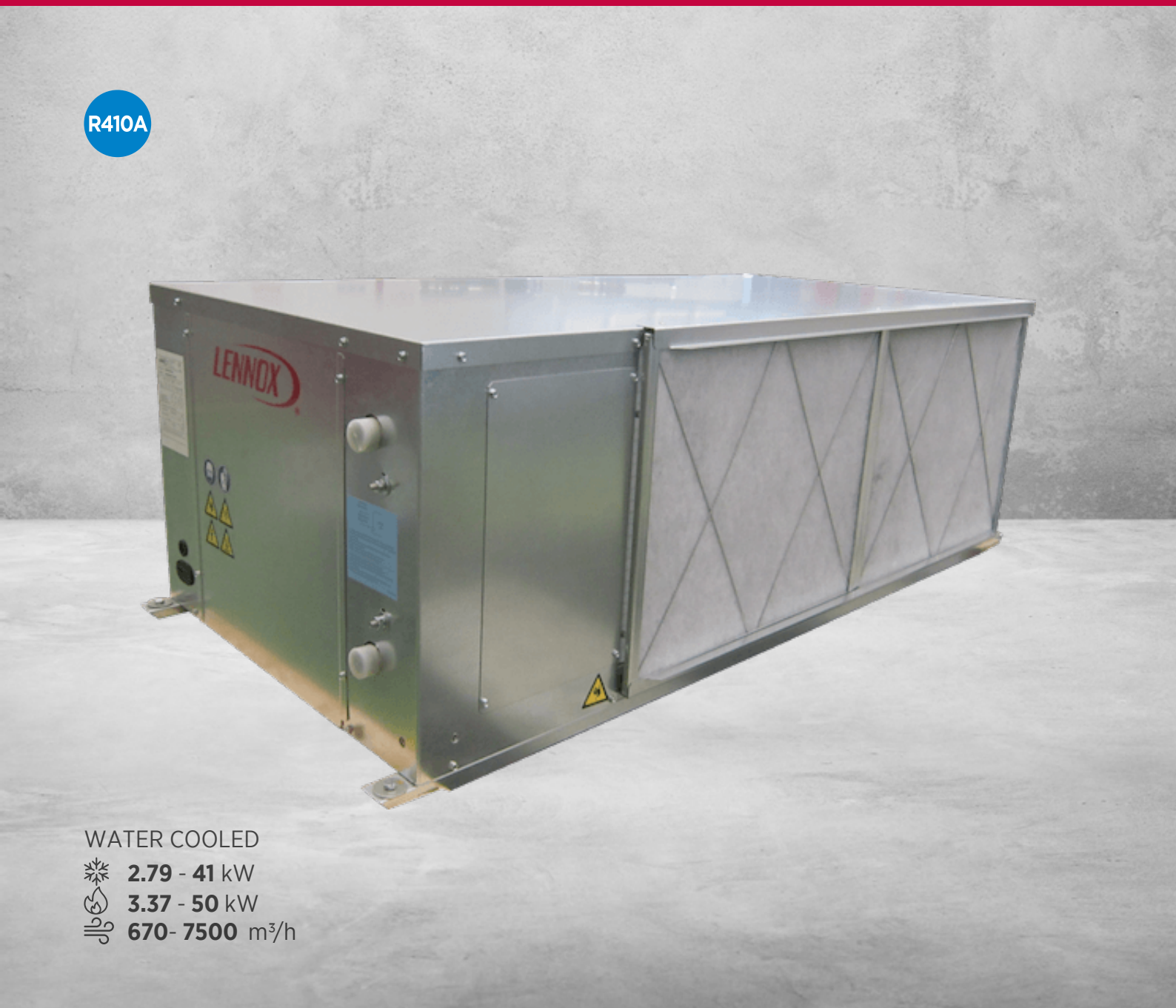
AQUALEAN

Horizontal water-cooled packaged air conditioners

R410A



WATER COOLED

2.79 - **41** kW

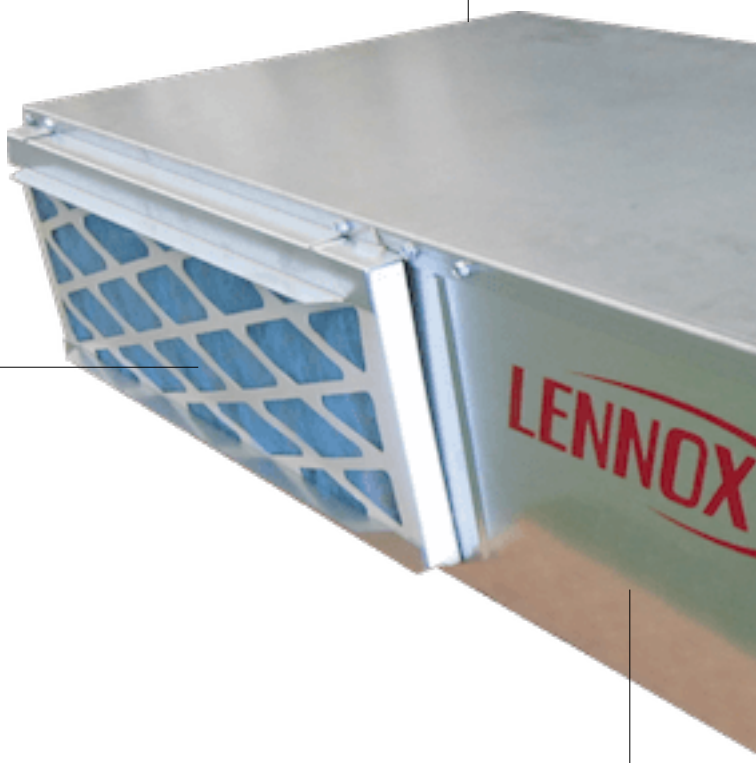
3.37 - **50** kW

670- **7500** m³/h

Compact solution with reduced height for ceiling installation.
Each unit responds to heating or cooling loads of different individual zones, improving overall **comfort**.
Water source heat pump able to reach very **high efficiency** in cooling and heating modes.
Variable speed direct transmission ventilation to **save energy** and lower operating costs.

AUXILIARY HEATING DEVICES

Electric heater as option on units 007 to 040.
Available in three different sizes:
- Standard capacity
- Medium capacity
- High capacity (only available on models 012 to 040).



AIR TREATMENT

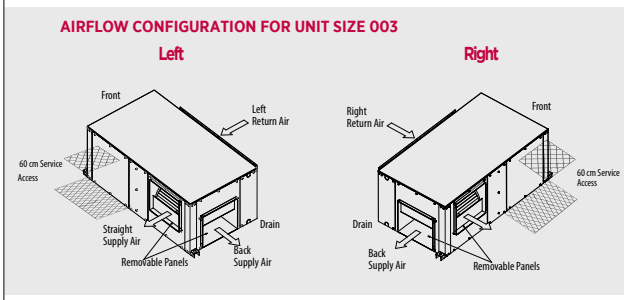
EC motor fans ensuring a precise temperature for better comfort and energy savings.
Analogue filter detection to inform when the filters must be changed.
IAQ kits for improved indoor air quality inside buildings:
- G2 (standard) for all models
- M5 (ePM10) + F7 (ePM1) available as an option on models 007 to 040.

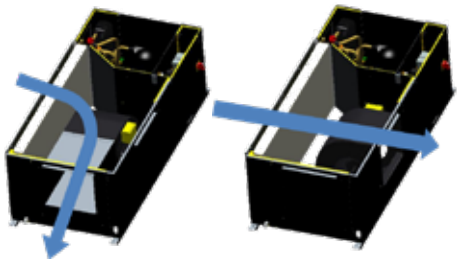
THERMODYNAMIC SYSTEM

Rotary compressor on models 003 only.
Scroll compressor on models 007 to 020.
Tandem scroll compressors on models 007 to 040.
Variable refrigerant control with electronic expansion valve.
Variable speed fans with optimized blade geometry to improve efficiency and reduce noise level.
Large surface exchangers for highly efficient heat transfer.

AIRFLOW

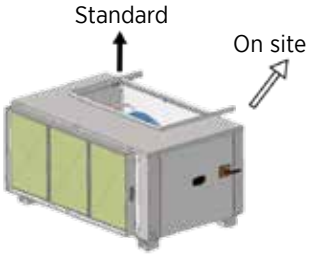
Horizontal return air on all models.
Models 007 to 020: In-line or perpendicular supply air configuration (both horizontal).
Models 025 to 040: horizontal or vertical supply air configuration.





UNITS 007 to 020
Standard

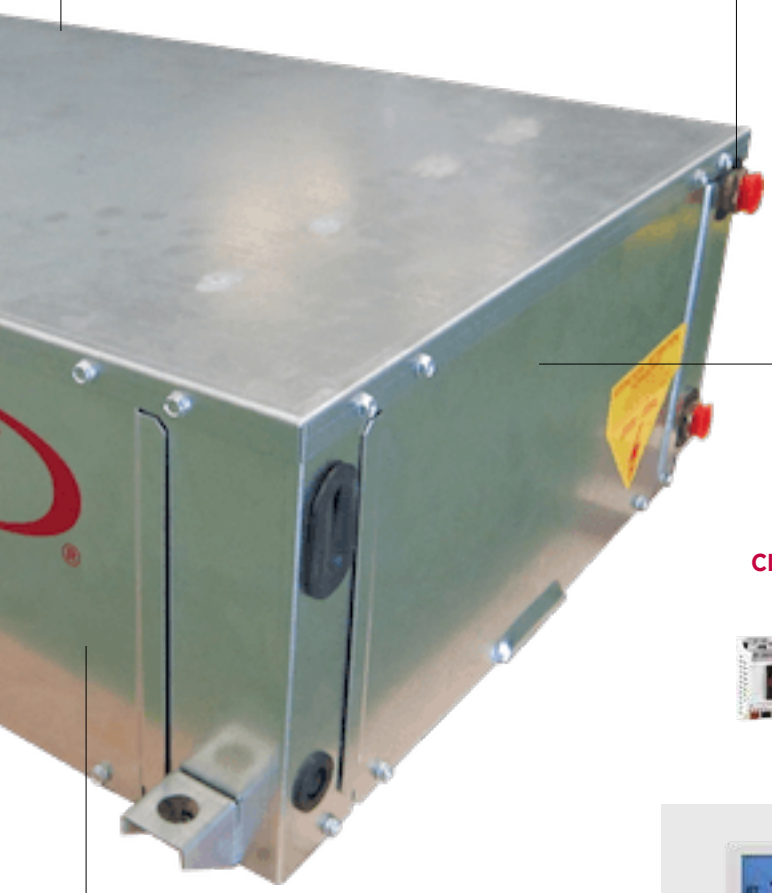
UNITS 007 to 020
On site



UNITS 025 to 040

WATER SYSTEM

Coaxial heat exchanger on units size 003.
Brazed plate heat exchanger made of stainless steel on units 007 to 040.
Water threaded connections F-G on units 007 to 020.
Victaulic connections on units 025 to 040.



CONTROL

Climatic60 controller and intelligent control parameters optimising part-load efficiency.
Integrated communication solutions offering flexibility (master/slave, Modbus, BACnet).
Several display solutions for different access levels.

CLIMATIC60

DS
Service display

DM
Multi-unit display

DC
Comfort display

Comfort display with integrated ambient thermostat **(only for units size 003)**

Cool/Heat/On/Off/Fan & Auto selection
Supply / Return air temperature data
Condenser Inlet / Outlet Water temperature data
Weekly program
Monitoring and recording of recent faults

CASING & DESIGN

Compact self-supporting casing with very low height to reduce dropped ceilings dimension.
Casing built with galvanized steel.
Thermal-acoustic insulation is installed in the compressor area to reduce noise level:
- Units 007 to 020: 25mm A2, s1, d0 (M0) in the air treatment area.
- Units 007 to 040: 10mm (M1) insulation in air section.

AW(A) C(B) 007(C) S(D) N(E) M(F) 2(G) M(H) T(I)

(A) **AW** = AQUALEAN
(B) **C** = Cooling only - **H** = Heat pump
(C) Approximate cooling capacity in kW
(D) **S** = 1 circuit
(E) ---
(F) **M** = R-410A
(G) Revision number
(H) **T** = 230V/1/50Hz - **M** = 400V/1/50Hz
(I) Water temperature version

Water cooled version

Cooling only units

AQUALEAN - AWC		007	008	010	012	015	018	020
Nominal thermal performances - Cooling mode								
Cooling capacity (1)	kW	6,8	8,0	10,2	11,2	14,5	17,0	19,0
Total Power Input	kW	1,7	2,1	2,6	2,8	3,4	4,2	4,8
EER net (1)		4,00	3,81	3,92	4,00	4,26	4,05	3,96
Nominal thermal performances - Heating mode								
Heating capacity (2)	kW	-	-	-	-	-	-	-
Total Power Input	kW	-	-	-	-	-	-	-
COP net (2)		-	-	-	-	-	-	-
Seasonal efficiencies - Cooling mode								
Seasonal Energy Efficiency Ratio - **SEER** (3)		-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,c** (4)	%	160,50	152,50	150,70	150,40	168,10	159,70	154,30
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-
Seasonal efficiencies - Heating mode								
Seasonal Coefficient of Performance - **SCOP** (5)		-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,h** (6)	%	-	-	-	-	-	-	-
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-
Auxiliary heating								
Gas heating capacity	kW	-	-	-	-	-	-	-
Electric heater capacity - Standard / High		2 / 5	2 / 5	3 / 9	3 / 9	3 / 9	5 / 12	5 / 12
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-	-
Hot water coil capacity Air inlet 10°C/Water		-	-	-	-	-	-	-
Ventilation data								
Minimum airflow rate	m^3/h	1010	1250	1550	1620	1850	2060	2450
Nominal airflow rate		1250	1500	1900	2000	2450	2800	3100
Maximum airflow rate		1430	1620	2100	2200	2610	3100	3500
Acoustic data (7)								
Sound pressure level - Low speed	dB(A)	49	50	48	49	49	46	47
Sound pressure level - High speed		51	52	51	51	53	51	54
Electrical data								
Maximum power	kW	2,7	3,3	4,1	4,9	5,7	6,3	7,6
Maximum current	A	14,4	17,6	24,6	28,6	12,9	14,7	17,9
Starting current	A	61,6	68,6	100,6	130,6	54,1	66,9	77,9
Short circuit current	kA	10	10	10	10	10	10	10
Water cooled condenser								
Nominal water flow rate	l/h	1450	1730	2190	2410	3070	3640	4090
Water pressure drop	kPa	25	30	40	48	40	45	55
Refrigeration circuit								
Number of circuits		1	1	1	1	1	1	1
Number of compressors		1	1	1	1	1	1	1
Refrigerant load	kg	1,3	1,3	1,9	1,9	2,4	2,9	2,9

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Sound pressure level has been tested at a distance of 2m from the unit, with duct in aspiration and air discharge, normal absorption in accordance with room size and unit capacity.

AW(A) C(B) 007(C) S(D) N(E) M(F) 1(G) M(H) T(I)

(A) **AW** = AQUALEAN
(B) **C** = Cooling only - **H** = Heat pump
(C) Approximate cooling capacity in kW
(D) **S** = 1 circuit
(E) ---
(F) **M** = R-410A
(G) Revision number
(H) **T** = 230V/1/50Hz - **M** = 400V/1/50Hz
(I) Water temperature version

Water cooled version

Heat pump units

AQUALEAN - AWH		007	008	010	012	015	018	020	025	030	040
Nominal thermal performances - Cooling mode											
Cooling capacity (1)	kW	6,8	8,0	10,2	11,2	14,5	17,0	19,0	24,8	30,8	41,0
Total Power Input	kW	1,7	2,1	2,6	2,8	3,4	4,2	4,8	5,20	6,70	9,50
EER net (1)		4,00	3,81	3,92	4,00	4,26	4,05	3,96	4,77	4,60	4,32
Nominal thermal performances - Heating mode											
Heating capacity (2)	kW	8,0	9,5	12,3	13,5	17,0	19,5	22,0	28,3	36,7	49,7
Total Power Input	kW	2,1	2,5	3,2	3,6	4,6	5,1	6,0	6,50	7,80	10,90
COP net (2)		3,81	3,80	3,84	3,75	3,70	3,82	3,67	4,35	4,71	4,56
Seasonal efficiencies - Cooling mode											
Seasonal Energy Efficiency Ratio - **SEER** (3)		-	-	-	-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,c** (4)	%	160,50	152,50	150,70	150,40	168,10	159,70	154,30	259	253	225
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-	-	-	-
Seasonal efficiencies - Heating mode											
Seasonal Coefficient of Performance - **SCOP** (5)		-	-	-	-	-	-	-	-	-	-
Seasonal energy efficiency - **ηs,h** (6)	%	103,30	102,50	108,80	105,30	106,30	105,60	99,00	158	166	161
Eurovent energy efficiency class - Part load operation		-	-	-	-	-	-	-	-	-	-
Auxiliary heating											
Gas heating capacity	kW	-	-	-	-	-	-	-	-	-	-
Electric heater capacity - Standard / High		2 / 5	2 / 5	3 / 9	3 / 9	3 / 9	5 / 12	5 / 12	10 / 20	10 / 20	10 / 20
Electric pre-heater capacity - Standard / High		-	-	-	-	-	-	-	-	-	-
Hot water coil capacity Air inlet 10°C/Water		-	-	-	-	-	-	-	-	-	-
Ventilation data											
Minimum airflow rate	m^3/h	1010	1250	1550	1620	1850	2060	2450	1800	2800	7500
Nominal airflow rate		1250	1500	1900	2000	2450	2800	3100	3700	5800	7500
Maximum airflow rate		1430	1620	2100	2200	2610	3100	3500	4500	6200	3700
Acoustic data (7)											
Sound pressure level - Low speed	dB(A)	49	50	48	49	49	46	47	50	52	56
Sound pressure level - High speed		51	52	51	51	53	51	54	56	61	63
Electrical data											
Maximum power	kW	2,7	3,3	4,1	4,9	5,7	6,3	7,6	11,5	13,9	17,4
Maximum current	A	14,4	17,6	24,6	28,6	12,9	14,7	17,9	20,2	24,8	34,3
Starting current	A	61,6	68,6	100,6	130,6	54,1	66,9	77,9	55,2	66,0	94,3
Short circuit current	kA	10	10	10	10	10	10	10	10	10	10
Water cooled condenser											
Nominal water flow rate	l/h	1450	1730	2190	2410	3070	3640	4090	4970	6200	8300
Water pressure drop	kPa	25	30	40	48	40	45	55	32	32	39
Refrigeration circuit											
Number of circuits		1	1	1	1	1	1	1	1	1	1
Number of compressors		1	1	1	1	1	1	1	1	1	1
Refrigerant load	kg	1,3	1,3	1,9	1,9	2,4	2,9	2,9	5,2	5,2	9,0

(1) **Cooling mode :** According to EN14511 nominal conditions - Outdoor temperature 35°C DB - Indoor temperature 27°C DB / 19°C WB
(2) **Heating mode :** According to EN14511 nominal conditions - Outdoor temperature 7°C DB / 6°C WB - Indoor temperature 20°C DB
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(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.
(7) Sound pressure level has been tested at a distance of 2m from the unit, with duct in aspiration and air discharge, normal absorption in accordance with room size and unit capacity.

AWHP(A) 003(B) M(C) A(D) 1(E) 0(F) S(G) L(H) B(I)

(A) **AW** = AQUALEAN Reversible water source heat pump
(B) Unit model
(C) BMS : **M** = Modbus - **B** = Bacnet
(D) Revision number
(E) Power supply : **1** = Single-Phase - **3** = Three-Phase
(F) Electric Heater : **0** = No heater - **1** = Preheater - **2** = Post Heater
(G) Fan type : **S** = Standard Fan - **C** = Ec fan
(H) Return air direction : **L** = Left - **R** = Right
(I) Air discharge direction : **B** = Back - **S** = Straight

Water cooled version — Reversible units

AQUALEAN - AWHP		003
Nominal thermal performances - Cooling mode		
Cooling capacity	kW	2,79
Total Power Input	kW	0,86
EER net		3,24
Nominal thermal performances - Heating mode		
Heating capacity	kW	3,37
Total Power Input	kW	0,89
COP net		3,78
Seasonal efficiencies - Cooling mode		
Seasonal Energy Efficiency Ratio - **SEER** (3)		3,07
Seasonal energy efficiency - **ηs,c** (4)	%	114,89
Seasonal efficiencies - Heating mode		
Seasonal Coefficient of Performance - **SCOP** (5)		3,31
Seasonal energy efficiency - **ηs,h** (6)	%	124,6
Ventilation data		
Nominal airflow rate	m3/h	670
External static pressure	Pa	128
Electrical data		
Power Supply Info	V/Ph/Hz	220 - 240/1/50/Neutral
Compressor		
Compressor Type		Rotary
Refrigerant		R410A
Total Refrigerant Charge	kg	0,8
Water cooled condenser		
Nominal water flow rate	l/s	0,17
Water side pressure drop	kPa	< 50
Water connection diameter	inch	1/2"
Dimensions and weight		
Lenght (A)	mm	945
Width (B)	mm	560
Height (C)	mm	377
Weight	kg	61

Entering air conditions of Cooling 27.0°C DB/19°C WB, and Heating 20.0°C DB/15°C WB entering air temperature.
(3) SEER in accordance with standard EN14825.
(4) Space cooling energy efficiency following Ecodesign regulation EU 2016/2281
(5) SCOP in accordance with standard EN 14825 (average climate conditions).
(6) Space heating energy efficiency following Ecodesign regulation EU 2016/2281.

Water cooled version

Cooling only units

AQUALEAN - AWC		07	08	10	12	15	18	20
A	mm	886	886	1180	1180	1180	1600	1600
B		492	492	623	623	623	703	703
C		441	441	491	491	491	531	531
Weight of standard units								
Basic unit	kg	69	70	109	111	113	148	148

Water cooled version

Heat pump units

AQUALEAN - AWH		07	08	10	12	15	18	20	25	30	40
A	mm	886	886	1180	1180	1180	1600	1600	2049	2049	2049
B		492	492	623	623	623	703	703	895	895	895
C		441	441	491	491	491	531	531	770	770	770
Weight of standard units											
Basic unit	kg	71	72	111	113	116	151	151	370	375	380