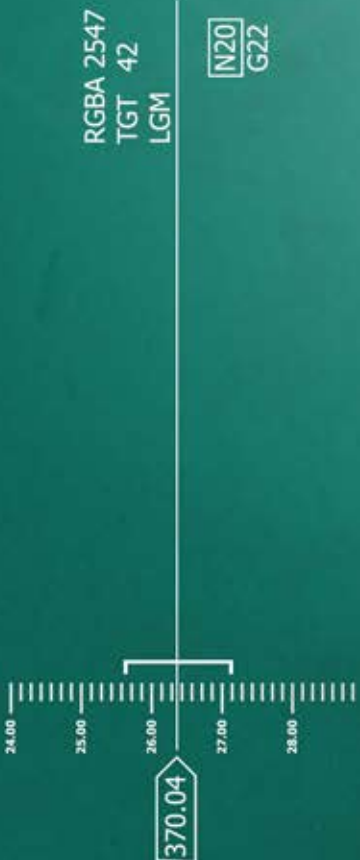


AND AVAILABLE TO ADDITIONAL TUBES designed for some SOLUTION
 QUALITY TO sanitary water for well CENTRE 5000m³ always needed HEATING SOURCE DAILY PURE POSITIVE PRESSURE
 FLOOR HEADINGS materials SUPPLY TANKS the maximum capacity but 40 bar ADDITIONAL CONDITIONAL USES
 THICKNESS of sanitary water tanks with ST made of STEEL or INOX. BIOMASS OIL OR SOLID FUEL. flexible flexible OFFERING OFFERING
 VALVES WATER CENTRAL SYSTEMS BUFFER TANKS made of STEEL or INOX. AIR RAFTS SOIL SYSTEMS for water and and
 INSIDE AIR conditioning COILS for water and air. POISSONVILLE LITE INALITE AIR RAFTS SOIL SYSTEMS for water and and
 engineering solutions HEAT exchangers connected to the MAIN LINE. The MAIN LINE. The MAIN LINE. The MAIN LINE. The MAIN LINE. The MAIN LINE.

GFX 42
SDC 90

BUFFER TANKS & CALORIFIERS

WWW.REFRA.EU



BUFFER TANKS & CALORIFIERS

SIMPLE

Material: Carbon steel S355, powder coated; AISI 304; AISI 316
Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armalex 40 mm or 80 mm
Finishing: leatherette, red or blue color

Calculations on following conditions:

Primary circuit at the heat source: +80°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C (after 1st hour)



Model	Volume
	Litres
FG0-V200D65PL50	200
FG0-V300D65PL50	300
FG0-V400D65PL50	400
FG0-V500D65PL50	500
FG0-V600D65PL50	600
FG0-V800D85PL50	800
FG0-V1000D85PL50	1000
FG0-V1200D110PL50	1200
FG0-V1400D110PL50	1400
FG0-V1500D110PL50	1500
FG0-V1600D110PL50	1600
FG0-V1800D110PL50	1800
FG0-V2000D110PL50	2000

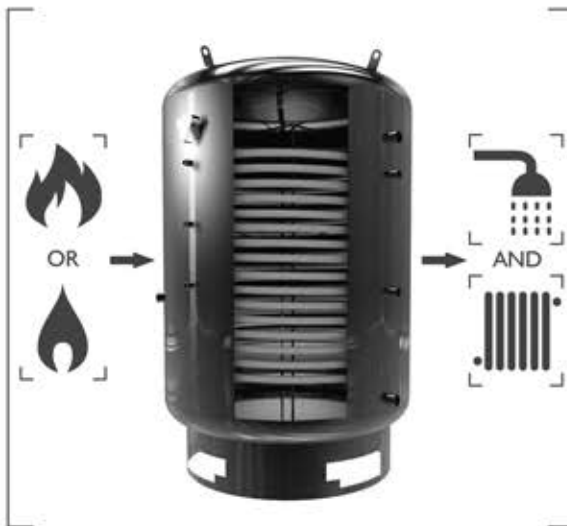
COMBI-1

Material: Carbon steel S355; Stainless steel AISI 304 or AISI 316
Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armalex 40 mm or 80 mm
Finishing: leatherette, red or blue color

Calculations on following conditions:

Primary circuit at the heat source: +60°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C



Model	Volume	Diameter, D	Height, H	Dimensions, mm						
				H1	H2	H3	H4	H5	H6	H7
FH4-V200D65PL50	200	650	900	310	320	372	449	527	604	
FH4-V300D65PL50	300		1200							
FH4-V400D65PL50	400		1500							
FH4-V500D65PL50	500		1800							
FH4-V600D65PL50	600	850	2100	350	360	495	765	1035	1305	
FH4-V800D85PL50	800		1750							
FH4-V1000D85PL50	1000		2100							
FH4-V1200D110PL50	1200		1600							
FH4-V1400D110PL50	1400	1100	1800	400	410	511	714	916	1119	
FH4-V1500D110PL50	1500		1960							
FH4-V1600D110PL50	1600		2050							
FH4-V1800D110PL50	1800		2250							
FH4-V2000D110PL50	2000		2420			614	1021	1429	1836	

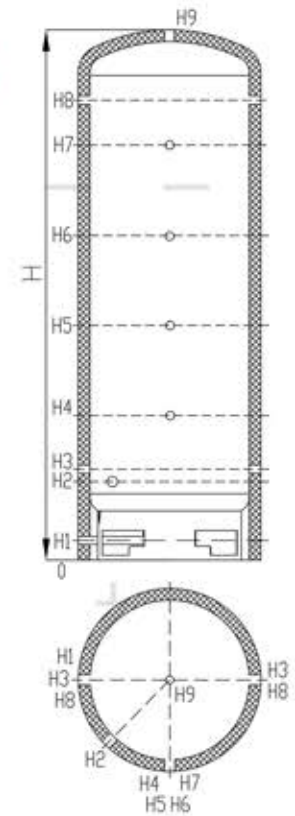
* Heat source biomass/gas boiler

** Sanitary water according UNI CTI 8065

Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

1	Drain	4	Thermometer	7	Thermomanometer
2	Electrical heater	5	Anode	8	Hot water (circulation)
3	Cold water (circulation)	6	Manometer	9	Hot water outlet

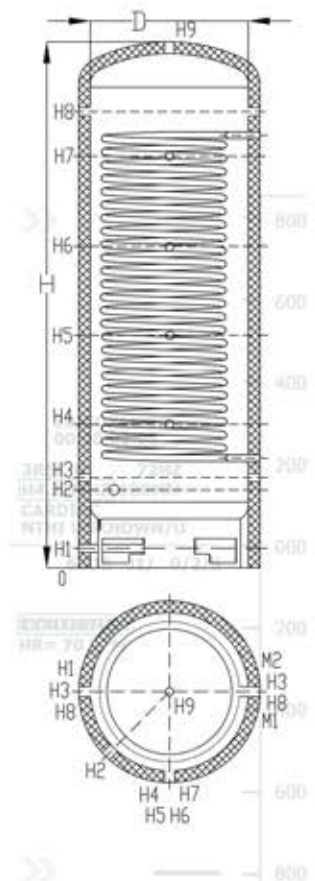
Diameter, D mm	Height, H mm	Dimensions, mm									Connections				
		H1	H2	H3	H4	H5	H6	H7	H8	H9	1	2	3	4-7	8-9
650	900				372	449	527	604	630	900	3/4"		1"		1"
	1200				396	549	701	854	930	1200					
	1500	80	310	320	430	650	870	1090	1200	1500					
	1800				468	763	1058	1353	1500	1800					
	2100				505	875	1245	1615	1800	2100					
850	1750	80	350	360	495	765	1035	1305	1440	1750	3/2"		1/2"		
	2100				539	896	1254	1611	1790	2100					
1100	1600				511	714	916	1119	1220	1600	1"		3/2"	3/2"	
	1800				536	789	1041	1294	1420	1800					
	1960	80	400	410	556	849	1141	1434	1580	1960					
	2050				568	883	1198	1513	1670	2050					
	2250				593	958	1323	1688	1870	2250					
	2420				614	1021	1429	1836	2040	2420					



Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

1	Drain	4	Thermometer	7	Thermomanometer
2	Electrical heater	5	Anode	8	Hot water (circulation)
3	Cold water (circulation)	6	Manometer	9	Hot water outlet

			Connections							Capacity of primary heat source*	Heat exchanger surface area	Capacity of heat exchanger	Sanitary water production**	
H8	M1	M2	1	2	3	4-7	8-9	10-11	kW	m2	kW	ltr/h	ltr/10 min	
630	400	540	3/4"		1"	1"	1"		12	1,2	9,26	159	73	
930		18							3,6	29,31	502	231		
1200		23							5,9	47,36	812	373		
1500		29							8,3	67,27	1153	530		
1800	450	1710	3/2"		1/2"	1"	1"		35	10,8	87,32	1497	689	
1440		47							10,1	81,77	1402	645		
1790		58							14,1	43,55	747	343		
1220	500	1130	1"		3/2"	3/2"	3/2"		70	9,4	76,37	1309	602	
1420		82							12,4	100,59	1724	793		
1580		88							14,8	119,88	2055	945		
1670		93							16,2	130,83	2243	1032		
1870		105							19,2	155,05	2658	1223		
2040		117							21,7	175,57	3010	1384		



TECHNICAL DATA - HEAT EXCHANGER:
 Material: Stainless steel AISI 316L, DN 20
 Maximum working pressure: 10 bar

BUFFER TANKS & CALORIFIERS

COMBI-2

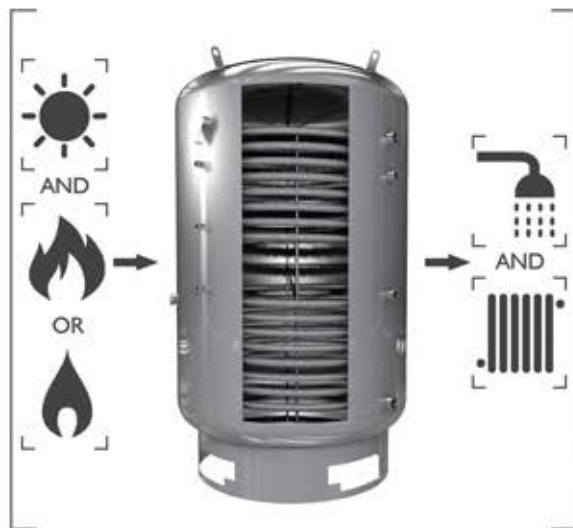
Material: Carbon steel S355; Stainless steel AISI 304 or AISI 316
 Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armaflex 40 mm or 80 mm
 Finishing: leatherette, red or blue color

Calculations on following conditions:
 Primary circuit at the heat source: +60°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C

TECHNICAL DATA - HEAT EXCHANGER:
 Material: Stainless steel AISI 316L, DN 20
 Maximum working pressure: 10 bar

1
2
3



Model	Volume Litres	Diameter, D mm	Height, H mm	Weight kg	Dimension							
					H1	H2	H3	H4	H5	H6	H7	
FH2-V300D65PL50	300	650	1200	53	80	310	320	80	396	549	701	854
FH2-V400D65PL50	400		1500	62					430	650	870	1090
FH2-V500D65PL50	500		1800	72					468	763	1058	1353
FH2-V600D65PL50	600	850	2100	81	80	350	360	80	505	875	1245	1615
FH2-V800D85PL50	800		1750	97					495	765	1035	1305
FH2-V1000D85PL50	1000		2100	112					539	896	1254	1611
FH2-V1200D110PL50	1200	1100	1600	159	80	410	410	80	511	714	916	1119
FH2-V1400D110PL50	1400		1800	175					536	789	1041	1294
FH2-V1500D110PL50	1500		1960	185					556	849	1141	1434
FH2-V1600D110PL50	1600	1100	2050	195	80	410	410	80	568	883	1198	1513
FH2-V1800D110PL50	1800		2250	211					593	958	1323	1688
FH4-V2000D110PL50	2000		2420	225					614	1021	1429	1836

* Heat source biomass/gas boiler

** Ignition time of a buffer tank if | heat exchanger returns the

COMBI-3

Material of main vessel: Carbon steel S355, powder coated
 Material of inner vessel: Stainless steel AISI 304
 Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armaflex 40 mm or 80 mm
 Finishing: leatherette, red or blue color

Calculations on following conditions:
 Primary circuit at the heat source: +60°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C (after 1st hour)



Model	Total Volume Litres	Diameter, D mm	Height, H mm	Volume V1 Litres	Volume V2 Litres	Weight kg	Dimension		
							H1	H2	H3
FG3-V200D65PL50	200	650	900	150	50	43	80	310	320
FG3-V300D65PL50	300		1200	225	75	53			
FG3-V400D65PL50	400		1500	300	100	62			
FG3-V500D65PL50	500	850	1800	375	125	72	80	350	360
FG3-V600D65PL50	600		2100	450	150	81			
FG3-V800D85PL50	800		1750	600	200	97			
FG3-V1000D85PL50	1000	1100	2100	750	250	112	80	400	410
FG3-V1200D110PL50	1200		1600	900	300	159			
FG3-V1400D110PL50	1400		1800	1050	350	175			
FG3-V1500D110PL50	1500	1100	1960	1125	375	185	80	400	410
FG3-V1600D110PL50	1600		2050	1200	400	195			
FG3-V1800D110PL50	1800		2250	1350	450	211			
FG3-V2000D110PL50	2000	1100	2420	1500	500	225	80	400	410

* Heat source biomass/gas boiler

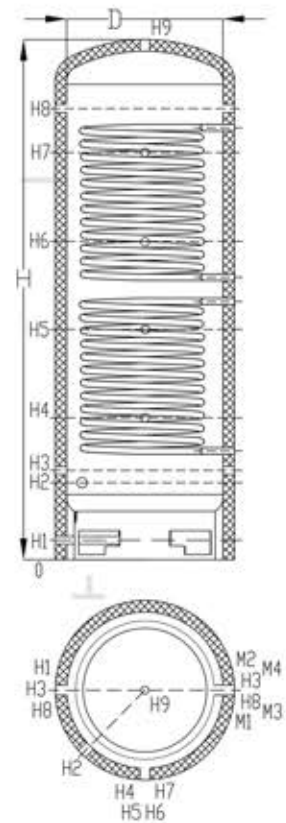
** Heat source for inner vessel heated by the water in main

Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

Drain	4	Thermometer	7	Thermomanometer	10	Internal heat exchanger inlet/outlet
Electrical heater	5	Anode	8	Hot water (circulation)	-	
Cold water (circulation)	6	Manometer	9	Hot water outlet	13	

Dimensions, mm						Connections						Capacity of primary heat source*	Heat exchanger surface area	Capacity of heat exchanger	Sanitary water production per 1 heat exchanger**	
H8	H9	M1	M2	M3	M4	1	2	3	4-7	8-9	10-13	kW	m ²	kW	ltr/h	ltr/10 min
930	1200	400	580	670	840	3/4"		1"	1"	1"	1"	18	1,5	12,03	206	95
1200	1500		715	805	1110							23	2,6	20,98	360	165
1500	1800		865	955	1410							29	3,8	30,87	529	243
1800	2100		1015	1105	1710							35	5,1	41,04	704	324
1440	1750	450	855	945	1350	3/2"	3/2"	1/2"	1"	1"	1"	47	3,3	27,00	463	213
1790	2100		1030	1120	1700							58	4,8	38,73	664	305
1220	1600		770	860	1130							70	2,2	18,05	309	142
1420	1800		870	960	1330							82	3,1	24,69	423	195
1580	1960	500	950	1040	1490	1"	3/2"	3/2"	3/2"	3/2"	3/2"	88	3,7	29,93	513	236
1670	2050		995	1085	1580							93	4,1	33,04	566	261
1870	2250		1095	1185	1780							105	4,9	39,65	680	313
2040	2420		1180	1270	1950							117	5,6	45,36	778	358

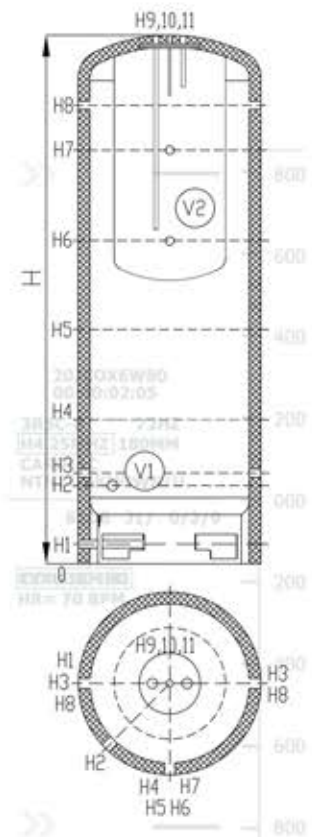
heat



Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

Dimensions, mm							Connections						Capacity of primary heat source*	Capacity of secondary heat source**	Ignition time of inner vessel
H4	H5	H6	H7	H8	H9, H10, H11		1	2	3	4-7	8-9	10-13	kW	kW	min
372	449	527	604	630	900	3/4"		1"	1"	1"	1"	1"	12	73,02	2,74
396	549	701	854	930	18								97,36	3,08	
430	650	870	1090	1200	23								121,71	3,29	
468	763	1058	1353	1500	29								158,22	3,16	
505	875	1245	1615	1800	2100	3/2"	3/2"	1/2"	1"	1"	1"	35	182,56	3,29	
495	765	1035	1305	1440	1750							47	182,56	4,38	
539	896	1254	1611	1790	2100							58	219,07	4,56	
511	714	916	1119	1220	1600							70	194,73	6,16	
536	789	1041	1294	1420	1800	1"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	82	219,07	6,39
556	849	1141	1434	1580	1960								88	231,24	6,49
568	883	1198	1513	1670	2050								93	243,41	6,57
593	958	1323	1688	1870	2250								105	279,92	6,43
614	1021	1429	1836	2040	2420								117	304,26	6,57

vessel



BUFFER TANKS & CALORIFIERS

COMBI-4

Material of main vessel: Carbon steel S355, powder coated
 Material of inner vessel: Stainless steel AISI 304 or AISI316
 Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armaflex 40 mm or 80 mm
 Finishing: leatherette, red or blue color

Calculations on following conditions:

Primary circuit at the heat source: +60°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C (after 1st hour)



Model	Total Volume	Diameter, D	Height, H	Volume V1	Volume V2	Weight						
							Litres	mm	mm	Litres	Litres	kg
FG3-V200D65PL50	200	650	900	150	50	43	80	310	320		372	449
FG3-V300D65PL50	300		1200	225	75	53					396	549
FG3-V400D65PL50	400		1500	300	100	62					430	650
FG3-V500D65PL50	500		1800	375	125	72					468	763
FG3-V600D65PL50	600		2100	450	150	81					505	875
FG3-V800D85PL50	800	850	1750	600	200	97	80	350	360		495	765
FG3-V1000D85PL50	1000		2100	750	250	112					539	896
FG3-V1200D110PL50	1200		1600	900	300	159					511	714
FG3-V1400D110PL50	1400	1100	1800	1050	350	175	80	400	410		536	789
FG3-V1500D110PL50	1500		1960	1125	375	185					556	849
FG3-V1600D110PL50	1600		2050	1200	400	195					568	883
FG3-V1800D110PL50	1800		2250	1350	450	211					593	958
FG3-V2000D110PL50	2000		2420	1500	500	225					614	1021

* Heat source biomass/gas boiler

** Heat source for inner vessel heated by the water in main

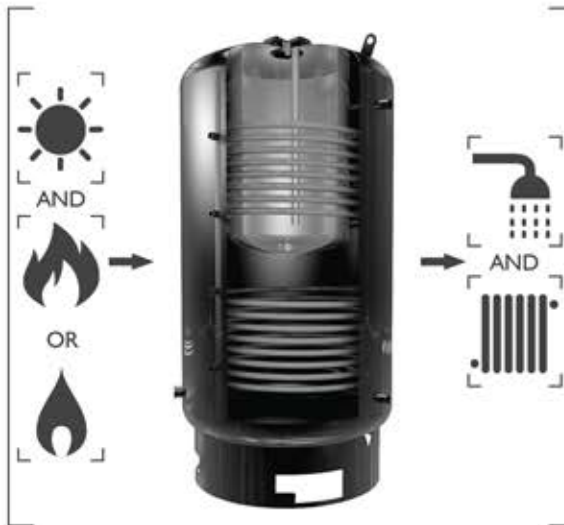
COMBI-5

Material of main vessel: Carbon steel S355, powder coated
 Material of inner vessel: Stainless steel AISI 304 or AISI316
 Thermal insulation: Soft polyurethane, thickness 50 mm or 100 mm or armaflex 40 mm or 80 mm
 Finishing: leatherette, red or blue color

Calculations on following conditions:

Primary circuit at the heat source: +60°C
 In first 10 min and first hour can be taken at 60°C

Inlet temperature: +10°C
 Outlet temperature: +60°C (after 1st hour)



Model	Total Volume	Diameter, D	Height, H	Volume V1	Volume V2	Weight							
							Litres	mm	mm	Litres	Litres	kg	H1
FG3-V300D65PL50	300	650	1200	225	75	53	80	310	320		396	549	701
FG3-V400D65PL50	400		1500	300	100	62					430	650	870
FG3-V500D65PL50	500		1800	375	125	72					468	763	1058
FG3-V600D65PL50	600	850	2100	450	150	81	80	350	360		505	875	1245
FG3-V800D85PL50	800		1750	600	200	97					495	765	1035
FG3-V1000D85PL50	1000		2100	750	250	112					539	896	1254
FG3-V1200D110PL50	1200	1100	1600	900	300	159	80	400	410		511	714	916
FG3-V1400D110PL50	1400		1800	1050	350	175					536	789	1041
FG3-V1500D110PL50	1500		1960	1125	375	185					556	849	1141
FG3-V1600D110PL50	1600		2050	1200	400	195					568	883	1198
FG3-V1800D110PL50	1800		2250	1350	450	211					593	958	1323
FG3-V2000D110PL50	2000		2420	1500	500	225					614	1021	1429

* Heat source biomass/gas boiler

** Heat source for inner vessel heated by the water in main

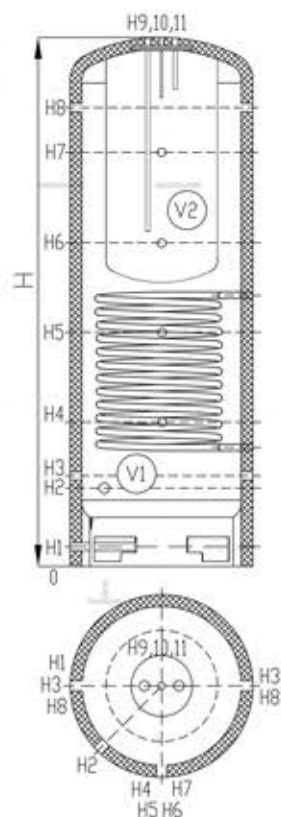
Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

TECHNICAL DATA - HEAT EXCHANGER:

Material: Stainless steel AISI 316L, DN 20
 Maximum working pressure: 10 bar

Dimensions, mm						Connections						Capacity of primary heat source*	Capacity (surface area) of inner vessel	Capacity (surface area) of heat exchanger	Ignition time of inner vessel
H6	H7	H8	H9,H10,H11	M1	M2	1	2	3	4-7	8-9	10-11	kW	kW (m ²)	kW (m ²)	min
527	604	630	900	400	458	3/4"		1"		1"		12	73,02 (0,6)	1,94 (0,3)	2,67
701	854	930	1200		580							18	97,36 (0,8)	6,46 (1,0)	2,89
870	1090	1200	1500		715							23	121,71 (1,0)	11,63 (1,8)	3,00
1058	1353	1500	1800		865							29	158,22 (1,3)	17,45 (2,7)	2,85
1245	1615	1800	2100		1015							35	182,56 (1,5)	23,26 (3,6)	2,92
1035	1305	1440	1750	450	855	3/2"	1/2"		1"		47	182,56 (1,5)	16,8 (2,6)	4,01	
1254	1611	1790	2100		1030						58	219,07 (1,8)	23,91 (3,7)	4,12	
916	1119	1220	1600		770						70	194,73 (1,6)	14,86 (2,3)	5,73	
1041	1294	1420	1800	500	870	1"	3/2"	3/2"			82	219,07 (1,8)	20,03 (3,1)	5,86	
1141	1434	1580	1960		950						88	231,24 (1,9)	24,56 (3,8)	5,86	
1198	1513	1670	2050		995						93	243,41 (2,0)	27,14 (4,2)	5,91	
1323	1688	1870	2250		1095						105	279,92 (2,3)	32,31 (5,0)	5,76	
1429	1836	2040	2420		1180						117	304,26 (2,5)	37,48 (5,8)	5,85	

vessel



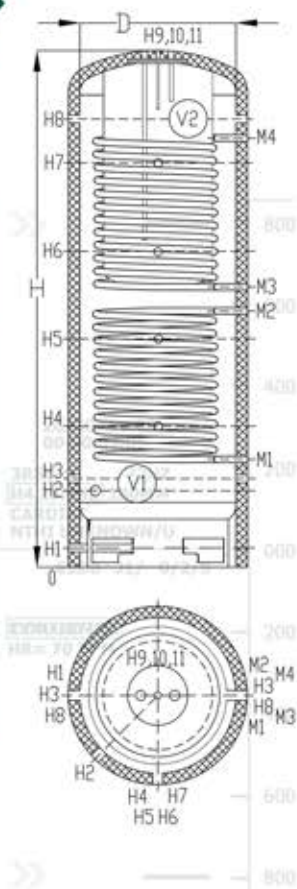
Maximum working pressure: 6 bar
 Minimum/Maximum working temperature: -20°C/+95°C

TECHNICAL DATA - HEAT EXCHANGER:

Material: Stainless steel AISI 316L, DN 20
 Maximum working pressure: 10 bar

Dimensions, mm							Connections					Capacity of primary heat source*	Capacity (surface area) of inner vessel	Capacity (surface area) of heat exchanger	Ignition time of inner vessel	
H7	H8	H9	M1	M2	M3	M4	1	2	3	4-7	8-9	10-14	kW	kW (m ²)	kW (m ²)	min
854	930	1200	400	580	670	840	3/4"		1"		1"		18	97,36 (0,8)	6,46 (1,0)	2,72
1090	1200	1500		715	805	1110							23	121,71 (1,0)	11,63 (1,8)	2,76
1353	1500	1800		865	955	1410							29	158,22 (1,3)	17,45 (2,7)	2,59
1615	1800	2100		1015	1105	1710							35	182,56 (1,5)	23,26 (3,6)	2,62
1305	1440	1750	450	855	945	1350	3/2"	1/2"		1"		47	182,56 (1,5)	16,8 (2,6)	3,70	
1611	1790	2100		1030	1120	1700						58	219,07 (1,8)	23,91 (3,7)	3,75	
1119	1220	1600		770	860	1130						70	194,73 (1,6)	14,86 (2,3)	5,35	
1294	1420	1800	500	870	960	1330	1"	3/2"	3/2"			82	219,07 (1,8)	20,03 (3,1)	5,40	
1434	1580	1960		950	1040	1490						88	231,24 (1,9)	24,56 (3,8)	5,35	
1513	1670	2050		995	1085	1580						93	243,41 (2,0)	27,14 (4,2)	5,37	
1688	1870	2250		1095	1185	1780						105	279,92 (2,3)	32,31 (5,0)	5,22	
1836	2040	2420		1180	1270	1950						117	304,26 (2,5)	37,48 (5,8)	5,27	

vessel



UAB "REFRA"
DARIAUS IR GIRENO STR. 107
VILNIUS, LT-02189, LITHUANIA

INFO@REFRA.EU
WWW.REFRA.EU

+370 5 2031020
+370 5 2031021
+370 5 2031023