

# Professional Range

## GROUND VERSION

**TEON Professional** range in **Ground** version, in closed loop operation, consists of natural monobloc water-to-water heat generators for the production of heating and domestic hot water (DHW), with the option of reversibility for summer operation in cooling mode. The **T60, T115, T250, T350** models are single-stage, capable of delivering

- High-temperature hot water (min 30°C - max 80°C);
- Chilled water at low temperature (min 5°C) - only in reversible models ('RT').

The compressors used are of the reciprocating or screw type, with high energy efficiency. They are developed and optimised for applications with R600a refrigerant, minimising power consumption, vibration and noise.

The exchangers are AISI 316 stainless steel plates, braze-welded, with countercurrent heat exchange and AISI 304 stainless steel connections. They are characterised by high thermal efficiency with simultaneous high turbulence and reduced risk of scale and deposit formation.

Inside the supporting structure with perimeter panelling are the main components of the machines:

- Compressor(s)
- Laminating valve
- Evaporator(s)
- Capacitor(s)
- Economiser(s)
- Measuring and control components
- Tubing and various in-line components
- Machine edge

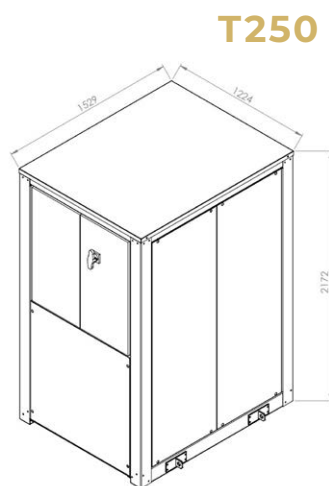
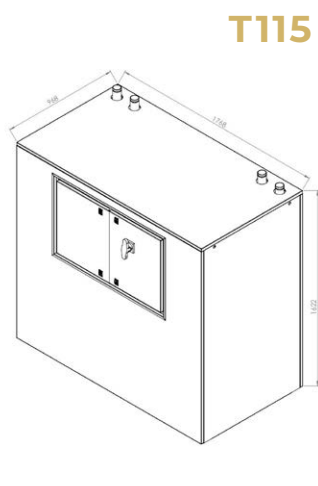
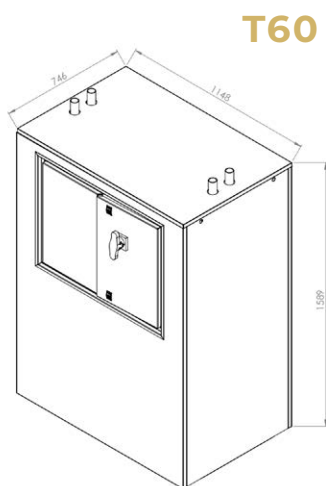


**WATER  
BLAZE**<sup>®</sup>  
TECHNOLOGY

*TEON's WATER BLAZE technology introduces into the traditional thermodynamic cycle of heat pumps a forced sub-cooling, thanks to which more thermal power is recovered from the natural source to be transferred to the heating system and overall efficiency is maximised. This is achieved by splitting the iso-enthalpic curve into two distinct transformations, one at constant pressure and one at constant temperature, which take place in a recuperator and a lamination valve, respectively..*

# TECHNICAL FEATURES

PERFORMANCE	U.M.	T60			T115			T250			T350		
<b>HEATING (T models)</b>													
Thermal Power	[kW]	44,5	49,2	38,9	81,9	88,1	69,4	163,8	176,3	138,9	253,5	275,4	232
Electric Power	[kW]	9,3	13	14,1	16,2	23,1	25,2	32,5	46,1	50,3	56,6	77,5	103,6
COP	[-]	4,81	3,78	2,76	5,04	3,82	2,76	5,04	3,82	2,76	4,48	3,55	2,24
Inlet water temperature from source	[°C]	0	7	7	0	7	7	0	7	7	0	7	7
Outlet water temperature to source	[°C]	-3	4	4	-3	4	4	-3	4	4	-3	4	4
Inlet water temperature from plant	[°C]	30	50	70	30	50	70	30	50	70	30	50	70
Outlet water temperature to plant	[°C]	35	60	80	35	60	80	35	60	80	35	60	80
Water flow on the source side	[l/s]	2,81	2,88	1,98	5,23	5,18	3,53	10,46	10,37	7,05	15,68	15,76	10,23
Water flow on the plant side	[l/s]	2,13	1,18	0,93	3,91	2,11	1,66	7,83	4,21	3,32	12,11	6,58	5,54
Refrigerant charge (R600a)	[kg]		4			6,9			15			24	
<b>COOLING (RT models)</b>													
Refrigeration Power	[kW]		51,9			95,9			191,9			276,4	
Electric Power	[kW]		10,3			18,4			36,7			56,4	
EER	[-]		5,03			5,2			5,2			4,9	
Outlet water temperature to source	[l/s]		2,48			4,6			9,2			13,2	
Inlet water temperature from source	[l/s]		3			5,5			10,9			15,9	
Outlet water temperature to plant	[°C]		20			20			20			20	
Inlet water temperature from plant	[°C]		15			15			15			15	
Water flow on the source side	[°C]		7			7			7			7	
Water flow on the plant side	[°C]		12			12			12			12	
Refrigerant charge (R600a)	[kg]		5			9			15			24	



NOTE: For **T60** and **T115** the following clearances apply: front and rear 500 mm, side left and right 600 mm and top 500 mm. For **T250**, **T350** the following clearances apply: front and rear 1000 mm, side left and right 800 mm and top 150 mm.

TECHNICAL DATA	U.M.	T60	T115	T250	T350
Max nominal electric current	[A]	32,9	66,1	132,2	180,8
Sound pressure level 1 m (*) (w.o. Acoustic Insulation optional)	[db(A)]	61	64	67	74
Sound pressure level 5 m (*) (w.o. Acoustic Insulation optional)	[db(A)]	47	50	53	60
Sound pressure level 10 m (*) (w.o. Acoustic Insulation optional)	[db(A)]	41	44	47	54
Water circuit load loss on evaporator side	[kPa]	8	10,5	17,6	15
Water circuit load loss on condenser side	[kPa]	6,5	8,2	12,3	39
Power supply	[V/-Hz]	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
Refrigerant type	[-]	R600a	R600a	R600a	R600a
Compressors type	[-]	Alternativo	Alternativo	Alternativo	Vite
Partialization (with partialization optional)	[-]	83 / 66	88 / 75	88 / 75 / 50 / 44 / 38	75 / 50 / 25
<b>SIZES AND WEIGHTS</b>					
Dimensions (L x P x H) (**)	[mm]	1.148 x 746 x 1.589	1.768 x 968 x 1.622	1.224 x 1.529 x 2.172	1.280 x 2.050 x 2.312
Empty weight	[kg]	640	990	1761	2653
Operating weight	[kg]	700	1.045	1868	2811
Diameter source side hydraulic connections (T)	[Victaulic]	"G 1" 1/4"	DN50	DN80	DN100
Diameter plant side hydraulic connections (T)	[Victaulic]	"G 1" 1/4"	DN50	DN65	DN100
<b>SAFETY</b>					
Maximum pressure of the refrigerant	[bar]	14	14	14	14
F-GAS license need for maintenance	[-]	No	No	No	No

(\*) Data shown are from free-field measurements.

(\*\*) The indicated height does not take into account the anti-vibration mounts, which would increase the total height by between 60 mm and 110 mm.