Information requirements for heat pump space heaters and heat pump combination heaters - Commission Regulation (EU) No 813/2013

Indoor Model	***Vitocal 222-A AWOT-M-E 221.A10***
Outdoor Model	***Vitocal 200-A AWO-M-E 201.A10***
Air-to-water heat pump	*yes*
Water-to-water heat pump	*no*
Brine-to-water heat pump	*no*
Low-temperature heat pump	*no*
Equipped with a supplementary heater	*yes*
Heat pump combination heater	*yes*

Application	***Low temperature***
Climate conditions	***Average***

Rated heat output	*Prated*	9	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
T_j = - 7 °C	*Pdh*	8.2	kW
T_j = + 2 °C	*Pdh*	5.3	kW
T_j = + 7 °C	*Pdh*	6.6	kW
T_j = + 12 °C	*Pdh*	6.6	kW
T_j = bivalent temperature	*Pdh*	8.2	kW
T_j = operation limit temperature	*Pdh*	7.5	kW
T_j = - 15 °C (if TOL < -20 °C)	*Pdh*		kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	*Pcych*		kW
Degradation coefficient	*Cdh*	0.98	
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0.050	kW
Thermostat-off mode	P_{TO}	0.000	kW
Standby mode	P_{SB}	0.025	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	39/56	dB
Annual energy consumption	Q_{HE}	4295	kWh

Seasonal space heating energy efficiency	η_s	176	%
Declared coefficient of performance for part load at indoor temperature 20 °C and outdoor temperature Tj			
T_j = - 7 °C	COP_d	3.2	
T_j = + 2 °C	COP_d	4.3	
T_j = + 7 °C	COP_d	5.8	
T_j = + 12 °C	COP_d	7.5	
T_j = bivalent temperature	COP_d	3.2	
T_j = operation limit temperature	COP_d	2.9	
T_j = - 15 °C (if TOL < -20 °C)	COP_d		
Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc		
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output	Psup	9.0	kW
Type of energy input		Electric	
Rated air flow rate, outdoors		4500	m^3/h

For heat pump combination heater

Declared load profile		L		**Water heating energy efficiency**	η_{wh}	117	%
Daily electric consumption	Q_{elec}	4.234	kWh	Daily fuel consumption	Q_{fuel}		kWh
Annual electricity consumption	*AEC*	904	kWh	Annual fuel consumption	*AFC*		kWh
Standby cylinder heat loss		1200	Wh/day	Reference hot water temperature		52.5	°C
				DHW volume accounted for in test		290	l

Application	***Medium temperature***
Climate conditions	***Average***

Rated heat output	*Prated*	9	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
T_j = - 7 °C	*Pdh*	8.3	kW
T_j = + 2 °C	*Pdh*	6.1	kW
T_j = + 7 °C	*Pdh*	5.4	kW
T_j = + 12 °C	*Pdh*	6.4	kW
T_j = bivalent temperature	*Pdh*	8.3	kW
T_j = operation limit temperature	*Pdh*	8.0	kW
T_j = - 15 °C (if TOL < -20 °C)	*Pdh*		kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	*Pcych*		kW
Degradation coefficient	*Cdh*	0.98	
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0.050	kW
Thermostat-off mode	P_{TO}	0.000	kW
Standby mode	P_{SB}	0.025	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	39/56	dB
Annual energy consumption	Q_{HE}	5781	kWh

Seasonal space heating energy efficiency	η_s	129	%
Declared coefficient of performance for part load at indoor temperature 20 °C and outdoor temperature Tj			
T_j = - 7 °C	COP_d	2.3	
T_j = + 2 °C	COP_d	3.1	
T_j = + 7 °C	COP_d	4.2	
T_j = + 12 °C	COP_d	5.7	
T_j = bivalent temperature	COP_d	2.3	
T_j = operation limit temperature	COP_d	2.0	
T_j = - 15 °C (if TOL < -20 °C)	COP_d		
Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COPcyc		
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output	Psup	9.0	kW
Type of energy input		Electric	
Rated air flow rate, outdoors		4500	m^3/h

For heat pump combination heater

Declared load profile		L		**Water heating energy efficiency**	η_{wh}	117	%
Daily electric consumption	Q_{elec}	4.234	kWh	Daily fuel consumption	Q_{fuel}		kWh
Annual electricity consumption	*AEC*	904	kWh	Annual fuel consumption	*AFC*		kWh
Standby cylinder heat loss		1200	Wh/day	Reference hot water temperature		52.5	°C
				DHW volume accounted for in test		290	l

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