



Strong Durable
High Quality Product



UTAMA FRP

*“ We serve and ensure to our clients
with the best quality product ”*



Company Profile

PT.BCAM

Facilities

1. Engineering Design, Factory, Machinery
2. Factory Area 5000 M²
With 4(four) Building for Production
3. Production use Helical Filament Winding Process with computerized system
4. Man Power More Than 80 Persons.

Mission & Quality

We strive to be the competent performer for our customers, satisfy their requirement, solve their problem and provide best service.

Our dedicated personnel will commit to their task for supporting the customers to get the optimum value from our products and service. With the satisfaction of our customers, we maintain our profit and

honor the esteemed loyalty of our people.

PT. Itama filippin Reya had designed 8 manufactured fibreglass to many joint

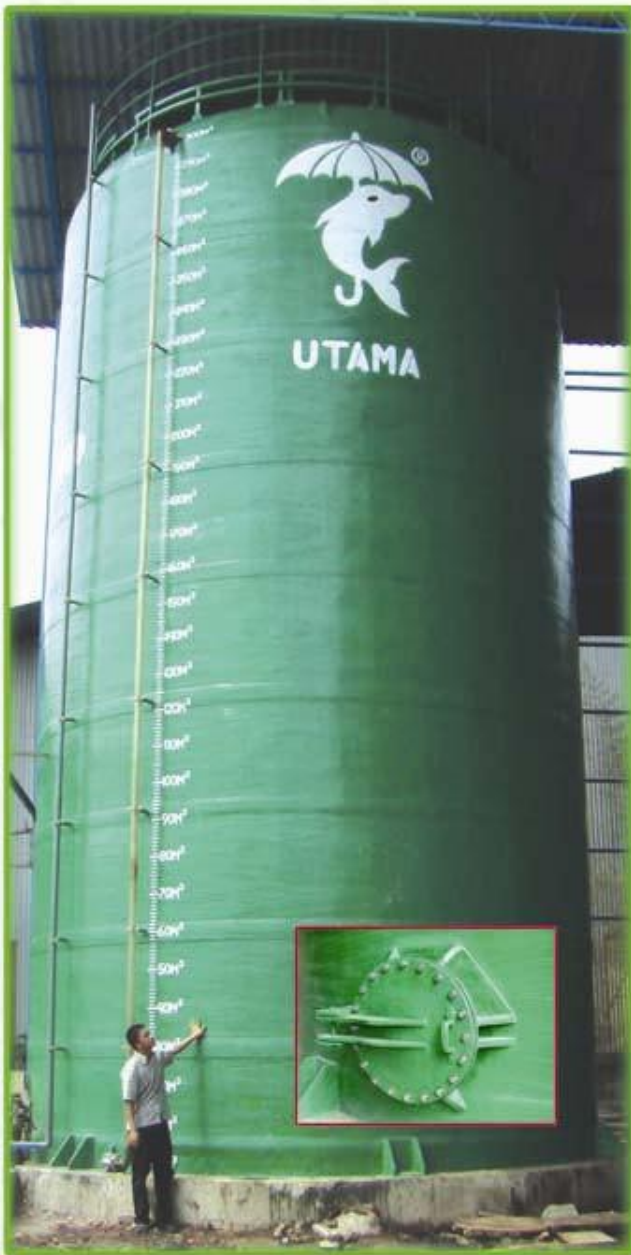
ventures, foreign investment companies as well as exports to some foreign markets, all for very competitive price & comparable to import quality. We owe these to the experienced skilled workers headed by our foreign trained engineer. Towards customers satisfaction. We are ever continuing our innovations,

- * Storage Tank (Chemicals, Water, etc.)
- * Mixing Tank (Chemicals, Water, etc.)
- ' Grating, Job Order
- ' Scrubber Tank, Stack
- * Reactor Tank
- * Pipe & Ducting
- * Panel Tank
- * Sedimentation Tank, Flocculator Tank
- * Clarifier Tank
- * Grease Trap Tank
- * Gutter, Roof Light, Ground Tank, Roof Tank
- * Lining Frp for Chemical
- * Portable Toilet
- * Septic Tank (BT, RC, RCX)
- ' Biotech S T P W W T P / W T P.

Products

Our Customers

水 工 業 用 貯 水 槽 工 業 用 貯 水 槽 工 業 用 貯 水 槽



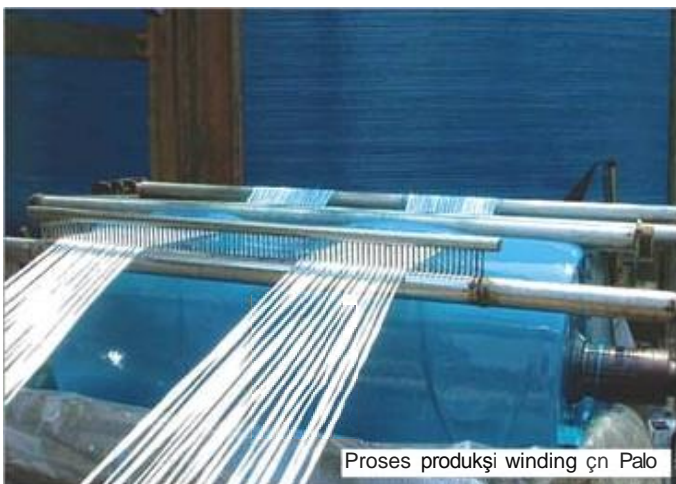
- PT. ABC President
- PT. Adhi Karya
- PT. Araya
- CV. Bangun Decorindo
- PT. Basuki Rahmat
- PT. Charoen Pokphand
- PT. Chubb Safes Indonesia
- PT. Coca cola - Cikarang
- PT. Cognis
- PT. Daichi Chemical
- PT. Delident
- PT. Dharma Polimetal
- PT. Dystar colorindo
- PT. Esa Kertas
- PT. Frisian Flag
- PT. Golden Mississippi
- PT. Hopac
- PT. Indah Kiat Pulp & Paper
- PT. Kormac
- PT. Locomotif
- PT. Mayora Indah
- PT. Mitsui Eterindo Chemical
- PT. Pindo Deli Pulp & Paper
- PT. Pulau Intan
- PT. South Pacific
- PT. Sumitomo corp.
- PT. Surya Cipta
- PT. Totalindo
- PT. Total Bangun Persada
- PT. Tatamulia
- PT. Tatametrika Nusantara
- PT. Waskita Karya
- PT. Wijaya karya



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Storage Tank Frp



Storage Tank Applications

G-Stan8ari Epoxy Vinyl Ester Grade for Strong Chemical Resistance.



PT. UNR

Reactor Tanks



Mixing Tank Frp



Pipe and Ducting Frp

for Chemical

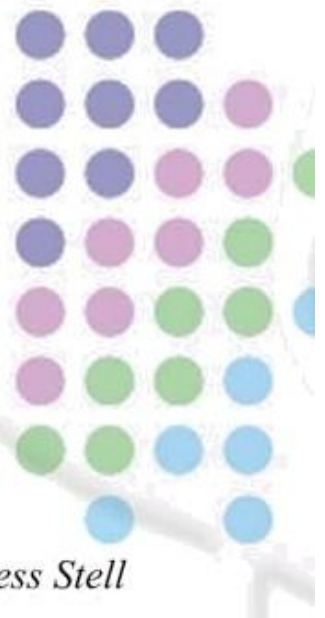


Pipe & Ducting Frp Base On ASTM D-3200

- e Pressure Pipe
- e Chemical Pipe
- e Scrubber Pipe & Ducting
- e Job Order Pipe & Ducting.

Scrubber Frp

(air Cleaning)



System 8 wnierial Scrubber adjusment by cbaraciertstic Chemik'al is used.



FRP

PVC

Stainless Stell

Lining Frp

PROJECT YOUR TANK FLOOR WITH FRP LINING

Very effective in combating corrosion, low cost, long lasting frp linings. Fiberglass reinforced lining are the low cost, long lasting and highly effective in combating corrosion. A frp is usually less than half new steel tank.

Whether in new tank or old, frp lining provide protection against leaks caused by underside corrosion and abrasive and are resistant to crude oil, refined, hydrocarbons, petrochemicals, dilute acid and alkalis, installing a frp lining is easy to do, a finished cross section is detailed in diagram below.



MAIN APPLICATION

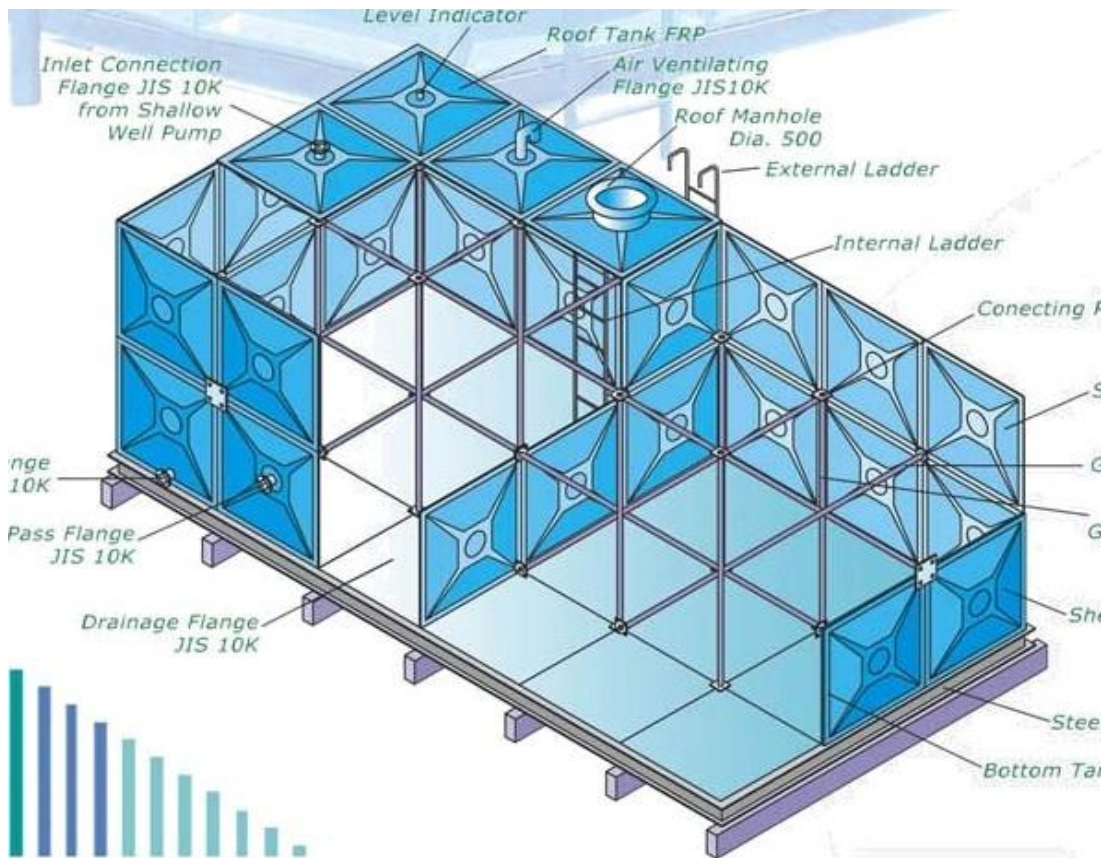
FRP lining applies, rolled or trowelled fiberglass reinforced resin lining in tanks, vats, duct work, bleaching, pump pads, concrete trenches, steels, fences, floors, etc. These linings, are applied to new, or existing, equipment at the customer's plant site. The resin and glass are hand worked by brushes, whether in a new tank or old, frp lining provide protection against leaks caused by underside corrosion and grooved and mohair mat to remove air and to saturate the glass with resin. The total lining thickness is build up layer. Added corrosion protection is provided by an outer layer of surfacing veil which insures a resin rich surface.

BENEFIT OF FRP LINING

Low cost. Durable. Excellent adhesion strength. Soft on concrete & steel.
High mechanical strength, Hard and smooth surface, Resistant to corrosive & abrasive.
Simple and fast to apply, immersion temperature resistant up to 100°C,
Excellent resistant to strong acid & moderate to high alkalis.



Panel Tank Utama



Assembled from extra-strong fibreglass panel, Utama Panel Tank cannot rust, never needs Painting and keep water clean, fresh and pure.

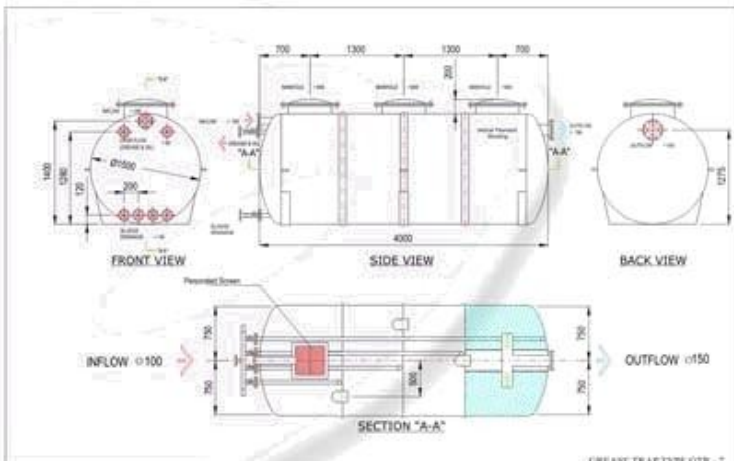


GREASE TRAP *Biotech*

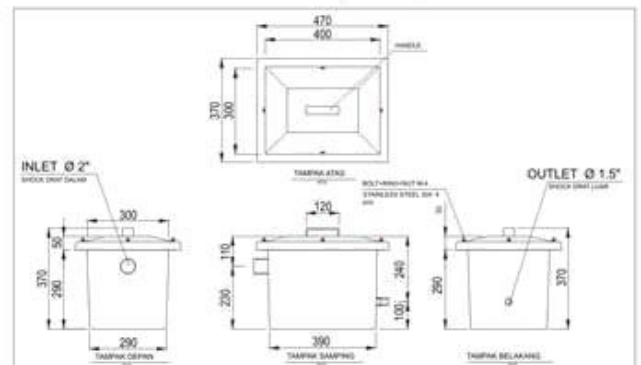


- ☺ Apartment
- ☺ Food Court
- ☺ Hotel
- ☺ Mall
- ☺ Dll.

No.	TYPE	FLOW RATE	MODEL
1	GTR 1 - GTR 500	1 M3 / Day - 500 M3 / Day	Horizontal



Grease Trap Frp



Portable Toilet



Portable Toilet sangat cocok digunakan sebagai pengganti Toilet permanen ditempat umum dan mudah dipindahkan dan sangat mudah dalam perawatannya juga bergaransi.

Portable Toilet dilengkapi dengan water tank, Septic tank, dan instalasi pipa.

Rooflight Frp

(atap penerangan)

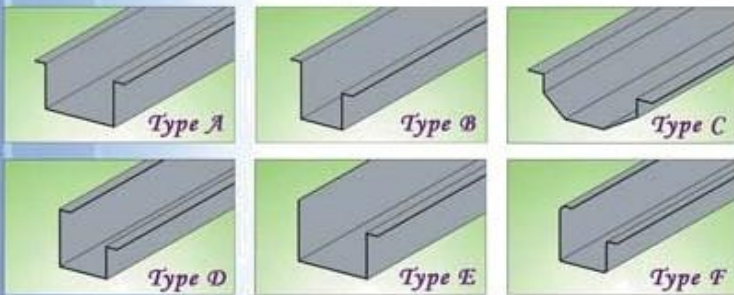


KEUNTUNGAN UTAMA ROOFLIGHT

• Anti Ultra Golet / Anti UV, Tahan Temperatur slâ 120°C
 • Tidak berubah bentuk karena pnnas matnhari

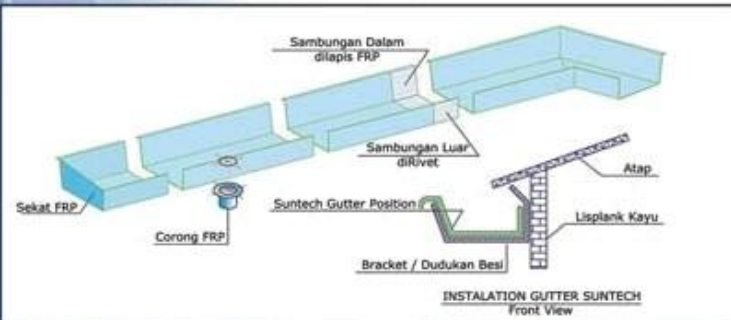
• Tidak mudah pecah / rusak, Tahan terhadap zat kimia, Bentuk dan type dapat disesuaikan dengan kebutuhan, Wai na dapat dipesan sesuoi selera onda.

MACAM - MACAM TYPE TALANG



Sangat Cooek Digunakan pada :

- e Pabrik - pabrik (Industri)
- e Pergudangan
- e Gelandangan Olah Raga
- e Peternakan
- e Perkebunan / Pertanian (Seperti rumah - rumah kaca)
- e Dll.



Gutter Frp

Srätting Frp

BENEFITS OF GRATING FRP

Low cost, Strong, Resistant of Chemical, & Durable, Hight mechanical strength, Hard and smooth surface, Simple and fast to apply, Immersion temperature resistant up to 120°C, Excellent resistant to strong acid & moderate to high alkalis.



TB 32 TB 55 TB 25 TB 70 TB 80 TB 120 TB 110 TB 160 TB 200

dimensi

Tipe	Kapasitas (liter)	D (mm)	T (mm)	TA (mm)	d (mm)	Tebal Dinding (mm)	Fitting (inch)
TB 25	225	600	805	855	400	4 - 6	¾
TB 32	300	690	825	870	400	4 - 6	¾
TB 55	520	830	1045	1110	400	6 - 9	¾
TB 70	650	830	1200	1285	400	7 - 10	¾
TB 80	800	830	1625	1700	400	7 - 10	¾
TB 110	1050	1060	1220	1265	400	9 - 11	1
TB 120	1200	1060	1325	1395	400	9 - 11	1
TB 160	1550	1160	1495	1575	400	10 - 12	1
TB 200	2000	1440	1385	1485	600	10 - 12	1½

Tipe	Kapasitas (liter)	D (mm)	T (mm)	TA (mm)	d (mm)	Tebal Dinding (mm)	Fitting (inch)
TB 200s	2000	1760	845	1000	600	10 - 12	1½
TB 220	2250	1440	1545	1665	600	10 - 12	1½
TB 280	2800	1760	1050	1400	600	10 - 15	1½
TB 300	3100	1440	2000	2110	600	10 - 15	1½
TB 400	4100	1760	2000	2125	600	12 - 18	1½
TB 500	5100	1800	2040	2150	600	12 - 18	1½
TB 800	8000	2140	2250	2410	600	12 - 18	1½
TB 1000	11000	2140	3200	3360	600	15 - 20	2
TB 1600	16000	2750	2750	3000	600	15 - 20	2
TB 2200	22500	2750	3850	4100	600	15 - 22	3



PILIHAN WARNA

[warna standar] [warna special]

WWTP Biotech...



Air Disk Diffuser merk SSI Ex. USA



Waste Water Treatment System BIOTECH cocok untuk :

- 🔴 Limbah Produksi Industri
- 🟠 Rumah Sakit & Hotel
- 🟢 Apartemen & Mall
- 🟡 Sekolah & Laboratorium.

STP BJOT7ti??f

Type RCO - Series

New technology for Domestic Wastewater Treatment.

Changing wastewater to clean water

BOTECH



PROCESS FLOW



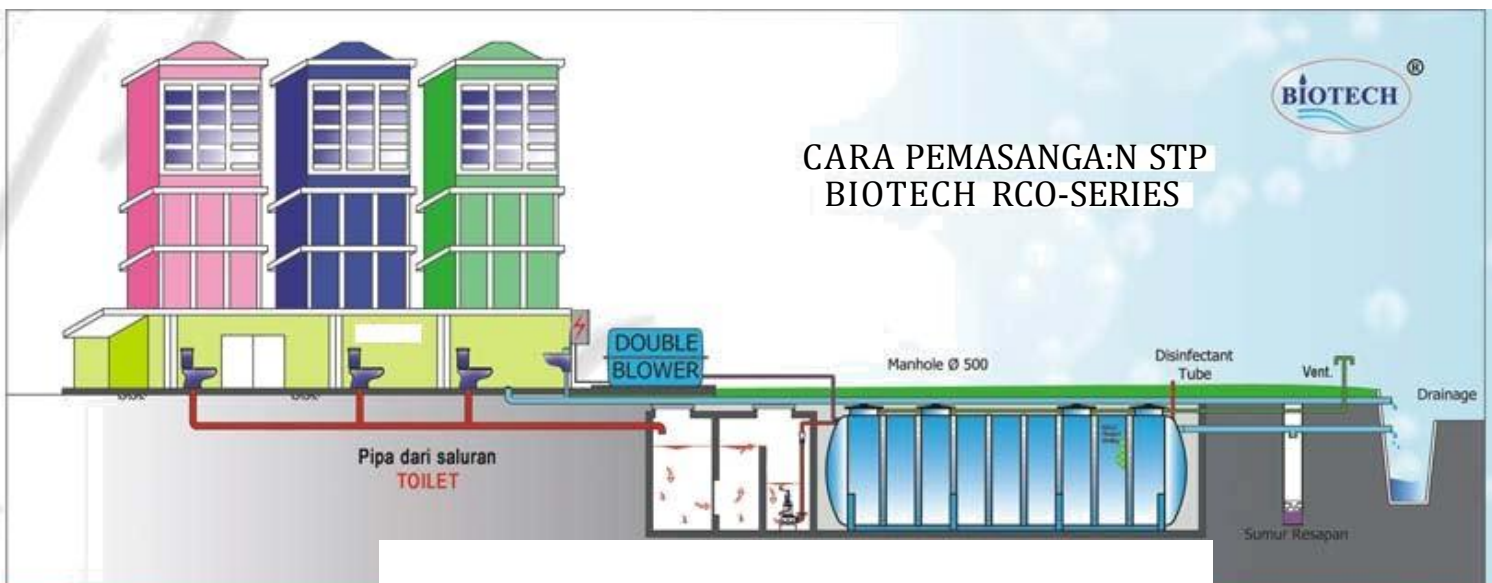
Control Panel Automatic (Optional)

- Warning Light system and Sound Speaker.
- Timer for Submersible and Double Blower.

CAPSULE PACKAGE WASTEWATER PURIFICATION TANK

APARTMENT	MALL	HOSPITAL	HOTEL
CONDOMINIUM	OFFICE BUILDING	RESTORANT	FACTORY

CARA PEMASANGAN STP BIOTECH RCO-SERIES



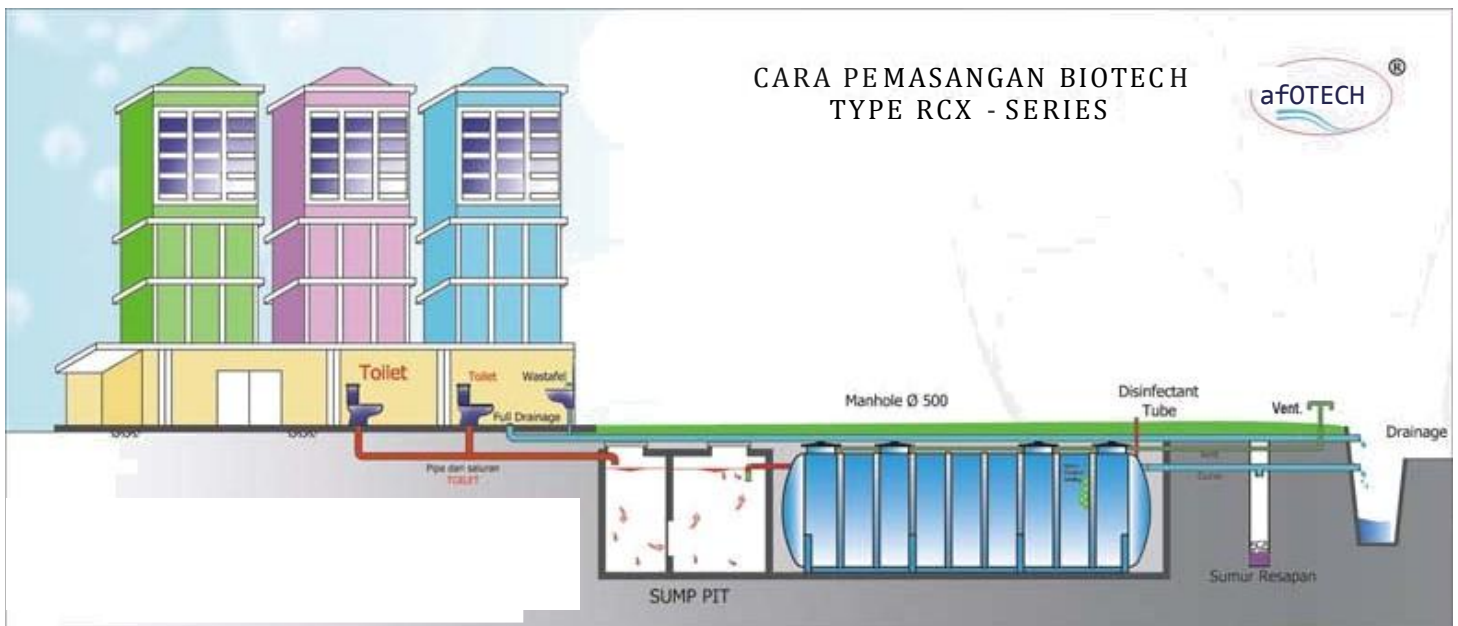


“ Biotech System Ramah Lingkungan ”



No.	TYPE	VOLUME	UKURAN	MODEL
		Luar	Luar	
1	RCX- 2	2 M3	B t000 x 2000	Horizontal
2	RCX- 3	3 M3	B t350 x 2000	Horizontal
3	RCX- 4	4 M3	gl 1350 x 2600	Horizontal
4	RCX- 5	5 M3	g 1350 x 3500	Horizontal
5	RCX- 6	6 M3	Ø 1500 x 3500	Horizontal
6	RCX- 7	7 M3	Ø 1500 x 4000	Horizontal
7	RCX- 9	9 M3	g 1500 x 5200	Horizontal
8	RCX- 10	10 M3	g 1750 x 4000	Horizontal
9	RCX- 12	12 N3	g 1750 x 5000	Horizontal
10	RCX- 15	15 N3	g 1750 x 6000	Horizontal
11	RCX- 16	16 N3	g 2000 x 5100	Horizontal
12	RCX- 17	17 M3	B 2000 x 5500	Horizontal
13	RCX- 18	18 M3	g 2000 x 5700	Horizontal
14	RCX- 19	19 M3	g 2000 x 6000	Horizontal
15	RCX- 20	20 Id3	g 2000 x 6500	Horizontal

TYPE	VOLUME	MODEL
	Luar	
RCX20 –RCX500	20 N3 - 500 N3	Horizontal



Keterangan : Dapat disesuaikan kebutuhan di lapangan, konsultasi dengan orang tehnik kami.

New Technology

7ro Inlet Type BTI - 12



Inflow from *Wise> awe* 4"

Cleaning tube 4"

Inflow from *Toilet* 4"

Cleaning tube 4"

Perporated screen (non clog)

Media Cell B

Media Cell A



Manhole

Ventilating 2"

Disinfectan tube 4"

Cleaning tube 4"

Outflow 4"

Transfer pipe 4"

Media Cell A

Medin Cell B



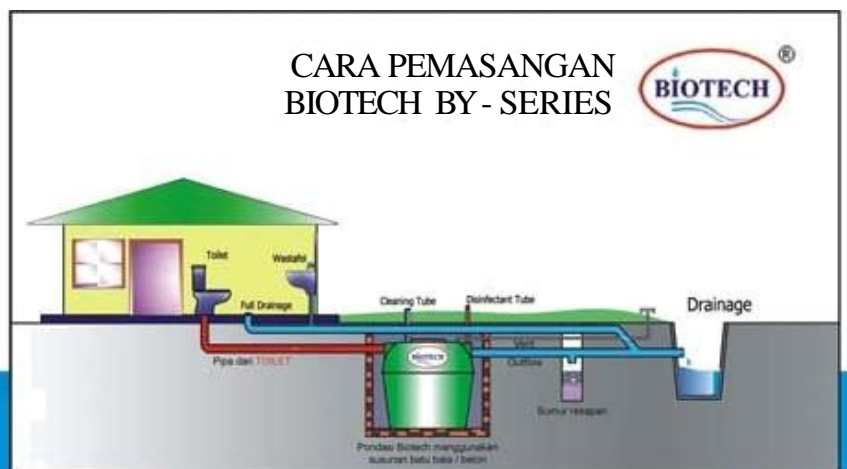
Septic Tank BIOTECH ramah lingkungan dan membantu mengatasi pencemaran air

hingga menjadikan lingkungan bersih dan sehat.

Sistem BIOTECH <ik•rigk>ipi dengan disinfectan tube untuk mensterilkan dari bakteri patogen.

Septic Tank Biotech

Type BT - Series



Septic Tank Biotech

Type RC - Series



Technical Information of CORROSION

CHEMICAL ENVIRONMENT	DERAKANE 411	DERAKANE 470
Maximum Concentration %	Maximum Temperature °C	
Acetic Acid	●	●
Acetone	●●●	●●●
Alums (all types)	●	●
Ammonia (liquid gas)	●●●●	●●●●
Ammonia (gas)	●●●	●●●
Ammonium Hydroxide (conc)	●●●	●
Amyl Acetat	●●●	●
Amyl Alcohol	●●●	●
Barium Chloride	●	●
Barium Hydroxide	●	●
Benzene	●●●	●●●
Brass Plating Solution	●	●
Brine	●	●
Bromine (liquid)	●●●	●●●
Bromine (wet gas)	●●●	●●●
Butter	●	●
Cadmium Chloride	●	●
Calcium Hydroxide	●	●
Calcium Hypochlorite	●	●
Carbon Dioxide (gas)	●	●
Castor Oil	●	●
Chlorine	●	●
Chlorofoam	●●●	●●●
Chromic Acid	●●●	●
Citric Acid	●	●
Coconut Oil	●	●
Cola Concentrates	●	●
Copper	●	●
Crude Oil	●	●
Developer, Photo	●	●
Emulsion, Photo	●	●
Ethyl Alcohol	●●●	●
Ferric Nitrate	●	●
Fish Solubles	●	●
Fluosilic Acid	●●●	●●●
Formic Acid (conc)	●	●
Fuel Oil	●	●
Gasoline	●	●
Gold	●	●
Glucose	●	●

CHEMICAL ENVIRONMENT	DERAKANE 411	DERAKANE 470
Maximum Concentration %	Maximum Temperature °C	
Hydrochloric Acid (all conc)	●	●
Hydrofluoric Acid (conc)	●	●
Latex	●	●
Lead Acetat	●	●
Methanol (Methyl Alcohol)	●●●	●
Milk	●	●
Mineral Oils	●	●
Mosses	●	●
Nickel	●	●
Nitric Acid	●●●	●●●
Plating solutions	●	●
Potassium Hydroxide	●	●
Sea Water	●	●
Shortening	●	●
Silver	●	●
Soap Solution	●	●
Sodium Chloride	●	●
Sodium Hydroxide	●	●
Sodium Hypochlorite	●	●
Solvent	●	●
Styrene	●●●	●
Sulphuric Acid (70%)	●●●	●
Sulphuric Acid (80%)	●●●	●●●
Sulfuric Acid 5 ACT	●	●
Turpentine	●	●
Urea	●	●
Vegetable Oils	●	●
Vinegar	●	●
Water	●	●
Wines	●	●

Kejelasan



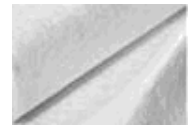
Tahan tidak ada indikasi akan rusak.

Ketahanan bervariasi, tergantung dan kondisi pemakaian.



Tidak tahan. Tidak dianjurkan untuk digunakan pada kondisi apapun.

note - Sumber data diambil dari katalog material FRP.



Comparative Physical Properties of Fibreglass Versus Other Material

II.4TER tAL	FIBREGLASS	FIBREGLASS	STEEL	STAINLESS	PVf
Specification	Hand Lay Up	Helical MW	SS 41 Grade	sus 316 Grade	General Grade
Specific Gravity	1.5 - 1.7	1.8 - 2.0	7.8	7.9	1.47
Thermal Expansion Coefficient (1/°C)	15 - 25	20 - 30			7 - 11
Tensile Strength (Kg/mm ²)	9 - 15	30 - 35	20 - 23	21 - 35	3 - 5
Thermal Conductivity (Kcal/mh °C)	0.20 - 0.25	0.23 - 0.25	32 - 57	12 - 23	0.2
Water Absorption (%)	0.1 - 0.2	0.1 - 0.2			0.1 - 0.4
Specific Heat (Kcal/gr °C)	0.31 - 0.33	0.31 - 0.33	0.10	0.11	0.2 - 0.3
Hardness (Baird J)	35 - 50	35 - 50			
Flexural Modulus of Elasticity (Kg/mm ²)	700 - 900	1500 - 2500	21000	21000	300

Material of FRP

I. POLYMER

1. Polyester
2. Vinyl ester
3. Epoxy.

II. FIBREGLASS

1. Surfacing Fibre
2. Chopped Strand Mat
3. Woven Roving
4. Continuous Roving.

III. ADDITIVE

1. Catalyst
2. UV (Ultra Violet Protection)
3. Fire Retardant
4. Pigment
5. Abrasion Resistant.

General Procedure to Build FRP Tank

1. Design Specification

User Basic Requirement Specification

example." Dimension, Capacity, Materials, Pressure, temperature, etc.

2. Engineering

Redrawing, Calculation of FRP

3. Fabrication

Operational Procedure, Quality Assurance, Handling, Storage and Shipment

4. Installation

5. Testing and Commissioning.

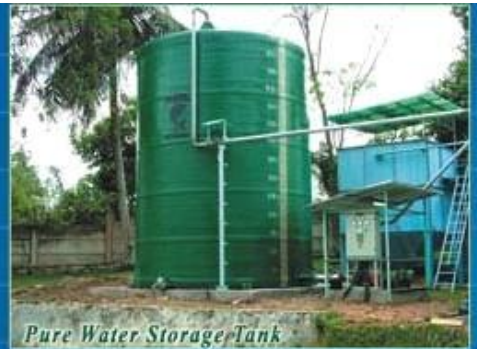
Products Catalogue



Reactor Tank & Sedimentation



Aluminium Sulfate Storage Tank



Pure Water Storage Tank



Chemical Storage Tank



Fuel Oil Storage Tank



Chimney & Scrubber-Frp



WWTP & WTP for Industry



Pipe & Ducting Frp



Scrubber for Air Cleaning Tank



Chemical Mixing Tank