

PROTECTOR

HYDROPROTECTOR

**CLASS 1 HYDROCARBON SPILL
CONTAINMENT AND OIL SEPARATION**



SAVING NATURE.



SAVING NATURE.

At Protector we are focused on improving the quality of our waterways by supplying products that are designed to capture and contain pollution in stormwater runoff for many applications. Contaminants such as hydrocarbons, suspended solids, plastic rubbish and dissolved nutrients are removed by utilising absorption, retention, filtration and capture processes. These stormwater systems will deliver cleaner water back into the environment, saving nature for future generations.

Protector is an Australian family owned and operated stormwater treatment and fibreglassing company. Protector's 18 years of fabrication experience is a result of continuous improvement in product design and manufacturing innovation.

Our products are renowned for their quality and are engineered to Australian standards BS4994-1987 and ASME RPT1. Protector has improved the ease of device installation by eliminating the need for confined space entry and the requirement to access the base of site excavations.

Quality control procedures ensure each product is manufactured to specification and post production, each unit is inspected and factory tested to industry standards.

Protector products are constructed using the advanced chop hoop filament winding process which ensures circumferential as well as longitudinal strength. Every Protector product has a smooth molded resin rich inner corrosion barrier layer and an external resin barrier. Being manufactured in FRP (Fibre Reinforced Plastic) Protector products are light, easy to handle and easy to install.

FRP composites are a sustainable material that is reflected through its physical characteristics resulting in longer service life that exceeds traditional materials. The weight saving advantages lower construction and transport costs, reducing environmental impact. FRP products are high strength and are far more resistant to the effects of ageing, weathering, and degradation in severe environments. Maintenance is improved by the smooth internal molded finish providing excellent protection against scum accumulation. Fibre Reinforced Plastic is not susceptible to rust and offers excellent corrosion resistance.

HYDROPROTECTOR

THE ULTIMATE IN STORMWATER PROTECTION

- INDEPENDENTLY CERTIFIED TO CLASS 1, EN 858.1 STANDARD
- FAIL SAFE AUTOMATIC CLOSURE DEVICE
- INTEGRATED INLET FLAME TRAP
- STRONG FRP DUAL CHAMBER CONSTRUCTION WITH WEIGHT SAVING ADVANTAGE
- OIL MONITORING SENSOR WITH AUDIBLE AND VISUAL ALARM
- SECONDARY CHAMBER FITTED WITH A COALESCER FILTER

Hydroprotector systems are autonomous and gravity operated, therefore will function without electricity. They are engineered to meet the European Standard EN858:1: 2002 and have been independently tested for discharge water quality of less than 5mg/l and also achieve percentage removal rates of nitrogen and phosphorus.

All Hydroprotector models are independently certified for hydrocarbon spill capture volumes. Hydraulic testing has been carried out to ensure capacity and flowrate accuracy.

The Hydroprotector is a full retention separator that does not allow any liquids to be bypassed, therefore all flows into the unit are treated.

The Hydroprotector has an incorporated flame trap, an automatic closure device and is a two chamber design which protects the coalescer that is fitted at the outlet from inundation in the event of a spill.

Hydroprotector units are manufactured to treat stormwater flow rates from 2 l/s up to 350 l/s with a maximum pipe size of 750mm.



HYDROPROTECTOR

FEATURES OF A CHAMPION

FLAME TRAP INLET PIPE

The inlet pipe features a flame trap which works by eliminating air from the liquids entering the primary chamber.



PRIMARY CHAMBER

The primary chamber of the Stormprotector is designed to slow down and separate pollutants from stormwater runoff, allowing dense particles to settle at the bottom of the chamber and the lighter fluids and debris to rise to the surface while the cleaner water flows into the secondary chamber for further treatment.

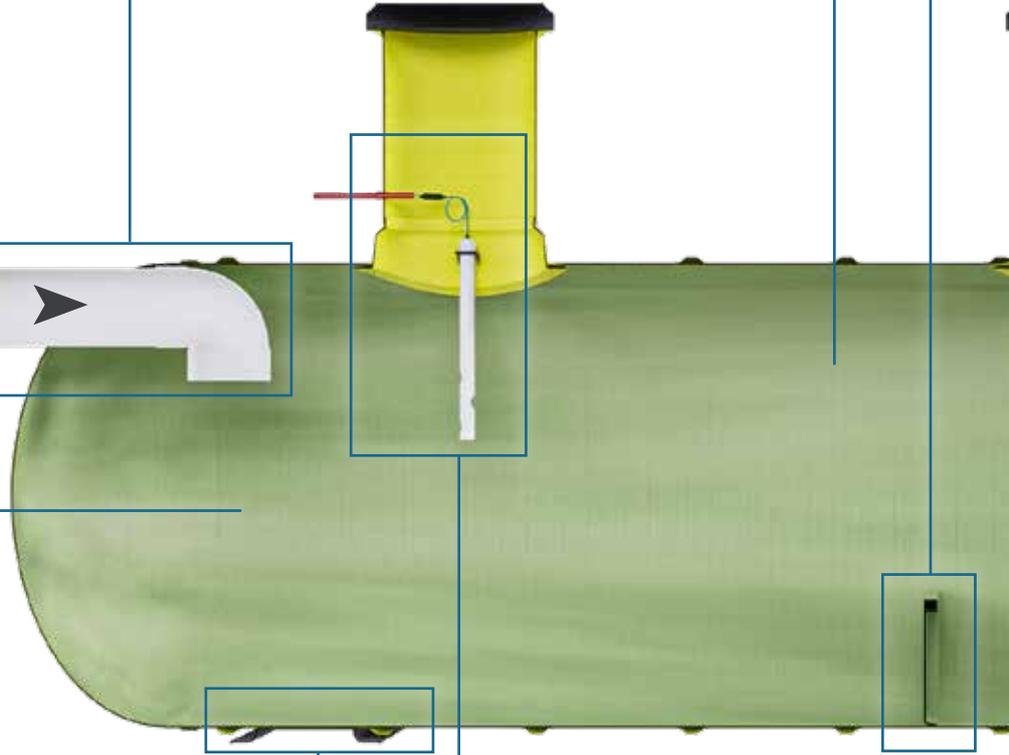
UNIQUE ANCHORING SYSTEM

Hydroprotector tanks are manufactured with a combined feet and anchor system which eliminates additional anchor system requirements. This makes installation safer as the installer does not need to access the base of excavation.



OIL CAPTURE

Captured hydrocarbons rise to the surface of the storage chamber and are retained behind a wier which stops them from flowing into the secondary chamber without resuspension during high flow events.



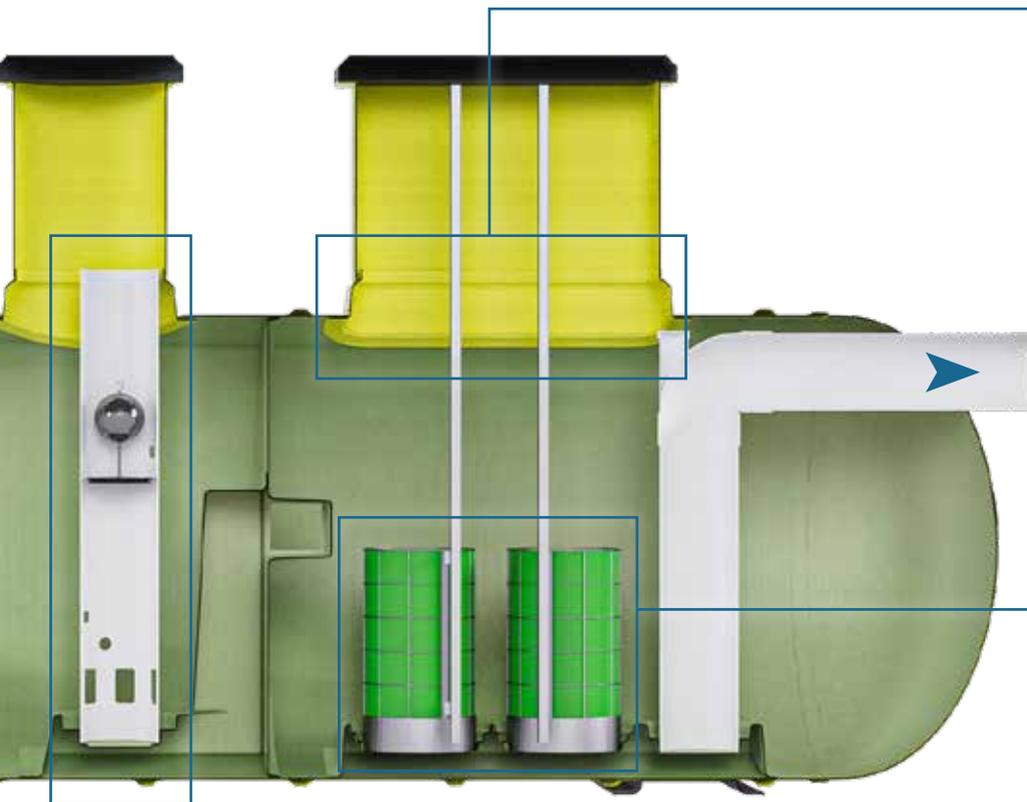
OIL PROBE, CONTROL PANEL AND VAPOUR Y SEAL

The oil probe and control panel are crucial components in monitoring and maintaining oil spills. The probe detects any oil leaks and sends signals to the control panel, which alerts the maintenance team.

The Vapor Y Seal is an essential component installed in control panel conduits to prevent vapours from escaping the unit. It is designed to maintain the integrity of the unit and prevent hazardous vapours from escaping into the environment.

SLUDGE WEIR (OPTIONAL)

For unsealed sites with high silt loads Hydroprotector units have an integrated sludge weir which prevents the build up of silt from clogging the outlet of the first chamber and facilitates effective sealing of the Automatic Closure Device in the event of a spill.



INNOVATIVE RISER DESIGN

Protector have created a slip joint riser design to eliminate the need for flange to flange installation. This excludes the need for fasteners, saving time and reducing safety hazards during installation.

COALESCER FILTER UNIT

The secondary chamber is fitted with a finely perforated coalescing unit which removes the remaining globules of light liquid to a certified 5mg/l. The Coalescing unit is installed on guiderails for ease of installation and maintenance.

AUTOMATIC CLOSURE DEVICE



The automatic closure device is calibrated to float in water and sink in light hydrocarbon liquids. If the maximum oil spill capacity of the primary chamber reached, the device will shut off flow of liquid to the secondary chamber and therefore protecting the environment from a catastrophic event.

Maintenance of the Hydroprotector system is straightforward and requires no confined space entry.

Respective installation and maintenance manuals specific for your Hydroprotector system will be provided at time of commissioning. These guides detail all procedures, OH&S measures, and other important requirements.



HYDROPROTECTOR SPECIFICATIONS

| MODEL ID | TREATMENT FLOW RATE (L/S) | SPILL CAPACITY (L) | TOTAL CAPACITY (L) | UNIT LENGTH (L) | UNIT DIA (MM) | TANK WEIGHT (KG) | BASE TO INLET INVERT (MM) | BASE TO OUTLET INVERT (MM) | STANDARD PIPEWORK DIA (MM) |
|-----------------|---------------------------|--------------------|--------------------|-----------------|---------------|------------------|---------------------------|----------------------------|----------------------------|
| HYD.2.DC.R2-1 | 2 | 343 | 791 | 1099 | 1050 | 100 | 950 | 850 | 100 |
| HYD.4.DC.R2-1 | 4 | 617 | 1551 | 2100 | 1050 | 140 | 900 | 800 | 150 |
| HYD.8.DC.R2-1 | 8 | 1344 | 2984 | 3000 | 1200 | 178 | 1050 | 950 | 150 |
| HYD.13.DC.R4-1 | 13 | 2436 | 4896 | 2370 | 1500 | 198 | 1275 | 1175 | 225 |
| HYD.15.DC.R4-1 | 15 | 2790 | 5616 | 3750 | 1500 | 303 | 1275 | 1175 | 225 |
| HYD.20.DC.R4-1 | 20 | 4033 | 7495 | 3350 | 1850 | 446 | 1550 | 1450 | 300 |
| HYD.30.DC.R5-1 | 30 | 6006 | 11,228 | 5450 | 1850 | 726 | 1550 | 1450 | 300 |
| HYD.40.DC.R6-1 | 40 | 10,008 | 14,950 | 7460 | 1850 | 984 | 1550 | 1450 | 300 |
| HYD.50.DC.R5-2 | 50 | 10,031 | 18,678 | 8000 | 1850 | 1053 | 1550 | 1450 | 300 |
| HYD.60.DC.R5-2 | 60 | 11,923 | 22,405 | 9550 | 1850 | 1252 | 1550 | 1450 | 300 |
| HYD.70.DC.R5-2 | 70 | 14,951 | 26,224 | 7900 | 2200 | 1394 | 1900 | 1800 | 300 |
| HYD.80.DC.R6-2 | 80 | 17,022 | 29,888 | 8850 | 2200 | 1559 | 1900 | 1800 | 300 |
| HYD.100.DC.R5-3 | 100 | 21,262 | 37,392 | 11,000 | 2200 | 1930 | 1900 | 1800 | 300 |
| HYD.110.DC.R5-3 | 110 | 23,848 | 41,469 | 9950 | 2500 | 2343 | 2050 | 1950 | 450 |
| HYD.120.DC.R6-3 | 120 | 25,939 | 45,131 | 10,800 | 2500 | 2540 | 2050 | 1950 | 450 |
| HYD.150.DC.R5-4 | 150 | 32,209 | 56,116 | 13,350 | 2500 | 3130 | 2050 | 1950 | 450 |
| HYD.180.DC.R6-4 | 180 | 40,983 | 67,949 | 11,000 | 3000 | 3940 | 2550 | 2450 | 450 |
| HYD.200.DC.R6-4 | 200 | 47,297 | 76,029 | 9000 | 3500 | 4856 | 3050 | 2950 | 450 |
| HYD.250.DC.R7-4 | 250 | 58,239 | 93,825 | 11,000 | 3500 | 5892 | 3050 | 2950 | 450 |
| HYD.300.DC.R7-5 | 300 | 69,728 | 112,511 | 13,100 | 3500 | 6981 | 3050 | 2950 | 750 |
| HYD.350.DC.R7-5 | 350 | 80,943 | 130,751 | 15,150 | 3500 | 7997 | 3050 | 2950 | 750 |

Models shown are standard range. Additional retention chamber length can be added for increased spill capacities in all sizes. All units can be supplied with Class B, Class D or Class G manhole covers.

PROTECTOR

PRODUCT RANGE

Protector is a family-owned and operated Australian company with 18 years of experience manufacturing FRP stormwater treatment systems. Protector is dedicated to efficiency, innovation and ease of use. When necessary, Protector improve their product design and manufacturing process to ensure their products are user-friendly and easy to install. Protector is committed to improving waterway quality by capturing and containing pollution in stormwater runoff, delivering cleaner water back into the environment, saving nature for future generations.

TRAP-IT GPT INSERT

The Protector Trap-It is a simple gross Pollutant Trap Pit Insert that comes with a simple yet highly efficient design. Designed for ease of installation and maintenance, it is the best and easiest choice for your Gross pollutant trap needs. This system combines a 3-stage physical filtration system, whilst being designed for structural integrity, high volume capture and high load capacities. They can be retrofitted into existing structures or the new ones, making the installation quite simple and cheap. The simplicity in its design, ease of installation and maintenance and cost-efficiency make it highly desirable.



ECOPROTECTOR

The EcoProtector is a high-capacity trash and litter removal GPT (Gross Pollutant Trap) with particulate removal down to 3mm.

The EcoProtector has been designed to trap solid debris including sediment and hydrocarbons under low velocity conditions.

These units are commonly used as primary treatment for the removal of pollutants in areas such as; residential subdivisions, roads, car parks, industrial applications and other impervious areas that require stormwater treatment.



ENVIROSAVE

The Envirosave is a compact stormwater management solution that combines a Gross Pollutant Trap (GPT) and Nutrient Filter in one unit. It is designed to remove large debris, pollutants, and excess nutrients from stormwater runoff in residential, commercial, and industrial settings. The Envirosave's compact size makes it easy to install in limited spaces, and its low maintenance requirements and internal bypass system reduce installation and upkeep costs. The Envirosave's innovative design, including its high-quality materials and internal hydrocarbon baffle, ensures it can withstand harsh environmental conditions and heavy traffic loads. The GPT and Nutrient Filter work together to provide high-performance capabilities for efficient stormwater management.



XTREAMFILTER

The Xtreamfilter is designed to filter stormwater run off and remove a large proportion of the contaminants in the process. This filtration device to be implemented into stormwater systems to remove fine sediments, heavy metals and phosphorus from stormwater runoff.

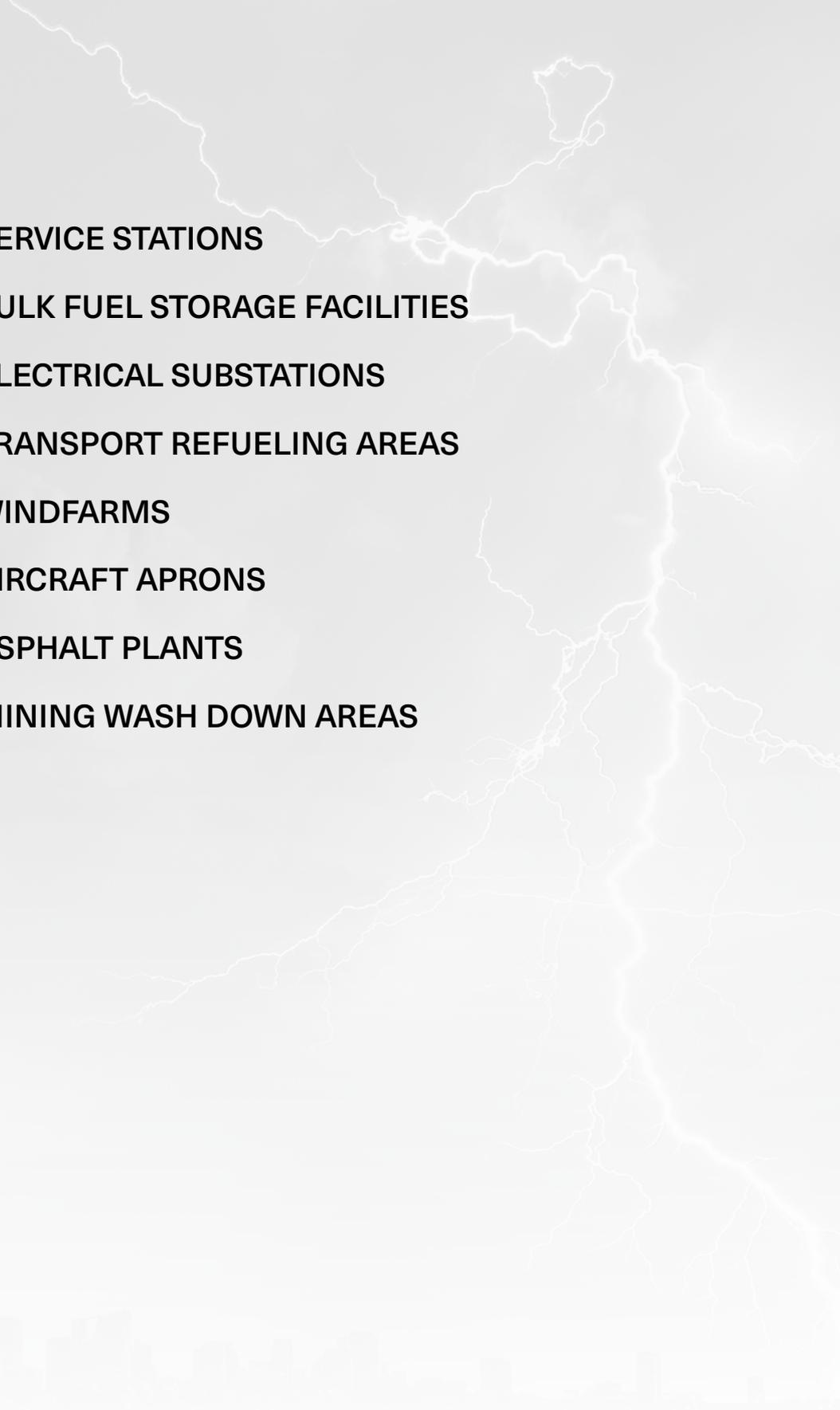
This system is able to effectively remove large portions of sediment, gross pollutants, hydrocarbons and oils, heavy metals, nutrients and organic substances and phosphorus. This system combines to create an exceptional all round filtration system suitable for almost any site demand.



HYDROVAULT

Hydrovault is Protector's high-capacity sewerage and stormwater storage systems called Retention systems, which are made of fiber glass polymer using a unique chop hoop filament winding technique. These systems are compatible with most stormwater treatment systems and can store almost all types of effluent due to their corrosion-resistant coating. The Hydrovault systems are constructed from fiber-reinforced polymers and built using the chop hoop filament winding construction technique, providing a long-lasting solution. These systems are designed for use in storage, detention, and retention at the end of treatment trains. The Hydrovault can be customized with baffles, pumping stations, and pressurization to meet specific needs.





SERVICE STATIONS

BULK FUEL STORAGE FACILITIES

ELECTRICAL SUBSTATIONS

TRANSPORT REFUELING AREAS

WINDFARMS

AIRCRAFT APRONS

ASPHALT PLANTS

MINING WASH DOWN AREAS



This information is correct at the time of publishing 01/01/2023 but the manufacturer reserves the right to carry out modification aimed at product improvement without notice. © Protector Australia 2023.

sales@protector.com.au

www.protector.com.au

1 Government Road, Braemar, NSW, 2575

1300 585 787

 **PROTECTOR**
SAVING NATURE.