



Dynaglass OilyMAN® – Oil/Water Separator

How does it work?

The Dynaglass OilyMAN oil/water separator uses the principle of gravity separation. The removal of oils and suspended solids from a water stream is by intercepting the flow with a CPU (Corrugated Plate Unit), shortening the time required for the oil to separate from the water.

By introducing the CPU, the oil droplets have a shorter distance to travel resulting in the increased speed of oil separation. The CPU also increases the surface area, thus enhancing efficiency.

By this, the Dynaglass OilyMAN – Oil/Water Separator is very small and compact in size as compared to pit-type effluent interceptors of equal capacities.

Design & Construction

The Dynaglass OilyMAN – Oil/Water Separator enhances the oil splitting process by introducing a large number of corrugated plates pre-assembled as a CPU plate-pack, placed into a settling basin so that the oil and suspended solids have a small distance between the plates to travel before they are intercepted. The plates also create a lamina flow which is essential for gravity separation. Since the plates are set at an inclination, suspended solids trapped on the lower plates will slide down to the sludge chamber located at the bottom of the basin tank.

Performance

At the design flow rate the Dynaglass OilyMAN – Oil/Water Separator will intercept all oil particles with a rising velocity of 0.7 metres per hour or suspended solids with equal velocity, will settle on the lower plates.

This means that oils having a specific gravity of 0.90 and oil droplets larger than 60 microns will be intercepted or removed.

Designed with such low rising velocity, effluent water quality of 10 ppm and lower can be expected from the Dynaglass OilyMAN – Oil/Water Separator. (Ref: Independent Laboratory Test results.)

Kindly note that agitation caused by certain types of pumps and the use of emulsifying detergents may affect the final quality of the treated effluent water.

Dynaglass OilyMAN – Oil/Water Separator can be used singularly or in multiple numbers connected via a manifold system.

Material Used for Construction

All material used for its construction are specially selected and tested for suitability, compatibility and good performance. The tank is molded in one piece and contains no joints that may leak or crack as high quality structural composite is used for moulding the tank. The tank finishes are made with pigments permanently added to the resins during the moulding process. With this process we can ensure that no painting or refinishing will be required for the life of the unit. It will not rust nor corrode. Inlet and Discharge fittings have been provided to the tank.

Flow-regulating screens, weirs, oil-skimmers and discharge for solids are also installed to the tank for ease of operation and maintenance.

Technical Specifications

Dimensions: L.1740 x W.400 x H.940 mm

Capacity: 3000 litres/hour



CPU (Corrugated Plate Unit)



Oil-skimmer



Inlet Screen



Dynaglass OilyMAN® – Oil/Water Separator

Operation and Maintenance

Detail description of operation

The CPU (Corrugated Plate Unit) is placed into a tank fitted with one Inlet and one Discharge fittings with Baffles, Weirs, Skimmers and Sludge-hopper operated automatically.

The oil-skimmer is set to allow a layer of oil to build-up to a preset level before recovered oil begins to flow from the interceptor's oil-outlet. This pre-set level is to ensure that oil recovered by the interceptor will not be contaminated with water.

The design of the Dynaglass OilyMAN – Oil/Water Separator caters for abnormal situation should the unit become over-loaded i.e. when in-flow is greater than the designed capacity of the unit. In such an event, water may be skimmed into the oil collector reservoir but oil cannot find its way out of the discharge or outlet point.

Because of this built-in safety feature, the Dynaglass OilyMAN – Oil/Water Separator is by far more superior of the conventional pit-type interceptors.

The flow distribution Gate forms a final screen before the effluent flows through the CPU. They should be cleaned at periodic intervals. This will depend on the volume and quality of effluent treated.

A simple observation which can help determine if the interceptor requires cleaning is a drop in liquid level across the Baffles will indicate that the CPU needs attention.

To ensure efficient separation of oil from the water stream, there should be regular cleaning of:

1. Inlet baffle
2. Plate-pack
3. Desludge inlet chamber
4. Check and clear air-vents at inlet defuser pipe.
5. Drain sludge hopper



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ORIGINAL

Test Report No. 4494-0895-QFEX0880	Lab ref. EX0880-95	Page no. 1 OF 1
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CHEMICAL ANALYSIS TEST REPORT

YOUR REF

DATE OF REPORT

29 August 1995

CLIENT

DYNAGLASS REINFORCED PLASTIC PTE LTD
No. 2 Tuas Drive 2
Singapore 2263

ATTENTION

Ms. Carolyn Seow

SAMPLE DESCRIPTION

One bottle of oil sample.

DATE OF SAMPLE RECEIVED

23 August 1995



TEST RESULTS

Test Performed	Result (% wt)
Water content	3.34

TEST METHOD

Karl Fisher

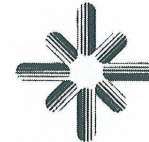
/ng

TESTING / REPORTING OFFICER SEAH SOO LIN PEH CHUE CHEO (No Signature Required)	REVIEWING OFFICER  LEE SUET YIN (MS.) CHEMIST	APPROVING OFFICER  NG LOON JI (MS.) SENIOR CHEMIST
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T E S T R E P O R T

**SINGAPORE
INSTITUTE OF
STANDARDS AND
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Your Ref : **Letter dated 1995-09-05** Date : **1995-09-08**
 Our Ref : **01-41119-ST5L4-CMW** Page : **Page 1 of 1**
 (Please quote our ref. no. in reply)
 DID : **7729554** Fax : **7794359**



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Subject : Analysis of four water samples

Client : Dynaglass Reinforced Plastic Pte Ltd
 No. 2 Tuas Drive 2
 Singapore 2263

Attn : Ms Carolyn Seow



**Description
of Sample :**

Four unsealed glass bottles of water samples, labelled as shown in the table under "Results" were received on 1995-09-05.

Method of Test :

Standard methods for the examination of water and wastewater (APHA-AWWA-WEF, 18th edition 1992).

Results :

Sample Reference	"Water Sample After Treatment"			
	No. 1	No. 3	No. 5	No. 6
Oil & Grease (n-hexane extract), mg/l	Less than 1	1	2	Less than 1

Chuan
CHUA-CHAN MENG WAH (Mrs)
SENIOR SCIENTIFIC OFFICER
CHEMICAL & SURFACE TECHNOLOGY CENTRE

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