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

Model(s): MHAITI 104 + IUB 06 + KACSI + KAR + KID

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	91	%
Daily electricity consumption	Qelec	5.780	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1129	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 33 - 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 + IUB 06 + KACSI + KAR + KID

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	127.4	%
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	91	%
Daily electricity consumption	Qelec	5.780	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1129	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 33 - 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 + IUB 10 + KACSI + KAR + KID

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	85	%
Daily electricity consumption	Qelec	6.072	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1201	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 33 - 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 + IUB 10 + KACSI + KAR + KID

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	85	%
Daily electricity consumption	Qelec	6.072	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1201	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details: Via Oltre Ferrovia 33 - 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.

Scheda prodotto: apparecchi di riscaldamento misti / Product fiche: combination heaters

Electa-ECOS-B-IN:		**104**	**106**	**108**	**110**
Unita esterna / Outdoor unit - MHAITI		**104**	**106**	**108**	**110**
Unità interna / Indoor unit - IUB		**06**	**06**	**10**	**10**
Modulo interno - IN/		**150**	**150**	**150**	**150**
Riscaldamento d'ambiente - Applicazione della temperatura / Space heating - Temperature application		Media / Medium	Media / Medium	Media / Medium	Media / Medium
Riscaldamento dell'acqua - Profilo di carico dichiarato / Water heating - Declared load profile		L	L	L	L
Classe di efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche medie / Seasonal space heating energy efficiency class in average climate conditions		A++	A++	A++	A++
Classe di efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency class in average climate conditions		A	A	A	A
Potenza termica nominale in condizioni climatiche medie / Rated heat output in average climate conditions	kW	5	5	7	8
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche medie / Space heating - Annual energy consumption in average climate conditions	kWh	3152	3169	4371	5091
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche medie / Water heating - Annual energy consumption in average climate conditions	kWh	1129	1129	1201	1201
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche medie / Seasonal space heating energy efficiency in average climate conditions	%	128	127	129	127
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency in average climate conditions	%	91	91	85	85
Livello di potenza sonora L_{WA} all'interno / Sound power level L_{WA} indoors	dB	42	42	42	42
Capacità di funzionare durante le ore morte / Ability to work in off-peak hours		\	\	\	\
Precauzioni / Precautions		Vedi manuale installazione, uso e manutenzione / See installation, use and operation manual			
Potenza termica nominale in condizioni climatiche più fredde / Rated output in colder climate conditions	kW	3	4	7	8
Potenza termica nominale in condizioni climatiche più calde / Rated output in warmer climate conditions	kW	4	5	8	9
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche più fredde / Space heating - Annual energy consumption in colder climate conditions	kWh	3615	3701	5982	6985
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche più calde / Space heating - Annual energy consumption in warmer climate conditions	kWh	1365	1575	2645	2927
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più fredde / Water heating - Annual energy consumption in colder climate conditions	kWh	1332	1332	1419	1419
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più calde / Water heating - Annual energy consumption in warmer climate conditions	kWh	780	780	943	943
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche più fredde / Seasonal space heating energy efficiency in colder climate conditions	%	95	104	112	110
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche più calde / Seasonal space heating energy efficiency in warmer climate conditions	%	154	167	159	161
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più fredde / Water heating energy efficiency in colder climate conditions	%	77	77	72	72
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più calde / Water heating energy efficiency in warmer climate conditions	%	131	131	109	109
Livello di potenza sonora L_{WA} all'esterno / Sound power level L_{WA} outdoors	dB	62	62	67	68

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

Model(s): MHAITI 104 + IUB 06 + KACSI + KAR + KID + KACSI2 + KAR2

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	XL			Water heating energy efficiency	ηwh	84	%
Daily electricity consumption	Qelec	10.134	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1997	kWh	Annual fuel consumption	AFC	NA	GJ

Contact details:
Via Oltre Ferrovia 33 - 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 + IUB 06 + KACSI + KAR + KID + KACSI2 + KAR2

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	127.4	%
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	XL			Water heating energy efficiency	ηwh	84	%
Daily electricity consumption	Qelec	10.134	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1997	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 33 - 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 + IUB 10 + KACSI + KAR + KID + KACSI2 + KAR2

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	XL			Water heating energy efficiency	ηwh	79	%
Daily electricity consumption	Qelec	10.760	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2109	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 33 - 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 + IUB 10 + KACSI + KAR + KID + KACSI2 + KAR2

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	XL			Water heating energy efficiency	ηwh	79	%
Daily electricity consumption	Qelec	10.760	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2109	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details: Via Oltre Ferrovia 33 - 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.

Scheda prodotto: apparecchi di riscaldamento misti / Product fiche: combination heaters

Electa-ECOS-B-IN:		**104**	**106**	**108**	**110**
Unita esterna / Outdoor unit - MHAITI		**104**	**106**	**108**	**110**
Unità interna / Indoor unit - IUB		**06**	**06**	**10**	**10**
Modulo interno - IN/150		**KAR+KACSI+KID**	**KAR+KACSI+KID**	**KAR+KACSI+KID**	**KAR+KACSI+KID**
Riscaldamento d'ambiente - Applicazione della temperatura / Space heating - Temperature application		Media / Medium	Media / Medium	Media / Medium	Media / Medium
Riscaldamento dell'acqua - Profilo di carico dichiarato / Water heating - Declared load profile		L	L	L	L
Classe di efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche medie / Seasonal space heating energy efficiency class in average climate conditions		A++	A++	A++	A++
Classe di efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency class in average climate conditions		A	A	A	A
Potenza termica nominale in condizioni climatiche medie / Rated heat output in average climate conditions	kW	5	5	7	8
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche medie / Space heating - Annual energy consumption in average climate conditions	kWh	3152	3169	4371	5091
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche medie / Water heating - Annual energy consumption in average climate conditions	kWh	1129	1129	1201	1201
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche medie / Seasonal space heating energy efficiency in average climate conditions	%	128	127	129	127
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency in average climate conditions	%	91	91	85	85
Livello di potenza sonora L_{WA} all'interno / Sound power level L_{WA} indoors	dB	42	42	42	42
Capacità di funzionare durante le ore morte / Ability to work in off-peak hours		\	\	\	\
Precauzioni / Precautions		Vedi manuale installazione, uso e manutenzione / operation manual			See installation, use and
Potenza termica nominale in condizioni climatiche più fredde / Rated output in colder climate conditions	kW	3	4	7	8
Potenza termica nominale in condizioni climatiche più calde / Rated output in warmer climate conditions	kW	4	5	8	9
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche più fredde / Space heating - Annual energy consumption in colder climate conditions	kWh	3615	3701	5982	6985
Riscaldamento d'ambiente - Consumo energetico annuo in condizioni climatiche più calde / Space heating - Annual energy consumption in warmer climate conditions	kWh	1365	1575	2645	2927
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più fredde / Water heating - Annual energy consumption in colder climate conditions	kWh	1332	1332	1419	1419
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più calde / Water heating - Annual energy consumption in warmer climate conditions	kWh	780	780	943	943
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche più fredde / Seasonal space heating energy efficiency in colder climate conditions	%	95	104	112	110
Efficienza energetica stagionale del riscaldamento d'ambiente in condizioni climatiche più calde / Seasonal space heating energy efficiency in warmer climate conditions	%	154	167	159	161
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più fredde / Water heating energy efficiency in colder climate conditions	%	77	77	72	72
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più calde / Water heating energy efficiency in warmer climate conditions	%	131	131	109	109
Livello di potenza sonora L_{WA} all'esterno / Sound power level L_{WA} outdoors	dB	62	62	67	68
Modulo interno - IN/150+150		**KAR+KACSI+KID KAR2+KACSI2+KQEA**	**KAR+KACSI+KID KAR2+KACSI2+KQEA**	**KAR+KACSI+KID KAR2+KACSI2+KQEA**	**KAR+KACSI+KID KAR2+KACSI2+KQEA**
Riscaldamento d'ambiente - Applicazione della temperatura / Space heating - Temperature application		Media / Medium	Media / Medium	Media / Medium	Media / Medium
Riscaldamento dell'acqua - Profilo di carico dichiarato / Water heating - Declared load profile		XL	XL	XL	XL
Classe di efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency class in average climate conditions		A	A	B	B
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche medie / Water heating - Annual energy consumption in average climate conditions	kWh	1997	1997	2109	2109
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più fredde / Water heating - Annual energy consumption in colder climate conditions	kWh	2564	2564	2708	2708
Riscaldamento dell'acqua - Consumo energetico annuo in condizioni climatiche più calde / Water heating - Annual energy consumption in warmer climate conditions	kWh	1625	1625	1745	1745
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche medie / Water heating energy efficiency in average climate conditions	%	84	84	79	79
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più fredde / Water heating energy efficiency in colder climate conditions	%	65	65	62	62
Efficienza energetica di riscaldamento dell'acqua in condizioni climatiche più calde / Water heating energy efficiency in warmer climate conditions	%	103	103	96	96