





Salvatore Loddo
Founder and Chief Executive Officer

TML was born in the mid-seventies as manufacturer of tanks.

Commercial reliability and the commitment of the management have led to the development of the whole structure through the creation of new factories, the use of advanced technologies, the expansion of staff and technical knowledge. Today the company has production units in two regions, Abruzzo and Sardinia and operates on an area of approximately 84,000 m² of which 22,500 are covered.

Thanks to a strong desire to grow up, to the incessant investment and collaboration with the University of Teramo, the TML steps forward the great challenges of future markets.

In the creation of its production structure, the TML has focused the attention on some key factors that have contributed to its competitive advantage:

- investment in human resources;
- technological innovation of the machinery;
- full automation of processes;
- the SWGV - SSIGE, IMQ, Giordano Institute, Solar Keymark, TÜV Certifications;
- the creation of a spin-off with the University of Teramo.

TML uses the latest technology and most advanced materials, listening to the needs of the customer and offering customized solutions by providing assistance before, during and after the purchase.

TML dedicates also a strong commitment to technology initiatives aimed at energy saving and environmental protection to ensure future generations a cleaner and healthier world.



The products of TML comply with Directive 2009/125/CE (ErP - Energy related Products)



Headquarters and Logistic
Floriano di Campli - Teramo
Total area: 44000 Sq.m
Covered surface: 6000 Sq.m



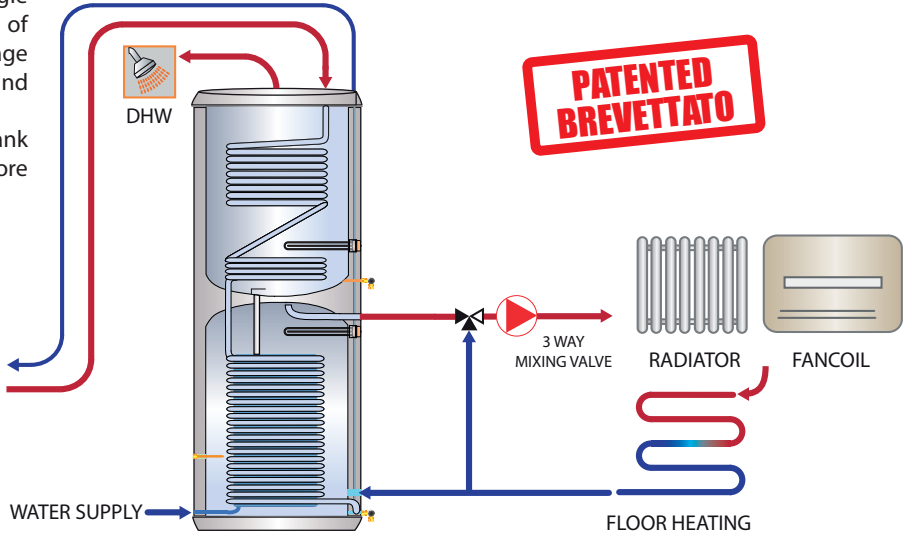
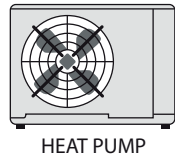
Main production site
Favale di Civitella del Tronto - Teramo
Total area: 35000 Sq.m
Covered surface: 14000 Sq.m



Production site
Abbasanta - Oristano
Total area: 5000 Sq.m
Covered surface: 2500 Sq.m

Combined Two in One for heat pumps with gas heat exchangers

The system consists of two water heaters in a single body. The upper tank is dedicated for the production of domestic hot water, the lower tank is a thermal storage for primary water. Both tanks are powered by a single and shared gas heat exchanger with enhanced capacity. The domestic hot water is preheated into the lower tank by an internal coil thus making a redundant and more efficient system.

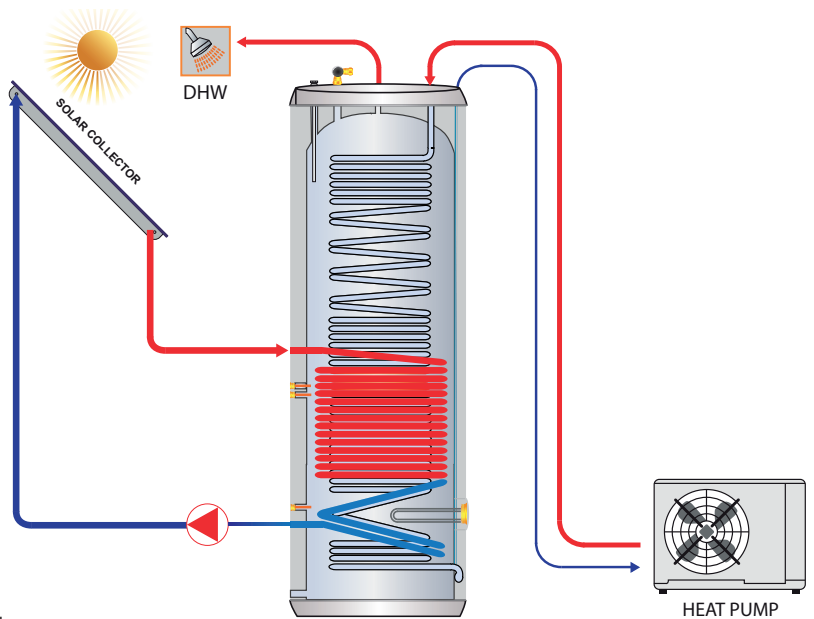


Domestic Hot Water	Material:	AISI 316L Stainless steel	Puffer	Material:	AISI 316L Stainless steel or S235 Jr
	Internal treatment:	Pickling and passivation		Internal treatment:	Pickling & passivation / no treatment
	External treatment:	Pickling and passivation		External treatment:	Pickling & passivation / no treatment
	Working/Operating (P max. / T max.):	10 bar / 95°C		Working/Operating (P max. / T max.):	3 bar / 95°C
Gas heat exchanger "pipe in pipe"	Material:	AISI 316L Stainless steel	General features	Capacity DHW/Puffer:	150/170 Lt - 400/480 Lt
	External treatment:	Pickling and passivation		Warranty:	5 years
	Working/Operating (P max. / T max.):	30 bar / 110°C		Thermal insulation:	Hard Polyurethane – ABS external jacket
	Pre-heating DHW heat exchanger	Material:		AISI 316L Stainless steel	Cathodic protection:
Inside treatment:		Pickling and passivation	Compliant to:	PED 2014/68/UE	
External treatment:		Pickling and passivation	ErP	Directive 2009/125/CE (Energy related Product)	
Working/Operating (P max. / T max.):		10 bar / 95°C		A class	

This product is manufactured under license of Polar Energi AS - Patent No US10077950 and EP2041496

Hybrid combined water heater for heat pumps and solar system with gas heat exchanger

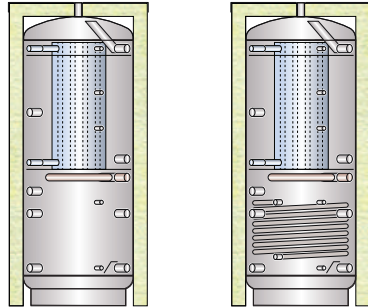
Water heater for the production of hot domestic water by a gas heat exchanger with enhanced capacity. The tank is integrated with a solar heat exchanger that can provide power to the DHW or to a heating system.



Domestic Hot Water	Material:	AISI 316L Stainless steel	General features	Capacity DHW/Puffer:	300 - 1000 Lt
	Internal treatment:	Pickling and passivation		Warranty:	5 years
	External treatment:	Pickling and passivation		Thermal insulation:	Hard Polyurethane – ABS external jacket
	Working/Operating (P max. / T max.):	10 bar / 95°C		Cathodic protection:	Impressed current anode
Gas heat exchanger "pipe in pipe"	Material:	AISI 316L Stainless steel	ErP	Compliant to:	PED 2014/68/UE
	External treatment:	Pickling and passivation		A class	Directive 2009/125/CE (Energy related Product)
	Working/Operating (P max. / T max.):	30 bar / 110°C			
	Solar/Heating heat exchanger	Material:		AISI 316L Stainless steel	This product is manufactured under license of Polar Energi AS - Patent No US10077950 and EP2041496
Inside treatment:		Pickling and passivation			
External treatment:		Pickling and passivation			
Working/Operating (P max. / T max.):		12 bar / 95°C			

Combined thermal storage Clever Tank

Buffer storage of primary water generated by discontinuous heat sources and instantaneous production of domestic hot water by means of an internal storage with an innovative heat exchanger. A smart partition systems guarantees a stable stratification.



**PATENTED
BREVETTATO**

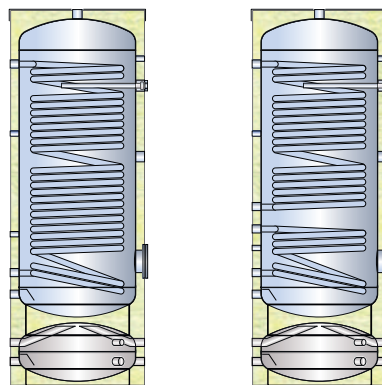
**NEW
PRODUCT**



Domestic Hot Water	Material:	AISI 316L Stainless steel	
	Internal treatment:	Pickling and passivation	
	External treatment:	Pickling and passivation	
	Working/Operating (P max. / T max.):	6 bar / 95°C	
Puffer	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	Anti rust painting	
	Working/Operating (P max. / T max.):	3 bar / 95°C	
Solar Heat Exchanger	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	No treatment	
	Working/Operating (P max. / T max.):	12 bar / 95°C	
General features	Capacities:	500 - 1000 Lt	
	Warranty:	5 years	
	Thermal insulation:	Hard/soft polyurethane or Polyester - Sky external jacket	
	Compliant to:	PED 2014/68/UE	
		Directive 2009/125/CE (Energy related Product)	
ErP	B class (for 500 Lt) C class (for 800 and 1000 Lt)		

Combined thermal storage Twin

The system consists of two tanks in a single body: the upper tank is a water heater for production and storage of Domestic Hot Water equipped with one or two heat exchangers that can be powered by a heat pump and a solar collector; the lower tank is a buffer tank for primary water for the heating system that is always powered by a heat pump. "Twin" is a cost effective and compact solution.



**NEW
PRODUCT**

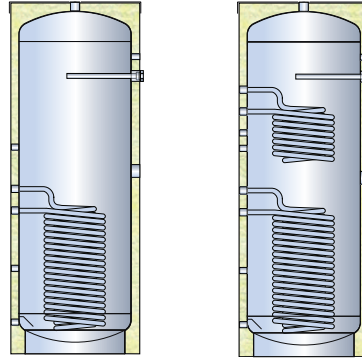


Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal/external treatment:	Pickling and passivation	Enamelling according to DIN 4753.3 / Painted
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C
Puffer	Material:	S 235 Jr (no internal treatment/externally painted)	
	Working/Operating (P max. / T max.):	4 bar / 95°C	
Heat Pump Solar Heat Exchanger	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal/external treatment:	Pickling and passivation	No treatment / Enamelling according to DIN 4753.3
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C
General features	Capacities:	200 - 500 Lt	200 - 500 Lt
	Warranty:	5 years	
	Thermal insulation:	Hard polyurethane - Sky external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode (for DHW tank)	
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
ErP	B class		

Stainless steel water heater with fixed coil Eco-Line

A on demand >>>

Water heater for production and storage of Domestic Hot Water complete with fixed heat exchanger manufactured using a spiral tube. New version with a new generation of heat exchangers.

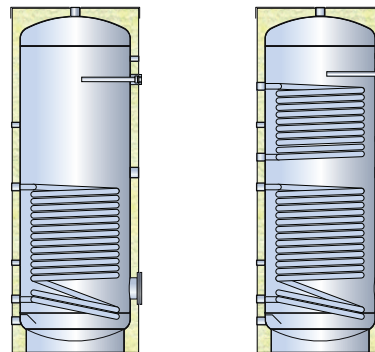


Domestic Hot Water	Material:	AISI 316L Stainless steel
	Internal treatment:	Pickling and passivation
	External treatment:	Pickling and passivation
	Working/Operating (P max. / T max.):	6 bar / 95°C
Solar/Boiler Heat Exchanger	Material:	AISI 316L Stainless steel
	Internal treatment:	Pickling and passivation
	External treatment:	Pickling and passivation
	Working/Operating (P max. / T max.):	12 bar / 95°C
General features	Capacities:	150 - 500 Lt
	Warranty:	5 years
	Thermal insulation:	Rigid polyurethane - Sky external jacket
	Cathodic protection:	Magnesium anode or impressed current anode
	Compliant with:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)
ErP	B class	

A on demand >>>

Water heater with fixed coil

Water heater for production and storage of Domestic Hot Water complete with a fixed heat exchanger manufactured using a spiral tube.

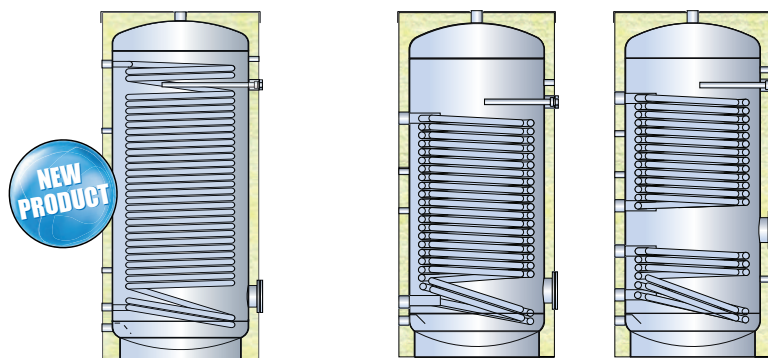


Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	External treatment:	Pickling and passivation	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C
Solar/Boiler Heat Exchanger	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal treatment:	Pickling and passivation	-
	External treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C
General features	Capacities:	200 - 5000 Lt	200 - 3000 Lt
	Warranty:	5 years	
	Thermal insulation:	Hard/soft polyurethane or Polyester - Sky external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode	
	Compliant with:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
ErP	B class (from 200 to 500 Lt)	C class (from 800 to 2000 Lt)	

Water heater for heat pumps

Water heater for production and storage of Domestic Hot Water featuring either one or two heat exchangers with enhanced capacity. Can be powered with heat pump or solar collectors.

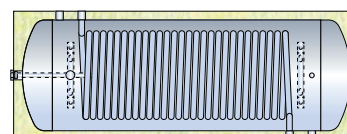
on demand **A**



Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	External treatment:	Pickling and passivation	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C
Solar/Boiler Heat Exchanger	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal treatment:	Pickling and passivation	-
	External treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C
General features	Capacities:	300 - 2000 Lt	300 - 1500 Lt
	Warranty:	5 years	
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKY external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode	
	Compliant with:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
ErP	B class (from 300 to 600 Lt) C class (from 800 to 2000 Lt)		

Wall boiler

Wall mounted water heater for the production and storage of domestic hot water with fixed coil heat exchanger. Vertical and horizontal configuration.

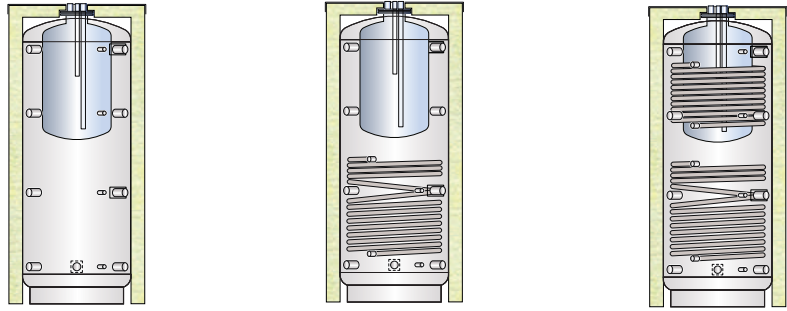


BM

		BM-X	BM-V
Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr glass lined
	Internal protective treatment:	Pickling e passivation	Enamelling according to DIN 4753.3
	External protective treatment:	Pickling e passivation	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C
Coil heat exchanger	Material:	Inox AISI 316L	S 235 Jr glass lined
	Internal protective treatment:	Pickling e passivation	No treatment
	External protective treatment:	Pickling e passivation	Enamelling according to DIN 4753.3
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C
General features	Capacities:	100 - 150 - 200 Lt	
	Warranty:	5 years	5 years
	Insulation:	Rigid polyurethane thickness 25mm + Sky external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode	
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
ErP	C class		

Combined thermal storage Kombinox - Kombiglass

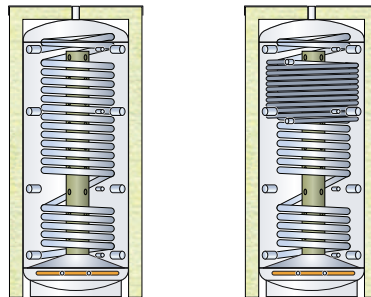
Buffer storage of primary water generated by discontinuous heat sources and production of domestic hot water by means of an internal water heater.



Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr Glass lined
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	External treatment:	Pickling and passivation	Anti rust painting
	Working/Operating (P max. /T max.):	10 bar / 95°C	10 bar / 95°C
Puffer	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	Anti rust painting	
	Working/Operating (P max. /T max.):	3 bar / 95°C	
Solar/Boiler Heat Exchanger	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	No treatment	
	Working/Operating (P max. /T max.):	12 bar / 95°C	
General features	Capacities:	600 - 2000 Lt	
	Warranty:	5 years	
	Thermal insulation:	Hard/soft polyurethane or Polyester - Sky external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode (for DHW tank)	
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
ErP	B class (for 600 Lt) C class (from 800 to 2000 Lt)		

Combined thermal storage Solarmax

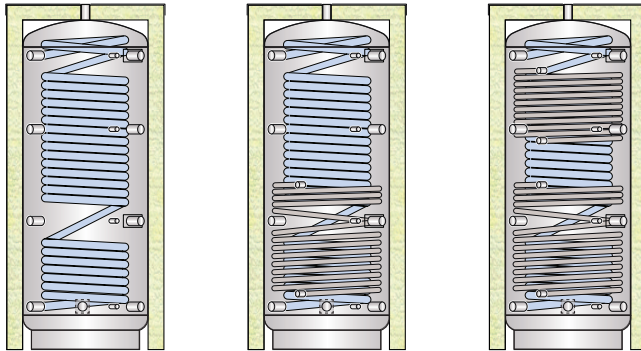
Buffer storage of primary water generated by discontinuous heat sources and instantaneous production of domestic hot water by means of high performance stainless steel corrugated pipe heat exchanger. The primary water is distributed by a system designed to enhance the performance even in the most critical working conditions.



Domestic Hot Water	Material:	AISI 316L Stainless steel	
	Internal treatment:	Pickling and passivation	
	External treatment:	Pickling and passivation	
	Working/Operating (P max. /T max.):	6 bar / 95°C	
Puffer	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	Anti rust painting	
	Working/Operating (P max. /T max.):	3 bar / 95°C	
Boiler Heat Exchanger	Material:	S 235 Jr	
	Internal treatment:	No treatment	
	External treatment:	No treatment	
	Working/Operating (P max. /T max.):	12 bar / 95°C	
Solar Heat Exchanger	Material:	Copper finned coil	
	Internal treatment:	No treatment	
	External treatment:	No treatment	
	Working/Operating (P max. /T max.):	12 bar / 95°C	
General features	Capacities:	600 - 2000 Lt	
	Warranty:	5 years	
	Thermal insulation:	Hard/soft polyurethane or Polyester - Sky external jacket	
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
	ErP	B class (for 600 Lt) C class (from 800 to 2000 Lt)	

Combined thermal storage Maxiwarm

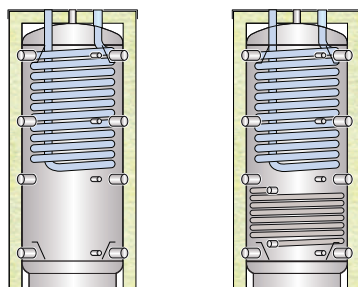
Buffer storage of primary water generated by discontinuous heat sources and instantaneous production of domestic hot water by means of high performance stainless steel corrugated pipe heat exchanger.



Domestic Hot Water	Material:	AISI 316L Stainless steel
	Internal treatment:	Pickling and passivation
	External treatment:	Pickling and passivation
	Working/Operating (P max. / T max.):	6 bar / 95°C
Puffer	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	Anti rust painting
	Working/Operating (P max. / T max.):	3 bar / 95°C
Solar/Boiler Heat Exchanger	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	No treatment
	Working/Operating (P max. / T max.):	12 bar / 95°C
General features	Capacities:	600 - 2000 Lt
	Warranty:	5 years
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKY external jacket
	Reference regulations:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)
ErP	B class (for 600 Lt) C class (from 800 to 2000 Lt)	

Combined thermal storage Smartwarm

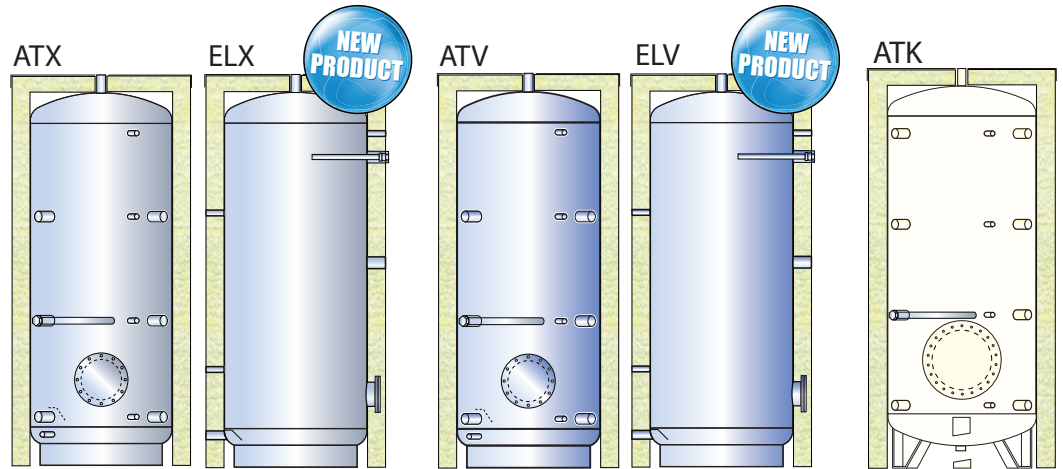
Buffer storage of primary water generated by discontinuous heat sources and instantaneous production of domestic hot water by means of high performance stainless steel corrugated pipe heat exchanger. Designed for small domestic systems.



Domestic Hot Water	Material:	AISI 316L Stainless steel
	Internal treatment:	Pickling and passivation
	External treatment:	Pickling and passivation
	Working/Operating (P max. / T max.):	6 bar / 95°C
Puffer	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	Anti rust painting
	Working/Operating (P max. / T max.):	3 bar / 95°C
Solar Heat Exchanger	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	No treatment
Boiler	Working/Operating (P max. / T max.):	12 bar / 95°C
	Capacities:	300 - 400 Lt
General features	Warranty:	5 years
	Thermal insulation:	Hard polyurethane - SKY external jacket
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)
	ErP	B class

Thermal Storage tanks

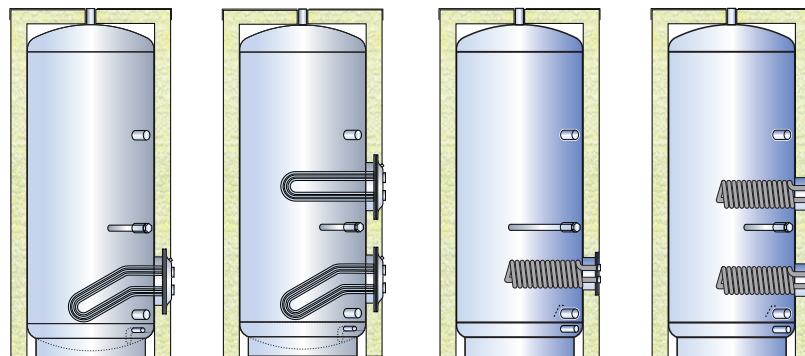
Thermal buffer for the storage of domestic hot water. The tanks are equipped with an inspection hatch that allows the installation of electric heating elements.



Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr glass lined	S 235 Jr Keramtech lined
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3	Alimentary epoxy-ceramic coating
	External treatment:	Pickling and passivation	Anti rust painting	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C	6 bar / 100° C
General features	Capacities AT (Capacities EL):	200 - 5000 Lt (200 - 1000 Lt)	200 - 3000 Lt (200 - 1000 Lt)	2000 - 5000 Lt
	Warranty:	5 years		
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKy external jacket		
	Cathodic protection:	Magnesium anode or impressed current anode		
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)		
ErP	B Class (from 200 to 500 Lt) C class (from 800 to 2000 Lt)			

Water heater with removable heat exchanger

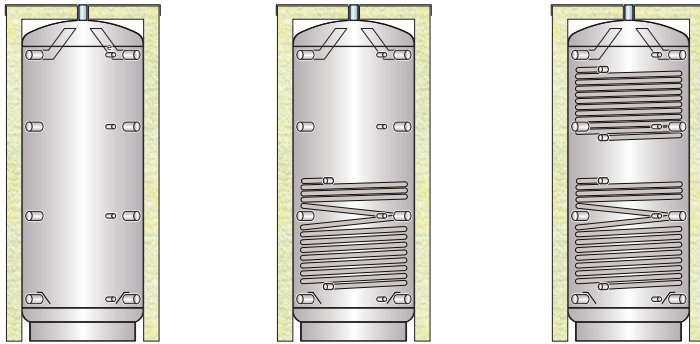
Water heater for production and storage of Domestic Hot Water featuring one or two exchangers.



Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr glass lined	S 235 Jr Keramtech
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3	Alimentary epoxy-ceramic coating
	External treatment:	Pickling and passivation	Anti rust painting	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C	6 bar / 100° C
Solar/Boiler heat exchanger	Material:	AISI 316L Stainless steel	U-Tube heat exchanger in copper or stainless-steel / tinned finned copper heat exchanger	
	Internal treatment:	Pickling and passivation	No treatment	
	External treatment:	Pickling and passivation	No treatment	
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C	
General features	Capacities:	200 - 5000 Lt	200 - 3000 Lt	2000 - 5000 Lt
	Warranty:	5 years	5 years	5 years
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKy external jacket		
	Cathodic protection:	Magnesium anode or impressed current anode		
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)		
ErP	B Class (from 200 to 500 Lt) C class (from 800 to 2000 Lt)			

Thermal storage Pufferspeicher

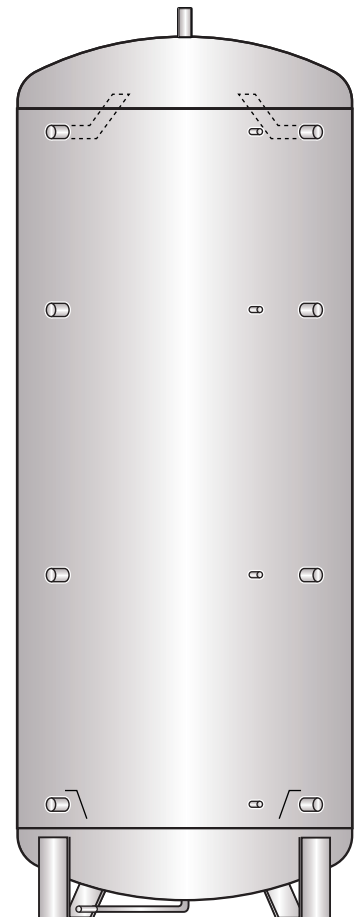
Thermal buffer for storage and production of primary water generated by discontinuous heat sources.



Puffer	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	Anti rust painting
	Working/Operating (P max. / T max.):	4 bar / 95°C
Solar Heat Exchanger	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	No treatment
Boiler	Working/Operating (P max. / T max.):	12 bar / 95°C
	Capacities:	300 - 5000 Lt
General features	Warranty:	5 years
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKy external jacket
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)
ErP	B class (from 300 to 500 Lt) C class (from 800 to 2000 Lt)	

Thermal storage Pufferspeicher Large Size

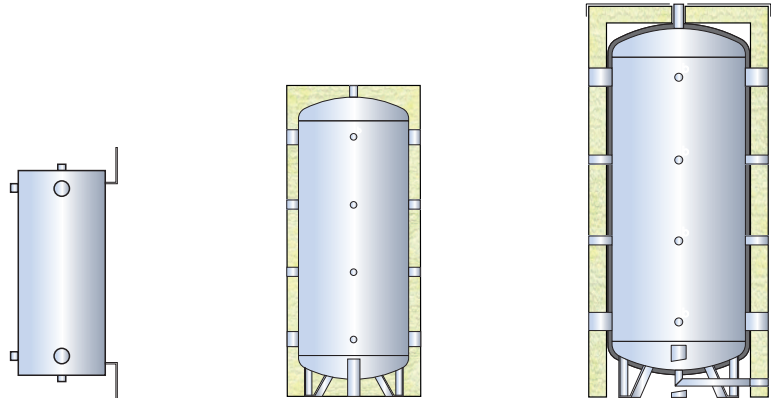
Thermal buffer for storage of primary water generated by discontinuous heat sources. Tanks of outstanding sizes for heating and cooling districts.



Puffer	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	Anti rust painting
	Working/Operating (P max. / T max.):	4-6 bar / 95°C
General features	Capacities:	6,000-100.000 Lt
	Warranty:	5 years
	Thermal insulation:	Hard/soft polyurethane or Polyester - SKy external jacket
	Compliant to:	PED 2014/68/UE

Hot and cold water storage tank

Buffer tanks for the storage of primary water designed for installations on systems that produce hot water in winter (solar collectors, biomass boilers, heat pumps etc) and chilled water during the summer (heat pumps).

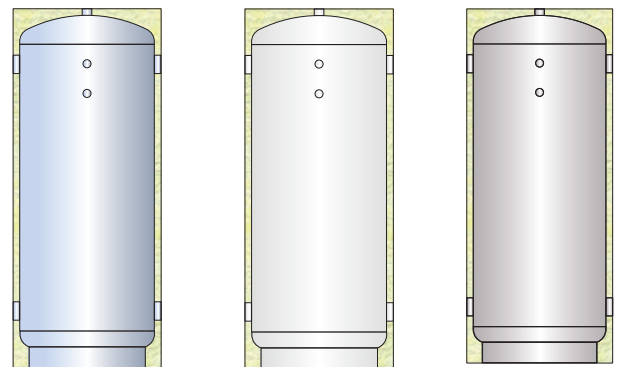


Storage	Material:	S 235 Jr
	Internal treatment:	No treatment
	External treatment:	Painted
	Working/Operating (P max. / T max.):	4 bar / -10/+95°C
General features	Capacities:	25 - 5000 Lt
	Warranty:	5 years
	Thermal insulation:	Hard polyurethane + Sky or ABS jacket / Pexl + Soft Poliurethan + Sky jacket*
	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)
ErP	B Class (from 25 to 500 Lt) C class (from 800 to 2000 Lt)	

** On demand with anti-UV PVC or embossed aluminum external finishing*

Storage tank for chilled water

Buffer tanks for the storage of chilled water for AC systems.



Storage	Material:	AISI 304 Stainless steel	S 235 Jr galvanized	S 235 Jr
	Internal treatment:	Pickling and passivation	galvanized	No treatment
	External treatment:	Pickling and passivation	galvanized	No treatment
	Working/Operating (P max. / T max.):	6 bar / -10/+60°C	6 bar / -10/+60°C	6 bar / -10/+60°C
General features	Capacities:	100 - 5000 Lt		
	Warranty:	5 years		
	Thermal insulation:	Hard polyurethane 25mm + Sky jacket / anti-UV PVC or Aluminium jacket (for outdoor)		
	Compliant to:	PED 2014/68/UE		

Plate Heat-Exchangers

The heat exchanger plate has the function to enable the transfer of heat between two fluids with different chemical-physical features, with no mixing between them.

These, are preferred compared to shell and tube heat exchangers, spiral, etc. in applications where there are important factors such as:

- Durability in time (guaranteed by the total inspection)
- Ability to change in future the performances through the addition or removal of intermediate plates
- Compact size
- Conditions of heat exchange to the physical limit (temperature difference of only 0.5° C)

The heat exchanger plate is built in compliance with the PED (14/68/UE) related to Pressure Equipment Directive.

The wide selection of plate heat exchangers offered by TML can cover a range of power from 15 kW to 700 kW. The TML is able to design any type of heat exchanger thanks to a dedicated software capable of simulating all operating conditions.



Fresh Water Module

Instant production of domestic hot water module, studied to satisfy the large flow demands (5-12 m³ / h).

The module is applied in residents heating systems, sports units, multi-family housing units, etc. and it's associated with technical water storage (Buffer) from which it takes the necessary thermal energy.

The kit consists of a inspectionable heat exchanger with stainless steel plates, primary modulating high efficiency pump, the multifunction electronic control unit, high sensitivity thermal-flow meter, brass fittings, stainless steel tubes, electric power supply panel.

Everything is pre-assembled and pre-wired in a rugged metal box thermally isolated placed on a wheeled base that facilitates the transport operations. The box is equipped with air vents for inner ventilation and large inspection doors to facilitate the maintenance operations.

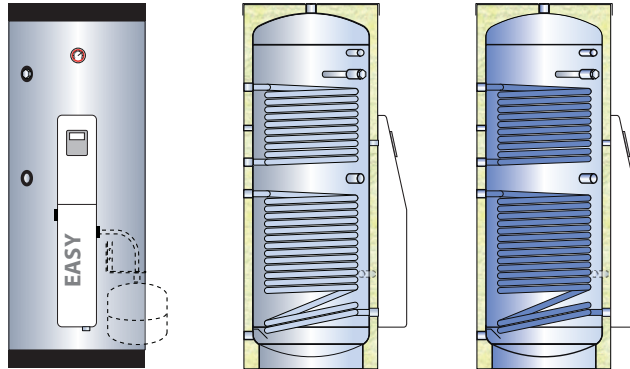
Advantages:

- It can satisfy large demands for domestic hot water;
- The high exchange efficiency allows use with low temperature water technique (heat pumps);
- High level of hygiene, guaranteed by the use of stainless steel and the low risk of legionnaire's disease (low levels of standing water);
- Small dimensions and easy installation and use.



Water heater with fixed coil and solar control panel Easy

Water heater for production and storage of Domestic Hot Water complete with a fixed coil heat exchanger manufactured using a spiral tube. It's provided by a solar station and a control unit for a direct connection to the solar collectors.



Domestic Hot Water	Material:	AISI 316L Stainless steel	S 235 Jr glass lined
	Internal treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	External treatment:	Pickling and passivation	Anti rust painting
	Working/Operating (P max. / T max.):	6 bar / 95°C	8 bar / 95°C
Solar/Boiler heat exchanger	Material:	AISI 316L Stainless steel	S 235 Jr glass lined
	Internal treatment:	Pickling and passivation	No treatment
	External treatment:	Pickling and passivation	Enamelling according to DIN 4753.3
	Working/Operating (P max. / T max.):	12 bar / 95°C	12 bar / 95°C
General features	Capacities:	200 - 500 Lt	
	Warranty:	5 years	
	Thermal insulation:	Hard polyurethane - Sky external jacket	
	Cathodic protection:	Magnesium anode or impressed current anode	
ErP	Compliant to:	PED 2014/68/UE - Directive 2009/125/CE (Energy related Product)	
		B class	

Solar Collectors PTML

The solar collectors PTML 2.1 and 2.6 PTML are characterized by a high absorbing surface, a high efficiency, a very fast and easy installation and a modern design. They are suitable for all applications in the field of solar thermal systems, they are adaptable to different surfaces, flat or tilted roof, also allowing a recessed installation.

The absorber is made of copper tubes and aluminum plate absorber with highly selective coating film metal-ceramic treated, laser welded, fully built by TML. The insulation of the collector is made of rock wool with layers of 50 mm in thickness.

Sheet of tempered glass protector sp. 4 mm prismatic low iron content that optimizes the properties of transmission and reduces reflection of sunlight (degree of transmission 91.5 %).

The case is made by a moulded aluminum body.



The kit for recessed mounting allows the integration of the collector into the roof improving the external design of the buildings.

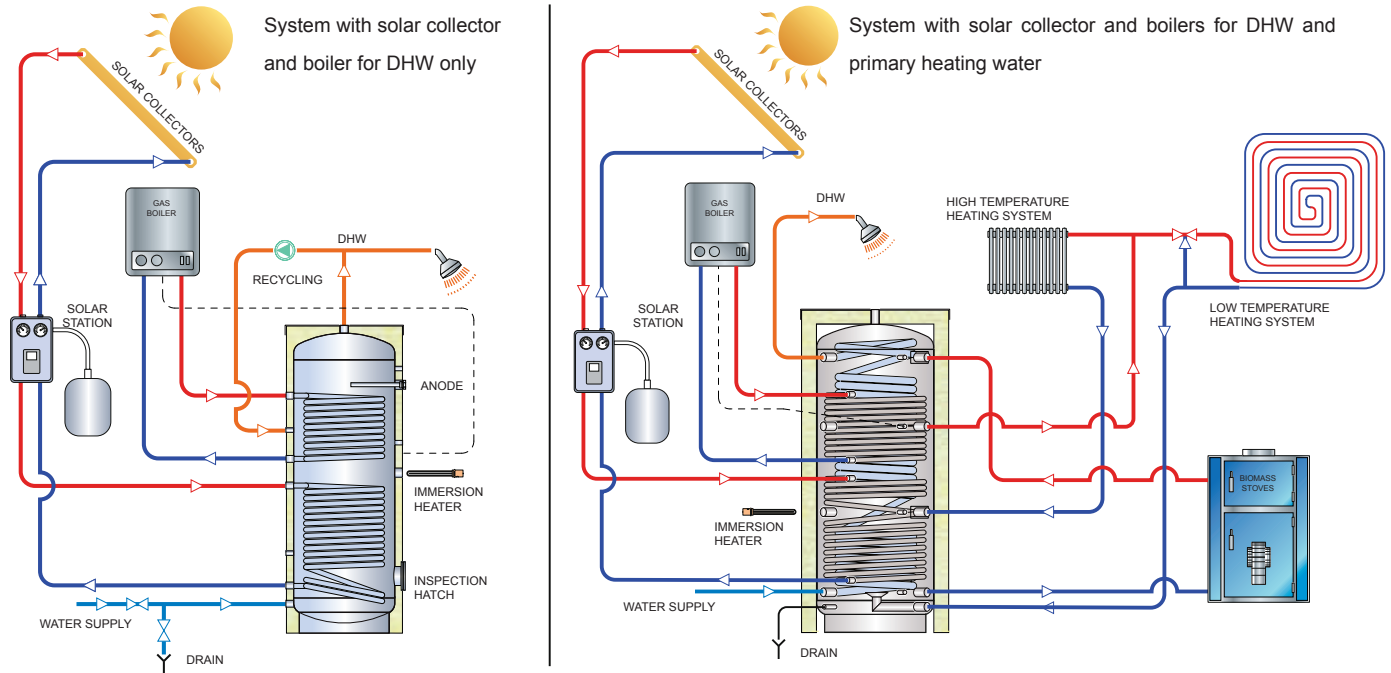


Technical informations	External dimensions	Surface	Absorbing surface	Liquid content	Absorpt.	Emission	Working pressure	Maximum pressure	Test pressure	Max. temp.	Stagnation temperature	Weight
PTML 2.1 AV	2125 x 1025 x 95 mm	2,178 mq	1,857 mq	1,231 mq	95 %	5%	6 bar	9 bar	16 bar	250 °C	205 °C	38,5 Kg
PTML 2.6 AV	2125 x 1275 x 95 mm	2,709 mq	2,328 mq	1,517 mq	95 %	5%	6 bar	9 bar	16 bar	250 °C	205 °C	48,5 Kg

Forced circulation solar power system

The forced circulation system is used to produce Domestic Hot Water and features a water heater unit fitted inside the house or building (instead of being installed on your roof). The heat transferring fluid will be directed from the collectors to the water heater by a circulation pump. The system improves the design of the building and at the same time ensure a better performance of the water heater due to a reduced heat loss. An electronic control unit located inside a solar station assembled into the water heater, manages and controls the entire system. In the event of low solar radiation intake, the system may be supplemented by a natural gas boiler. The TML kit is complete with all the necessary accessories for its installation.

Assembly scheme



The above diagrams are approximate and simplified and they do not constitute a guarantee nor a responsibility of TML.

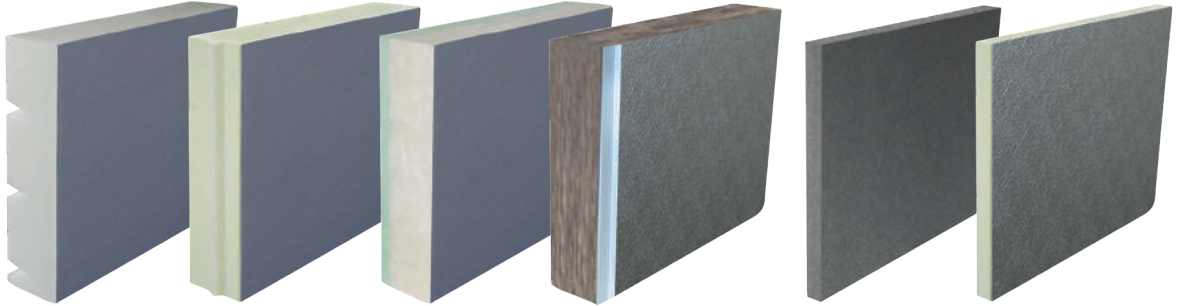


Thermal insulation

TML is a leading company specialized in manufacturing water heater and has always paid attention to the insulation of its products, knowing that the best way to save energy is to build tanks properly insulated.

Customers can choose from a wide range of options that are able to satisfy all the necessary requirements to achieve the best level of insulation. On demand, TML can provide fire rated insulations complying with the most common local specifications like Class 0 (Italy), Class M0(France), Class A1 (Germany), etc.

As an OEM, TML can provide any kind of customization in term of colors, accessories, fittings, packaging based on the most particular requirements.



Types of insulation	Heating			
	Soft Polyurethane	Hard Polyurethane	Polyester	Mineral Fiber
Outer shell	PVC ABS -	PVC ABS Aluminum	PVC ABS -	- - Aluminum
Thickness (mm)	50 - 100 - 130 - 160 - 200	50 - 70 - 100	50 - 100 - 125 - 160	50 - 100
Storage capacity (Lt)	100 ÷ 15000	100 ÷ 5000	100 ÷ 5000	100 ÷ 5000
Density (Kg/m3)	15 ÷ 17,5	40 ÷ 45	11 ÷ 25	11 ÷ 25
Thermal conductivity λ (W/mK)	0,041 ÷ 0,044	0,023 ÷ 0,026	0,036 ÷ 0,044	0,037 ÷ 0,041

Cooling	
Closed cells Polyethylene	Hard Polyurethane (direct injection)
PVC -	PVC ABS
Aluminum	Aluminum
20 - 40	25 - 50
100 ÷ 15000	100 ÷ 800
29 ÷ 31	40 ÷ 45
0,034 ÷ 0,037	0,023 ÷ 0,026

The following data are given as guideline



Special products

Our "special manufacturing" dept. has over three decades of experience to meet our clients' most demanding design needs. A flexible organizational structure, technical skills paired with state-of-the-art technologies make this dept. fit to turn all our clients ideas into facts.

The design office, supports our clients while searching for innovative solutions, most advanced products and an accurate feasibility study of a draft or sample.



International distribution

TML distribute their products in the following geographic areas:

Algeria, Austria, Belgium, Chile, Cyprus, Cuba, United Arab Emirates, France, Germany, Jordania, Greece, Ireland, Libya, Mauritius Islands, Macedonia, Morocco, Netherlands, Poland, Portugal, Czech Republic, Romania, Russia, Scotland, Spain, Switzerland, Tunisia, USA



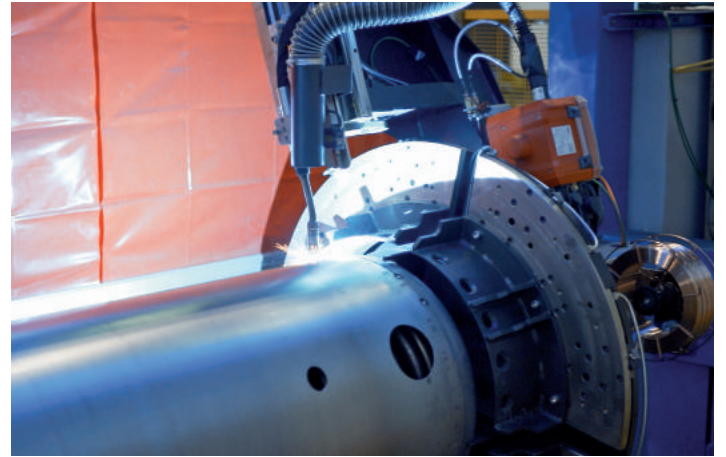


TML also manufacture:

- Evaporators and heat exchangers for the chemical and petrochemical industry
- Fire standpipe units
- Condensation water tank
- Hot-water heating/accumulating fireplaces
- Wood and pellet-fuelled stoves
- Biomass stoves
- Brazed and plate heat exchangers

Find out more about our products on our website:

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