Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 104 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	128	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	4.0	kW	Tj = – 7 ℃	COPd	2.03	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	2.6	kW	Tj = 2 ℃	COPd	3.27	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	2.3	kW	Tj = 7 ℃	COPd	4.30	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 12℃	Pdh	2.8	kW	Tj = 12℃	COPd	6.00	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = bivalent temperature	Pdh	4.0	kW	Tj = bivalent temperature	COPd	2.03	–
Tj = operation limit temperature	Pdh	3.8	kW	Tj = operation limit temperature	COPd	1.38	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	3152	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	101	%
Daily electricity consumption	Qelec	5.049	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1011	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 104 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	3	kW	Seasonal space heating energy efficiency	ηs	95	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	1.9	kW	Tj = – 7 ℃	COPd	1.72	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 2 ℃	Pdh	1.9	kW	Tj = 2 ℃	COPd	3.41	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 7 ℃	Pdh	2.6	kW	Tj = 7 ℃	COPd	5.29	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 12℃	Pdh	2.9	kW	Tj = 12℃	COPd	6.71	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	2.7	kW	Tj = bivalent temperature	COPd	1.35	–
Tj = operation limit temperature	Pdh	2.3	kW	Tj = operation limit temperature	COPd	1.10	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	2.7	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	1.35	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.7	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	3015	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.277	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1252	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 104 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	ηs	154	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	4.2	kW	Tj = 2 ℃	COPd	2.10	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 7 ℃	Pdh	2.6	kW	Tj = 7 ℃	COPd	3.40	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	2.7	kW	Tj = 12℃	COPd	5.55	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = bivalent temperature	Pdh	4.2	kW	Tj = bivalent temperature	COPd	2.10	–
Tj = operation limit temperature	Pdh	4.2	kW	Tj = operation limit temperature	COPd	2.10	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	1365	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.250	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1246	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 104 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	184	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	4.6	kW	Tj = – 7 ℃	COPd	3.23	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 2 ℃	Pdh	2.9	kW	Tj = 2 ℃	COPd	4.59	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 7 ℃	Pdh	2.6	kW	Tj = 7 ℃	COPd	6.39	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 12℃	Pdh	2.8	kW	Tj = 12℃	COPd	6.37	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	4.6	kW	Tj = bivalent temperature	COPd	3.23	–
Tj = operation limit temperature	Pdh	4.2	kW	Tj = operation limit temperature	COPd	2.56	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.8	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	2216	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	101	%
Daily electricity consumption	Qelec	5.049	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1011	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 104 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	ηs	145	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	2.4	kW	Tj = – 7 ℃	COPd	2.68	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 2 ℃	Pdh	2.3	kW	Tj = 2 ℃	COPd	5.34	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 7 ℃	Pdh	2.7	kW	Tj = 7 ℃	COPd	7.04	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 12℃	Pdh	2.6	kW	Tj = 12℃	COPd	6.90	–
Degradation co-efficient (**)	Cdh	0.93	–				
Tj = bivalent temperature	Pdh	3.1	kW	Tj = bivalent temperature	COPd	2.06	–
Tj = operation limit temperature	Pdh	2.8	kW	Tj = operation limit temperature	COPd	1.19	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	3.1	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	2.03	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.3	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	2662	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.277	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1252	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 104 / IUT 06

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	232	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	4.8	kW	Tj = 2 ℃	COPd	3.46	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	3.3	kW	Tj = 7 ℃	COPd	5.57	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 12℃	Pdh	2.9	kW	Tj = 12℃	COPd	7.60	–
Degradation co-efficient (**)	Cdh	0.93	–				
Tj = bivalent temperature	Pdh	4.8	kW	Tj = bivalent temperature	COPd	3.46	–
Tj = operation limit temperature	Pdh	4.8	kW	Tj = operation limit temperature	COPd	3.46	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	1137	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.250	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1246	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details:
Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)

Name of the supplier:
RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 106 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	127	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	4.0	kW	Tj = – 7 ℃	COPd	2.03	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	2.6	kW	Tj = 2 ℃	COPd	3.27	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	2.4	kW	Tj = 7 ℃	COPd	4.20	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 12℃	Pdh	2.8	kW	Tj = 12℃	COPd	6.00	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = bivalent temperature	Pdh	4.0	kW	Tj = bivalent temperature	COPd	2.03	–
Tj = operation limit temperature	Pdh	3.8	kW	Tj = operation limit temperature	COPd	1.38	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	3169	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	101	%
Daily electricity consumption	Qelec	5.049	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1011	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 106 / IUT 06

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	ηs	104	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	2.4	kW	Tj = – 7 ℃	COPd	1.83	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 2 ℃	Pdh	2.1	kW	Tj = 2 ℃	COPd	3.87	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 7 ℃	Pdh	2.5	kW	Tj = 7 ℃	COPd	5.31	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 12℃	Pdh	2.9	kW	Tj = 12℃	COPd	6.73	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	3.1	kW	Tj = bivalent temperature	COPd	1.38	–
Tj = operation limit temperature	Pdh	2.3	kW	Tj = operation limit temperature	COPd	1.10	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	3.1	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	1.38	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.7	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	3701	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.277	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1252	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 106 / IUT 06

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	167	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	5.2	kW	Tj = 2 ℃	COPd	3.52	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	3.3	kW	Tj = 7 ℃	COPd	3.49	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	2.7	kW	Tj = 12℃	COPd	5.67	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = bivalent temperature	Pdh	5.2	kW	Tj = bivalent temperature	COPd	3.52	–
Tj = operation limit temperature	Pdh	5.2	kW	Tj = operation limit temperature	COPd	3.52	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	1575	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.250	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1246	kWh	Annual fuel consumption	AFC	NA	GJ

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Name of the supplier:
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(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 106 / IUT 06							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	ηs	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	5.3	kW	Tj = – 7 ℃	COPd	2.81	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	3.3	kW	Tj = 2 ℃	COPd	4.68	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 7 ℃	Pdh	2.6	kW	Tj = 7 ℃	COPd	6.22	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 12℃	Pdh	2.6	kW	Tj = 12℃	COPd	5.72	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	5.3	kW	Tj = bivalent temperature	COPd	2.81	–
Tj = operation limit temperature	Pdh	4.2	kW	Tj = operation limit temperature	COPd	2.56	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	2729	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	101	%
Daily electricity consumption	Qelec	5.049	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1011	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 106 / IUT 06

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	ηs	145	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	2.6	kW	Tj = – 7 ℃	COPd	2.69	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 2 ℃	Pdh	2.3	kW	Tj = 2 ℃	COPd	5.34	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 7 ℃	Pdh	2.7	kW	Tj = 7 ℃	COPd	7.04	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = 12℃	Pdh	2.6	kW	Tj = 12℃	COPd	6.90	–
Degradation co-efficient (**)	Cdh	0.93	–				
Tj = bivalent temperature	Pdh	3.4	kW	Tj = bivalent temperature	COPd	1.98	–
Tj = operation limit temperature	Pdh	2.7	kW	Tj = operation limit temperature	COPd	1.58	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	3.4	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	1.98	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.3	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	2674	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.277	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1252	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 106 / IUT 06

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	ηs	232	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	5.2	kW	Tj = 2 ℃	COPd	3.53	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	3.3	kW	Tj = 7 ℃	COPd	5.57	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 12℃	Pdh	2.9	kW	Tj = 12℃	COPd	7.60	–
Degradation co-efficient (**)	Cdh	0.93	–				
Tj = bivalent temperature	Pdh	5.2	kW	Tj = bivalent temperature	COPd	3.53	–
Tj = operation limit temperature	Pdh	5.2	kW	Tj = operation limit temperature	COPd	3.53	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3200	m 3 /h
Sound power level, indoors/outdoors	L_{WA}	42/62	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m 3 /h
Annual energy consumption	Q_{HE}	1136	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	82	%
Daily electricity consumption	Qelec	6.250	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1246	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details:
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Name of the supplier:
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(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 108 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	ηs	129	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	6.3	kW	Tj = – 7 ℃	COPd	2.24	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	4.1	kW	Tj = 2 ℃	COPd	3.18	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	4.3	kW	Tj = 7 ℃	COPd	4.26	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	5.0	kW	Tj = 12℃	COPd	5.93	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	6.3	kW	Tj = bivalent temperature	COPd	2.24	–
Tj = operation limit temperature	Pdh	6.3	kW	Tj = operation limit temperature	COPd	1.79	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.7	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	4371	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	89	%
Daily electricity consumption	Qelec	5.632	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1152	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 108 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	ηs	112	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	4.6	kW	Tj = – 7 ℃	COPd	2.64	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	3.3	kW	Tj = 2 ℃	COPd	3.24	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	4.2	kW	Tj = 7 ℃	COPd	4.76	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	4.7	kW	Tj = 12℃	COPd	5.86	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	5.9	kW	Tj = bivalent temperature	COPd	1.77	–
Tj = operation limit temperature	Pdh	2.9	kW	Tj = operation limit temperature	COPd	1.26	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	5.9	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	1.77	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	4.1	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	5982	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	78	%
Daily electricity consumption	Qelec	6.401	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1314	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 108 / IUT 10							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	ηs	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	8.1	kW	Tj = 2 ℃	COPd	2.52	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 7 ℃	Pdh	5.3	kW	Tj = 7 ℃	COPd	3.38	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 12℃	Pdh	5.2	kW	Tj = 12℃	COPd	5.42	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	8.1	kW	Tj = bivalent temperature	COPd	2.52	–
Tj = operation limit temperature	Pdh	8.1	kW	Tj = operation limit temperature	COPd	2.52	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	2645	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	110	%
Daily electricity consumption	Qelec	4.574	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	933	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 108 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	ηs	181	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	6.2	kW	Tj = – 7 ℃	COPd	2.94	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	3.9	kW	Tj = 2 ℃	COPd	4.39	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	3.0	kW	Tj = 7 ℃	COPd	6.29	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 12℃	Pdh	3.6	kW	Tj = 12℃	COPd	8.43	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	6.2	kW	Tj = bivalent temperature	COPd	2.94	–
Tj = operation limit temperature	Pdh	5.9	kW	Tj = operation limit temperature	COPd	2.69	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.1	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	3149	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	89	%
Daily electricity consumption	Qelec	5.632	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1152	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 108 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	ηs	146	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	4.5	kW	Tj = – 7 ℃	COPd	3.26	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 2 ℃	Pdh	3.3	kW	Tj = 2 ℃	COPd	4.26	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	4.3	kW	Tj = 7 ℃	COPd	6.04	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 12℃	Pdh	4.9	kW	Tj = 12℃	COPd	7.26	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = bivalent temperature	Pdh	5.8	kW	Tj = bivalent temperature	COPd	2.63	–
Tj = operation limit temperature	Pdh	4.5	kW	Tj = operation limit temperature	COPd	1.52	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	5.8	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	2.63	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	2.5	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	4628	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	78	%
Daily electricity consumption	Qelec	6.401	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1314	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 108 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	ηs	217	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	8.2	kW	Tj = 2 ℃	COPd	3.58	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 7 ℃	Pdh	5.4	kW	Tj = 7 ℃	COPd	4.84	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 12℃	Pdh	5.1	kW	Tj = 12℃	COPd	7.08	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = bivalent temperature	Pdh	8.2	kW	Tj = bivalent temperature	COPd	3.58	–
Tj = operation limit temperature	Pdh	8.2	kW	Tj = operation limit temperature	COPd	3.58	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/67	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	1947	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	110	%
Daily electricity consumption	Qelec	4.574	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	933	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details:
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(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 110 / IUT 10							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	ηs	127	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	6.9	kW	Tj = – 7 ℃	COPd	2.12	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	4.2	kW	Tj = 2 ℃	COPd	3.09	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	4.3	kW	Tj = 7 ℃	COPd	4.34	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	4.9	kW	Tj = 12℃	COPd	5.91	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	6.9	kW	Tj = bivalent temperature	COPd	2.12	–
Tj = operation limit temperature	Pdh	6.8	kW	Tj = operation limit temperature	COPd	1.75	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	5091	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	89	%
Daily electricity consumption	Qelec	5.632	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1152	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 110 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	ηs	110	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	5.3	kW	Tj = – 7 ℃	COPd	2.42	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	3.1	kW	Tj = 2 ℃	COPd	3.23	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	4.2	kW	Tj = 7 ℃	COPd	4.78	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 12℃	Pdh	4.8	kW	Tj = 12℃	COPd	5.91	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	6.7	kW	Tj = bivalent temperature	COPd	1.83	–
Tj = operation limit temperature	Pdh	3.3	kW	Tj = operation limit temperature	COPd	1.22	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	6.7	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	1.83	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	4.7	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	6985	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	78	%
Daily electricity consumption	Qelec	6.401	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1314	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details:
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Name of the supplier:
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(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 110 / IUT 10							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Medium-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	ηs	161	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	9.0	kW	Tj = 2 ℃	COPd	2.48	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 7 ℃	Pdh	5.9	kW	Tj = 7 ℃	COPd	3.56	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 12℃	Pdh	5.2	kW	Tj = 12℃	COPd	5.30	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	2.48	–
Tj = operation limit temperature	Pdh	9.0	kW	Tj = operation limit temperature	COPd	2.48	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	2927	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	110	%
Daily electricity consumption	Qelec	4.574	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	933	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 110 / IUT 10							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Average climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	ηs	181	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	7.7	kW	Tj = – 7 ℃	COPd	2.87	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 2 ℃	Pdh	4.8	kW	Tj = 2 ℃	COPd	4.34	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 7 ℃	Pdh	3.1	kW	Tj = 7 ℃	COPd	6.58	–
Degradation co-efficient (**)	Cdh	0.95	–				
Tj = 12℃	Pdh	3.7	kW	Tj = 12℃	COPd	8.37	–
Degradation co-efficient (**)	Cdh	0.94	–				
Tj = bivalent temperature	Pdh	7.7	kW	Tj = bivalent temperature	COPd	2.87	–
Tj = operation limit temperature	Pdh	7.1	kW	Tj = operation limit temperature	COPd	2.59	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	-7	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-10	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	1.9	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	4038	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	89	%
Daily electricity consumption	Qelec	5.632	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1152	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Information requirements (heat pump space heaters and heat pump combination heaters)							
Model(s): MHAITI 110 / IUT 10							
Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Colder climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	ηs	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	5.2	kW	Tj = – 7 ℃	COPd	3.25	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 2 ℃	Pdh	3.2	kW	Tj = 2 ℃	COPd	4.31	–
Degradation co-efficient (**)	Cdh	0.97	–				
Tj = 7 ℃	Pdh	4.3	kW	Tj = 7 ℃	COPd	6.11	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = 12℃	Pdh	4.9	kW	Tj = 12℃	COPd	7.30	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = bivalent temperature	Pdh	6.4	kW	Tj = bivalent temperature	COPd	2.69	–
Tj = operation limit temperature	Pdh	5.6	kW	Tj = operation limit temperature	COPd	1.67	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	6.4	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	2.69	–
Bivalent temperature	Tbiv	-15	℃	For air-to-water heat pumps: Operation limit temperature	TOL	-22	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	2.4	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	5201	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	78	%
Daily electricity consumption	Qelec	6.401	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1314	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)				Name of the supplier: RHOSS S.P.A			
(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.							

Information requirements
(heat pump space heaters and heat pump combination heaters)

Model(s): MHAITI 110 / IUT 10

Air-to-water heat pump	Y			Low-temperature heat pump	N		
Water-to-water heat pump	N			Equipped with a supplementary heater	Y		
Brine-to-water heat pump	N			Heat pump combination heater	Y		
Parameters declared for	Low-temperature application						
Parameters declared for	Warmer climate condition						
Item	symbol	value	unit	Item	symbol	value	unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	ηs	217	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = – 7 ℃	Pdh	NA	kW	Tj = – 7 ℃	COPd	NA	–
Degradation co-efficient (**)	Cdh	NA	–				
Tj = 2 ℃	Pdh	8.8	kW	Tj = 2 ℃	COPd	3.15	–
Degradation co-efficient (**)	Cdh	0.99	–				
Tj = 7 ℃	Pdh	5.8	kW	Tj = 7 ℃	COPd	4.86	–
Degradation co-efficient (**)	Cdh	0.98	–				
Tj = 12℃	Pdh	5.1	kW	Tj = 12℃	COPd	7.18	–
Degradation co-efficient (**)	Cdh	0.96	–				
Tj = bivalent temperature	Pdh	8.8	kW	Tj = bivalent temperature	COPd	3.15	–
Tj = operation limit temperature	Pdh	8.8	kW	Tj = operation limit temperature	COPd	3.15	–
For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	Pdh	NA	kW	For air-to-water heat pumps: Tj = – 15℃ (if TOL < – 20℃)	COPd	NA	–
Bivalent temperature	Tbiv	2	℃	For air-to-water heat pumps: Operation limit temperature	TOL	2	℃
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	–
				Heating water operating limit temperature	WTOL	60	℃
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.025	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P_{TO}	0.025	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0.025	kW				
Crankcase heater mode	P_{CK}	0.025	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	–	3300	m^3/h
Sound power level, indoors/outdoors	L_{WA}	42/68	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	NA	m^3/h
Annual energy consumption	Q_{HE}	2183	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	110	%
Daily electricity consumption	Qelec	4.574	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	933	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 32 - 33033 Codroipo (Ud)	Name of the supplier: RHOSS S.P.A

(*) 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). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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ITALIANO	ENGLISH	FRANCAIS	DEUTSCH	ESPANOL
MODELLO:	MODEL	MODÈLE(S)	MODELL(E)	MODELOS
Pompa di calore Aria-Acqua	Air to Water heat pump	Pompes à chaleur air-eau	Luft-Wasser-Wärmepumpe	Bomba de calor aire-agua
Pompa di calore Acqua-Acqua	Water to Water heat pump	Pompes à chaleur eau-eau	Wasser-Wasser-Wärmepumpe	Bomba de calor agua-agua
Pompa di calore Acqua glicolata-Acqua	Brine to Water heat pump	Pompe à chaleur eau glycolée-eau	Sole-Wasser-Wärmepumpe	Bomba de calor salmuera-agua
Pompa di calore a Bassa Temperatura	Low temperature heat pump	Pompes à chaleur basse température	Niedertemperatur-Wärmepumpe	Bomba de calor de baja temperatura
Equipaggiata con riscaldatore supplementare	Equipped with supplemetary heater	Équipée d'un dispositif de chauffage d'appoint	Mit Zusatzheizgerät	Equipado con un calefactor complementario
Pompa di calore Mista	Heat pump combination heater	Dispositif de chauffage mixte par pompe à chaleur	Kombiheizgerät mit Wärmepumpe	Calefactor combinado con bomba de calor
Elemento	Item	Caractéristique	Angabe	Elemento
Simbolo	Symbol	Symbole	Symbol	Símbolo
Clima	Climate	Conditions climatiques	Klimaverhältnisse	Condiciones climáticas
Valore	Value	Valeur	Wert	Valor
Unità	Unit	Unité	Einheit	Unidad
Potenza termica nominale	Rated heat output	Puissance thermique nominale	Wärmenennleistung	Potencia calorífica nominal
Capacità di riscaldamento dichiarata a carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj	Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j	Puissance calorifique déclarée à charge partielle pour une température intérieure de 20 C et une température extérieure Tj	Angegebene Leistung für Teillast bei Raumlufttemperatur 20 C und Außenlufttemperatur Tj	Capacidad de calefacción declarada para una carga parcial a una temperatura interior de 20 C y una temperatura exterior Tj
T j = temperatura bivalente	T j = bivalent temperature	Tj = température bivalente	Tj = Bivalenztemperatur	Tj = temperatura bivalente
T j = temperatura limite di esercizio	T j = operation limit temperature	Tj = température limite de fonctionnement	Tj=Betriebstemperaturgrenzwert	Tj = temperatura límite de funcionamiento
Temperatura bivalente	Bivalent temperature	Température bivalente	Bivalenztemperatur	Temperatura bivalente
Ciclicità degli intervalli di capacità per il riscaldamento	Cycling interval capacity for heating	Puissance calorifique sur un intervalle cyclique	Leistung bei zyklischem Intervall-Heizbetrieb	Eficiencia del intervalo cíclico para calefacción
Coefficiente di degradazione	Degradation co-efficient	Coefficient de dégradation	Minderungsfaktor	Coeficiente de degradación
Consumo energetico in modi diversi dal modo attivo	Power consumption in modes other than active mode	Consommation d'électricité dans les modes autres que le mode actif	Stromverbrauch in anderen Betriebsarten als dem Betriebszustand	Consumo de electricidad en modos distintos del activo
Modo spento	Off mode	Mode arrêt	Aus-Zustand	Modo desactivado
Modo termostato spento	Thermostat-off mode	Mode arrêt par thermostat	Thermostat-aus-Zustand	Modo desactivado por termostato
Modo stand-by	Standby mode	Mode veille	Bereitschaftszustand	Modo de espera
Modo riscaldamento del carter	Crankcase heater mode	Mode résistance de carter active	Betriebszustand mit Kurbelgehäuseheizung	Modo de calentador del cárter
Altri elementi	Other items	Autres caractéristiques	Sonstige Elemente	Otros elementos
Controllo della capacità	Capacity control	Régulation de la puissance	Leistungssteuerung	Control de capacidad
Livello della potenza sonora, all'interno/all'esterno	Sound power level, indoors/ outdoors	Niveau de puissance acoustique, à l'intérieur/à l'extérieur	Schallleistungspegel, innen/außen	Nivel de potencia acústica (interior/exterior)
fisso/variabile	fixed/variable	fixe/variable	fest/veränderlich	fijo/variable
Efficienza energetica stagionale del riscaldamento d'ambiente	Seasonal space heating energy efficiency	Efficacité énergétique saisonnière pour le chauffage des locaux	Jahreszeitbedingte Raumheizungs-Energieeffizienz	Eficiencia energética estacional de calefacción
Coefficiente di prestazione dichiarato o indice di energia primaria per carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j	Coefficient de performance déclaré ou coefficient sur énergie primaire déclaré à charge partielle pour une température intérieure de 20 °C et une température extérieure Tj	Angegebene Leistungszahl oder Heizzahl für Teillast bei Raumlufttemperatur 20 °C und Außenlufttemperatur Tj	Coeficiente de rendimiento declarado o factor energético primario para una carga parcial a una temperatura interior de 20 °C y una temperatura exterior Tj
T j = temperatura limite di esercizio	T j = bivalent temperature	T_j = température bivalente	T_j = Bivalenztemperatur	T_j = temperatura bivalente
Per le pompe di calore aria/ acqua: temperatura limite di esercizio	T j = operation limit temperature	T_j = température limite de fonctionnement	T_j = Betriebstemperaturgrenzwert	T_j = temperatura límite de funcionamiento
Efficienza della ciclicità degli intervalli	For air-to-water heat pumps: Operation limit temperature	Pour les pompes à chaleur air-eau: température limite de fonctionnement	Für Luft-Wasser-Wärmepumpen: Betriebsgrenzwert-Temperatur	Para bombas de calor aire-agua: Temperatura límite de funcionamiento
Temperatura limite di esercizio di riscaldamento dell'acqua	Cycling interval efficiency	Efficacité sur un intervalle cyclique	Leistungszahl bei zyklischem Intervallbetrieb	Eficiencia del intervalo cíclico
T j = temperatura limite di esercizio	For air-to-water heat pumps: Operation limit temperature	Température maximale de service de l'eau de chauffage	Grenzwert der Betriebstemperatur des Heizwassers	Temperatura límite de calentamiento de agua
Per le pompe di calore aria/ acqua: portata d'aria, all'esterno	For air-to-water heat pumps: Rated air flow rate, outdoors	Pour les pompes à chaleur air-eau: débit d'air nominal, à l'extérieur	Für Luft-Wasser-Wärmepumpen: Nenn-Luftdurchsatz, außen	Para bombas de calor aire-agua: Caudal de aire nominal (exterior)
Per le pompe di calore acqua/acqua e salamoia/acqua: flusso di salamoia o acqua nominale, scambiatore di calore all'esterno	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Pour les pompes à chaleur eau-eau ou eau glycolée-eau: débit nominal d'eau glycolée ou d'eau, échangeur thermique extérieur	Für Wasser/Sole-Wasser-Wärmepumpen: Wasser- oder Sole-Nenndurchsatz	Para bombas de calor agua/salmuera a agua: Caudal de salmuera o de agua nominal, intercambiador de calor de exterior
(*) Temperatura d'uscita variabile	(*) Variable outlet temperature	(*) Sortie variable de tempèrature	(*) Temperatur variable Ausgangs	(*) Variable de temperatura de salida
Più Freddo	Colder	Plus froides	kälter	Mas frias
Medio	Average	Moyennes	durchshnittl	media
Più caldo	Warmer	Plus chaudes	wärmer	Mas calida
Consumo energetico annuo	Annual energy consumption	Consommation annuelle d'énergie	Jährlichen Energieverbrauch	Consumo anual de energía
Classe di efficienza energetica	Energy efficiency classes	Clases de eficiencia energética	Classes d'efficacité énergétique	Energieeffizienzklassen