

Dual Clima HT Pro



Dual Clima HT Pro

iConnect 



MUSA
K N I K

Dual Clima HT Pro

70° domestic hot water

Same water production, less space

Anti-legionella production with no electric heaters

Up to

70%

Money
savings

75° C

No need to modify
the installation

ECO

Emission
reduction

**Safe and
easy**

Installation and
maintenance



Dual Clima HT Pro RANGE

Model	One-phase	Three-phase
Dual Clima 6HT	■	
Dual Clima 9HT	■	
Dual Clima 12HT	■	■
Dual Clima 16HT	■	■
Dual Clima 19HT	■	■
Dual Clima 22HTT		■

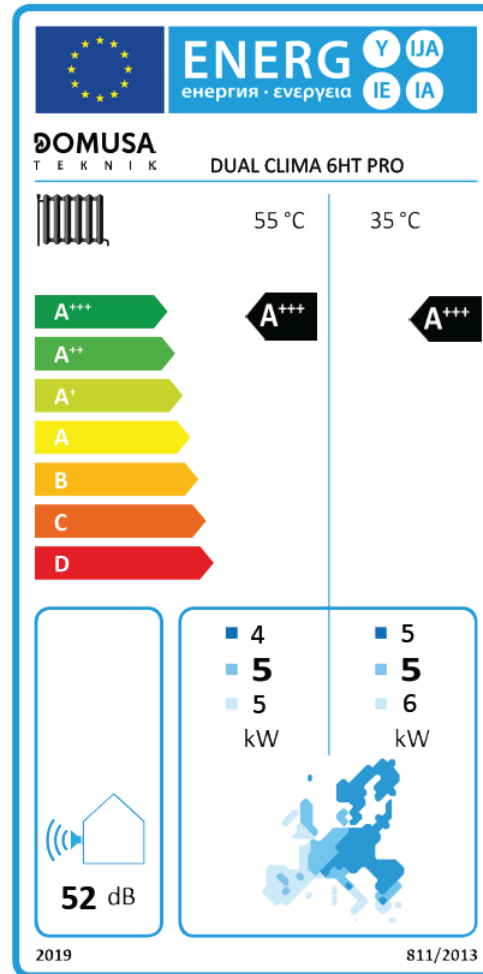


TECHNICAL DATA DUAL CLIMA HT

		DUAL CLIMA 6HT PRO	DUAL CLIMA 9HT PRO	DUAL CLIMA 12HT PRO	DUAL CLIMA 16HT PRO	DUAL CLIMA 19HT PRO
Type	-	Air/water				
Rated heating capacity	kW	6,19	9,4	12,60	16,84	19,52
Rated heating consumption	kW	1,285	1,981	2,72	3,62	4,302
Rated heating current	A	5,58	8,61	11,82	15,73	18,7
COP (Air 7°C, Water 35°C)	-	4,81	4,74	4,63	4,65	4,54
Rated cooling capacity	kW	6,23	9,12	11,8	15,09	18,62
Rated cooling consumption	kW	1,125	1,774	2,612	3,586	4,432
Rated cooling current	A	4,89	7,71	11,35	15,59	19,26
EER (Air 35°C, Water 18°C)	-	5,54	5,14	4,52	4,21	4,20
Maximum consumption	kW	2,76	3,15	3,75	6,21	7,00
Maximum current	A	12,0	13,7	17,0	27,0	30,4
Electrical supply	-	230 V~ / 50 Hz				
Max. working pressure (water circuit)	MPa (bar)	0,3 (3)				
Max. water temperature	°C	75				
Nominal water flow	m³/h	1,10	1,57	2,10	2,75	3,27
Max. working pressure (refrigerant circuit)	MPa	3,2				
Min. working pressure (refrigerant circuit)	MPa	0,03				
Refrigerant	-	R290				
Refrigerant amount	Kg	0,8	0,85	1,2	1,4	1,9
Protection degree	-	IPX4				
Working temperature range (Heating)	°C	-25/45				
Working temperature range (cooling)	°C	10/45				
Sound pressure level (1m)	dB(A)	44	44	44	47	47
Dimensions (Height/Width/Depth)	mm	1115/415/900			1115/415/1320	
Net weight	Kg	80	82	125	140	146

EFFICIENCY

The high COP efficiency of the Dual Clima HT of 6,4 allows it to get to maximum efficiency rate of A+++

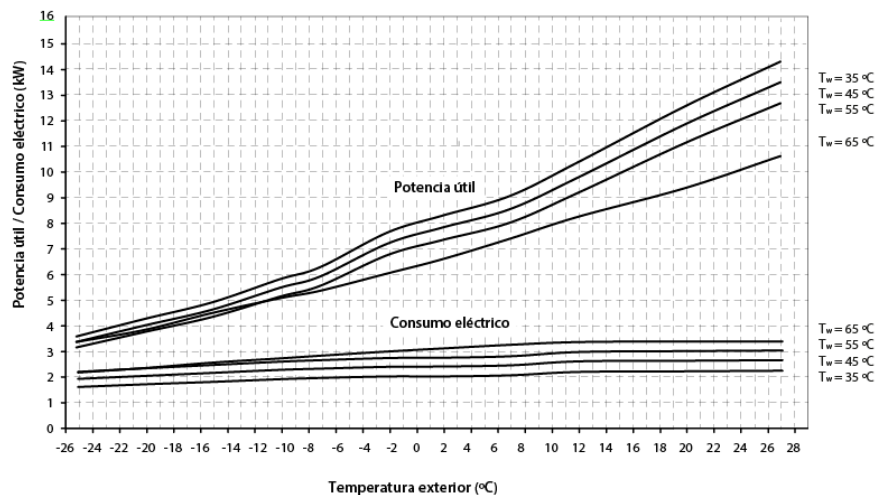


TECHNICAL DATA DUAL CLIMA HT PRO

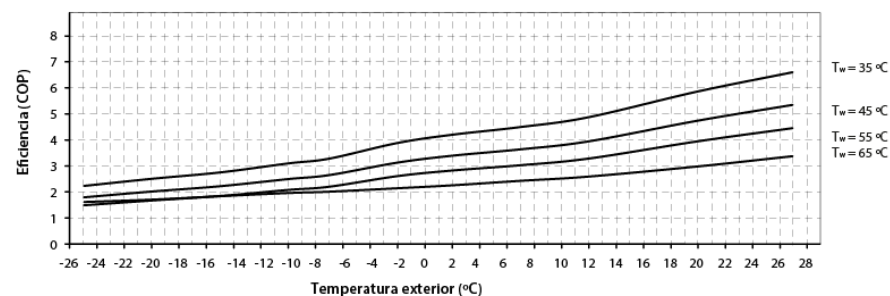
PERFORMANCE CURVE DUAL CLIMA 9HT (HEATING)

		Ambient temperature (°C)										
Water outlet (°C)		-25	-20	-15	-10	-7	-2	2	7	12	20	27
35	Heating Capacity (kW)	3,74	4,41	5,05	5,94	6,41	7,75	8,39	9,15	10,44	12,62	14,33
	Input Power (kW)	1,64	1,73	1,81	1,90	1,94	1,99	1,99	2,03	2,14	2,16	2,18
	COP	2,27	2,54	2,78	3,12	3,30	3,89	4,20	4,49	4,86	5,83	6,56
45	Heating Capacity (kW)	3,53	4,16	4,77	5,61	6,05	7,32	7,93	8,64	9,85	11,92	13,53
	Input Power (kW)	1,91	2,01	2,11	2,21	2,25	2,31	2,32	2,36	2,49	2,51	2,53
	COP	1,84	2,06	2,26	2,53	2,68	3,15	3,41	3,65	3,95	4,73	5,33
55	Heating Capacity (kW)	3,32	3,91	4,49	5,27	5,69	6,88	7,45	8,12	9,26	11,20	12,72
	Input Power (kW)	2,14	2,26	2,37	2,48	2,53	2,60	2,61	2,66	2,80	2,83	2,85
	COP	1,54	1,72	1,89	2,12	2,24	2,64	2,85	3,05	3,30	3,95	4,45
60	Heating Capacity (kW)	3,67	4,15	4,83	5,43	5,74	6,44	7,02	7,85	8,73	10,54	12,33
	Input Power (kW)	2,05	2,18	2,34	2,46	2,54	2,65	2,74	2,84	2,96	3,09	3,13
	COP	1,78	1,90	2,06	2,20	2,26	2,42	2,55	2,75	2,94	3,40	3,87
65	Heating Capacity (kW)	3,53	3,99	4,64	5,21	5,50	6,17	6,71	7,50	8,34	9,46	10,68
	Input Power (kW)	2,12	2,27	2,45	2,59	2,68	2,82	2,92	3,04	3,13	3,15	3,15
	COP	1,66	1,75	1,88	2,00	2,05	2,18	2,29	2,46	2,62	3,00	3,39
70	Heating Capacity (kW)	3,36	3,80	4,41	4,95	5,22	5,85	6,37	6,90	7,30	8,29	9,32
	Input Power (kW)	2,19	2,36	2,56	2,73	2,82	2,98	3,10	3,15	3,15	3,15	3,15
	COP	1,53	1,61	1,71	1,81	1,84	1,95	2,05	2,19	2,32	2,63	2,96

Curvas de prestaciones en calentamiento Dual Clima 9HT

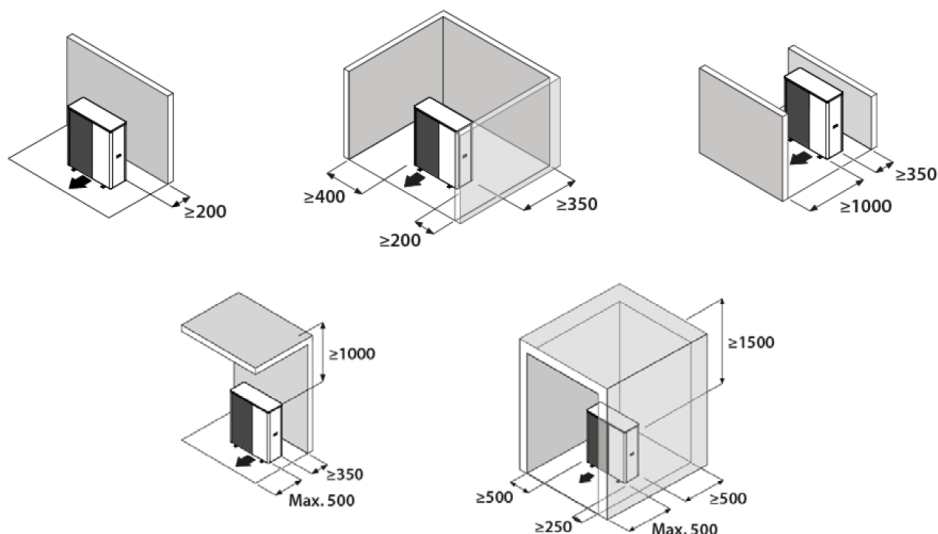


Curvas de eficiencia en calentamiento Dual Clima 9HT (COP)



INSTALLATION

MINIMUM DISTANCES



- Silentblocks are mandatory.
- 100mm clearance must be guaranteed below the heatpump.

Element	Minimum distance (m)
Possible sources of ignition	1,5
Electrical switches and plugs	0,5
Electric conductors	0,3
Combustion engines	1,5
Registration of sewers, drains, etc.	1,5
Basement openings	1,5

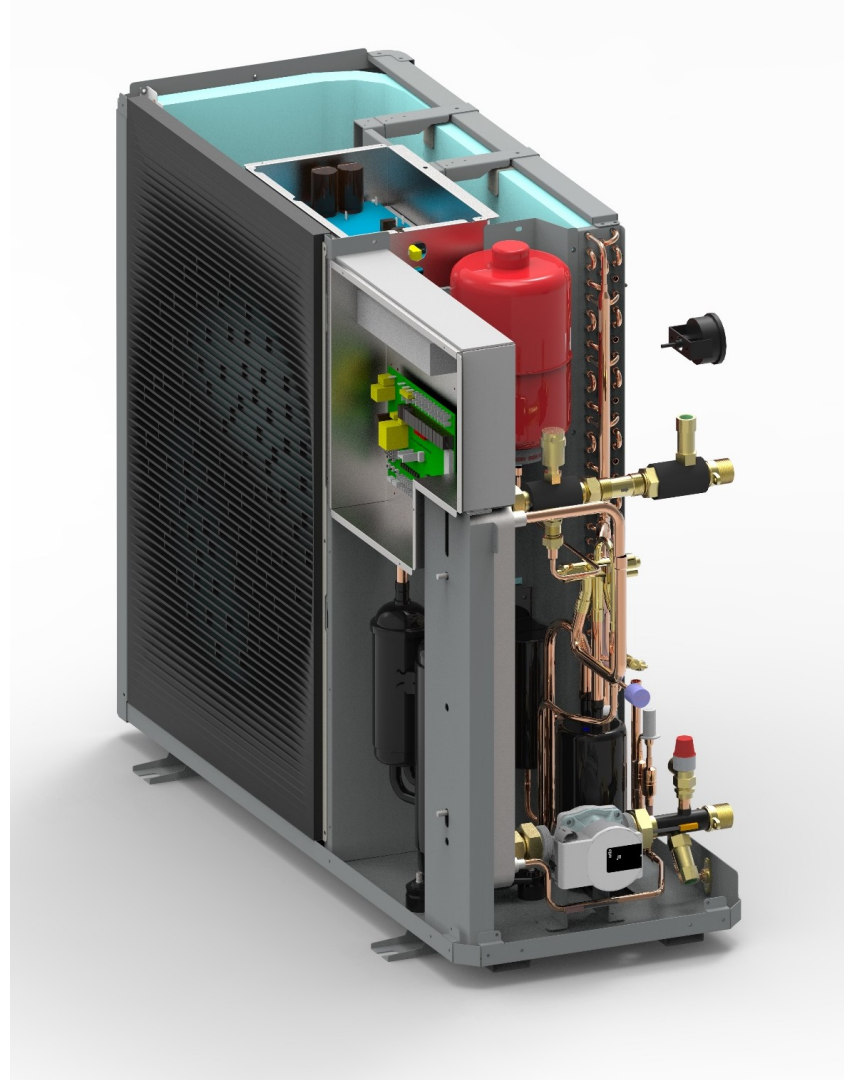
INSTALLATION

FLOW

	Optimum	Mínimum	Error
16 HT	38	20	18
12 HT	34	16	14
9 HT	23	15	13
6HT	17	12	10

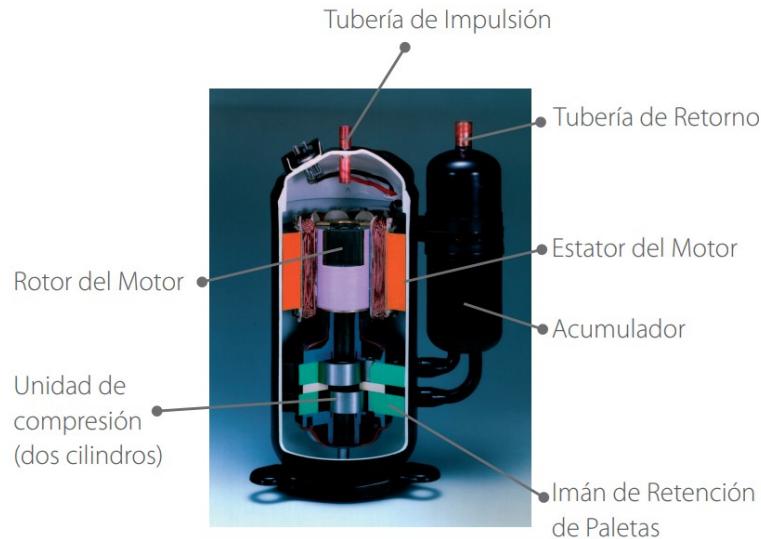
- **Water filter (strainer) is mandatory on the return of the heatpump.**
- **A lower flow than the optimum may affect the performance of the heatpump, reducing its output power.**

COMPONENTS



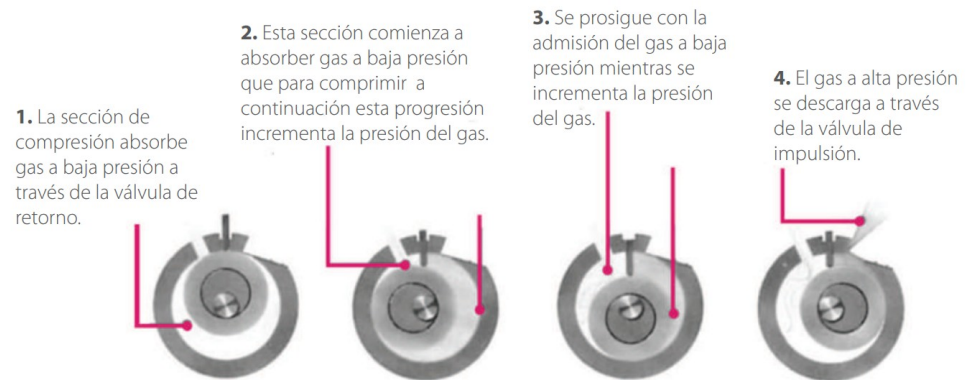
COMPONENTS – GAS CIRCUIT

COMPRESOR:



Twin-Rotary GMCC compressor (Toshiba):

- More simple than scroll compressors.
- Smaller.
- Less oil quantity.
- More efficient.
- More reliable.



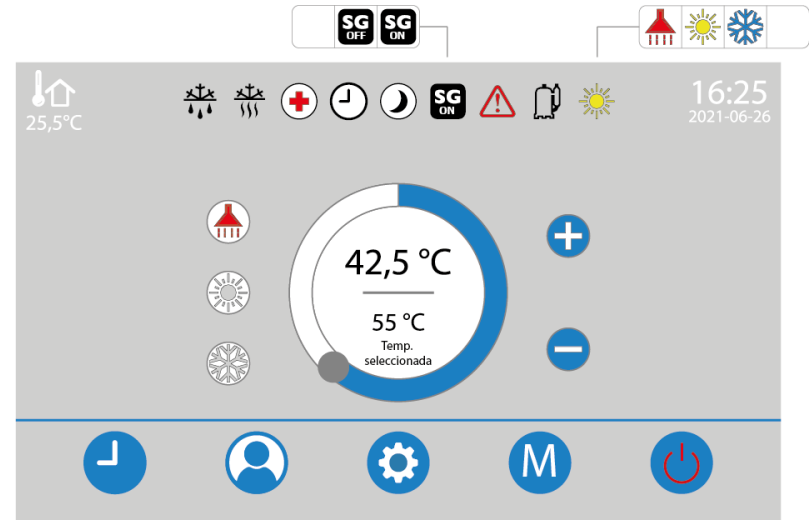
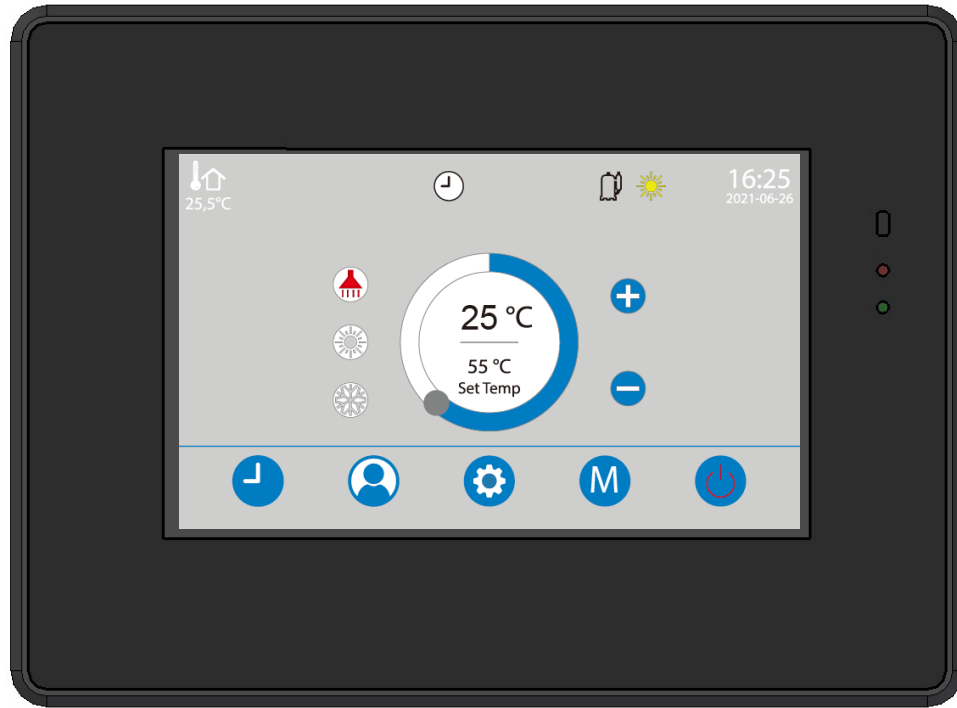
PRESSURE SENSORS:



High and low pressure sensors:

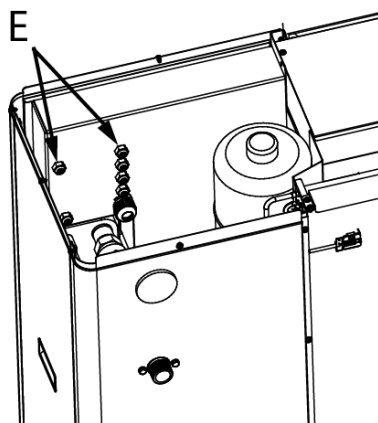
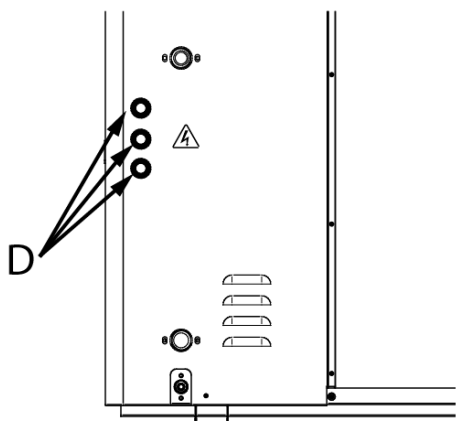
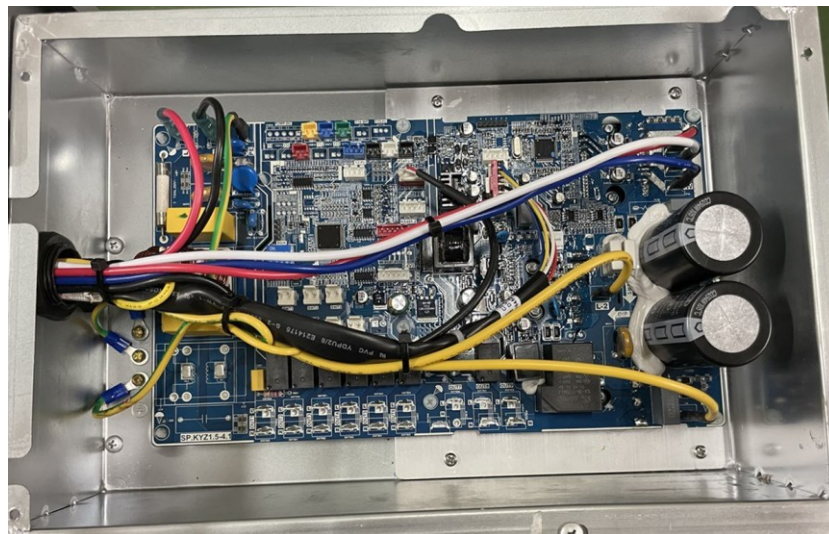
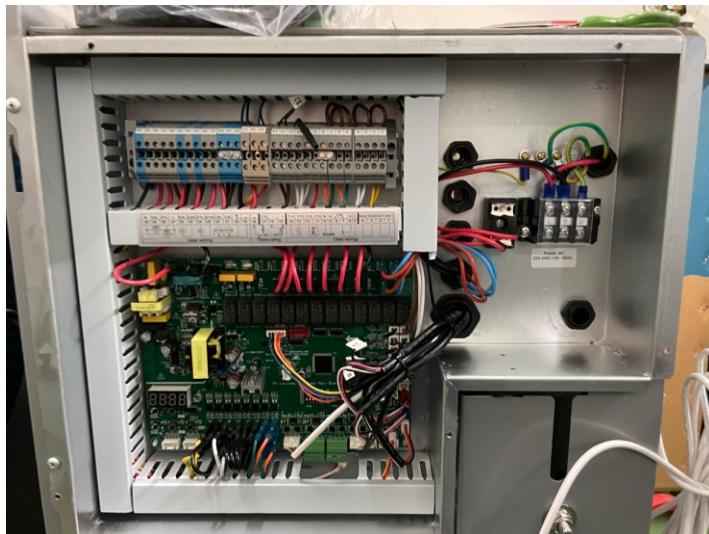
- More precise modulation depending on pressure.
- Easier to detect gas leaks.

COMPONENTS – DIGITAL DISPLAY



- 4 wires (2 power, 2 communication)

COMPONENTS – ELECTRIC DIAGRAM



The electric circuit of the Dual Clima HT is completely insulated to avoid any contact of electricity with possible gas leaks.

JUMPERS

Model selection:

SW4

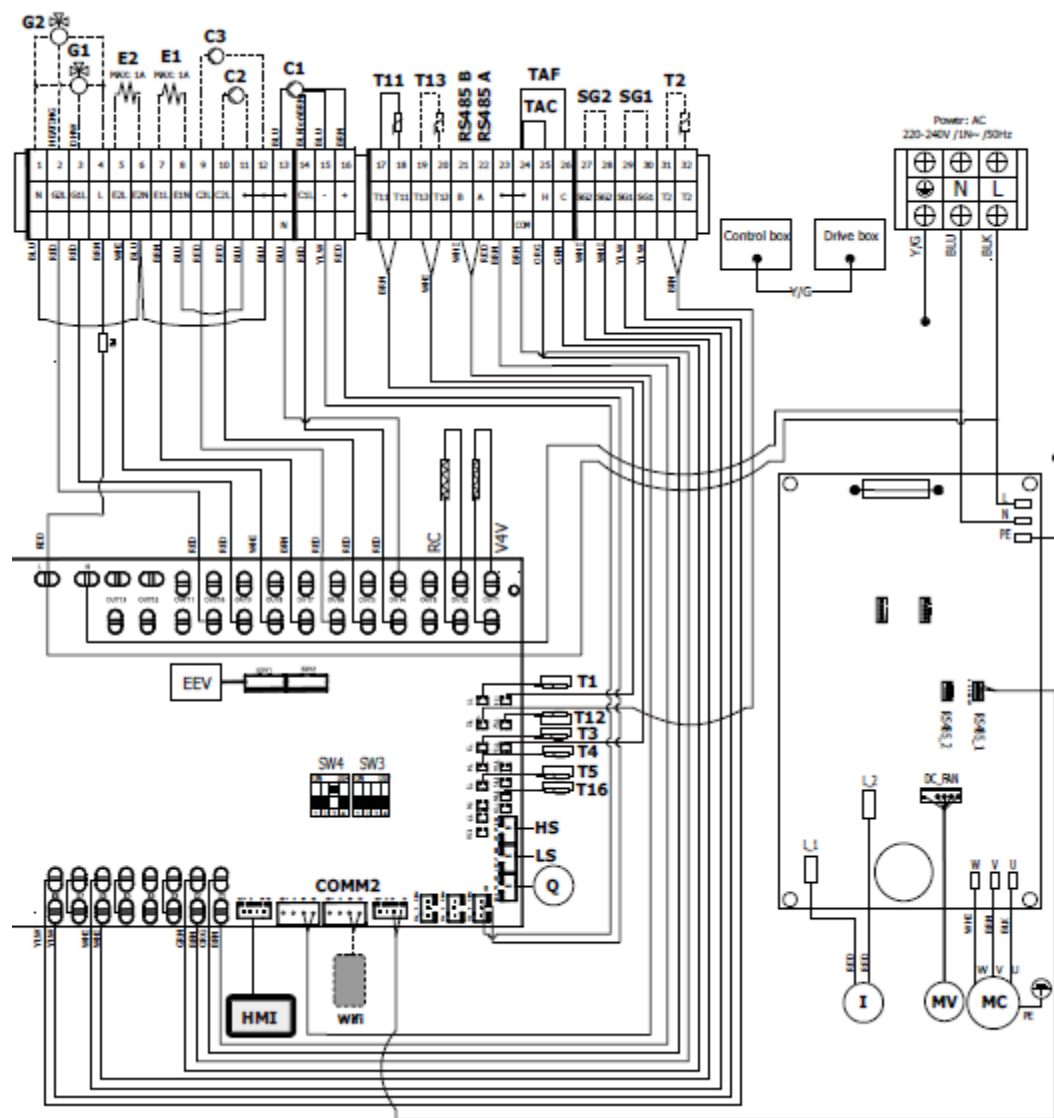
ON		DIP	
☐	☐	☒	☐
☒	☒	☐	☒
1	2	3	4

SW3

ON		DIP	
☐	☒	☐	☐
☒	☐	☒	☒
1	2	3	4

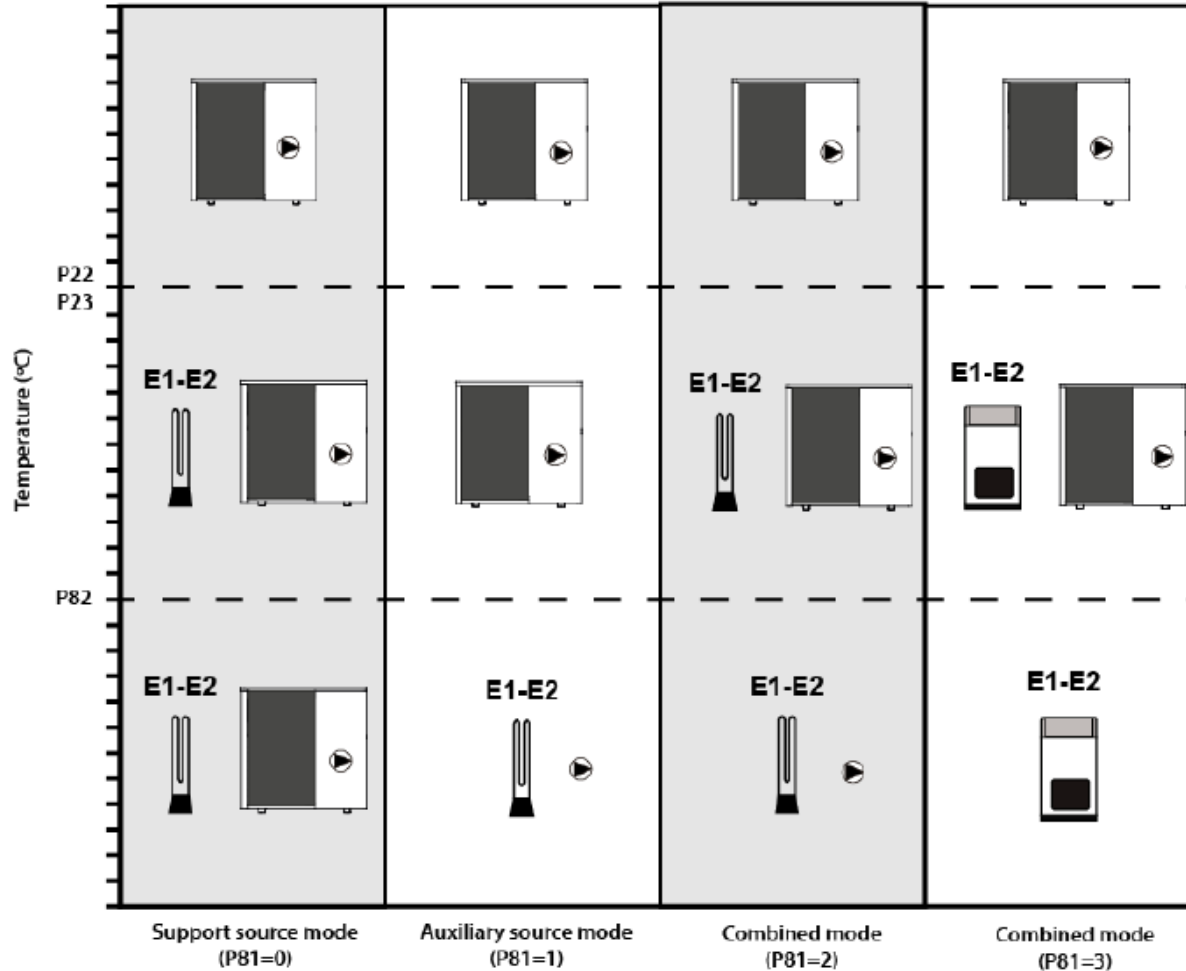
Model	SW4_1	SW4_2	SW4_3	SW4_4	SW3_1	SW3_2	SW3_3	SW3_4
Dual Clima 6HT	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
Dual Clima 9HT	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
Dual Clima 12HT	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
Dual Clima 16HT	ON	OFF	ON	ON	ON	OFF	OFF	OFF

COMPONENTS – ELECTRIC DIAGRAM



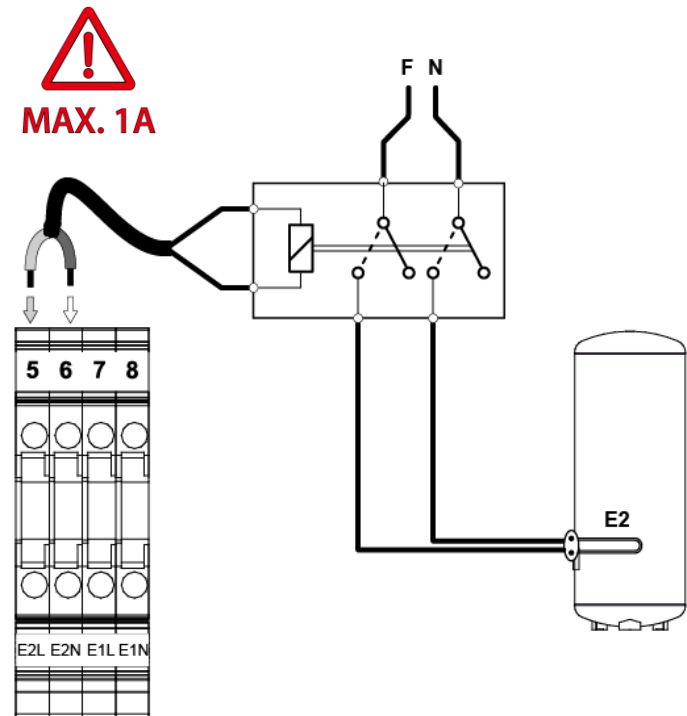
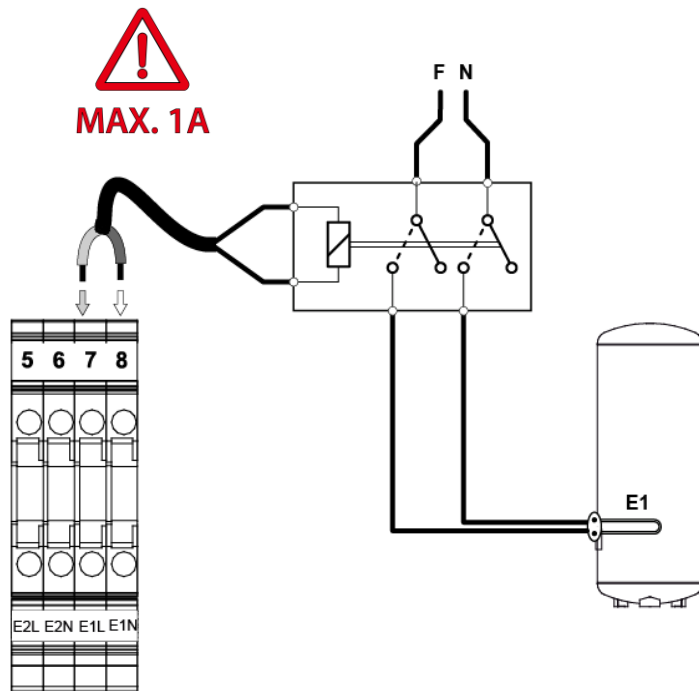
- G1: 3-way valve heating/DHW.
- G2: 3-way valve heating/cooling.
- E1: DHW back-up electric heater.
- E2: Heating back-up electric heater.
- C1: Circulation pump heat-pump.
- C2: Circulation back-up pump heating/cooling.
- C3: Circulation back-up pump DHW.
- T11: Return temperature sensor.
- T13: DHW temperature sensor.
- TAF: Cooling room thermostat.
- TAC: Heating room thermostat.
- SG1: Contact 1 for SG function.
- SG2: Contact 2 for SG function.
- T2: thermostat/sensor contact

E1 / E2 MODES



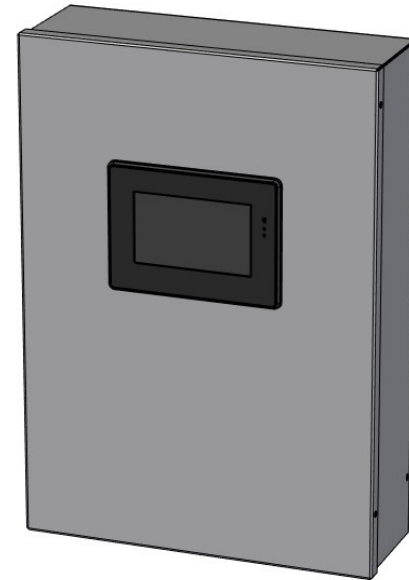
Code	Definition
P81	Operating mode
P22	External temp. Activating backup heating (E2)
P23	External temp. Activating backup DHW (E1)
P24	Hysteresis activating E1 and E2
P36	E1 and E2 activation time interval

E1 / E2 ELECTRIC HEATERS CONNECTIONS



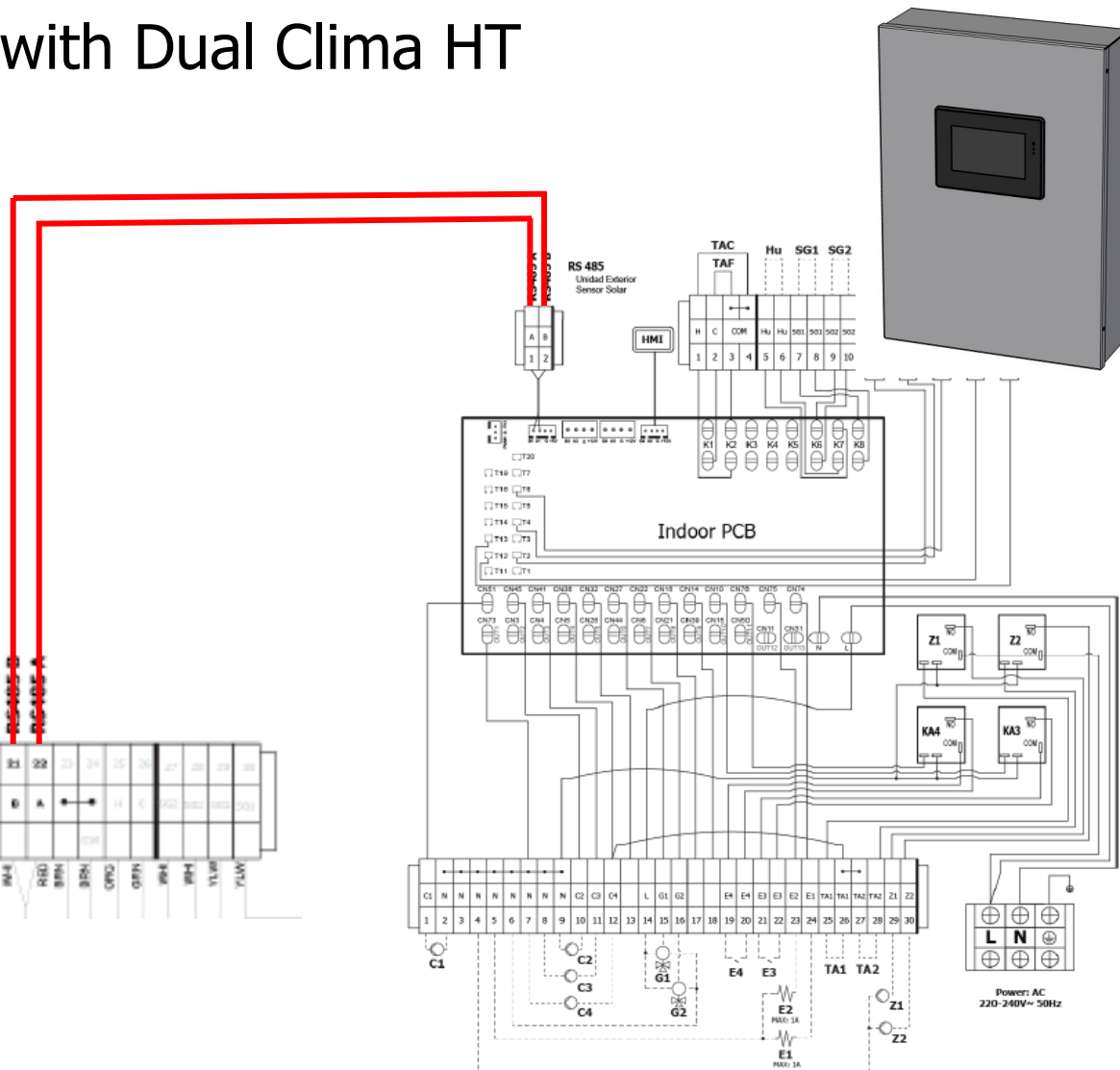
EASY CONNECT MODULE

- 2 wire connection with Dual Clima HT
- Manages all inlets/outlets
- Room sensor management
- OTC mode + outdoor sensor
- Buffer tank mode
- Humidity sensor management
- PV panels management
- Cascade function



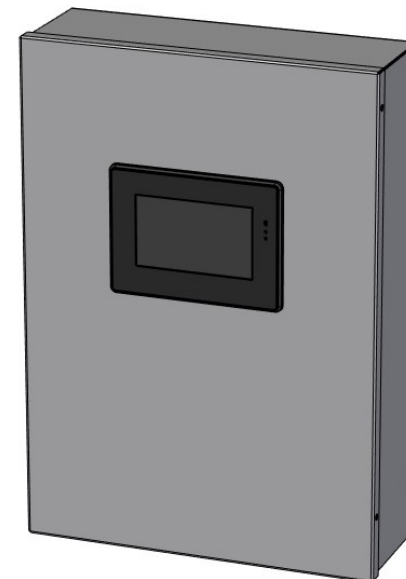
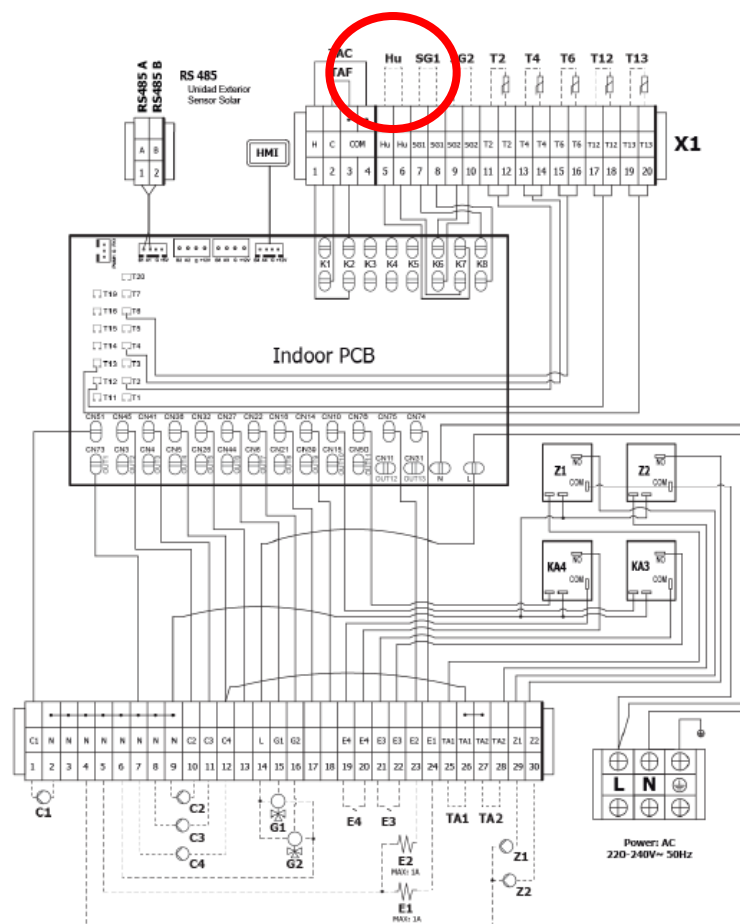
EASY CONNECT MODULE

- 2 wire connection with Dual Clima HT



EASY CONNECT MODULE

- Humidity sensor management
Open/close connection



EASY CONNECT MODULE

- PV panels management
Energy Meter Required
Possibility to use the excess of
electricity generated by PV panels
to to over-heat buffer or DHW tank.



EASY CONNECT MODULE

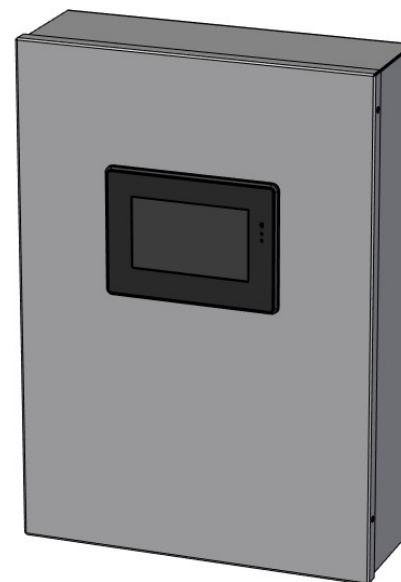
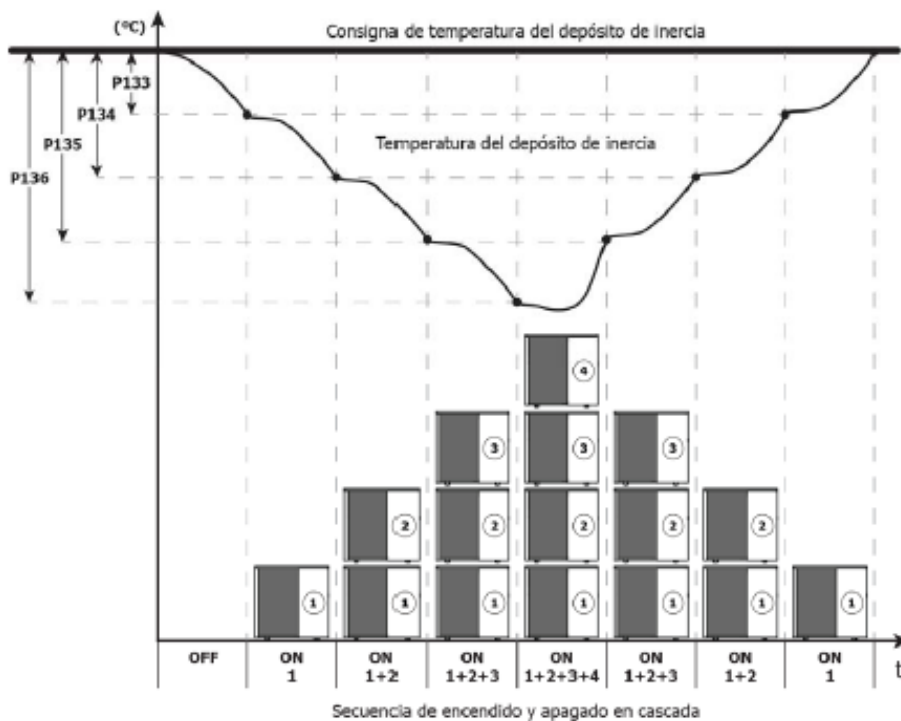
- Cascade function

One Easy-connect for each heatpump

Up to 4 units

Each one needs a buffer tank sensor

Modo Calentamiento



iCONNECT

- Enable the heat-pump to be connected to the internet via Wi-Fi.
- The heat-pump will be controlled via an app.
- The service will be done via the web portal.



ACQUA RANGE

- ACQUA ME
 - 85 litres DHW
 - 20 litres buffer
 - Stainless steel



ACQUA RANGE

- ACQUA SE
 - 120 litres DHW
 - 30 litres buffer
 - Stainless steel



ACQUA RANGE

- ACQUA OD
 - Outdoor installation (extra insulation)
 - 120 litres DHW
 - 30 litres buffer
 - Stainless steel



FUSION RANGE

- FUSION
 - 150, 200, 300 litres DHW
 - Stainless steel



FUSION RANGE

- FUSION TRIO
 - 200 litres DHW
 - 50 or 80 litres buffer
 - Stainless steel



FUSION RANGE

- FUSION COMBI
 - 50 litres buffer (wall-hung)
 - 80 litres buffer (floor-standing)
 - Hybridization unit (no DHW)



AIR HYDRAULIC KITS

M



DM



2D



2DM



BD



BM



BDM



B2D



B2DM



Kit AIR
Manifolds

Kit AIR B
Low loss header

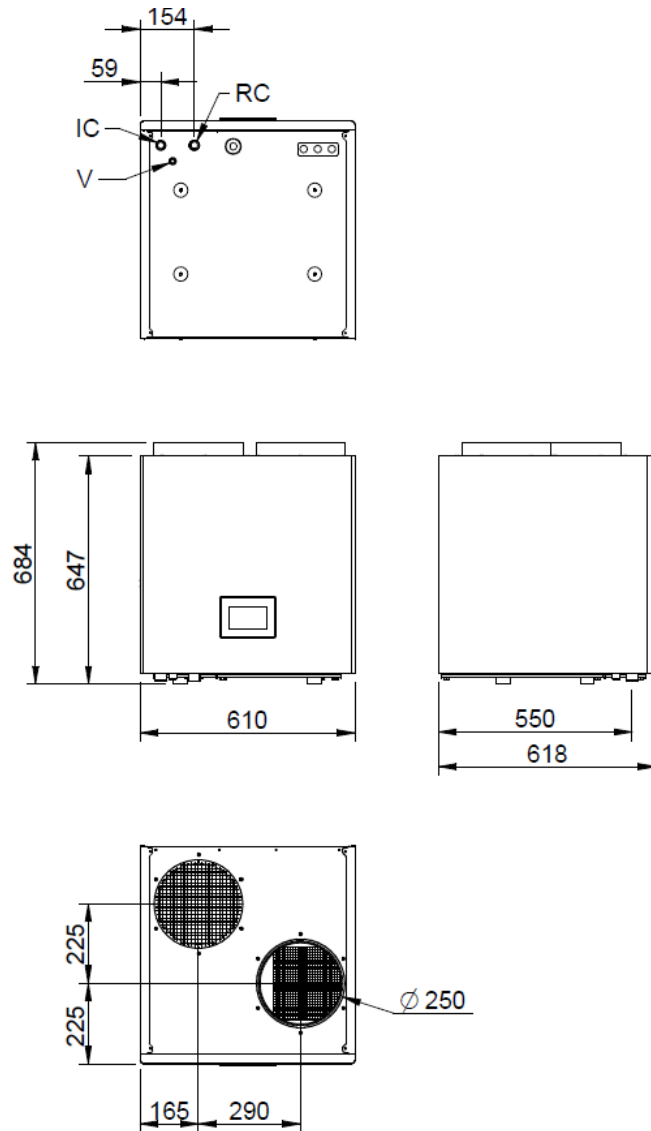
NANO Clima

- **4kW** indoor heatpump.
- **R290** gas (75°C).
- Wall-hung or floor-standing (cylinder).
- 3kW heating element integrated (HDX).
- Heating + cooling + DHW.

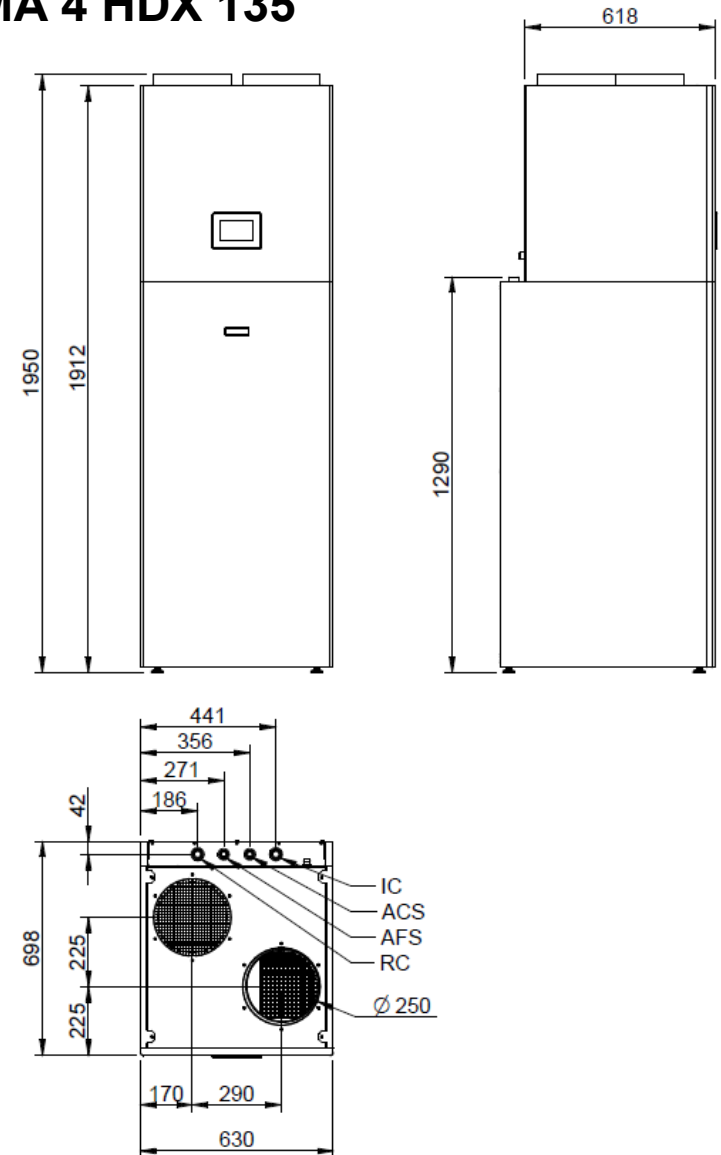


DIMENSIONS

NANOCLIMA 4

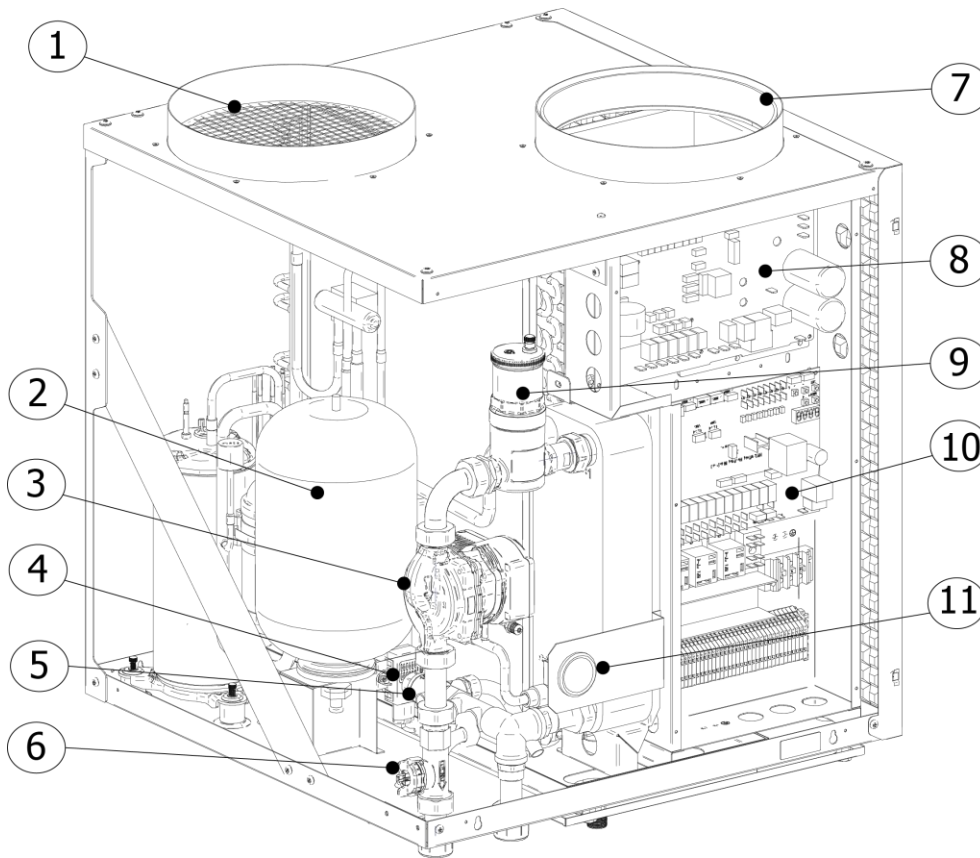


NANOCLIMA 4 HDX 135



COMPONENTS

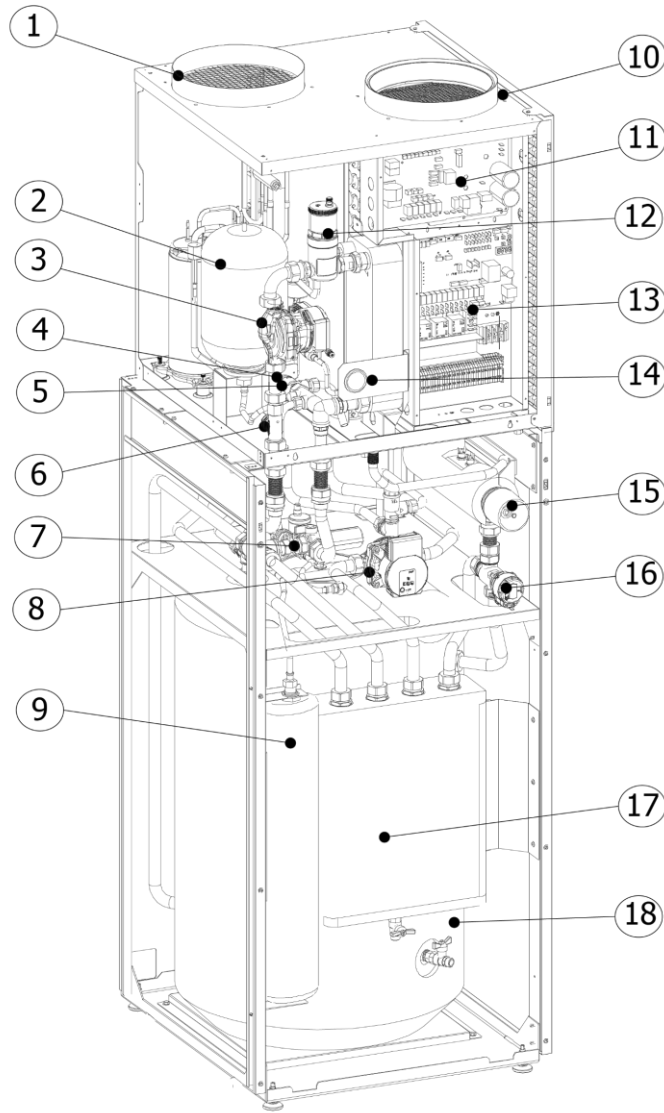
NANOCLIMA 4



- 1. Air inlet
- 2. Expansion vessel 5L
- 3. Wilo pump 7m
- 4. R290 gas sensor
- 5. Safety valve
- 6. Flow meter
- 7. Air outlet
- 8. IPM module
- 9. Deaerator
- 10. PCB board
- 11. Pressure gauge
- 12. Wall-hung support

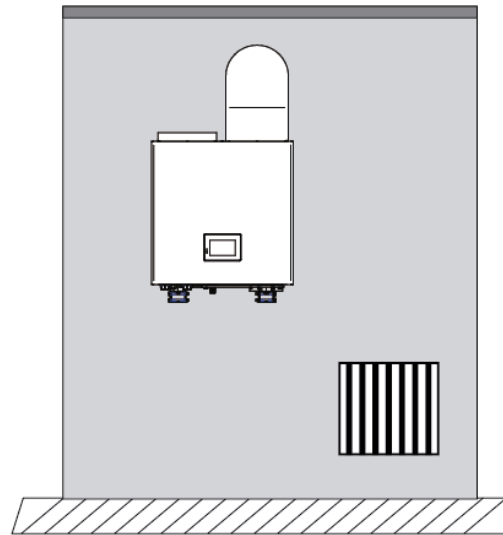
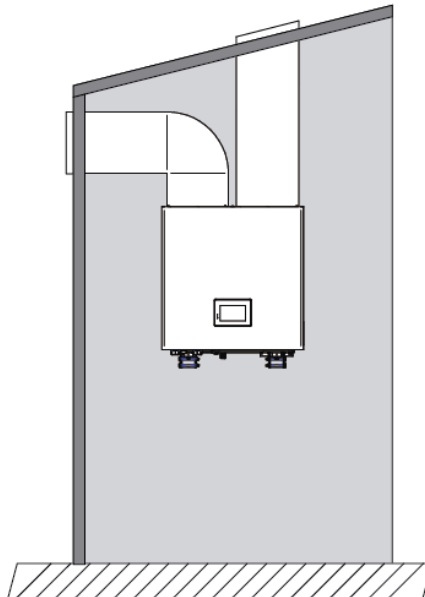
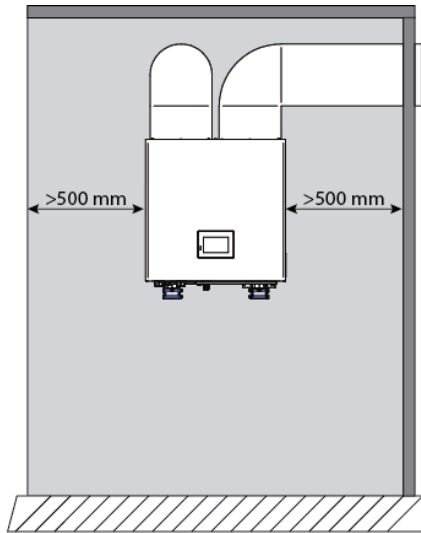
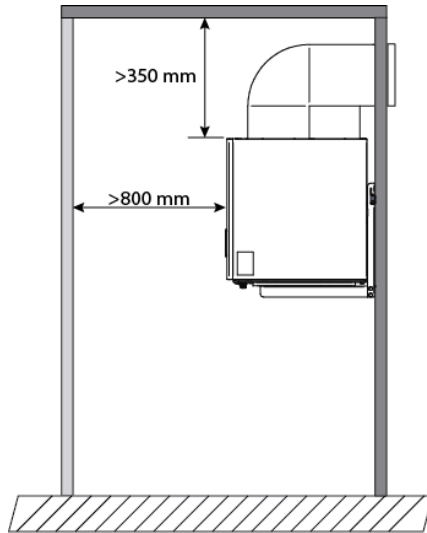
COMPONENTS

NANOCLIMA 4 HDX 135



- 1. Air inlet
- 2. Expansion vessel 5L
- 3. Wilo pump 7m
- 4. R290 gas sensor
- 5. Safety valve
- 6. Vortex flow-meter
- 7. Magnetic mud filter
- 8. Heating circulation pump 7m
- 9. DHW expansion vessel 4L
- 10. Air outlet
- 11. IPM module
- 12. Deaerator
- 13. PCB board
- 14. Pressure gauge
- 15. 3kW two phase heating element
- 16. Three-way valve
- 17. Buffer 8L
- 18. DHW cylinder 135l

AIR CONDUCT INSTALLATION



HYDREA

- **DUPLEX** 2205 cylinder.
- **Connectivity** integrated.
- **Element** integrated
- **R290 gas** –70°C max. temperature.
- **1,5 kW** power.
- Models:
 - **Hydrea 150** (Wall-hung)
 - **Hydrea 200** (floor)
 - **Hydrea 280** (floor)
 - **Hydrea 280S** (floor + coil)





DOMUSA
T E K N I K