## 1 GAHP A

## Figure 1.1

 Table 8

 COMMISSION DELEGATED REGULATION (EU) No 811/2013

 Technical parameters for heat pump space heaters and heat pump combination heater

Technical pa	rameters fo	r heat pu	mp spac	e heaters and heat pump com	bination heaters		
Model(s):				GAHP A HT			
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:			no			
Heat pump combination heater:				no			
Parameters shall be declared for							
Parameters shall be declared for	average, col	der and w	armer cli	mate conditions.			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
		AVERA	GE CLIN	IATE CONDITIONS		-	
Rated heat output (*)	Prated	29,6	kW	Seasonal space heating energy efficiency	$\eta_s$	111	%
				Declared coefficient of perfo	rmance or prima	ry energy	
Declared capacity for heating for				ratio for part load at indoor t			
temperature 20 °C and outdoor to	emperature 7	ſj		outdoor temperature Tj	emperature 20 C	unu	
T: 7.00	D 11	261	1 117			01	<b>1</b> 0/
Tj = -7 °C	Pdh D ll	26,1	kW	Tj = -7 °C	PERd	96	%
Tj = +2 °C	Pdh D ll	16,0	kW	$Tj = +2 \circ C$	PERd	120	%
Tj = +7 °C	Pdh D ll	10,4	kW	$Tj = +7 \circ C$	PERd	117	%
Tj = +12 °C	Pdh	4,4	kW	Tj = +12 °C	PERd	111	%
$T_j$ = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	198	GJ				
		COLDE	R CLIM	ATE CONDITIONS			
Rated heat output (*)	Prated	29,4	kW	Seasonal space heating energy efficiency	$\eta_{s}$	107	%
Declared capacity for heating for temperature 20 °C and outdoor to			-	Declared coefficient of perfo ratio for part load at indoor t outdoor temperature Tj			
$T_1^i = -7 \ ^\circ C$	Pdh	17,9	kW	$T_i = -7 \ ^\circ C$	PERd	109	%
Tj = +2 °C	Pdh	10,9	kW	Tj = +2 °C	PERd	117	%
$T_{j} = +7 $ °C	Pdh	7,1	kW	Tj = +7 °C	PERd	112	%
Tj = +12  °C	Pdh	3,2	kW	Tj = +12  °C	PERd	111	%
Tj = bivalent temperature	Pdh	-	kW	$T_j = bivalent temperature$	PERd	-	%
$T_i = operation limit$				$T_j = operation limit$			
temperature	Pdh	29,4	kW	temperature	PERd	87	%
For air-to-water heat pumps:				temperature .			1
$T_j = -15 \text{ °C} \text{ (if TOL} < -20 \text{ °C)}$	Pdh	24,1	kW	For air-to-water heat pumps: Tj = $-15$ °C (if TOL < $-20$ °		90	%
Annual energy consumption	$Q_{HE}$	244	GJ	, ( <b>.</b>	,		J
	~ 111			IATE CONDITIONS			
Rated heat output (*)	Prated	36,4	kW	Seasonal space heating energy efficiency	$\eta_s$	116	%
	Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				ormance or prima emperature 20 °C		1
Tj = +2 °C	Pdh	36,4	kW	outdoor temperature Tj Tj = $+2$ °C	PERd	119	%
Tj = +7 °C	Pdh	23,3	kW	Tj = +7 °C	PERd	119	%
Tj = +7 C Tj = +12 °C	Pdh	10,6	kW	Tj = +12  °C	PERd	1122	%
$T_j = bivalent temperature$	Pdh		kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption		151	GJ	ij orvatent temperature	1 12114		/0
Annual energy consumption	$Q_{HE}$	131	U)				

Figure 1.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
		<u>.</u>		Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	her than activ	e mode	_	Supplementary heater		-	
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW
Thermostat-off mode	$P_{TO}$	0,021	kW				
Standby mode	$P_{SB}$	0,005	kW	Type of energy input	monovalent		
Crankcase heater mode	$P_{CK}$	-	kW				
Other items						_	
Capacity control	V	ariable		For air-to-water heat pumps: Rated air flow rate, outdoors	_	11000	m³/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	- / 80	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	—	-	m³/h

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating sup(Tj).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_{r}$ 

mg/ 40 kWh

# 2 GAHP A S1

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### Figure 2.1

Table 8 COMMISSION DELEGATED REGULATION (EU) No 811/2013

-	rameters fo	r heat pu	mp spac	e heaters and heat pump combi	ination heaters	8	
Model(s):				GAHP A HT S1			
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 l	heater:			no			
Heat pump combination heater:				no			
Parameters shall be declared for		<u>^</u>	<u>^</u>				
Parameters shall be declared for							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
		AVERA	JE CLIN	IATE CONDITIONS			1
Rated heat output (*)	Prated	29,6	kW	Seasonal space heating energy efficiency	$\eta_s$	113	%
Dealand annaite fan haatin a far		:		Declared coefficient of perform	mance or prima	ry energy	
Declared capacity for heating for				ratio for part load at indoor ter	nperature 20 °C	Cand	
temperature 20 °C and outdoor to	emperature I	J		outdoor temperature Tj			
Tj = -7 °C	Pdh	26,1	kW	Tj = -7 °C	PERd	97	%
$T_i = +2 $ °C	Pdh	16,0	kW	Tj = +2 °C	PERd	122	%
$T_j = +7 \ ^{\circ}C$	Pdh	10,0	kW	Tj = +7 °C	PERd	119	%
Tj = +12  °C	Pdh	4,4	kW	Tj = +12  °C	PERd	113	%
$T_i = bivalent temperature$	Pdh	_	kW	$T_j = bivalent temperature$	PERd	-	%
Annual energy consumption	$Q_{HE}$	195	GJ		1 2110		
Tunidal chergy consumption	Q HE			ATE CONDITIONS			
			IN CLIVE	Seasonal space heating			1
Rated heat output (*)	Prated	29,4	kW	energy efficiency	$\eta_{s}$	109	%
Declared capacity for heating for part load at indoor				Declared coefficient of perform			
temperature 20 °C and outdoor to				ratio for part load at indoor ter outdoor temperature Tj	nperature 20 °C	C and	
$Tj = -7 \circ C$	Pdh	17,9	kW	Tj = −7 °C	PERd	110	%
$T_i = +2 \circ C$	Pdh	10,9	kW	$T_j = +2 \ ^{\circ}C$	PERd	119	%
$T_i = +7 \ ^\circ C$	Pdh	7,1	kW	$T_{i}^{j} = +7 \ ^{\circ}C$	PERd	114	%
$T_i = +12 \text{ °C}$	Pdh	3,2	kW	$T_{j} = +12 \text{ °C}$	PERd	113	%
Tj = bivalent temperature	Pdh	-	kW	$T_j = bivalent temperature$	PERd	-	%
$T_i = operation limit$	- "			$T_j = operation limit$			
temperature	Pdh	29,4	kW	temperature	PERd	88	%
For air-to-water heat pumps:							1
$T_j = -15 \text{ °C} (\text{if TOL} < -20 \text{ °C})$	Pdh	24,1	kW	For air-to-water heat pumps: Tj = $-15$ °C (if TOL < $-20$ °C	) PERd	91	%
Annual energy consumption	$Q_{HE}$	239	GJ			L	J
	∠ IIE			ATE CONDITIONS			
				Seasonal space heating			
Rated heat output (*)	Prated	36,4	kW	energy efficiency	$\eta_{s}$	117	%
Declared capacity for heating for	r nart load at	indoor		Declared coefficient of perform			
temperature 20 °C and outdoor to				ratio for part load at indoor ter outdoor temperature Tj	nperature 20 °C	C and	
$T_i = +2 \ ^{\circ}C$	Pdh	36,4	kW	$T_j = +2 °C$	PERd	120	%
$T_{j} = +7 \text{ °C}$	P dh	23,3	kW	Tj = +7 °C	PERd	123	%
$T_{j} = +12 \text{ °C}$	Pdh	10,6	kW	Tj = +12  °C	PERd	118	%
$T_j = bivalent temperature$	P dh	-	kW	$T_j = bivalent temperature$	PERd	-	%
Annual energy consumption	$Q_{HE}$	150	GJ	1 orvaient temperature	1 12100	L	
initial energy consumption	₽ HE	150	U)				

Section C01.19

Figure 2.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
				Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	her than activ	e mode		Supplementary heater		-	
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW
Thermostat-off mode	$P_{TO}$	0,021	kW				
Standby mode	$P_{SB}$	0,005	kW	Type of energy input	monovalent		
Crankcase heater mode	$P_{CK}$	-	kW				
Other items						_	
Capacity control	v	ariable		For air-to-water heat pumps: Rated air flow rate, outdoors	_	11000	m³/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	- / 74	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	—	-	m³/h

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating sup(Tj).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_{r}$ 

Emissions of nitrogen oxides:

mg/ 40 kWh

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## **3 GAHP A INDOOR**

### Figure 3.1

 Table 8

 COMMISSION DELEGATED REGULATION (EU) No 811/2013

 Technical parameters for beat numbers and beat number combination beaters

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	arameters fo	r heat pu	mp spac	e heaters and heat pump comb	ination heaters	6	
Model(s):				GAHP A INDOOR			
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:			no			
Heat pump combination heater:				no			
Parameters shall be declared for		<u>^</u>	<u>^</u>				
Parameters shall be declared for	average, col	der and w	armer cli	mate conditions.			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
		AVERA	GE CLIM	IATE CONDITIONS		-	
Rated heat output (*)	Prated	30,1	kW	Seasonal space heating energy efficiency	$\eta_s$	112	%
						m. on or ot	<u> </u>
Declared capacity for heating fo	r part load at	indoor		Declared coefficient of perform			
temperature 20 °C and outdoor t	emperature	Гj		ratio for part load at indoor ter	nperature 20 °C	and	
		<u> </u>		outdoor temperature Tj			<b>1</b>
$Tj = -7 \ ^{\circ}C$	Pdh	26,5	kW	Tj = -7 °C	PERd	96	%
Tj = +2 °C	Pdh	16,3	kW	Tj = +2 °C	PERd	121	%
$Tj = +7 \circ C$	Pdh	10,5	kW	$Tj = +7 \circ C$	PERd	117	%
$Tj = +12 \circ C$	Pdh	4,5	kW	Tj = +12 °C	PERd	111	%
$T_j = bivalent temperature$	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	200	GJ				
		COLDE	R CLIM	ATE CONDITIONS			
Rated heat output (*)	Prated	29,8	kW	Seasonal space heating energy efficiency	$\eta_s$	108	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of perform ratio for part load at indoor ten outdoor temperature Tj			
$T_i = -7 \ ^{\circ}C$	Pdh	18,2	kW	$Tj = -7 \circ C$	PERd	109	%
Tj = +2 °C	Pdh	11,0	kW	Tj = +2 °C	PERd	118	%
$T_{i} = +7 \text{ °C}$	Pdh	7,2	kW	Tj = +7 °C	PERd	113	%
$T_j = +12 \text{ °C}$	Pdh	3,3	kW	Tj = +12  °C	PERd	111	%
Tj = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
$T_i = operation limit$	1 6/1			Tj = operation limit	1 1100		
temperature	Pdh	29,8	kW	temperature	PERd	87	%
For air-to-water heat pumps:						<u> </u>	1
$T_j = -15 \text{ °C} (\text{if TOL} < -20 \text{ °C})$	Pdh	24,4	kW	For air-to-water heat pumps: Tj = $-15$ °C (if TOL < $-20$ °C	) PERd	90	%
Annual energy consumption	$Q_{{\scriptscriptstyle H\!E}}$	245	GJ		,		]
······································	<b>~</b> 11E			ATE CONDITIONS			
Rated heat output (*)	Prated	36,6	kW	Seasonal space heating energy efficiency	$\eta_s$	116	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			Declared coefficient of perform ratio for part load at indoor ter outdoor temperature Tj				
$T_i = +2 °C$	Pdh	36,6	kW	$Tj = +2 \circ C$	PERd	119	%
$T_j = +7 \circ C$	Pdh	23,4	kW	Tj = +7 °C	PERd	122	%
$T_j = +12 \text{ °C}$	Pdh	10,6	kW	Tj = +12  °C	PERd	117	%
$T_j = bivalent temperature$	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	152	GJ	5 F C		L	- · ·
initial energy consumption	€ HE	132	01				

.....

Figure 3.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
			J	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	her than activ	e mode		Supplementary heater		-	
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW
Thermostat-off mode	$P_{TO}$	0,021	kW				
Standby mode	$P_{SB}$	0,005	kW	Type of energy input	monovalent		
Crankcase heater mode	$P_{CK}$	-	kW				
Other items							
Capacity control	v	ariable		For air-to-water heat pumps: Rated air flow rate, outdoors	_	11000	m³/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	- / 74	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	_	-	m³/h

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating sup(Tj).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_{r}$ 

mg/ 40 kWh

## 4 GAHP-AR

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Figure 4.1	

 Table 8

 COMMISSION DELEGATED REGULATION (EU) No 811/2013

	^	and the	e heaters and heat pump combin			
			GAHP-AR			
			yes			
			no			
			no			
			no			
y heater:			no			
••			no			
	perature :	applicatio	on.			
		Unit		Symbol	Value	Unit
		GE CLIN		·		
Prated	28,4	kW	Seasonal space heating energy efficiency	$\eta_s$	110	%
				nance or prima	rv energy	,
			<u>^</u>	· ·		
temperature 7	ſj			inportation 20 C	unu	
	25.0	1 1 1 1 1	· ·		0.2	
			5			%
		-	5			%
						%
	4,3		5		118	%
Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
$Q_{HE}$	207	GJ				
	COLDF	R CLIM	ATE CONDITIONS			
D	267	1-337	Seasonal space heating		105	07
Pratea	26,7	KW	energy efficiency	$\eta_s$	105	%
		•		nance or prima	rv energy	,
temperature	ſj		<u>^</u>	- P		
D JI.	16.2	1-337	· ·	DEDJ	102	
			5		-	%
		4			-	%
		4				%
	2,9	-	5		112	%
Pdh	-	kW		PERd	-	%
Pdh	26.7	kW	5 1	PERd	89	%
1 0/1	20,7		temperature	1 12114		
			For air to water heat more			1
Pdh	21,9	kW		PERd	92	%
			$I_{\rm J} = -15^{-1} C (II IOL < -20^{-3} C)$	)		1
$Q_{HF}$	242	GJ			<u>.</u>	_
~			IATE CONDITIONS			
	1				100	
Prated	32,6	kW	energy efficiency	$\eta_s$	120	%
	.1		Declared coefficient of perform	nance or prima	rv enerov	,
for part load at			ratio for part load at indoor ter	· ·		
	ſj		outdoor temperature Tj	inperature 20 C		
r temperature 7			* 5			п.
Â		1			1 101	1 0/
Pdh	32,6	kW	$Tj = +2 \ ^{\circ}C$	PERd	121	
Â	20,9	kW kW	Tj = +7  °C	PERd	121	%
Pdh			5			%
Pdh Pdh	20,9	kW	Tj = +7  °C	PERd	128	% % %
	Transformedium-tem or medium-tem or average, colo Symbol Prated For part load at to temperature The Pdh Pdh Pdh Pdh Pdh Pdh Pdh Pdh Pdh Pdh	Termedium-temperature or average, colder and wSymbol ValueAVERAGEPrated28,4Prated28,4Prated28,4Por part load at indoortemperature TjPdh25,0Pdh15,3Pdh9,9Pdh4,3Pdh-Q HE207COLDEPratedPath26,7Pdh16,3Pdh9,9Pdh6,4Pdh2,9Pdh6,4Pdh2,9Pdh-Pdh26,7Pdh26,7Pdh21,9Q HE242WARMI	Price       Prated       Value       Unit         AVERAGE CLIM       AVERAGE CLIM         Prated       28,4       kW         For part load at indoor       temperature Tj         Pdh       25,0       kW         Pdh       9,9       kW         Pdh       9,9       kW         Pdh       4,3       kW         Pdh       4,3       kW         Pdh       4,3       kW         Pdh       207       GJ         COLDER CLIM       COLDER CLIM       Prated       26,7         Prated       26,7       kW         Pdh       9,9       kW         Pdh       2,9       kW         Pdh       2,9       kW         Pdh       2,1,9       kW         Pdh       21,9       kW         Pdh       21,9       kW         QHE       242       GJ	y heater:noi:noor medium-temperature application.or average, colder and warmer climate conditions.SymbolValueUnitItemAVERAGE CLIMATE CONDITIONSPrated28,4kWSeasonal space heating energy efficiencyPrated28,4bor part load at indoortemperature TjPdh25,0Pdh15,3Pdh9,9kWPdh-QHE207COLDER CLIMATE CONDITIONSPatted26,7Path-Pdh26,7Pdh9,9WWTj = -7 °CPatted26,7kWTj = bivalent temperatureQHE207COLDER CLIMATE CONDITIONSPrated26,7kWTj = -7 °CPdh-pdh5,3kWTj = -7 °CPatted26,7kWTj = -7 °CPdh16,3kWTj = -7 °CPdh2,9kWTj = -7 °CPdh2,9kWTj = +12 °CPdh2,9Pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh-pdh- <t< td=""><td>y heater:nonoredium-temperature application.or medium-temperature application.or average, colder and warmer climate conditions.SymbolValueUnitItemSymbolAVERAGE CLIMATE CONDITIONSPrated28,4kWSeasonal space heating energy efficiency<math>\eta_s</math>Declared coefficient of performance or prima ratio for part load at indoor temperature TjDeclared coefficient of performance or prima ratio for part load at indoor temperature 20 °C outdoor temperature TjPdh25,0 15,3 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh26,7 9,9 kWkW Tj = +12 °CPERd PERd Tj = bivalent temperature<math>\eta_s</math>Prated26,7 9,9 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh16,3 9,9 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh16,3 9,9 kWkW Tj = -7 °CPERd PERd Tj = -7 °CPdh26,7 8,4kW Tj = +12 °CPERd PERd Tj = +12 °CPdh2,9 9,4kW Tj = +12 °CPERd PERd Tj = +12 °CPdh26,7 2,9 kWKW Tj = +12 °CPERd PERd Tj = +12 °CPdh26,7 2,9 kWKW Tj = +12 °CPERd PERd Tj = -15 °C (if TOL &lt; -20 °C)Pdh21,9 2,0 2,0KWSeasonal space heating timperaturePublic21,9 2,0 2,0KWSeasonal space heating 2,0 2,0Public21,9 2,0 2,</td><td>y heater:nonornoor medium-temperature application.or average, colder and warmer climate conditions.SymbolValueAVERAGE CLIMATE CONDITIONSPrated28,4AVERAGE CLIMATE CONDITIONSPrated28,4Warmer climate conditions.Prated28,4Warmer climate conditions.Prated28,4Warmer climate conditions.Parated28,4Parated28,4Parated28,4Warmer climate conditions.Parated28,4Warmer climate conditions.Parated25,0Parated25,0Parated25,0Parated25,0Parated25,0Parated25,0Parated26,7Parated26,7Parated26,7Parated26,7Parated26,7Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated22,6Paratee242Paratee242Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7</td></t<>	y heater:nonoredium-temperature application.or medium-temperature application.or average, colder and warmer climate conditions.SymbolValueUnitItemSymbolAVERAGE CLIMATE CONDITIONSPrated28,4kWSeasonal space heating energy efficiency $\eta_s$ Declared coefficient of performance or prima ratio for part load at indoor temperature TjDeclared coefficient of performance or prima ratio for part load at indoor temperature 20 °C outdoor temperature TjPdh25,0 15,3 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh26,7 9,9 kWkW Tj = +12 °CPERd PERd Tj = bivalent temperature $\eta_s$ Prated26,7 9,9 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh16,3 9,9 kWkW Tj = -7 °CPERd PERd Tj = +12 °CPdh16,3 9,9 kWkW Tj = -7 °CPERd PERd Tj = -7 °CPdh26,7 8,4kW Tj = +12 °CPERd PERd Tj = +12 °CPdh2,9 9,4kW Tj = +12 °CPERd PERd Tj = +12 °CPdh26,7 2,9 kWKW Tj = +12 °CPERd PERd Tj = +12 °CPdh26,7 2,9 kWKW Tj = +12 °CPERd PERd Tj = -15 °C (if TOL < -20 °C)Pdh21,9 2,0 2,0KWSeasonal space heating timperaturePublic21,9 2,0 2,0KWSeasonal space heating 2,0 2,0Public21,9 2,0 2,	y heater:nonornoor medium-temperature application.or average, colder and warmer climate conditions.SymbolValueAVERAGE CLIMATE CONDITIONSPrated28,4AVERAGE CLIMATE CONDITIONSPrated28,4Warmer climate conditions.Prated28,4Warmer climate conditions.Prated28,4Warmer climate conditions.Parated28,4Parated28,4Parated28,4Warmer climate conditions.Parated28,4Warmer climate conditions.Parated25,0Parated25,0Parated25,0Parated25,0Parated25,0Parated25,0Parated26,7Parated26,7Parated26,7Parated26,7Parated26,7Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated21,9Parated22,6Paratee242Paratee242Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7Paratee24,7

Figure 4.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C				
			1	Heating water operating limit temperature	WTOL	60	°C				
Power consumption in modes of	her than activ	/e mode	_	Supplementary heater		_	kW				
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW				
Thermostat-off mode	$P_{TO}$	0,023	kW								
Standby mode	$P_{SB}$	0,007	kW	Type of energy input	mo	novalent					
Crankcase heater mode	$P_{CK}$	-	kW								
Other items						_					
Capacity control		fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	_	11000	m³/h				
Sound power level, indoors/ outdoors	L <sub>WA</sub>	- / 80	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	_	-	m³/h				

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating  $sup(T_j)$ .

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_x$ 

mg/ 48 kWh

#### 5 **GAHP-AR S**

Figure 5.1	

Table 8 COMMISSION DELEGATED REGULATION (EU) No 811/2013

				e heaters and heat pump combination	ation heaters		
Model(s):				GAHP-AR S			
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 1	heater:			no			
Heat pump combination heater:				no			
Parameters shall be declared for	medium-tem	perature	applicatio	n.			
Parameters shall be declared for							
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
	~J 0 -			IATE CONDITIONS	~,		
Rated heat output (*)	Prated	28,4	kW	Seasonal space heating	$\eta_s$	111	%
,				energy efficiency			
Declared capacity for heating for	part load at	indoor		Declared coefficient of perform			
emperature 20 °C and outdoor to				ratio for part load at indoor tem	perature 20 °C	and	
-	1		_	outdoor temperature Tj			_
$\Gamma j = -7 \ ^{\circ}C$	Pdh	25,0	kW	Tj = -7 °C	PERd	94	%
$\Gamma j = +2 \ ^{\circ}C$	Pdh	15,3	kW	$Tj = +2 \ ^{\circ}C$	PERd	119	%
$\Gamma_j = +7 \ ^\circ C$	Pdh	9,9	kW	Tj = +7  °C	PERd	118	%
$\Gamma_j = +12 \ ^{\circ}C$	Pdh	4,3	kW	$T_j = +12 $ °C	PERd	121	%
$\Gamma_i = bivalent temperature$	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	207	GJ	5 1		I	-
	£ ne	_		ATE CONDITIONS			
		T		Seasonal space heating			
Rated heat output (*)	Prated	26,7	kW	energy efficiency	$\eta_{s}$	105	%
				Declared coefficient of perform	ance or prima	rv energy	,
Declared capacity for heating for				ratio for part load at indoor tem			
temperature 20 °C and outdoor to	emperature 7	Гj		outdoor temperature Tj	iperature 20	e unu	
T: 7.00		1(2	1 1 1 1	· ·	חדת	102	
$\Gamma j = -7 \ ^{\circ}C$	Pdh	16,3	kW	$Tj = -7 \circ C$ $Ti = +2 \circ C$	PERd	103	%
$\Gamma j = +2 \circ C$	Pdh	9,9	kW	Tj = +2 °C	PERd	116	%
$\Gamma j = +7 \circ C$	Pdh	6,4	kW	Tj = +7 °C	PERd	114	%
$\Gamma j = +12 \ ^{\circ}C$	Pdh	2,9	kW	$Tj = +12 \ ^{\circ}C$	PERd	112	%
$\Gamma j = bivalent temperature$	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
$\Gamma_j$ = operation limit	Pdh	26,7	kW	Tj = operation limit	PERd	89	%
emperature	1 411	20,7		temperature	1 12100		/0
For air-to-water heat pumps:				For sin to mater hard a m			
$\Gamma_i = -15 \text{ °C} (\text{if TOL} < -20 \text{ °C})$	Pdh	21,9	kW	For air-to-water heat pumps: $T_{i} = 15$ °C (if TOL < 20 °C)	PERd	92	%
•				Tj = -15  °C (if TOL < $-20 $ °C)		1	
Annual energy consumption	$Q_{HE}$	242	GJ			L	-
C,	~ 115			ATE CONDITIONS			
				Seasonal space heating		100	
Rated heat output (*)	Prated	32,6	kW	energy efficiency	$\eta_{s}$	120	%
		1		Declared coefficient of perform	ance or prima	rv enerov	
Declared capacity for heating for	*			ratio for part load at indoor tem			
emperature 20 °C and outdoor to	emperature 7	Гj		outdoor temperature Tj			
$\Gamma j = +2 \circ C$	Pdh	32,6	kW	Tj = $+2 \circ C$	PERd	121	%
-		-	-	5			-
$\Gamma j = +7 \circ C$	Pdh	20,9	kW	Tj = +7 °C Ti = +12 °C	PERd	120	%
$\Gamma j = +12 \ ^{\circ}C$	Pdh	9,5	kW	Tj = +12  °C	PERd	113	%
	Pdh	I -	kW	$T_j = bivalent temperature$	PERd	-	%
Γj = bivalent temperature Annual energy consumption	$Q_{HE}$	141	GJ	ij orvalent temperatare			, .

Figure 5.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C				
			1	Heating water operating limit temperature	WTOL	60	°C				
Power consumption in modes ot	her than activ	ve mode	_	Supplementary heater			kW				
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW				
Thermostat-off mode	$P_{TO}$	0,023	kW								
Standby mode	$P_{SB}$	0,007	kW	Type of energy input	mo	novalent					
Crankcase heater mode	$P_{CK}$	-	kW								
Other items		-	-		-						
Capacity control		fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	_	11000	m³/h				
Sound power level, indoors/ outdoors	L <sub>WA</sub>	- / 75	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	_	-	m³/h				

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating  $sup(T_j)$ .

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_x$ 

Emissions of nitrogen oxides:

48 mg/ kWh

## 6 GAHP GS

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### Figure 6.1

 Table 8

 COMMISSION DELEGATED REGULATION (EU) No 811/2013

-	arameters fo	or heat pu	imp spac	e heaters and heat pump combin	nation heaters	5	
Model(s):				GAHP GS			
Air-to-water heat pump:				no			
Water-to-water heat pump:				no			
Brine-to-water heat pump:				yes			
Low-temperature heat pump:				no			
Equipped with a supplementary	heater:			no			
Heat pump combination heater:				no			
Parameters shall be declared for	medium-ten	perature	applicatio	on.			
Parameters shall be declared for	average, col	der and w	armer cli	mate conditions.			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
		AVERA	GE CLIM	IATE CONDITIONS			
Rated heat output (*)	Prated	37,4	kW	Seasonal space heating energy efficiency	$\eta_s$	125	%
				Declared coefficient of perform	ance or prima	rv energy	
Declared capacity for heating for				ratio for part load at indoor tem			
temperature 20 °C and outdoor	temperature ]	Гj		outdoor temperature Tj	r-100010 20 (		
$T_{i} = 7 \circ C$	Pdh	32,9	1-117	Tj = -7 °C	PERd	128	%
$Tj = -7 \circ C$ $Ti = +2 \circ C$			kW	-			
$Tj = +2 \circ C$ $Ti = +7 \circ C$	Pdh Pdh	20,2	kW	Tj = +2 °C Ti = +7 °C	PERd	130	%
$Tj = +7 \circ C$ $Ti = +12 \circ C$	Pdh Ddh	13,1	kW	Tj = +7 °C Ti = +12 °C	PERd PERd	128	%
$Tj = +12 \circ C$	Pdh	5,6	kW	$Tj = +12 \circ C$		123	%
$T_j$ = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	223	GJ				
		COLDE	R CLIM	ATE CONDITIONS		-	
Rated heat output (*)	Prated	37,4	kW	Seasonal space heating energy efficiency	$\eta_s$	124	%
Declared capacity for heating for temperature 20 °C and outdoor				Declared coefficient of perform ratio for part load at indoor tem outdoor temperature Tj			-
Tj = -7 °C	Pdh	22,8	kW	$Tj = -7 \circ C$	PERd	129	%
Tj = +2 °C	Pdh	13,8	kW	$T_j = +2 \ ^\circ C$	PERd	128	%
$T_{i} = +7 \text{ °C}$	Pdh	9,0	kW	$T_j = +7 \ ^\circ C$	PERd	126	%
$T_i = +12 \text{ °C}$	Pdh	4,1	kW	$T_i = +12 \text{ °C}$	PERd	122	%
Tj = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
$T_i = operation limit$	1 000		1	Tj = operation limit	1 210		,,,
temperature	Pdh	37,4	kW	temperature	PERd	128	%
For air-to-water heat pumps:				temperature			-
$T_j = -15 \text{ °C} \text{ (if TOL} < -20 \text{ °C)}$	Pdh	30,7	kW	For air-to-water heat pumps: Tj = $-15$ °C (if TOL $< -20$ °C)	PERd	128	%
Annual energy consumption	$Q_{HE}$	268	GJ				]
		WARMI	ER CLIM	ATE CONDITIONS			
Rated heat output (*)	Prated	37,4	kW	Seasonal space heating energy efficiency	$\eta_s$	124	%
Declared capacity for heating for temperature 20 °C and outdoor				Declared coefficient of perform ratio for part load at indoor tem outdoor temperature Tj			
$Tj = +2 \circ C$	Pdh	37,4	kW	$T_i = +2 °C$	PERd	128	%
Tj = +7 °C	Pdh	23,9	kW	Tj = +7 °C Tj = +7 °C	PERd	128	%
$T_j = +7 C$ $T_j = +12 °C$	Pan Pdh	10,9	kW kW	Tj = +7 C Tj = +12 °C	PERd PERd	129	~~ %
Tj = +12 C Tj = bivalent temperature		-		$T_j = +12$ C $T_j = bivalent temperature$			
	Pdh	-	kW	1) – orvatent temperature	PERd	-	%
Annual energy consumption	$Q_{HE}$	145	GJ				

Figure 6.2

Bivalent temperature	$T_{biv}$ $TOL < T_{designh}$ °C		°C	For air-to-water heat pumps: Operation limit temperature	TOL	-	°C	
				Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes of	ther than activ	e mode	_	Supplementary heater		-		
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW	
Thermostat-off mode	10 1,000		kW		monovalent			
Standby mode			kW	Type of energy input				
Crankcase heater mode	ater mode $P_{CK}$ - kW		kW					
Other items								
Capacity control	V	ariable		For air-to-water heat pumps: Rated air flow rate, outdoors	_	-	m³/h	
Sound power level, indoors/ outdoors	$L_{W} = -/66$		dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	_	3,0	m³/h	

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating sup(Tj).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_{r}$ 

mg/ 40 kWh

## 7 GAHPWS

## Figure 7.1

 Table 8

 COMMISSION DELEGATED REGULATION (EU) No 811/2013

 Technical parameters for heat pump space heaters and heat pump combinat

Technical				REGULATION (EU) No 811/201. e heaters and heat pump comb		2	
Model(s):	parameters to	i neat pu	inp spac	GAHP WS	mation neaters	,	
Air-to-water heat pump:				no			
Water-to-water heat pump:				yes			
Brine-to-water heat pump:				no			
Low-temperature heat pump:				no			
Equipped with a supplementar	ry heater:			no			
Heat pump combination heate				no			
Parameters shall be declared f		perature	applicatio	on.			
Parameters shall be declared f	or average, col	der and w	armer cli	mate conditions.			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
		AVERA	GE CLIN	IATE CONDITIONS			
Dated heat output (*)	Duated	41,5	kW	Seasonal space heating	22	127	%
Rated heat output (*)	Prated	41,5	KW	energy efficiency	$\eta_s$	127	%0
	C (1 1 (	· .		Declared coefficient of perform	mance or prima	ry energy	
Declared capacity for heating	-			ratio for part load at indoor ter			
temperature 20 °C and outdoo	r temperature	J		outdoor temperature Tj			
Tj = −7 °C	Pdh	36,5	kW	$Tj = -7 \circ C$	PERd	139	%
Tj = +2 °C	P dh	22,4	kW	Tj = +2 °C	PERd	135	%
$Tj = +7 \circ C$	Pdh	14,5	kW	Tj = +7 °C	PERd	127	%
$T_j = +12 \text{ °C}$	Pdh	6,2	kW	Tj = +12  °C	PERd	121	%
$T_i = bivalent temperature$	P dh	-	kW	$T_j = bivalent temperature$	PERd	-	%
Annual energy consumption	$Q_{HE}$	243	GJ	1) orvaient temperature	I LIU		70
Annual energy consumption	Q HE			ATE CONDITIONS			
		COLDI	IN CLIWI	Seasonal space heating			1
Rated heat output (*)	Prated	41,5	kW	energy efficiency	$\eta_s$	125	%
			•	Declared coefficient of perform	mance or prima	rv energy	
Declared capacity for heating				ratio for part load at indoor ter			
temperature 20 °C and outdoo	r temperature	j		outdoor temperature Tj	1		
$T_i = -7 \ ^\circ C$	Pdh	25,3	kW	Tj = -7 °C	PERd	135	%
Tj = +2 °C	Pdh	15,4	kW	Tj = +2 °C	PERd	128	%
$T_{j} = +7 \ ^{\circ}C$	P dh	10,0	kW	Tj = +7 °C	PERd	120	%
$T_{j} = +12 $ °C	Pdh	4,6	kW	Tj = +12  °C	PERd	119	%
Tj = bivalent temperature	Pdh	-	kW	Tj = bivalent temperature	PERd	-	%
$T_i = operation limit$	1 000			Tj = operation limit			
temperature	Pdh	41,5	kW	temperature	PERd	142	%
For air-to-water heat pumps:				temperature			
$T_i = -15 \text{ °C} (\text{if TOL} < -20 \text{ °C})$	) Pdh	34,0	kW	For air-to-water heat pumps:	PERd	138	%
$r_j = -15$ C (ii 10L < -20 C)	) Fun	54,0	K VV	Tj = -15  °C (if TOL $< -20 $ °C	$) \qquad \Gamma L \Lambda u$	138	70
A	0	204	CI.				
Annual energy consumption	$Q_{HE}$	294	GJ	ATE CONDITIONS			
		WARN	lk CLIM	ATE CONDITIONS		1	
Rated heat output (*)	Prated	41,5	kW	Seasonal space heating energy efficiency	$\eta_s$	126	%
	с . і і	· ·	-	Declared coefficient of perform	mance or prima	ry energy	
Declared capacity for heating	•			ratio for part load at indoor ter	•		
temperature 20 °C and outdoo	r temperature 7	j –		outdoor temperature Tj			
$Tj = +2 \ ^{\circ}C$	Pdh	41,5	kW	Tj = +2 °C	PERd	142	%
$T_j = +7 °C$	P dh	26,6	kW	Tj = +7 °C	PERd PERd	136	%
$T_j = +7 C$ $T_j = +12 °C$	Pan Pdh	12,0	kW kW	Tj = +7 C Tj = +12 °C	PERd PERd	125	~~ %
$T_j = \pm 12$ C T <sub>j</sub> = bivalent temperature	Pan Pdh	12,0	kW	-			~~ %
		-		Tj = bivalent temperature	PERd	_	70
Annual energy consumption	$Q_{HE}$	158	GJ	1			

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Figure 7.2

Bivalent temperature	T <sub>biv</sub>	TOL < T <sub>designh</sub> °C		For air-to-water heat pumps: Operation limit temperature	TOL	-	°C	
			1	Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes of	her than activ	e mode	_	Supplementary heater		-		
Off mode	$P_{OFF}$	0,000	kW	Rated heat output	Psup	-	kW	
Thermostat-off mode	$P_{TO}$	0,019	kW					
Standby mode	$P_{SB}$	<i>P</i> <sub>SB</sub> 0,005 kW		Type of energy input	monovalent			
Crankcase heater mode	$P_{CK}$	-	kW					
Other items					-			
Capacity control	v	ariable		For air-to-water heat pumps: Rated air flow rate, outdoors	_	-	m³/h	
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/66 dB		For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	_	2,9	m³/h	

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating sup(Tj).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 2:

 $NO_{r}$ 

mg/ 40 kWh

## 8 AY00-120

Figure 8.1

Table 7
COMMISSION DELEGATED REGULATION (EU) No 811/2013

Technical parameter	rs for boiler s	pace hea	ters, boil	er combination heaters and cog	generation sp	oace heater	rs
Model(s):				AY120			
Condensing boiler:				yes			
Low-temperature (**) boiler:				no			
B11 boiler:				no			
Cogeneration space heater:			no	If yes, equipped with a supple	ementary hea	ter:	no
Combination heater:				no			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	34,9	kW	Seasonal space heating energy efficiency	$\eta_s$	90,7	%
For boiler space heaters and b Useful heat output	oiler combina	tion heate	ers:	For boiler space heaters and b Useful efficiency	oiler combin	ation heate	ers:
At rated heat output and high-temperature regime (*)	$P_4$	34,4	kW	At rated heat output and high-temperature regime (*)	$\eta_{\scriptscriptstyle 4}$	98,6	%
At 30 % of rated heat output and low-temperature regime (**)	<i>P</i> <sub>1</sub>	8,6	kW	At 30 % of rated heat output and low-temperature regime (**)	$\eta_{I}$	107,5	%
Auxiliary electricity consumption	tion			Other items			
At full load	elmax	0,185	kW	Standby heat loss	$P_{stby}$	0,058	kW
At part load	elmin	0,080	kW	Ignition burner power consumption	$P_{ign}$	0	kW
In standby mode	$P_{SB}$	0,005	kW	Annual energy consumption	$Q_{HE}$	286,2	GJ
				Sound power level, indoors	$L_{WA}$	- / 57,0	dB

(\*) High-temperature regime means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.

(\*\*) Low temperature means for condensing boilers 30 °C, for low-temperature boilers 37 °C and for other heaters 50 °C return temperature (at heater inlet).

Additional information required by COMMISSION REGULATION (EU) No 813/2013, Table 1:

 $NO_x$ 

Emissions of nitrogen oxides:

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31 mg/ kWh



#### 9 **DDC PANEL**

Figure 9.1 DDC Technical Data Sheets

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- REGOLAMENTO DELEGATO (UE) N. 811/2013 DELLA COMMISSION COMMISSION DELEGATED REGULATION (EU) NO 811/2013 RÈGLEMENT DÉLÉGUÉ (UE) N o 811/2013 DE LA COMMISSION DELEGIERTE VERORDNUNO (EU) N°. 811/2013 DER KOMMISSIO GEDELEGEREDE VERORDENING (EU) N°. 811/2013 VAN DE COMMISSIE NAŘIZENÍ KOMISE V PŘENESENÉ PRAVOMOCI (EU) č. 811/2013 ROZPORZĄDZENIE DELEGOWANE KOMISII (UE) NR 811/2013

- IT EN FR DE NL CS PL

DISPOSITIVI DI CONTROLLO DELLA TEMPERATURA DISPOSITIVI DI CONTROLLO DELLA TEMPERATURE CONTROLO RÉGULATEURS DE TEMPÉRATURE TEMPERATURREGELA TEMPERATURREGELAARS REGULÁTORY TEPLOTY REGULATORY TEMPERATURY

	Robur	DDC		2%
				jednego miejsca po przecinku
PL	Nazwa dostawcy lub jego znak towarowy	Identyfikator modelu dostawcy	Klasa regulatora temperatury	Udział regulatora temperatury w sezonowej efektywności energetycznej ogrzewania pomieszczeń w %, w zaokragleniu do
CS	Název nebo ochranná známka dodavatele	ldentifikační značka modelu používaná dodavatelem	Třída regulátoru teploty	Přínos regulátoru teploty k sezonní energetické účinnosti vytápění, vyjádřený v % a zaokrouhlený na jedno desetinné místo
NL	De naam van de leverancier of het handelsmerk	De typeaanduiding van de leverancier	De klasse van de temperatuurregelaar	De bijdrage van de temperatuurregelaar aan de seizoensgebonden energie-efficiëntie voor ruimteverwarming in %, afgerond tot op één decimaal
DE	Name oder Warenzeichen des Lieferanten	Modellkennung des Lieferanten	Die Klasse des Temperaturreglers	Beitrag des Temperaturreglers zur jahreszeitbedingten Raumheizungs-Energieeffizienz in Prozent, auf eine Dezimalstelle gerundet
FR	Le nom du fournisseur ou la marque commerciale	La référence du modèle donnée par le fournisseur	La classe du régulateur de température	La contribution du régulateur de température à l'efficacité énergétique saisonnière pour le chauffage des locaux, en %, arrondie à la première décimale
EN	Supplier's name or trade mark	Supplier's model identifier	The class of the temperature control	The contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place
IT	Il nome o marchio del fornitore	L'identificativo del modello del fornitore	La classe del dispositivo di controllo della temperatura	Il contributo del dispositivo di controllo della temperatura all'efficienza energetica stagionale di riscaldamento d'ambiente in %, arrotondata alla cifra intera più vicina

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#### **CCI PANEL** 10

. . . . . . . . . . . . . . Figure 10.1 Fiches Tecniche CCI

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- REGOLAMENTO DELEGATO (UE) N. 811/2013 DELLA COMMISSION COMMISSION DELEGATED REGULATION (EU) No. 811/2013 RÈGLEMENT DÉLÉGUÉ (UE) No. 811/2013 DE LA COMMISSION DELEGIENT VERORONUNG (EU) Nr. 811/2013 DER KOMMISSION GEDELEGEERDE VERORDENING (EU) Nr. 811/2013 VAN DE COMMISSIG MAÏZENÍ KOMISE V PŘENSENBE PRAVOMOCI (EU) Ž. 811/2013 ROZPORZĄDZENIE DELEGOWANE KOMISII (UE) NR 811/2013
- IT EN FR DE NL CS PL

DISPOSITIVI DI CONTROLLO DELLA TEMPERATURA TEMPERATURE CONTROLS RÉGULATEURS DE TEMPÉRATURE TEMPERATURREGLER TEMPERATURREGLEAARS REGULÁTORY TEPLOTY REGULATORY TEMPERATURY

	Robur	CCI	111	2%
				jednego miejsca po przecinku
PL	Nazwa dostawcy lub jego znak towarowy	ldentyfikator modelu dostawcy	Klasa regulatora temperatury	Udział regulatora temperatury w sezonowej efektywności energetycznej ogrzewania pomieszczeń w %, w zaokrągleniu do
CS	Název nebo ochranná známka dodavatele	ldentifikační značka modelu používaná dodavatelem	Třída regulátoru teploty	Přínos regulátoru teploty k sezonní energetické účinnosti vytápění, vyjádřený v % a zaokrouhlený na jedno desetinné místo
NL	De naam van de leverancier of het handelsmerk	De typeaanduiding van de leverancier	De klasse van de temperatuurregelaar	De bijdrage van de temperatuurregelaar aan de seizoensgebonden energie-efficiëntie voor ruimteverwarming in %, afgerond tot op één decimaal
DE	Name oder Warenzeichen des Lieferanten	Modellkennung des Lieferanten	Die Klasse des Temperaturreglers	Beitrag des Temperaturreglers zur jahreszeitbedingten Raumheizungs-Energieeffizienz in Prozent, auf eine Dezimalstelle gerundet
FR	Le nom du fournisseur ou la marque commerciale	La référence du modèle donnée par le fournisseur	La classe du régulateur de température	La contribution du régulateur de température à l'efficacité énergétique saisonnière pour le chauffage des locaux, en %, arrondie à la première décimale
EN	Supplier's name or trade mark	Supplier's model identifier	The class of the temperature control	The contribution of the temperature control to seasonal space heating energy efficiency in %, rounded to one decimal place
IT	Il nome o marchio del fornitore	L'identificativo del modello del fornitore	La classe del dispositivo di controllo della temperatura	Il contributo del dispositivo di controllo della temperatura all'efficienza energetica stagionale di riscaldamento d'ambiente in %, arrotondata alla cifra intera più vicina

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#### **BUFFER TANKS AND DHW TANKS** 11

### Table 11.1 Buffer tanks and DHW tanks

ltem code	Description	Loss (W)	Loss (kWh/24h)	Specific loss (W/K)	Volume (I)	Energy efficiency class
OSRB000	300-litre thermal tank	90	2,24	2,07	270	С
OSRB001	500-litre thermal tank	126	3,02	2,79	476	D
OSRB004	300-litre DHW tank	85	2,03	1,88	263	C
OSRB005	500-litre DHW tank	130	3,13	2,90	470	D
OSRB006	500-litre DHW tank with integrated coil	130	3,13	2,90	470	D