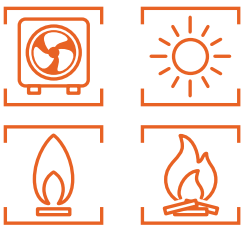
XPC - Combined buffer store / DHW tank in tank Kombinox

PC - Combined buffer store / DHW tank in tank - Kombiglass

Thermal buffer for the storage of primary water produced from continuous and discontinuous heat sources. Production of domestic hot water (DHW) through an internal cylinder (tank in tank). The main vessel is made of carbon steel while the DHW cylinder is available in two options:
- AISI 316L stainless steel (XPC)
- Glass lined steel (PC)
Both products are available in the following configurations
- only storage + DHW production
- storage + DHW production + one auxiliary fixed coil
- storage + DHW production + two auxiliary fixed coils.
The thermal fluid contained in the cylinder and in the primary heat exchangers must operate in closed circuit (without oxygen), in order to avoid corrosion phenomena. Cylinders are also prepared to host a backup immersion heater (not supplied).

HEAT SOURCE



APPLICATION

TECHNICAL FEATURES

		XPC	PC
DHW cylinder	Material	AISI 316L Stainless steel (1.4404)	Glass lined S 235 Jr Carbon steel
	Internal protective treatment	Pickling and passivation	Enamelling according to DIN 4753.3
	External protective treatment	Pickling and passivation	None
	Rating (P max. / T max.)	10 bar / 95°C	10 bar / 95°C
	Cathodic protection	Magnesium anode	Magnesium anode
Buffer vessel	Material	S 235 Jr Carbon steel	
	Internal protective treatment	None	
	External protective treatment	Anti rust protection + epoxy painting	
	Rating (P max. / T max.)	3 bar / 95°C	
Heat exchanger	Material	S 235 Jr Carbon steel	
	Internal protective treatment	None	
	External protective treatment	None	
	Type	Fixed coil	
	Rating (P max. / T max.)	10 bar / 95°C	
General features	Capacity	600 - 2000 L	
	Warranty	5 years	
	Insulation	- Rigid polyurethane foam + PVC: Fire retardant class B3 (DIN 4102) - Soft insulation with polyester + PVC: Fire retardant class B2 (DIN 4102)	
	In compliance with	- Pressure Equipment Directive (PED) 2014/68/UE Art. 4 Para 3 - Italian MOH specifications (products suitable to contain potable water) - Energy related Products (Erp) Directive 2009/125/CE	

ACCESSORIES (page 218)

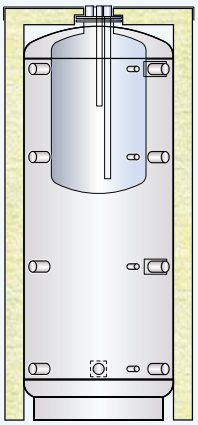
Impressed current cathodic protection

Electronic control unit

Thermostat

Thermometer

1"½ electric immersion heater

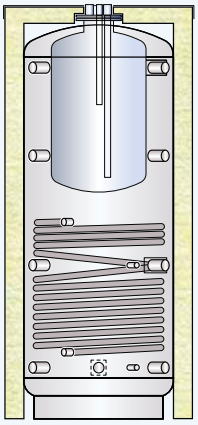


XPC - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)
XPC 00600 R	50	C	96,0	585,2	145
XPC 00800 R	100	C	111,3	749,3	170
XPC 01000 R	100	C	115,1	931,0	200
XPC 01500 R	100	C	134,2	1472,4	250
XPC 02000 R	100	C	144,7	1950,0	340

XPC - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)
XPC 00800 F	130	C	130,5	749,3	170
XPC 01000 F	130	C	142,3	931,0	200
XPC 01500 F	130	C	168,6	1472,4	250
XPC 02000 F	130	C	184,6	1950,0	340

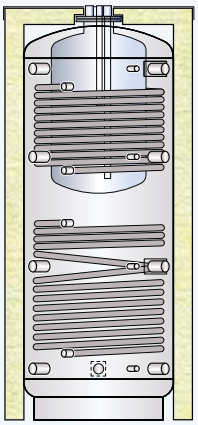


XPCS - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
XPCS 00600 R	50	C	96,0	585,2	145	2,5 / 24,5
XPCS 00800 R	100	C	111,3	749,3	170	2,5 / 24,5
XPCS 01000 R	100	C	115,1	931,0	200	3,5 / 34,3
XPCS 01500 R	100	C	134,2	1472,4	250	4,0 / 39,2
XPCS 02000 R	100	C	144,7	1950,0	340	4,8 / 47,0

XPCS - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
XPCS 00800 F	130	C	130,5	749,3	170	2,5 / 24,5
XPCS 01000 F	130	C	142,3	931,0	200	3,5 / 34,3
XPCS 01500 F	130	C	168,6	1472,4	250	4,0 / 39,2
XPCS 02000 F	130	C	184,6	1950,0	340	4,8 / 47,0



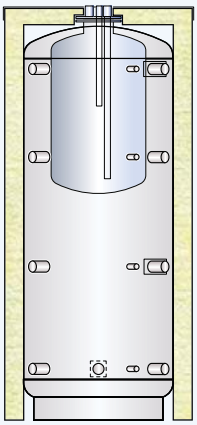
XPCSS - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGERS (m^2) / (L) * LOWER	UPPER
XPCSS 00600 R	50	C	96,0	585,2	145	2,5 / 24,5	1,8 / 17,6
XPCSS 00800 R	100	C	111,3	749,3	170	2,5 / 24,5	2,0 / 19,6
XPCSS 01000 R	100	C	115,1	931,0	200	3,5 / 34,3	2,5 / 24,5
XPCSS 01500 R	100	C	134,2	1472,4	250	4,0 / 39,2	2,8 / 27,4
XPCSS 02000 R	100	C	144,7	1950,0	340	4,8 / 47,0	3,8 / 37,2

XPCSS - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGERS (m^2) / (L) * LOWER	UPPER
XPCSS 00800 F	130	C	130,5	749,3	170	2,5 / 24,5	2,0 / 19,6
XPCSS 01000 F	130	C	142,3	931,0	200	3,5 / 34,3	2,5 / 24,5
XPCSS 01500 F	130	C	168,6	1472,4	250	4,0 / 39,2	2,8 / 27,4
XPCSS 02000 F	130	C	184,6	1950,0	340	4,8 / 47,0	3,8 / 37,2

** Volume occupied by the heat exchanger and its support structure*

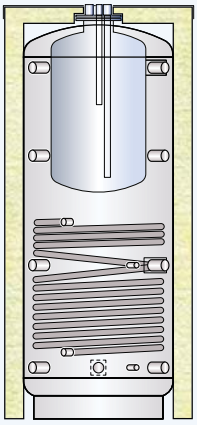


PC - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)
PC 00600 R	50	C	96,0	585,2	145
PC 00800 R	100	C	111,3	749,3	170
PC 01000 R	100	C	115,1	931,0	200
PC 01500 R	100	C	134,2	1472,4	250
PC 02000 R	100	C	144,7	1950,0	340

PC - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)
PC 00800 F	130	C	130,5	749,3	170
PC 01000 F	130	C	142,3	931,0	200
PC 01500 F	130	C	168,6	1472,4	250
PC 02000 F	130	C	184,6	1950,0	340

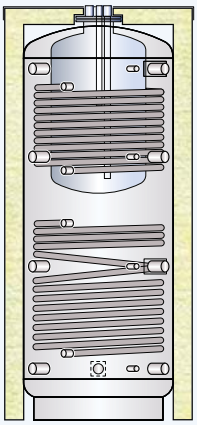


PCS - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
PCS 00600 R	50	C	96,0	585,2	145	2,5 / 24,5
PCS 00800 R	100	C	111,3	749,3	170	2,5 / 24,5
PCS 01000 R	100	C	115,1	931,0	200	3,5 / 34,3
PCS 01500 R	100	C	134,2	1472,4	250	4,0 / 39,2
PCS 02000 R	100	C	144,7	1950,0	340	4,8 / 47,0

PCS - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGER (m^2) / (L) *
PCS 00800 F	130	C	130,5	749,3	170	2,5 / 24,5
PCS 01000 F	130	C	142,3	931,0	200	3,5 / 34,3
PCS 01500 F	130	C	168,6	1472,4	250	4,0 / 39,2
PCS 02000 F	130	C	184,6	1950,0	340	4,8 / 47,0



PCSS - Hard insulation with rigid polyurethane foam and PVC jacket

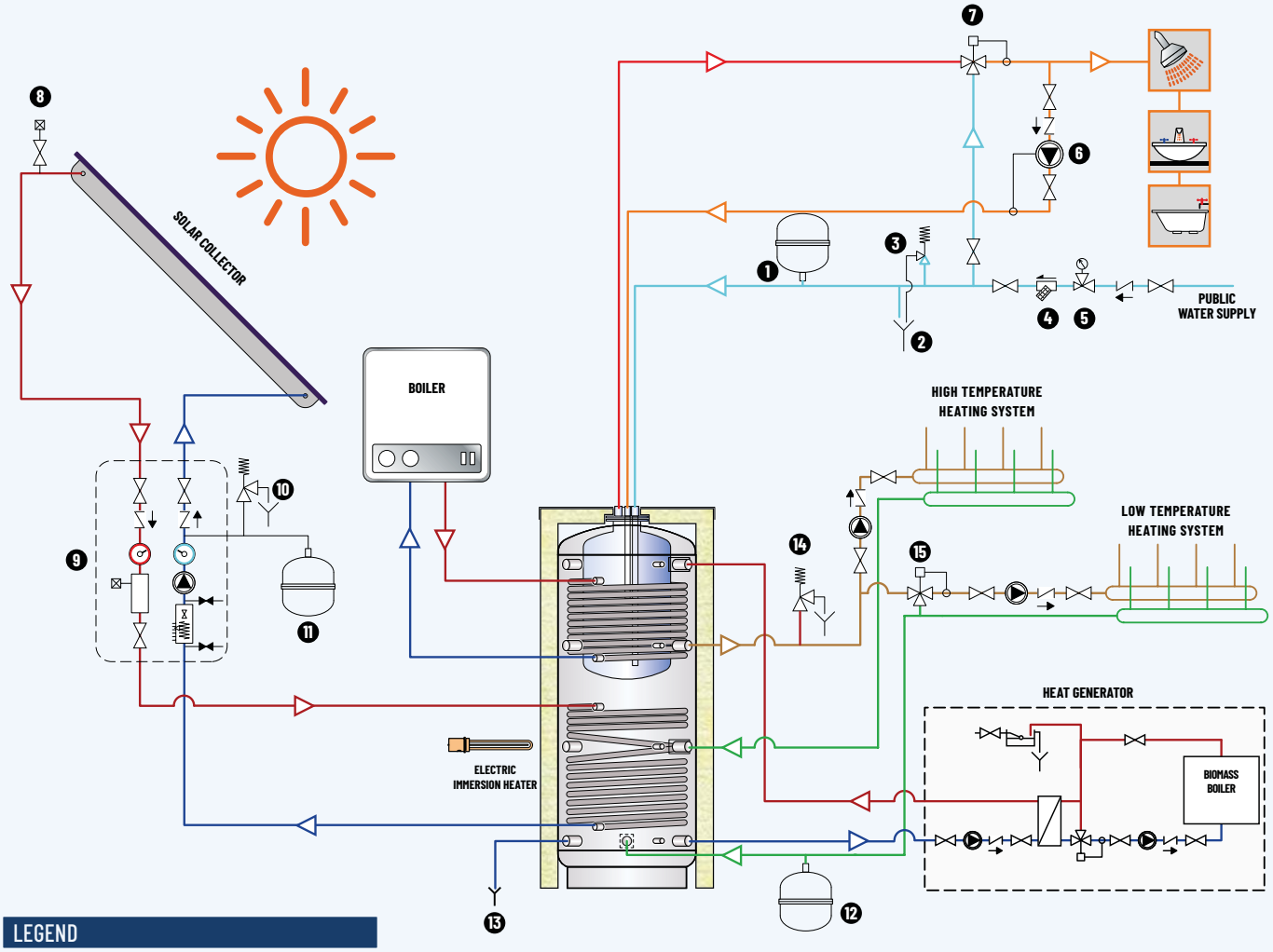
CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGERS (m^2) / (L) * LOWER	UPPER
PCSS 00600 R	50	C	96,0	585,2	145	2,5 / 24,5	1,8 / 17,6
PCSS 00800 R	100	C	111,3	749,3	170	2,5 / 24,5	2,0 / 19,6
PCSS 01000 R	100	C	115,1	931,0	200	3,5 / 34,3	2,5 / 24,5
PCSS 01500 R	100	C	134,2	1472,4	250	4,0 / 39,2	2,8 / 27,4
PCSS 02000 R	100	C	144,7	1950,0	340	4,8 / 47,0	3,8 / 37,2

PCSS - Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	BUFFER CAPACITY (L)	DHW CYLINDER CAPACITY (L)	AUXILIARY HEAT EXCHANGERS (m^2) / (L) * LOWER	UPPER
PCSS 00800 F	130	C	130,5	749,3	170	2,5 / 24,5	2,0 / 19,6
PCSS 01000 F	130	C	142,3	931,0	200	3,5 / 34,3	2,5 / 24,5
PCSS 01500 F	130	C	168,6	1472,4	250	4,0 / 39,2	2,8 / 27,4
PCSS 02000 F	130	C	184,6	1950,0	340	4,8 / 47,0	3,8 / 37,2

** Volume occupied by the heat exchanger and its support structure*

Disclaimer: *this layout is purely indicative. It does not replace consultant's design*



LEGEND

1 . Domestic water expansion vessel
2 . Domestic water drain
3 . Domestic water safety valve (6 bar)
4 . Strainer
5 . Pressure reducing valve
6 . DWH Recirculation pump
7 . DHW 3-way valve
8 . Vent with valve
9 . Solar system control unit
10 . Solar system safety kit (6 bar)
11 . Solar system expansion vessel
12 . Heating system expansion vessel
13 . System drain
14 . Heating system safety valve
15 . 3-way valve low temperature heating system

DHW cylinder

CODE	DHW CAPACITY (L)	DHW AT 45° (L) *
_PC_ 00600 R	145	240
_PC_ 00800_	170	286
_PC_ 01000_	200	333
_PC_ 01500_	250	396
_PC_ 02000_	340	541

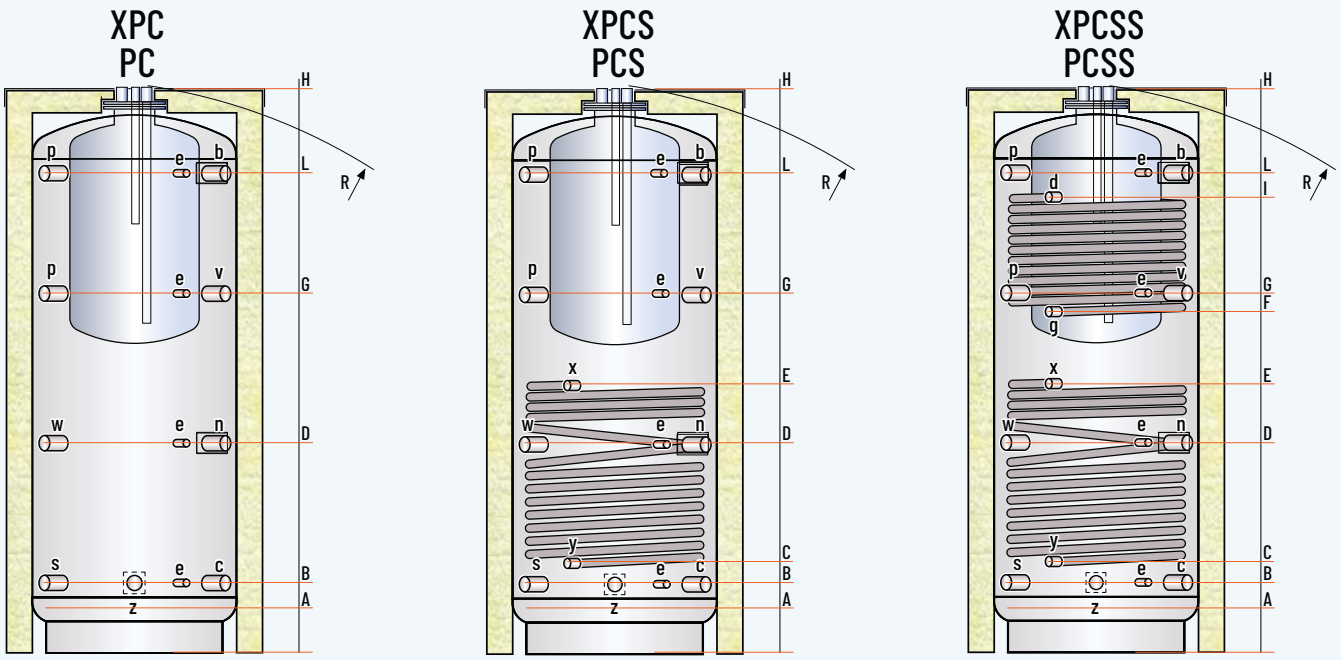
Amount of domestic hot water available (with a 20 L/min. flow rate) with the buffer vessel at an average temperature of 65 °C

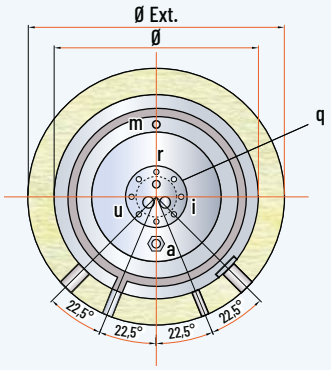
Lower heat exchanger / Upper heat exchanger

CODE	Lower heat exchanger m² (L)	Lower heat exchanger Power (kW) ΔT* 10 °C	ΔT* 15 °C	ΔT* 20 °C	ΔT* 25 °C	Upper heat exchanger m² (L)	Upper heat exchanger Power (kW) ΔT* 10 °C	ΔT* 15 °C	ΔT* 20 °C	ΔT* 25 °C
_PC_ 00600 R	2,5 (17,8)	16,0	24,0	32,0	40,0	1,8 (12,8)	11,5	17,3	23,0	28,8
_PC_ 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
_PC_ 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
_PC_ 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
_PC_ 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

** ΔT: difference between the average temperature of the heating fluid (inside the heat exchanger) and the average temperature of the heated fluid (internal to the buffer in the area affected by the coil).*

Dimensions and heights





LEGEND

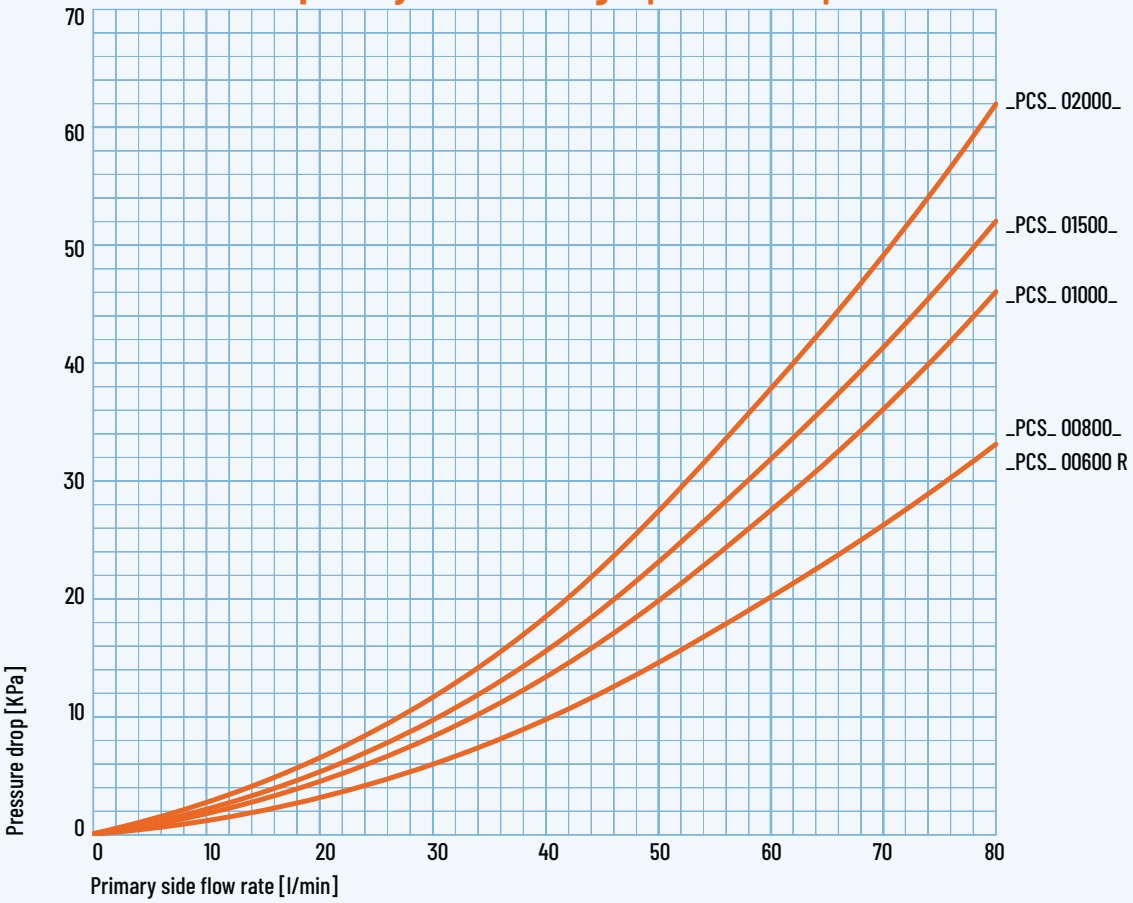
- **a .** Magnesium anode
- **b .** Biomass boiler flow
- **c .** Biomass boiler return
- **d .** Boiler flow
- **e .** Thermometer - Sensor
- **g .** Boiler return
- **i .** Domestic cold water inlet
- **m.** Buffer vent
- **n .** Heating system return
- **p .** Free connection
- **q .** DHW inspection hatch
- **u .** Domestic hot water outlet
- **v .** Heating system flow
- **w.** Opening for immersion heater
- **x .** Solar system flow
- **y .** Solar system return
- **z .** Low temperature heating system return

MODEL	DIMENSIONS (mm) Ø	H	Ø EXT ** (Hard/Soft ins.)	R	HEAT EXCHANGER (m²) LOWER	UPPER	WEIGHT XPCSS (kg)	WEIGHT PCSS (kg)
_PC_ 00600 R	650	1945	750	2095 *	2,50	1,80	153	184
_PC_ 00800_	790	1750	990/1050	1830	2,50	2,00	182	216
_PC_ 01000_	790	2110	990/1050	2170	3,50	2,50	222	260
_PC_ 01500_	1000	2115	1200/1260	2210	4,00	2,80	276	320
_PC_ 02000_	1100	2380	1300/1360	2440	4,80	3,80	325	373

** For the 600 litres model, the tilt height refers to the insulated cylinder*
*** The insulation is removable except for the 600 litres model*

MODEL	HEIGHTS (mm) A	B	C	D	E	F	G	I	L	CONNECTIONS (GAS) a	d g x y	e m r	i u	b c n p s v w z	q
_PC_ 00600 R	135	235	315	700	1000	1120	1270	1480	1630	1"¼	1"	½"	1"	1"½	120/180
_PC_ 00800_	170	275	355	655	875	1015	1145	1345	1410	1"¼	1"	½"	1"	1"½	120/180
_PC_ 01000_	170	275	350	810	1035	1195	1355	1675	1755	1"¼	1"	½"	1"	1"½	120/180
_PC_ 01500_	235	340	420	765	1080	1220	1400	1620	1725	1"¼	1"	½"	1"	1"½	120/180
_PC_ 02000_	265	370	450	930	1090	1210	1435	1690	1945	1"¼	1"	½"	1"	1"½	120/180

PCS - Lower primary heat exchanger pressure drops



_PCSS - Upper primary heat exchanger pressure drops