

## PF - Pufferspeicher thermal accumulator



Thermal accumulator for the storage of heating water produced from continuous and discontinuous heat sources.

Available in:

- only accumulation
- accumulation + a fixed coil heat exchanger
- accumulation with two fixed coil heat exchangers.

The thermal fluid contained in the tank and in the primary heat exchangers must operate "closed loop" (without oxygen), this to avoid corrosion.

300-500L Models have rigid insulation.  
800-5000L Models have flexible, removable insulation.



TECHNICAL CHARACTERISTICS

Puffer	Material:	S 235 Jr
	Internal protective processing:	Rough
	External protective processing:	Painting with anti rust and industrial glaze
	Operation (P max. / T max.):	4 bar / 95°C
Upper exchanger (boiler)	Material:	S 235 Jr
	Internal protective processing:	Rough
	External protective processing:	Rough
Lower exchanger (solar)	Typology:	Spiral fixed coil
	Operation (P max. / T max.):	12 bar / 95°C
General characteristics	Capacity:	300 - 5000 Lt
	Warranty:	5 years
	Insulation:	- Flexible Polyester + pvc: Fire resistance class B2 (DIN4102)
		- Rigid insulation:
- for capacities 300/500/800/1000/1500/2000 Lt polyurethane + pvc: Fire resistance class B3 (DIN4102) - for capacities 1250/2500/3000/4000/5000 Lt polyester (15) + polystyrene (85) + pvc: Fire resistance class B2 (DIN4102)		
Reference legislation:	- PED 14/68/UE Art. 4 Par. 3 - Directive 2009/125/CE (Energy related Products)	

FITTINGS  
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Electronic control unit



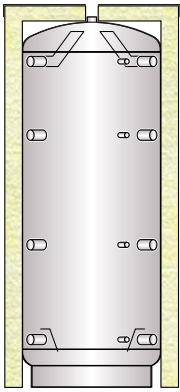
Electrical resistance 1 1/2 connection



Thermostat

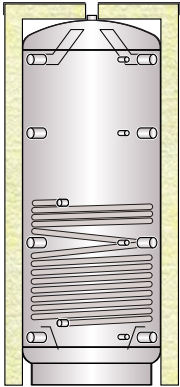


Thermometer

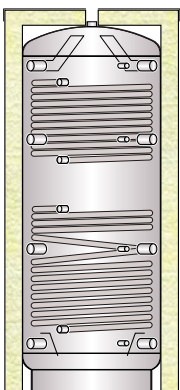


<b>PF - Pufferspeicher thermal accumulator</b>						
Flexible polyester insul. 100 mm thick + pvc			Rigid insulation + pvc			
Code	ErP	€	Code	Thickness (mm)	ErP	€
-	-	-	PF 00300 R	50	B	-
-	-	-	PF 00500 R	50	B	-
PF 00800 F	D	-	PF 00800 R	100	C	-
PF 01000 F	D	-	PF 01000 R	100	C	-
PF 01250 F	D	-	PF 01250 R	100	C	-
PF 01500 F	D	-	PF 01500 R	100	C	-
PF 02000 F	D	-	PF 02000 R	100	C	-
PF 02500 F	-	-	PF 02500 R	100	-	-
PF 03000 F	-	-	PF 03000 R	100	-	-
PF 04000 F	-	-	PF 04000 R	100	-	-
PF 05000 F	-	-	PF 05000 R	100	-	-

Horizontal version +10%



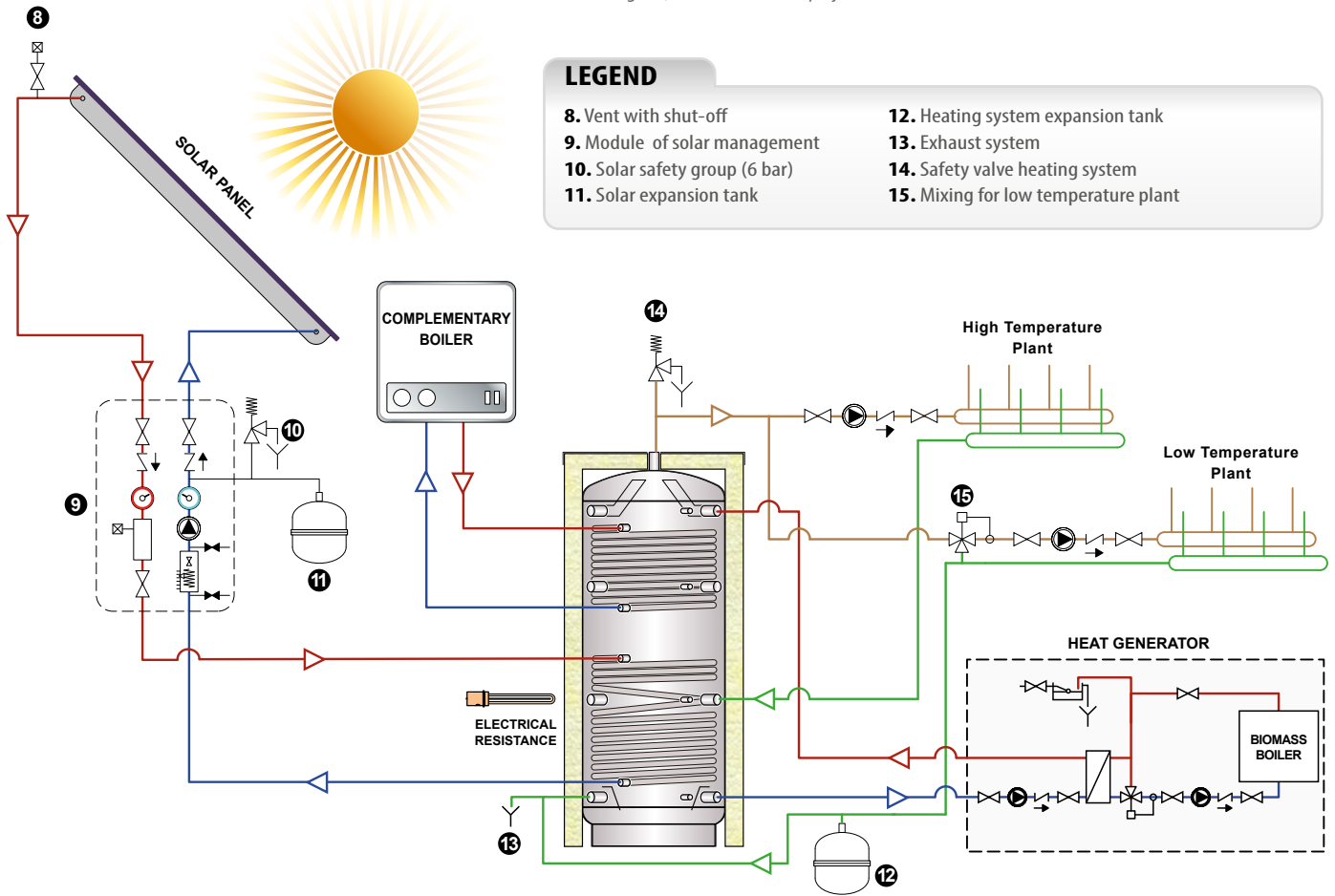
<b>PFS - Pufferspeicher thermal accumulator with a single coil</b>						
Flexible polyester insul. 100 mm thick + pvc			Rigid insulation + pvc			
Code	ErP	€	Code	Thickness (mm)	ErP	€
-	-	-	PFS 00300 R	50	B	-
-	-	-	PFS 00500 R	50	B	-
PFS 00800 F	D	-	PFS 00800 R	100	C	-
PFS 01000 F	D	-	PFS 01000 R	100	C	-
PFS 01250 F	D	-	PFS 01250 R	100	C	-
PFS 01500 F	D	-	PFS 01500 R	100	C	-
PFS 02000 F	D	-	PFS 02000 R	100	C	-
PFS 02500 F	-	-	PFS 02500 R	100	-	-
PFS 03000 F	-	-	PFS 03000 R	100	-	-
PFS 04000 F	-	-	PFS 04000 R	100	-	-
PFS 05000 F	-	-	PFS 05000 R	100	-	-



<b>PFSS - Pufferspeicher thermal accumulator with two coils</b>						
Flexible polyester insul. 100 mm thick + pvc			Rigid insulation + pvc			
Code	ErP	€	Code	Thickness (mm)	ErP	€
-	-	-	PFSS 00300 R	50	B	-
-	-	-	PFSS 00500 R	50	B	-
PFSS 00800 F	D	-	PFSS 00800 R	100	C	-
PFSS 01000 F	D	-	PFSS 01000 R	100	C	-
PFSS 01250 F	D	-	PFSS 01250 R	100	C	-
PFSS 01500 F	D	-	PFSS 01500 R	100	C	-
PFSS 02000 F	D	-	PFSS 02000 R	100	C	-
PFSS 02500 F	-	-	PFSS 02500 R	100	-	-
PFSS 03000 F	-	-	PFSS 03000 R	100	-	-
PFSS 04000 F	-	-	PFSS 04000 R	100	-	-
PFSS 05000 F	-	-	PFSS 05000 R	100	-	-

Technical water thermal accumulators

Caution: Indicative Schematic diagram, not substitutive for project work.

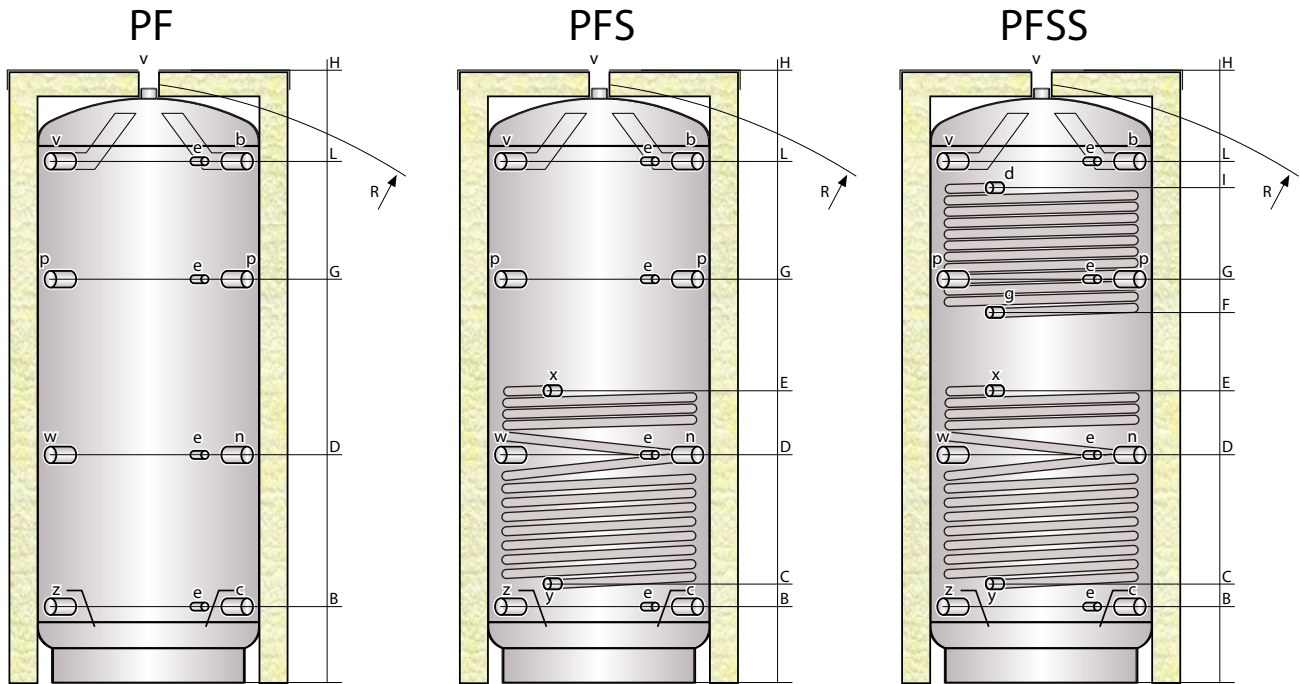


- LEGEND**
- 8. Vent with shut-off
  - 9. Module of solar management
  - 10. Solar safety group (6 bar)
  - 11. Solar expansion tank
  - 12. Heating system expansion tank
  - 13. Exhaust system
  - 14. Safety valve heating system
  - 15. Mixing for low temperature plant

Model	FE spiral lower exchanger					FE spiral upper exchanger				
	Sq.m. (Lt)	Power (kW)				Sq.m. (Lt)	Power (kW)			
		$\Delta T^*$ 10° C	$\Delta T^*$ 15° C	$\Delta T^*$ 20° C	$\Delta T^*$ 25° C		$\Delta T^*$ 10° C	$\Delta T^*$ 15° C	$\Delta T^*$ 20° C	$\Delta T^*$ 25° C
PF_00300R	1,4 (9,9)	9,0	13,4	17,9	22,4	1,1 (7,8)	7,0	10,6	14,1	17,6
PF_00500R	2,0 (14,2)	12,8	19,2	25,6	32,0	1,8 (12,8)	11,5	17,3	23,0	28,8
MX_W_00600R_AM_X_00600R PC/XPC_00600R_MD_M_00600R	2,5 (17,8)	16,0	24,0	32,0	40,0	1,8 (12,8)	11,5	17,3	23,0	28,8
PF_00800_	2,5 (17,8)	16,0	24,0	32,0	40,0	2,0 (14,2)	12,8	19,2	25,6	32,0
PF_01000_	3,5 (24,9)	22,4	33,6	44,8	56,0	2,5 (17,8)	16,0	24,0	32,0	40,0
PF_01250_	3,8 (27,0)	24,3	36,5	48,6	60,8	2,6 (18,5)	16,6	24,9	33,3	41,6
PF_01500_	4,0 (28,4)	25,6	38,4	51,2	64,0	2,8 (19,9)	17,9	26,9	35,8	44,8
PF_02000_	4,8 (34,1)	30,7	46,0	61,4	76,7	3,8 (27,0)	24,3	36,5	48,6	60,8
PF_02500_	4,8 (34,1)	30,7	46,0	61,4	76,7	3,8 (27,0)	24,3	36,5	48,6	60,8
PF_03000_	6,0 (42,6)	38,4	57,6	76,7	95,9	3,8 (27,0)	24,3	36,5	48,6	60,8
PF_04000_	7,0 (49,7)	44,8	67,2	89,5	111,9	4,5 (32,0)	28,8	43,2	57,6	71,9
PF_05000_	8,0 (56,8)	51,2	76,7	102,3	127,9	5,0 (35,5)	32,0	48,0	64,0	79,9

\*  $\Delta T$ : difference between the average temperature of the heating fluid (inside the heat exchanger) and the average temperature of the heated fluid (internal to the puffer in the area affected by the coil).

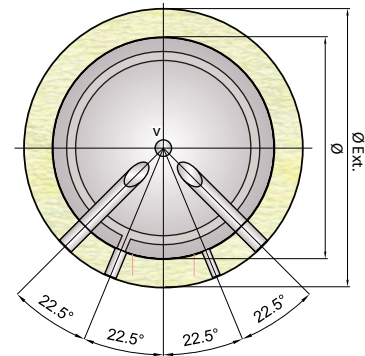
For the purposes of the Directive (ErP) 2009/125 / EC Regulation N° 812/2013 and N° 814/2013 the results of the energy measurements are given on page 231



- b biomass boiler flow
- c biomass boiler return
- d boiler flow integration
- e thermometer - probe
- g integration boiler return
- n heating system return
- p service connection
- x solar flow
- y solar return
- v heating system flow
- w preparation for electrical resistance
- z return from low temperature heating system

Model	Dimensions (mm)				Exchanger (Sq.m.)		Weight PFSS (Kg)
	Ø	H	Ø Ext	R	Lower	Upper	
PF_00300R	500	1595	600	1720*	1,40	1,10	70
PF_00500R	650	1645	750	1820*	2,00	1,80	110
PF_00800_	790	1750	990	1745	2,50	2,00	149
PF_01000_	790	2110	990	2095	3,50	2,50	183
PF_01250_	950	2075	1150	2090	3,80	2,60	215
PF_01500_	1000	2115	1200	2145	4,00	2,80	237
PF_02000_	1100	2350	1300	2385	4,80	3,80	301
PF_02500_	1200	2495	1400	2550	4,80	3,80	354
PF_03000_	1250	2710	1450	2760	6,00	3,80	423
PF_04000_	1400	2820	1600	2905	7,00	4,50	492
PF_05000_	1600	2850	1800	3005	8,00	5,00	572

\* For capacities from 300 to 500 Lt the diagonal of rollover is referred to the insulated tank  
 All insulations are removable except for models from 300 to 500 Lt.



Technical water thermal accumulators

Model	Dimensions (mm)								Connections (gas)			
	B	C	D	E	F	G	I	L	d g x y	e	b c n p v w z	
PF_00300R	215	290	595	810	930	1080	1290	1350	1"	1/2"	1"1/2	
PF_00500R	240	315	615	835	955	1105	1315	1375	1"	1/2"	1"1/2	
PF_00800_	275	355	655	875	1015	1145	1345	1410	1"	1/2"	1"1/2	
PF_01000_	275	350	810	1035	1195	1355	1675	1755	1"	1/2"	1"1/2	
PF_01250_	320	400	745	1060	1200	1380	1600	1705	1"	1/2"	1"1/2	
PF_01500_	340	420	765	1080	1220	1400	1620	1725	1"	1/2"	1"1/2	
PF_02000_	370	450	930	1090	1230	1435	1710	1945	1"	1/2"	1"1/2	
PF_02500_	385	480	940	1120	1300	1500	1700	2050	1"	1/2"	2"	
PF_03000_	400	490	1015	1210	1430	1645	1830	2255	1"	1/2"	2"	
PF_04000_	460	550	1085	1270	1490	1710	1930	2315	1"	1/2"	2"	
PF_05000_	465	555	1080	1275	1495	1710	1895	2320	1"	1/2"	2"	