

ANNEX 1

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 2035, MB 4035						
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	35	kW	Seasonal space heating energy efficiency	η_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 ₄	34,79	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P ₁		kW	At 30% of rated output and low-temperature regime	η_1		%
Auxiliary electricity consumption				Other items			

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At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW
At part load	elmin		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Annual energy consumption	Q_{HE}		kWh or GJ
				Sound power level, indoors	L_{WA}	52,6	dB

Technical parameters and product information for ecodesign:

Model(s):	MB 2035, MB 4035		
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	P_{rated}	35	kW	Seasonal space heating energy efficiency	η_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_4	34,79	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P_1		kW	At 30% of rated output and low-temperature regime	η_1		%
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	$P_{CHP100+Sup0}$		kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$		%
Auxiliary electricity consumption				Other items			
At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW

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At part load	e_{min}		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Emissions of nitrogen oxides	NO_x		mg/kWh

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	η_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 ₄	44,73	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P ₁		kW	At 30% of rated output and low-temperature regime	η_1		%
Auxiliary electricity consumption				Other items			

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At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW
At part load	elmin		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Annual energy consumption	Q_{HE}		kWh or GJ
				Sound power level, indoors	L_{WA}	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	P_{rated}	45	kW	Seasonal space heating energy efficiency	η_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_4	44,73	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P_1		kW	At 30% of rated output and low-temperature regime	η_1		%
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	$P_{CHP100+Sup0}$		kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$		%
Auxiliary electricity consumption				Other items			
At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW

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At part load	e_{\min}		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Emissions of nitrogen oxides	NO_x		mg/kWh

ANNEX 3

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 2060, MB 4060						
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	60	kW	Seasonal space heating energy efficiency	η_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 ₄	59,64	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P ₁		kW	At 30% of rated output and low-temperature regime	η_1		%
Auxiliary electricity consumption				Other items			

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At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW
At part load	elmin		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Annual energy consumption	Q_{HE}		kWh or GJ
				Sound power level, indoors	L_{WA}	52,6	dB

Technical parameters and product information for ecodesign:

Model(s):	MB 2060, MB 4060		
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	P_{rated}	60	kW	Seasonal space heating energy efficiency	η_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_4	59,64	kW	At rated heat output and high-temperature regime	η_4	39,8	%
At 30% of rated output and low-temperature regime	P_1		kW	At 30% of rated output and low-temperature regime	η_1		%
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	$P_{CHP100+Sup0}$		kW	At rated heat output of cogeneration space heater with supplementary heater disabled	$\eta_{CHP100+Sup0}$		%
Auxiliary electricity consumption				Other items			
At full load	elmax		kW	Standby heat loss	P_{stby}	0	kW

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At part load	e_{\min}		kW	Ignition burner power consumption	P_{ign}		kW
In standby mode	P_{SB}	0,00537	kW	Emissions of nitrogen oxides	NO_x		mg/kWh

