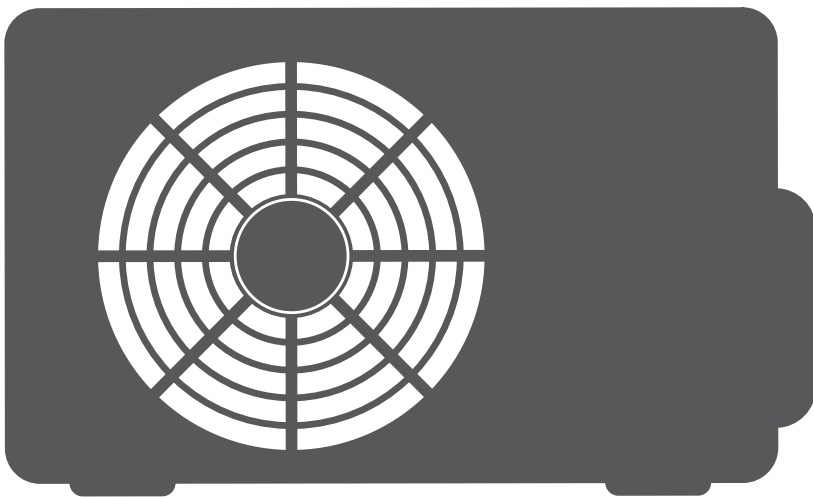


AIR CONDITIONING SYSTEMS

AIR-TO-WATER HEAT PUMP - SPLIT TYPE

• PRODUCT FICHE



MODELS:

ATS04S/HU060S3
ATS06S/HU060S3
ATS08S/HU100S3
ATS10S/HU100S3
ATS12S/HU160S3
ATS14T/HU160T9
ATS16T/HU160T9

Model		For low - temperature application											
Outdoor unit	Indoor unit Matrix	Energy efficiency class	Indoor unit sound power dB	Outdoor unit sound power dB	average climate			colder climate			warmer climate		
					Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh
ATS04S	HU060S3	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
ATS06S	HU060S3	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
ATS08S	HU100S3	A+++	42	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
ATS10S	HU100S3	A+++	42	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
ATS12S	AU160S3	A+++	43	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292
ATS14T	AU160T9	A+++	43	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462
ATS16T	AU160T9	A+++	43	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786

Model		For medium - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power dB	Outdoor unit sound power dB	average climate			colder climate			warmer climate		
					Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh
ATS04S	HU060S3	A++	38	56	4.4	129.5	2742	3.4	102.1	3158	5.0	163.1	1614
ATS06S	HU060S3	A++	38	58	5.7	137.9	3343	4.3	111.1	3680	5.1	165.4	1634
ATS08S	HU100S3	A++	42	59	6.6	131.6	4054	5.8	112.1	4948	7.6	177.2	2242
ATS10S	HU100S3	A++	42	60	7.7	135.7	4567	6.7	116.5	5539	8.6	181.7	2496
ATS12S	AU160S3	A++	43	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.1	3376
ATS14T	AU160T9	A++	43	65	12.1	135.6	7203	11.0	118.9	8867	13.7	176.4	4092
ATS16T	AU160T9	A++	43	68	13.0	133.2	7896	11.8	121.8	9310	13.8	175.9	4116

Product fiche 1

Heat pump space heater Matrix										
	Outdoor	ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T		
Indoor unit sound power (*)	Indoor	HU060S3	HU060S3	HU100S3	HU100S3	HU160S3	HU160T9	HU160T9		
Average climate low temperature application	[dB]	38.0	38.0	42.0	42.0	43.0	43.0	43.0		
Outdoor unit sound power (*)	[dB]	56.0	58.0	59.0	60.0	64.0	65.0	68.0		
Average climate medium temperature application	[dB]	56.0	58.0	59.0	60.0	64.0	65.0	68.0		
Capacity of the back-up heater integrated in the unit	[kW]	0/3	0/3	3	3	3	9	9		
Space heating	-	A+++	A+++	A+++	A+++	A+++	A+++	A+++		
Space heating	-	A++	A++	A++	A++	A++	A++	A++		
Average climate (Design temperature = -10°C)										
Space heating 35°C	[kW]	5.5	6.8	8.1	9.2	12.0	13.7	15.2		
Seasonal space heating efficiency (ηs)	[%]	191.0	195.0	205.6	204.8	189.4	185.6	181.6		
Annual energy consumption	[kWh]	2,351	2,845	3,218	3,644	5,152	6,013	6,805		
Capacity of the back-up heater integrated in the unit	[kW]	4.4	5.7	6.6	7.7	11.6	12.1	13.0		
Space heating 55°C	[%]	129.5	137.9	131.6	135.7	135.1	135.6	133.2		
Annual energy consumption	[kWh]	2,742	3,343	4,054	4,567	6,927	7,203	7,896		
Part load conditions space heating average climate low temperature application										
(A) condition (-7°C)	[kW]	4.88	6.03	7.18	8.10	10.61	12.14	13.45		
COPd (declared COP)	-	3.19	3.09	3.35	3.23	2.88	2.79	2.72		
Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
(B) condition (2°C)	[kW]	3.05	3.88	4.65	5.18	6.69	7.94	8.56		
COPd (declared COP)	-	4.78	4.85	5.09	5.01	4.65	4.52	4.41		
Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
(C) condition (7°C)	[kW]	1.93	2.39	2.90	3.32	4.44	5.20	5.70		
COPd (declared COP)	-	6.13	6.63	6.82	7.08	6.62	6.68	6.56		
Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
(D) condition (12°C)	[kW]	1.48	1.39	1.63	1.65	3.74	3.75	3.78		
COPd (declared COP)	-	8.05	7.93	8.35	8.58	8.47	8.52	8.51		
Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
(E) ToI (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00		
Pdh (declared heating capacity)	[kW]	4.41	5.36	6.44	7.40	10.74	11.47	12.52		
COPd (declared COP)	-	2.86	2.76	3.04	2.96	2.77	2.59	2.48		
WTOL (Heating water Operation Limit)	[°C]	60.00	60.00	60.00	60.00	60.00	60.00	60.00		

Product fiche 2

Heat pump space heater Matrix										
	Tblv	Outdoor		ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T
		Indoor	[°C]	HU060S3	HU060S3	HU100S3	HU100S3	HU160S3	HU160T9	HU160T9
(F) Trivalent temperature		[kW]	-7.00	-7.00	-7.00	7.18	8.10	10.61	12.14	13.45
Supplementary capacity at P_design		-	3.19	3.09	3.35	3.23	2.88	2.79	2.79	2.72
		[kW]	1.11	1.45	1.68	1.76	1.26	2.23	2.23	2.68
Part load conditions space heating average climate medium temperature application										
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	3.89	5.04	5.84	6.78	10.24	10.68	10.68	11.52
	COPd (declared COP)	-	2.17	2.17	2.16	2.24	2.01	2.01	2.01	1.99
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	2.38	3.12	3.76	4.28	6.52	6.86	6.86	7.18
	COPd (declared COP)	-	3.30	3.51	3.30	3.42	3.44	3.43	3.43	3.34
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	2.94	2.08	2.43	2.77	4.36	4.63	4.63	4.67
	COPd (declared COP)	-	4.41	4.54	4.34	4.52	4.59	4.66	4.66	4.61
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.32	1.28	1.39	1.58	3.29	3.31	3.31	3.32
	COPd (declared COP)	-	5.66	5.59	5.33	5.68	6.05	6.13	6.13	6.07
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) ToI (temperature operating limit)	ToI (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	3.42	4.52	4.91	5.38	9.10	9.19	9.19	10.33
	COPd (declared COP)	-	1.91	1.91	1.84	1.83	1.79	1.76	1.76	1.80
(F) Trivalent temperature	WTOL (Heating water Operation Limit)	[°C]	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
	Tblv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	3.89	5.04	5.84	6.78	10.27	10.68	10.68	11.52
	COPd (declared COP)	-	2.17	2.17	2.16	2.24	2.01	2.01	2.01	1.99
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	0.98	1.18	1.69	2.28	2.50	2.91	2.91	2.67
Colder climate (Design temperature = -22°C)										
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	4.6	5.6	7.0	7.7	11.4	12.6	12.6	13.7
	Seasonal space heating efficiency (ηs)	[%]	159.5	165.3	170	169.8	160.2	159.6	159.6	157.8
	Annual energy consumption	[kWh]	2,769	3,300	3,976	4,423	6,870	7,667	7,667	8,431

Product fiche 3

Heat pump space heater Matrix										
Space heating 55°C	Outdoor		ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T	
	Indoor		HU060S3	HU060S3	HU100S3	HU100S3	HU160S3	HU160T9	HU160T9	HU160T9
Prated (declared heating capacity) @ -22°C	[kW]		3.4	4.3	5.8	6.7	10.3	11.0		11.8
Seasonal space heating efficiency (ηs)	[%]		102.1	111.1	112.1	116.5	117.8	118.9		121.8
Annual energy consumption	[kWh]		3,158	3,680	4,948	5,539	8,419	8,867		9,310
Part load conditions space heating colder climate low temperature application										
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	2.75	3.42	4.46	4.83	7.05	7.96		8.31
	COPd (declared COP)	-	3.49	3.59	3.66	3.60	3.48	3.44		3.37
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90		0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	1.77	2.06	2.69	2.94	4.67	5.05		5.26
	COPd (declared COP)	-	4.95	5.21	5.20	5.26	4.96	4.92		4.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90		0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.17	1.46	1.65	1.92	3.14	3.15		3.62
	COPd (declared COP)	-	5.53	6.24	6.53	7.08	6.10	6.11		6.49
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90		0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.43	1.44	1.65	1.65	3.57	3.57		3.34
	COPd (declared COP)	-	7.67	7.66	7.96	7.96	7.87	7.82		7.40
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90		0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00		-22.00
	Pdh (declared heating capacity)	[kW]	2.80	3.48	4.06	4.62	7.01	7.57		8.88
	COPd (declared COP)	-	1.97	1.96	1.95	1.97	1.98	1.92		1.97
(F) Tblv (bivalent temperature)	WTOL (Heating water Operation Limit)	[°C]	51.00	51.00	51.00	51.00	51.00	51.00		51.00
	Tblv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00		-15.00
	Pdh (declared heating capacity)	[kW]	3.72	4.59	5.69	6.32	9.28	10.31		11.22
	COPd (declared COP)	-	2.57	2.53	2.83	2.64	2.59	2.53		2.43
Supplementary capacity at P _{design}	P _{sup} (@Tdesignh: -22°C)	[kW]	1.76	2.15	2.91	3.08	4.40	5.03		4.82
Part load conditions space heating colder climate medium temperature application										
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	2.13	2.69	3.86	4.27	6.63	6.89		7.64
	COPd (declared COP)	-	2.32	2.46	2.48	2.54	2.63	2.66		2.65
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90		0.90

Product fiche 4

Heat pump space heater Matrix									
	Outdoor		ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T
	Indoor		HU060S3	HU060S3	HU100S3	HU100S3	HU160S3	HU160T9	HU160T9
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	1.28	1.60	2.21	2.57	4.06	4.32	4.42
	COPd (declared COP)	-	2.99	3.36	3.35	3.51	3.60	3.66	3.79
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.01	1.02	1.44	1.65	2.78	3.06	2.97
	COPd (declared COP)	-	3.86	3.94	4.11	4.37	4.54	4.72	4.81
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.36	1.37	1.47	1.48	3.33	3.33	3.43
	COPd (declared COP)	-	6.28	6.35	5.92	5.96	6.25	6.25	6.29
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	1.64	2.09	2.80	2.80	4.19	4.20	5.21
	COPd (declared COP)	-	1.02	1.13	1.22	1.22	1.13	1.13	1.23
(F) Tivalent temperature	WTOL (Heating water Operation Limit)	[°C]	51.00	51.00	51.00	51.00	51.00	51.00	51.00
	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	2.74	3.47	4.71	5.47	8.41	8.94	9.61
Supplementary capacity at P_design	COPd (declared COP)	-	1.74	1.86	1.90	2.00	1.84	1.79	1.86
	Psup (@Tdesignh: -22°C)	[kW]	1.72	2.17	2.97	3.91	6.12	6.76	6.59
Warmer climate (Design temperature = 2°C)									
Space heating 35°C	P _{rated} (declared heating capacity) @ 2 °C	[kW]	5.5	6.1	8.1	8.6	11.1	12.1	13.1
	Seasonal space heating efficiency (ηs)	[%]	255.4	259.8	276.6	280.5	256.1	259.8	248.1
	Annual energy consumption	[kWh]	1,146	1,244	1,551	1,617	2,292	2,462	2,786
Space heating 55°C	P _{rated} (declared heating capacity) @ 2 °C	[kW]	5.0	5.1	7.6	8.6	12.5	13.7	13.8
	Seasonal space heating efficiency (ηs)	[%]	163.1	165.4	177.2	181.7	174.1	176.4	175.9
	Annual energy consumption	[kWh]	1,614	1,634	2,242	2,496	3,376	4,092	4,116
Part load conditions space heating warmer climate low temperature application									
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.34	5.93	7.56	8.44	11.26	12.04	13.10
	COPd (declared COP)	-	3.94	3.91	3.98	3.84	3.59	3.44	3.35
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14	7.78	8.41
	COPd (declared COP)	-	5.92	5.89	6.26	6.18	5.87	5.84	5.36
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90

Product fiche 5

Heat pump space heater Matrix									
	Outdoor		ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T
	Indoor	[kW]	HU060S3	HU060S3	HU100S3	HU100S3	HU160S3	HU160T9	HU160T9
(D) condition (12°C)	Pdh (declared heating capacity)	-	1.63	1.79	2.62	2.62	3.55	3.75	3.87
	COPd (declared COP)	-	7.91	8.20	9.23	9.04	7.94	8.25	8.11
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	Toi (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
(E) Toi (temperature operating limit)	Pdh (declared heating capacity)	[kW]	5.34	5.93	7.56	8.44	11.26	12.04	13.10
	COPd (declared COP)	-	3.94	3.91	3.98	3.84	3.59	3.44	3.35
	WTOL (Heating water Operation Limit)	[°C]	62.00	62.00	62.00	62.00	62.00	62.00	62.00
	Tblv	[°C]	7.00	7.00	7.00	7.00	7.00	7.00	7.00
(F) Tblivalent temperature	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14	7.78	8.41
	COPd (declared COP)	-	5.92	5.89	6.26	6.18	5.87	5.84	5.36
	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.18	0.55	0.14	0.00	0.00	0.00
	Supplementary capacity at P_design								
Part load conditions space heating warmer climate medium temperature application									
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.55	8.06	12.07	13.04	13.38
	COPd (declared COP)	-	2.51	2.48	2.59	2.59	2.31	2.20	2.29
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	3.22	3.31	4.86	5.54	8.04	8.83	8.86
(C) condition (7°C)	COPd (declared COP)	-	3.68	3.67	3.92	4.10	3.86	3.91	3.84
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	1.47	1.59	2.32	2.53	3.75	4.08	4.06
	COPd (declared COP)	-	5.15	5.29	5.55	5.82	5.70	5.90	5.86
(D) condition (12°C)	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	Toi (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.83	8.15	12.07	13.04	13.38
	COPd (declared COP)	-	2.51	2.48	2.66	2.61	2.31	2.20	2.29
(E) Toi (temperature operating limit)	WTOL (Heating water Operation Limit)	[°C]	62.00	62.00	62.00	62.00	62.00	62.00	62.00
	Tblv	[°C]	7.00	7.00	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	3.22	3.31	4.86	5.54	8.04	8.83	8.86
	COPd (declared COP)	-	3.68	3.67	3.92	4.10	3.86	3.91	3.84
(F) Tblivalent temperature	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.12	0.00	0.48	0.43	0.66	0.42
	Supplementary capacity at P_design								

Product fiche 6

		Heat pump space heater Matrix									
		Outdoor	ATS04S	ATS06S	ATS08S	ATS10S	ATS12S	ATS14T	ATS16T		
Product description	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No	No	No	No	No	No
	Brine-to-water heat pump	NBVCXZ	No	No	No	No	No	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No	No	No	No	No	No
	Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Heat pump combination heater	Y/N	No	No	No	No	No	No	No	No	No
	Air to water unit	[m ³ /h]	2770	2770	4030	4030	4060	4060	4060	4060	4650
	Brine/water to water unit		/	/	/	/	/	/	/	/	/
	Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
		P _{off} (Power consumption Off mode)	[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.02
P _{to} (Power consumption Thermostat off mode)		[kW]	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.030	
P _{sb} (Power consumption Standby mode)		[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.02	
P _{CK} (Power crankcase heater model)		[kW]	0.000	0.000	0.000	0.000	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 installation and or operation manuals.

Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.

Technical parameters

Model(s):	Outdoor unit: ATS04S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	4.4	kW	Seasonal space heating energy efficiency	η_s	129.5	%
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°C	Pdh	3.89	kW	Tj = -7°C	COPd	2.17	-
Tj = 2°C	Pdh	2.38	kW	Tj = 2°C	COPd	3.30	-
Tj = 7°C	Pdh	2.94	kW	Tj = 7°C	COPd	4.41	-
Tj = 12°C	Pdh	1.32	kW	Tj = 12°C	COPd	5.66	-
Tj = bivalent temperature	Pdh	3.89	kW	Tj = bivalent temperature	COPd	2.17	-
Tj = operating limit	Pdh	3.42	kW	Tj = operating limit	COPd	1.91	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COP _{eyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	0.98	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	LWA	38/56	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	QHE	2744	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{clec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac
-----------------	---

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS04S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	3.4	kW	Seasonal space heating energy efficiency	η_s	102.1	%
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°C	Pdh	2.13	kW	Tj = -7°C	COPd	2.32	-
Tj = 2°C	Pdh	1.28	kW	Tj = 2°C	COPd	2.99	-
Tj = 7°C	Pdh	1.01	kW	Tj = 7°C	COPd	3.86	-
Tj = 12°C	Pdh	1.36	kW	Tj = 12°C	COPd	6.28	-
Tj = bivalent temperature	Pdh	2.74	kW	Tj = bivalent temperature	COPd	1.74	-
Tj = operating limit	Pdh	1.64	kW	Tj = operating limit	COPd	1.02	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	1.72	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	3159	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS04S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5.0	kW	Seasonal space heating energy efficiency	η_s	162.4	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	4.83	kW	Tj = 2°C	COPd	2.51	-
Tj = 7°C	Pdh	3.22	kW	Tj = 7°C	COPd	3.68	-
Tj = 12°C	Pdh	1.47	kW	Tj = 12°C	COPd	5.15	-
Tj = bivalent temperature	Pdh	3.22	kW	Tj = bivalent temperature	COPd	3.68	-
Tj = operating limit	Pdh	4.83	kW	Tj = operating limit	COPd	2.51	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	P _{sup}	0.18	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	1621	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag. Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
-----------------	--	--	--	--	--	--	--

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS06S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5.7	kW	Seasonal space heating energy efficiency	η_s	137.9	%
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°C	Pdh	5.04	kW	Tj = -7°C	COPd	2.17	-
Tj = 2°C	Pdh	3.12	kW	Tj = 2°C	COPd	3.51	-
Tj = 7°C	Pdh	2.08	kW	Tj = 7°C	COPd	4.54	-
Tj = 12°C	Pdh	1.28	kW	Tj = 12°C	COPd	5.59	-
Tj = bivalent temperature	Pdh	5.04	kW	Tj = bivalent temperature	COPd	2.17	-
Tj = operating limit	Pdh	4.52	kW	Tj = operating limit	COPd	1.91	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	C _{dh}	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.014	kW	Rated heat output (**)	P _{sup}	1.18	kW
Standby mode	P _{sb}	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.024	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	38/58	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	3345	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS06S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	4.3	kW	Seasonal space heating energy efficiency	η_s	111.1	%
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°C	Pdh	2.70	kW	Tj = -7°C	COPd	2.46	-
Tj = 2°C	Pdh	1.60	kW	Tj = 2°C	COPd	3.36	-
Tj = 7°C	Pdh	1.02	kW	Tj = 7°C	COPd	3.94	-
Tj = 12°C	Pdh	1.37	kW	Tj = 12°C	COPd	6.35	-
Tj = bivalent temperature	Pdh	3.47	kW	Tj = bivalent temperature	COPd	1.86	-
Tj = operating limit	Pdh	2.09	kW	Tj = operating limit	COPd	1.13	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cyc}	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.014	kW	Rated heat output (**)	P _{sup}	5.10	kW
Standby mode	P _{sb}	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.024	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	3681	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS06S Indoor unit: HU060S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	NO
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5.1	kW	Seasonal space heating energy efficiency	η_s	164.7	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	5.02	kW	Tj = 2°C	COPd	2.48	-
Tj = 7°C	Pdh	3.31	kW	Tj = 7°C	COPd	3.67	-
Tj = 12°C	Pdh	1.60	kW	Tj = 12°C	COPd	5.29	-
Tj = bivalent temperature	Pdh	3.31	kW	Tj = bivalent temperature	COPd	3.67	-
Tj = operating limit	Pdh	5.02	kW	Tj = operating limit	COPd	2.48	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	0	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2770	m ³ /h
Sound power level, indoors/outdoors	LWA	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	QHE	1640	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qclec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS08S - Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6.6	kW	Seasonal space heating energy efficiency	η_s	131.5	%
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°C	Pdh	5.84	kW	Tj = -7°C	COPd	2.16	-
Tj = 2°C	Pdh	3.75	kW	Tj = 2°C	COPd	3.30	-
Tj = 7°C	Pdh	2.42	kW	Tj = 7°C	COPd	4.34	-
Tj = 12°C	Pdh	1.39	kW	Tj = 12°C	COPd	5.33	-
Tj = bivalent temperature	Pdh	5.84	kW	Tj = bivalent temperature	COPd	2.16	-
Tj = operating limit	Pdh	4.90	kW	Tj = operating limit	COPd	1.84	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COP _{eyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	1.69	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L _{WA}	42/59	dB
Annual energy consumption	Q _{HE}	4056	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:									
Declared load profile		-			Water heating energy efficiency		η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh	
Annual electricity consumption	AEC	-	-	kWh	Annual fuel consumption	AFC	-	GJ	

Contact details: **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS08S Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5.8	kW	Seasonal space heating energy efficiency	η_s	112.0	%
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°C	Pdh	3.86	kW	Tj = -7°C	COPd	2.48	-
Tj = 2°C	Pdh	2.21	kW	Tj = 2°C	COPd	3.35	-
Tj = 7°C	Pdh	1.44	kW	Tj = 7°C	COPd	4.11	-
Tj = 12°C	Pdh	1.46	kW	Tj = 12°C	COPd	5.92	-
Tj = bivalent temperature	Pdh	4.71	kW	Tj = bivalent temperature	COPd	1.90	-
Tj = operating limit	Pdh	2.80	kW	Tj = operating limit	COPd	1.22	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COP _{eyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	2.97	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	4950	kWh				

For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency		η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh	
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ	

Contact details: **INVENTOR A.G. S.A.**
24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS08S Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7.6	kW	Seasonal space heating energy efficiency	η_s	175.8	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	7.55	kW	Tj = 2°C	COPd	2.59	-
Tj = 7°C	Pdh	4.86	kW	Tj = 7°C	COPd	3.92	-
Tj = 12°C	Pdh	2.31	kW	Tj = 12°C	COPd	5.55	-
Tj = bivalent temperature	Pdh	4.86	kW	Tj = bivalent temperature	COPd	3.92	-
Tj = operating limit	Pdh	7.55	kW	Tj = operating limit	COPd	2.59	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	P _{sup}	0	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	Q _{HE}	2259	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q _{elec}	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q _{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac
-----------------	---

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS10S Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7.7	kW	Seasonal space heating energy efficiency	η_s	136.6	%
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°C	Pdh	6.78	kW	Tj = -7°C	COPd	2.24	-
Tj = 2°C	Pdh	4.28	kW	Tj = 2°C	COPd	3.42	-
Tj = 7°C	Pdh	2.77	kW	Tj = 7°C	COPd	4.52	-
Tj = 12°C	Pdh	1.58	kW	Tj = 12°C	COPd	5.68	-
Tj = bivalent temperature	Pdh	6.78	kW	Tj = bivalent temperature	COPd	2.24	-
Tj = operating limit	Pdh	5.38	kW	Tj = operating limit	COPd	1.83	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval efficiency	COP _{cyh}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.014	kW	Rated heat output (**)	P _{sup}	2.29	kW
Standby mode	P _{sb}	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.024	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L _{WA}	42/60	dB
Annual energy consumption	Q _{HE}	4539	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS10S Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6.7	kW	Seasonal space heating energy efficiency	η_s	116.4	%
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°C	Pdh	4.27	kW	Tj = -7°C	COPd	2.54	-
Tj = 2°C	Pdh	2.57	kW	Tj = 2°C	COPd	3.51	-
Tj = 7°C	Pdh	1.65	kW	Tj = 7°C	COPd	4.37	-
Tj = 12°C	Pdh	1.47	kW	Tj = 12°C	COPd	5.96	-
Tj = bivalent temperature	Pdh	5.47	kW	Tj = bivalent temperature	COPd	2.00	-
Tj = operating limit	Pdh	2.80	kW	Tj = operating limit	COPd	1.22	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	3.91	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m³/h
Sound power level, indoors/outdoors	LWA	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m³/h
Annual energy consumption	QHE	5540	kWh				

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS10S Indoor unit: HU100S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8.6	kW	Seasonal space heating energy efficiency	η_s	180.3	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	8.06	kW	Tj = 2°C	COPd	2.59	-
Tj = 7°C	Pdh	5.54	kW	Tj = 7°C	COPd	4.10	-
Tj = 12°C	Pdh	2.53	kW	Tj = 12°C	COPd	5.82	-
Tj = bivalent temperature	Pdh	5.54	kW	Tj = bivalent temperature	COPd	4.10	-
Tj = operating limit	Pdh	8.15	kW	Tj = operating limit	COPd	2.61	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval efficiency	COP _{cyh}	-	-
Degradation co-efficient (**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.014	kW	Rated heat output (**)	P _{sup}	0.48	kW
Standby mode	P _{sb}	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.024	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	Q _{HE}	2516	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4030	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q _{elec}	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q _{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS12S Indoor unit: HU160S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.6	kW	Seasonal space heating energy efficiency	η_s	135.1	%
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°C	Pdh	10.24	kW	Tj = -7°C	COPd	2.01	-
Tj = 2°C	Pdh	6.52	kW	Tj = 2°C	COPd	3.44	-
Tj = 7°C	Pdh	4.36	kW	Tj = 7°C	COPd	4.59	-
Tj = 12°C	Pdh	3.29	kW	Tj = 12°C	COPd	6.05	-
Tj = bivalent temperature	Pdh	10.24	kW	Tj = bivalent temperature	COPd	2.01	-
Tj = operating limit	Pdh	9.10	kW	Tj = operating limit	COPd	1.79	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	1.23	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	43/64	dB
Annual energy consumption	Q _{HE}	6927	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details

INVENTOR A.G. S.A.
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS12S Indoor unit: HU160S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10.3	kW	Seasonal space heating energy efficiency	η_s	117.8	%
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°C	Pdh	6.63	kW	Tj = -7°C	COPd	2.63	-
Tj = 2°C	Pdh	4.06	kW	Tj = 2°C	COPd	3.60	-
Tj = 7°C	Pdh	2.78	kW	Tj = 7°C	COPd	4.54	-
Tj = 12°C	Pdh	3.33	kW	Tj = 12°C	COPd	6.25	-
Tj = bivalent temperature	Pdh	8.41	kW	Tj = bivalent temperature	COPd	1.84	-
Tj = operating limit	Pdh	4.19	kW	Tj = operating limit	COPd	1.13	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	6.11	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
Sound power level, indoors/outdoors	LWA	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	QHE	8419	kWh				

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details

INVENTOR A.G. S.A.
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS12S Indoor unit: HU160S3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.5	kW	Seasonal space heating energy efficiency	η_s	174.0	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	12.07	kW	Tj = 2°C	COPd	2.31	-
Tj = 7°C	Pdh	8.04	kW	Tj = 7°C	COPd	3.86	-
Tj = 12°C	Pdh	3.75	kW	Tj = 12°C	COPd	5.70	-
Tj = bivalent temperature	Pdh	8.04	kW	Tj = bivalent temperature	COPd	3.86	-
Tj = operating limit	Pdh	12.07	kW	Tj = operating limit	COPd	2.31	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	0.43	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.024	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	QHE	3776	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Qfuel	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS14TB Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.08	kW	Seasonal space heating energy efficiency	η_s	135.6	%
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°C	Pdh	10.68	kW	Tj = -7°C	COPd	2.01	-
Tj = 2°C	Pdh	6.86	kW	Tj = 2°C	COPd	3.43	-
Tj = 7°C	Pdh	4.63	kW	Tj = 7°C	COPd	4.66	-
Tj = 12°C	Pdh	3.31	kW	Tj = 12°C	COPd	6.13	-
Tj = bivalent temperature	Pdh	10.68	kW	Tj = bivalent temperature	COPd	2.01	-
Tj = operating limit	Pdh	9.19	kW	Tj = operating limit	COPd	1.76	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.020	kW	Rated heat output (**)	Psup	1.40	kW
Standby mode	Psb	0.020	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.030	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
Sound power level, indoors/outdoors	LWA	43/65	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	QHE	7203	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS14T Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.0	kW	Seasonal space heating energy efficiency	η_s	118.9	%
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°C	Pdh	6.89	kW	Tj = -7°C	COPd	2.66	-
Tj = 2°C	Pdh	4.32	kW	Tj = 2°C	COPd	3.66	-
Tj = 7°C	Pdh	3.06	kW	Tj = 7°C	COPd	4.72	-
Tj = 12°C	Pdh	3.33	kW	Tj = 12°C	COPd	6.25	-
Tj = bivalent temperature	Pdh	8.94	kW	Tj = bivalent temperature	COPd	1.79	-
Tj = operating limit	Pdh	4.20	kW	Tj = operating limit	COPd	1.13	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cyc}	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.020	kW	Rated heat output (**)	P _{sup}	6.80	kW
Standby mode	P _{sb}	0.020	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.030	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L _{WA}	-	dB
Annual energy consumption	Q _{HE}	8867	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Q _{elec}	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Q _{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS14T Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.7	kW	Seasonal space heating energy efficiency	η_s	176.4	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	13.04	kW	Tj = 2°C	COPd	2.20	-
Tj = 7°C	Pdh	8.83	kW	Tj = 7°C	COPd	3.91	-
Tj = 12°C	Pdh	4.08	kW	Tj = 12°C	COPd	5.90	-
Tj = bivalent temperature	Pdh	8.83	kW	Tj = bivalent temperature	COPd	3.91	-
Tj = operating limit	Pdh	13.04	kW	Tj = operating limit	COPd	2.20	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.020	kW	Rated heat output (**)	Psup	0.66	kW
Standby mode	Psb	0.020	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.030	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	QHE	4092	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4060	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:

Declared load profile				Water heating energy efficiency			
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details

INVENTOR A.G. S.A.
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS16T Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.0	kW	Seasonal space heating energy efficiency	η_s	133.2	%
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°C	Pdh	11.52	kW	Tj = -7°C	COPd	1.99	-
Tj = 2°C	Pdh	7.18	kW	Tj = 2°C	COPd	3.34	-
Tj = 7°C	Pdh	4.67	kW	Tj = 7°C	COPd	4.61	-
Tj = 12°C	Pdh	3.31	kW	Tj = 12°C	COPd	6.07	-
Tj = bivalent temperature	Pdh	11.52	kW	Tj = bivalent temperature	COPd	1.99	-
Tj = operating limit	Pdh	10.33	kW	Tj = operating limit	COPd	1.80	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyc}	-	kW	Cycling interval efficiency	COP _{cyc}	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{off}	0.020	kW	Rated heat output (**)	P _{sup}	2.67	kW
Standby mode	P _{sb}	0.020	kW	Type of energy input	Electrical		
Thermostat-off mode	P _{to}	0.030	kW				
Crankcase heater mode	P _{ck}	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	43/68	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	Q _{HE}	7896	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS16T Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.8	kW	Seasonal space heating energy efficiency	η_s	121.8	%
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°C	Pdh	7.64	kW	Tj = -7°C	COPd	2.65	-
Tj = 2°C	Pdh	4.42	kW	Tj = 2°C	COPd	3.79	-
Tj = 7°C	Pdh	2.97	kW	Tj = 7°C	COPd	4.81	-
Tj = 12°C	Pdh	3.43	kW	Tj = 12°C	COPd	6.29	-
Tj = bivalent temperature	Pdh	9.61	kW	Tj = bivalent temperature	COPd	1.86	-
Tj = operating limit	Pdh	5.21	kW	Tj = operating limit	COPd	1.23	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	51	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.020	kW	Rated heat output (**)	Psup	6.59	kW
Standby mode	Psb	0.020	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.030	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m ³ /h
Sound power level, indoors/outdoors	LWA	-	dB	For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Annual energy consumption	QHE	9310	kWh				

For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qdec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

Contact details: **INVENTOR A.G. S.A.**
 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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.

Technical parameters

Model(s):	Outdoor unit: ATS16T Indoor unit: HU160T9
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.8	kW	Seasonal space heating energy efficiency	η_s	175.9	%
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°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = 2°C	Pdh	13.38	kW	Tj = 2°C	COPd	2.29	-
Tj = 7°C	Pdh	8.86	kW	Tj = 7°C	COPd	3.84	-
Tj = 12°C	Pdh	4.06	kW	Tj = 12°C	COPd	5.86	-
Tj = bivalent temperature	Pdh	8.86	kW	Tj = bivalent temperature	COPd	3.84	-
Tj = operating limit	Pdh	13.38	kW	Tj = operating limit	COPd	2.29	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	62	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Poff	0.014	kW	Rated heat output (**)	Psup	0.42	kW
Standby mode	Psb	0.014	kW	Type of energy input	Electrical		
Thermostat-off mode	Pto	0.029	kW				
Crankcase heater mode	Pck	0.000	kW				

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	LWA	-	dB
Annual energy consumption	QHE	4116	kWh
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m ³ /h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h

For heat pump combination heater:			
Declared load profile	-		
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	η_{wh}	-	%
Daily fuel consumption	Qfuel	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details **INVENTOR A.G. S.A.**
24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565
Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

(*) 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

Model(s):	Outdoor unit: ATS04S Indoor unit: HU060S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	4.7	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	196.5	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	4.66	kW	$T_j=+35^{\circ}\text{C}$	EER_d	3.52	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	3.66	kW	$T_j=+30^{\circ}\text{C}$	EER_d	4.76	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	2.21	kW	$T_j=+25^{\circ}\text{C}$	EER_d	5.72	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	0.94	kW	$T_j=+20^{\circ}\text{C}$	EER_d	5.72	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	38/56	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS04S Indoor unit: HU060S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	4.5	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	307.7	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	4.51	kW	$T_j=+35^\circ\text{C}$	EER_d	5.54	-
$T_j=+30^\circ\text{C}$	P_{dc}	3.44	kW	$T_j=+30^\circ\text{C}$	EER_d	7.23	-
$T_j=+25^\circ\text{C}$	P_{dc}	2.19	kW	$T_j=+25^\circ\text{C}$	EER_d	8.94	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.13	kW	$T_j=+20^\circ\text{C}$	EER_d	10.48	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	38/55	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water /brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS06S Indoor unit: HU060S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	6.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	210.7	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	6.35	kW	$T_j=+35^{\circ}\text{C}$	EER_d	2.93	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	4.76	kW	$T_j=+30^{\circ}\text{C}$	EER_d	4.53	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	3.02	kW	$T_j=+25^{\circ}\text{C}$	EER_d	6.32	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	1.39	kW	$T_j=+20^{\circ}\text{C}$	EER_d	7.20	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	38/58	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS06S Indoor unit: HU060S3							
Outdoor side heat exchanger of chiller:	Air to water							
Indoor side heat exchanger chiller:	Water							
Type:	Compressor driven vapour compression							
Driver of compressor:	Electric motor							
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	6.5	kW		Seasonal space cooling energy efficiency	$\eta_{s,c}$	325.2	%
Declared cooling capacity for part load at given outdoor temperature T_j					Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	6.55	kW		$T_j=+35^\circ\text{C}$	EER_d	4.69	-
$T_j=+30^\circ\text{C}$	P_{dc}	4.84	kW		$T_j=+30^\circ\text{C}$	EER_d	7.16	-
$T_j=+25^\circ\text{C}$	P_{dc}	3.26	kW		$T_j=+25^\circ\text{C}$	EER_d	9.64	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.41	kW		$T_j=+20^\circ\text{C}$	EER_d	11.48	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-					
Power consumption in modes other than "active mode"								
Off mode	P_{OFF}	0.014	kW		Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW		Standby mode	P_{SB}	0.014	kW
Other items								
Capacity control	variable				For air-to-water comfort chillers: air flow rate, outdoor measured	-	2770	m^3/h
Sound power level, indoors / outdoors	L_{WA}	38/58	dB					
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV		For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)					
Standard rating conditions used	Medium temperature application							
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac							
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.								

Information requirements

Model(s):	Outdoor unit: ATS08S Indoor unit: HU100S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	7.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	230.1	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	7.38	kW	$T_j=+35^\circ\text{C}$	EER_d	3.39	-
$T_j=+30^\circ\text{C}$	P_{dc}	5.72	kW	$T_j=+30^\circ\text{C}$	EER_d	4.71	-
$T_j=+25^\circ\text{C}$	P_{dc}	3.62	kW	$T_j=+25^\circ\text{C}$	EER_d	6.65	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.64	kW	$T_j=+20^\circ\text{C}$	EER_d	8.55	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	42/60	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x (**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS08S Indoor unit: HU100S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	8.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	355.1	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	8.37	kW	$T_j=+35^\circ\text{C}$	EER_d	5.09	-
$T_j=+30^\circ\text{C}$	P_{dc}	6.47	kW	$T_j=+30^\circ\text{C}$	EER_d	7.02	-
$T_j=+25^\circ\text{C}$	P_{dc}	4.31	kW	$T_j=+25^\circ\text{C}$	EER_d	10.67	-
$T_j=+20^\circ\text{C}$	P_{dc}	1.80	kW	$T_j=+20^\circ\text{C}$	EER_d	13.61	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	42/60	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x (**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):		Outdoor unit: ATS10S Indoor unit: HU100S3					
Outdoor side heat exchanger of chiller:		Air to water					
Indoor side heat exchanger chiller:		Water					
Type:		Compressor driven vapour compression					
Driver of compressor:		Electric motor					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	8.7	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	236.2	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	8.73	kW	$T_j=+35^{\circ}\text{C}$	EER_d	3.21	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	6.68	kW	$T_j=+30^{\circ}\text{C}$	EER_d	4.47	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	4.26	kW	$T_j=+25^{\circ}\text{C}$	EER_d	7.02	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	1.94	kW	$T_j=+20^{\circ}\text{C}$	EER_d	9.54	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	42/61	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water /brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS10S Indoor unit: HU160S3						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	10.0	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	348.1	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	10.01	kW	$T_j=+35^{\circ}\text{C}$	EER_d	4.64	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	7.71	kW	$T_j=+30^{\circ}\text{C}$	EER_d	6.45	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	5.03	kW	$T_j=+25^{\circ}\text{C}$	EER_d	10.36	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	2.32	kW	$T_j=+20^{\circ}\text{C}$	EER_d	14.98	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4030	m^3/h
Sound power level, indoors / outdoors	L_{WA}	42/60	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):		Outdoor unit: ATS12S Indoor unit: HU160S3					
Outdoor side heat exchanger of chiller:		Air to water					
Indoor side heat exchanger chiller:		Water					
Type:		Compressor driven vapour compression					
Driver of compressor:		Electric motor					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	11.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	192.4	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	11.31	kW	$T_j=+35^{\circ}\text{C}$	EER_d	2.61	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	8.76	kW	$T_j=+30^{\circ}\text{C}$	EER_d	3.93	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	5.81	kW	$T_j=+25^{\circ}\text{C}$	EER_d	5.73	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	2.63	kW	$T_j=+20^{\circ}\text{C}$	EER_d	6.75	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4060	m^3/h
Sound power level, indoors / outdoors	L_{WA}	43/65	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):		Outdoor unit: ATS12S Indoor unit: HU160T9					
Outdoor side heat exchanger of chiller:		Air to water					
Indoor side heat exchanger chiller:		Water					
Type:		Compressor driven vapour compression					
Driver of compressor:		Electric motor					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	11.8	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	280.9	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	11.77	kW	$T_j=+35^{\circ}\text{C}$	EER_d	3.87	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	9.21	kW	$T_j=+30^{\circ}\text{C}$	EER_d	5.50	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	5.74	kW	$T_j=+25^{\circ}\text{C}$	EER_d	8.66	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	3.33	kW	$T_j=+20^{\circ}\text{C}$	EER_d	10.07	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.014	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.014	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4060	m^3/h
Sound power level, indoors / outdoors	L_{WA}	43/64	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS14T Indoor unit: HU160T9						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	12.2	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	190.3	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	12.19	kW	$T_j=+35^{\circ}\text{C}$	EER_d	2.46	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	9.41	kW	$T_j=+30^{\circ}\text{C}$	EER_d	3.85	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	6.16	kW	$T_j=+25^{\circ}\text{C}$	EER_d	5.80	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	2.63	kW	$T_j=+20^{\circ}\text{C}$	EER_d	6.74	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4060	m^3/h
Sound power level, indoors / outdoors	L_{WA}	44/65	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):		Outdoor unit: ATS14T Indoor unit: HU160T9					
Outdoor side heat exchanger of chiller:		Air to water					
Indoor side heat exchanger chiller:		Water					
Type:		Compressor driven vapour compression					
Driver of compressor:		Electric motor					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	13.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	270.9	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	13.30	kW	$T_j=+35^\circ\text{C}$	EER _d	3.47	-
$T_j=+30^\circ\text{C}$	P_{dc}	10.20	kW	$T_j=+30^\circ\text{C}$	EER _d	5.26	-
$T_j=+25^\circ\text{C}$	P_{dc}	6.57	kW	$T_j=+25^\circ\text{C}$	EER _d	8.45	-
$T_j=+20^\circ\text{C}$	P_{dc}	3.33	kW	$T_j=+20^\circ\text{C}$	EER _d	10.07	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4060	m ³ /h
Sound power level, indoors / outdoors	L_{WA}	44/64	dB				
Emissions of nitrogen oxides (if applicable)	$NO_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m ³ /h
GWP of the refrigerant	-	675	kg CO ₂ eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS16T Indoor unit: HU160T9						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	14.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	183.6	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^{\circ}\text{C}$	P_{dc}	14.31	kW	$T_j=+35^{\circ}\text{C}$	EER_d	2.47	-
$T_j=+30^{\circ}\text{C}$	P_{dc}	10.68	kW	$T_j=+30^{\circ}\text{C}$	EER_d	3.63	-
$T_j=+25^{\circ}\text{C}$	P_{dc}	6.76	kW	$T_j=+25^{\circ}\text{C}$	EER_d	5.27	-
$T_j=+20^{\circ}\text{C}$	P_{dc}	3.41	kW	$T_j=+20^{\circ}\text{C}$	EER_d	7.29	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4650	m^3/h
Sound power level, indoors / outdoors	L_{WA}	44/68	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	2088	kg CO_2eq (100years)				
Standard rating conditions used	Low temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Information requirements

Model(s):	Outdoor unit: ATS16T Indoor unit:HU160T9						
Outdoor side heat exchanger of chiller:	Air to water						
Indoor side heat exchanger chiller:	Water						
Type:	Compressor driven vapour compression						
Driver of compressor:	Electric motor						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	15.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	265.3	%
Declared cooling capacity for part load at given outdoor temperature T_j				Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j=+35^\circ\text{C}$	P_{dc}	15.40	kW	$T_j=+35^\circ\text{C}$	EER_d	3.50	-
$T_j=+30^\circ\text{C}$	P_{dc}	11.42	kW	$T_j=+30^\circ\text{C}$	EER_d	5.14	-
$T_j=+25^\circ\text{C}$	P_{dc}	7.27	kW	$T_j=+25^\circ\text{C}$	EER_d	7.83	-
$T_j=+20^\circ\text{C}$	P_{dc}	3.40	kW	$T_j=+20^\circ\text{C}$	EER_d	10.35	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4650	m^3/h
Sound power level, indoors / outdoors	L_{WA}	44/67	dB				
Emissions of nitrogen oxides (if applicable)	$\text{NO}_x(**)$	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	INVENTOR A.G. S.A. 24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565 Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac						
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9. (**) From 26 September 2018.							

Condition(°C)	outdoor unit	indoor unit	Capacity (kW)	Power input (kW)	EER/COP (/)
Ambient Temperature 35/24 Water temperature 12/7	ATS04S	HU060S3	4.70	1.36	3.45
	ATS06S	HU060S3	7.00	2.33	3.00
	ATS08S	HU100S3	7.40	2.19	3.38
	ATS10S	HU100S3	8.20	2.48	3.30
	ATS12S	HU160S3	11.60	4.22	2.75
	ATS14T	HU160T9	12.70	4.98	2.55
	ATS16T	HU160T9	14.00	5.71	2.45
Ambient Temperature 35/24 Water temperature 23/18	ATS04S	HU060S3	4.50	0.81	5.55
	ATS06S	HU060S3	6.55	1.34	4.90
	ATS08S	HU100S3	8.40	1.66	5.05
	ATS10S	HU100S3	10.00	2.08	4.80
	ATS12S	HU160S3	12.00	3.00	4.00
	ATS14T	HU160T9	13.50	3.75	3.60
	ATS16T	HU160T9	14.90	4.38	3.40
Ambient Temperature 7/6 Water temperature 30/35	ATS04S	HU060S3	4.25	0.82	5.20
	ATS06S	HU060S3	6.20	1.24	5.00
	ATS08S	HU100S3	8.30	1.60	5.20
	ATS10S	HU100S3	10.00	2.00	5.00
	ATS12S	HU160S3	12.10	2.44	4.95
	ATS14T	HU160T9	14.50	3.09	4.70
	ATS16T	HU160T9	16.00	3.56	4.50
Ambient Temperature 2/1 Water temperature 30/35	ATS04S	HU060S3	4.45	1.10	4.05
	ATS06S	HU060S3	5.50	1.39	3.95
	ATS08S	HU100S3	7.10	1.73	4.10
	ATS10S	HU100S3	8.20	2.02	4.05
	ATS12S	HU160S3	9.30	2.35	3.95
	ATS14T	HU160T9	11.40	3.12	3.65
	ATS16T	HU160T9	13.00	3.71	3.50

Condition(°C)	outdoor unit	indoor unit	Capacity (kW)	Power input (kW)	EER/COP (/)
Ambient Temperature: -7/-8 Water temperature: 30/35	ATS04S	HU060S3	4.80	1.52	3.15
	ATS06S	HU060S3	6.10	2.00	3.05
	ATS08S	HU100S3	7.10	2.18	3.25
	ATS10S	HU100S3	8.25	2.62	3.15
	ATS12S	HU160S3	10.00	3.33	3.00
	ATS14T	HU160T9	12.00	4.29	2.80
	ATS16T	HU160T9	13.30	4.93	2.70
Ambient Temperature: 7/6 Water temperature: 40/45	ATS04S	HU060S3	4.35	1.14	3.80
	ATS06S	HU060S3	6.35	1.69	3.75
	ATS08S	HU100S3	8.20	2.08	3.95
	ATS10S	HU100S3	10.00	2.63	3.80
	ATS12S	HU160S3	12.30	3.24	3.80
	ATS14T	HU160T9	14.20	3.89	3.65
	ATS16T	HU160T9	16.00	4.44	3.60
Ambient Temperature: 2/1 Water temperature: 40/45	ATS04S	HU060S3	5.10	1.70	3.00
	ATS06S	HU060S3	5.80	1.93	3.00
	ATS08S	HU100S3	7.40	2.28	3.25
	ATS10S	HU100S3	7.85	2.45	3.20
	ATS12S	HU160S3	10.70	3.57	3.00
	ATS14T	HU160T9	11.70	4.09	2.86
	ATS16T	HU160T9	12.80	4.49	2.85
Ambient Temperature: -7/-8 Water temperature: 40/45	ATS04S	HU060S3	4.30	1.83	2.35
	ATS06S	HU060S3	5.40	2.25	2.40
	ATS08S	HU100S3	6.60	2.59	2.55
	ATS10S	HU100S3	7.35	2.88	2.55
	ATS12S	HU160S3	10.20	4.25	2.40
	ATS14T	HU160T9	11.80	5.02	2.35
	ATS16T	HU160T9	12.90	5.78	2.23
Ambient Temperature: 7/6 Water temperature: 47/55	ATS04S	HU060S3	4.40	1.49	2.95
	ATS06S	HU060S3	6.00	2.00	3.00
	ATS08S	HU100S3	7.50	2.36	3.18
	ATS10S	HU100S3	9.50	3.06	3.10
	ATS12S	HU160S3	12.00	3.87	3.10
	ATS14T	HU160T9	13.80	4.60	3.00
	ATS16T	HU160T9	16.00	5.52	2.90

Condition(°C)	outdoor unit	indoor unit	Capacity (kW)	Power input (kW)	EER/COP (/)
Ambient Temperature: 2/1 Water temperature: 47/55	ATS04S	HU060S3	5.10	2.08	2.45
	ATS06S	HU060S3	5.65	2.31	2.45
	ATS08S	HU100S3	7.10	2.73	2.60
	ATS10S	HU100S3	8.10	3.16	2.56
	ATS12S	HU160S3	11.40	4.47	2.55
	ATS14T	HU160T9	11.80	4.82	2.45
	ATS16T	HU160T9	13.40	5.58	2.40
Ambient Temperature: -7/-8 Water temperature: 47/55	ATS04S	HU060S3	4.00	2.05	1.95
	ATS06S	HU060S3	5.15	2.58	2.00
	ATS08S	HU100S3	6.15	3.00	2.05
	ATS10S	HU100S3	6.85	3.43	2.00
	ATS12S	HU160S3	10.00	4.88	2.05
	ATS14T	HU160T9	11.00	5.37	2.05
	ATS16T	HU160T9	12.50	6.19	2.02



AIR CONDITIONING SYSTEMS

AIR-TO-WATER HEAT PUMP - SPLIT TYPE



V:1.1.042021

Please check the applicable models, F-GAS and manufacturer information from the "Owner's Manual - Product Fiche" in the packaging of the outdoor unit. (European Union products only).

Manufacturer: **INVENTOR A.G. S.A.**

24th km National Road Athens - Lamia & 2 Thoukididou Str., Ag.Stefanos, 14565

Tel.: +30 211 300 3300, Fax: +30 211 300 3333 - www.inventor.ac

