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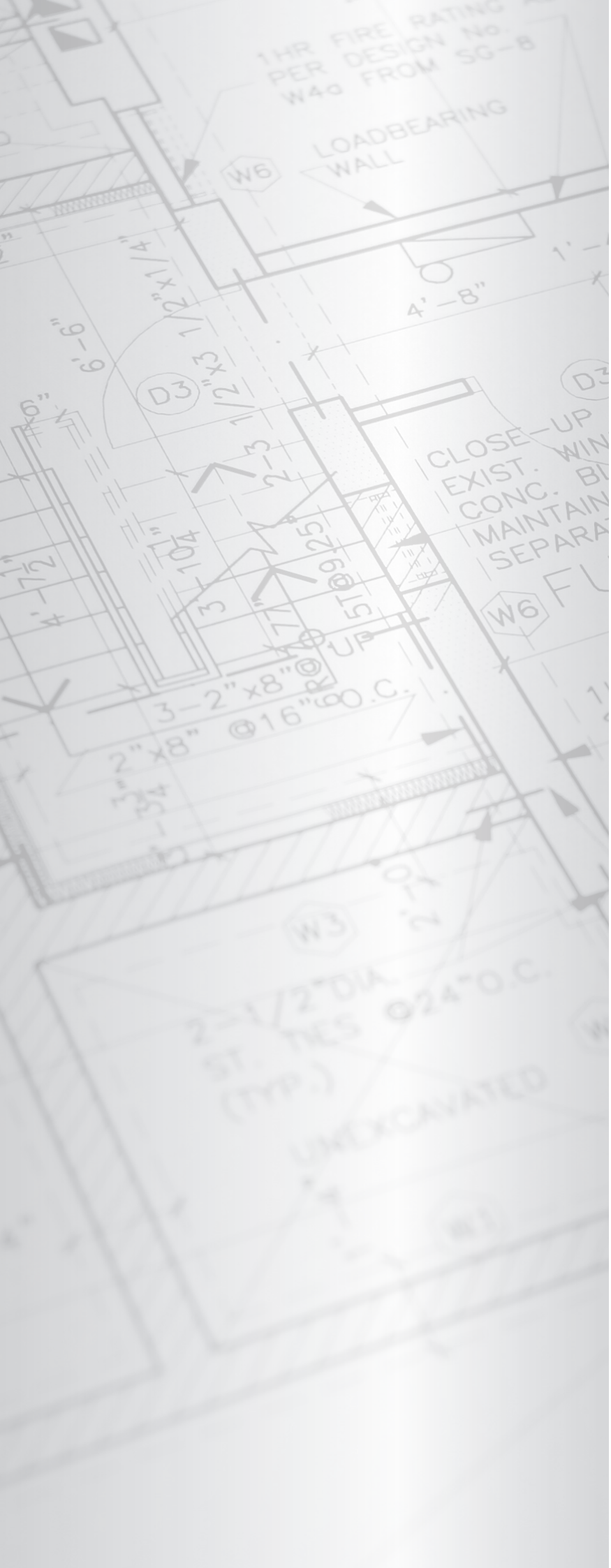
Product Fiche



IMMERGAS

MAGIS
M18 - 22 - 26 - 30

Block heat pumps
Three phase

1 TECHNICAL DATA MODELS 18 - 22 - 26 - 30 KW.

1.1 MEDIUM TEMPERATURE APPLICATIONS.

Model	For medium temperature applications				
	Energy efficiency class	Sound power of unit	Medium zone temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A++	71	18.00	125.0	11375
MAGIS M22T	A++	73	22.00	126.0	14390
MAGIS M26 T	A+	75	26.00	123.0	17204
MAGIS M30 T	A+	77	30.00	123.0	19316

Model	For medium temperature applications				
	Energy efficiency class	Sound power of unit	Cold zones temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A++	71	18.00	97.0	18156
MAGIS M22T	A++	73	22.00	102.0	21067
MAGIS M26 T	A+	75	26.00	101.0	24967
MAGIS M30 T	A+	77	30.00	100.0	29238

Model	For medium temperature applications				
	Energy efficiency class	Sound power of unit	Hot zones temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A++	71	18.00	157.0	6041
MAGIS M22T	A++	73	22.00	161.0	7180
MAGIS M26 T	A+	75	26.00	168.0	8218
MAGIS M30 T	A+	77	30.00	163.0	9580

1.2 LOW TEMPERATURE APPLICATIONS.

Model	For low temperature applications				
	Energy efficiency class	Sound power of unit	Medium zone temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A+++	71	18.00	181.0	8086
MAGIS M22T	A+++	73	22.00	178.0	10180
MAGIS M26 T	A+++	75	25.00	177.0	11489
MAGIS M30 T	A++	77	29.00	165.0	14165

Model	For low temperature applications				
	Energy efficiency class	Sound power of unit	Cold zones temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A+++	71	18.00	146.0	11740
MAGIS M22T	A+++	73	21.00	146.0	14179
MAGIS M26 T	A+++	75	26.00	143.0	17421
MAGIS M30 T	A++	77	29.00	138.0	20390

Model	For low temperature applications				
	Energy efficiency class	Sound power of unit	Hot zones temperatures		
			Rated heat output	Space heating seasonal energy efficiency	For space heating, annual power consumption
	-	dB	kW	%	kWh
MAGIS M18 T	A+++	71	18.00	226.0	4116
MAGIS M22T	A+++	73	22.00	234.0	4945
MAGIS M26 T	A+++	75	26.00	231.0	5959
MAGIS M30 T	A++	77	30.00	213.0	7540

2 PRODUCT DATA SHEET MODELS 18 - 22 - 26 - 30 KW.

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
Sound power of unit (*)	Low temperature medium weather application	dB	71.0	73.0	75.0	77.0
	Medium weather temperature application	dB	71.0	73.0	75.0	77.0
Space heating	Energy efficiency class 35°C (low temperature application)	-	A+++	A+++	A+++	A++
Space heating	Energy efficiency class 55°C (medium temperature application)	-	A++	A++	A+	A+
Medium weather (design temperature = -10°C)						
Space heating 35°C	P_{rated} (declared heating capacity) @ -10°C	kW	18.00	22.00	26.00	30.00
	Space heating seasonal energy efficiency (η_s)	%	181.0	178.0	177.0	165.0
	Annual power consumption	kWh	8086	10180	11489	14165
Space heating 55°C	P_{rated} (declared heating capacity) @ -10°C	kW	18.00	22.00	26.00	30.00
	Space heating seasonal energy efficiency (η_s)	%	125.0	126.0	123.0	123.0
	Annual power consumption	kWh	11375	14390	17204	19316
Low temperature application medium weather space heating partial load conditions						
(A) Condition (-7°C)	P_{dh} (Declared heating capacity)	kW	15.91	19.73	22.15	21.95
	COP_d (Declared COP)	-	2.85	2.74	2.56	2.53
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	9.67	12.04	13.78	16.22
	COP_d (Declared COP)	-	4.57	4.40	4.41	4.12
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	6.57	8.02	9.38	10.69
	COP_d (Declared COP)	-	5.95	6.24	6.43	6.21
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	3.77	3.81	4.11	4.59
	COP_d (Declared COP)	-	6.97	7.00	7.08	7.14
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	-10.00	-10.00	-10.00	-10.00
	P_{dh} (Declared heating capacity)	kW	18.14	20.34	20.36	20.43
	COP_d (Declared COP)	-	2.49	2.35	2.34	2.34
	W_{TOL} (Water heating limit operation)	°C	60.00	60.00	60.00	60.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	-7.00	-7.00	-7.00	-5.00
	P_{dh} (Declared heating capacity)	kW	15.91	19.73	22.15	23.57
	COP_d (Declared COP)	-	2.85	2.74	2.56	2.70
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: –10°C)	kW	0.00	1.97	4.68	8.75
Medium temperature application medium weather space heating partial load conditions						
(A) Condition (-7°C)	P_{dh} (Declared heating capacity)	kW	15.64	19.84	20.65	20.12
	COP_d (Declared COP)	-	1.72	1.74	1.69	1.63
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	9.62	11.91	14.28	16.50
	COP_d (Declared COP)	-	3.30	3.30	3.11	3.09
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	6.40	7.99	9.30	10.51
	COP_d (Declared COP)	-	4.41	4.62	4.72	4.73
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	3.60	3.62	3.90	4.65
	COP_d (Declared COP)	-	5.09	5.20	5.41	5.85
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	-10.00	-10.00	-10.00	-10.00
	P_{dh} (Declared heating capacity)	kW	15.03	13.83	13.87	13.83
	COP_d (Declared COP)	-	1.17	1.08	1.08	1.07
	W_{TOL} (Water heating limit operation)	°C	60.00	60.00	60.00	60.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	-7.00	-7.00	-6.00	-5.00
	P_{dh} (Declared heating capacity)	kW	15.64	19.84	22.13	23.98
	COP_d (Declared COP)	-	1.72	1.74	1.88	2.02
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: –10°C)	kW	2.64	8.60	12.28	15.86
Cold weather (Design temperature = -22°C)						
Space heating 35°C	P_{rated} (declared heating capacity) @ -22°C	kW	18.00	21.00	26.00	29.00
	Space heating seasonal energy efficiency (η_s)	%	146.0	146.0	143.0	138.0
	Annual power consumption	kWh	11740	14179	17421	20390
Space heating 55°C	P_{rated} (declared heating capacity) @ -22°C	kW	18	22	26	30
	Space heating seasonal energy efficiency (η_s)	%	97.0	102.0	101.0	100.0
	Annual power consumption	kWh	18156	21067	24967	29238
Low temperature application cold weather space heating partial load conditions						
Condition (-15°C)	P_{dh} (Declared heating capacity)	kW	14.49	17.46	18.95	18.61
	COP_d (Declared COP)	-	2.42	2.36	2.27	2.24
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(A) Condition (-7°C)	P_{dh} (Declared heating capacity)	kW	11.21	13.30	15.91	18.49
	COP_d (Declared COP)	-	3.09	3.12	3.10	3.07
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	6.64	8.25	10.10	11.88
	COP_d (Declared COP)	-	4.50	4.42	4.45	4.42
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	4.77	5.45	6.30	7.53
	COP_d (Declared COP)	-	5.85	5.87	6.06	6.15
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	3.95	3.98	4.03	4.11
	COP_d (Declared COP)	-	7.18	7.19	7.13	6.87
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	-22.00	-22.00	-22.00	-22.00
	P_{dh} (Declared heating capacity)	kW	13.14	13.27	13.07	13.17
	COP_d (Declared COP)	-	1.67	1.69	1.67	1.67
	W_{TOL} (Water heating limit operation)	°C	37.00	37.00	37.00	37.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	-15.00	-15.00	-12.00	-10.00
	P_{dh} (Declared heating capacity)	kW	14.49	17.46	18.97	19.93
	COP_d (Declared COP)	-	2.42	2.36	2.36	2.44
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: –22°C)	kW	4.62	8.13	12.68	15.96

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
Medium temperature application cold weather space heating partial load conditions						
Condition (-15°C)	P_{dh} (Declared heating capacity)	kW	13.56	13.78	13.37	13.06
	COP_d (Declared COP)	-	1.21	1.24	1.20	1.18
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(A) Condition (-7°C)	P_{dh} (Declared heating capacity)	kW	11.12	13.53	15.90	18.40
	COP_d (Declared COP)	-	1.98	2.07	2.10	2.10
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	6.65	8.61	10.17	11.23
	COP_d (Declared COP)	-	3.44	3.70	3.58	3.51
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	4.66	5.21	6.52	7.42
	COP_d (Declared COP)	-	4.35	4.49	4.99	5.18
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	3.74	3.74	3.63	3.64
	COP_d (Declared COP)	-	5.68	5.76	5.68	5.73
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	-15.00	-15.00	-15.00	-15.00
	P_{dh} (Declared heating capacity)	kW	13.56	13.78	13.37	13.06
	COP_d (Declared COP)	-	1.21	1.24	1.20	1.18
	W_{TOL} (Water heating limit operation)	°C	50.00	50.00	50.00	50.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	-7.00	-7.00	-7.00	-7.00
	P_{dh} (Declared heating capacity)	kW	11.12	13.53	15.90	18.40
	COP_d (Declared COP)	-	1.98	2.07	2.10	2.10
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: –22°C)	kW	18.38	22.36	26.27	30.41

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
Warm weather (Design temperature = 2°C)						
Space heating 35°C	P_{rated} (declared heating capacity) @ -2°C	kW	18.00	22.00	26.00	30.00
	Space heating seasonal energy efficiency (η_s)	%	226.0	234.0	231.0	213.0
	Annual power consumption	kWh	4116	4945	5959	7540
Space heating 55°C	P_{rated} (declared heating capacity) @ -2°C	kW	18.00	22.00	26.00	30.00
	Space heating seasonal energy efficiency (η_s)	%	157.0	161.0	168.0	163.0
	Annual power consumption	kWh	6041	7180	8218	9580
Low temperature application warm weather space heating partial load conditions						
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	17.84	21.81	25.50	26.29
	COP_d (Declared COP)	-	3.53	3.31	3.00	2.94
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	11.36	14.08	16.77	19.57
	COP_d (Declared COP)	-	5.16	5.20	5.02	4.75
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	5.45	6.44	7.65	8.90
	COP_d (Declared COP)	-	7.01	7.50	7.78	7.53
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	2.00	2.00	2.00	2.00
	P_{dh} (Declared heating capacity)	kW	17.84	21.81	25.50	26.29
	COP_d (Declared COP)	-	3.53	3.31	3.00	2.94
	W_{TOL} (Water heating limit operation)	°C	60.00	60.00	60.00	60.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	7.00	7.00	7.00	7.00
	P_{dh} (Declared heating capacity)	kW	11.36	14.08	16.77	19.57
	COP_d (Declared COP)	-	5.16	5.20	5.02	4.75
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: 2°C)	kW	0.00	0.09	0.58	4.15

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
Medium temperature application warm weather space heating partial load conditions						
(B) Condition (2°C)	P_{dh} (Declared heating capacity)	kW	18.44	22.12	26.50	26.41
	COP_d (Declared COP)	-	2.12	2.12	1.99	1.99
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) Condition (7°C)	P_{dh} (Declared heating capacity)	kW	11.62	14.15	16.86	19.11
	COP_d (Declared COP)	-	3.49	3.50	3.47	3.37
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) Condition (12°C)	P_{dh} (Declared heating capacity)	kW	5.35	6.38	7.58	8.92
	COP_d (Declared COP)	-	5.09	5.34	5.94	6.09
	C_{dh} (Degradation coefficient)	-	0.90	0.90	0.90	0.90
(E) Tol (operation limit temperature)	Tol (operation limit temperature)	°C	2.00	2.00	2.00	2.00
	P_{dh} (Declared heating capacity)	kW	18.44	22.12	26.50	26.41
	COP_d (Declared COP)	-	2.12	2.12	1.99	1.99
	W_{TOL} (Water heating limit operation)	°C	60.00	60.00	60.00	60.00
(F) $T_{bivalent}$ temperature	T_{blv}	°C	7.00	7.00	7.00	7.00
	P_{dh} (Declared heating capacity)	kW	11.62	14.15	16.86	19.11
	COP_d (Declared COP)	-	3.49	3.50	3.47	3.37
Supplementary capacity to P_{design}	P_{sup} (@$T_{designh}$: 2°C)	kW	0.00	0.00	0.00	3.32

Space heating appliance with heat pump		Model	MAGIS M18 T	MAGIS M22 T	MAGIS M26 T	MAGIS M30 T
0						
Description of the product	Air-water heat pump	Y/N	Yes	Yes	Yes	Yes
	Water-water heat pump	Y/N	No	No	No	No
	Brine to water heat pump	Y/N	No	No	No	No
	Low temperature heat pump	Y/N	No	No	No	No
	Equipped with additional heater	Y/N	No	No	No	Yes
	Mixed central heating device with heat pump:	Y/N	No	No	No	No
Air-water unit	Nominal air flow	m^3/h	10650	10650	11200	11200
Brine/water to water unit	Water/brine at nominal flow rate (H/E outdoor)		/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter
	P_{off} (Power consumption OFF Mode)	kW	0.018	0.018	0.018	0.018
	P_{to} (Power consumption with thermostat at OFF Mode)	kW	0.096	0.096	0.096	0.096
	P_{sb} (Power consumption in Standby Mode)	kW	0.018	0.018	0.018	0.018
	P_{CK} (Electric crankcase heater model)	kW	0.000	0.000	0.000	0.000
	Q_{elec} (Daily electricity consumption)	kWh	/	/	/	/
	Q_{fuel} (Daily fuel consumption)	kWh	/	/	/	/

Details and precautions on installation, maintenance and assembly can be found in the use and installation manual.

Data of the product data sheets according to the directive on energy labelling 2010/30/EC (EU) 811/2013.

3 TECHNICAL PARAMETERS MODELS 18 - 22 - 26 - 30 KW.

Technical Parameters	
Model:	**MAGIS M18 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**MEDIUM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	17.70	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	15.60	kW
Tj = 2°C	P_{dh}	9.60	kW
Tj = 7°C	P_{dh}	6.40	kW
Tj = 12°C	P_{dh}	3.60	kW
Tj = bivalent temperature	P_{dh}	15.60	kW
Tj = operating limit	P_{dh}	15.00	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{biv}	-7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	125.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	1.72	-
Tj = 2°C	COPd	3.30	-
Tj = 7°C	COPd	4.41	-
Tj = 12°C	COPd	5.09	-
Tj = bivalent temperature	COPd	1.72	-
Tj = operating limit	COPd	1.17	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	-10	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	2.60	kW
Type of energy supplied	Electric		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/71	dB
Annual power consumption	Q_{HE}	11375	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M18 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**COLD**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	18.40	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	11.10	kW
Tj = 2°C	P_{dh}	6.70	kW
Tj = 7°C	P_{dh}	4.70	kW
Tj = 12°C	P_{dh}	3.70	kW
Tj = bivalent temperature	P_{dh}	11.10	kW
Tj = operating limit	P_{dh}	13.60	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	13.60	kW
Bivalent temperature	T_{blv}	-7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	97.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	1.98	-
Tj = 2°C	COPd	3.44	-
Tj = 7°C	COPd	4.35	-
Tj = 12°C	COPd	5.68	-
Tj = bivalent temperature	COPd	1.98	-
Tj = operating limit	COPd	1.21	-
For air-water heat pumps: Tj = -15°C	COPd	1.21	-
For air-water heat pumps: Operation limit temperature	TOL	-15	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	50	°C
Additional heater			
Rated heat output (*)	P_{sup}	18.40	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/71	dB
Annual power consumption	Q_{HE}	18156	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M18 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**WARM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	18.10	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	-	kW
Tj = 2°C	P_{dh}	18.40	kW
Tj = 7°C	P_{dh}	11.60	kW
Tj = 12°C	P_{dh}	5.40	kW
Tj = bivalent temperature	P_{dh}	11.60	kW
Tj = operating limit	P_{dh}	18.40	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	157.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	-	-
Tj = 2°C	COPd	2.12	-
Tj = 7°C	COPd	3.49	-
Tj = 12°C	COPd	5.09	-
Tj = bivalent temperature	COPd	3.49	-
Tj = operating limit	COPd	2.12	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	2	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	0.00	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/71	dB
Annual power consumption	Q_{HE}	6041	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M22 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**MEDIUM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit	Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	22.40	kW	Space heating seasonal energy efficiency	η_s	126.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj				Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	19.80	kW	Tj = -7°C	COPd	1.74	-
Tj = 2°C	P_{dh}	11.90	kW	Tj = 2°C	COPd	3.30	-
Tj = 7°C	P_{dh}	8.00	kW	Tj = 7°C	COPd	4.62	-
Tj = 12°C	P_{dh}	3.60	kW	Tj = 12°C	COPd	5.20	-
Tj = bivalent temperature	P_{dh}	19.80	kW	Tj = bivalent temperature	COPd	1.74	-
Tj = operating limit	P_{dh}	13.80	kW	Tj = operating limit	COPd	1.08	-
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW	For air-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	T_{blv}	-7	°C	For air-water heat pumps: Operation limit temperature	TOL	-10	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW	Efficiency of cycle range	COP_{cyc}	-	-
Degradation coefficient (**)	C_{dh}	0.9	-	Heating water operation limit temperature	W_{TOL}	60	°C
Power consumption in modes other than active mode				**Additional heater**			
OFF mode	P_{off}	0.018	kW	Rated heat output (*)	P_{sup}	8.60	kW
Standby Mode	P_{sb}	0.018	kW				
Thermostat OFF mode	P_{to}	0.096	kW	Type of energy supplied	Electric		
Crankcase heater mode electrical	P_{ck}	0.000	kW				

Other items							
Capacity control	Variable			For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
Sound power level, indoors/outdoors	L_{WA}	-/73	dB	For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h
Annual power consumption	Q_{HE}	14390	kWh				

For mixed central heating appliances with a heat pump:							
Declared load profile	-			Water central heating energy efficiency	η_{WH}	-	%
Daily electrical power consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
Annual electrical power consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M22 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**COLD**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	22.40	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	13.50	kW
Tj = 2°C	P_{dh}	8.60	kW
Tj = 7°C	P_{dh}	5.20	kW
Tj = 12°C	P_{dh}	3.70	kW
Tj = bivalent temperature	P_{dh}	13.50	kW
Tj = operating limit	P_{dh}	13.80	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	13.80	kW
Bivalent temperature	T_{blv}	-7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	102.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2.07	-
Tj = 2°C	COPd	3.70	-
Tj = 7°C	COPd	4.49	-
Tj = 12°C	COPd	5.76	-
Tj = bivalent temperature	COPd	2.07	-
Tj = operating limit	COPd	1.24	-
For air-water heat pumps: Tj = -15°C	COPd	1.24	-
For air-water heat pumps: Operation limit temperature	TOL	-15	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	50	°C
Additional heater			
Rated heat output (*)	P_{sup}	22.40	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/73	dB
Annual power consumption	Q_{HE}	21067	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M22 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**WARM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	22.00	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	-	kW
Tj = 2°C	P_{dh}	22.10	kW
Tj = 7°C	P_{dh}	14.10	kW
Tj = 12°C	P_{dh}	6.40	kW
Tj = bivalent temperature	P_{dh}	14.10	kW
Tj = operating limit	P_{dh}	22.10	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	161.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	-	-
Tj = 2°C	COPd	2.12	-
Tj = 7°C	COPd	3.50	-
Tj = 12°C	COPd	5.34	-
Tj = bivalent temperature	COPd	3.50	-
Tj = operating limit	COPd	2.12	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	2	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	0.00	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/73	dB
Annual power consumption	Q_{HE}	7180	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	10650	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M26 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**MEDIUM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	26.10	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	20.60	kW
Tj = 2°C	P_{dh}	14.30	kW
Tj = 7°C	P_{dh}	9.30	kW
Tj = 12°C	P_{dh}	3.90	kW
Tj = bivalent temperature	P_{dh}	22.10	kW
Tj = operating limit	P_{dh}	13.80	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	-6	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	123.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	1.69	-
Tj = 2°C	COPd	3.11	-
Tj = 7°C	COPd	4.72	-
Tj = 12°C	COPd	5.41	-
Tj = bivalent temperature	COPd	1.88	-
Tj = operating limit	COPd	1.08	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	-10	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	12.30	kW
Type of energy supplied	Electric		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/75	dB
Annual power consumption	Q_{HE}	17204	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M26 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**COLD**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	26.30	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	15.90	kW
Tj = 2°C	P_{dh}	10.20	kW
Tj = 7°C	P_{dh}	6.50	kW
Tj = 12°C	P_{dh}	3.60	kW
Tj = bivalent temperature	P_{dh}	15.90	kW
Tj = operating limit	P_{dh}	13.40	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	13.40	kW
Bivalent temperature	T_{blv}	-7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	101.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2.10	-
Tj = 2°C	COPd	3.58	-
Tj = 7°C	COPd	4.99	-
Tj = 12°C	COPd	5.68	-
Tj = bivalent temperature	COPd	2.10	-
Tj = operating limit	COPd	1.20	-
For air-water heat pumps: Tj = -15°C	COPd	1.20	-
For air-water heat pumps: Operation limit temperature	TOL	-15	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	50	°C
Additional heater			
Rated heat output (*)	P_{sup}	26.30	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/75	dB
Annual power consumption	Q_{HE}	24967	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M26 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**WARM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	26.20	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	-	kW
Tj = 2°C	P_{dh}	26.50	kW
Tj = 7°C	P_{dh}	16.90	kW
Tj = 12°C	P_{dh}	7.60	kW
Tj = bivalent temperature	P_{dh}	16.90	kW
Tj = operating limit	P_{dh}	26.50	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	168.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	-	-
Tj = 2°C	COPd	1.99	-
Tj = 7°C	COPd	3.47	-
Tj = 12°C	COPd	5.94	-
Tj = bivalent temperature	COPd	3.47	-
Tj = operating limit	COPd	1.99	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	2	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	0.00	kW
Type of energy supplied	-		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/75	dB
Annual power consumption	Q_{HE}	8218	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M30 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**MEDIUM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	29.70	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	20.10	kW
Tj = 2°C	P_{dh}	16.50	kW
Tj = 7°C	P_{dh}	10.50	kW
Tj = 12°C	P_{dh}	4.70	kW
Tj = bivalent temperature	P_{dh}	24.00	kW
Tj = operating limit	P_{dh}	13.80	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	-5	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	123.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	1.63	-
Tj = 2°C	COPd	3.09	-
Tj = 7°C	COPd	4.73	-
Tj = 12°C	COPd	5.85	-
Tj = bivalent temperature	COPd	2.02	-
Tj = operating limit	COPd	1.07	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	-10	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	15.90	kW
Type of energy supplied	Electric		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/77	dB
Annual power consumption	Q_{HE}	19316	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M30 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**COLD**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	30.40	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	18.40	kW
Tj = 2°C	P_{dh}	11.20	kW
Tj = 7°C	P_{dh}	7.40	kW
Tj = 12°C	P_{dh}	3.60	kW
Tj = bivalent temperature	P_{dh}	18.40	kW
Tj = operating limit	P_{dh}	13.10	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	13.10	kW
Bivalent temperature	T_{blv}	-7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	100.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	2.10	-
Tj = 2°C	COPd	3.51	-
Tj = 7°C	COPd	5.18	-
Tj = 12°C	COPd	5.73	-
Tj = bivalent temperature	COPd	2.10	-
Tj = operating limit	COPd	1.18	-
For air-water heat pumps: Tj = -15°C	COPd	1.18	-
For air-water heat pumps: Operation limit temperature	TOL	-15	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	50	°C
Additional heater			
Rated heat output (*)	P_{sup}	30.40	kW
Type of energy supplied	Electric		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/77	dB
Annual power consumption	Q_{HE}	29238	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

Technical Parameters	
Model:	**MAGIS M30 T**
Air-water heat pump:	**Yes**
Water-water heat pump:	**No**
Brine to water heat pump:	**No**
Low temperature heat pump:	**No**
Equipped with additional heater:	**No**
Mixed central heating device with heat pump:	**No**
Declared weather condition:	**WARM**
The parameters are declared for the medium temperature application.	

Element	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	29.70	kW
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	P_{dh}	-	kW
Tj = 2°C	P_{dh}	26.40	kW
Tj = 7°C	P_{dh}	19.10	kW
Tj = 12°C	P_{dh}	8.90	kW
Tj = bivalent temperature	P_{dh}	19.10	kW
Tj = operating limit	P_{dh}	26.40	kW
For air-water heat pumps: Tj = -15°C	P_{dh}	-	kW
Bivalent temperature	T_{blv}	7	°C
Capacity of the cycle range for central heating	P_{cych}	-	kW
Degradation coefficient (**)	C_{dh}	0.9	-
Power consumption in modes other than active mode			
OFF mode	P_{off}	0.018	kW
Standby Mode	P_{sb}	0.018	kW
Thermostat OFF mode	P_{to}	0.096	kW
Crankcase heater mode electrical	P_{ck}	0.000	kW

Element	Symbol	Value	Unit
Space heating seasonal energy efficiency	η_s	163.0	%
Central heating capacity declared for a partial load at indoor temperature of 20°C and outdoor temperature Tj			
Tj = -7°C	COPd	-	-
Tj = 2°C	COPd	1.99	-
Tj = 7°C	COPd	3.37	-
Tj = 12°C	COPd	6.09	-
Tj = bivalent temperature	COPd	3.37	-
Tj = operating limit	COPd	1.99	-
For air-water heat pumps: Tj = -15°C	COPd	-	-
For air-water heat pumps: Operation limit temperature	TOL	2	°C
Efficiency of cycle range	COP_{cyc}	-	-
Heating water operation limit temperature	W_{TOL}	60	°C
Additional heater			
Rated heat output (*)	P_{sup}	3.30	kW
Type of energy supplied	Electric		

Other items			
Capacity control	Variable		
Sound power level, indoors/outdoors	L_{WA}	-/77	dB
Annual power consumption	Q_{HE}	9580	kWh

For air-water heat pumps: Rated air flow rate outdoors	-	11200	m^3/h
For water or brine-water heat pumps: Rated water or brine flow rate, heat exchanger outdoors	-	-	m^3/h

For mixed central heating appliances with a heat pump:			
Declared load profile	-		
Daily electrical power consumption	Q_{elec}	-	kWh
Annual electrical power consumption	AEC	-	kWh

Water central heating energy efficiency	η_{WH}	-	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact information	Immergas S.p.A. via Cisa Ligure n.95

(*) For heat pump appliances for space heating and heating appliances mixed with heat pump, the rated heat output P_{rated} is equal to the design load for heating. $P_{designh}$ and the rated heat output of an additional heater P_{sup} is equal to the supplementary heating capacity sup(Tj).
(**) If C_{dh} is not determined by measuring, the default degradation coefficient is C_{dh} = 0.9.

4 INFORMATION REQUIREMENTS FOR SPACE CHILLERS MODELS 18 - 22 - 26 - 30 KW.

Information requirements for space chillers								
Model:	**MAGIS M18 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	16.60	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	185.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	16.60	kW		Tj = +35°C	EER_d	3.06	-
Tj = +30°C	P_{dc}	11.90	kW		Tj = +30°C	EER_d	4.13	-
Tj = +25°C	P_{dc}	7.60	kW		Tj = +25°C	EER_d	5.59	-
Tj = +20°C	P_{dc}	3.50	kW		Tj = +20°C	EER_d	5.55	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	8100	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/71	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Low temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M18 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	18.40	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	216.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	18.40	kW		Tj = +35°C	EER_d	4.44	-
Tj = +30°C	P_{dc}	13.30	kW		Tj = +30°C	EER_d	5.26	-
Tj = +25°C	P_{dc}	8.50	kW		Tj = +25°C	EER_d	6.68	-
Tj = +20°C	P_{dc}	3.30	kW		Tj = +20°C	EER_d	5.15	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	8100	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/71	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Medium temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M22 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	20.60	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	185.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	20.60	kW		Tj = +35°C	EER_d	2.89	-
Tj = +30°C	P_{dc}	14.90	kW		Tj = +30°C	EER_d	3.95	-
Tj = +25°C	P_{dc}	9.30	kW		Tj = +25°C	EER_d	5.37	-
Tj = +20°C	P_{dc}	4.30	kW		Tj = +20°C	EER_d	6.19	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	8950	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/73	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Low temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M22 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	22.80	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	224.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	22.80	kW		Tj = +35°C	EER_d	4.25	-
Tj = +30°C	P_{dc}	16.30	kW		Tj = +30°C	EER_d	5.16	-
Tj = +25°C	P_{dc}	10.20	kW		Tj = +25°C	EER_d	6.45	-
Tj = +20°C	P_{dc}	4.60	kW		Tj = +20°C	EER_d	6.38	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	8950	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/73	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Medium temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M26 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	25.50	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	183.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	25.50	kW		Tj = +35°C	EER_d	2.63	-
Tj = +30°C	P_{dc}	18.50	kW		Tj = +30°C	EER_d	3.79	-
Tj = +25°C	P_{dc}	11.80	kW		Tj = +25°C	EER_d	5.19	-
Tj = +20°C	P_{dc}	5.60	kW		Tj = +20°C	EER_d	6.84	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	9750	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/75	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Low temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M26 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	26.80	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	226.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	26.80	kW		Tj = +35°C	EER_d	4.04	-
Tj = +30°C	P_{dc}	19.40	kW		Tj = +30°C	EER_d	5.21	-
Tj = +25°C	P_{dc}	12.10	kW		Tj = +25°C	EER_d	6.23	-
Tj = +20°C	P_{dc}	5.90	kW		Tj = +20°C	EER_d	6.94	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	9750	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/75	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Medium temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M30 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	29.50	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	177.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	29.50	kW		Tj = +35°C	EER_d	2.29	-
Tj = +30°C	P_{dc}	21.20	kW		Tj = +30°C	EER_d	3.62	-
Tj = +25°C	P_{dc}	13.50	kW		Tj = +25°C	EER_d	5.06	-
Tj = +20°C	P_{dc}	6.00	kW		Tj = +20°C	EER_d	6.75	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	10650	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/77	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Low temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

Information requirements for space chillers								
Model:	**MAGIS M30 T**							
Heat exchanger:	**Air-Water**							
Type:	**Steam compression cycle**							
Compressor start-up:	**Electric motor**							
Element	**Symbol**	**Value**	**Unit**		**Element**	**Symbol**	**Value**	**Unit**
Rated cooling capacity	$P_{rated,c}$	30.80	kW		Space heating seasonal energy efficiency	$\eta_{s,c}$	225.0	%
Cooling capacity declared at partial load at outdoor temperature Tj					Cooling capacity declared at partial load at outdoor temperature Tj			
Tj = +35°C	P_{dc}	30.80	kW		Tj = +35°C	EER_d	3.79	-
Tj = +30°C	P_{dc}	22.10	kW		Tj = +30°C	EER_d	5.06	-
Tj = +25°C	P_{dc}	13.90	kW		Tj = +25°C	EER_d	6.33	-
Tj = +20°C	P_{dc}	6.30	kW		Tj = +20°C	EER_d	7.01	-
Degradation coefficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
OFF mode	P_{OFF}	0.017	kW		Crankcase heater mode electrical	P_{CK}	0.000	kW
Thermostat OFF mode	P_{TO}	0.084	kW		Standby Mode	P_{SB}	0.017	kW
Other items								
Capacity control	Variable				For air-water emergency chillers: air flow rate, measured outdoors	-	10650	m^3/h
Sound power level, indoors/ outdoors	L_{WA}	-/77	dB					
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/ kWh input GCV		For water / brine-water chillers: brine or rated brine water flow rate, outdoors side heat exchanger	-	-	m^3/h
GWP of refrigerant	-	675	kg CO_{2eq}					
Standard rating conditions used	Medium temperature application							
Contact information	Immergas S.p.A. via Cisa Ligure n.95							

(*) If C_{dh} is not determined by measuring, the standard degradation coefficient of chillers must be 0.9.
(**) Since September 26, 2018

5 TECHNICAL DATA TABLE ON ENVIRONMENTAL CONDITIONS MODELS 18 - 22 - 26 - 30 KW.

Conditions (°C)	Model	Capacity (kW)	Absorbed power (kW)	EER/COP (/)
Room Temperature: 35/24 Water Temperature: 12/7	MAGIS M18 T	17.00	5.58	3.05
	MAGIS M22 T	21.00	7.12	2.95
	MAGIS M26 T	26.00	9.63	2.70
	MAGIS M30 T	29.50	11.57	2.55
Room Temperature: 35/24 Water Temperature: 23/18	MAGIS M18 T	18.50	3.90	4.75
	MAGIS M22 T	23.00	5.00	4.60
	MAGIS M26 T	27.00	6.28	4.30
	MAGIS M30 T	31.00	7.75	4.00
Room Temperature: 7/6 Water Temperature: 30/35	MAGIS M18 T	18.00	3.83	4.70
	MAGIS M22 T	22.00	5.00	4.40
	MAGIS M26 T	26.00	6.38	4.08
	MAGIS M30 T	30.10	7.70	3.91
Room Temperature: 2/1 Water Temperature: 30/35	MAGIS M18 T	18.00	5.33	3.38
	MAGIS M22 T	22.00	7.10	3.10
	MAGIS M26 T	24.00	8.33	2.88
	MAGIS M30 T	26.00	9.29	2.80
Room Temperature: -7/-8 Water Temperature: 30/35	MAGIS M18 T	18.00	6.67	2.70
	MAGIS M22 T	21.00	8.08	2.60
	MAGIS M26 T	22.00	8.80	2.50
	MAGIS M30 T	23.00	9.39	2.45
Room Temperature: 7/6 Water Temperature: 40/45	MAGIS M18 T	18.00	5.15	3.50
	MAGIS M22 T	22.00	6.48	3.40
	MAGIS M26 T	26.00	8.39	3.10
	MAGIS M30 T	30.00	10.35	2.90
Room Temperature: 7/6 Water Temperature: 47/55	MAGIS M18 T	18.00	6.55	2.75
	MAGIS M22 T	22.00	8.31	2.65
	MAGIS M26 T	26.00	10.62	2.45
	MAGIS M30 T	30.00	13.05	2.30