


Information requirements for warm air heaters Commission Regulation (EU) 2016/2281

 Information to identify the model(s) to which the information relates to: **VRA-4E**

B1 warm air heater:		[NO]											
C2 warm air heater:		[NO]											
C4 warm air heater:		[NO]											
Type of fuel:		[GAS: G20/G25]											
Model:			12-4E	20-4E	30-4E	35-4E	45-4E	50-4E	60-4E	75-4E	100-4E	120-4E	145-4E
Item:	Symbol:	Unit:											
Capacity:													
Rated heating capacity:	$P_{rated,h}$	[kW]	11.16	21.65	25.56	35.69	44.48	50.43	59.55	71.99	94.17	119.33	137.39
Minimum capacity:	P_{min}	[kW]	5.39	10.26	12.06	16.76	21.11	24.14	27.93	34.20	44.64	56.89	65.84
Electric power consumption*:													
At rated heating capacity:	$e_{l,max}$	[kW]	0.16	0.24	0.22	0.35	0.35	0.47	0.74	0.74	0.81	1.63	1.63
At minimal capacity:	$e_{l,min}$	[kW]	0.16	0.24	0.22	0.35	0.35	0.47	0.74	0.74	0.81	1.63	1.63
In standby mode:	$e_{l,sb}$	[kW]	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Useful efficiency:													
Useful efficiency at rated heating capacity*:	η_{nom}	[%]	83.7	81.9	80.8	81.2	81.7	82.4	81.3	81.9	81.9	82.4	83.0
Useful efficiency at minimum capacity*:	η_{pl}	[%]	80.9	77.7	76.2	76.2	77.6	79.0	76.2	77.8	77.7	78.6	79.6
Other items:													
Envelope loss factor:	F_{env}	[%]	0	0	0	0	0	0	0	0	0	0	0
Ignition burner power consumption*:	P_{ign}	[kW]	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Emissions of nitrogen oxides [input energy (GCV)]*:	NO_x	[mg/kWh]	-	-	-	-	-	-	-	-	-	-	-
Emission efficiency:	$h_{s,flow}$	[%]	95.8	94.8	95.2	95.6	94.7	94.4	95.2	94.5	94.0	93.9	93.3
ErP seasonal space heating energy efficiency:	$\eta_{s,h}$	[%]	74.2	72.1	72.2	72.2	72.2	73.3	72.1	72.5	72.1	72.3	72.8
Thermal efficiency at rated heating capacity [NCV]:	η	[%]	93.0	91.0	89.7	90.1	90.8	91.5	90.2	91.0	91.0	91.5	92.2
* not required for electric warm air heaters													
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