

HISHITANK™

GRP(FRP) PANEL TYPE WATER TANK



MITSUBISHI PLASTICS, INC. is the pioneer in Japan to manufacture product "GRP" (Glassfiber Reinforced Plastic) tanks under the name of "HISHI" GRP water tanks since 1962 for over 30 years. It has been an innovative and reliable leader in this industries serving a range of customers to their full satisfaction.

As the products of one of the renowned "MITSUBISHI" group companies, HISHI GRP water tanks are committed to meet stringent quality control in order to achieve the highest performances and meeting the demands of the customers worldwide.

MITSUBISHI PLASTICS, INC.'s research is always looking foward to upgrading and exploring new development of the water tank in anticipation of future needs. Hence the present panel type tank is developed with full flexibility in assemble to any capacity as required.

"HISHI" GRP water tank is now marketed to more than 20 countries worldwide.



Head office in Tokyo

Products gentle to the environment

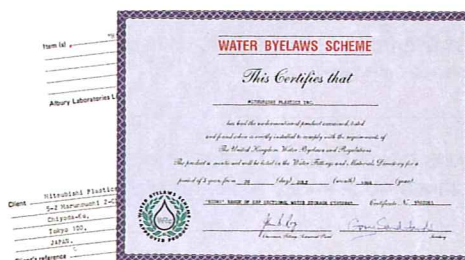
There have been increasing concern about the protection of global environment, especially the conservation of ozone layer.

MITSUBISHI PLASTICS, INC. noted this problem many years ago has been engaging in the development of heat insulation material which does not require the use of fluoro carbon compound.

HISHITANK have attained various authorized for potable water tank,
with hight appraisement around the world.



Test Report



Albury laboratories LTD.

[illegible]

LPCB

COMPARISON : HISHITANK GRP PANEL TYPE AND OTHER TANK TYPES

KINDS OF TANKS	WATER QUALITY	WATER TIGHTNESS	DURABILITY	TRANSPORTATION	MAINTENANCE	CORROSION
HISHITANK G-PANEL TYPE	◎	◎	○	◎	◎	◎
CONCRETE WATER TANK	×	△	△	×	×	◎
STEEL WATER TANK	△	◎	○	△	×	×
STAINLESS STEEL TANK	◎	◎	○	△	△	△ *
GRP HAND LAY UP TANK	△	◎	○	×	△	◎

*It is possible that the roof panel of Stainless steel tank get rust by the high concentration of chlorine contents.

Internal reinforcement not required

Up to 2m of height

FEATURES OF HISHI G-PANEL TYPE TANK

- 1** STRONG & LONG DURABILITY as panels are made by MITSUBISHI PLASTICS, INC.'s excellent HOT PRESSED GRP technique.
- 2** EASY CLEANING & MAINTENANCE with no internal reinforcement material. (1.0mH~2.0mH type)
- 3** DRAINS COMPLETELY AT ROOF AND BOTTOM as it uses SPECIALLY DESIGNED ROOF PANEL and DRAINAGE PANEL.
- 4** PREVENT LEAKAGE COMPLETELY by using SPECIAL SEALING MATERIAL.
- 5** PREVENT THE ALGAE GROWTH IN THE TANK
GRP PANELS OF HISHITANK G PANEL TYPE are made by SMC HOT PRESS METHOD, which has high opaque quality.
THIS OPAQUE QUALITY PREVENT THE EVAPORATION OF STERILIZER, AND STOP THE ALGAE GROWTH.
- 6** HISHITANK is assembled by using STRONG PANELS and REINFORCEMENT MATERIAL.
- 7** VARIOUS SHAPE TANKS ARE AVAILABLE by combination of strong panels.

PARTS OF HISHITANK

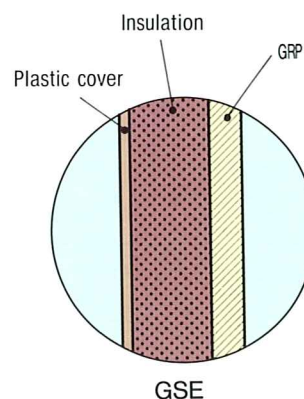
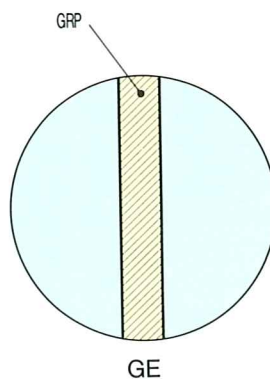
1	Manhole panel
2	Side panel
3	Roof panel
4	Bottom panel
5	Drainage panel
6	Piping panel
7	Electrode base
8	Air ventilator
9	Internal ladder
10	External ladder
11	Inlet flange
12	Outlet flange
13	Overflow flange
14	Drainage flange
15	Partition panel
16	Reinforcement angle
17	Steel footing
18	Concrete foundation
19	Anchor bolt

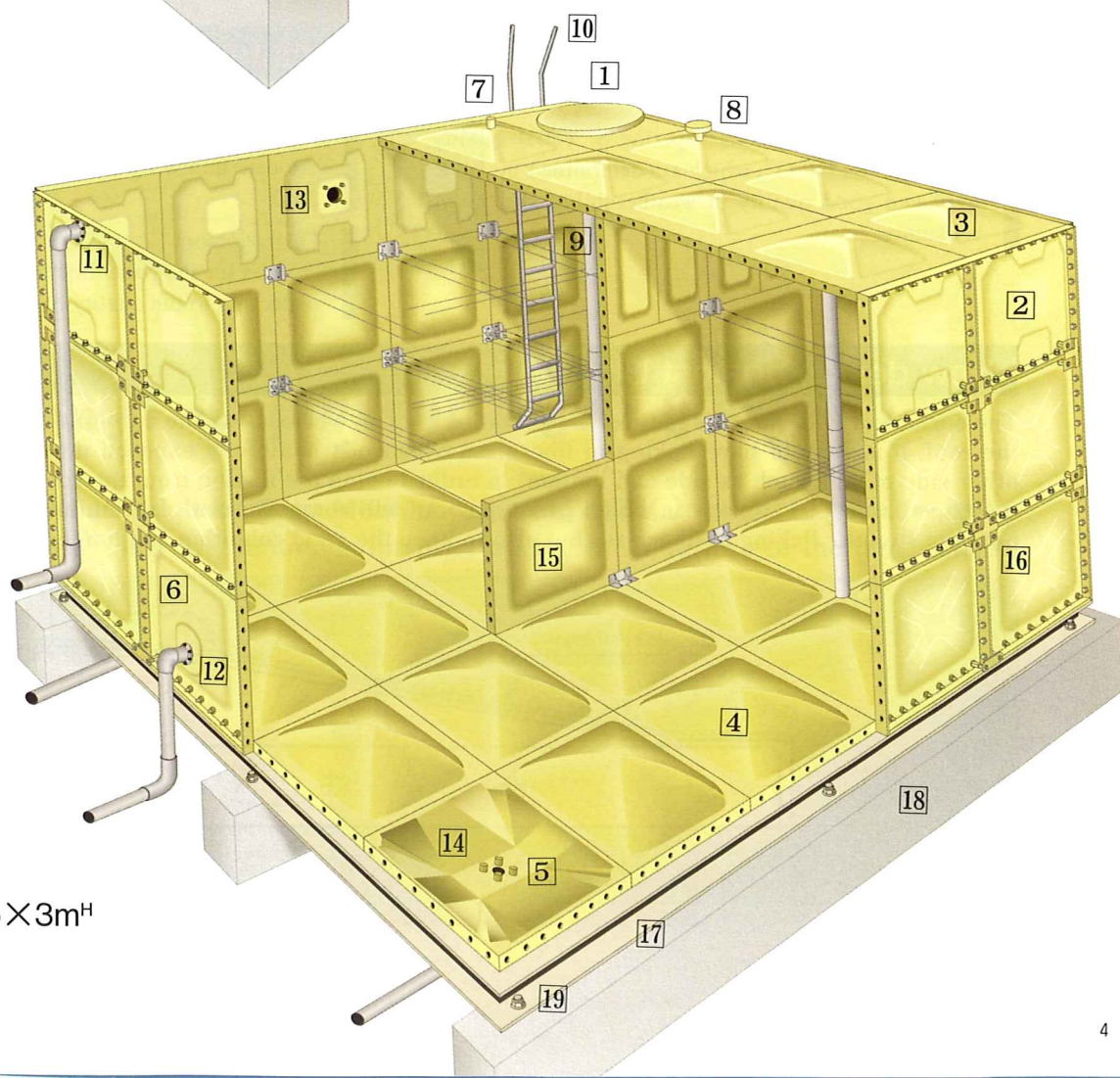
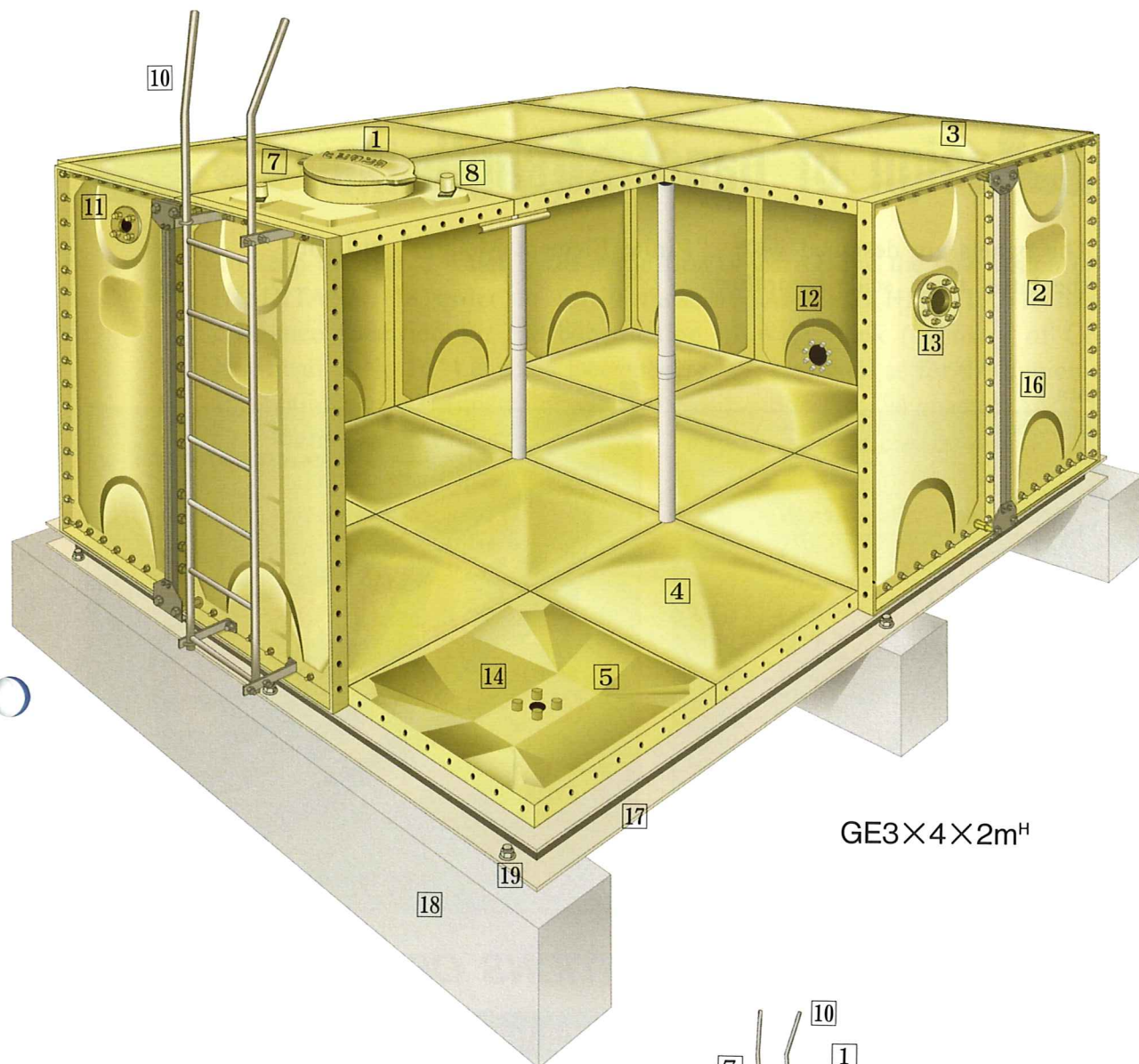
NOTE: ITEM 17, 18 & 19 are not the tank parts, but only for your reference.

HISHI TANK
 MITSUBISHI PLASTICS, INC.

MODEL CAPACITY M³
 SERIAL NO.

TYPE	PANEL
GE	GRP
GSE	GRP with insulation

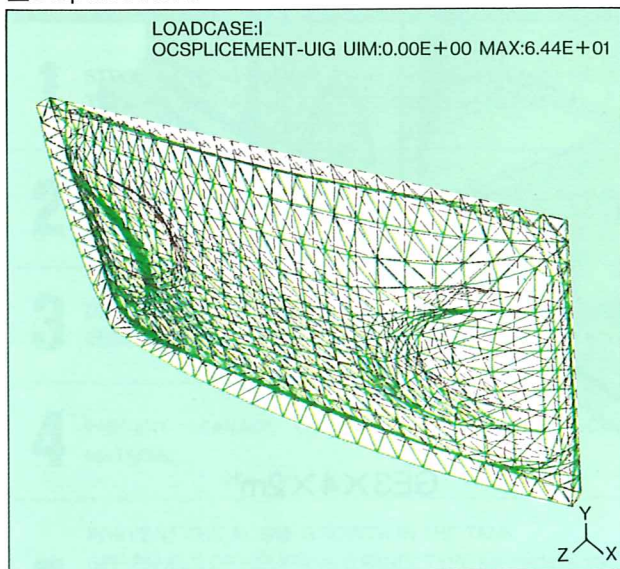




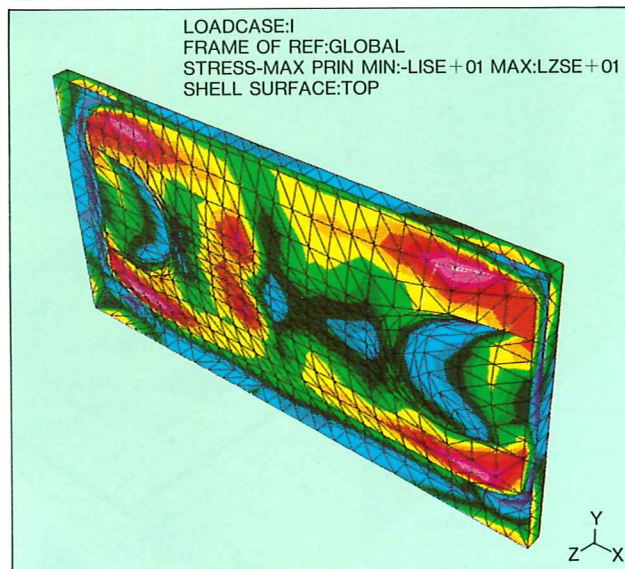
Design of panel strength

The panels are designed with "Finite Element Method" utilizing the latest large scale computer.

■ Displacement



■ Stress



QUALITIES & SPECIFICATIONS OF PANELS

Material: Hot pressed mould glass fiber reinforced plastics

Unsaturated Polyester Resin

Used for the panel is superior or equal quality with "Class UP-G", which are determined by JIS R 6919 and good quality in weatherability and water resistance.

Glass Fiber

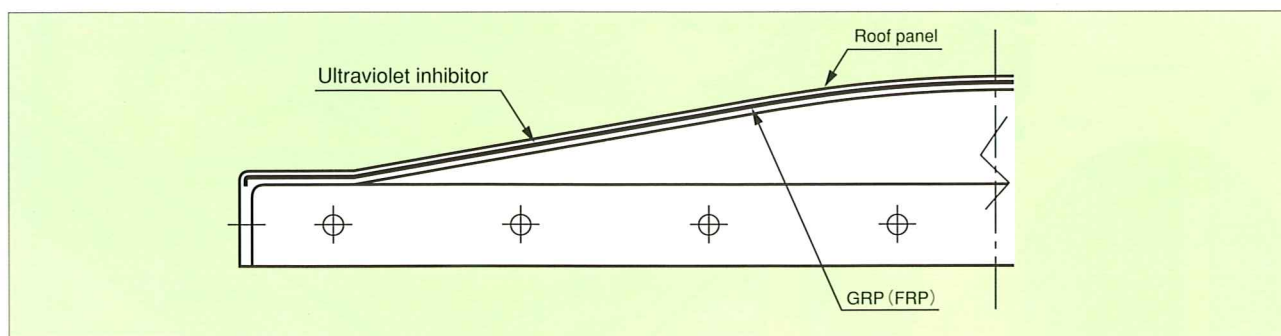
Used for the panel is non-alkaline quality which are determined by JIS R 3411, JIS R 3412 and JIS R 3413.

Filler, Pigment

Used for the panel does not affect to the quality of water and to the quality of the components of the panel.

New design against Ultraviolet

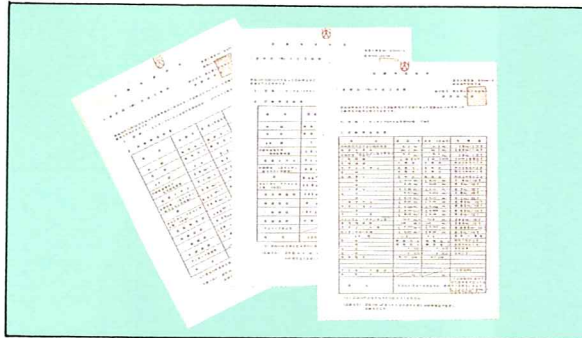
The surface of GRP panel is getting deterioration year by year due to the sunlight. Especially the surface of the roof, it is easy to have flaking of fiberglass because it is directly exposed much longer compared with other side of tank such as side and bottom. In order to stop the flaking from the roof panel, HISHITANK has developed a new technology in which panel material will composite with UV inhibitor. The UV inhibitor will not only stop the flaking of fiberglass but also to keep the good condition and longer life of tank.



Seeking hygiene

To keep the stored water clean is the first objective and the task which is sought by HISHITANK. In order to fulfill these requirements, HISHITANK has obtained clearance specified for the construction of water tank (Ministry of Construction Notification No.1674, enacted December 1, 1982) as well as for the hygienic checking and maintenance (Ministry of Welfare Notification No.194, enacted April 1, 1983) and City Water Law.

City water law in Japan



Water quality test

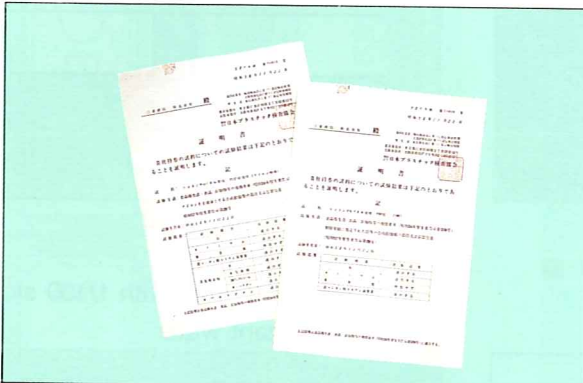
ご依頼のあった検査の成績は次のとおりです。

神奈川県 厚木市 厚木町

水質検査結果書(一般項目)

検査区分	①生活用水	②農業用試験水	③雨水	④その他
検査年月日	昭和2年3月6日	検査場所	厚木町厚木1	
天	晴	気温	17.0℃	降水
検体の種類	①浄水	②生水	③貯水	④その他
検査項目	色	臭	味	透明度
結果	1.6 mg/l	臭	異常なし	透明度1.0
検査イオン	1.3 mg/l	硬度	異常なし	硬度1.0
カルシウム	1.5 mg/l	色度	2 度未満	5度以下
一般細菌	1000/100ml	菌数	1 度未満	2度以下
大腸菌	不検出	検出	不検出	500以下
鉄	0.05 mg/l	銅	0.4 mg/l	0.5以下
マンガン	0.05 mg/l	亜鉛	0.05 mg/l	0.05以下
pH値	7.0	8.0 - 8.5		
判定	①上記検査項目については水質基準に適合する。			
検査者	検査員 2 年 3 月 6 日 検査所 2 年 3 月 6 日			
検査所	厚木町厚木1 2480 検査所 2480 検査所 2480			

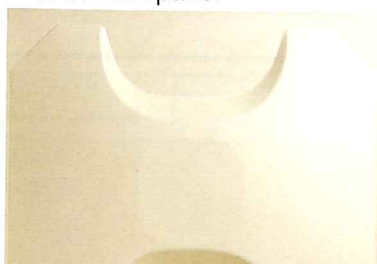
Food container test



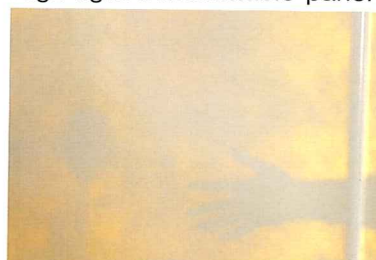
Design to prevent algae growth

The panels are made by Sheet Mould Compound (SMC) method to give low light transmittance. Thus low luminous intensity on the inner surface of the tank panels prevent the growth of algae.

HISHITANK panel



High light transmittable panel



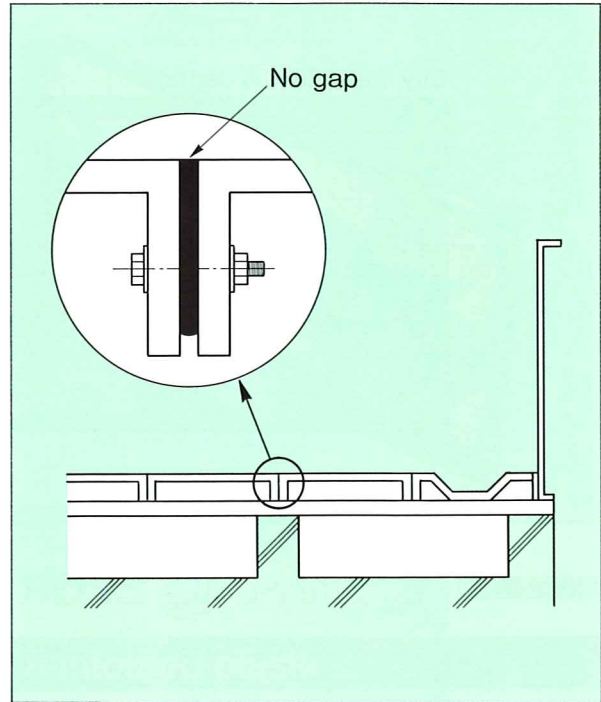
Outside reinforcement for easy maintenance

HISHITANK is designed to allow easy cleaning and maintenance to the internal of the tank.

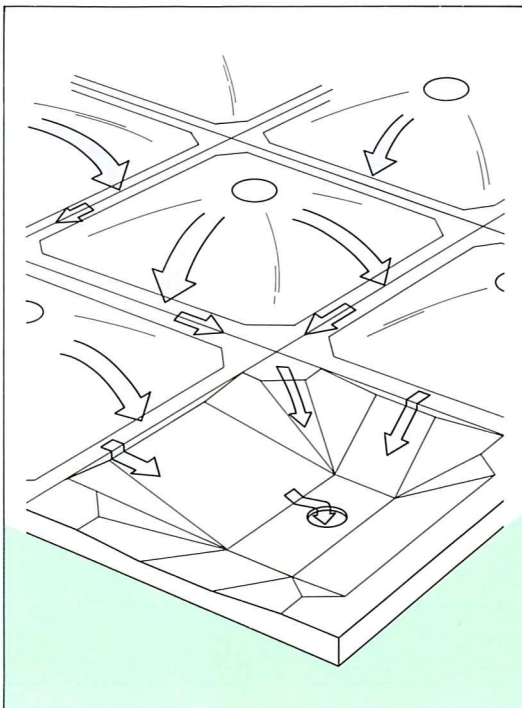
No internal bracing & tie
(up to 2m of height)



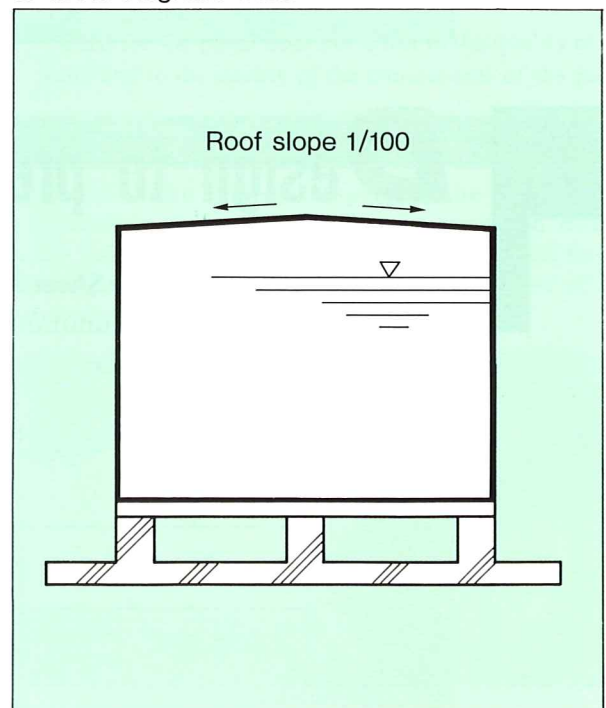
Having no gap between bottom panels
dust will not be accumulated



Bottom panels designed to
Drain Off Completely



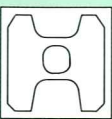

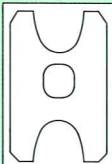

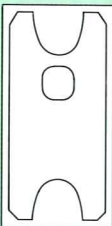





Roof panels designed with 1/100 slope
to avoid stagnant water



PARTS FOR HISHITANK G-TYPE

■SIDE PANEL

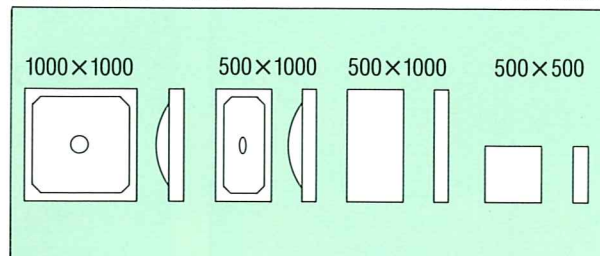
500H	500×1000 	500×500 
1000H	1000×1000 	500×1000 
1500H 2500H	1000×1500 	500×1500 
2000H	1000×2000 	500×2000 
2500H 3000H	1000×1000 	500×1000 

■BOLTS & NUTS

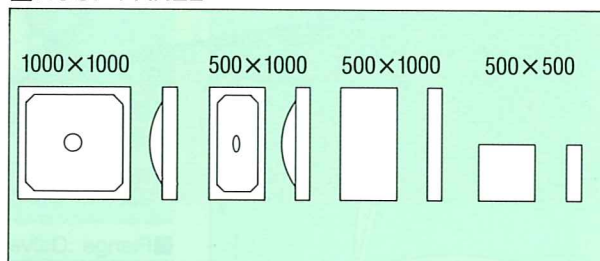


■BOTTOM PANEL

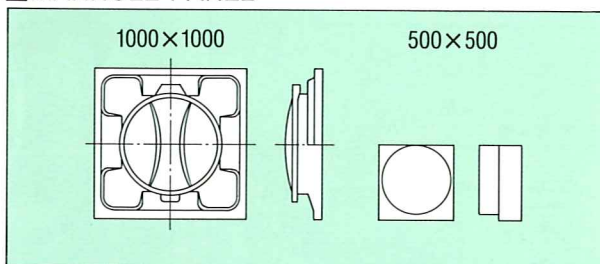
UNIT:mm



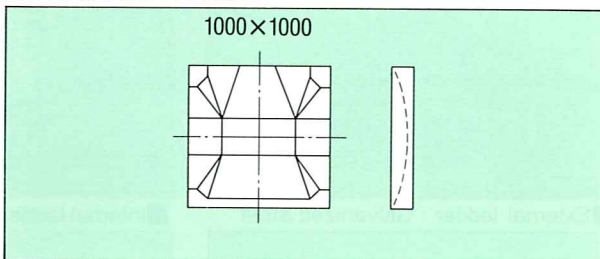
■ROOF PANEL



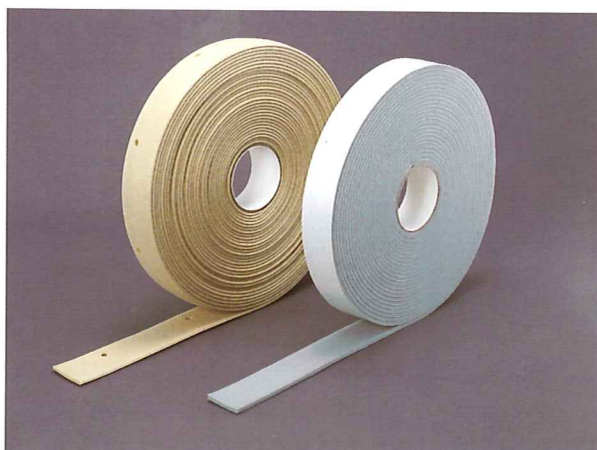
■MANHOLE PANEL



■DRAINAGE PANEL

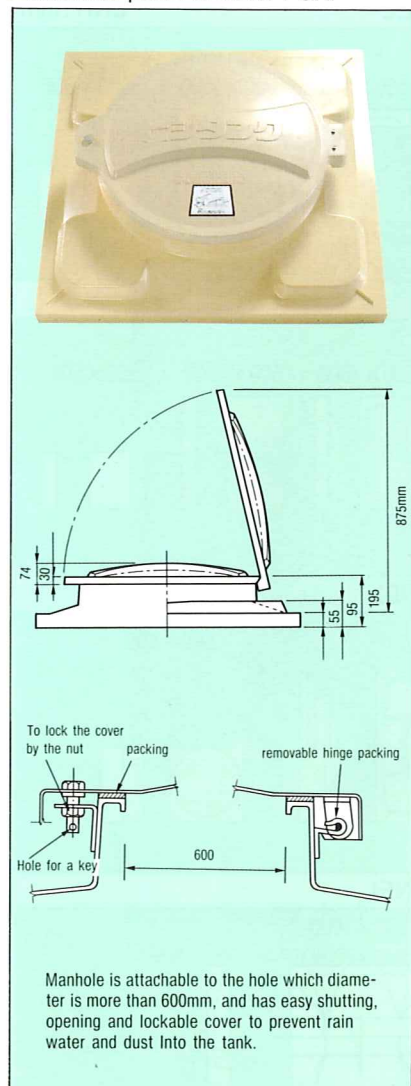


■GASKET(PACKING)

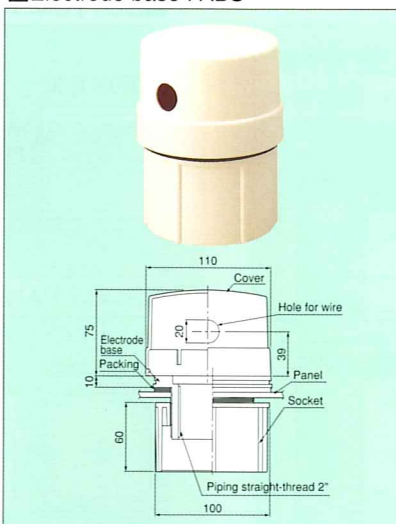


STANDARD ACCESSORIES

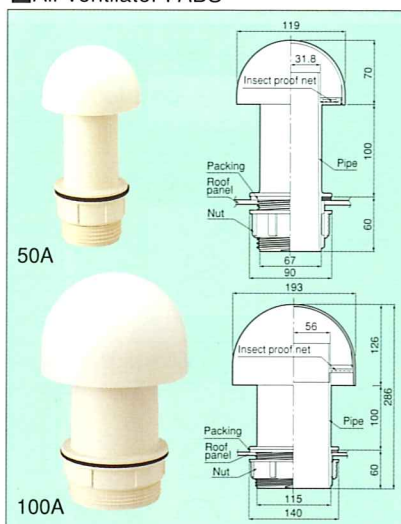
■ Manhole panel & Cover : GRP



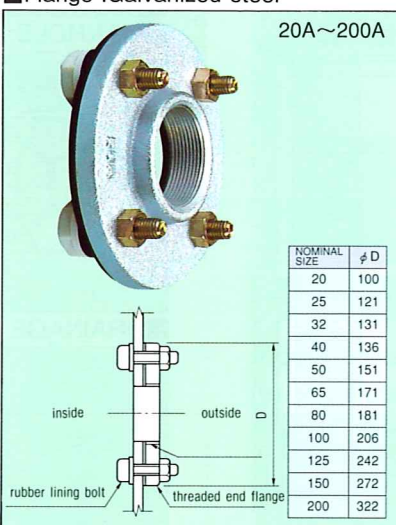
■ Electrode base : ABS



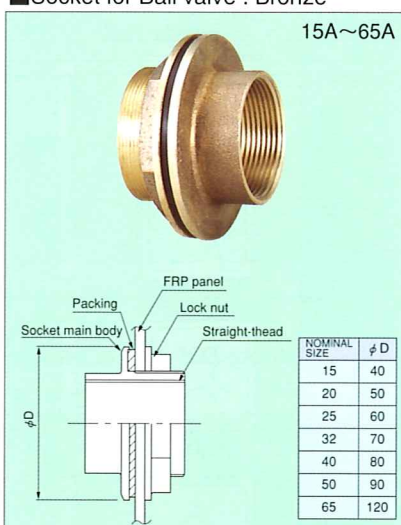
■ Air ventilator : ABS



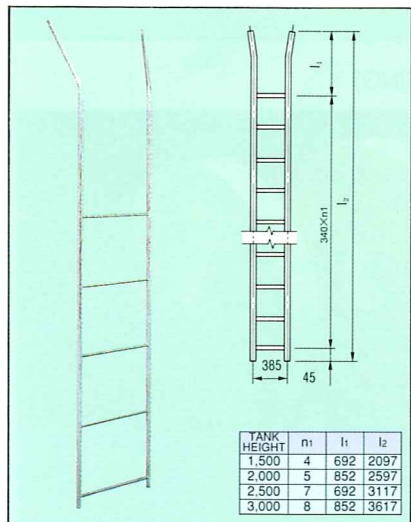
■ Flange : Galvanized steel



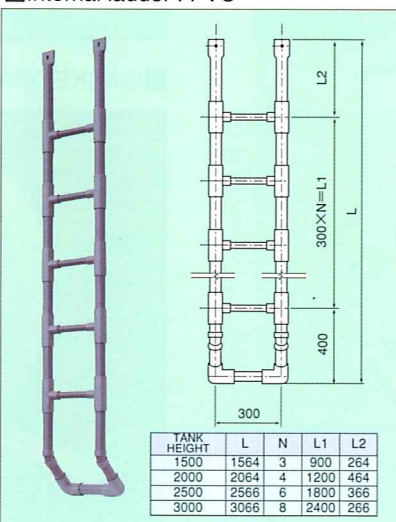
■ Socket for Ball valve : Bronze



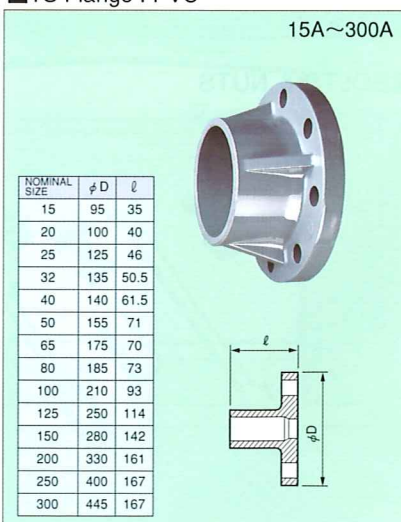
■ External ladder : Galvanized steel



■ Internal ladder : PVC



■ TS Flange : PVC

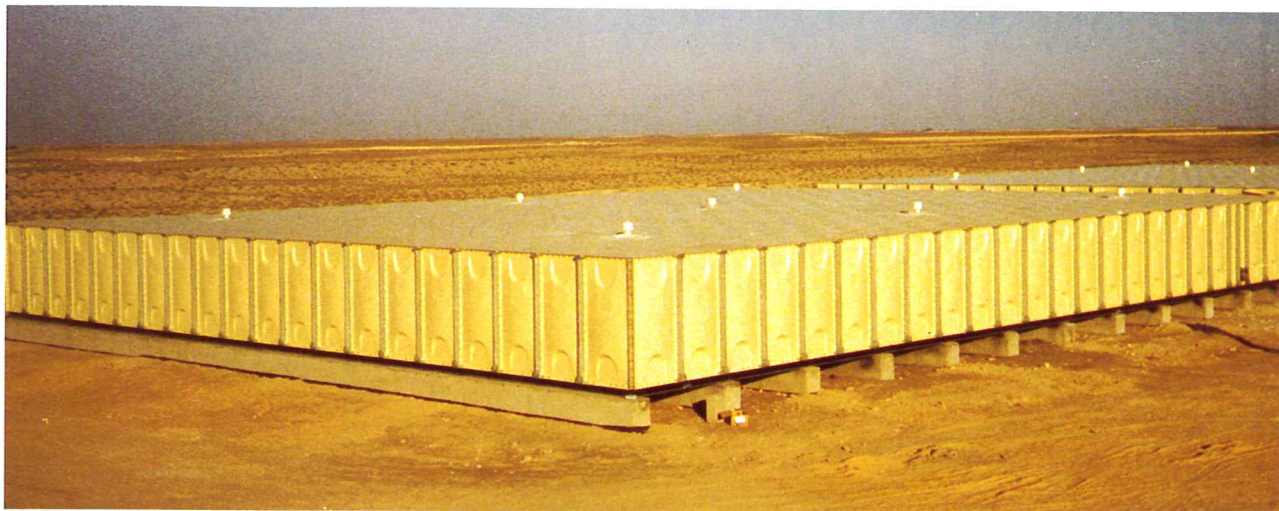


※A ladder is not attached for 1 mH tank
 ※A ladder with safty cage is provided as option

Standard : JIS

HISHITANK

delivered to various places



GE 1,000m³ in U.A.E.
20×25×2mH 2units



GE 40m³ in BRUNEI
4×4×2.5mH



GSE 288m³ in BRUNEI
8×12×3mH



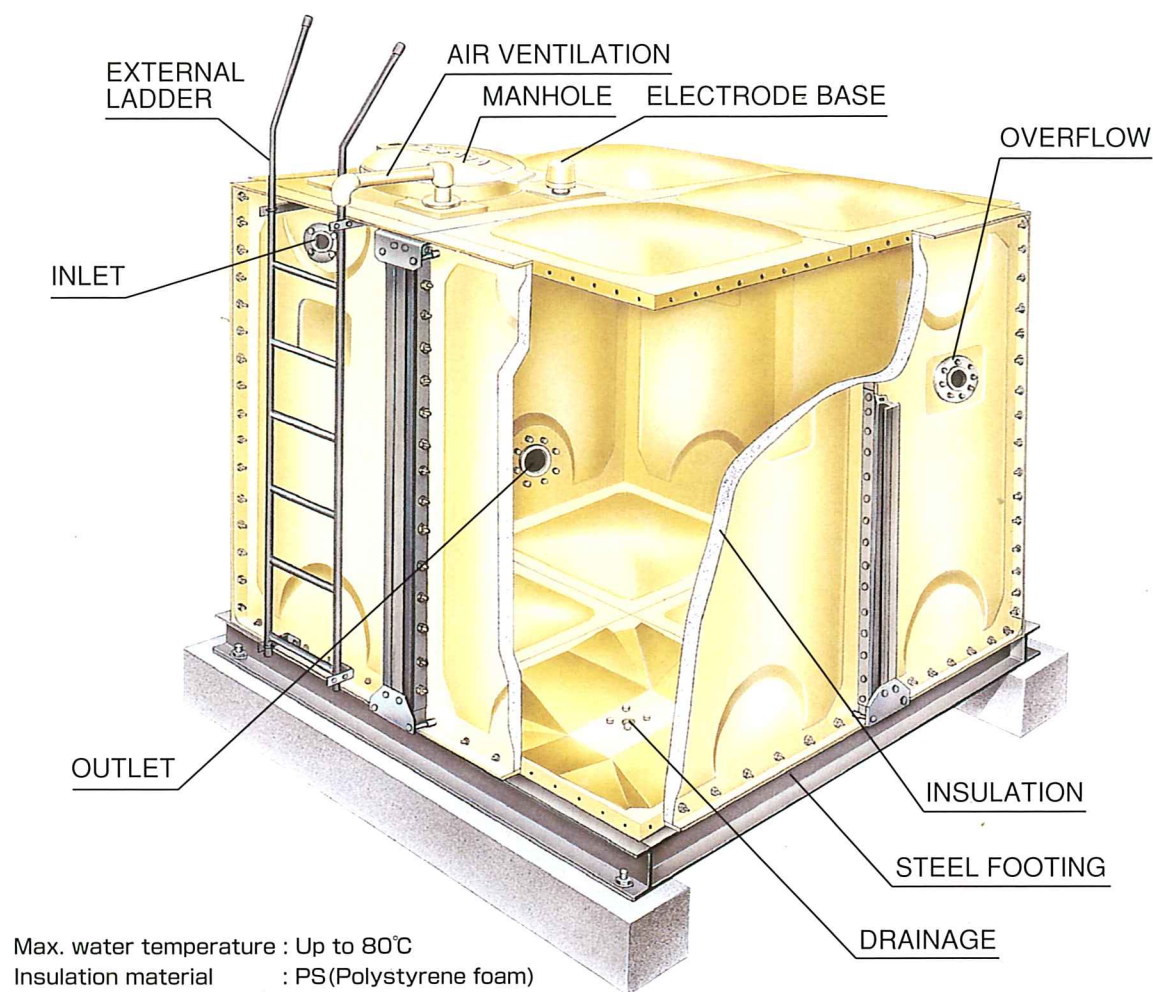
GSE 48m³ in JAPAN
3×4×4mH



GE 150m³ in JAPAN
9×10×2mH+2×6×2mH

Related Product

HISHITANK U-panel Heat storage tank



 **mitsubishi PLASTICS, INC.**

Yamaguchi 7 Bldg, 19-9 Taito 4-chome, Taito-ku, Tokyo 110-8573, Japan TEL. 3-3834-8868

URL <http://www.mpi.co.jp>

CAUTION UPON USAGE

- * Please proceed with maintenance of water tank in accordance with "Operating Instruction" provided by our Company.
- * Damage to water tank may be caused if modification or change is made to it. If any modification or change is necessary, please call upon us.
- * If any damage to the water tank is found by the periodical inspection, please be sure to contact our distributor for determining if repair is necessary, etc. If any damage or accident is caused by the continued use of water tank as it is or just by an emergency repair, it would fall into the exemption item.

The information contained herein is, to the best of our knowledge, accurate but it is offered for consideration and guidance only. All recommendations or suggestions are made without guarantee.

MITSUBISHI PLASTICS, INC. disclaims any liability for loss or damage incurred in connection with the use of materials described in this brochure.

By the policy of constant improvement of design and performance, MITSUBISHI PLASTICS, INC. reserves the right to make amendments to the specifications stated without notice.

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