

Applications

Humeceptor™ is an effective hydrodynamic source control device for the capture and retention of a range of contaminants from stormwater runoff generated from impervious surfaces such as:

- Car parks
- Industrial and commercial sites
- Roads and highways
- Marinas
- Airport facilities
- Sea port facilities
- Service stations
- Defence establishments
- High/medium density residential developments
- Similar impervious/hardstand surfaces.

These activities are generally associated with a higher risk in terms of contaminant generation particularly oils, hydrocarbons, petroleum products and a range of contaminants that sorb or attach to the fine silts and clay particles such as heavy metals.

Unlike gross pollutant style products, which are typically employed as an end of line solution for the capture of larger sized visual pollutants such as gross litter items greater than 5 mm in size, as a source control device **Humeceptor™** is suited to the capture of fine contaminants close to the source of generation and will therefore be generally suitable for catchment areas with an impervious area between 0.1 and 8.0 hectares. The following activities represent typical applications for the **Humeceptor™** product.

Parking areas

- **Oil and suspended solids control in commercial car parks**

Commercial and office parking areas have the potential to generate significant amounts of motor vehicle related contaminants such as oils, hydraulic fluids and heavy metals associated with automotive components.

Car parking areas also generate a surprisingly high load of fine suspended solids which are generally deposited on the hardstand surface from atmospheric deposition and fine particulates from vehicle exhausts. The combination of oils and grease and fine suspended solids will often be interrelated in car parks. The fine suspended solids deposited across



Humeceptor™ is well suited to retain vehicle related contaminants from car parks.

car parks will often act as a carrier for oils, grease and a range of hydrocarbon products. Therefore, the most appropriate stormwater management solutions from this land use are those that target suspended solids less than 60 µm in size, since the retention of these particles will often result in the removal of a majority of the actual total hydrocarbon loads. Unlike gross pollutant traps, **Humeceptor™** is focussed on fine material and therefore is very suitable for installation in a range of car parking areas. The inlet **Humeceptor™** also enables the grated drainage pits to be incorporated within the stormwater management device, thus providing a very cost effective solution.

Industrial facilities

- **Protects municipal drainage systems from industrial spills**

The **Humeceptor™** system is a proven spill control device for industrial properties, refuelling areas and gas/petroleum facilities. The design can be specifically tailored to take into consideration the actual specific gravity of the primary spill of concern (for example aviation fuel).



The ability of **Humeceptor™** to completely capture spills during both dry weather and wet weather make it an essential risk management tool for industrial facilities.



Humeceptor™ can be configured to provide up to 60,000 litres of storage volume. The ability of **Humeceptor™** to capture and retain emergency spills has been demonstrated on numerous sites where actual spills have been completely captured. In these situations, the clean-up of the spill has been rapid which has allowed minimal site down time and proprietors have avoided expensive litigation. **Humeceptor™** is unique in that it is also able to contain moderate spills during wet weather rainfall events. Many alternative products can capture dry weather spills, but are unable to retain this spill or are unable to obtain this same level of performance during wet weather events.

Service stations

- **Spill control for petrol stations and other auto services facilities.**

Petrol stations and auto repair shops are primary sources of oil and petrol spills. In addition to the small spills and drips from vehicle fuelling, there is a potential for significant spills to occur as petroleum carriers fill underground storage tanks. **Humeceptor™** has a large capacity for oil capture to accommodate these spills. The fibreglass insert provides double wall containment for the first 1000 litres of spilled materials. These large hardstand areas also generate a high proportion of fine particulate material and suspended solids deposited from vehicles. **Humeceptor™** is effective at removing these contaminants. Many major outlets in Australia have installed **Humeceptor™** units.



Service stations are an obvious high risk land use in terms of exporting oils and petroleum products as well as generating surprisingly high loads of fine particulate matter.



A range of activities from automotive workshops to freight handling facilities and distribution centres are well suited to **Humeceptor™** given the likely priority contaminants.

Auto and truck repair and storage facilities have similar spill potential risks. These can also be effectively treated by the **Humeceptor™** System.

Roads and highways

- **Protects the natural environment from highway runoff pollution**

Humeceptor™ is an effective water quality device for highway runoff applications. Runoff from roadways, bus stops, emergency breakdown bays, weighbridges and toll gate houses contain high levels of fine suspended solids contaminated with metals and hydrocarbons.

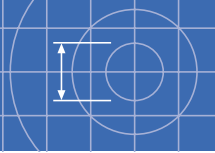


Humeceptor™ has become the preferred product for various transport/transit projects around Australia.

These applications also have high risk of hydrocarbon spills. **Humeceptor™** has a unique and independently tested ability to deliver tangible water quality benefits, retaining fine suspended solids and oils spills more efficiently than other devices.



Road surfaces from major motorways to residential streets are significant contributors to the overall contaminant load.



Air, land and sea ports

- Captures spills and removes stormwater pollution at air land, and sea ports.

Air, land and sea ports generate significant pollution loads and are potential sources of petroleum and chemical spills.



The majority of the domestic and international terminals in Australia utilise **Humeceptor™**.

Humeceptor™ units can be installed in fuelling and loading locations to capture spills. In doing so, **Humeceptor™** provides excellent protection from environmental liability.

Humeceptor™ is easy to install in port facilities because it can accommodate both shallow and deep installations, as well as space-constrained areas. A bend structure configuration can also be used to minimise the amount of required drainage infrastructure.



Port facilities combine high risk activities, high tailwater levels and surrounding estuarine/marine environs which are particularly suitable for the Submerged **Humeceptor™**.

Pre-treatment of other stormwater management practices

- Pre-treats infiltration and filtration systems, ponds, and wetlands

Humeceptor™ is an ideal pre-treatment device for infiltration practices, ponds, filtration systems and wetlands. When used for pre-treatment, **Humeceptor™** units will extend the useful life of other management practices, improve the aesthetics and effectiveness of downstream facilities and reduce the maintenance burden for private owners and municipalities that own these facilities. The use of a **Humeceptor™** in conjunction with other stormwater quality practices (treatment train), is an effective strategy for stormwater management.



Humeceptor™ works in combination with a wide range of best management practices to minimise maintenance of insitu solutions and operate conjunctively to deliver the required water quality outcomes.

