

API SEPARATOR - Oil/Water Management System



Introduction

The Hynds API Separator is a secure and reliable spill management system designed to separate hydrocarbons from stormwater. The system will contain 2500 litres of spilt hydrocarbons and separate free oil and water to 15 ppm.

Should an accidental spillage occur the victaulic butterfly shutoff valve eliminates the danger of hydrocarbons contaminating the stormwater system.

Applications

The reliable design of the separator has proven the Hynds API to be the separator of choice wherever oil-water management is required.

Applications include:

- Fuelling facilities
- Truck stops
- Vehicle service centres
- Treatment of non-detergent washing water from vehicle washing and repair workshops.

Advantages

- Cost effective
- Separates free oil from water
- High quality precast concrete chambers
- Meets environmental separation standard of 15ppm
- Manual shut off valve
- Easy access for servicing
- Design and sizing available to meet range of catchment sizes
- Designed to contain 2500 litre of hydrocarbons
- Low maintenance
- High operational reliability
- Easy to install

Manufacturing Standards

- Precast manufacture is to NZS 3101 and 3109:1997
- f_y is 500 MPa
- Concrete has a design strength of 40 MPa

API SEPARATOR - Oil/Water Management System

Installation

A level and uniform sub-base providing a safe bearing capacity of at least 100 kPa is required to bed the Hynds Environmental API Separator. The sub-base should be pre-prepared with at least 100mm of compacted granular material. The lid must be bedded uniformly on all sides using SM 9020 or similar to ensure a watertight seal between the lid and the chamber.

Operating Procedures

Subsequent to installation the API separator should be filled with clean water up to the invert level of the inlet. The butterfly valve should be left OPEN.

In the event of a spillage, the following steps must be followed:

- CLOSE the butterfly valve immediately (using the telescopic handle attached to the valve under the 225mm Toby box lid).
- Management should be notified.
- The valve is to remain closed until the spillage is pumped out.
- The API Separator should be pumped out and cleaned thoroughly before recommissioning the system.
- On recommissioning the butterfly valve must be left OPEN.

An authorised liquid waste disposal company must carry out the removal of the contaminated liquid and sediment using vacuum inductor trucks, disposing of the waste at a licensed treatment facility.



Maintenance

Hynds Environmental offers a maintenance service for all our treatment systems, as without continuous maintenance the separation standard of the system will be diminished.

The API is easily inspected by listing the aluminium 300mm diameter Toby box lid and should be inspected as least once a week as well as after any non-routine event.

All separated substances (grit, petroleum by-products, and floatables) have to be pumped and disposed in time. To ensure that the separator is maintained properly a person should be designated to inspect and report the status of the system.

Due to the danger of explosions, smoking or naked flames near the separator should be prohibited; particularly after the access covers are removed.

The heavy duty cast iron access covers must be fitted securely and accurately and should be accessible at all times. They must not be covered with earth or other construction material.

Hynds Environmental API Separator Design Table						
Size	API 3.0	API 3.5	API 4.0	API 4.5	API 5.0	API 5.5
Internal Length	3000	3500	4000	4500	5000	5500
External Length	3300	3800	4300	4800	5300	5800
Internal Width	1580	1580	1580	1580	1580	1580
External Width	1880	1880	1880	1880	1880	1880
Unit Weight	12	13.5	15	16.5	18	19.5
Oil Industry Design Guidelines (Rainfall Rate used is 15mm/hr)						
Size	API 3.0	API 3.5	API 4.0	API 4.5	API 5.0	API 5.5
Catchment Area m ²	163	197	230	263	290	320
Design Flow (litres/sec)	0.68	0.82	1.32	1.1	1.21	1.33
Auckland Regional Council TP 10						
Size	API 3.0	API 3.5	API 4.0	API 4.5	API 5.0	API 5.5
Catchment Area m ²	117	140	160	183	203	227
Design Flow	0.48	0.58	0.66	0.76	0.85	0.95
Notes: For orifice sizing, please contact Hynds Environmental.						

Hynds Environmental Systems Limited

North Island

PO Box 17388, Greenlane 1546,
Auckland, New Zealand
Telephone +64 9 571 0090
Facsimile +64 9 571 0091
Email sales@hyndsenv.co.nz

South Island

PO Box 16552, Hornby 8441,
Christchurch, New Zealand
Telephone +64 3 344 1370
Facsimile +64 3 344 1375
Email mikes@hyndsenv.co.nz

protecting our environment

HYNDS
ENVIRONMENTAL