WORCESTER | BOSCH

Worcester 2000

25 C NG

7736902027

Technical documentation (combination heater): This document covers information requirements according (EU) No 811/2013, (EU) No 813/2013 as well as (EU) No 2017/1369, specifically Art. 12 (5) regarding: General description of the model, Measured technical parameters of the model.

Productdata	Symbol	Unit	7736902027
Declared load profile			XL
Rated heat output	Prated	kW	20
Annual energy consumption (average climate conditions)	Q_{HE}	kWh	62
Annual energy consumption	Q_{HE}	GJ	-
Annual electricity consumption	AEC	kWh	27
Annual fuel consumption	AFC	GJ	17
Seasonal space heating energy efficiency	η_S	%	93
Water heating energy efficiency	η_{wh}	%	85
Sound power level, indoors	L_{WA}	dB	43
Condensing boiler			Yes
Low temperature boiler			No
B1 boiler			No
Cogeneration space heater			No
Equipped with a supplementary heater?			-
Combination heater			Yes
Useful heat output			
At rated heat output and high temperature regime	P_4	kW	20,0
At 30 % of rated heat output and low temperature regime	P_1	kW	6,7
Useful efficiency			
At rated heat output and high temperature regime	η_4	%	87,7
At 30 % of rated heat output and low temperature regime	η_1	%	97,9
Auxiliary electricity consumption			
At full load	elmax	kW	0,028
At part load	elmin	kW	0,011
In standby mode	P_{SB}	kW	0,003
Other items			
Standby heat loss	P_{stby}	kW	0,055
Ignition burner power consumption	P_{ign}	kW	-
Emissions of nitrogen oxides (only gas- or oil fired)	NO_x	mg/kWh	35
Additional data for combination heaters			
Daily electricity consumption (average climate conditions)	Q_{elec}	kWh	0,122
Daily fuel consumption	Q_{fuel}	kWh	21,810

WORCESTER **BOSCH**

Technical documentation (temperature control): This document covers information requirements according (EU) No 811/2013.

Productdata	Symbol	Unit	7736902027
Class of the temperature control			V
Contribution of the temperature control to seasonal space heating efficiency		%	3,0

WORCESTER ⊞ BOSCH

Worcester 2000

25 C NG

7736902027

Technical documentation (combination heater package): This document covers information requirements according (EU) No 811/2013 as well as (EU) No 2017/1369, specifically Art. 12 (5) regarding: General description of the model, measured technical parameters of the model, calculations performed with the measured parameters.

The energy efficiency given in this data sheet for the product combination may deviate from the energy efficiency after its installation in a building, since this is influenced by other factors such as heat loss in the distribution system and the dimensioning of the products in relation to the size and characteristics of the building.

	Information about calculating the space heating energy efficiency		
I	Value for the space heating energy efficiency of the preferential space heater	93	%
II	Factor for the weighting of the heat output of the preferential and supplementary heaters of a package system	-	–
III	Value of the mathematical expression $294/(11 \cdot P_{rated})$	-	–
IV	Value of the mathematical expression $115/(11 \cdot P_{rated})$	-	–

Seasonal space heating energy efficiency of the boiler   **I** = **1** 93 %

Temperature control (From the data sheet of the temperature control)   + **2** 3,0 %

Class: I = 1 %, II = 2 %, III = 1.5 %, IV = 2 %, V = 3 %, VI = 4 %, VII = 3.5 %, VIII = 5 %

Supplementary boiler (From the data sheet of the boiler)   (- – **I**) x 0,1 = ± **3** - %

Seasonal space heating energy efficiency (in %)

Solar contribution   (**III** x - + **IV** x -) x 0,9 x (- /100) x - = + **4** - %
(From the data sheet of the solar device)

Collector size (in m^2)

Storage tank volume (in m^3)

Collector efficiency (in %)

Storage tank rating: A$^+$ = 0.95, A = 0.91, B = 0.86, C = 0.83, D-G = 0.81

Supplementary heat pump (from the data sheet of the heat pump)   (- – **I**) x **II** = + **5** - %

Seasonal space heating energy efficiency (in %)

Solar contribution AND supplementary heat pump   0,5 x **4** -   **OR**   0,5 x **5** - = – **6** - %
(Select smaller value)

Seasonal space heating energy efficiency of the package system   **7** 96 %

Seasonal space heating energy efficiency class of the package system   **A** ▶

G < 30 %, F ≥ 30 %, E ≥ 34 %, D ≥ 36 %, C ≥ 75 %, B ≥ 82 %, A ≥ 90 %, A$^+$ ≥ 98 %, A^{++} ≥ 125 %, A^{+++} ≥ 150 %

Installation of boiler and supplementary heat pump with low-temperature heat radiators (35 °C)?
(From the data sheet of the heat pump)   **7** 96 + (50 x **II**) = - %

Worcester 2000

25 C NG

7736902027

Information about calculating the water heating energy efficiency			
I	Value of the water heating energy efficiency of the combination heater, expressed in %	85	%
II	Value of the mathematical expression $(220 \cdot Q_{ref})/Q_{nonsol}$	-	–
III	Value of the mathematical expression $(Q_{aux} \cdot 2.5)/(220 \cdot Q_{ref})$	-	–

Water heating energy efficiency of the combination heater   **I**   =   **1**   85   **%**

Given load profile   XL

Solar contribution (From the data sheet of the solar device) $(1,1 \times \mathbf{I} - 10\,\%) \times \mathbf{II} - \mathbf{III} - \mathbf{I}$ = **+**   **2**   -   **%**

Water heating energy efficiency of the package system with average climate conditions   **3**   -   **%**

Water heating energy efficiency class of the package system with average climate conditions   **A ▶**

Load profile M:	G < 27 %, F ≥ 27 %, E ≥ 30 %, D ≥ 33 %, C ≥ 36 %, B ≥ 39 %, A ≥ 65 %, A⁺ ≥ 100 %, A⁺⁺ ≥ 130 %, A⁺⁺⁺ ≥ 163 %
Load profile L:	G < 27 %, F ≥ 27 %, E ≥ 30 %, D ≥ 34 %, C ≥ 37 %, B ≥ 50 %, A ≥ 75 %, A⁺ ≥ 115 %, A⁺⁺ ≥ 150 %, A⁺⁺⁺ ≥ 188 %
Load profile XL:	G < 27 %, F ≥ 27 %, E ≥ 30 %, D ≥ 35 %, C ≥ 38 %, B ≥ 55 %, A ≥ 80 %, A⁺ ≥ 123 %, A⁺⁺ ≥ 160 %, A⁺⁺⁺ ≥ 200 %
Load profile XXL:	G < 28 %, F ≥ 28 %, E ≥ 32 %, D ≥ 36 %, C ≥ 40 %, B ≥ 60 %, A ≥ 85 %, A⁺ ≥ 131 %, A⁺⁺ ≥ 170 %, A⁺⁺⁺ ≥ 213 %

Water heating energy efficiency

– with colder climate conditions: **3** - $- 0,2 \times$ **2** -   =   -   **%**

– with warmer climate conditions: **3** - $+ 0,4 \times$ **2** -   =   -   **%**