

AIR SYSTEMS

Roomtop

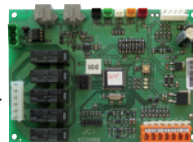
RTC-RTH 15 to 30 - L



Roomtop

RTC-RTH - L

A complete range from 14.6 kW up to 27.0 kW



YKN2open



Features

- New YKN2open board
- Possibility to be installed outdoor
- Scroll Compressors
- High COP and EER
- 1/4 turn on electrical panel
- Expansion valves for models 20, 25 and 30
- High external static pressure on evaporator and condenser
- Digital thermostat DPC-1 and indoor air filter included

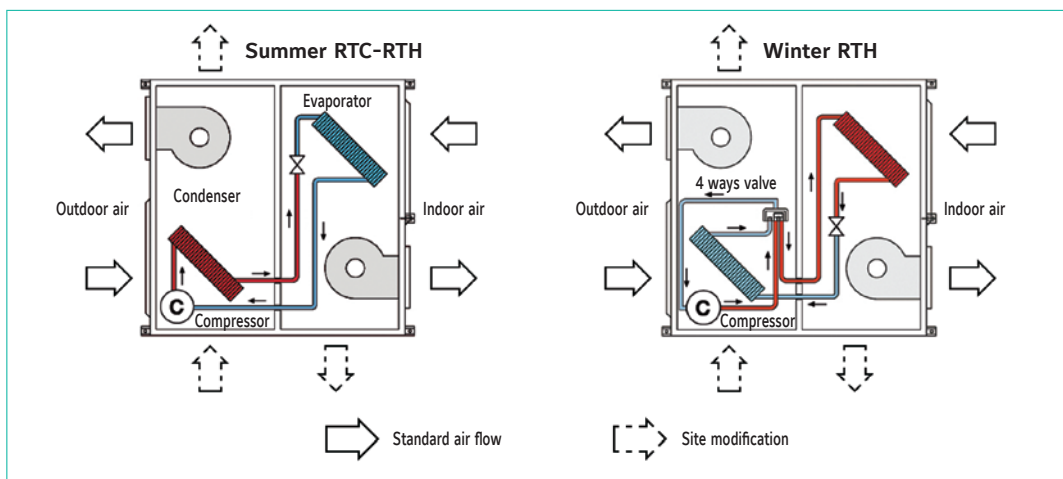
RTC 15 L

Nomenclature

L = version

Capacity range:
15 = 15 kW

Product category:
RTC = Cooling only
RTH = Heat pump



Roomtop

RTC-RTH 15 to 30 - L



Technical features

Cooling only models			RTC 15 L	RTC 20 L	RTC 25 L	RTC 30 L
Cooling capacities	kW		14.60	19.90	22.20	27.00
Power input in cooling	kW		5.50	8.60	10.00	12.00
In duct outdoor side sound power level	dB(A)		72	74	77	81
In duct indoor side sound power level	dB(A)		71	73	75	75
Heat pump models			RTH 15 L	RTH 20 L	RTH 25 L	RTH 30 L
Cooling capacities	kW		14.10	19.90	22.20	26.80
Power input in cooling	kW		5.40	8.32	10.04	11.63
Heating capacities	kW		13.80	17.80	20.80	25.40
Power input in heating	kW		4.84	7.15	7.89	9.67
In duct outdoor side sound power level	dB(A)		74	74	81	81
In duct indoor side sound power level	dB(A)		73	73	81	81
Common characteristics						
Power supply		400V/3 + N/ 50Hz				
Nominal current RTC / RTH	A		11.6 / 11.5	19 / 19	21 / 21	23 / 23
Starting current	A		64	95	111	118
Main switch (1)	A		20	25	25	32
Main cable (1)	Nbr.xmm ²		5 x 4	5 x 4	5 x 4	5 x 6
Cable to standard thermostat (2)	Nbr.xmm ²		10 x 0.22			
Evaporator fan at nominal airflow	Airflow	m ³ /h	3 580	4 100	5 060	5 300
	Standard ESP	Pa	50	50	62	62
Condenser fan at nominal airflow	Airflow	m ³ /h	3 890	4 810	5 640	7 450
	Standard ESP	Pa	50	50	50	50
Nett dimensions	Height	mm	557	585	650	650
	Length	mm	1 312	1 575	1 750	1 770
	Depth	mm	1 312	1 575	1 656	2 056
Nett weight	RTC	kg	235	305	358	420
Nett weight	RTH	kg	243	317	379	434

(1) For information only. These should be checked for compliance with local regulations depending also on installation and cable type

(2) Shield type cable only

All the data are at EUROVENT conditions with 400V/3+N/50Hz.

Cooling : Entering indoor coil temp. 27°C / 19°C WB and outdoor temperature 35°C

Heating : Entering indoor coil temp. 20°C and outdoor temperature 7°C / 6°C WB

Compatibility table / Codes

Cooling only models			RTC 15 L	RTC 20 L	RTC 25 L	RTC 30 L
			S661241503	S661242003	S661242503	S661243003
Heat pump models			RTH 15 L	RTH 20 L	RTH 25 L	RTH 30 L
			S662041503	S662042003	S662042503	S662043003
Thermostat						
Delivered as standard with the unit			DPC-1			
Accessories or options	Remarks	Code	RTC 15 L	RTC 20 L	RTC 25 L	RTC 30 L
			RTH 15 L	RTH 20 L	RTH 25 L	RTH 30 L
Electrical Heaters * (in duct)	5 kW / 3ph.	S611765653	A	A	A	A
	10 kW / 3ph.	S611765583	A	A	A	A
	15 kW / 3ph.	S611765513	A	A	A	A
Low ambient regulation		S613111533	O			
		S613113087 *		O	O	O
Copper-copper coils unit	Contact us		O	O	O	O
Blue fin	Contact us		O	O	O	O

A= Accessory (supplied loose). O= Option (factory fitted). * Not protected against external conditions.

Design details



Cabinet features

- Build to last, all cabinet with heavy gauge galvanized steel and powder paint backed on oven.
- Copper-copper coils or blue fin delivered upon request.
- Side or bottom duct connections to be realized on site.
- Excellent water-tightness even with high internal negative pressure.
- External slopes to remove rain water.
- Only 4 solid points to crane.



Copper-copper coil



Blue fin



Designed to service

- Quick and easy access to all components.
- Doors equipped with hinges and 1/4 turn lock.
- Service valves.
- Inspection window for sight glass.
- Internal drain pan slope to remove drain water.
- YKtool for comissioning, monitoring and controlling unit parameters.



Electrical features

- YKN2open regulation and control.
- Vertical hermetic scroll compressor, with compressor module and crankcase heater.
- Smooth start indoor fan.
- Phase detector.
- Main power switch.
- Numbered wires in cable trunking.
- Motor protection.

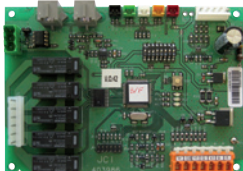


Quality and ELT

Design, built and tested under ISO9001 quality system certification, we are constantly listening to customer comments. For this reason, our End of Line Test ELT strives to be as close as possible to the commissioning you carry out on site.

Control System

YK^{N2open}



The YKlon is a controller regulating all components and accessories. It will pro actively manage cool and heat stages to maintain a stable room temperature maximizing the efficiency.

Additionally, the benefits are:

- Redundancy on cool and heat stages (if one step is locked out, the PCB starts another one automatically).
- Random start between units to minimise electrical tariff.
- All stages will start in sequence to reduce peak inrush.
- Reduces nuisance calls by using 3 times "you are out" on all safeties before a hard lockout occurs.
- Automatic restart after power failure. Compressors run time priority.
- Alarm output relay and led diagnostic code. No parameters to check before starting.
- Lockout and incident level of protection. Last 10 lockouts stored in a non-volatile memory.
- 4 heating stages on hot water heating.
- BMS connection (N2 Open protocol).

YK^{tool} N^{2open}



The Yktool is the perfect tool to use on a regular basis for comissioning and service on site. For comissioning, it will override the thermostat and start the cooling or heating stages. Being a plug and play device, you will have direct access to all sensors and status of each components and accessories installed (lockout & incidents, temperatures, defrost test...).

Code: S613786031



Features and benefits Thermostat DPC-1

- Day (normal), night (economy) and unoccupied (stand by).
- Lockout code on screen gives direct diagnostics.
- ON/OFF or programmable from dip switch setting.
- Day or night programmable state avoids wide internal temperature variation.
- 3 preset and 3 programmable profiles.
- Temperature override.
- Select the control sensor you want to use (integrated in the thermostat, return air in duct or room sensor).
- Turbo, normal or economy logic from dip switch setting.
- From -3°C to +3°C sensor offset.
- Average temperature with room or duct sensors.

Thermostats with integrated sensors

Thermostat models		DPC-1	DPC-1R
	Code	S603786044	S603786045
Roomtop	RTC and RTH	X	0
Rooftop	All models	X (1)	0
Split system	VAC and VAH	X	0
	VCH	X	0

Main features			
Strategy	Turbo, normal or economy		
Auto restart after power failure	•		•
Number of cool stages	2	1	2
Number of heat stages	2	1	2
Auxiliary Heat	•		•
Automatic Heat/Cool change over	•		•
Continuous or auto indoor fan	•		•
Manual setback (Day/Night key)	Day, night and unoccupied		
Override possibility	•		•
Compressor anti short cycle	•		•
°C Range cooling / heating	10 to 32°C / 9 to 32°C		
Programmable, 7-day	•		•
Lockout codes	•		•
Outdoor air temperature	•		with YKlon
Sensor selection	•		•

X : Delivered as standard with the unit. X (1) : Standard but has to be ordered separately.
O : Optional. • : Function available.

Duct sensor	Ambiance sensor*	Room sensor
DS-1	AS-1	RS-1
S603786047	S603786049	S603786042

* To control up to 4 temperature sensors. To be fitted with DPC-1 version 2.0 or superior.



DS-1

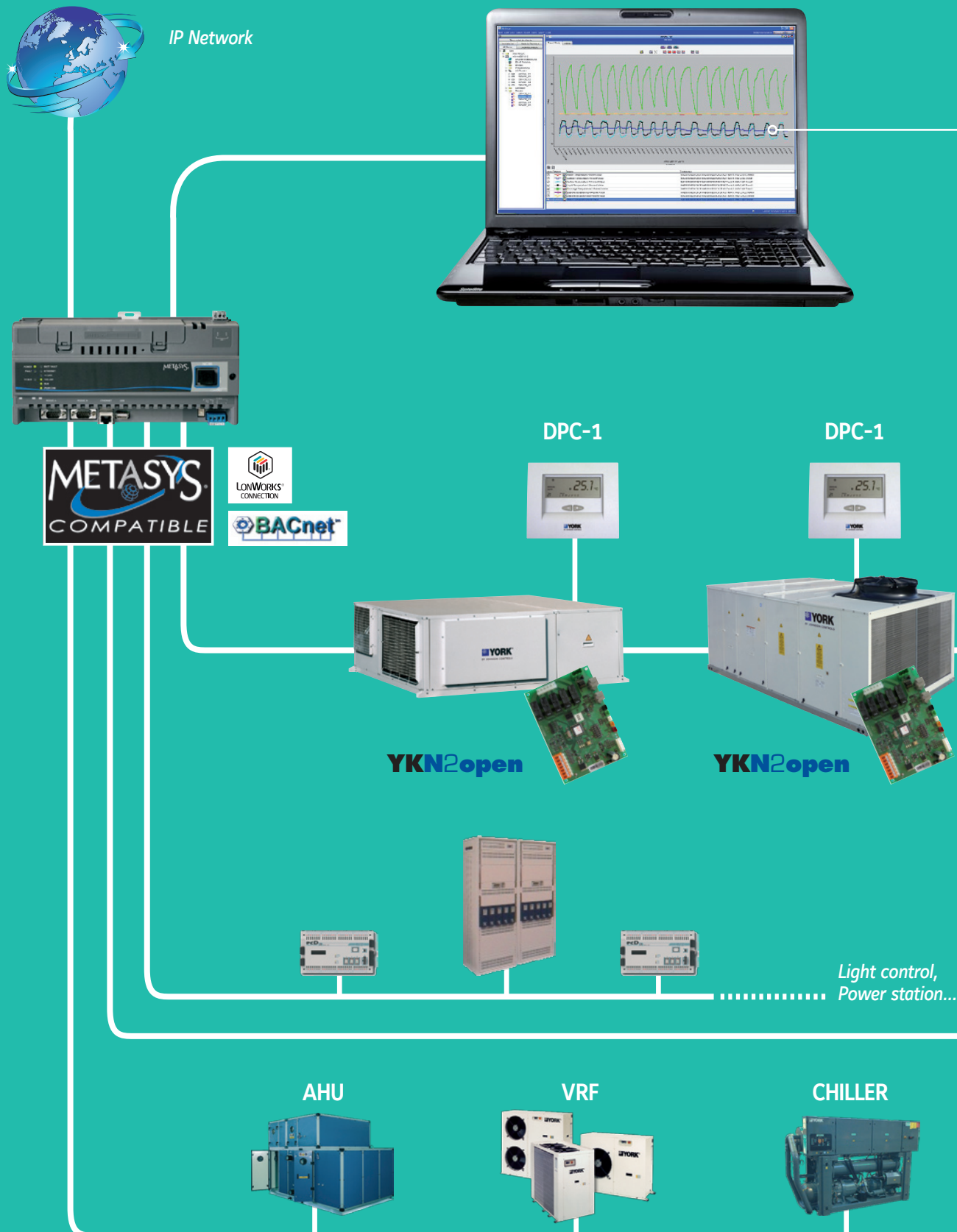


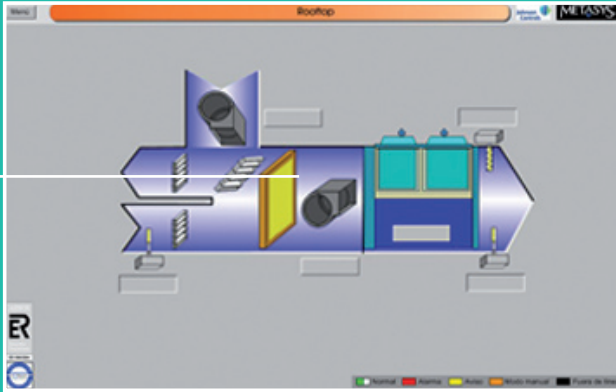
AS-1



RS-1

BMS Connection





Sample screen

- BMS communication through new board YKN2Open delivered as standard (N2Open protocol)
- Possibility to fully control the unit and monitor more than 160 variables per unit.
- Can be integrated with other systems like lighting, fire&security or other HVAC equipment.
- Fully tailored solutions available (ask JCI sales office)

