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# RHC 2U

SS316L CALORIFIER  
WITH 2 UTUBE  
BUNDLE COILS



## CONSTRUCTION



RHC 2U

TANK MATERIAL	STAINLESS STEEL AISI 316L
INTERNAL SURFACE TREATMENT	PICKLING AND PASSIVATION
EXTERNAL SURFACE TREATMENT	PICKLING AND PASSIVATION
CAPACITY	1000 TO 10000L
VERSION	VERTICAL
CONNECTIONS	THREADED
COIL MATERIAL	STAINLESS STEEL AISI 316L
PRIMARY CHEST MATERIAL	STAINLESS STEEL AISI 316L
INSULATION   1000 L	HARD POLYURETHANE 85MM REMOVABLE SHELLS
INSULATION   1500-2000 L	PLFH 120 MM HIGH DENSITY ECO-FRIENDLY POLYESTER FIBER
INSULATION   2500-5000 L	PLF 50 MM ECO-FRIENDLY POLYESTER FIBER
CLADDING	LIGHT GREY RAL7035, ALUMINIUM
ACCESSORIES	ALUMINIUM

## STANDARD WORKING CONDITIONS

Capacity-L		1000	1500	2000	2500	3000	4000	5000
Tank working pressure	bar	ATM-8*						
Tank working temperature	°C	AMB-99						
Coil working pressure	bar	ATM -12						
Coil working temperature	°C	AMB-99						

\*ATM -10 optional

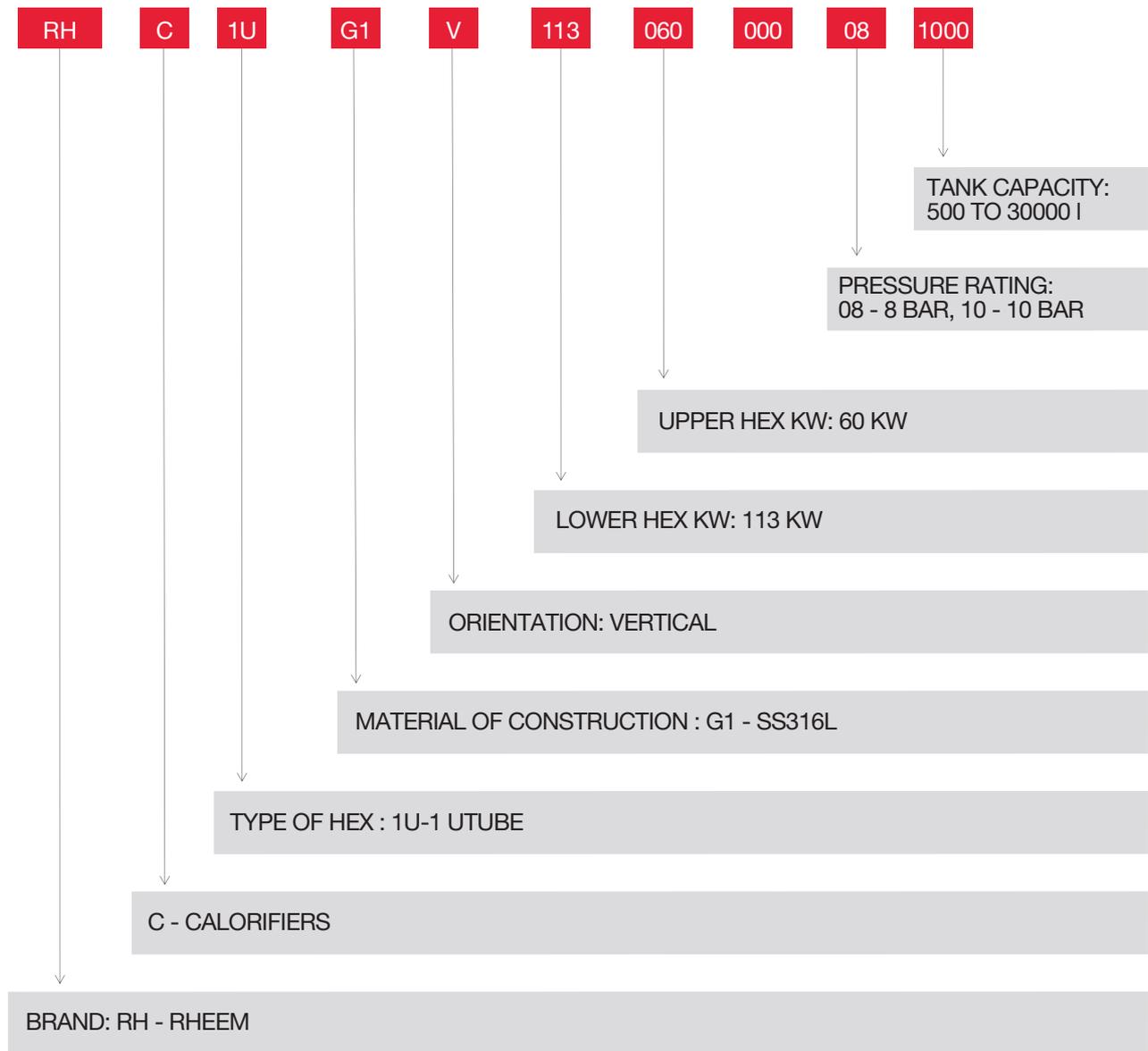
## GENERAL CHARACTERISTICS - VERTICAL STANDARD VERSION

	Capacity-L	1000	1500	2000	2500	3000	4000	5000
<b>DIMENSIONS</b>								
Diameter without insulation	mm	800	1000	1200	1200	1250	1400	1600
Diameter with insulation	mm	970	1240	1440	1300	1350	1500	1700
Overall height	mm	2185	2265	2184	2590	2790	2869	2960
Overturning height with without insulation	mm	2297   2201	2441   2270	2426   2197	2773   2595	2976   2795	3088   2878	3232   2977

Calorifiers made of Stainless Steel AISI 316L pickled and passivated with two removable tube bundle coils for production and storage of DHW. Designed for connection to one or two different primary energy sources.

The calorifiers of the RHC 2U range stand out for the wide choice of capacities, from 1000 to 10000L as standard and over upon request.

## 2U Nomenclature - 60HZ



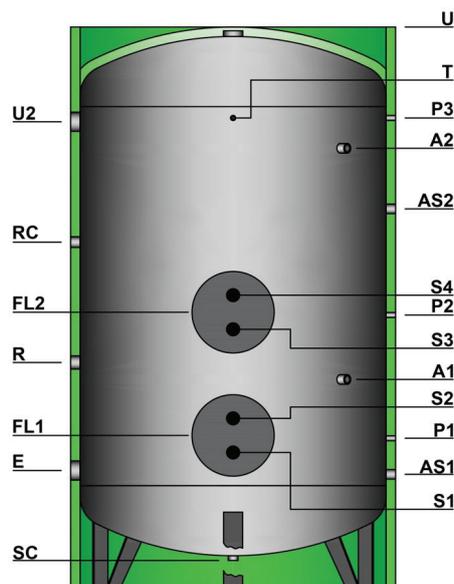
# INSTALLATION ASSUMPTIONS

## CONNECTIONS

E	Cold water supply	mm   Ø	420   2"	480   2"½	504   2"½	590   3"	525   3"	559   3"	620   3"
U	DHW return	mm   Ø	2185   2"	2265   2"½	2184   2"½	2590   3"	2790   3"	2869   3"	2960   3"
U2	DHW additional return	mm   Ø	—	—	—	—	—	2399   3"	2460   3"
RC	Recirculation	mm   Ø	1405   1"½	1395   1"½	1319   1"½	1645   1"½	1730   1"½	1764   1"½	1825   1"½
R	Immersion electric heater	mm   Ø	885   2"	950   2"	899   2"	1100   2"	1095   2"	1129   2"	1190   2"
P1	Sensor	mm   Ø	610   ½"	650   ½"	649   ½"	700   ½"	695   ½"	729   ½"	790   ½"
P2	Sensor	mm   Ø	1080   ½"	1150   ½"	1099   ½"	1300   ½"	1345   ½"	1379   ½"	1440   ½"
P3	Sensor	mm   Ø	1700   ½"	1680   ½"	1714   ½"	2190   ½"	2385   ½"	2419   ½"	2480   ½"
T	Thermometer	mm   Ø	1800   ½"	1840   ½"	1714   ½"	2190   ½"	2385   ½"	2419   ½"	2480   ½"
A1	Anode	mm   Ø	810   ½"	860   ½"	834   ½"	1010   ½"	1005   ½"	1039   ½"	1100   ½"
A2	Anode	mm   Ø	—	1680   ½"	1554   ½"	2030   ½"	2225   ½"	2259   ½"	2320   ½"
AS1	Spare	mm   Ø	420   1"¼	450   1"¼	484   1"¼	510   1"¼	505   1"¼	539   1"¼	600   1"¼
AS2	Spare	mm   Ø	1820   1"¼	1850   1"¼	1284   1"¼	1910   1"¼	1905   1"¼	1939   1"¼	2000   1"¼
FL1	Lower heat exchanger manhole	mm	610	650	649	700	695	729	790
		mm   Ø	300x380	300x380	300x380	300x380	300x380	350x430	350x430
FL2	Upper heat exchanger manhole	mm	1080	1150	1099	1300	1345	1379	1440
		mm   Ø	300x380	300x380	300x380	300x380	300x380	350x430	350x430
S1	Lower heat exchanger return	mm   Ø	535   2"	575   2"	574   2"	625   2"	620   2"	629   2"	690   2"
S2	Lower heat exchanger supply	mm   Ø	685   2"	725   2"	724   2"	775   2"	770   2"	829   2"	890   2"
S3	Upper heat exchanger return	mm   Ø	1005   2"	1075   2"	1024   2"	1225   2"	1270   2"	1279   2"	1340   2"
S4	Upper heat exchanger supply	mm   Ø	1155   2"	1225   2"	1174   2"	1375   2"	1420   2"	1479   2"	1540   2"
SC	Drain	mm   Ø	95   1"¼	130   1"¼	109   1"¼	135   1"¼	125   1"¼	114   1"¼	145   1"¼

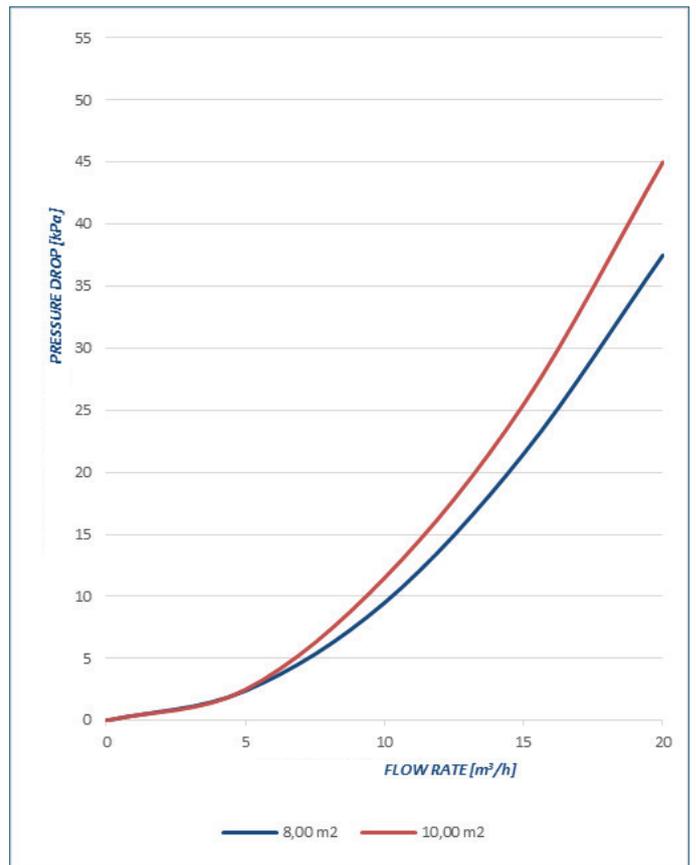
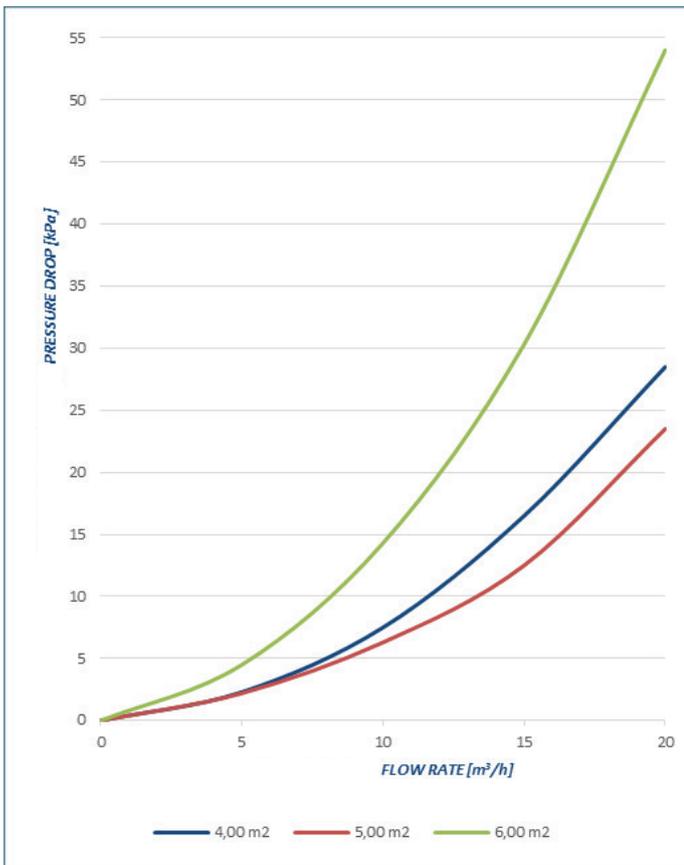
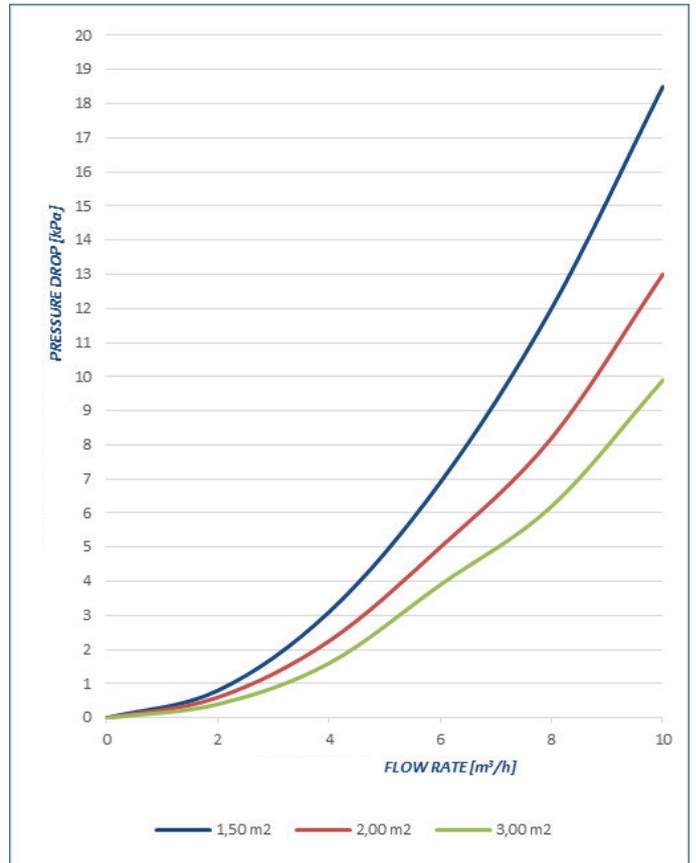
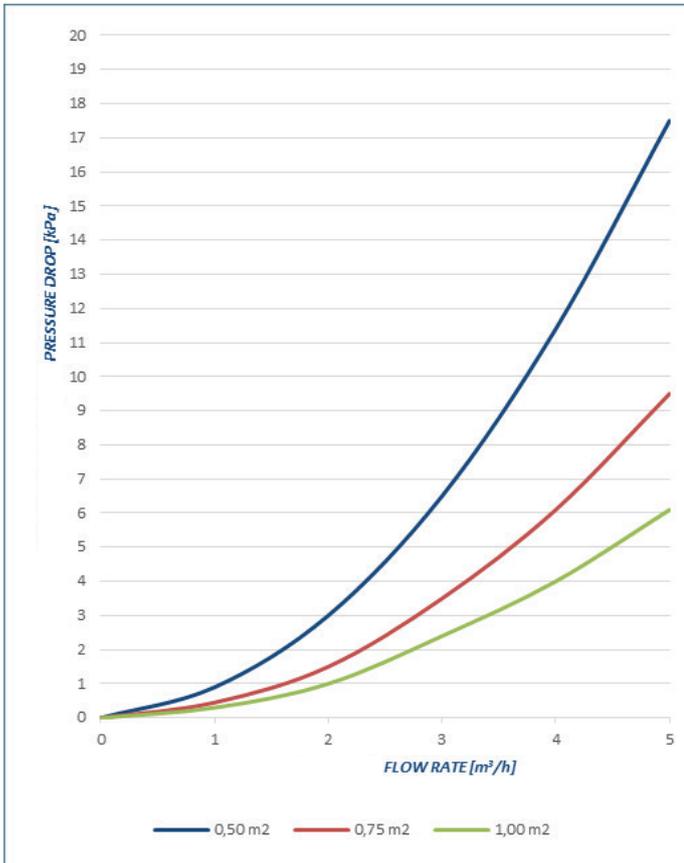
## COIL PERFORMANCES

<b>Lower coil heating surface area</b>	m <sup>2</sup>	2,00	3,00	4,00	5,00	6,00	8,00	10,00
Lower coil output (Prim. 80/70°C-Sec10/45°C)	kW	72	108	144	180	215	287	359
<b>Upper coil heating surface</b>	m <sup>2</sup>	2,00	3,00	4,00	5,00	6,00	8,00	10,00
Upper coil output (Prim. 80/70°C - Sec.	kW	72	108	144	180	215	287	359



Note: All the measurements of the connections are considered "from the ground".  
The thread are female GAS type, unless otherwise

# HEAT EXCHANGER PRESSURE DROP



# TUBE BUNDLE COIL OUTPUT

PRIMARY (80-70)°C | SECONDARY(10-45)°C

SECONDARY (DHW)

Storage Volume <i>L</i>	Heating Surface Area <i>m<sup>2</sup></i>	Max Output <i>kW</i>	Primary Airflow <i>L/h</i>
1000	2,00	72	6175
	2,00	72	6175
1500	3,00	108	9263
	3,00	108	9263
2000	4,00	144	12350
	4,00	144	12350
2500	5,00	180	15438
	5,00	180	15438
3000	6,00	215	18525
	6,00	215	18525
4000	8,00	287	24700
	8,00	287	24700
5000	10,00	359	30870
	10,00	359	30875

Continous production <i>L/h</i>	Production First 10' <i>L</i>	Production First 60' <i>L</i>
3529	1588	4529
5293	2382	6793
7057	3176	9057
8821	3970	11321
10586	4764	13586
14114	6352	18114
17643	7940	22643

PRIMARY (70-60)°C | SECONDARY(10-45)°C

SECONDARY (DHW)

Storage Volume <i>L</i>	Heating Surface Area <i>m<sup>2</sup></i>	Max Output <i>kW</i>	Primary Airflow <i>L/h</i>
1000	2,00	52	4500
	2,00	52	4500
1500	3,00	78	6750
	3,00	78	6750
2000	4,00	105	9000
	4,00	105	9000
2500	5,00	131	11250
	5,00	131	11250
3000	6,00	157	13500
	6,00	157	13500
4000	8,00	209	18000
	8,00	209	18000
5000	10,00	262	22500
	10,00	262	22500

Continous production <i>L/h</i>	Production First 10' <i>L</i>	Production First 60' <i>L</i>
2571	1429	3571
3857	2143	5357
5143	2857	7143
6429	3571	8929
7714	4286	10714
10286	5714	14286
12857	7143	17857

PRIMARY (60-50)°C | SECONDARY(10-45)°C

SECONDARY (DHW)

Storage Volume <i>L</i>	Heating Surface Area <i>m<sup>2</sup></i>	Max Output <i>kW</i>	Primary Airflow <i>L/h</i>
1000	2,00	35	3025
	2,00	35	3025
1500	3,00	53	4538
	3,00	53	4538
2000	4,00	70	6050
	4,00	70	6050
2500	5,00	88	7563
	5,00	88	7563
3000	6,00	106	9075
	6,00	106	9075
4000	8,00	141	12100
	8,00	141	12100
5000	10,00	176	15125
	10,00	176	15125

Continous production <i>L/h</i>	Production First 10' <i>L</i>	Production First 60' <i>L</i>
1729	1288	2729
2593	1932	4093
3457	2576	5457
4321	3220	6821
5186	3864	8186
6914	5152	10914
8643	6440	13643

PRIMARY (55-45)°C | SECONDARY(10-45)°C

SECONDARY (DHW)

Storage Volume <i>L</i>	Heating Surface Area <i>m<sup>2</sup></i>	Max Output <i>kW</i>	Primary Airflow <i>L/h</i>
1000	2,00	21	1800
	2,00	21	1800
1500	3,00	31	2700
	3,00	31	2700
2000	4,00	42	3600
	4,00	42	3600
2500	5,00	52	4500
	5,00	52	4500
3000	6,00	63	5400
	6,00	63	5400
4000	8,00	84	7200
	8,00	84	7200
5000	10,00	105	9000

Continous production <i>L/h</i>	Production First 10' <i>L</i>	Production First 60' <i>L</i>
1029	1171	2029
1543	1757	3043
2057	2343	4057
2571	2929	5071
3086	3514	6086
4114	4686	8114
5143	5857	10143

## ACCESSORIES & SPARE PARTS

- THERMOMETER Ø65 mm | L=150 mm | (0-120)°C
- THERMOMETER Ø100 mm | L=150 mm | (0-120)°C
- SENSOR SOCKET Ø1½" | L=150 mm | Ø int <sup>10</sup> mm
- THERMOSTAT Ø½" (0-90)°C
- ELECTRONIC ANODE KIT 1000 L
- ELECTRONIC ANODE KIT 1500-5000 L



THERMOMETER



PROBE



THERMOSTAT



ELECTRONIC ANODE

## IMMERSION ELECTRIC HEATERS 3/1 PHASE SS316L / INCOLOY SCREW CONNECTION 2" | ALUMINIUM BOX IP55 | V230/400

Power <i>Watt</i>	Tank capacity <i>L</i>	Length <i>mm</i>
2000	1000-5000	280
3000	1000-5000	380
5000	1000-5000	500
6000	1000-5000	600
9000	1000-5000	680



## TUBE BUNDLE HEAT EXCHANGERS

Heating surface area <i>m<sup>2</sup></i>	Dimensions	
	D <i>mm</i>	L <i>mm</i>
2,00	380	594
3,00	380	718
4,00	380	850
5,00	380	1050
6,00	380	1250
8,00	430	1250
10,00	430	1510



## ANTI-CORROSION PROTECTION STEEL TREATMENTS

DHW storage tanks made of Stainless Steel 316L are treated with full immersion pickling procedures and subsequent passivation to ensure the highest hygiene standards.

## 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.



## INSULATIONS

Insulating material	Removable	Thickness	Density	Thermal conductivity coefficient at 45°C	Operating temperature	Fire reaction class Euroclass EN13501-1
PLF Polyester fibre	✓	50 mm	20 kg/m <sup>3</sup>	$\lambda = 0,037$ W/mK	Amb. / +99°C	B-s2, d0
PLFH High Density Polyester fibre	✓	100 mm	25 kg/m <sup>3</sup>	$\lambda = 0,034$ W/mK	Amb. / +99°C	B-s2, d0
Injected Hard Polyurethane	✗	80 mm	40-42 kg/m <sup>3</sup>	$\lambda = 0,019$ W/mK	-10°C / +99°C	F

### PLFH / PLF – Polyester fibre

- 100% recyclable
- Environmental friendly
- Lightweight
- Self-supporting
- Fire-retardant
- Rot-proof
- Resistant to mould, bacteria or rodents
- Hypoallergenic
- Water repellent



### Hard foam Polyurethane

Thermal and anti-condensation insulation made of hard closed cell polyurethane foam (PU), free from CFC and HCFC.

It is available in various thickness and can be injected directly to the shell of the tank to prevent it from condensation and provide the lower thermal dispersion. For some sizes it is pre-formed into half-shells to ease the insulation removal in case the tank has to pass through narrow doors.

## CLADDINGS



### 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.



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