EN | PRODUCT FICHE (Annex A)

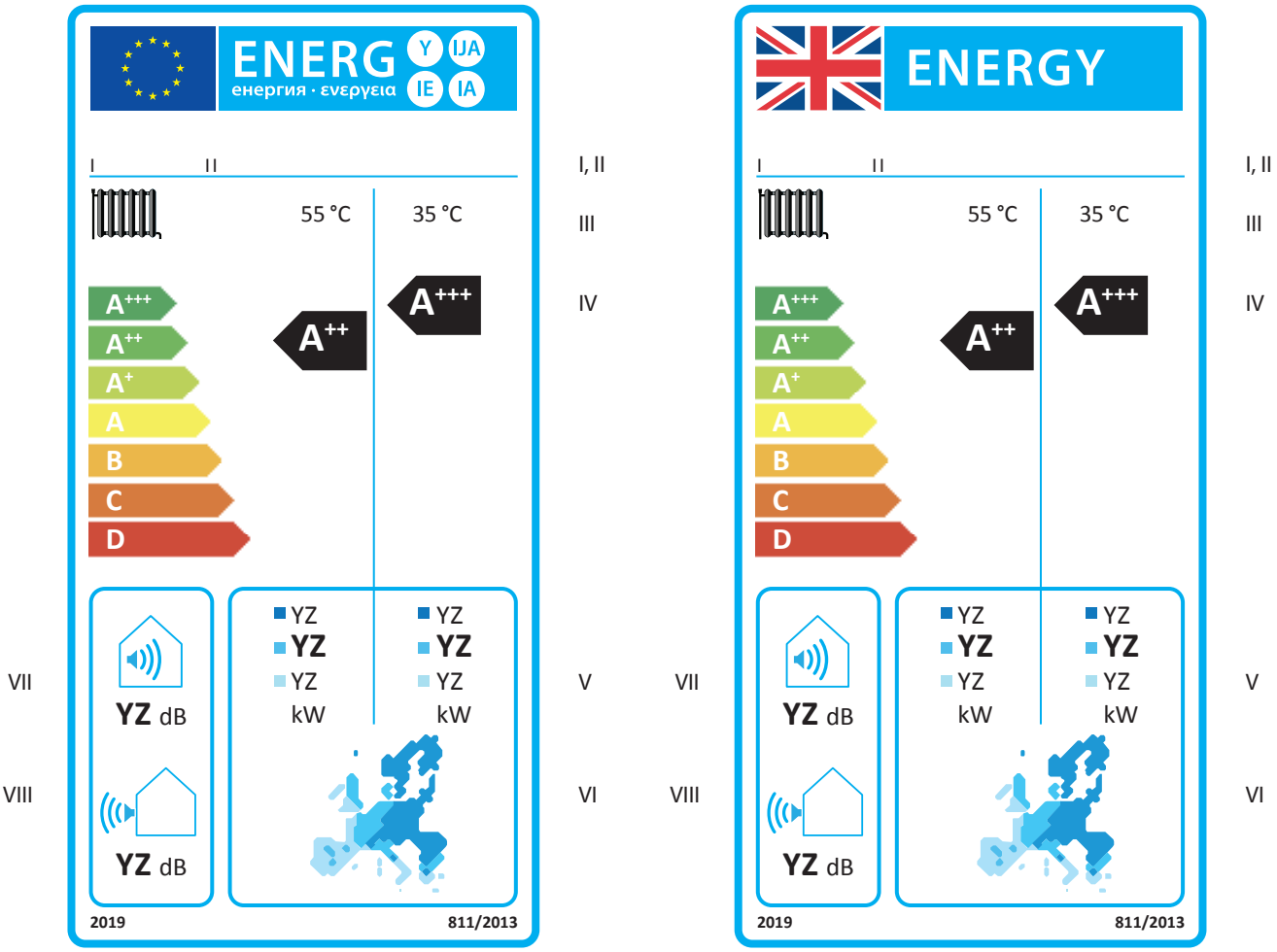
NIMBUS 5 M R290 PLUS, COMPACT-UK, POCKET, PACK

ARISTON

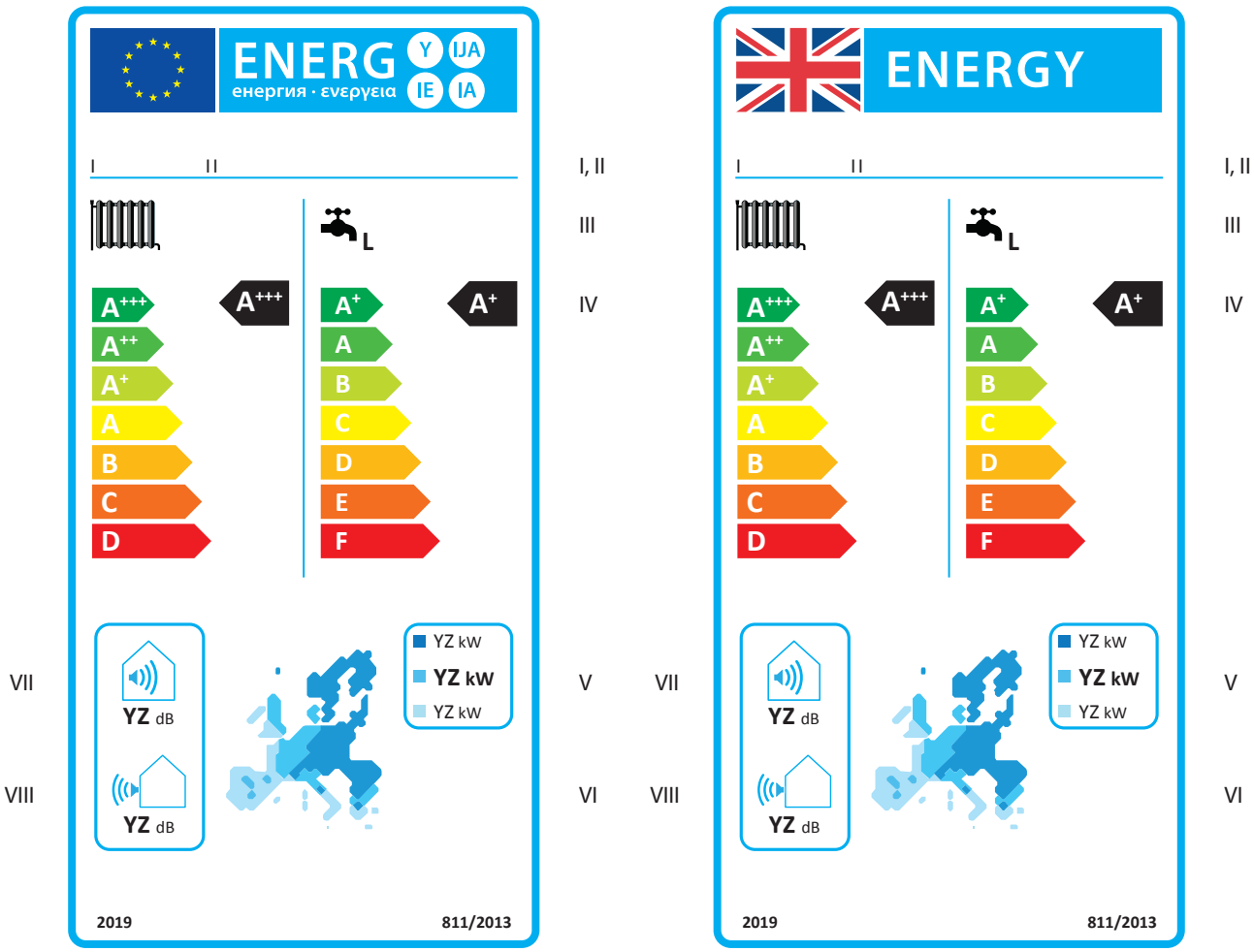
TECHNICAL DOCUMENTATION

Instruction for installation, use and maintenance in the booklet.

ENERGY LABEL



I Supplier's name or trade mark;
II Supplier's model identifier;
III The space heating function for medium and low temperature application;
IV Seasonal space heating energy efficiency class;
V Rated heat output under average, colder, warmer climate conditions for medium and low temperature application;
VI European temperature map displaying three indicative temperature zones;
VII Sound power level Indoors;
VIII Sound power levels outdoors.



I Supplier's name or trade mark;
II Supplier's model identifier;
III The space heating function for medium and low temperature and domestic hot water [1]
IV Seasonal space heating energy efficiency class and water heating energy effciency class;
V Rated heat output under average, colder, warmer climate conditions for medium and low temperature application;
VI European temperature map displaying three indicative temperature zones;
VII Sound power level Indoors;
VIII Sound power levels outdoors.

The data in the tables below apply to the following products:
NIMBUS 5 COMPACT M R290, NIMBUS 5 PLUS M R290, NIMBUS 5 POCKET M R290

PRODUCT FICHE according to regulation (EU) No 811/2013

ARISTON

Heat Pump Model		NIMBUS 5 M R290 PLUS							
		30 M	50 M	80 M	80 M-T	120 M	120 M-T	150 M	150 M-T
Medium High Temperature application		x	x	x	x	x	x	x	x
DHW - Declared Tapping Profile		--	--	--	--	--	--	--	--
CH -Seasonal Space Heating Energy Efficiency Class		A+++	A++	A++	A++	A+++	A+++	A+++	A+++
Rated Heat Output - Average Conditions	kW	2.83	5.65	7.69	7.69	9.42	9.42	11.59	11.59
CH - Annual Energy Consumption	kWh	1523	3184	4440	4440	5022	5022	6195	6195
DHW - Annual Electricity Consumption - Average Conditions	kWh	--	--	--	--	--	--	--	--
CH - Seasonal Space Heating Energy Efficiency - Average Conditions	%	150	144	140	140	152	152	151	151
DHW -Water heating Energy Efficiency -Average Conditions	%	--	--	--	--	--	--	--	--
Sound Power Level Indoors (LWA)	dB	35	35	35	35	35	35	35	35
Work only during off-peaks hour		--	--	--	--	--	--	--	--
Precautions		*	*	*	*	*	*	*	*
Rated Heat Output - Colder Conditions	kW	4.13	8.26	11.53	11.53	13.76	13.76	16.93	16.93
Rated Heat Output - Warmer Conditions	kW	2	5	8	8	8.33	8.33	10.25	10.25
CH - Annual energy consumption - Colder Conditions	kWh	3208	6673	9311	9311	10442	10442	13340	13340
CH - Annual energy consumption - Warmer Conditions	kWh	627	1516	2520	2520	2433	2433	3201	3201
DHW - Annual energy consumption - Colder Conditions	kWh	--	--	--	--	--	--	--	--
DHW - Annual energy consumption - Warmer Conditions	kWh	--	--	--	--	--	--	--	--
CH - Seasonal Space Heating Energy Efficiency - Colder Conditions	%	124	119	119	119	127	127	122	122
CH -Seasonal Space Heating Energy Efficiency - Warmer Conditions	%	168	173	167	167	180	180	168	168
DHW -Water heating Energy Efficiency -Warmer Conditions	%	--	--	--	--	--	--	--	--
DHW -Water heating Energy Efficiency -COlder Conditions	%	--	--	--	--	--	--	--	--
Sound Power Level Outdoors (LWA)	dB	52	54	56	56	57	57	57	57

ARISTON

Heat Pump Model		NIMBUS 5 M R290 COMPACT-UK							
		30 M	50 M	80 M	80 M-T	120 M	120 M-T	150 M	150 M-T
Medium High Temperature application		x	x	x	x	x	x	x	x
DHW - Declared Tapping Profile		XL	XL	XL	XL	XL	XL	XL	XL
CH -Seasonal Space Heating Energy Efficiency Class		A+++	A++	A++	A++	A+++	A+++	A+++	A+++
Rated Heat Output - Average Conditions	kW	2.83	5.65	7.69	7.69	9.42	9.42	11.59	11.59
CH - Annual Energy Consumption	kWh	1523	3184	4440	4440	5022	5022	6195	6195
DHW - Annual Electricity Consumption - Average Conditions	kWh	1267	1263	1276	1276	1304	1304	1304	1304
CH - Seasonal Space Heating Energy Efficiency - Average Conditions	%	150	144	140	140	152	152	151	151
DHW -Water heating Energy Efficiency -Average Conditions	%	132	133	132	132	129	129	129	129
Sound Power Level Indoors (LWA)	dB	35	35	35	35	35	35	35	35
Work only during off-peaks hour		--	--	--	--	--	--	--	--
Precautions		*	*	*	*	*	*	*	*
Rated Heat Output - Colder Conditions	kW	4.13	8.26	11.53	11.53	13.76	13.76	16.93	16.93
Rated Heat Output - Warmer Conditions	kW	2	5	8	8	8.33	8.33	10.25	10.25
CH - Annual energy consumption - Colder Conditions	kWh	3208	6673	9311	9311	10442	10442	13340	13340
CH - Annual energy consumption - Warmer Conditions	kWh	627	1516	2520	2520	2433	2433	3201	3201
DHW - Annual energy consumption - Colder Conditions	kWh	1523	1523	1493	1493	1602	1602	1602	1602
DHW - Annual energy consumption - Warmer Conditions	kWh	1020	1020	1134	1134	1031	1031	1031	1031
CH - Seasonal Space Heating Energy Efficiency - Colder Conditions	%	124	119	119	119	127	127	122	122
CH -Seasonal Space Heating Energy Efficiency - Warmer Conditions	%	168	173	167	167	180	180	168	168
DHW -Water heating Energy Efficiency -Warmer Conditions	%	165	165	148	148	163	163	163	163
DHW -Water heating Energy Efficiency -COlder Conditions	%	110	110	112	112	105	105	105	105
Sound Power Level Outdoors (LWA)	dB	52	54	56	56	57	57	57	57

(*) Refer to installation manual

ARISTON

Heat Pump Model		NIMBUS 5 M R290							
		POCKET							
		30 M	50 M	80 M	80 M-T	120 M	120 M-T	150 M	150 M-T
Medium High Temperature application		x	x	x	x	x	x	x	x
DHW - Declared Tapping Profile		--	--	--	--	--	--	--	--
CH -Seasonal Space Heating Energy Efficiency Class		A+++	A++	A++	A++	A+++	A+++	A+++	A+++
Rated Heat Output - Average Conditions	kW	2.83	5.65	7.69	7.69	9.42	9.42	11.59	11.59
CH - Annual Energy Consumption	kWh	1523	3184	4440	4440	5022	5022	6195	6195
DHW - Annual Electricity Consumption - Average Conditions	kWh	--	--	--	--	--	--	--	--
CH - Seasonal Space Heating Energy Efficiency - Average Conditions	%	150	144	140	140	152	152	151	151
DHW -Water heating Energy Efficiency -Average Conditions	%	--	--	--	--	--	--	--	--
Sound Power Level Indoors (LWA)	dB	31	31	31	31	31	31	31	31
Work only during off-peaks hour		--	--	--	--	--	--	--	--
Precautions		*	*	*	*	*	*	*	*
Rated Heat Output - Colder Conditions	kW	4.13	8.26	11.53	11.53	13.76	13.76	16.93	16.93
Rated Heat Output - Warmer Conditions	kW	2	5	8	8	8.33	8.33	10.25	10.25
CH - Annual energy consumption - Colder Conditions	kWh	3208	6673	9311	9311	10442	10442	13340	13340
CH - Annual energy consumption - Warmer Conditions	kWh	627	1516	2520	2520	2433	2433	3201	3201
DHW - Annual energy consumption - Colder Conditions	kWh	--	--	--	--	--	--	--	--
DHW - Annual energy consumption - Warmer Conditions	kWh	--	--	--	--	--	--	--	--
CH - Seasonal Space Heating Energy Efficiency - Colder Conditions	%	124	119	119	119	127	127	122	122
CH -Seasonal Space Heating Energy Efficiency - Warmer Conditions	%	168	173	167	167	180	180	168	168
DHW -Water heating Energy Efficiency -Warmer Conditions	%	--	--	--	--	--	--	--	--
DHW -Water heating Energy Efficiency -COlder Conditions	%	--	--	--	--	--	--	--	--
Sound Power Level Outdoors (LWA)	dB	52	54	56	56	57	57	57	57

(*) Refer to installation manual

(ERP) TECHNICAL DATA

MODEL	UM	NIMBUS 5 M R290				
		30 M	50 M	80 M 80 M-T	120 M 120 M-T	150 M 150 M-T
Air to water heat pump				YES		
Water-to-water heat pump				NO		
Brine-to-water heat pump				NO		
Low temperature heat pump				NO		
With supplementary heater				YES		
Rated heat output	[kW]	2.83	5.65	7.69	9.42	11.59
Annual energy consumption	[kWh]	1523	3184	4440	5022	6195
Seasonal space heating energy efficiency	[%]	150	144	140	152	151
Sound power level, outdoor	[dB]	52	54	56	57	57
Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj, LWT 35						
Climate		**AVERAGE**				
ηs	%	193	190	181	191	184
Prated	[kW]	2.83	5.65	7.91	11	12.5
SCOP		4.91	4.82	4.59	4.86	4.67
Bivalent temperature	[°C]			-7		
Operating limit temperature	[°C]			-25		
Heating water operation limit temperature	[°C]			75		
Capacity Tj = -7 °C	[kW]	2.50	5	7	9.73	11.06
COPd Tj = -7 °C		3.35	3.02	2.99	3.16	2.96
Degradation coefficient Tj = -7°C		0.986	0.994	0.995	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.52	3.05	4.3	6.10	6.79
COPd Tj = 2 °C		4.82	4.62	4.5	4.72	4.54
Degradation coefficient Tj = 2°C		0.968	0.985	0.987	0.990	0.991
Capacity Tj = 7 °C	[kW]	1.16	2.13	2.76	4.00	4.36
COPd Tj = 7 °C		5.98	6.6	5.85	6.16	6.15
Degradation coefficient Tj = 7°C		0.948	0.970	0.975	0.980	0.982
Capacity Tj = 12 °C	[kW]	1.42	1.86	2.67	3.75	3.56
COPd Tj = 12 °C		8.35	7.72	7.21	7.65	7.33
Degradation coefficient Tj = 12°C		0.941	0.959	0.968	0.973	0.973
Capacity Tj = biv	[kW]	2.50	5.00	7.00	9.73	11.06
COPd Tj = biv		3.35	3.02	2.99	3.16	2.96
Degradation coefficient Tj = biv		0.986	0.994	0.995	0.996	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	2.6	4.93	7.11	9.81	10.78
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.92	2.78	2.51	2.87	2.67
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.990	0.994	0.996	0.996	0.997
Climate		**COLDER**				
ηs	%	145	143	142	150	144
Prated	[kW]	4.13	8.26	11.57	16.08	18.27
SCOP		3.70	3.65	3.61	3.83	3.67
Bivalent temperature	[°C]			-7		
Operating limit temperature	[°C]			-25		
Heating water operation limit temperature	[°C]			75		
Capacity Tj = -7 °C	[kW]	2.50	5.00	7.00	9.73	11.06
COPd Tj = -7 °C		3.63	3.24	3.20	3.39	3.21
Degradation coefficient Tj = -7°C		0.985	0.994	0.995	0.996	0.996
Capacity Tj = 2 °C	[kW]	1.51	3.04	4.38	5.71	6.65
COPd Tj = 2 °C		4.44	4.97	4.86	5.11	5.01
Degradation coefficient Tj = 2°C		0.970	0.983	0.987	0.988	0.990
Capacity Tj = 7 °C	[kW]	1.28	1.93	2.97	3.79	4.25
COPd Tj = 7 °C		6.42	6.87	6.38	6.61	6.15
Degradation coefficient Tj = 7°C		0.949	0.964	0.974	0.977	0.981
Capacity Tj = 12 °C	[kW]	1.33	1.76	2.67	3.85	3.65
COPd Tj = 12 °C		7.93	8.14	7.19	8.34	7.16
Degradation coefficient Tj = 12°C		0.940	0.953	0.968	0.972	0.975
Capacity Tj = biv	[kW]	2.50	5.00	7.00	9.73	11.06
COPd Tj = biv		3.63	3.24	3.20	3.39	3.21
Degradation coefficient Tj = biv		0.985	0.994	0.995	0.996	0.996
Capacity Tj = -15 °C	[kW]	2.29	3.90	5.80	8.72	9.60
COPd Tj = -15 °C		2.52	2.33	2.34	2.49	2.31
Degradation coefficient Tj = -15°C		0.989	0.994	0.995	0.996	0.997

Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	1.80	2.94	4.63	6.98	7.63
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.04	1.86	1.97	2.09	2.94
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.989	0.994	0.995	0.996	0.997
Climate		**WARMER**				
ηs	%	228	238	228	234	220
Prated	[kW]	2.00	5.00	8.00	9.73	11.06
SCOP		5.76	6.04	5.77	5.93	5.56
Bivalent temperature	[°C]	2				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = 2°C	[kW]	2.00	5.00	8.00	9.73	11.06
COPd Tj = 2 °C		4.15	3.48	3.25	3.62	3.32
Degradation coefficient Tj = 2°C		0.980	0.993	0.995	0.995	0.996
Capacity Tj = 7 °C	[kW]	1.27	3.19	5.16	6.29	7.03
COPd Tj = 7 °C		5.40	5.74	5.29	5.45	5.19
Degradation coefficient Tj = 7°C		0.957	0.982	0.988	0.989	0.990
Capacity Tj = 12 °C	[kW]	1.31	1.65	2.94	3.47	3.47
COPd Tj = 12 °C		7.05	6.97	6.90	6.97	6.41
Degradation coefficient Tj = 12°C		0.946	0.957	0.972	0.974	0.976
Capacity Tj = biv	[kW]	2.00	5.00	8.00	9.73	11.06
COPd Tj = biv		4.15	3.48	3.25	3.62	3.32
Degradation coefficient Tj = biv		0.980	0.993	0.995	0.995	0.996
Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj, LWT 55						
Climate		**AVERAGE**				
ηs	%	150	144	140	152	151
Prated	[kW]	2.83	5.65	7.69	9.42	11.59
SCOP		3.83	3.67	3.58	3.87	3.86
Bivalent temperature	[°C]	-7				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = -7 °C	[kW]	2.50	5.00	6.80	8.33	10.25
COPd Tj = -7 °C		2.48	2.38	2.27	2.44	2.30
Degradation coefficient Tj = -7°C		0.990	0.995	0.996	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.57	2.91	4.07	5.26	6.28
COPd Tj = 2 °C		3.75	3.49	3.51	3.73	3.84
Degradation coefficient Tj = 2°C		0.976	0.988	0.990	0.990	0.992
Capacity Tj = 7 °C	[kW]	1.21	2.00	2.77	3.37	3.93
COPd Tj = 7 °C		4.94	4.90	4.63	5.09	5.10
Degradation coefficient Tj = 7°C		0.959	0.975	0.980	0.981	0.983
Capacity Tj = 12 °C	[kW]	1.41	1.78	2.54	3.69	3.52
COPd Tj = 12 °C		6.44	6.20	5.65	6.48	6.09
Degradation coefficient Tj = 12°C		0.954	0.965	0.973	0.977	0.978
Capacity Tj = biv	[kW]	2.50	5.00	6.80	8.33	10.25
COPd Tj = biv		2.48	2.38	2.27	2.44	2.30
Degradation coefficient Tj = biv		0.990	0.995	0.996	0.996	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	2.61	4.48	6.38	9.05	9.95
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.18	2.11	1.90	2.14	1.99
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.992	0.995	0.996	0.997	0.997
Climate		**COLDER**				
ηs	%	124	119	119	127	122
Prated	[kW]	4.13	8.26	11.23	13.76	16.93
SCOP		3.17	3.05	3.05	3.25	3.13
Bivalent temperature	[°C]	-7				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = -7 °C	[kW]	2.50	5.00	6.98	8.33	10.25
COPd Tj = -7 °C		2.88	2.71	2.62	2.86	2.69
Degradation coefficient Tj = -7°C		0.989	0.995	0.996	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.51	3.03	4.28	5.15	6.21
COPd Tj = 2 °C		3.77	4.01	3.96	4.14	4.13
Degradation coefficient Tj = 2°C		0.975	0.987	0.989	0.990	0.991
Capacity Tj = 7 °C	[kW]	1.25	1.94	2.72	3.37	3.98
COPd Tj = 7 °C		5.15	5.59	5.11	5.42	5.15
Degradation coefficient Tj = 7°C		0.958	0.971	0.977	0.979	0.983

Capacity Tj = 12 °C	[kW]	1.42	1.76	2.57	3.69	3.58
COPd Tj = 12 °C		7.25	6.93	6.03	7.00	6.22
Degradation coefficient Tj = 12°C		0.948	0.960	0.972	0.975	0.977
Capacity Tj = biv	[kW]	2.50	5.00	6.98	8.33	10.25
COPd Tj = biv		2.88	2.71	2.62	2.86	2.69
Degradation coefficient Tj = biv		0.989	0.995	0.996	0.996	0.997
Capacity Tj = -15 °C	[kW]	2.40	3.40	5.55	7.95	8.99
COPd Tj = -15 °C		2.27	1.81	2.14	1.95	1.87
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	1.87	2.68	3.78	6.11	6.89
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		1.79	1.48	1.59	1.54	1.48
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.990	0.994	0.995	0.997	0.997
Climate		**WARMER**				
ηs	%	168	173	167	180	168
Prated	[kW]	2.00	5.00	8.00	8.33	10.25
SCOP		4.27	4.41	4.24	4.57	4.28
Bivalent temperature	[°C]	2				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = 2°C	[kW]	2.00	5.00	8.00	8.33	10.25
COPd Tj = 2 °C		2.72	2.44	2.25	3.06	2.47
Degradation coefficient Tj = 2°C		0.987	0.995	0.997	0.995	0.997
Capacity Tj = 7 °C	[kW]	1.28	3.20	5.12	5.47	6.56
COPd Tj = 7 °C		3.79	4.08	3.74	3.96	3.80
Degradation coefficient Tj = 7°C		0.970	0.987	0.991	0.991	0.992
Capacity Tj = 12 °C	[kW]	1.28	1.62	2.78	3.51	3.50
COPd Tj = 12 °C		5.47	5.23	5.29	5.60	5.21
Degradation coefficient Tj = 12°C		0.957	0.968	0.977	0.979	0.981
Capacity Tj = biv	[kW]	2.00	5.00	8.00	8.33	10.25
COPd Tj = biv		2.72	2.44	2.25	3.06	2.47
Degradation coefficient Tj = biv		0.987	0.995	0.997	0.995	0.997
Power consumption under different active modes						
Off mode	[W]	9.8	9.8	12	12.8	12.8
Thermostat-off mode	[W]	10.1	10.1	12	13	13
Standby mode	[W]	10.1	10.1	12	13	13
Crankcase heater mode	[W]	0	0	0	0	0
Back-up heater						
Climate		**AVERAGE**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output (Psup)	[kW]	0.13 / 0.22	0.72 / 1.18	0.81 / 1.31	1.19 / 0.37	1.72 / 1.64
Climate		**COLDER**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output	[kW]	2.33 / 2.26	5.32 / 5.58	6.94 / 7.76	9.09 / 7.65	10.64 / 10.04
Climate		**WARMER**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output	[kW]	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Type of energy input		Electric				
For heat pump combination heater						
Declared load profile		XL COMPACT	XL COMPACT	XL COMPACT	XL COMPACT	XL COMPACT
Daily electricity consumption	[kWh]	6.08	6	6.09	6.18	6.18
Annual electricity consumption	[kWh]	1267	1263	1276	1304	1304
Water heating energy efficiency	[%]	132	133	132	129	129
Other items						
Capacity control		Variable				
Outlet temperature capacity control		Variable				
Water flow rate capacity control		Fixed				
Contact details		Ariston Group S. p. A. - V.le Merloni 45 60044 Fabriano (AN) Italy				

EN14825 TECHNICAL DATA - COOLING

	MODEL	UM	NIMBUS 5 M R290				
			30 M	50 M	80 M 80 M-T	120 M 120 M-T	150 M 150 M-T
			EWT 23 / LWT 18				
	Pdesign	[kW]	3	5	7	10.8	12.2
	SEER		6.92	6.9	6.93	6.97	6.82
	etaS,C	[%]	275	274	275	276	270
4	Annual Energy Consumption	[kWh]	331	435	605	930	1074
			EWT 12 / LWT 7				
	Pdesign	[kW]	3	5	7	9.1	11
	SEER	[%]	5.43	5.4	5.33	5.45	5.43
	etaS,C		215	213	211	215	215
4	Annual Energy Consumption	[kWh]	331	557	787	1001	1215

EN16147 - TECHNICAL DATA

	COMPACT-UK				
Tilted height (needed height to bring the IDU from horizontal to vertical position) (m)	2.05 with pallet; 1.95 without pallet				
Storage tank volume (l)	177				
Max. tank temperature (°C)	90				
Max. operation pressure (bar)	6				
Type of corrosion protection (-)	Magnesium anode+pro tech				
Size and type of the tank connections (inch)	Ø1" M / Ø3/4" M				
Heat losses (kWh/24h)	1.74				
Thickness of insulation material (mm)	35				
Type of insulation material (-)	Polyurethane HFO				
Volume of the expansion vessel (l)	8				
Pre-pressure of the expansion vessel (bar)	3.5				
Domestic Hot Water (DHW) Performances - Load profile L (EN 16147)					
OUTDOOR UNIT	**30 M**	**50 M**	**80 M 80 M-T**	**120 M 120 M-T**	**150 M 150 M-T**
DHW set point (°C)	55	55	55	55	55
Heat Pump function mode	Alternate				
Nominal storage capacity (liters)	180				
DHW performance certified with or without electrical resistance	Without electrical resistance				
Heating up time (th)	02:20:00	01:40:00	01:03:00	00:55:00	00:50:00
Stand-by power input (Pes) (W)	36	38	38	38	38
Coefficient of performance (COPDHW)	3.2	3.1	3.1	3.1	3.1
Reference hot water temperature (θWH) (°C)	52.5	52.5	52.5	52.5	52.5
Maximum quantity of usable hot water (VMAX) (l)	233	233	233	233	233
Domestic Hot Water (DHW) Performances - Load profile XL (EN 16147)					
OUTDOOR UNIT	**30 M**	**50 M**	**80 M 80 M-T**	**120 M 120 M-T**	**150 M 150 M-T**
DHW set point (°C)	57	57	56	55	55
Heat Pump function mode	Alternate				
Nominal storage capacity (liters)	180				
DHW performance certified with or without electrical resistance	Without electrical resistance				
Heating up time (th)	02:50:00	02:00:00	01:15:00	00:59:00	00:50:00
Stand-by power input (Pes) (W)	58	48	53	45	45
Coefficient of performance (COPDHW)	3.1	3.15	3.1	3.1	3.1
Reference hot water temperature (θWH) (°C)	52	52.5	53	53	53
Maximum quantity of usable hot water (VMAX) (l)	227	230	233	233	233

The data in the tables below apply to the following products:
NIMBUS 5 PACK M 150L, NIMBUS 5 PACK M 180L, NIMBUS 5 PACK M 210L

PRODUCT FICHE according to regulation (EU) No 811/2013

ARISTON

Heat Pump Model		NIMBUS NET R290							
		PACK							
		30 M	50 M	80 M	80 M-T	120 M	120 M-T	150 M	150 M-T
Medium High Temperature application		x	x	x	x	x	x	x	x
CH -Seasonal Space Heating Energy Efficiency Class		A++	A++	A++	A++	A+++	A+++	A+++	A+++
Rated Heat Output - Average Conditions	kW	2.83	5.65	7.69	7.69	9.42	9.42	11.59	11.59
CH - Annual Energy Consumption	kWh	1615	3339	4656	4656	5065	5065	6243	6243
CH - Seasonal Space Heating Energy Efficiency - Average Conditions	%	142	137	133	133	151	151	150	150
Sound Power Level Indoors (LWA)	dB	45	45	45	45	45	45	45	45
Work only during off-peaks hour		--	--	--	--	--	--	--	--
Precautions		*	*	*	*	*	*	*	*
Rated Heat Output - Colder Conditions	kW	4.13	8.26	11.53	11.53	13.76	13.76	16.93	16.93
Rated Heat Output - Warmer Conditions	kW	2	5	8	8	8.33	8.33	10.25	10.25
CH - Annual energy consumption - Colder Conditions	kWh	3308	6854	9566	9566	10714	10714	13687	13687
CH - Annual energy consumption - Warmer Conditions	kWh	687	1599	2646	2646	2558	2558	3345	3345
CH - Seasonal Space Heating Energy Efficiency - Colder Conditions	%	120	116	116	116	124	124	119	119
CH -Seasonal Space Heating Energy Efficiency - Warmer Conditions	%	153	164	159	159	171	171	161	161
Sound Power Level Outdoors (LWA)	dB	52	54	56	56	57	57	57	57
Indoor Unit		NIMBUS 5 PP M 150L							
DHW - Declared Tapping Profile		L							
DHW - Annual Electricity Consumption - Average Conditions	kWh	1267	1263	1276	1276	-	-	-	-
DHW -Water heating Energy Efficiency -Average Conditions	%	132	133	132	132	-	-	-	-
Indoor Unit		NIMBUS 5 PP M 180L							
DHW - Declared Tapping Profile		XL							
DHW - Annual Electricity Consumption - Average Conditions	kWh	1267	1263	1276	1276	1304	1304	1304	1304
DHW -Water heating Energy Efficiency -Average Conditions	%	132	133	132	132	129	129	129	129
Indoor Unit		NIMBUS 5 PP M 210L							
DHW - Declared Tapping Profile		XL							
DHW - Annual Electricity Consumption - Average Conditions	kWh	-	-	1276	1276	1304	1304	1304	1304
DHW -Water heating Energy Efficiency -Average Conditions	%	-	-	132	132	129	129	129	129

(*) Refer to installation manual

(ERP) TECHNICAL DATA

MODEL	UM	NIMBUS 5 M R290				
		30 M	50 M	80 M 80 M-T	120 M 120 M-T	150 M 150 M-T
Air to water heat pump				YES		
Water-to-water heat pump				NO		
Brine-to-water heat pump				NO		
Low temperature heat pump				NO		
With supplementary heater				NO		
Rated heat output	[kW]	2.83	5.65	7.69	9.42	11.59
Annual energy consumption	[kWh]	1625	3339	4656	5065	6243
Seasonal space heating energy efficiency	[%]	142	137	133	151	150
Sound power level, outdoor	[dB]	52	54	56	57	57
Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj, LWT 35						
Climate				**AVERAGE**		
ηs	%	181	180	175	182	175
Prated	[kW]	2.83	5.65	7.91	11	12.5
SCOP		4.59	4.57	4.46	4.62	4.46
Bivalent temperature	[°C]			-7		
Operating limit temperature	[°C]			-25		
Heating water operation limit temperature	[°C]			75		
Capacity Tj = -7 °C	[kW]	2.50	5	7	9.73	11.06
COPd Tj = -7 °C		3.35	3.02	2.99	3.16	2.96
Degradation coefficient Tj = -7°C		0.986	0.994	0.995	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.52	3.05	4.3	6.10	6.79
COPd Tj = 2 °C		4.58	4.39	4.4	4.49	4.31
Degradation coefficient Tj = 2°C		0.968	0.985	0.987	0.990	0.991
Capacity Tj = 7 °C	[kW]	1.16	2.13	2.76	4.00	4.36
COPd Tj = 7 °C		5.68	6.27	5.7	5.85	5.84
Degradation coefficient Tj = 7°C		0.948	0.970	0.975	0.980	0.982
Capacity Tj = 12 °C	[kW]	1.42	1.86	2.67	3.75	3.56
COPd Tj = 12 °C		8.35	7.72	7.21	7.65	7.33
Degradation coefficient Tj = 12°C		0.941	0.959	0.968	0.973	0.973
Capacity Tj = biv	[kW]	2.50	5	7	9.73	11.06
COPd Tj = biv		3.35	3.02	2.99	3.16	2.96
Degradation coefficient Tj = biv		0.986	0.994	0.995	0.996	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	2.6	4.93	7.11	9.81	10.78
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.92	2.78	2.51	2.87	2.67
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.990	0.994	0.996	0.996	0.997
Climate				**COLDER**		
ηs	%	140	139	136	146	140
Prated	[kW]	4.13	8.26	11.57	16.08	18.27
SCOP		3.59	3.56	3.52	3.73	3.58
Bivalent temperature	[°C]			-7		
Operating limit temperature	[°C]			-25		
Heating water operation limit temperature	[°C]			75		
Capacity Tj = -7 °C	[kW]	2.50	5.00	7.00	9.73	11.06
COPd Tj = -7 °C		3.63	3.24	3.20	3.39	3.21
Degradation coefficient Tj = -7°C		0.985	0.994	0.995	0.996	0.996
Capacity Tj = 2 °C	[kW]	1.51	3.04	4.38	5.71	6.65
COPd Tj = 2 °C		4.22	4.72	4.62	4.85	4.76
Degradation coefficient Tj = 2°C		0.970	0.983	0.987	0.988	0.990
Capacity Tj = 7 °C	[kW]	1.28	1.93	2.97	3.79	4.25
COPd Tj = 7 °C		6.10	6.53	6.06	6.28	5.85
Degradation coefficient Tj = 7°C		0.949	0.964	0.974	0.977	0.981
Capacity Tj = 12 °C	[kW]	1.33	1.76	2.67	3.85	3.65
COPd Tj = 12 °C		7.93	8.14	7.19	8.34	7.16
Degradation coefficient Tj = 12°C		0.940	0.953	0.968	0.972	0.975
Capacity Tj = biv	[kW]	2.50	5.00	7.00	9.73	11.06
COPd Tj = biv		3.63	3.24	3.20	3.39	3.21
Degradation coefficient Tj = biv		0.985	0.994	0.995	0.996	0.996
Capacity Tj = -15 °C	[kW]	2.29	3.90	5.80	8.72	9.60
COPd Tj = -15 °C		2.52	2.33	2.34	2.49	2.31
Degradation coefficient Tj = -15°C		0.989	0.994	0.995	0.996	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	1.80	2.94	4.63	6.98	7.63

COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.04	1.86	1.97	2.09	1.94
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.989	0.994	0.995	0.996	0.997
Climate		**WARMER**				
ηs	%	202	223	216	222	209
Prated	[kW]	2.00	5.00	8.00	9.73	11.06
SCOP		5.13	5.66	5.47	5.63	5.30
Bivalent temperature	[°C]	2				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = 2 °C	[kW]	2.00	5.00	8.00	9.73	11.06
COPd Tj = 2 °C		3.94	3.31	3.09	3.44	3.16
Degradation coefficient Tj = 2°C		0.980	0.993	0.995	0.995	0.996
Capacity Tj = 7 °C	[kW]	1.27	3.19	5.16	6.29	7.03
COPd Tj = 7 °C		5.13	5.45	5.03	5.18	4.93
Degradation coefficient Tj = 7°C		0.957	0.982	0.988	0.989	0.990
Capacity Tj = 12 °C	[kW]	1.31	1.65	2.94	3.47	3.47
COPd Tj = 12 °C		7.05	6.97	6.90	6.97	6.41
Degradation coefficient Tj = 12°C		0.946	0.957	0.972	0.974	0.976
Capacity Tj = biv	[kW]	2.00	5.00	8.00	9.73	11.06
COPd Tj = biv		4.15	3.48	3.25	3.62	3.32
Degradation coefficient Tj = biv		0.980	0.993	0.995	0.995	0.996
Declared capacity and coefficient of performance for heating at indoor conditions 20°C and outdoor temperature Tj, LWT 55						
Climate		**AVERAGE**				
ηs	%	142	137	133	151	150
Prated	[kW]	2.83	5.65	7.69	9.42	11.59
SCOP		3.62	3.50	3.41	3.84	3.83
Bivalent temperature	[°C]	-7				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = -7 °C	[kW]	2.50	5.00	6.80	8.33	10.25
COPd Tj = -7 °C		2.48	2.38	2.27	2.44	2.30
Degradation coefficient Tj = -7°C		0.990	0.995	0.996	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.57	2.91	4.07	5.26	6.28
COPd Tj = 2 °C		3.56	3.31	3.34	3.73	3.84
Degradation coefficient Tj = 2°C		0.976	0.988	0.990	0.990	0.992
Capacity Tj = 7 °C	[kW]	1.21	2.00	2.77	3.37	3.93
COPd Tj = 7 °C		4.69	4.66	4.39	5.09	5.10
Degradation coefficient Tj = 7°C		0.959	0.975	0.980	0.981	0.983
Capacity Tj = 12 °C	[kW]	1.41	1.78	2.54	3.69	3.52
COPd Tj = 12 °C		6.44	6.20	5.65	6.48	6.09
Degradation coefficient Tj = 12°C		0.954	0.965	0.973	0.977	0.978
Capacity Tj = biv	[kW]	2.50	5.00	6.80	8.33	10.25
COPd Tj = biv		2.48	2.38	2.27	2.44	2.30
Degradation coefficient Tj = biv		0.990	0.995	0.996	0.996	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	2.61	4.48	6.38	9.05	9.95
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		2.18	2.11	1.90	2.14	1.99
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.992	0.995	0.996	0.997	0.997
Climate		**COLDER**				
ηs	%	120	116	116	124	119
Prated	[kW]	4.13	8.26	11.23	13.76	16.93
SCOP		3.08	2.97	2.97	3.17	3.05
Bivalent temperature	[°C]	-7				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = -7 °C	[kW]	2.50	5.00	6.98	8.33	10.25
COPd Tj = -7 °C		2.88	2.71	2.62	2.86	2.69
Degradation coefficient Tj = -7°C		0.989	0.995	0.996	0.996	0.997
Capacity Tj = 2 °C	[kW]	1.51	3.03	4.28	5.15	6.21
COPd Tj = 2 °C		3.58	3.81	3.76	3.93	3.93
Degradation coefficient Tj = 2°C		0.975	0.987	0.989	0.990	0.991
Capacity Tj = 7 °C	[kW]	1.25	1.94	2.72	3.37	3.98
COPd Tj = 7 °C		4.89	5.31	4.84	5.15	4.89
Degradation coefficient Tj = 7°C		0.958	0.971	0.977	0.979	0.983
Capacity Tj = 12 °C	[kW]	1.42	1.76	2.57	3.69	3.58
COPd Tj = 12 °C		7.25	6.93	6.03	7.00	6.22
Degradation coefficient Tj = 12°C		0.948	0.960	0.972	0.975	0.977
Capacity Tj = biv	[kW]	2.50	5.00	6.98	8.33	10.25

COPd Tj = biv		2.88	2.71	2.62	2.86	2.69
Degradation coefficient Tj = biv		0.989	0.995	0.996	0.996	0.997
Capacity Tj = -15 °C	[kW]	2.40	3.40	5.55	7.95	8.99
COPd Tj = -15 °C		2.27	1.81	2.14	1.95	1.87
Degradation coefficient Tj = -15°C		0.990	0.995	0.995	0.997	0.997
Capacity Tj = Operating limit temperature or Capacity Tj=Tdesignh if TOL<Tdesignh	[kW]	1.87	2.68	3.78	6.11	6.89
COP Tj = Operating limit temperature or COP Tj=Tdesignh if TOL<Tdesignh		1.79	1.48	1.59	1.54	1.48
Degradation coefficient Tj = Operating limit temperature or Degradation coefficient Tj=Tdesignh if TOL<Tdesignh		0.990	0.994	0.995	0.997	0.997
Climate		**WARMER**				
ηs	%	153	164	159	171	161
Prated	[kW]	2.00	5.00	8.00	8.33	10.25
SCOP		3.89	4.18	4.04	4.35	4.09
Bivalent temperature	[°C]	2				
Operating limit temperature	[°C]	-25				
Heating water operation limit temperature	[°C]	75				
Capacity Tj = 2 °C	[kW]	2.00	5.00	8.00	8.33	10.25
COPd Tj = 2 °C		2.58	2.32	2.14	2.91	2.35
Degradation coefficient Tj = 2°C		0.987	0.995	0.997	0.995	0.997
Capacity Tj = 7 °C	[kW]	1.28	3.20	5.12	5.47	6.56
COPd Tj = 7 °C		3.60	3.88	3.55	3.76	3.61
Degradation coefficient Tj = 7°C		0.970	0.987	0.991	0.991	0.992
Capacity Tj = 12 °C	[kW]	1.28	1.62	2.78	3.51	3.50
COPd Tj = 12 °C		5.47	5.23	5.29	5.60	5.21
Degradation coefficient Tj = 12°C		0.957	0.968	0.977	0.979	0.981
Capacity Tj = biv	[kW]	2.00	5.00	8.00	8.33	10.25
COPd Tj = biv		2.72	2.44	2.25	3.06	2.47
Degradation coefficient Tj = biv		0.987	0.995	0.997	0.995	0.997
Power consumption under different active modes						
Off mode	[W]	9.8	9.8	12	12.8	12.8
Thermostat-off mode	[W]	10.1	10.1	12	13	13
Standby mode	[W]	10.1	10.1	12	13	13
Crankcase heater mode	[W]	0	0	0	0	0
Back-up heater						
Climate		**AVERAGE**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output (Psup)	[kW]	0.13 / 0.22	0.72 / 1.18	0.81 / 1.31	1.19 / 0.37	1.72 / 1.64
Climate		**COLDER**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output (Psup)	[kW]	2.33 / 2.26	5.32 / 5.58	6.94 / 7.76	9.09 / 7.65	10.64 / 10.04
Climate		**WARMER**				
Indoor conditions 20°C and outdoor temperature Tj		35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C	35°C / 55°C
Rated heat output (Psup)	[kW]	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Type of energy input		Electric				
For heat pump combination heater						
Outdoor unit		**NIMBUS EXT R290**				
		30 M	**50 M**	**80 M 80 M-T**	**120 M 120 M-T**	**150 M 150 M-T**
Indoor unit		**NIMBUS PP M 150L**	**NIMBUS PP M 150L**	**NIMBUS PP M 150L**		
Declared load profile		L	L	L	-	-
Daily electricity consumption	[kWh]	3.90	3.70	3.67	-	-
Annual electricity consumption	[kWh]	810.23	764.82	735.22	-	-
Water heating energy efficiency	[%]	127	134	140	-	-
Indoor unit		**NIMBUS PP M 180L**	**NIMBUS PP M 180L**	**NIMBUS PP M 180L**	**NIMBUS PP M 180L**	**NIMBUS PP M 180L**
Declared load profile		XL	XL	XL	XL	XL
Daily electricity consumption	[kWh]	6.12	6.06	5.85	6.31	6.35
Annual electricity consumption	[kWh]	1296	1281	1207	1353	1363
Water heating energy efficiency	[%]	129	131	139	124	123
Indoor unit		-	-	**NIMBUS PP M 210L**	**NIMBUS PP M 210L**	**NIMBUS PP M 210L**
Declared load profile		-	-	XL	XL	XL
Daily electricity consumption	[kWh]	-	-	5.37	6.23	6.32
Annual electricity consumption	[kWh]	-	-	1106	1336	1357
Water heating energy efficiency	[%]	-	-	152	126	124
Other items						
Capacity control		Variable				
Outlet temperature capacity control		Variable				
Water flow rate capacity control		Fixed				
Contact details		Ariston Group S. p. A. - V.le Merloni 45 60044 Fabriano (AN) Italy				

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			PP M 150L	PP M 180L	PP M 210L
Tilted height (needed height to bring the IDU from horizontal to vertical position) (m)			-		
Storage tank volume (l)			144	173	210
Max. tank temperature (°C)			90	90	90
Max. operation pressure (bar)			6	6	6
Type of corrosion protection (-)			-	-	-
Size and type of the tank connections (mm)			Ø22mm / Ø22mm compression fitting		
Heat losses (kWh/24h)			1.68	1.72	1.78
Thickness of insulation material (mm)			-	-	-
Type of insulation material (-)			-	-	-
Volume of the expansion vessel (l)			12	18	24
Pre-pressure of the expansion vessel (bar)			3.5	3.5	3.5
Domestic Hot Water (DHW) Performances					
DHW set point (°C)			57	57	54
Heat Pump function mode			Alternate		
Nominal storage capacity (liters)			150		
DHW performance certified with or without electrical resistance			Without electrical resistance		
INDOOR UNIT	**PP M 150L**				
OUTDOOR UNIT	**30 M**	**50 M**	**80 M 80 M-T**	-	-
Load profile (EN 16147)	L	L	L	-	-
Heating up time (h)	02:27:44	01:49:12	01:17:56	-	-
Stand-by power input (Pes) (W)	39.0	40.5	60.1	-	-
Coefficient of performance (COPDHW)	3.0	3.1	3.2	-	-
Reference hot water temperature (θWH) (°C)	49.8	50.0	51.4	-	-
Maximum quantity of usable hot water (VMAX) (l)	181.7	182.5	195.2	-	-
INDOOR UNIT	**PP M 180L**				
OUTDOOR UNIT	**30 M**	**50 M**	**80 M 80 M-T**	**120 M 120 M-T**	**150 M 150 M-T**
Load profile (EN 16147)	XL	XL	XL	XL	XL
Heating up time (h)	02:47:49	02:03:58	01:27:03	01:13:15	01:08:51
Stand-by power input (Pes) (W)	42.0	43.8	65.8	28.5	28.6
Coefficient of performance (COPDHW)	3.11	3.15	3.26	3.02	3.00
Reference hot water temperature (θWH) (°C)	49.6	49.7	51.1	47.4	47.4
Maximum quantity of usable hot water (VMAX) (l)	219.5	220.7	236.4	201.5	202.1
INDOOR UNIT	**PP M 210L**				
OUTDOOR UNIT	-	-	**80 M 80 M-T**	**120 M 120 M-T**	**150 M 150 M-T**
Load profile (EN 16147)	-	-	XL	XL	XL
Heating up time (h)	-	-	01:35:15	01:19:37	01:14:13
Stand-by power input (Pes) (W)	-	-	62.8	27.9	27.9
Coefficient of performance (COPDHW)	-	-	3.5	3.1	3.0
Reference hot water temperature (θWH) (°C)	-	-	51.5	47.7	47.8
Maximum quantity of usable hot water (VMAX) (l)	-	-	274.3	235.5	236.2

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