

## COMPANY PROFILE

### Mawongpa's Prefab water STORAGE TANKS

MAWONGPA WATER SOLUTIONS PVT. LTD, organization with its excellent service, product quality and proven track record, has established itself as the Premier OEM manufacturer and turnkey service-provider of LIQUID STORAGE TANKS. Our products is highly customised ZINCALUME Tanks best fit for storage water, waste-water, oil, chemicals, molasses etc. Mawongpa water solutions has executed more than 30 tanks and installations in approximately 4 Dzongkhags



With 10+ years of experience in assembling and manufacturing, Mawongpa water solutions private limited is committed to create innovative ideas for Storage Tanks and Storage Silos through constant research and development. We are pledged to deliver the best quality

and innovative technologies to our clients, keeping up with the ever changing requirements of the industry. Incepted in 2015, our company has earned an expertise in fabricating and engineering steel structures in multiple dimensions. We provide design & manufacturing engineering support, outstanding customer service, consistent product quality, and on-time delivery of our products. The combination of our Zincalume technology and our experienced engineering staff allows us to reduce costs significantly, delivering on time, every time.

## **Our Products including water filtration systems**

- Liquid Storage Tanks Zincalume Tanks
- SS Water filtration systems
- SS water sinks
- Mawongpa housing filters
- Wilo pumps
- Electrical panels.
- DBOT or rental programs in schools, offices and homes.
- Free public drinking water.

**In Compliance With:** AUSTRALIAN STANDARDS FM GLOBAL STANDARDS INDIAN STANDARDS

**1. VOLUME** :Mawongpa tanks range from 5 cubic meters to 5000 cubic meters.

**2. PREFABRICATION** :Our prefabricated design allows the tank to be dis-assembled and relocated as many times as desired.

**3. LINER** : Rostfrei offers a range of state-of-the-art liner technologies suitable for almost all applications. Our reinforced liners are capable of supporting water pressures of more than 2kg/cm<sup>2</sup> and are capable of storage of wide variety of liquids.

**Standard Liners** Manufactured from reinforced, multi-layered, food-grade anti-algae, UV stabilized PVC liner with a woven multifaceted nylon scrim, the Rostfrei liner is primarily used for installation in lighter commercial and rural domestic tank designs. Consisting of three bonded layers of PVC fabric, it ensures a homogenous bond between

each layer. The inert nature of the PVC prevents it from affecting the stored liquids.

#### **4. CORRUGATION TECHNOLOGY**

Our tanks come in a strong corrugated profile and are stiffened with unique ‘W’ stiffeners with much higher strength and reliability than normal one. Our unique corrugation technology of uniform pitch and depth makes it a premium one as it acts as a structural reinforcement and shock absorber for earth movement or soil subsidence.



#### **5. ZINCALUME**

Zincalume is the new cutting edge technology that has given our tanks the best enhanced and aesthetic features. Our expertise in manufacturing Zincalume tank sets us apart from others. “Zincalume tanks” are fabricated using the highest grade of “Zincalume steel” which lasts up to four times longer than galvanized steel and ensures superior performance and durability. Powered by hot galvanised AZ150 coating of 43.5% Zinc, 55% Aluminium and 1.5% Silicon, this extensive research technology makes Mawongpa take 30% to 40% more corrosion resistant than hot galvanized Z275 steel. With an increasing demand for its durability, resilience and sustainability, Zincalume is bound set the next generation standard in the coming years. The most unique feature that distinguishes Mawongpa tanks from other brands in the international market is that we use stainless steel materials in the area those are exposed to water and moisture.

## 6. BOLTED TECHNOLOGY

The well-devising bolting and welding features makes our tanks much easier to install and relocate. Unlike conventional tanks, our tanks do not require sealing and coating on-site.

## 7. CUSTOMISABLE

We provide tailored formations based on geographical and environmental conditions and also as per the requirements of our esteemed clients.



**TURBINE VENT & ACCESS HATCH  
or MANHOLE NOZZLES ANTI-VORTEX**

## Advantages

- Relocatable: Mawongpa tank supports easy relocation of the tanks anytime, even after years of use. The BOLTED Technology enables tanks to be dismantled and reassembled even if it requires changing site locations.
- Expandable: Our tanks supports expansion of tank capacities as and when required. Our team can work on expanding tank volumes anytime without posing any damage to actual tank.
- Highly cost-effective: tanks are highly cost-effective when compared to other traditional tanks.
- Easy to Install: Our tanks have pre-approved designs and take the least time for on-site installation.
- Transportable: Due to the materials used in our products these are light-weighted therefore they are easy to lift and handle. It makes our products easy to transport.
- Strong and Durable: The use high tensile strength of ZINCALUME steel make our products strong, making the longer life expectancy of our products up to 40-50 years.
- Maintenance free: Mawongpa tanks are very easy to maintain under general environment conditions, and if well-maintained our tanks enjoy wonderful longevity.

## Advantages that sets us apart

1. Environment Protected  
our tanks are designed to withstand cyclonic wind velocity of 88 m/sec and earthquake zone IV.



2. *Anti-vortex and nozzles*

### 3. Cage ladder, level indicator and side manhole



### Comparison

Mawongpa Zincalume and Colorbond steel kit form Storage Tanks with Liner	Bolted and welded Steel tanks without liner	Concrete tanks
High Grade Reinforced Liner. Forecasted to last 50- 60 years in a fully roofed tank. Using a liner ensures there is no contact between the steel structure and the stored water (no use of silicones or sealants required).	Water in direct contact with the steel structure compromising longevity of tank. Problems occur as a result of silicones used to seal bolt joins.	Concrete is porous in nature, which allows seepage of water over time. Since water is directly in contact with concrete wall, this eventually leads to cracking, spalling, scaling, lime deposition and contamination.
Flexible steel wall with a unique and strong corrugated profile. The internal liner and tank shell can move independently of each other.	Limited flexibility due to use of silicones or sealants overlap joints (these will break the tanks down over time).	Rigid, Inflexible structure incapable of withstanding movement without cracking. (Movement as a result of heavy machinery, unstable ground or soil subsidence).
Modular, kit form structure. Easy to lift and handle, can be installed almost anywhere. Can also be	Tank wall panels are considerably heavier and therefore more difficult to transport	Concrete tanks are not suited for hilly regions and irregular terrains due to difficulty to reach

installed on building roof tops and on project sites where space is restricted	and install on site, especially if site access is limited or restricted. Lager tanks will require the use of a crane to lift the wall panels into position.	locations or inaccessible sites.
Tanks can be shipped or transported almost anywhere. Each tank knocks down to only 1% of its fully assembled size, allowing us to pack between 15-25 units into a sea container. Tanks can be transported by sea, rail or air if required. Transported by sea, rail or air if required.	Installation of these tanks is subject to site access or weight restrictions. Damage to the coatings used to seal the steel can occur during transit.	These tanks have limitations as in where they can be transported and installed due to the lack of availability or locality settlements near the site of a batching plant.
Completely modular knock down design. All components are of consistent quality as they are produced in a controlled factory environment and checked prior to dispatch	Welded steel tanks require thorough labour intensive checking to ensure all joins are adequately sealed or water tight.	Not all batches of concrete are of the same quality or consistency. Longer installation and curing times will result from the material being of inconsistent quality and weaker areas will eventually cause cracking to appear in wall structure.
In the event of accidental damage, all components of the Mawongpa steel tank are replaceable. This means that the customer does not need to buy a new tank. Replacement parts can be air freighted if required.	Square and rectangular bolted steel tanks have a considerable amount of internal and external bracing. These bracings are in direct contact with	"Repairs are not effective and will not last and replacement costs are high. Mawongpa steel tank liners are often used to repair cracked or leaking concrete tanks

	<p>the stored water and will corrode after a period of time causing discoloration of the water.</p> <p>Replacement and refurbishment costs are very high.</p>	due to the economic cost."
The Mawongpa kit form tanks are demountable and can be relocated to a new location if required.	Steel bolted tanks can be relocated however considerable work and expense is required to do this.	Permanently installed structure that cannot be moved to another location without a great deal of difficulty or expense
Full range of factory pre-coated colors is available. Tanks can also be painted if desired.	Limited colors available.	Limited colors available.
Mawongpa Tanks can be commissioned and used immediately after installation. No curing process required. Tanks up to 248,000 litres in capacity can be installed in one or two days.	Construction time is considerably longer than the Mawongpa steel kit form tank.	Concrete tanks may take several days to complete. Curing can take up to 28 days depending on weather conditions at the time of installation.
All Mawongpa tanks contain a fully welded one piece liner (like a giant bag) no sealing is required.	End sealing of bolted steel tanks without a liner is a difficult task. These tanks do not have a continuous seal.	
Tank liner is designed to move with any flexing of the tank wall.	Steel floor has limited flexibility.	Concrete floor has limited flexibility.

Low cost for high quality product that is built to last. Installation is simple and fast and tanks can be filled immediately upon completion of construction.	High cost. Construction time is moderate however can be labour intensive due to the weight of the steel panels.	Highly labour intensive with considerable time required for construction.
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### Comparison between various types of tanks

Features	Our Tank	MS Tank	RCC Tank	SS Tank	PVC Tank
<b>Cost (Nu/litre)</b>	2.00 to 10.00	3.00 to 12.00	5.00 to 15.00	17.00 to 35.00	3.00 to 12.00
<b>Maintenance</b>	Not Required	Highly Required	Required	Not Required	Highly Required
<b>Food Grade</b>	Yes	No	No	Yes	Yes
<b>Algae Formation</b>	No	Yes	Yes	No	Yes
<b>Corrosion</b>	No	Yes	Negligible	No	No
<b>Relocation</b>	Easy	Difficult	Not Possible	Difficult	Easy
<b>Weight</b>	Light	Heavy	Very heavy	Heavy	Light
<b>Expandable</b>	Yes	No	No	No	No
<b>Liquid Temperature</b>	Negligible	Increase	Increase	Increase	Increase
<b>Life of complete tank</b>	40-60 Yrs	7-15 Yrs	30-80 Yrs	60-80 Yrs	5-10 Yrs
<b>Need painting/ coating</b>	No	Yes	Yes	No	No

### RESEARCH & DEVELOPMENT

Mawongpa believes in bringing out the best by constant learning and developing its products through continuous research by expert research and development team. We implement the best and the latest technology, 3-D CAD packages and other strategic changes in the products.

		ZA02	ZA03	ZA05	ZA06	ZA12	ZA15	ZA20	ZA25	ZA30	ZA40	ZA45	ZA50
No. of rings	wall height	Dia. 1.84	Dia. 2.77	Dia. 3.69	Dia. 4.61	Dia. 5.53	Dia. 6.46	Dia. 7.38	Dia. 8.30	Dia. 9.23	Dia. 10.15	Dia. 11.07	Dia. 12.00
R1	1.12	2.98	6.75	11.97	18.68	26.89	36.69	47.89	60.57	74.90	90.58	107.74	126.60
R2	2.08	5.53	12.53	22.23	34.70	49.93	68.14	88.93	112.48	139.10	168.22	200.09	235.12
R3	3.03	8.05	18.25	32.39	50.55	72.74	99.26	129.55	163.86	202.64	245.04	291.48	342.51
R4	4.00	10.63	24.09	42.75	66.73	96.02	131.04	171.02	216.31	267.51	323.49	384.79	452.16
R5	4.95	13.16	29.81	52.91	82.58	118.83	162.16	211.64	267.69	331.04	400.32	476.18	559.55
R6	5.90	15.68	35.54	63.06	98.43	141.64	193.28	252.25	319.06	394.57	477.15	567.57	666.94
R7	6.87	18.26	41.38	73.43	114.61	164.92	225.06	293.72	371.52	459.44	555.60	660.88	776.58
R8	7.82	20.78	47.10	83.59	130.46	187.73	256.18	334.34	422.90	522.97	632.42	752.27	883.97
R9	8.80	23.39	53.00	94.06	146.81	211.25	288.28	376.24	475.89	588.51	711.68	846.54	994.75
R10	9.76	25.94	58.79	104.32	162.83	234.30	319.73	417.28	527.81	652.71	789.32	938.89	1,103.27

		ZA60	ZA70	ZA80	ZA90	ZA100	ZA110	ZA120	ZA130	ZA140	ZA150	ZA160	ZA170	ZA180	ZA190	ZA200
No. of ring height	wall height	Dia. 12.92	Dia. 13.84	Dia. 14.77	Dia. 15.69	Dia. 16.61	Dia. 17.53	Dia. 18.45	Dia. 19.37	Dia. 20.29	Dia. 21.21	Dia. 22.16	Dia. 23.08	Dia. 24.00	Dia. 24.90	Dia. 25.85
R1	1.12	146.76	168.41	191.80	216.44	242.56	270.18	299.28	329.87	361.95	395.52	431.74	468.34	506.42	545.11	587.50
R2	2.08	272.56	312.76	356.20	401.96	450.48	501.76	555.81	612.62	672.20	734.54	801.81	869.77	940.5	1,012.3	1,091.0
R3	3.03	397.04	455.60	518.89	585.54	656.22	730.93	809.66	892.42	979.21	1,070.7	1,168.0	1,267.0	1,370.0	1,474.7	1,589.4
R4	4.00	524.15	604.45	685.00	772.99	886.30	964.92	1,068.8	1,178.1	1,292.6	1,412.5	1,541.9	1,672.6	1,808.6	1,946.8	2,098.2
R5	4.95	648.63	744.30	847.69	956.58	1,072.0	1,194.0	1,322.7	1,457.9	1,599.7	1,748.0	1,908.1	2,069.8	2,238.2	2,409.2	2,596.5
R6	5.90	773.12	887.14	1,010.3	1,140.1	1,277.7	1,423.2	1,576.5	1,737.7	1,906.7	2,083.5	2,274.3	2,467.1	2,667.7	2,871.5	3,094.8
R7	6.87	900.23	1,033.0	1,176.4	1,327.6	1,487.8	1,657.2	1,835.7	2,023.4	2,220.1	2,426.0	2,648.2	2,872.7	3,106.3	3,343.6	3,603.7
R8	7.82	1,024.7	1,175.8	1,339.1	1,511.2	1,693.6	1,886.4	2,089.6	2,303.2	2,527.2	2,761.5	3,014.5	3,270.0	3,535.9	3,806.0	4,102.0
R9	8.80	1,153.1	1,323.2	1,507.0	1,700.5	1,905.8	2,122.8	2,351.5	2,591.8	2,843.9	3,107.6	3,392.2	3,679.8	3,979.0	4,283.0	4,616.0
R10	9.76	1,278.9	1,467.5	1,671.4	1,886.1	2,113.7	2,354.4	2,608.0	2,874.6	3,154.1	3,446.6	3,762.3	4,081.2	4,413.0	4,750.2	5,119.6

Tank sizes shaded Red are subject to Engineering and Design. Please refer Mawongpa for design requirements. Please note: All capacities are in Kilolitres

**Method of selection** Horizontally Dia in Mtr eg 1.84, 2.77, 3.69, 4.61.....

Vertically Height of tank in Mtr. eg 1.12, 2.08, 3.03, 4.00..... White column Volumes in Cub Mtr. eg 2.98, 6.75, 5.53, 12.53

#### For Example

If we are looking for a tank of 25KL then we have following options

Volume (Cub Mtr)	Dia (Mtr)	Height (Mtr)	Model
24.09	2.77	4.00	ZA03R4
22.23	3.69	2.08	ZA05R2