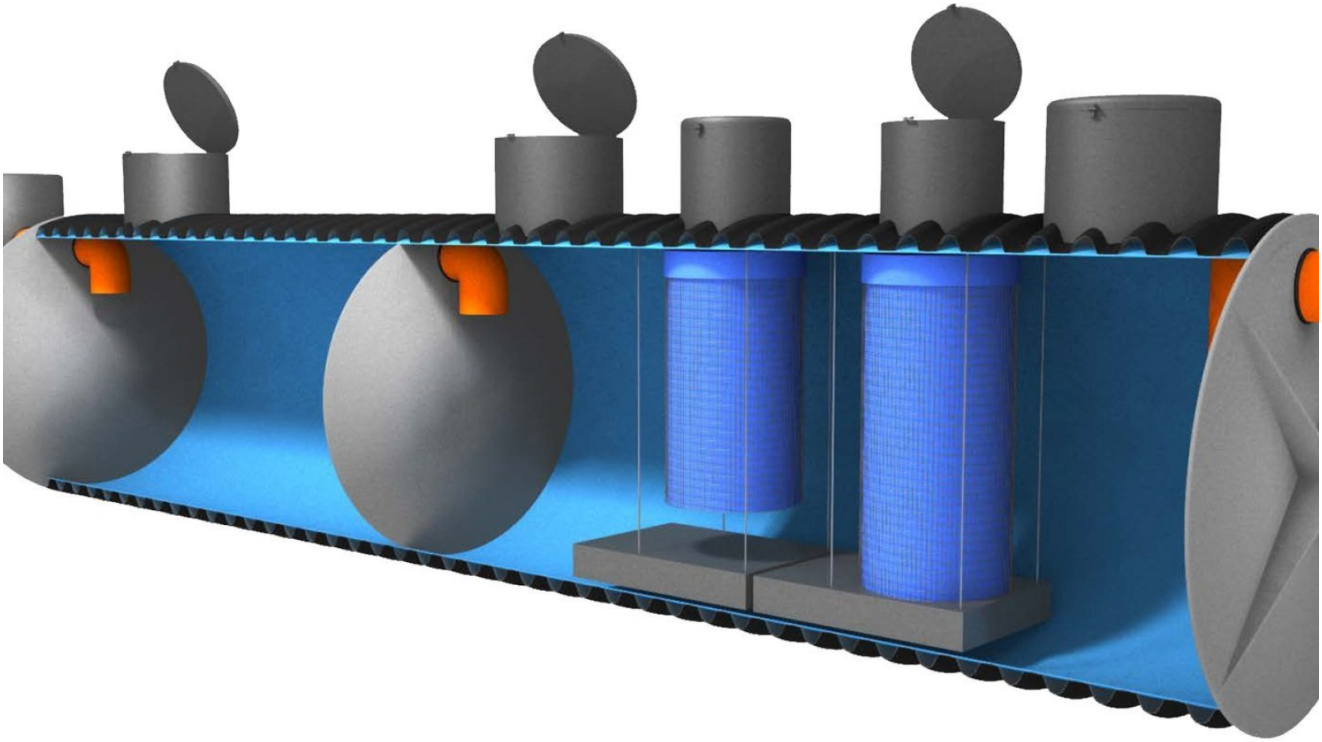
TREATMENT
First 5 mm of rainfall in 15 minutes over the drained surface

SECTIONS
Grit removal and oil separation with coalescence filter

Technical data

Material	**Single-block spiral-wound galvanised steel and polyethylene pipe to UNI 11434**
Treatment	**First 5 mm of rainfall in 15 minutes over the drained surface**
Sections	**Grit removal and oil separation with coalescence filter**
Standards	**Legislative Decree 152/2006, UNI EN 858-1/2, regional regulations**
Options	**Overflow chamber, bypass, flap valve, sampling chamber, riser extensions**

Application



Runoff from car parks and yards carries debris and hydrocarbons. PALAGREEN treats the **first 5 mm of rainfall** over the drained surface, preventing polluted water from reaching the sewer directly. Subsequent, less polluted water is diverted by the overflow chamber directly into the main pipeline.

On request, PALADEX technology also allows storage-type systems: the water is held for 48 hours and then pumped by an electric pump into the oil separator, controlled by a panel connected to rain sensors.

The monoblock system

Overflow chamber: conveys water from the yard to the system; when the flow exceeds the design flow, the second flush goes directly to the receiving body via the bypass.

Grit removal section: a stilling tank in which heavy substances settle to the bottom while oils, hydrocarbons and foam rise to the surface.

Oil separation section: a microbubble polyurethane coalescing filter, held in a removable stainless steel grid, merges oil droplets into larger drops that rise and separate from the effluent.

Sizing

For the same surface to be treated, PALAGREEN can be selected in different diameters to suit the available area, the installation depth and the inlet and outlet levels. Compared with concrete or GRP systems it is much lighter, making transport and installation fast and economical.

Dimension table

Sized for 5 mm of rainfall in 15 minutes over the whole drained area (180 m² per l/s of nominal size).

NS (l/s)	Drained area (m²)	Total usable volume (l)	PALADEX ID (mm)	External length (m)	Grit chamber: volume (l)	Grit chamber: internal L (mm)	Grit chamber: He (mm)	Separator: volume (l)	Separator: Hu (mm)	Inlet/outlet Ø (mm)	Oil storage (l)
10	1800	3880	1400	3,00	1940	1459	1050	1940	1010	150/150	150
15	2700	3880	1400	3,14	1940	1528	1100	1940	1060	200	225
20	3600	4000	1400	3,23	2000	1575	1100	2000	1060	200	300
30	5400	6000	1640	3,38	3000	1648	1340	3000	1300	250	450
40	7200	8000	1640	4,71	4000	2312	1275	4000	1235	315/200/200	600
50	9000	10.000	1640	5,87	5000	2890	1275	5000	1235	315/250/200	750
65	11.700	13.000	2200	3,95	6500	1940	1835	6500	1795	315	975
80	14.400	16.000	2200	4,85	8000	2388	1835	8000	1795	315	1200
85	15.300	17.000	2200	5,15	8500	2537	1835	8500	1795	315	1275
90	16.200	18.000	2200	5,45	9000	2687	1835	9000	1795	315	1350
100	18.000	20.000	2200	6,05	10.000	2985	1835	10.000	1795	315	1500
125	22.500	25.000	2200	7,91	12.500	3906	1750	12.500	1710	400	1875
150	27.000	30.000	2200	9,48	15.000	4688	1750	15.000	1710	400	2250
180	32.400	36.000	2200	11,29	18.000	5556	1750	18.000	1710	400	2700
200	36.000	40.000	2400	10,45	20.000	5128	1950	20.000	1910	500	3000
250	45.000	50.000	2400	13,00	25.000	6410	1950	25.000	1910	500	3750
300	54.000	60.000	2400	15,65	30.000	7692	1950	30.000	1910	500	4500

Frequently asked questions

Does PALAGREEN comply with UNI EN 858?

Yes. The PALAGREEN first-flush treatment system is built to UNI EN 858-1 and UNI EN 858-2, with a Class I oil separator and residual oil below 5 mg/l, and complies with Italian Legislative Decree 152/2006 and regional regulations on first-flush stormwater treatment.

How much rainfall does a PALAGREEN first-flush system treat?

PALAGREEN continuously treats the first 5 mm of rainfall falling within 15 minutes on the entire drained surface, equal to 180 m² per l/s of nominal flow. The subsequent, less polluted rainwater is diverted by the diversion chamber directly to the receiving water through the bypass.

What size of PALAGREEN is needed for a 9000 m² yard?

For 9000 m² of drained surface, the PALAGREEN table gives size NS 50: total usable volume of 10,000 litres, split into 5000 litres of grit separator and 5000 of oil separator, in a PALADEX DI 1640 monobloc 5.87 m long, with 750 litres of oil storage.

How does the coalescence filter in the PALAGREEN oil separator work?

In the PALAGREEN oil separator, a reticulated microcell polyurethane filter, housed in a removable stainless-steel basket, merges oil droplets into larger drops that rise to the surface. The filter panel has a surface area of 1.2 m² and a density of 10 PPI; a float closes the outlet when the oil layer reaches the maximum level.

Can PALAGREEN operate in storage mode instead of continuous flow?

Yes, on request. In the storage version, the first-flush water is held for 48 hours and then pumped into the oil separator by an electric pump controlled by a panel connected to rain sensors. The standard continuous-flow PALAGREEN range runs from 10 to 300 l/s of nominal flow.

Indicative data, subject to change without notice. The Paladeri technical department is available for sizing and selecting the right solution.

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