# UNIQUE.WORLDWIDE

## Behälter und Systemlösungen Tanks and System Solutions



LIPP Thermal Storage Tank, 5,200 m³ volume

# LIPP® Thermal Storage Tank from 2,000 to 6,000 m<sup>3</sup>

Automated welding process for carbon steel – longevity and low-maintenance

## Innovative heat storage system

The LIPP Thermal Storage Tank is a customized solution to effectively store excessive heat from biogas plants, biomass heating plants, solar plants or other heat sources.

## **Automated LIPP welding technology**

The carbon steel tanks are fabricated on site with the patented automated LIPP Welding Technology. The horizontal MAW-welding process enables the infinitely variable production of tanks up to 6,000 m<sup>3</sup> volume with horizontal welding only.

## **Fully equipped**

The large-volume, above ground storage tanks are fitted with all necessary safety and operation equipment. Additional, individual components according to client's specification can be considered. The roof and wall insulation is individually adapted to local conditions.

## Without ongoing operating costs

The LIPP Thermal Storage Tanks operate at atmospheric pressure, at a temperature of up to 95° C and are suitable for use with heating water. No additional nitrogen system necessary.



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# LIPP® Thermal Storage Tank for heating water



Insulation plates and water proofing

LIPP Stainless Steel membrane cover, self supported

Cladding: trapezoidal sheet metal

Mineral wool up to 400 mm

Tank wall: carbon steel

Interior fittings: carbon steel

Safety systems

Tank bottom: welded carbon steel plates

Foundation: concrete Insulation (under foundation)

# Major advantages

- · No ongoing operating costs
- Long durability
- · Low-maintenance
- · Tailored to individual requirements
- · Infinitely variable in diameter and height
- · Same quality worldwide
- · Only horizontal welds



## Technical data

## Volume

From 2,000 to 6,000 m<sup>3</sup>

## Diameter/Height

Infinitely variable from 8 m; Optimized diameter/height ratio

## Height

Variable

### Storage medium

Heating water up to 95° C According to VDI 2035 or AWG 510

## Operating pressure

atmospheric/ventilated Maximum pressure: 5 mbar Minimum pressure: -2,5 mbar Other pressures on request

## Operating temperature

Up to 95° C

## Materials

## Tank wall

Carbon steel grade: as required Material thickness: 3 – 10 mm

## Tank bottom

Carbon steel grade: as required Thickness: 5 - 10 mm

### Tank roof

SS 304 or 316L Thickness: 0,8 - 1,5 mm

## Components

Interior fittings, Manhole, diffusers, temperature sleeves etc. In specified carbon steel grade

## Construction

## Tank wall

Automated LIPP Welding Technology MAW welding, horizontal

## Tank bottom

Concrete foundation and insulation underneath Manually welded carbon steel plates, anchored on concrete Welding connection between floor and tank wall

## Tank roof

Free supported stainless steel membrane Insulation 100 - 400 mm Water-proofing and rain collecting system

## **Exterior wall**

Insulation: mineral wool 200 - 400 mm Cladding: trapezoidal sheet metal in standard RAL color

## **Certifications and Qualifications**

LIPP is ISO 9001:2015 certified. We are specialized manufacturer according to § 19 German Water Act and DIN-EN 1090-2 EXC 3. We are paying particular attention to the durability of our products, a professional execution and a solid workmanship in every detail due to qualified and certified technicians in house and on-site

#### Design and Manufacturing

Verifiable structural calculations according to EURO CODE III in connection with DIN EN1090-2

#### Documentation

Verifiable structural calculations, foundation plans, installation plans and as-built drawings as well as Operation and Maintenance manuals





LIPP GmbH

Industriestraße 27 73497 Tannhausen Germany Fon +49 7964 | 90 03-0 Fax +49 7964 | 90 03-27 info@lipp-system.de www.lipp-system.de