

## ANNEX 2

### Technical documentation for heat pumps and electric boilers

Supplier:		Varmeteknikk AS					
Address:		Postboks 6, Alnabru, N-0614 OSLO					
Applied standards:		Transitional methods for calculation and measurement according to EU Commission communication (2014/C 207/02) OJ 3.7.2014.					
Identification of person empowered:		Reidar Muri, Varmeteknikk AS					
Signature of person empowered:							
Calculations:							
Precautions:		User instructions regarding checks of water supply, possible leakages, pressure and voltage. Also requirements for electrical installations.					
Technical parameters for energy labelling:							
Model(s):		MB 2045, MB 4045					
Condensing boiler:		No					
Low temperature boiler:		No					
B11 boiler:		No					
Cogeneration space heater:		No	If yes, supplementary heater:			N/A	
Combination heater:		No					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	45	kW	Seasonal space heating energy efficiency	$\eta_s$	36,8	%
For boiler space heaters and boiler combination heaters: Useful heat output				For boiler space heaters and boiler combination heaters: Useful efficiency			
At rated heat output and high-temperature regime	P <sub>4</sub>	44,73	kW	At rated heat output and high-temperature regime	$\eta_4$	39,8	%
At 30% of rated output and low-temperature regime	P <sub>1</sub>		kW	At 30% of rated output and low-temperature regime	$\eta_1$		%
Auxiliary electricity consumption				Other items			
At full load	e <sub>lmax</sub>		kW	Standby heat loss	P <sub>stby</sub>	0	kW

At part load	elmin		kW	Ignition burner power consumption	P <sub>ign</sub>		kW
In standby mode	P <sub>SB</sub>	0,00537	kW	Annual energy consumption	Q <sub>HE</sub>		kWh or GJ
				Sound power level, indoors	L <sub>WA</sub>	52,6	dB
Technical parameters and product information for ecodesign:							
Model(s):		MB 2045, MB 4045					
Condensing boiler:		No					
Low temperature boiler:		No					
B11 boiler:		No					
Cogeneration space heater:		No	If yes, supplementary heater:				N/A
Combination heater:		No					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	45	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	36,8	%
For boiler space heaters and boiler combination heaters: Useful heat output				For boiler space heaters and boiler combination heaters: Useful efficiency			
At rated heat output and high-temperature regime	P <sub>4</sub>	44,73	kW	At rated heat output and high-temperature regime	η <sub>4</sub>	39,8	%
At 30% of rated output and low-temperature regime	P <sub>1</sub>		kW	At 30% of rated output and low-temperature regime	η <sub>1</sub>		%
For cogeneration space heaters: Useful heat output				For cogeneration space heaters: Useful efficiency			
At rated heat output of cogeneration space heater with supplementary heater disabled	P <sub>CHP100+Sup0</sub>		kW	At rated heat output of cogeneration space heater with supplementary heater disabled	η <sub>CHP100+Sup0</sub>		%
Auxiliary electricity consumption				Other items			
At full load	elmax		kW	Standby heat loss	P <sub>stby</sub>	0	kW
At part load	elmin		kW	Ignition burner power consumption	P <sub>ign</sub>		kW
In standby mode	P <sub>SB</sub>	0,00537	kW	Emissions of nitrogen oxides	NO <sub>x</sub>		mg/kWh