

Aquafix Separator

(Oil & Water Management)

Technical Guide SW 2

The next generation of oil water separators, meeting European standards for hydrocarbon removal and emergency storage, all in a single plug and play precast concrete device.



08.24 | STORMWATER | SW2 AQUAFIX SEPARATOR

Applications

Petrol stations and other fuelling facilities
Truck stops
Vehicle service centres
Transformer stations
Treatment of non-detergent washing water from vehicle washing repair workshops

Product Attributes

Meets European separation standard of <math><5\text{ppm (mg/L)}</math>
3445 Litres storage of hydrocarbons
Separates free oil from water using coalescing media
Automatic shut-off valve in the event of an accidental spill

Approvals/Standards

Precast concrete manufacture to NZS 3101 and 3109
Concrete designed to 40MPa

Quality

ISO 9001:2008 Quality Management

We are the supply partner of choice for New Zealand's stormwater management and treatment solutions.

HYNDS
STORMWATER

The Aquafix is a secure and reliable spill management system designed to separate hydrocarbons from stormwater.

In the event of an accidental spillage the internal valve will shut-off once the capacity of the treatment chamber is reached. The system can separate free oil from water to <5ppm (mg/L).

Design and sizing

Aquafix Model	Max Flowrate (L/s)	Total Storage (L)*	Chamber Diameter NI (mm)	Weight NI (T) (Including Lid)	Chamber Diameter SI (mm)	Weight SI (T) (Including Lid)	In/Outlet Diameter (mm)
K10	10	3,445	2020	8.99	2036	8.69	150
K20	20	3,445	2020	8.99	2036	8.69	200
K50	50	3,445	2020	8.99	2036	8.69	300

*Under normal hydrocarbon storage operations

Low Volume Shut-off Unit

Aquafix Model	Max Flowrate (L/s)	Total Storage (L)*	Chamber Diameter NI (mm)	Weight NI (T) (Including Lid)	Chamber Diameter SI (mm)	Weight SI (T) (Including Lid)	In/Outlet Diameter (mm)
Mini	10	200	1200	2.4	1200	2.4	150

*Under normal hydrocarbon storage operations

Installation

A level and uniform sub-base is required which is to provide a safe bearing capacity of a minimum 100kPa. 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.

How it works

The Hynds Aquafix works on the principle of the differing specific gravity of water and hydrocarbon. The chamber is split into two compartments by a weir wall, with one side allocated as an emergency storage of oily material the other for treatment and shut-off.

The flow initially bypasses the storage compartment and flows directly into the valve/treatment chamber. Here it passes through a coalescing media which separates the hydrocarbons from the water column.

As the hydrocarbons enter the valve/treatment compartment and becomes greater then the capacity of the chamber, a shut off valve automatically operates and seals of the discharge flowpath. Once the outlet is sealed, any incoming hydrocarbon flows are bypassed into the emergency storage compartment.

The following images demonstrate the actuation of the stop valve as hydrocarbons enter the chamber with differing oil storage depths.

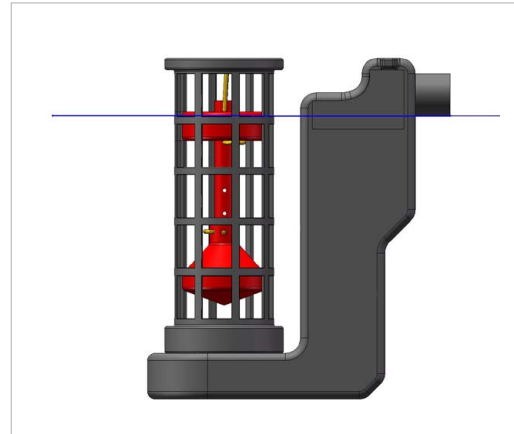


FIG. 1 Separator filled with fresh water. Floater is floating in water.

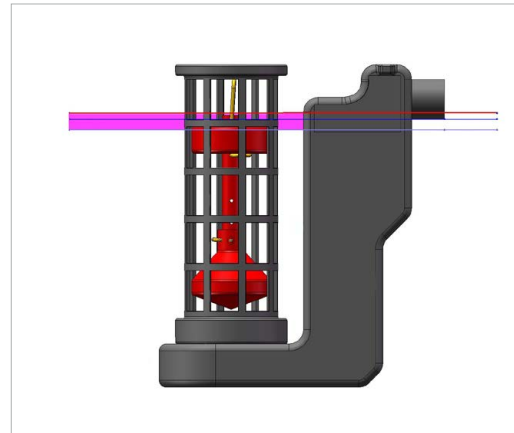


FIG. 2 Layer of oil is forming on the surface of water. At-rest water level is sinking. Floater is also sinking.

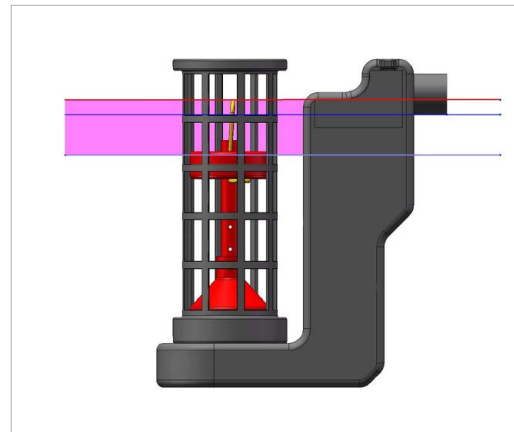
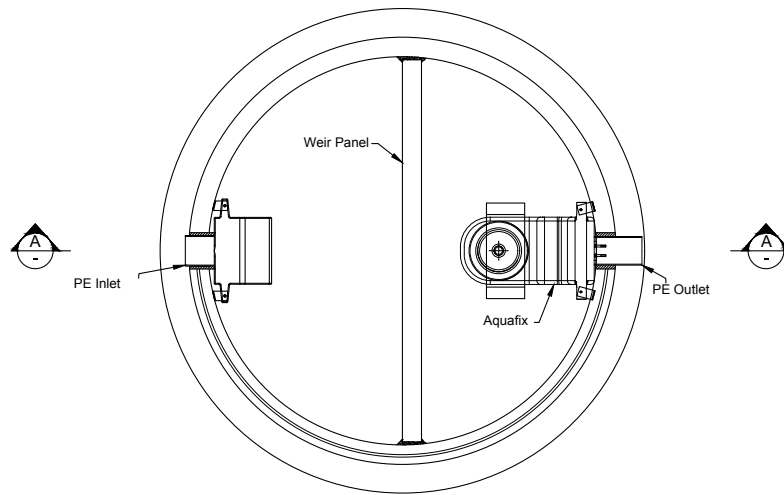
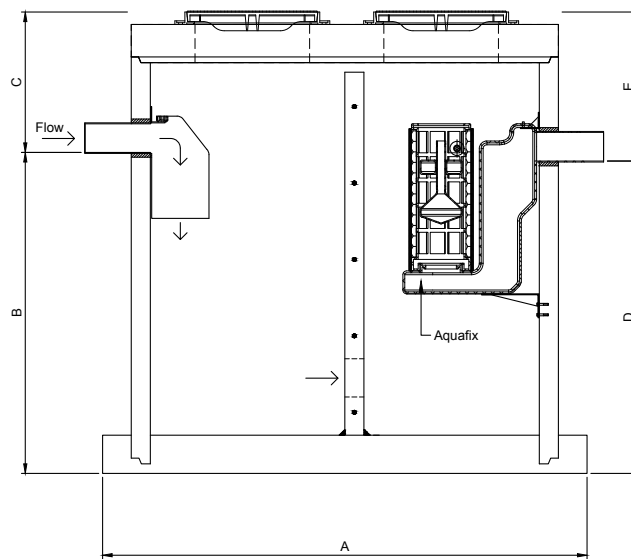


FIG. 3 Layer of oil is maximum. Layer of liquid is maximum. Closing device (valve) is closed.



Plan



Section A

FIG. 4 General arrangement drawing

TABLE 1 Aquafix Kit System - Chamber dimensions

Product Code	Lid Openings	Lid Thickness	Internal Fittings Ø (mm)	Dimensions						Total Mass (T)		Shipped from	
				A (mm)	B (mm)		C (mm)	D (mm)		E (mm)	NI		SI
					NI	SI		NI	SI				
AQUAFIXK10KIT	2	200	150	2530	1660	1671	779	1615	1626	824	8.99	8.69	Auck/Chc
AQUAFIXK20KIT	2	200	175	2530	1660	1671	779	1615	1626	824	8.99	8.69	Auck/Chc
AQUAFIXK50KIT	2	200	300	2530	1660	1671	779	1615	1626	824	8.99	8.69	Auck/Chc

Note:

- Aquafix system is housed in a Ø2050 x 2100H Flanged base riser complete with a concrete lid, ductile iron cast cover and frames.
- Suggested invert level is indicative only and may vary depending on inlet/outlet invert to finish floor levels.
- Prices may vary depending on your location.

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Disclaimer: While every effort has been made to ensure that the information in this document is correct and accurate, users of Hynds product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hynds unless expressly stated in any sale and purchase agreement entered into between Hynds and the user.