



Installation, Function and Maintenance of Biogt Grease Trap

Company : **BIOGT RECYCLE (M) SDN BHD**



BIOGT ORGANIZATION CHART

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Department**
(Nigu Contruction &
Engineering Sdn Bhd)

**Account
Human Resources**

**Purchasing
Department**
**Operations
Department**

**Sales
Department**

**Service
Department**

**Recycle
Department**
- Dr. Wee Yong Geap

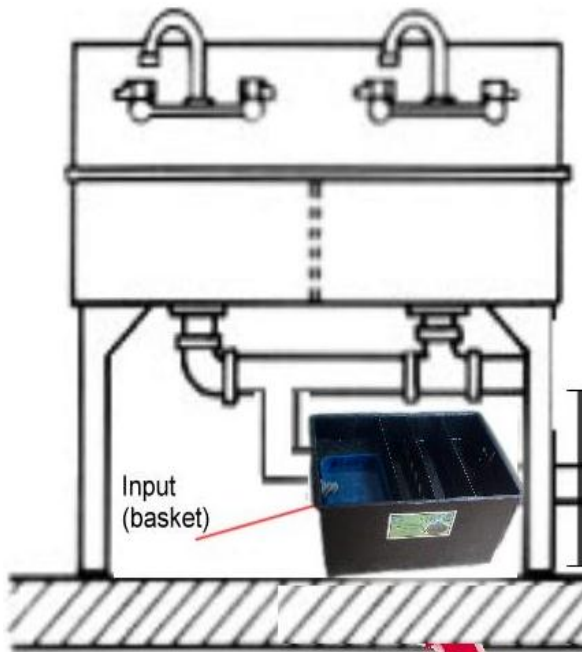
**Malaysia
Branch :**
Selangor
Melaka
Perak
Johor
Kedah
Perlis

**Oversea
Branch :**
Brunei
Singapore
Thailand



WHAT IS GREASE TRAP

Grease Trap is a tank installed under kitchen sink in order to **avoid piping and sewer blockage caused from the flow of Fat, Oil and Grease (FOG), and also to nurture and maintain the cleanliness of environment from pollution.**



Before



After



Why Installation of Grease Trap is COMPULSORY?

- To reduce nauseous and disgusting smell within the premises
- To ensure healthy environment and clean dining place
- To avoid premises from being the source of few well known deceases caused by decease oriented animals such as rats, fly, cockroaches etc
- To portray a good image to tourist
- To avoid drainage system, rivers and ocean from massive pollution



CURRENT ISSUE I



Blockage to piping system



CURRENT ISSUE II



Blockage to septic tank



CURRENT ISSUE III

Penyakit kencing tikus



Rats, flies and cockroaches will caused well known disease.

CURRENT ISSUE IV

Longkang tersumbat punca banjir kilat



Longkang tersumbat punca banjir kilat 21/10/08 00/55

Kos pembersihan parit yang tidak berhenti-henti.



Bau busuk di premis-premis Makanan.



Banjir telah menelan berjuta-juta wang rakyat Malaysia.

Blockage in Drainage System will result Disastrous Flood and will Involve massive losses, millions in value



CURRENT ISSUE V

RM2bil needed to clean up Sg Pinang

DETAILED REPORT

By SIAH KIM HUI

If it takes a week pollution clean-up, rehabilitation, polluted rivers, and drainage and drainage Department (DRD) senior assistant director Siah Kim Hui, said.

The cost is available, said, adding to the cost of the Pinang River Clean-Up Project and the Sg Pinang River.

Pinang River Clean-Up Project had a cost of RM200m, he said, adding that the Pinang River Clean-Up Project had a cost of RM200m.

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Pinang River Clean-Up Project, he said, adding that the Pinang River Clean-Up Project had a cost of RM200m.

Extremely and heavily polluted rivers in Penang



High cost of Maintenance and Cleaning Activity for drainage system and rivers



KESAN-KESAN PENCEMARAN

And other pollution issue...





BIOGT GREASE TRAP INFORMATION AND SPECIFICATION

BIOGT[®]



RESTAURANT AND FOOD PREMISE GREASE TRAP

BIOGT

ECONOMICAL
&
DURABLE



CONSERVING THE ENVIRONMENT THROUGH INNOVATION

BIOGT

EASY CLEANING
&
VALUABLE



CONSERVING THE ENVIRONMENT THROUGH INNOVATION

BIOGT

ZERO ENERGY
&
GREEN CONCEPT



CONSERVING THE ENVIRONMENT THROUGH INNOVATION

PRODUCT PATENT & SIRIM SAMPLE ANALYSIS



PERBADANAN HARTA INTELEK MALAYSIA INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA

(Diperbadankan)
Kementerian Perdagangan Dalam Negeri, Koperasi dan Keperluan


AKTA REKA BENTUK PERINDUSTRIAN 1996
PERATURAN-PERATURAN REKA BENTUK PERINDUSTRIAN 1999
(Peraturan 20)

PERAKUAN PENDAFTARAN SUATU REKA BENTUK PERINDUSTRIAN

Nombor Pendaftaran : MY 10-00859-0101
Tarikh Pendaftaran : 05 Julai 2010
Tarikh Prioriti :
Tarikh Pemfailan : 05 Julai 2010
Tarikh Pemberian Perakuan : 10 Mac 2011
Barang atau set Barang
yang berkenaan dengannya
Reka Bentuk Perindustrian
itu didaftarkan

Declarasi ini disahkan bahawa,

meletak dan tertakluk kepada peruntukan Akta Reka Bentuk Perindustrian 1996 dan Peraturan-Peraturan Reka Bentuk Perindustrian 1999, Reka Bentuk Perindustrian atau Reka Bentuk-Reka Bentuk Perindustrian yang representasi atau representasi-representasi dikesempatan, telah atau pun didaftarkan pada tarikh pendaftaran di atas, atas nama BIOGT GROUP (M) SDN. BHD. di alamat 19, LALUAN TUPAI 2, JALAN TUPAI, 34000 TAIPING, PERAK MALAYSIA berkenaan dengan suatu permohonan pendaftaran Reka Bentuk Perindustrian.


MOHD. FAIZUDIN BIN MOHD. SHARUJI
b.p. Pendaftar
Reka Bentuk Perindustrian Malaysia

P.U. (A) 351



Pusat Teknologi Alam Sekitar dan Bioproses Environment and Bioprocess Technology Centre

Bangunan 15, SIRIM Berhad, Shah Alam, Selangor Darul Ehsan.

Tel : 60-3-5544 6550 / 6598 Faks : 60-3-5544 6590



Company Name : GT Compact Technology
Sdn. Bhd
Address : 413-1-G, Wisma Chuan Bee
Lebuh Chulia
10200 Penang
Attn : Mr. Ooi

Your Ref No.	
SIRIM Ref.No.	ETC 237/16/761
Job No.	J 061/08
Report No.	R 062/08
Date of Issue	7/5/08
No. of pages	3

Request : Analysis of Kitchen Wastewater Samples

SAMPLE DESCRIPTION

Wastewater (Inlet and Outlet) from Grease Trap Evaluation samples were received on 11/3/2008, 18/3/2008, 25/3/2008, 1/4/2008 and 8/4/2008

TEST METHOD

Please refer to page 2

RESULT

Please refer to page 2 and 3

INFERENCE

Not applicable.

(The inferences expressed herein are outside the scope of accreditation)

SIRIM Berhad

(No. Syarikat 36174-V)

1, Persiaran Dato' Menteri

Seksyen 2, Peti Surat 7039

40911 Shah Alam

MALAYSIA

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Website: www.sirim.my

The results contained in this report relate only to samples/ items received and analysed by SIRIM Environment and Bioprocess Technology Centre. The report or parts thereof shall not be reproduced in any form without the written approval of SIRIM Berhad.

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SIRIM
MS ISO 9002
(Reg. No. JH 2176)



MS ISO/IEC 17025
TESTING
SAMM NO. 195

Jalan Pinang Raja, 32040 Seri Manjung, Perak Darul Ridzuan
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E-mail : ydp@mpm.gov.my Web : www.mpm.gov.my

*Bandar Pelancong & Maritim*

POLYESTER-GLASS FIBRE 49

(Silalahkan rujuk kami apabila menjawab surat ini)

Sample Effluent complied with the Standard B Parameter



SPECTRUM LABORATORIES (PENANG) SDN BHD

Company No.: 290941-X
1904, Tkt. 1, Jalan Bukit Minyak, Taman Sri Manjara, 14000 Bukit Mertajam, Seberang Perai Tengah,
Pulau Pinang, Malaysia. Tel: 604-5075188, 5075188. Fax: 604-5074243. E-mail: speclab@tm.net.my



MS ISO/IEC 17025
TESTING
SAMM NO. 111

CERTIFICATE OF ANALYSIS

Page 1 of 1

Company : Biogt Recycle (M) Sdn. Bhd.
Lab. No : W / 1109 / 378
Date Sample Received : 15 th September 2011
Date Sample Reported : 22 nd September 2011
Sample Description : Effluent
Sample Marking : Waste Water from Biogt Grease trap system, Outlet from Grease trap

PARAMETER	METHODS	RESULT	STD. B
COD, mg/l	APHA 5220-C	36	200
BOD* 5 days @20°C, mg/l	APHA 5210-B	3	50
Suspended Solids, mg/l	APHA 2540-D	18	100
Oil & Grease, mg/l	APHA 5520-B	ND < 2.0	10.0
Color, ADMI	APHA2120 F	44	200

NOTE : APHA means Standard Methods for the Examination of Water and Wastewater, (American Public Health Association), 21st Edition, 2005.

STD B means EQA (Industrial Effluent) Regulations 2009, Fifth Schedule.

ND means Not Detected.

* Sample for BOD was preserved at <4°C and tested on 17/09/2011.

Inference: The chemical analysis result show that all the parameters tested for the outlet grease trap complied with the DOE Standard B limit. (Opinion & interpretation stated in this section not under the SAMM Accreditation scope)

Attn : Mr. Tan Kok Hua

Biogt Recycle (M) Sdn Bhd.,
19, Laluan Tupai 2, Jalan Tupai,
34000 Taiping,
Perak.

Ms. C. Y. NG
B. Sc., AMIC
Senior Chemist
IKM No. A 4619/2004

The above results relate only to the items tested. This report shall not be reproduced, except in full, without the written approval of Spectrum Laboratories (Penang) Sdn. Bhd.

K.L. Office : Lot 14, (PT 5015) 2nd Floor, Jalan Pandamar 27/90, Seksyen 27, 40000 Shah Alam, Selangor. Tel: 603-51928188, 51923188. Fax: 603-51918188.
Johor Office : 18A, Jalan Molek 2/5, Taman Molek, 81100 Johor Bahru, Johor Darul Takzim. Tel: 607-3539288, 3532088, 3537088. Fax: 607-3581088.

Parameters	(Units)	Standard	
		A (1)	B (2)
1 Temperature	°C	40	40
2 pH	-	6.0 - 9.0	5.5 - 9.0
3 BOD 5 @ 20°C	mg/l	20	50
4 COD	mg/l	50	100
5 Suspended Solids	mg/l	50	100
6 Mercury	mg/l	0.005	0.05
7 Cadmium	mg/l	0.01	0.02
8 Chromium, Hexavalent	mg/l	0.05	0.05
9 Arsenic	mg/l	0.05	0.10
10 Cyanide	mg/l	0.05	0.10
11 Lead	mg/l	0.10	0.5
12 Chromium, Trivalent	mg/l	0.20	1.0
13 Copper	mg/l	0.20	1.0
14 Manganese	mg/l	0.20	1.0
15 Nickel	mg/l	0.20	1.0
16 Tin	mg/l	0.20	1.0
17 Zinc	mg/l	1.0	1.0
18 Boron	mg/l	1.0	4.0
19 Iron (Fe)	mg/l	1.0	5.0
20 Phenol	mg/l	0.001	1.0
21 Free Chlorine	mg/l	1.0	2.0
22 Sulphide	mg/l	0.50	0.50
23 Oil and Grease	mg/l	Not detectable	10.0

Environmental Quality (Sewage and Industrial Effluents) Maximum Effluent Parameter Limits Standards A and B.

1. Standard A for discharge upstream of drinking water
2. Standard B for inland waters

PROPOSED BIOGT GREASE TRAP

A. GREASE TRAP MODEL

We produce 17 standard models Grease Trap. For other sizes, we can do “customization” base on customers specification. The type of materials we are using is Stainless Steel 304 (free from rust) or Fiber Glass. However, the proposed model for kitchen sink are GTA01, GTA02 dan GTA2000 and for the underground type we proposed any model from GTA3 series.





BIOGT GREASE TRAP PRODUCT



A.1. MODEL GTA01 Fibreglass



SPECIFICATION GTA01

Flow Rate : 15 gallon/ minute

Daily Meal : 40 - 150 meals

Pipe Size : 32 mm

Grease Trap Size : 24"(L) x 12"(W) x 12"(H)

Maximum capacity of oil and waste water trapped : 30 liter

Maximum capacity until overflow : 57 liter

Material :

Durable fiber glass – can stand heat from sun and heat until 300 °C

A.2. MODEL GTA02 Fibreglass



SPECIFICATION GTA02

Flow Rate : 20 gallon/ minute

Daily Meal : 150 – 250 meals

Pipe size : 40mm

Grease Trap size : 30"(L) x 14"(W) x 12"(H)

Maximum capacity of oil and waste water trapped : 45 liter

Maximum capacity until overflow : 80 liter

Material :

Durable fiber glass- can stand heat from sun and heat until 300 °C





BIOGT GREASE TRAP PRODUCT



A.1. MODEL GTA01 Stainless Steel



SPECIFICATION GTA01

Flow Rate : 15 gallon/ minute

Daily Meal : 40 – 150 meal

Pipe size : 32 mm

Grease Trap size : 24"(L) x 12"(W) x 12"(H)

Maximum capacity of oil and waste water trapped : 30 liter

Maximum capacity until overflow : 57 liter

Material :

Stainless Steel 304

A.2. MODEL GTA02 Stainless Steel



SPECIFICATION GTA02

Flow Rate : 20 gallon/ minute

Daily Meal : 150 – 250 meals

Pipe size : 40mm

Grease Trap size : 30"(L) x 14"(W) x 12"(H)

Maximum capacity of oil and waste water trapped : 45 liter

Maximum capacity until overflow : 80 liter

Material :

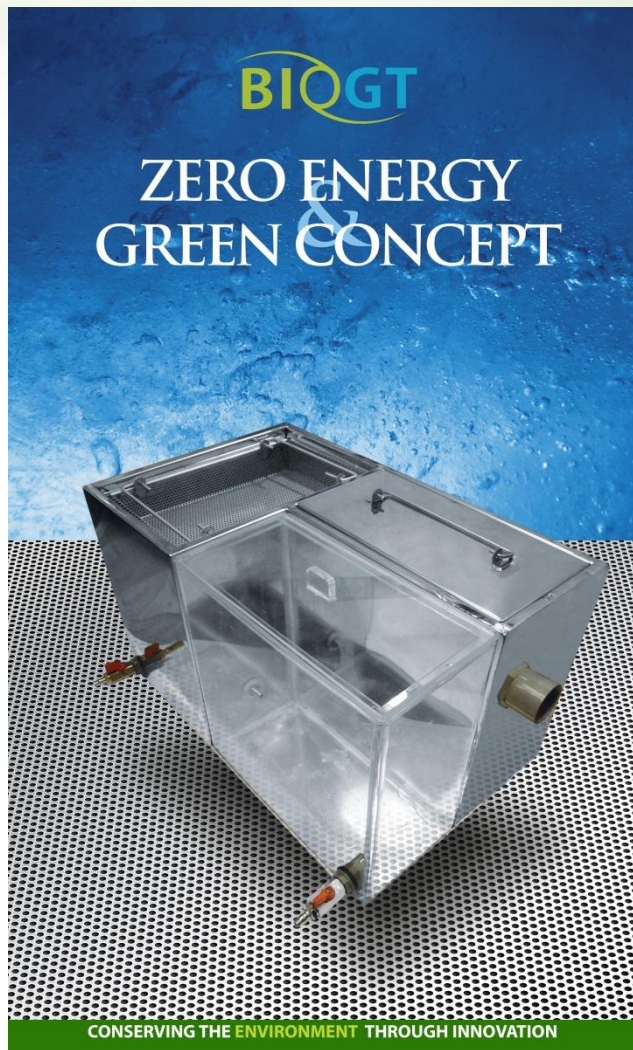
Stainless Steel 304





BIOGT GREASE TRAP PRODUCT

B. MODEL GTA2000 Automatic Grease Separator



SPECIFICATION GTA2000

Flow rate : 15 gallon/ minute

Daily Meal : 2000 – 3500 meals

Pipe size : Max 50 mm

Grease Trap size : 24"(L) x 15"(W) x 14"(H)

Maximum capacity of oil and waste water trapped : Oil will be separated into 12 liter tank and only oil free water will flow through the outlet

Maximum capacity until overflow : 60 liter

Material : Stainless Steel 304

Illustration below is showing how the Grease Separator works automatically on Mineral Oil (black oil) – it separate and traps the oil and only water will come out





BIOGT GREASE TRAP PRODUCT

C. MODEL GTA3 SERIES (Underground)





PRODUK PERANGKAP GRIS BIOGT

13 Model Underground / Centerise Grease Trap

Under Ground Series (Stainless Steel 304 / Fiber glass)								
GTA325	30-50	25 GPM	250 to 300	3"	26" (L) x 16" (W) x 22" (H) (inch) 650 (L) x 410" (W) x 560" (H) (mm)	R.Mamak / Workshop	94 Liter	149 Liter
GTA335	50-70	35 GPM	300 to 400	3"	28" (L) x 18" (W) x 24" (H) (inch) 700 (L) x 450" (W) x 600" (H) (mm)	R.Mamak / Workshop	124 Liter	189 Liter
GTA350	70-80	50 GPM	400 to 600	3"	32" (L) x 22" (W) x 25" (H) (inch) 800 (L) x 520 (W) x 630 (H) (mm)	R.Mamak / Workshop	176 Liter	262 Liter
GTA375	80-90	75 GPM	600 to 1000	4"	39" (L) x 28" (W) x 25" (H) (inch) 1000 (L) x 710 (W) x 630 (H) (mm)	R.Mamak / Workshop	287 Liter	447 Liter
GTA3100	90-100	100 GPM	1000 to 2200	4"	47" (L) x 34" (W) x 33" (H) (inch) 1200 (L) x 860 (W) x 840 (H) (mm)	Kanteen	634 Liter	866 Liter
GTA3150	> 100	150 GPM	2200 to 3200	4"	55" (L) x 36" (W) x 37" (H) (inch) 1400 (L) x 910 (W) x 940 (H) (mm)	Kanteen	910 Liter	1197 Liter
GTA3200	> 100	200 GPM	3200 to 4400	6"	63" (L) x 40" (W) x 42" (H) (inch) 1600 (L) x 1010 (W) x 1060 (H) (mm)	Kanteen	1212 Liter	1712 Liter
GTA3250	> 100	250 GPM	4400 to 6000	6"	67" (L) x 44" (W) x 46" (H) (inch) 1700 (L) x 1110 (W) x 1160 (H) (mm)	Kanteen	1603 Liter	2188 Liter
GTA3300	> 100	300 GPM	6000 to 6600	6"	71" (L) x 46" (W) x 46" (H) (inch) 1800 (L) x 1160 (W) x 1160 (H) (mm)	Hotel	1774 Liter	2635 Liter
GTA3350	> 100	350 GPM	6600 to 7800	6"	79" (L) x 48" (W) x 48" (H) (inch) 2000 (L) x 1210 (W) x 1210 (H) (mm)	Hotel	2178 Liter	2928 Liter
GTA3400	> 100	400 GPM	7800 to 9400	6"	83" (L) x 52" (W) x 50" (H) (inch) 2100 (L) x 1310 (W) x 1260 (H) (mm)	Hotel	2613 Liter	3466 Liter
GTA3450	> 100	450 GPM	9400 to 12000	6"	87" (L) x 56" (W) x 54" (H) (inch) 2200 (L) x 1410 (W) x 1360 (H) (mm)	Food Factory	3257 Liter	4218 Liter
GTA3500	> 100	500 GPM	12000 to 15000	6"	87" (L) x 56" (W) x 62" (H) (inch) 2200 (L) x 1410 (W) x 1560 (H) (mm)	Food Factory	3877 Liter	4839 Liter



HOW THE CONVENTIONAL GREASE TRAP WORKS

Food waste (solid waste) and cooking oil from the kitchen sink will flow into the Grease Trap, the oil will be trapped inside the tank and only clean water flows out into the drain.



HOW THE GREASE SEPARATOR WORKS?

Illustration below will show how the Grease Separator works, it will separate and trap the oil into the special tank and only clean water will flow out into the drain.



LOCATION TO INSTALL GREASE TRAP

- Under kitchen sink
- Under the sink where cleaning of the dishes is taking place
- Under the sink where cleaning of raw food such as fish, chicken etc is taking place
- And at any location where waste oil will flow out





MAINTENANCE METHOD

Clean everyday if necessary by :

- (a) Clearing the solid or food waste into plastic bag
- (b) Scoop or pump the oil into the container



a) Pump (Hand Pump)



b) Scoop





HOW TO KNOW IF THE GREASE TRAP IS FUNCTIONING ACCORDINGLY



- (a) It can trap the oil from flowing out
- (b) There will be no overflow or blockage
- (c) There will not produce nauseous smell



Grease Trap is functioning very well



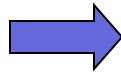
Grease Trap is not maintain accordingly



THE PERFECT CYCLE



1 Step: (Send)



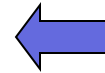
2 Step: (Install)



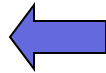
3 Step: (Service)



4 Step: (Report)



5 Step: (Collect)



6 Step: (Re-Cycle)



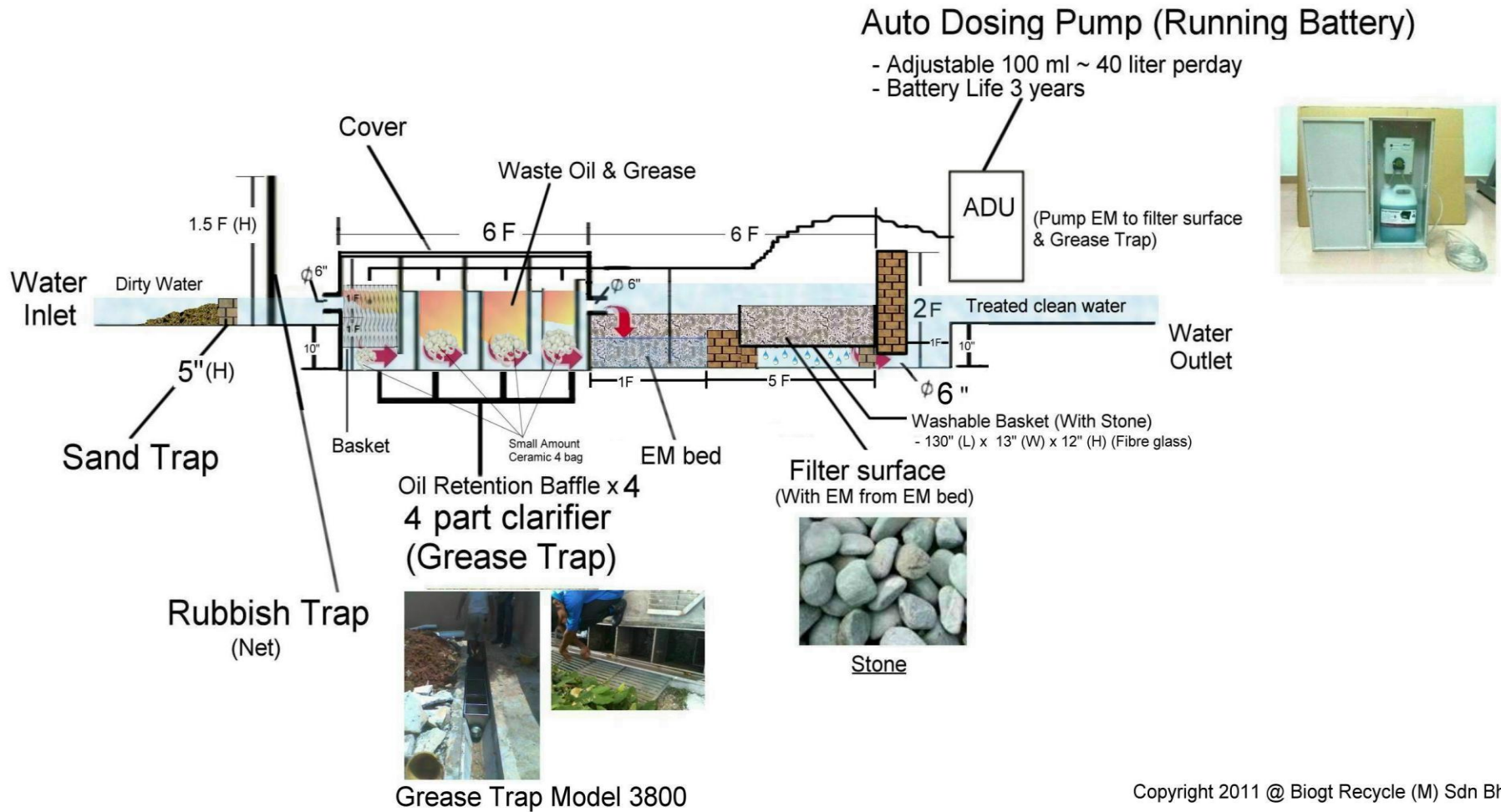


MAIN DRAIN GREASE TRAP



ADVANCE MAIN DRAIN TREATMENT PLAN

Advanced Drain Treatment Plan



AUTO DOSING UNIT DAN BIOGT DISPERSANT

Biogt Auto Dosing Unit - ADU9000 SPESIFIKASI

LDS4 Programmable dosing pump.

Provisional Specification Sheet 1 (last updated Nov 2011.)

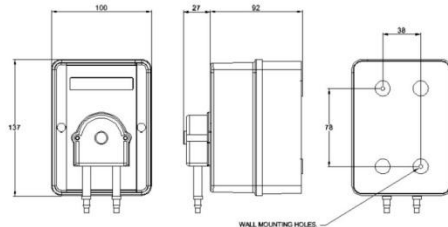


- battery operation.
- 24 hr or 7 day timing functions.
- 28 programmable dose times.
- Standard 200 series mini peristaltic pump head.
- Dose set in ml.
- Calibrate function.
- Battery back up.
- Battery voltage drop compensation for stable pump output.
- Low battery indication.
- 16 Character blue back lit lcd display.
- Settings pass code protected.
- Wall mounting.
- IP 55.
- Small footprint.
- Optional external input & output.
- Optional slave unit for dual dosing.

Optional:



- 1) Metal Cabinet
- 2) Enzymes



Biogt Dispersant - A0085 SPESIFIKASI



Masalah:
- Bau busuk
- Lipas
- Lalat



After 2 week



Biogt Dispersant ini adalah campuran tertentu mikro organisme (pelbagai strain) yang mana ianya dipta khas untuk menggalakkan perubahan rupa, bentuk fizikal bahan buangan organik yang sukar untuk dicernakan. Bahan buangan organik ini adalah termasuk lemak, minyak dan gris (FOG), protein, selulose dan hydrocarbon. Dengan penggunaan Biogt Dispersant, FOG akan ditukarkan kepada bahan seperti CO₂ (karbon dioksida) dan juga H₂O (air). Ini adalah salah satu kaedah terbaik dalam pra-rawat bahan buangan organik bagi mencegah ianya dari masuk ke dalam sistem perparitan.

Kelebihan menggunakan Biogt Dispersant :

1. Sangat berkesan untuk mengurangkan atau menghapuskan bahan cemar
2. Mengurai dan menukar bahan buangan organik kepada bahan larut air
3. Menjaga saluran langkang supaya lancar
4. Tidak menghakis, tidak akan merasakkan langkang dan juga perangkap minyak
5. Mengawal dan mengurangkan bau busuk
6. Tidak mengandungi pencemaran phosphate
7. Tidak bersifat toksik dan tidak pathogenic (tidak bersifat penyebab penyakit)
8. Selamat dan mesra alam sekitar

Cap Dagangan:

BIOGT™



MAIN DRAIN GREASE TRAP

Installation example

MARDI SEDANG, SELANGOR



COMPLETED PROJECT



Sekolah Bestari, Kelantan



92 Sekolah Menerima
Perangkap Minyak BIOGT, Penang



Kem PLKN Manjung



CIAST, Shah Alam



Universiti Teknologi Petronas



Rumah Sampah Alam Flora Putra Jaya



Tambun Hot Springs, Ipoh



Gerai Majlis Perbandaran Melaka



Petronas Gas Berhad, Terengganu



Carssem Sdn Bhd, Ipoh



SHORUBBER, ARAU PERLIS



Synico Marketing S/B sg.soi kuantan



Ceva Freight Holdings (Malaysia) S/B
Shah Alam Selangor



UEM Builders Berhad, Penang



Sek Men Sri Muda, Penaga



Sek Men Kampung Kastam, Penang



Maktab Rendah Sains Mara



FAMA, Teman, Ipoh



Sime Darby, Kedah

Dan banyak lagi





Thank You!

www.biogt.com.my

