dal 1968

Pacetti

SCAMBIATORI - BOLLITORI - SERBATOI

BKPE Q

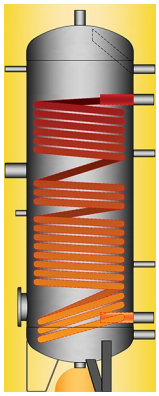
DHW CALORIFIER WITH SINGLE OR TWIN BUILT-IN, OVERSIZED SPIRAL COILS FOR HEAT PUMP PRIMARY

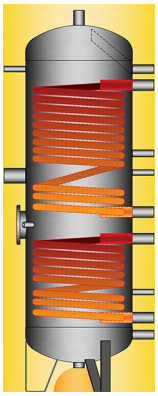
ENERGY EFFICIENCY CLASS A

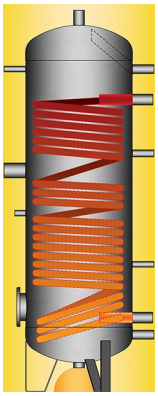
DHW CALORIFIER WITH SINGLE OR TWIN BUILT-IN, OVERSIZED SPIRAL COILS FOR HP PRIMARY - CLASS A

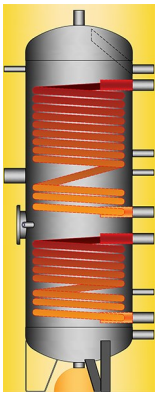
Water heaters designed for domestic hot water (DHW) production and storage. They are compatible with heat pumps and any other energy source. ***BKPE Q*** range tanks are equipped with fixed spiral coils to maximise the heating exchange surface area in relation to storage capacity.
The ***BKPE-1 Q*** model is equipped with an oversized single spiral coil, and its high heat exchange surface allows for optimal efficiency when connected to a heat pump.
The ***BKPE-2 Q*** model is equipped with an oversized single spiral coil for connection to the heat pump, and a second coil for connection to an additional energy source, either conventional or renewable, serving as a booster to the heat pump or a separate power supply.
Thermal insulation is an effective solution for ensuring minimal heat loss, thereby maintaining a constant temperature of the water stored inside the tank. This results in a reduced number of starts of connected heating generators, leading to savings in operating costs and increased reliability. Insulations are factory-made, and the external cladding can be selected from either a technical fabric, suitable for indoor installation only, or an embossed aluminium sheet, suitable for both indoor and outdoor installation.
The new **Q** range guarantees minimal heat loss while delivering maximum performance. Thanks to their increased insulation thickness, this water heater is classified as **energy efficiency class 'A'** in accordance with the European ErP Directive. This makes the product a top-of-the-range choice in terms of quality, versatility, and cost-effectiveness. It is particularly suitable for the most advanced and demanding systems, enabling the highest output from connected generators and raising the quality standard of the heating system.
BKPE Q range tanks are available in two options: glass-lined carbon steel (***BKPE-V Q***), which complies with DIN4753.3, and stainless steel AISI 316L (***BKPE-X Q***), which meets the most demanding quality requirements.

CONSTRUCTION









	BKPE1-V Q	BKPE2-V Q	BKPE1-X Q	BKPE2-X Q
TANK MATERIAL	Carbon steel	Carbon steel	Stainless Steel AISI 316L	Stainless Steel AISI 316L
SPIRAL COIL MATERIAL	Carbon steel (glass-lined externally)	Carbon steel (glass-lined externally)	Stainless Steel AISI 316L	Stainless Steel AISI 316L
INT. SURFACE STEEL TREATMENT	Glass-lining (DIN 4753.3)	Glass-lining (DIN 4753.3)	Pickling and passivation	Pickling and passivation
EXT. SURFACE STEEL TREATMENT	Antirust primer	Antirust primer	Pickling and passivation	Pickling and passivation
CAPACITY	200÷500 L	300 - 500 L	200÷500 L	300 - 500 L
VERSION	Vertical	Vertical	Vertical	Vertical
CONNECTION TYPE	Threaded	Threaded	Threaded	Threaded
INSULATION	**Hard foam polyurethane** 105 mm	**Hard foam polyurethane** 105 mm	**Hard foam polyurethane** 105 mm	**Hard foam polyurethane** 105 mm
OUTER CLADDING	Light grey PVC - RAL7035	Light grey PVC - RAL7035	Light grey PVC - RAL7035	Light grey PVC - RAL7035
ELECTRONIC ANODE (TITANIUM)	Supplied as standard	Supplied as standard	Supplied on request	Supplied on request
ACCESSORIES (factory fitted)	Thermometer	Thermometer	Thermometer	Thermometer

Energy efficiency class - Regulation EU 812/2013 & 814/2013 (European Directive 2009/125/CE)

				Capacity - L	200	300	500
	Energy efficiency class				A	A	A
BKPE1-V Q	Standing loss	S	W		41	47	58
	Storage total volume	V	L		206	269	476
	Energy efficiency class					A	A
BKPE2-V Q	Standing loss	S	W			48	58
	Storage total volume	V	L			270	476
	Energy efficiency class				A	A	A
BKPE1-X Q	Standing loss	S	W		41	46	57
	Storage total volume	V	L		206	270	477
	Energy efficiency class					A	A
BKPE2-X Q	Standing loss	S	W			48	58
	Storage total volume	V	L			271	477

STANDARD WORKING CONDITIONS

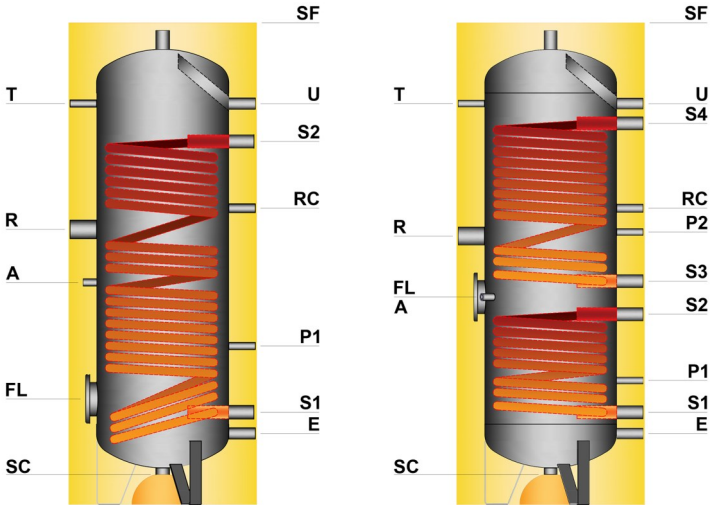
			BKPE1-V Q | BKPE1-X Q BKPE2-V Q | BKPE2-X Q	
	Capacity - L	200	300	500
Tank working pressure	bar	ATM÷10	ATM÷10	ATM÷10
Tank working temperature	°C	AMB÷99	AMB÷99	AMB÷99
Spiral coil working pressure	bar	ATM÷10	ATM÷10	ATM÷10
Spiral coil working temperature	°C	AMB÷110	AMB÷110	AMB÷110

REGULATORY COMPLIANCE

ErP - Reg. 812/2013 & 814/2013 (European Directive 2009/125/CE)

European Pressure Equipment Directive (PED) 2014/68/EU | SEP (Sound Engineering Practice) - exclusion from CE marking - Art. 4.3

D.M. 174/04 or Reg. (CE) 1935/04 | Compatible with drinking water



GENERAL CHARACTERISTICS

			BKPE1-V Q BKPE1-X Q			BKPE2-V Q BKPE2-X Q	
	Capacity - L		200	300	500	300	500
DIMENSIONS							
Diameter without insulation		mm	500	500	650	500	650
Diameter with insulation		mm	710	710	860	710	860
Maximum height		mm	1459	1819	1924	1819	1924
Overturning height with | without insulation		mm	1630	1960	2120	1960	2120
CONNECTIONS							
E	Cold water inlet	mm | Ø	269 | 1"	269 | 1"	284 | 1"	269 | 1"	284 | 1"
U	Hot water outlet	mm | Ø	1154 | 1"	1514 | 1"	1533 | 1"	1514 | 1"	1534 | 1"
RC	Recirculation	mm | Ø	969 | ¾"	1119 | ¾"	1139 | ¾"	1119 | ¾"	1139 | ¾"
A	Electronic anode	mm | Ø	629 | ½"	839 | ½"	804 | ½"	784 | ½"	740 | ½"
P1	Sensor	mm | Ø	629 | ½"	599 | ½"	679 | ½"	469 | ½"	509 | ½"
P2	Sensor	mm | Ø	—	—	—	1029 | ½"	1029 | ½"
T	Thermometer	mm | Ø	1154 | ½"	1514 | ½"	1524 | ½"	1514 | ½"	1524 | ½"
R	Immersion electric heater	mm | Ø	794 | 2"	1039 | 2"	995 | 2"	1014 | 2"	1010 | 2"
S1	Lower Spiral coil primary outlet	mm | Ø	349 | 1"¼	349 | 1"¼	379 | 1"¼	349 | 1"¼	369 | 1"¼
S2	Lower Spiral coil primary inlet	mm | Ø	1084 | 1"¼	1371 | 1"¼	1409 | 1"¼	719 | 1"¼	679 | 1"¼
S3	Upper Spiral coil primary outlet	mm | Ø	—	—	—	844 | 1"¼	799 | 1"¼
S4	Upper Spiral coil primary inlet	mm | Ø	—	—	—	1439 | 1"¼	1444 | 1"¼
SC	Drain	mm | Ø	114 | 1"¼	114 | 1"¼X	99 | 1"¼	114 | 1"¼	99 | 1"¼
SF	Air-vent (BKPE-V Q)	mm | Ø	1459 | 1"¼	1819 | 1"¼	1924 | 1"¼	1819 | 1"¼	1924 | 1"¼
SF	Air-vent (BKPE-X Q)	mm | Ø	1459 | ½"	1819 | ½"	1924 | ½"	1819 | ½"	1924 | ½"
FL	Inspection opening	mm	399	399	424	784	740
		Ø mm	180×120	180×120	180×120	180×120	180×120
PERFORMANCE							
Upper Spiral coil surface area		**m²**	**3,0**	**4,2**	**6,0**	**2,5**	**4,1**
Upper Spiral coil output (Primary 50/45°C - Secondary 10/45°C)		kW	21	29	42	17	29
DHW continuous flow 10/45°C		l/h	516	720	1029	429	703
Lower Spiral coil surface area		**m²**	**—**	**—**	**—**	**1,7**	**1,8**
Lower Spiral coil output (Primary 50/45°C - Secondary 10/45°C)		kW	—	—	—	50	53
DHW continuous flow 10/45°C		l/h	—	—	—	1239	1311
WEIGHT							
Empty weight BKPE1-V Q | BKPE1-X Q		kg	139	154	211	—	—
Empty weight BKPE2-V Q | BKPE2-X Q		kg	—	—	—	159	214

NOTE: All the measurements of the hydraulic connections are considered "from the ground" - All the threads are female GAS type, unless otherwise specified.
Tanks higher than 2200mm are packaged horizontally.

BKPE1-V Q | BKPE1-X Q - SINGLE COIL OUTPUT

Primary (60-50)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
200	3,0	**48**	4128	1180	397	1380
300	4,2	**67**	5775	1650	575	1950
500	6,0	**96**	8256	2357	893	2857

Primary (55-45)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
200	3,0	**31**	2666	762	327	962
300	4,2	**44**	3780	1080	480	1380
500	6,0	**63**	5400	1543	757	2043

Primary (50-45)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
200	3,0	**21**	3612	516	286	716
300	4,2	**29**	5040	720	420	1020
500	6,0	**42**	7200	1029	671	1529

BKPE2-V Q | BKPE2-X Q - UPPER COIL OUTPUT (HP)

Primary (60-50)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
300	2,5	**44**	2500	1071	479	1371
500	4,1	**72**	4100	1757	793	2257

Primary (55-45)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
300	2,5	**26**	2250	643	407	943
500	4,1	**43**	3690	1054	676	1554

Primary (50-45)°C | Secondary (10-45)°C

				SECONDARY (DHW)		
Tank capacity	HP coil surface area	Max. output	Primary flow	Continuous flow	Output first 10'	Output first 60'
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*	*Litres*	*Litres*
300	2,5	**17**	3000	429	371	729
500	4,1	**29**	4920	703	617	1203

BKPE2-V Q | BKPE2-X Q - LOWER COIL OUTPUT (Additional heating source)

Primary (75-65)°C | Secondary (10-45)°C

				SECONDARY (DHW)
Tank capacity	Lower coil surface area	Max. output	Primary flow	Continuous flow
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*
300	1,7	**50**	4335	1239
500	1,8	**53**	4590	1311

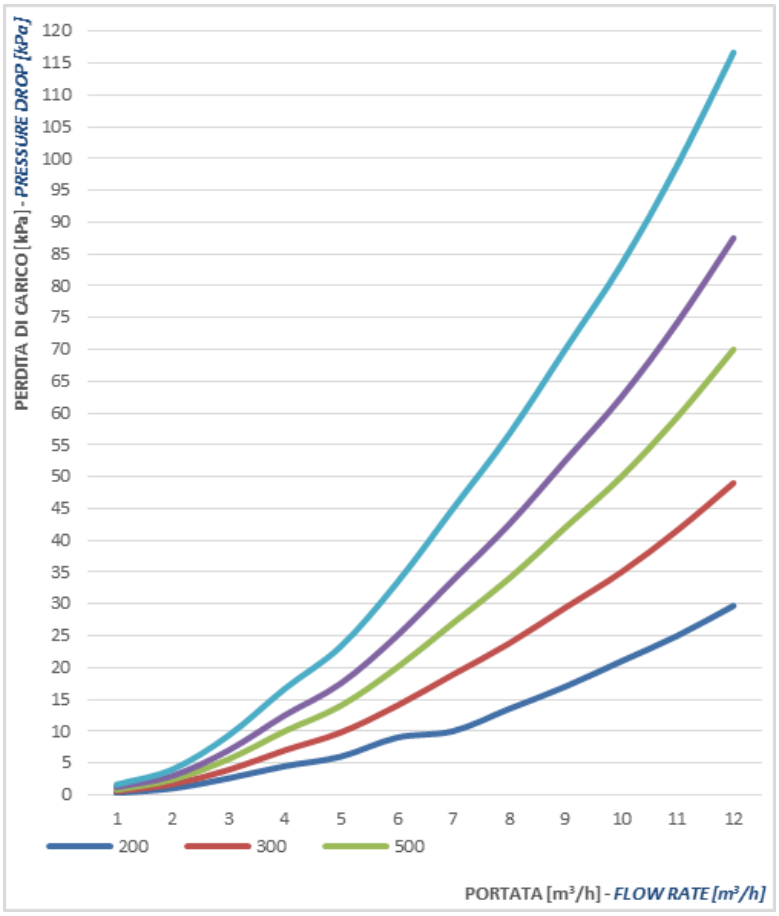
Primary (70-60)°C | Secondary (10-45)°C

				SECONDARY (DHW)
Tank capacity	Lower coil surface area	Max. output	Primary flow	Continuous flow
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*
300	1,7	**41**	3506	1002
500	1,8	**43**	3713	1061

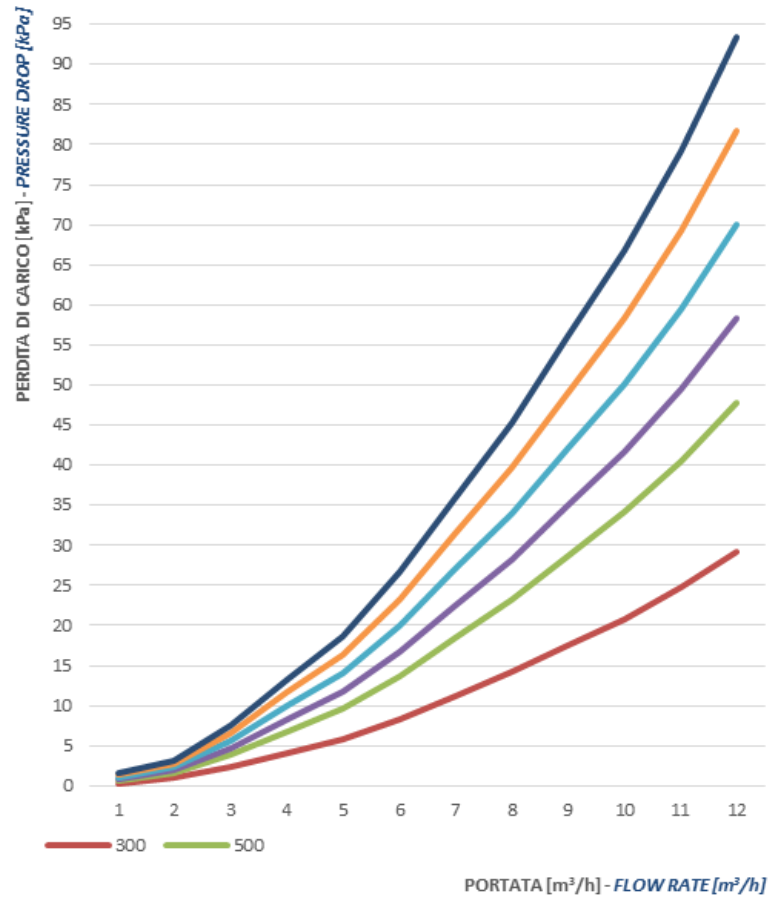
Primary (60-50)°C | Secondary (10-45)°C

				SECONDARY (DHW)
Tank capacity	Lower coil surface area	Max. output	Primary flow	Continuous flow
Litres	*m^2*	*kW*	*Litres/Hour*	*Litres/Hour*
300	1,7	**30**	1700	729
500	1,8	**31**	1800	771

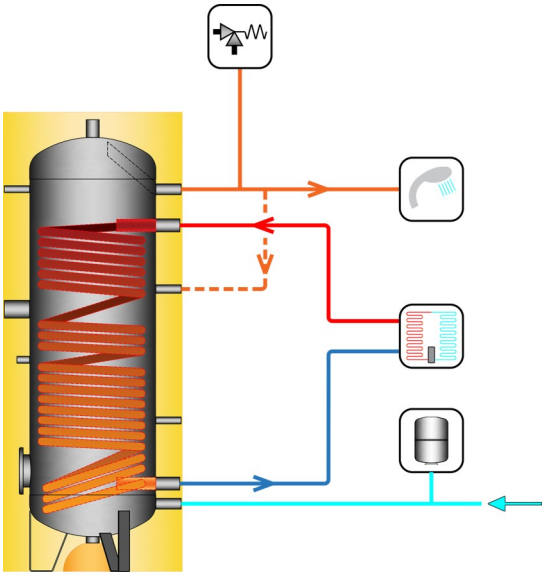
BKPE1-V Q | BKPE1-X Q - SINGLE COIL PRESSURE DROP

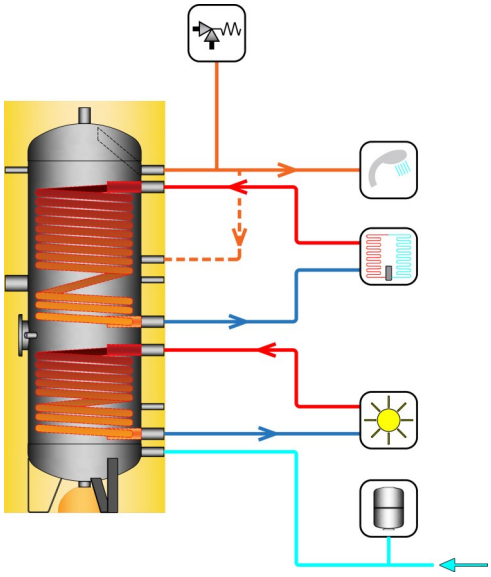


BKPE2-V Q | BKPE2-X Q - TWIN COIL PRESSURE DROP



INSTALLATION DIAGRAM EXAMPLE





The proposed diagrams are purely by way of example.

HOW TO ORDER

1 → Single fixed coil 2 → Twin fixed coil	V → Glass-lined steel X → Stainless Steel 316L	E → Titanium anode N → No anode (SS 316L	Tank capacity (L)

BKPE	1	-	V	0	V	E	Q	/	0200

ACCESSORIES AND SPARE PARTS

ITEM	PART NUMBER
THERMOMETER Ø65 mm | L=50 mm | *(0÷120)°C*	*TERMOMETRO-D65_S*
SENSOR POCKET Ø½" | L=50 mm | $Ø_{int}$ 10 mm	*POZZETTO_S*
THERMOSTAT Ø½" *(0÷90)°C*	*TERMOSTATO*
TITANIUM ANODE for GLASS-LINED tanks	ANODE012X380_P
TITANIUM ANODE for SS316L tanks	ANODE_ARTHX1-150/400
EPDM GASKET FOR INSPECTION OPENING	*GUGOM175X122ST*
GLASS-LINED BLIND FLANGE | BKPE-V Q	*PIASTRAN180-V*
SS 316L BLIND FLANGE | BKPE-X Q	*PIASTRAX180*


THERMOMETER


SENSOR


THERMOSTAT


TITANIUM ANODE


EPDM GASKET


BLIND FLANGE

1-PHASE & 3-PHASE IMMERSION ELECTRIC HEATER - STAINLESS STEEL 316L TUBES

Threaded plug 1.1/2" with brass adapter 1.1/2" to 2" | Aluminium box IP54 | V220/1-V240/1 or V400/3

Capacity	Capacity/L matching	Length	Volt	Plug type	2-THERMOSTAT Temperature regulation & overheating protection
Watt	*L*	*mm*	*V*		*PART NO.*
2000	200÷500	310	220/1 240/1	SHUKO	*RES020-L310-6-M-BT*
3000	200÷500	350			*RES030-L350-6-M-BT*
5000	200÷500	375	400/3	Not supplied	*RES050-L375-6-T-BT*
6000	200÷500	435			*RES060-L435-6-T-BT*
9000	500	610			*RES090-L610-6-T-BT*
10000	500	670			*RES100-L670-6-T-BT*


1-PHASE


3-PHASE

ANTI-CORROSION PROTECTION STEEL TREATMENTS

PROTECTIVE TREATMENTS FOR CARBON STEEL TANKS

Glass-enamelling

The glass-enamelling treatment is obtained with the application of one or two layers of enamel with characteristics of resistance to water and steam, which gives the treated product a high level of protection against the corrosion normally caused by the oxygen and the mineral salts dissolved in the water. The complete reliability of this type of treatment derives from its inorganic composition and from the link created between the enamel and the metallic surface.

After baking in an oven at about 850°C according to Bayer's method and DIN 4753.3 the enamel does not absorb water and does not conduct ions, allowing the 99.9% protection of the structure of the product. The remaining 0.01% (due to possible uncovered spots) is eliminated by inserting protective anticorrosive systems into the product such as the sacrificial magnesium anodes or the permanent electronic anodes.

PROTECTIVE TREATMENTS FOR STAINLESS STEEL TANKS.

Pickling and passivation

The calorifiers manufactured with the use of stainless steels are treated with picking procedures with full immersion and subsequent passivation, where planned.

CATHODIC PROTECTION

The corrosion of a metal structure occurs mainly in areas in which there is the passage of current (oxidation-reduction process) from the structure towards the outside (water or gas) causing a dissolution of the structure itself.

Cathodic protection by means of electronic impressed current system.

As an alternative to the galvanic system (coupling of materials with different potentials) there is a protection method which consists in applying an equal and opposite continuous current to the metallic structure to be protected, neutralising the voltages formed inside the tank.

Thanks to the modern techniques there is an innovative electronic system of cathodic protection with continuous impressed current.

The main advantages are:

- active protection by means of impressed currents from the outside;
- excellent flexibility of operation in order to adhere to the changeable internal coating conditions and the mass of water;
- reduction of maintenance costs due to the permanent protection of the system.

INSULATION

Insulating material	Removable	Thickness	Density	Thermal conductivity coefficient at 45°C	Operating temperature	Fire reaction class Euroclass EN13501-1
Hard polyurethane injected	✗	105 mm	40÷42 kg/m³	λ = 0,019 W/mK	-10°C / +99°C	F

Hard polyurethane

Thermal and anti-condensation insulation made of rigid closed cell polyurethane foam (PU), free from CFC and HCFC.
It is available in various thickness and can be injected directly to the walls of the tank to eliminate the possibility of formation of condensation and guarantee the minimum thermal dispersion, or pre-formed in removable half-shells to conserve the heat accumulated in the tank.
The extremely low thermal conductivity coefficient not only allows the limits specified by the ErP reference standard to be complied with, but actually to improve on them: the tanks of the new Q range, thanks to the careful study of the thicknesses and of the compounds, obtain the prestigious energy class "A" due to their limited heat dispersion values.

CLADDINGS

PVC

External cladding made of coloured PVC with hinge closing, suitable for installations in locations protected against adverse weather conditions. The standard colours of each product are indicated in their construction characteristics,
but different colours can be requested for each model as shown in the following table.
In the personalised TLR storage tanks the choice of the alternative colour is free of cost and does not incur any surcharge.

ITEM	*PART NUMBER*
PVC COVER YELLOW RAL1023	*COVER-RAL1023*
PVC COVER ORANGE RAL2004	*COVER-RAL2004*
PVC COVER RED RAL3000	*COVER-RAL3000*
PVC COVER BLUE RAL5015	*COVER-RAL5015*
PVC COVER WHITE RAL9016	*COVER-RAL9016*
PVC COVER LIGHT GREY RAL7035	*COVER-RAL7035*
PVC COVER DARK GREY RAL7024	*COVER-RAL7024*
PVC COVER BLACK RAL9004	*COVER-RAL9004*

ALUMINIUM

External cladding made of embossed aluminium sheeting suitable also for outdoor installations. The insulations made with this type of cladding consist of panels joined together by means of rivets and extruded aluminium slats with an exclusive design, specifically designed to facilitate assembly even directly at the installation site.
The coverings and flange covers made of same material securely anchored to the insulation guarantee the same levels of quality in terms of duration and outside appearance and do not risk being damaged by the wind and adverse weather conditions.

www.pacetti.it

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