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R02023

HOT & COLD
WATER STORAGE TANKS

ABOUT

JJ·ALAN

Backed by a group considered a market leader in small, medium and large heating and cooling solutions. With decades of experience, the group has managed to establish itself as one of the leading players in the field. Well known for its installation in large electric, solar thermal, heat pumps and boiler systems, we have completed numerous commercial projects of residential and institutional nature.

Today the group can proudly boast of being associated with several world class brands and products to provide an integrated system whilst backing it up with quality, thereby creating a niche for itself. We can boast of a long list of satisfied clients who would vouch for the quality and reliability of our tanks.

VISION

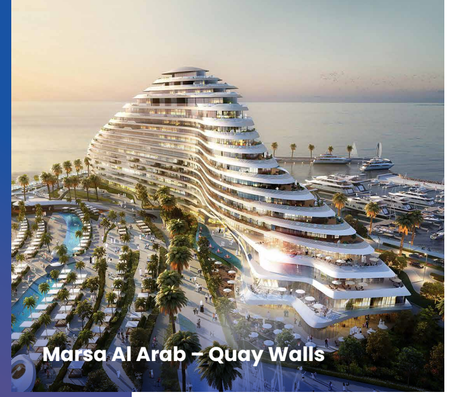
"To be a globally respected high-performance brand"

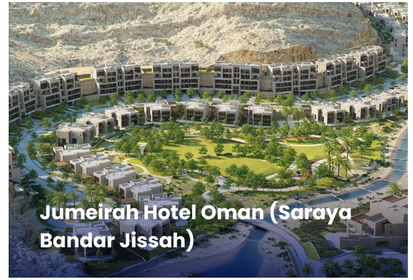
JJ ALAN tanks are manufactured to Pressure Equipment Directive EU/ ASME / DIN/ British standards depending upon the clients' requirements.

QUALITY

Complete due diligence and QC procedures are undertaken to guarantee complinace with the highest manufacturing standards to ensure the end user gets the right quality and durable product.

HIGHLIGHTING OUR **SUCCESSFUL ENDEAVORS**





PRODUCT FEATURES

TANK MATERIAL OPTIONS

High quality Stainless Steel - AISI 316 / 316L / 316 Ti

Duplex Stainless Steel is optional for higher mechanical strength applications

High quality non alloy low carbon steel Fe360/B, UNI7070 or S235 JR, EN 10025 or ASTM A36/283/516 build as per API 650

APPLICATIONS

Potable / drinking water for hotels, residential and industrial use

ANTI- CORROSION COATING

Untreated carbon steel is exposed to corrosion due to dissolved oxygen and mineral salts in the water. The below options need to be considered for open circuit water systems-

STAINLESS STEEL- SS 316 / 316 L / 316 TI

All stainless-steel products are subject to pickling and passivation surface treatments. This is the considered the best solution for hot water applications and can be manufactured in any capacity, small to large.

GLASS LINING/ INORGANIC LINING, UPTO 3000 LITERS

Inorganic food grade enamel according to standards DIN 4753.3 is a reliable and cheaper alternative to SS due to the inorganic composition and a strong bond created between the enamel and the metal's surface. Once baking is done at approximately 850C according to the Bayer method and DIN 4753.3 standard, the enamel does not absorb water or conduct ions. This vitrification process provides 99.9% protection to the metal surface. The remaining protection to the exposed 0.1% areas is achieved with Mg sacrificial or non-sacrificial permanent electronic anodes.

EPOXY/ ORGANIC COATING, UPTO 10,000 LITERS

This is an alternative to inorganic coating due to its tank size limitations. Organic enamel PTFE coating is suitable for contact with drinking water conforming to the EU directive n.76/893/EEC and suitable for drinking water as per DM 174/2004 conforming to EU directive n. 88/93CE. The coating is spray/hand painted once the tank is sand blasted inside and then washed with demineralised water and dried. The baking is achieved at lower temperatures of 240C-270C and the drying process is a lot quicker. The advantage of this type of coating is that it is not brittle unlike the inorganic coatings. It may be considered as a cheaper alternative to glass lining due to its sensitivity to chemicals, unaccustomed site conditions and lower life.

DIMENSION – UPTO 2000 LITERS CAPACITY

Rated Capacity, Liters		200	300	500	800	1000	1500	2000
Internal Diameter (d)	mm	500	500	650	800	800	1000	1200
External Diameter (D) with 50mm insulation	mm	610	610	760	900	900	1100	1300
Max Height (H) with 50mm insulation	mm	1400	1700	1800	1900	2150	2300	2350
Empty Weight	kg	65	75	110	135	175	250	295

DIMENSION –2500 TO 8000 LITERS CAPACITY

Rated Capacity, Liters		2500	3000	4000	5000	6000	8000
Internal Diameter (d)	mm	1200	1250	1400	1600	1700	1900
External Diameter (D) with 50mm insulation	mm	1300	1350	1500	1700	1800	2000
Max Height (H) with 50mm insulation	mm	2530	2800	2900	2900	3000	3300
Empty Weight	kg	340	395	586	693	790	1160

Dimensions are approximate for spatial requirements. Refer to final data sheets for actual.
*Larger tank capacities are possible upon request
*Tanks are customizable within limits and all parameters are subject to change for constant design upgradations.
*Working Pressures available are 6, 8, 10, 12, 16 & 20 bar.
*Test pressures are 1.3 times for ASME tanks and 1.43 times for PED tanks.
*Weights are approximate based on 6 bar pressure rating

INSULATION

In accordance with European Directives 2002/95/EC and 2003/11/EC, we use materials with high insulating capacity, which are CFC and HCFC free . The material has a dense cell structure (dozens per cm) containing gas with low thermal conductivity. The insulation ensures reduced heat loss and better energy efficiency. The types of insulation used are:

01 Rigid Polyurethane (PU) - Fire rated to class B3 (DIN 4102)

02 Soft Polyurethane (PU)

03 Rigid Polystyrene - Fire rated to class Euroklasse E (EN 13163)

04 Polyester fibre - Fire rated to CLASS 1 (UNI 9177), 100% recyclable

- All the insulated tanks for hot water, comply with the directive 2009/125/CE and 2010/30UE about energy efficiency.

OUTSIDE CLADDING

01 Aluminum stucco – Suitable for outdoor conditions

02 PVC external – Suitable for outdoor limited conditions

03 PVC internal – Suitable for indoor conditions only

HEATING **SOURCE**

HEAT EXCHANGER

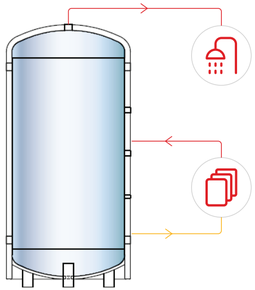
Internal SS 316/ Copper/ Coated Steel removable tube type or fixed coil to be connected to external solar / boiler / heat pumps heating sources

ELECTRIC ELEMENT

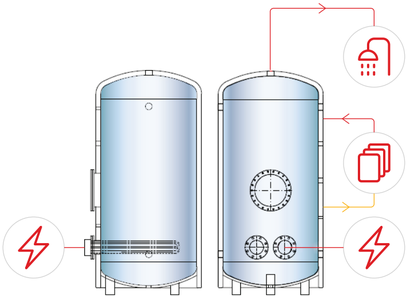
Long life, low W/cm2 and made of SS 316/ 316L/ Copper. Ceramic heating elements with very low W/cm2 density for long life and removing the elements without draining the tanks are an option

COMBINATIONS

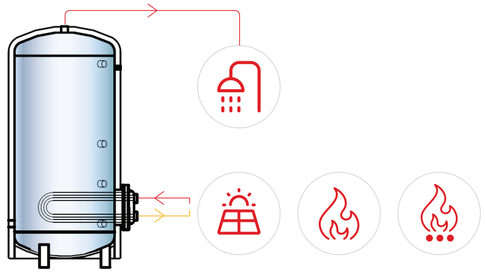
No Internal Heat Exchanger (suitable for External Plate Heat Exchanger)



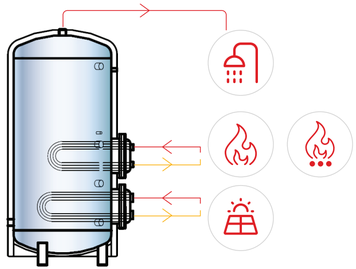
No Internal Heat Exchanger with Electric Backup



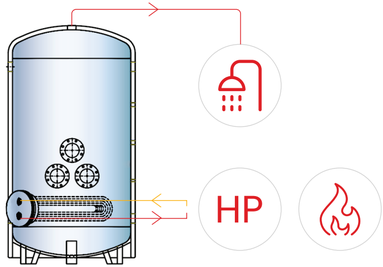
Single Internal Heat Exchanger



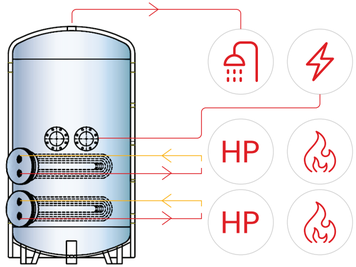
Double Internal Heat Exchanger



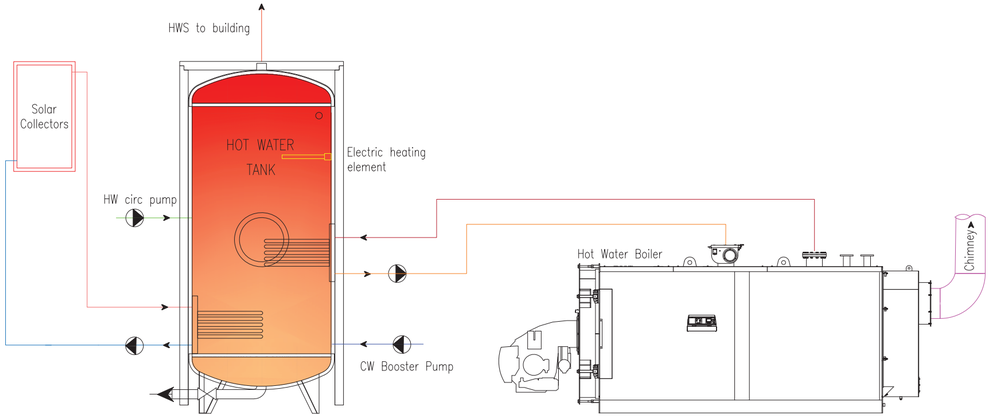
Single heat exchanger with Electric Backup

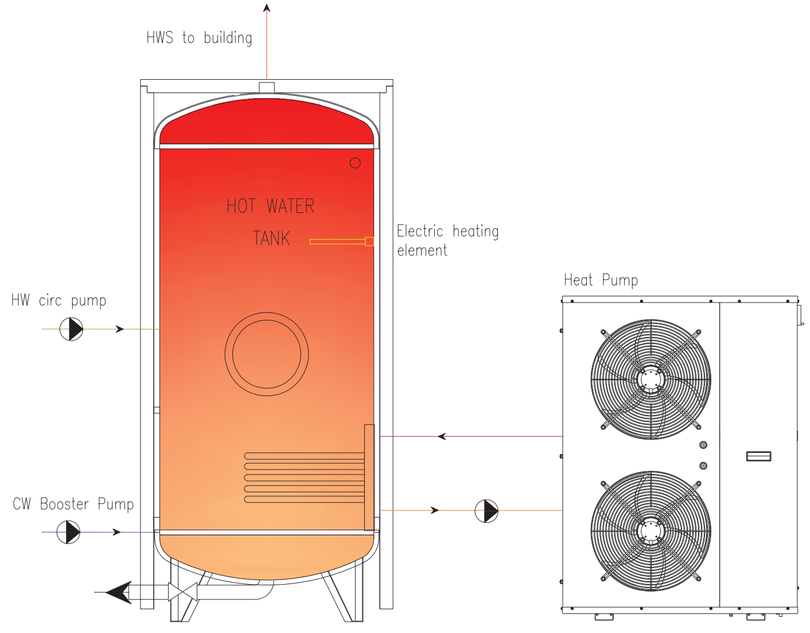


Double Heat Exchanger with Electric Backup



SCHEMATIC **DIAGRAM**





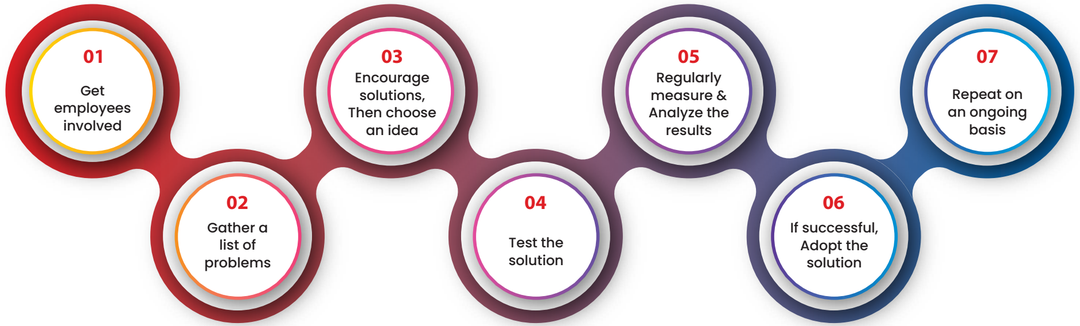
QUALITY POLICY &
KAIZEN - ISO 9001:2015

A Quality Policy is typically a brief statement that aligns with an organization's purpose, mission and strategic direction. It provides a framework for quality objectives and is a commitment to meet a client's requirements.

Kaizen is an approach to creating continuous improvement based on the idea that small, ongoing positive changes can reap significant improvements. Typically, it is based on cooperation and commitment and stands in contrast to approaches that use radical or top-down changes to achieve transformation. Kaizen is a cross of two Japanese words that together translate as "good change" or "improvement." However, it has come to mean "continuous improvement" over a period of time.

KAIZEN CYCLE FOR CONTINUOUS IMPROVEMENT

Kaizen requires identifying areas for improvement, Creating solutions and plans for a rollout - and then cycling through the process again for other issues or issues that were inadequately addressed.



A high-quality product that leads to high customer satisfaction is the main objective of our quality policy are and continual improvement in product quality and reliability, within a context of appropriate profitability. JJ ALAN is committed to pursuing these quality and improvement objectives and for this reason, quality is pursued in every step of the way. Quality methods are adopted in not only the design and development but also testing, delivery and in time-service of the finished products. The product comes with all user and installation manuals.

Product accountability is high and so the manufacturing process is tracked at every stage and each person is tied up to their work stage. Each person is held responsible for the quality of their own work. In case of a product failure, a NCR report is to be duly filled up by the end user and submitted with all the details such as serial number, model date of manufacture, project name and application among other details. The cause of failure will be assessed with a complete due diligence process.

ENVIRONMENTAL POLICY ISO 14001:2015

The latest version of ISO 14001 focuses on the improvement of environmental performance rather than the improvement of the management system itself. It also includes several new updates all aimed at making environmental management more comprehensive and relevant to the supply chain.

We recognize the importance of working in such a way that our actions and services create the minimum possible damage to the environment, adopting the principles of environmental protection and pursuing continual improvement of our environmental management system.

The guidelines that form the basis of our manufacturing process are:

- Reduction in energy consumption
- Reduction in the discharge of waste water and emissions into the atmosphere
- Use of best techniques and products within the processes to reduce environmental impact
- Prevention of pollution in any manner that is possible including the reduction in waste production in all departments Compliance with all
- legislation on environmental protection at all levels
- Continuous training of all personnel working in the organization on how to protect and value our environment and the effects that their activities may have on the environment

JJ ALAN is committed to constantly monitor the various environmental parameters so as to take prompt action should any situation occur that may have a significant environmental impact.

IMPRESSED CURRENT **CATHODIC PROTECTION (ICCP)**

Corrosion is a natural phenomenon that leads to the deterioration of the metal, due to its reaction with the environment that surrounds it. In tanks, the surface most sensitive to corrosion is the part in contact with water, being rich in oxygen, electrochemical phenomena are fed inside which can wear down the material itself. In this environment, galvanic currents develop, which develop when, which will affect the cathodic or anodic areas, based on the nobility of the material, or corrosion by oxygen, which develops from the reaction of oxygen in contact with the metal. The effectiveness of the phenomenon depends on the water values (pH, hardness, etc.) and on the type of system supplied with the tank.

To avoid the need to continuously monitor and replace magnesium anodes, some products can be fitted with a system for permanent protection of the steel by impressed current anode. This system guarantees continuous electrical protection over time using a titanium rod and a potentiostat: the instrument instantly compares the potential inside the tank against the theoretical potential and consequently applies the current needed to protect the entire storage cylinder. The system does not require maintenance, is not subject to any wear and is always effective.