



ALAM TIMUR INDUSTRIES SDN. BHD.

PRESSED STEEL SECTIONAL RECTANGULAR TANKS



MALAYSIA

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GENERAL

The pressed steel sectional rectangular tank is a versatile bulk storage container of water. The sectional construction concept consists of bolting up together mass produced tank panels (either 1.22m or 1.0m square) into tanks of various sizes and capacities. The tanks manufactured and installed by us are renowned for their quality and reliability. This is brought about by our relentless effort in the application of the best engineering practices in the production processes and the related services offered by us. Our tanks are widely used in Malaysia and the neighbouring countries of South-east Asia and have also been exported to many other parts of the world.

MATERIALS

- Mild Steel Panels : SS 400 or JIS G3101 or BS EN 10025-3 : 2004
- Stainless Steel Panels : AISI Grade 304 and 316

PANEL SIZES

- For 1220 x 1220 module : 1220 x 1220, 610 x 1220 and 610 x 610
- For 1000 x 1000 module : 1000 x 1000, 500 x 1000 and 500 x 500

FLANGES OF PLATES

Each individual panel is hydraulically pressed with a combined double flange at an angle of 45° and 90° to the face of the panel on all 4 sides.

PANEL COATING AND LINING

- Bitumen painted, hot-dipped galvanized, epoxy or polyester, powder coated for mild steel panel.
- High-density polyethylene (HDPE) internal lining of completed tank.
- Fibreglass internal lining of completed tank.

TANK COVERS

- Pressed steel sectional panel cover.
- Pitched roof cover sheets (only upon request).

Each compartment is provided with a hinged manhole and an air vent.

LEVEL INDICATOR

- Mechanical of cat-and-mouse type in metric scale.
- Direct reading acrylic glass tube indicator.

LADDERS

- Internal and external ladders of mild steel (bitumen painted, hot-dipped galvanized, epoxy powder coated, etc), aluminium, PVC and stainless steel.
- Security cage for external ladder also available.

BALL VALVE BOXES AND BOTTOM SUMPS

Ball valve boxes and bottom sumps at client's request will provide added capacity to the storage tank.

HOLE OPENING AND PIPE FLANGES

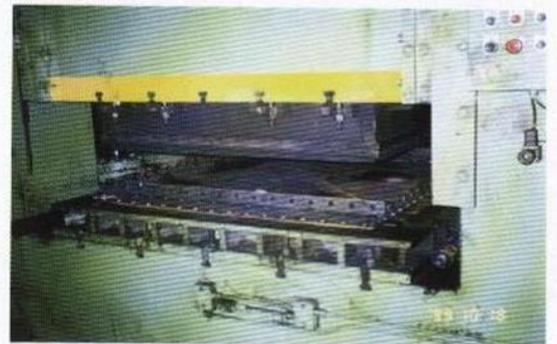
Hole opening and welded pipe sockets and flanges are provided at client's request.



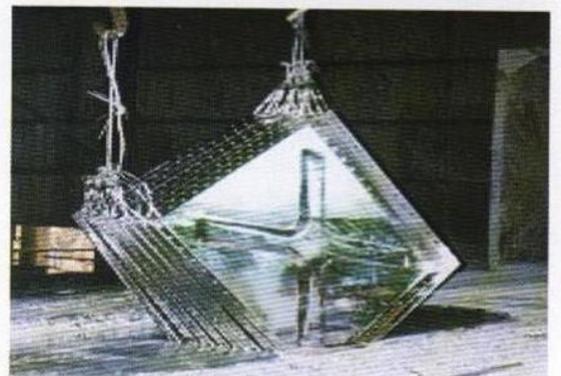
Our dedicated staff



Panel holes punching machine



Pressing



Hot dipped galvanising in progress

SEALANT

For the jointing of panel flanges, we provide high density ultra-violet resistance PVC foam gaskets (approved to DIN 4102 Pt1 B2). Specially designed butyl rubber mastic compound provided for the cleats offers excellent water tight joints.

INFORMATION FOR SITE ASSEMBLY

Illustrated erection instructions, drawings and parts list are issued with each tank delivery.

STEEL STAND

We also provide fabrication of mild steel stands for tanks on ground, building floors and elevations.

TANK ERECTION

Erection service for both local and oversea jobs is provided.

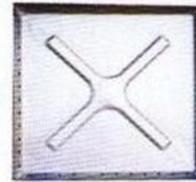


Hydraulic press machine

QUOTATION

To obtain a quotation, the following informations are needed :-

- Size of tank in terms of length, width and height. Otherwise give capacity or sketch of tank layout.
- State choice of using 1.0m x 1.0m or 1.22m x 1.22m panels.
- Number and positions of storage compartments required in each tank.
- Type of storage liquid and storage temperature.
- Materials and thickness for panels e.g. mild steel, stainless steel and grade.
- Coatings e.g. painting, hot-dipped galvanised, HDPE lining, etc.
- State if there is any limitation to tank height or tank area.
- Sketch and details of pipe connections and other ancillary fittings.
- Details of ladders and level indicators.
- Any grillage or steel stand required?
- Is installation service required?
- Location for tank to be delivered. For orders that required shipment, state port of entry.



Hot-dipped galvanised



Bitumen painted panel



Stainless steel panel



Roller painted panel



Polyester powder coated panel



Hot-dipped galvanised half panel



Hot-dipped galvanised roof panel



Hot-dipped galvanised manhole panel

SUPPORT STRUCTURES

TANK ON DWARF WALLS

- A clearance of 600mm is required around, above and below the tank for assembly and maintenance.
- The walls must be 150mm longer than the width of the tank.

Dwarf walls with steel skid beams-this is by far the best and cost effective way for tank to be sited on ground or building floor. The dwarf walls are usually built at spacing of either 2.0m or 2.44m depending on the types of plates used. I beams at 1.0m or 1.22m spacing are then placed at right angle across the top of the dwarf walls. See diagram A.

Dwarf walls without steel skid beams - the dwarf walls are built at a spacing of 1.0m or 1.22m. A mild steel capping flat of 9.0t is recommended to ensure evenness and protection for the dwarf wall. See diagram B.

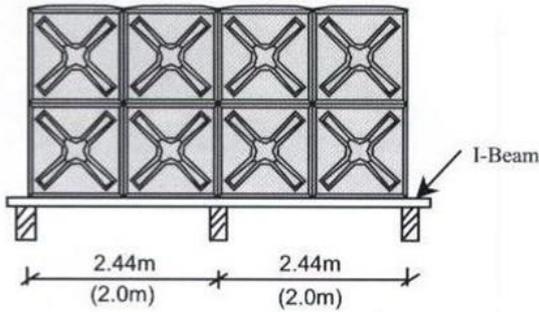


Diagram A

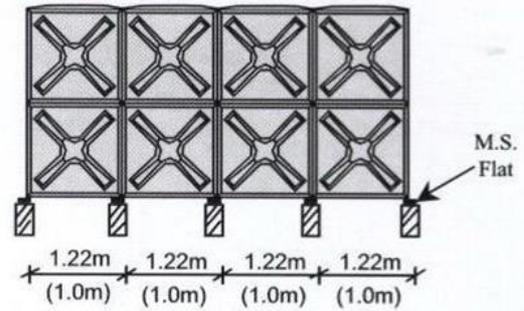


Diagram B



Tank on dwarf walls with steel skid beam



Tank on dwarf walls without steel skid beam

TANK ON STEEL STAND

- A 1.0m width walkway with protective rail around tank perimeter be provided.
- Preferably horizontal cross beams about 750mm below tank base be available for staging a temporary working platform to facilitate assembly and maintenance. See diagram C.

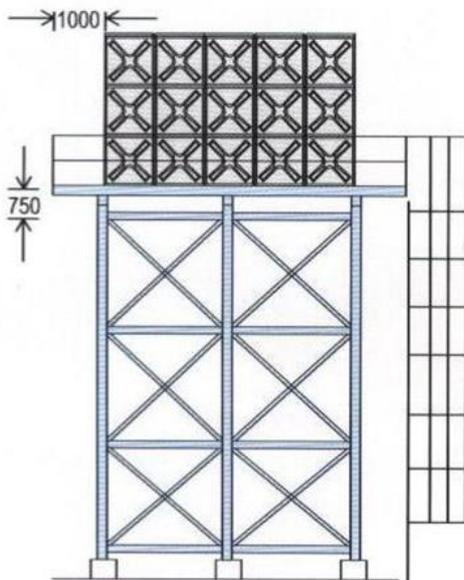


Diagram C



DIMENSION AND NOMINAL THICKNESS

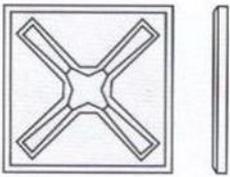
Module	Material	Tank Height mm	Tank Panel Thickness mm		Roof Panel Thickness mm
			Base	Wall	
1220 x 1220	mild steel	1220	5.0	5.0 (Tier 1)	1.5
		2440	5.0	5.0 (Tier 1, 2)	1.5
		3660	5.0	5.0 (Tier 1, 2, 3)	1.5
		4880	6.0	6.0 (Tier 1)	1.5
				5.0 (Tier 2, 3, 4)	
1220 x 1220	stainless steel	1220	2.5	2.5 (Tier 1)	1.5
		2440	3.0	3.0 (Tier 1, 2)	1.5
		3660	4.0	4.0 (Tier 1)	1.5
				3.0 (Tier 2, 3)	
		4880	5.0	5.0 (Tier 1)	1.5
		4.0 (Tier 2)			
			3.0 (Tier 3, 4)		

Module	Material	Tank Height mm	Tank Panel Thickness mm		Roof Panel Thickness mm
			Base	Wall	
1000 x 1000	mild steel	1000	3.0	3.0 (Tier 1)	1.5
		2000	3.0	3.0 (Tier 1, 2)	1.5
		3000	4.0	4.0 (Tier 1, 2, 3)	1.5
		4000	4.0	4.0 (Tier 1, 2, 3, 4)	1.5
		5000	5.0	5.0 (Tier 1, 2)	1.5
				4.0 (Tier 3, 4, 5)	
		6000	5.0	5.0 (Tier 1, 2)	1.5
			4.0 (Tier 3, 4, 5, 6)		
1000 x 1000	stainless steel	1000	2.5	2.5 (Tier 1)	1.5
		2000	2.5	2.5 (Tier 1, 2)	1.5
		3000	2.5	2.5 (Tier 1, 2, 3)	1.5
		4000	3.0	3.0 (Tier 1)	1.5
				2.5 (Tier 2, 3, 4)	
		5000	4.0	4.0 (Tier 1)	1.5
				3.0 (Tier 2, 3, 4, 5)	
		6000	5.0	5.0 (Tier 1)	1.5
				4.0 (Tier 2)	
				3.0 (Tier 3, 4, 5, 6)	



thickness in compliance with BS 1564 : 1975

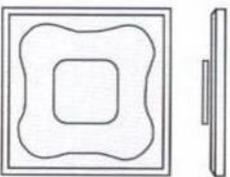
TYPES OF TANK PANELS



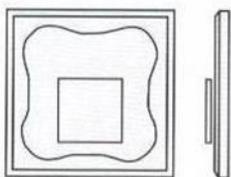
Full Size Tank Panel
Base, Wall



Full Size Flat Panel
Piping (Large Dia.)



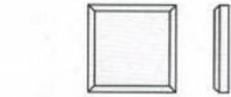
Full Size Roof Panel



Manhole



Half Size Flat Panel
Base, Wall, Roof

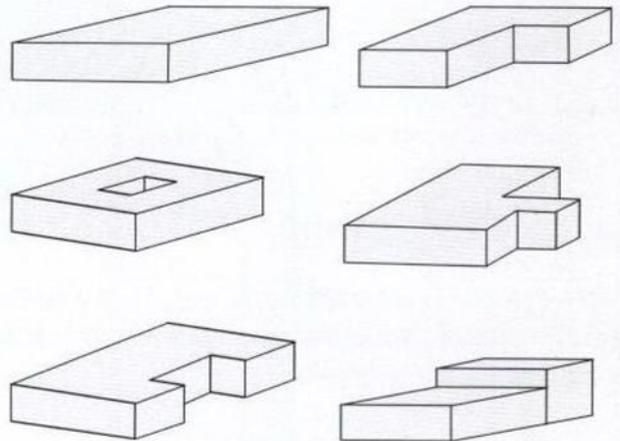


Quarter Size Flat Panel
Base, Wall, Roof

Full Size = 1220 x 1220 and 1000 x 1000
 Half Size = 1220 x 610 and 1000 x 500
 Quarter Size = 610 x 610 and 500 x 500

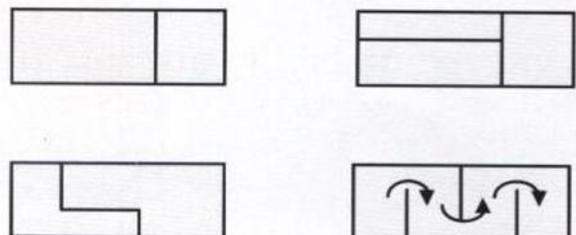
CONFIGURATIONS

The following configurations are possible :-



TANK DIVISIONS

The following divisions within tank are possible :-



(Circulation)



Sarawak (Malaysia)



Singapore



Johor (Malaysia)



Perak (Malaysia)



Negeri Sembilan (Malaysia)



Singapore