

UNDERGROUND STORAGE TANKS
PERMATANKS



The petrochemical
industry's best value in
underground storage tanks.
Permatank®

Forgeweld has been manufacturing the Permatank® since 1992.
Today we are one of the world's major Permatank®
producers and our market keeps growing.

forgeweld

LEADERS IN STEEL TANK MANUFACTURE, SINCE 1963.



This revolutionary tank design, known as the "jacketed tank", was developed in the mid-1980s by the Permatank Corporation of the USA. It pioneered a lasting solution to environmental concerns. Permatank® double-wall tanks are not subject to rupture, cracking or the types of failure typical of other secondary containment systems. Forgeweld is the official supplier of Permatank® to Chevron South Africa.



Secondary containment: complete peace of mind

The Permatank® is a tough-as-nails 6 mm carbon steel (355JR) primary tank enclosed within a secondary containment tank of rock-hard Fibreglass Reinforced Polyester Resin (FRP).

The steel inner tank ensures structural strength and product compatibility (any type of fuel can be stored) while the FRP outer tank provides corrosion resistance and dependable secondary containment. Shipped with a factory installed Precision Test System to ensure double-wall integrity, it is designed for peace of mind.

The hermetically sealed outer tank of FRP completely isolates the primary tank from the underground environment. This coating is checked for discontinuities by a 35 000 volt holiday test over the entire surface. Once the coat has cured, a vacuum of 75 kpa is drawn on the interstice to provide moisture-proof tightness and longevity.

Your reassurance of long-life performance

- The outer tank is totally seamless. It covers 100% of the exterior of the inner steel tank.
- 100% corrosion protection is assured, without the need for sacrificial anodes.
- Tank openings are flush with the top and are laminated up to the threads. This eliminates the need for dielectric fittings.
- To prevent adhesion between the FRP and steel, a lining of standoff mesh and polyester film forms an interstitial.
- The tough FRP tanks are 100 mm thick.
- Factory-installed insulation pads protect the tank against any damage during transport or on-site storage.
- Striker plates under each tank opening provide interior corrosion protection.
- Zinc anodes eliminate the possibility of corrosion cells forming.

Exceeding the World's Toughest Standards

Our Permatanks® conform to and exceed some of the toughest standards in the world:

- UL 1746 Part III (Jacketed Tank): Underwriters Laboratory Standard for External Protection System for Steel Underground Tanks: this code makes it mandatory to provide monitoring of the interstice for leaks.
- SANS 1535 - Glass Reinforced Polyester Coated Steel Tanks for the Underground Storage of Hydrocarbons and Oxygenated Solvents Intended for Burial Horizontally: Regular inspections and tests by the SABS ensure our compliance with this standard.
- SABS 1531 Grade 355JR: the steel used in the manufacture of our composite tanks conforms to this specification (equivalent to Grade 43A of the applicable British Code).

Warranty policy: All storage tanks manufactured by Forgeweld Engineering (Pty) Ltd carries a warranty against defective materials and workmanship for a period of 24 months from the date of installation.



- No cathodic protection is required.
- Removable fitting lugs require zero FRP touching up or repair in the field.
- Reusable. Can be relocated.
- Multiple compartment tanks can be manufactured to specifications.

The most effective leak detection system

- Permatank® comes installed with its own integral precision test system that exceeds NFPA 30 standards, making it today's most sensitive leak detection technology available.
- It provides two-in-one monitoring: vacuum and liquid leak detection. It is triggered by the presence of both water and petroleum fuels.

- Thanks to continual self-monitoring, no field testing of the tank is needed prior to installation, which is a cost-efficiency.
- The Permatank® vacuum monitoring system consists of a vacuum gauge and conduit, both made of stainless steel.
- The system is shipped on the tank, ready for field installation.
- It is fully adjustable and can be adapted for remote service, up to 400 metres.
- The system is sealed for tamper-proof reading of the gauge. The capability for optional secondary monitoring is built in.

Sizes

The tanks are supplied in standard sizes ranging from 5 m³ to 45 m³ but larger units can be manufactured on request.

Tank dimensions and capacity

VOLUME m ³	IN. DIAMETER mm	OUT. DIAMETER mm	OVERALL LENGTH mm	SHELL THICKNESS mm	CALC. CAPACITY litres	APPROX. WEIGHT kg
4,5	1 810	1 817	1 900	6	4 835	1 107
9	1 810	1 817	3 600	6	9 161	1 600
14	1 810	1 817	5 500	6	13 996	2 146
23	2 318	2 330	5 500	6	22 851	2 921
30 Long	2 318	2 330	7 200	6	30 384	3 505
30 Dumpie	2 870	2 882	4 500	6	29 112	3 235
46 Long	2 318	2 330	10 800	6	45 576	4 807
46 Dumpie	2 870	2 882	7 200	6	46 579	4 360
60	2 870	2 882	9 800	6	60 164	5 285
83	2 870	2 882	13 160	6	83 150	7 009

For more details or to order, please contact your nearest Forgeweld office.

LEADERS IN STEEL TANK MANUFACTURE, SINCE 1963. FORGEWELD'S MISSION IS TO BE A LEADER IN FUEL STORAGE SYSTEMS BY PROVIDING ENVIRONMENTALLY FRIENDLY, INNOVATIVE, COST-EFFECTIVE, INTERNATIONALLY ACCREDITED PRODUCTS AND SERVICES.

Gauteng offices: PO Box 472, Hammanskraal 0400 • 101 3rd Street, Babalegi 0407, Gauteng, South Africa • Tel: +27 (0)12 719 9052 • E-mail: info@ forgeweld.com • Website: www.forgeweld.com
 KZN offices: PO Box 271, Mandini 4490 • 13 Blue Street, Isithebe 4491, KwaZulu-Natal, South Africa • Tel: +27 (0)32 459 2382 • E-mail: info@ forgeweld.com • Website: www.forgeweld.com