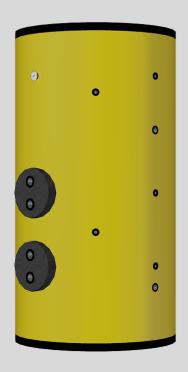




BT2H-C - BT2-C



ENAMELLED STEEL DHW CALORIFIER EQUIPPED WITH TWO REMOVABLE TUBE BUNDLE HEAT EXCHANGERS

Calorifiers made of enamelld steel with two removable tube bundle heat exchangers for production and storage of DHW. Designed for connection to one or two different primary energy sources.

The two heat exchangers, with equal heating surface area, are positioned in the lower and middle areas of the tank and allow the use of a single energy source by connecting them together; This allows double the yield compared to a calorifier equipped with one tube bundle heat exchanger, so that the connected source can be exploited to the full. This solution is particularly recommended with Heat Pump or low-temperature primary source. In the case of two different energy sources the configuration of BT2H-C | BT2-C guarantees high thermal output for both, ensuring the production of a large quantity of DHW.

The calorifiers of the BT2H-C | BT2-C range stand out for the wide choice of capacities, from 1000 to 5000 L as standard and over upon request. They are available, in the larger sizes, in vertical-low and vertical extra-low versions to allow them to be installed in circumstances where the available height is not sufficient for the standard measurement. The two tube bundle heat exchangers, made of Stainless Steel AISI 304 as standard, are also available in Stainless Steel AISI 316L or copper on request.

The possibility of selecting between various operating pressures - up to 10 bar - and the availability of different external claddings for indoor or outdoor installation, extends their use to all the possible applications. Protection from galvanic currents is provided by the electronic anodes fitted as standard, which both save on costs of checking and replacing conventional magnesium anodes and ensure superior reliability and durability.

CONSTRUCTION

TANK MATERIAL

CAPACITY

VERSION

CONNECTIONS



BT2H-C | BT2-C Carbon steel

CERAMFLON enamel

Anti-rust primer

1000 ÷ 5000 L

Vertical

Threaded

CERAMFLON enamelled steel

Stainless steel AISI 304 Stainless steel AISI 316L (on request)

Copper (on request)



BT2H-RC | BT2-RC

BT2-XC

Carbon steel

CERAMFLON enamel

Anti-rust primer

3000 ÷ 5000 L

Carbon steel CERAMFLON enamel Anti-rust primer

1500 ÷ 5000 L Vertical LOW-height Threaded

CERAMFLON enamelled steel

Vertical EXTRA-LOW height Threaded

CERAMFLON enamelled steel

- Stainless steel AISI 304 Stainless steel AISI 316L (on request)
- Copper (on request)
- Stainless steel AISI 304 Stainless steel AISI 316L (on request)

Copper (on request)

REMOVABLE TUBE BUNDLE HEAT EXCHANGER MATERIAL

PRIMARY CHEST MATERIAL

INTERNAL SURFACE TREATMENT

EXTERNAL SURFACE TREATMENT

INSULATION | 1000 L

INSULATION | 1500-2000 L

INSULATION | 2500 ÷ 5000 L

CLADDING

ANODE

ACCESSORIES

Hard Polyurethane 85mm removable shells **PLFH** 120 mm High density eco-friendly polyester fiber

PLF 50 mm Eco-friendly polyester fiber

PVC Yellow RAL1023Aluminium

Electronic Thermometer **PLFH** 120 mm High density eco-friendly polyester fiber

PLF 50 mm Eco-friendly polyester fiber

• PVC Yellow RAL1023 • Aluminium

Electronic Thermometer **PLF** 50 mm Eco-friendly polyester fiber

PVC Yellow RAL1023Aluminium

Electronic Thermometer

Energy efficiency of	class - Regulation 812/2013 & 814/201	3 Europear	Directive 2009/125/CE			
			Capacity - L	1000	1500	2000
	Energy efficiency class			C	C	C
BT2H-C	Standing loss	S	W	142	166	189
	Storage volume	V	L	918	1483	1983
	Energy efficiency class				C	С
BT2H-RC	Standing loss	S	W		165	187
	Storage volume	V	L		1515	1978

STANDARD WORKING CONDITIONS									
	Capacity - L	1000	1500	2000	2500	3000	4000	5000	
Tank working pressure	bar	ATM÷8	ATM÷6	ATM÷6	ATM÷6	ATM÷6	ATM÷6	ATM÷6	
Tank working temperature	°C	$AMB \div 85$	$AMB \! \div \! 85$						
Heat exchangers working pressure	bar	ATM÷12							
Heat exchangers working temperature	°C	$AMB \div 99$							

REGULATORY COMPLIANCE

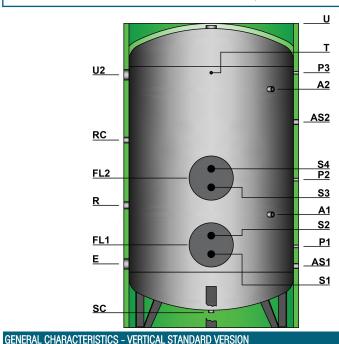
ErP - Reg. 812/2013 e Reg. 814/2013 | CE

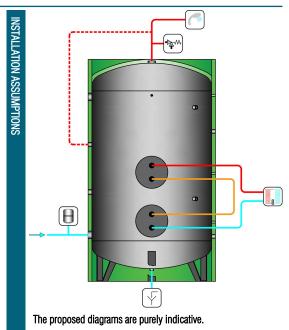
European Pressure Equipment Directive (PED) 2014/68/UE | SEP (Sound Engineering Practice) - exclusion from CE marking - Art. 4.3

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

Cooke Industries - Phone: +64 9 579 2185 Email: sales@cookeindustries.co.nz Web: www.cookeindustries.co.nz

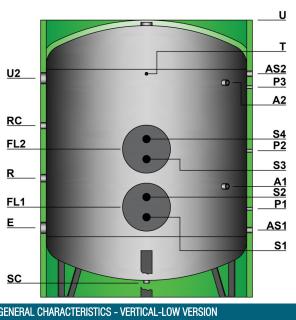


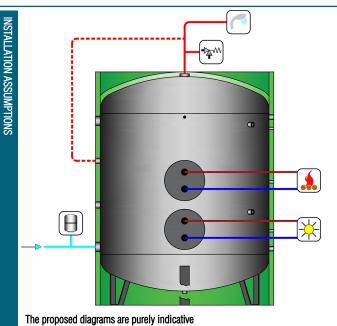




	Capacity - L	1000	1500	2000	2500	3000	4000	5000
DIMENSIONS								
Diameter without insulation	mm	800	950	1100	1200	1250	1400	1600
Diameter with insulation	mm	970	1190	1340	1300	1350	1500	1700
Overall height	mm	2185	2530	2535	2590	2790	2869	2960
Overturning height with without insulation	mm	2297 2201	2679 2532	2719 2541	2773 2600	2976 2800	3088 2883	3232 2982
CONNECTIONS								
E Cold water supply	mm Ø	420 2"	465 2"1/2	485 2"1/2	530 3"	525 3"	559 3"	620 3"
U DHW return	mm Ø	2185 2"	2530 2"1/2	2535 2"1/2	2590 3"	2790 3"	2869 3"	2960 3"
U2 DHW additional return	mm Ø	_	_	_	_	_	2399 3"	2460 3"
RC Recirculation	mm Ø	1405 1"1/2	1580 1"½	1600 1"½	1645 1"½	1730 1"½	1764 1"½	1825 1"½
R Immersion electric heater	mm Ø	885 2"	1035 2"	1055 2"	1100 2"	1095 2"	1129 2"	1190 2"
P1 Sensor	mm Ø	610 ½"	635 ½"	655 ½"	700 ½"	505 ½"	729 ½"	790 ½"
P2 Sensor	mm Ø	1080 ½"	1235 ½"	1255 ½"	1300 ½"	1345 ½"	1379 ½"	1440 ½"
P3 Sensor	mm Ø	1700 ½"	2125 ½"	2095 ½"	2190 ½"	2385 ½"	2419 ½"	2480 ½"
T Thermometer	mm Ø	1800 ½"	2125 ½"	2095 ½"	2190 ½"	2385 ½"	2419 ½"	2480 ½"
A1 Anode	mm Ø	810 ½"	945 ½"	965 ½"	1010 ½"	1005 ½"	1039 ½"	1100 ½"
A2 Anode	mm Ø	_	1965 ½"	1935 ½"	2030 ½"	2225 ½"	2259 ½"	2320 ½"
AS1 Spare	mm Ø	420 1"1/4	445 1"1/4	465 1"1/4	510 1"1/4	505 1"1/4	539 1"1/4	600 1"1/4
AS2 Spare	mm Ø	1820 1"1/4	1845 1"1⁄4	1865 1"1⁄4	1910 1"1⁄4	1905 1"1⁄4	1939 1"1/4	2000 1"1/4
El 1 Lawer heat evelonger menhole	mm	610	635	655	700	695	729	790
FL1 Lower heat exchanger manhole	Ø mm	300×380	300×380	300×380	300×380	300×380	350×430	350×430
51.0	mm	1080	1235	1255	1300	1345	1379	1440
FL2 Upper heat exchanger manhole	Ø mm	300×380	300×380	300×380	300×380	300×380	350×430	350×430
S1 Lower heat exchanger return	mm Ø	535 2"	560 2"	580 2"	625 2"	620 2"	631 2"	690 2"
S2 Lower heat exchanger supply	mm Ø	685 2"	710 2"	730 2"	775 2"	770 2"	831 2"	890 2"
S3 Upper heat exchanger retunrn	mm Ø	1005 2"	1160 2"	1180 2"	1225 2"	1270 2"	1281 2"	1340 2"
S4 Upper heat exchanger supply	mm Ø	1155 2"	1310 2"	1330 2"	1375 2"	1420 2"	1481 2"	1540 2"
SC Drain	mm Ø	95 1"1⁄4	135 1"1⁄4	123 1"1⁄4	135 1"1⁄4	125 1"1⁄4	114 1"1⁄4	145 1"1⁄4
TUBE BUNDLE HEAT EXCHANGERS PERFORM	MANCES							
Lower heat exchanger heating surface area	m²	2,00	3,00	4,00	5,00	6,00	8,00	10,00
Lower HEX output (Prim 80/70°C - Sec 10/45°	°C) kW	72	108	144	180	215	287	359
Upper heat exchanger heating surface	m²	2,00	3,00	4,00	5,00	6,00	8,00	10,00
Upper HEX output (Prim 80/70°C - Sec 10/45°	°C) kW	72	108	144	180	215	287	359
DHW continuous flow 10/45°C	L/h	3529	5293	7057	8821	10586	14114	17643
EMPTY WEIGHTS								
Empty Weight	kg	245	310	390	450	585	750	890

Note: All the measurements of the connections are considered "from the ground". The thread are female GAS type, unless otherwise specified. The tanks higher than 2200mm are packaged horizontally.





ULIN	ERAL CHARACTERISTICS - VERTICAL-L		4500	0000	0500	0000	4000	5000
_		Capacity - L	1500	2000	2500	3000	4000	5000
	ENSIONS							
	neter without insulation	mm	1100	1250	1400	1400	1600	1800
Dian	neter with insulation	mm	1340	1490	1500	1500	1700	1900
Over	all height	mm	2035	2039	2119	2369	2460	2483
Over	turning height with without insulation	mm	2264 2048	2319 2059	2410 2147	2632 2392	2781 2490	2874 2523
CON	INECTIONS							
Ε	Cold water supply	mm Ø	485 2"1/2	504 2"1/2	559 3"	559 3"	620 3"	622 3"
U	DHW return	mm Ø	2035 2"1/2	2039 2"1/2	2119 3"	2369 3"	2460 3"	2483 3"
U2	DHW additional return	mm Ø	_	_	1649 3"	1899 3"	1960 3"	1962 3"
RC	Recirculation	mm Ø	1235 1"½	1254 1"½	1309 1"½	1474 1"½	1535 1"½	1537 1"½
R	Immersion electric heater	mm Ø	865 2"	884 2"	939 2"	1004 2"	1065 2"	1067 2"
P1	Sensor	mm Ø	655 ½"	674 ½"	729 ½"	729 ½"	790 ½"	792 ½"
P2	Sensor	mm Ø	1065 ½"	1084 ½"	1139 ½"	1199 ½"	1310 ½"	1312 ½"
P3	Sensor	mm Ø	1595 ½"	1564 ½"	1669 ½"	1819 ½"	1880 ½"	1882 ½"
T	Thermometer	mm Ø	1595 ½"	1564 ½"	1669 ½"	1939 ½"	2000 ½"	2002 ½"
A1	Anode	mm Ø	870 ½"	889 ½"	944 ½"	929 ½"	990 1/2"	992 ½"
A2	Anode	mm Ø	1535 ½"	1504 ½"	1609 ½"	1859 ½"	1920 ½"	1922 ½"
AS1	Spare	mm Ø	465 1"1⁄4	484 1"1/4	539 1"1/4	539 1"1/4	600 1"1/4	602 1"1/4
AS2	Spare	mm Ø	1265 1"1⁄4	1284 1"1⁄4	1339 1"1⁄4	1939 1"1/4	2000 1"1/4	2002 1"1/4
FL1	Lower heat exchanger manhole	mm Ø	655 300×380	674 300×380	729 300×380	729 300×380	790 350×430	792 350×430
FL2	Upper heat exchanger manhole	mm Ø	1065 300×380	1084 300×380	1139 300×380	1199 300×380	1310 350×430	1312 350×430
S1	Lower heat exchanger return	mm Ø	580 2"	599 2"	654 2"	654 2"	691 2"	693 2"
S2	Lower heat exchanger manhole	mm Ø	730 2"	749 2"	804 2"	804 2"	891 2"	893 2"
S3	Upper heat exchanger return	mm Ø	990 2"	1009 2"	1064 2"	1124 2"	1211 2"	1213 2"
S4	Upper heat exchanger supply	mm Ø	1140 2"	1159 2"	1214 2"	1274 2"	1411 2"	1413 2"
00	D :	. ~		100 1 1111				

TUBE BUNDLE HEAT EXCHANGERS PERFORMANCE	:S						
Lower heat exchanger heating surface area	m²	3,00	4,00	5,00	6,00	8,00	10,00
Lower HEX output (Prim 80/70°C - Sec 10/45°C)	kW	108	144	180	215	287	359
Upper heat exchanger heating surface area	m²	3,00	4,00	5,00	6,00	8,00	10,00
Upper HEX output (Prim 80/70°C - Sec 10/45°C)	kW	108	144	180	215	287	359
DHW production 10/45°C	L/h	5293	7057	8821	10586	14114	17643
EMPTY WEIGHTS							
Empty weight	kg	325	405	505	600	725	915

106 | 1"1/4

114 | 1"1/4

114 | 1"1/4

145 | 1"1/4

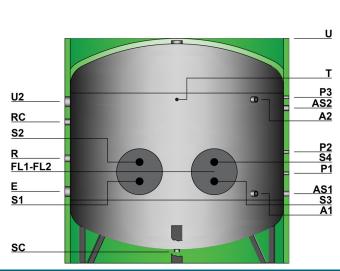
126 | 1"1/4

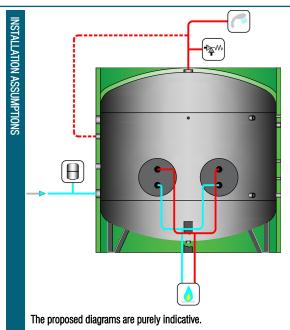
SC

Drain

123 | 1"1/4

mm | Ø



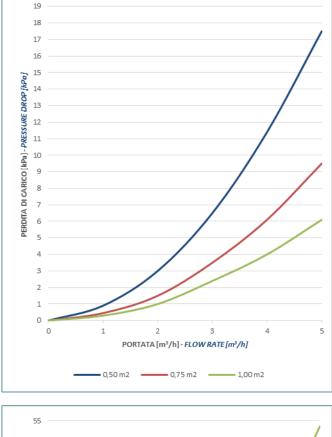


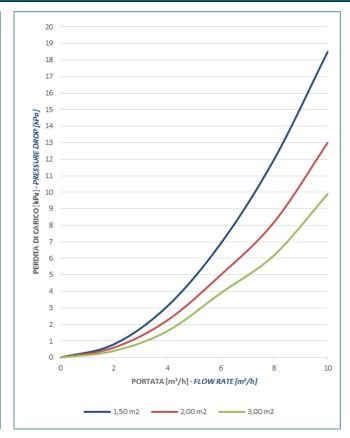
GENERAL CHARACTERISTICS - VERTICAL EXTR		2000	4000	E000
	Capacity - L	3000	4000	5000
DIMENSIONS				
Diameter without insulation	mm	1500	1700	2000
Diameter with insulation	mm	1600	1800	2100
Overall height	mm	2130	2190	2100
Overturning height with without insulation	mm	2450 2158	2578 2229	2628 2160
CONNECTIONS				
E Cold water supply	mm Ø	558 3"	590 3"	670 3"
U DHW return	mm Ø	2130 3"	2190 3"	2100 3"
U2 DHW additional return	mm Ø	1650 3"	1680 3"	1510 3"
RC Recirculation	mm Ø	1308 1"1/2	1370 1"1⁄2	1320 1"1⁄2
R Immersion electric heater	mm Ø	938 2"	1060 2"	1070 2"
P1 Sensor	mm Ø	728 ½"	790 ½"	850 ½"
P2 Sensor	mm Ø	1138 ½"	1010 ½"	1050 ½"
P3 Sensor	mm Ø	1668 ½"	1700 ½"	1530 ½"
T Thermometer	mm Ø	1668 ½"	1700 ½"	1530 ½"
A1 Anode	mm Ø	943 ½"	570 ½"	650 ½"
A2 Anode	mm Ø	1668 ½"	1620 ½"	1530 ½"
AS1 Spare	mm Ø	538 1"1/4	570 1"1/4	650 1"1/4
AS2 Spare	mm Ø	1337 1"1⁄4	1370 1"1/4	1450 1"1⁄4
FL1 Lower heat exchanger manhole	mm Ø	728 300×380	790 350×430	850 350×430
FL2 Upper heat exchanger manhole	mm Ø	1138 300×380	790 350×430	850 350×430
S1 Lower heat exchanger return	mm Ø	653 2"	691 2"	751 2"
S2 Lower heat exchanger manhole	mm Ø	803 2"	891 2"	951 2"
S3 Upper heat exchanger return	mm Ø	1063 2"	691 2"	751 2"
S4 Upper heat exchanger supply	mm Ø	1213 2"	891 2"	951 2"
SC Drain	mm Ø	103 1"1⁄4	105 1"1⁄4	105 1"1⁄4

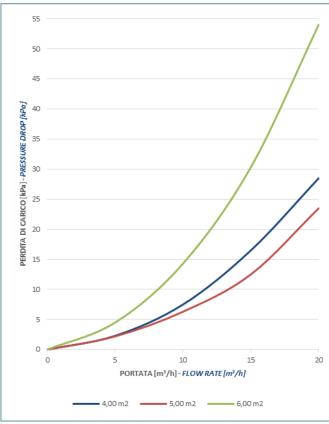
TODE DONDLE TIENT EXCHANGERS I EN ONWANCES				
Lower heat exchanger heating surface area	m²	6,00	8,00	10,00
Lower HEX output (Prim. 80/70°C - Sec. 10/45°C)	kW	215	287	359
Upper heat exchanger heating surface area	m²	6,00	8,00	10,00
Upper HEX output (Prim. 80/70°C - Sec. 10/45°C)	kW	215	287	359
DHW continuous flow 10/45°C	L/h	10586	14114	17643
EMPTY WEIGHTS				
Facetonia labe	1	000	770	005

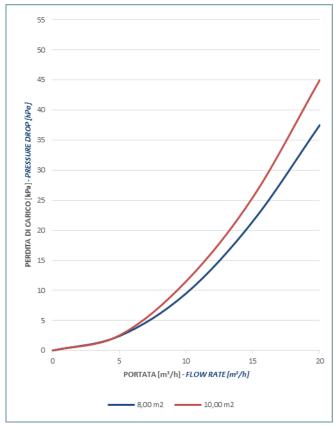
770 Empty weight 905 kg 600

20









TUBE BUNDLE HEAT EXCHANGER OUTPUT

					SECONDARY (DHW)	
Storage Volume	Heating surface area	Capacity	Primary flow	Continuous production	Production first 10'	Production first 60'
L	m²	kW	L/h	L/h	L	L
1000	2,00	72	6175	3529	1588	4529
1000	2,00	72	6175	3323		4023
1500	3,00	108	9263	5293	2382	6793
1500	3,00	108	9263	3233	2302	0195
2000	4,00	144	12350	7057	3176	9057
2000	4,00	144	12350		3170	3031
2500	5,00	180	15438	8821	3970	11321
2300	5,00	180	15438	0021	3310	11321
3000	6,00	215	18525	10586	4764	13586
3000	6,00	215	18525	10300	4704	13300
4000	8,00	287	24700	14114	6352	18114
4000	8,00	287	24700	14114	0332	10114
5000	10,00	359	30870	17643	7940	22643
J000	10,00	359	30875	17043	1 340	22043

mary (70-60)°C Se	55.1da.j (15 15) 5				SECONDARY (DHW)	
Storage Volume	Heating surface area	Capacity	Primary flow	Continuous production	Production first 10'	Production first 60'
L	m^2	kW	L/h	L/h	L	L
1000	2,00 2,00	52 52	4500 4500	2571	1429	3571
1500	3,00 3,00	78 78	6750 6750	3857	2143	5357
2000	4,00 4,00	105 105	9000 9000	5143	2857	7143
2500	5,00 5,00	131 131	11250 11250	6429	3571	8929
3000	6,00 6,00	157 157	13500 13500	7714	4286	10714
4000	8,00 8,00	209 209	18000 18000	10286	5714	14286
5000	10,00 10,00	262 262	22500 22500	12857	7143	17857

rimary (60-50)°C Se	condary(10-45)°C		1	SECONDARY (DHW)			
Storage Volume	Heating surface area	Capacity	Primary flow	Continuous production	Production first 10'	Production first 60'	
L	m²	kW	L/h	L/h	L	L	
1000	2,00 2,00	35 35	3025 3025	1729	1288	2729	
1500	3,00 3,00	53 53	4538 4538	2593	1932	4093	
2000	4,00 4,00	70 70	6050 6050	3457	2576	5457	
2500	5,00 5,00	88 88	7563 7563	4321	3220	6821	
3000	6,00 6,00	106 106	9075 9075	5186	3864	8186	
4000	8,00 8,00	141 141	12100 12100	6914	5152	10914	
5000	10,00 10,00	176 176	15125 15125	8643	6440	13643	

				SECONDARY (DHW)		
Storage Volume	Heating surface area	Capacity	Primary flow	Continuous production	Production first 10'	Production first 60
L	m^2	kW	L/h	L/h	L	L
1000	2,00 2,00	21 21	1800 1800	1029	1171	2029
1500	3,00 3,00	31 31	2700 2700	1543	1757	3043
2000	4,00 4,00	42 42	3600 3600	2057	2343	4057
2500	5,00 5,00	52 52	4500 4500	2571	2929	5071
3000	6,00 6,00	63 63	5400 5400	3086	3514	6086
4000	8,00 8,00	84 84	7200 7200	4114	4686	8114
5000	10,00 10,00	105 105	9000 9000	5143	5857	10143

HOW TO ORDER → Insulation 85 mm → Insulation 120 mm → Insulation 50 mm $\begin{array}{l} V \longrightarrow \text{Vertical} \\ R \longrightarrow \text{Vertical LOW} \\ X \longrightarrow \text{Vertical X-LOW} \end{array}$ $6 \rightarrow 6 \text{ bar} \\ 8 \rightarrow 8 \text{ bar} \\ 0 \rightarrow 10 \text{ bar}$ $\text{X} \rightarrow \text{HEX}$ tubes made of SS 304 $\text{6} \rightarrow \text{HEX}$ tubes made of SS 316L R $\rightarrow \text{HEX}$ tubes made of COPPER $\text{A} \rightarrow \text{Aluminium clad.}$ NULL $\rightarrow \text{PVC clad.}$ Capacity-L $H \rightarrow ErP$ compliant (≤ 2000 I) NULL \rightarrow Not subject to ErP BT2 | H | - | V | 8 | C | E | 0 | X | A | / | 1000

ACCESSORIES & SPARE PARTS

TUBE BUNDLE HEAT EXCHANGERS

ITEM

PART NO.

ANODE012X430X2_P

THERMOMETER Ø65 mm | L=150 mm | $(0 \div 120)$ °C TERMOMETRO-D65 L THERMOMETER Ø100 mm | L=150 mm | $(0 \div 120)$ °C TERMOMETRO-D100 POZZETTO_L SENSOR SOCKET $\emptyset1/2$ " | L=150 mm | \emptyset _{int} 10 mm THERMOSTAT Ø1/2" (0 ÷ 90)°C *TERMOSTATO* ELECTRONIC ANODE KIT 1000 L ANODE012X430_P ELECTRONIC ANODE KIT 1500 ÷ 5000 L







ELECTRONIC ANODE

1-3 PHASE Threaded plu	IMMERSION ELECT ug 2" Aluminium	RIC HEATER - box IP55 V2	- STAINLESS STEEL 316I / INCOLOY TUBE 230/400	S	
Capacity	Capacity/L matching	Lenght	1-THERMOSTAT Temperature regulation only	2-THERMOSTAT Temp. regulation & overheating protection	
Watt	L	mm	PART NO.	PART NO.	
2000	1000÷5000	280	RES020-200-L280-6-M	RES020-200-L280-6-B	
3000	$1000 \div 5000$	380	RES030-200-L380-6-M	RES030-200-L380-6-B	
5000	$1000 \div 5000$	500	RES050-200-L500-6-M	RES050-200-L500-6-B	
6000	$1000 \div 5000$	600	RES060-200-L600-6-M	RES060-200-L600-6-B	
9000	$1000 \div 5000$	680	RES090-200-L680-I-M	RES090-200-L680-I-B	
10000	$1000 \div 5000$	680	RES100-200-L680-I-M	RES100-200-L680-I-B	4
12000	$1000 \div 5000$	820	RES120-200-L820-I-M	RES120-200-L820-I-B	

PRIMARY CHESTS AND SEALING GASKETS					
Diameter Internal×External	Capacity	Primary chest made of galvanized steel	EPDM gasket without cross bar	EPDM gasket with cross bar	
mm	L	Part. No.	Part. No.	Part. No.	
300×380	1000÷3000	TESTA380X300X5-Z	GUGOMEPDM380X300ST	GUGOMEPDM380X300CT	
350×430	4000-5000	TESTA430X350X5-Z	GUGOMEPDM430X350ST	GUGOMEPDM430X350CT	

Heating	Dimensions		Dimensions Stainless Steel AISI 304 tubes	Stainless Steel AISI 316L tubes	COPPER tubes &	
surface area	D	L	CERAMFLON enamelled steel plate	CERAMFLON enamelled steel plate	CERAMFLON enamelled steel plate	
m ²	mm	mm	Part. No.	Part. No.	Part. No.	
2,00	380	594	SFX4020D380-S	SFX6020D380-S	SFRA020D380-S	
3,00	380	718	SFX4030D380-S	SFX6030D380-S	SFRA030D380-S	
4,00	380	850	SFX4040D380-S	SFX6040D380-S	SFRA040D380-S	
5,00	380	1050	SFX4050D380-S	SFX6050D380-S	SFRA050D380-S	
6,00	380	1250	SFX4060D380-S	SFX6060D380-S	SFRA060D380-S	
8,00	430	1250	SFX4080D430-S	SFX6080D430-S	SFRA080D430-S	
10,00	430	1510	SFX4100D430-S	SFX6100D430-S	SFRA100D430-S	



This bago is lot intentionally blank.

ANTI-CORROSION PROTECTION STEEL TREATMENTS

PROTECTIVE TREATMENTS FOR CARBON STEEL TANKS CERAMFLON enamelling

The "CERAMFLON" anti-corrosion treatment is an innovative system for the protection of the metallic walls which has been introduced by the recent developments in the studies on resins, guaranteeing hygiene and many other qualities:

- it is inert and insensitive corrosion thanks to its considerable resistance to ageing;
- it is water-repellent and impermeable to steam and moisture;
- it has a practically zero absorption of humidity and the stability is maintained both at high and low temperatures, so they can withstand even very high thermal excursions;
- it has a high impact resistance and a very low friction coefficient, which avoids large and hazardous adherence phenomena which, in the majority of cases, can be attributed to limescale;
- it has a low dielectric constant which is maintained at variations in operating temperatures.

The application of the resins using triboelectric guns, carried out after careful cleaning of the support, is consolidated on the product after baking in an oven at 200°C.

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 magnesium anodes.

The application of sacrificial magnesium anodes is a simple and economic method to obtain a cathodic protection. The sacrificial anode creates a situation similar to an electric battery, where the electrodes are represented by the anode and the metal structure to be protected.

Since the magnesium has a dissolution voltage which is much higher than that of other metals, the corrosion will only affect the anode, which will dissolve slowly, to the advantage of the metal structure to be protected.

Given the importance of the protection of the metal against corrosion, the wear of the anode is systematically controlled and it is immediately replaced if consumed.



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:

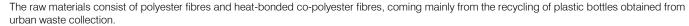
- active protection by means of impressed currents from the outside;
- excellent flexibility of operation in order to adhere to the changeable internal coating conditions and the mass of water:
- reduction of maintenance costs due to the permanent protection of the system.



INSULATION Thermal Operating Fire reaction class Insulating material Removable **Thickness** Density conductivity temperature Euroclass EN13501-1 coefficient at 45°C PLF 50 mm 20 kg/m³ $\lambda = 0.037 \text{ W/mK}$ Amb. / +99°C B-s2, d0 Polyester fibre PLFH 120 mm 25 kg/m³ $\lambda = 0.034 \text{ W/mK}$ Amb. / +99°C B-s2, d0 High Density Polyester fibre Hard Polyurethane 85 mm 40÷42 kg/m³ $\lambda = 0.019 \text{ W/mK}$ Amb. / +99°C

PLFH / PLF - Polyester fibre

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



It does not contain substances harmful to humans, may be handled and installed in complete safety, does not release powder, is hypoallergenic and cannot be attacked by microorganisms, mould and insects.

PLFH/PLF is a heat insulating product considered environmentally sustainable, even though it is not of natural origin: it is in fact recyclable and the quantity of embodied energy necessary to obtain it is extremely low.

The composition of the polyester fibre makes it an insulating material with an extremely low heat dispersion and its characteristics remain unaltered over time as it is not affected by humidity and its compact, flexible and resistant original structure is not modified.

Thanks to its characteristics, PLFH/PLF is an insulating material with the highest performance characteristics, which allows the requirements set by the severest technical standards to be satisfied, guaranteeing the maximum environmental compatibility for its entire life cycle.

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



<u>PVC</u>

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
COVER-RAL1023
COVER-RAL2004
COVER-RAL3000
COVER-RAL5015
COVER-RAL9016
COVER-RAL7035
COVER-RAL7024
COVER-RAL9004



<u>ALUMINIUM</u>

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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MADE IN ITALY

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