coolside new

AIR CONDITIONING SYSTEMS FOR HIGH HEAT DENSITY RACKS

rcgroup.it

C_GNR_0608

VERSIONS :

MONO DXA (R410A)
Cooling capacity up to 21,9 kW
Air cooled direct expansion split system, with scroll compressors and axial fans.

MULTI DXA (R410A)
Cooling capacity up to 80,9 kW
Air cooled direct expansion multi-split system, with scroll compressors and axial fans.

MULTI DXW (R410A)
Cooling capacity up to 96,0 kW
Water cooled direct expansion multi-split system.

CW
Cooling capacity 23,3 / 47,2 kW
Chilled water fed terminal unit/s, to be matched to a liquid chiller.

COOLSIDE is a multi-split system with surrounding air intake and delivery and it is RC GROUP answer to the demands for air conditioning of new generation computer rooms and server farms.
COOLSIDE means extremely high cooling density (up to **25 kW on 0.3 m² of surface**) modular design and autoadaptive logic, managed by the MP.COM microprocessor, and it is the best partner for blade servers architectures and high heat density equipment.

These features, together with the quality and the reliability of RC GROUP, make **COOLSIDE** the ideal system for air conditioning of telephone exchanges, data banks, internet hotels, server farms and all high heat density structures.

Possible installation of a COOLSIDE MULTI system

Installation
No need of ducts or plenum under the raised floor with a **COOLSIDE** system.

The **COOLSIDE** units are installed between the racks to be cooled, sucking out warm air (coming from the racks) in the rear part, or hot aisle, and delivering it (once cooled) from the frontal side, in the so called cold aisle, from which the equipment can suck it for cooling.

This means easy and quick installation and it is ideal also in case of retrofit and upgrade of existing and defined structures.

Maintenance
The units inspection is very easy even in highly populated server rooms, thanks to the fully removable paneling, to the complete frontal access, to the hinged electric box and to the supporting legs with wheels (optional accessory).

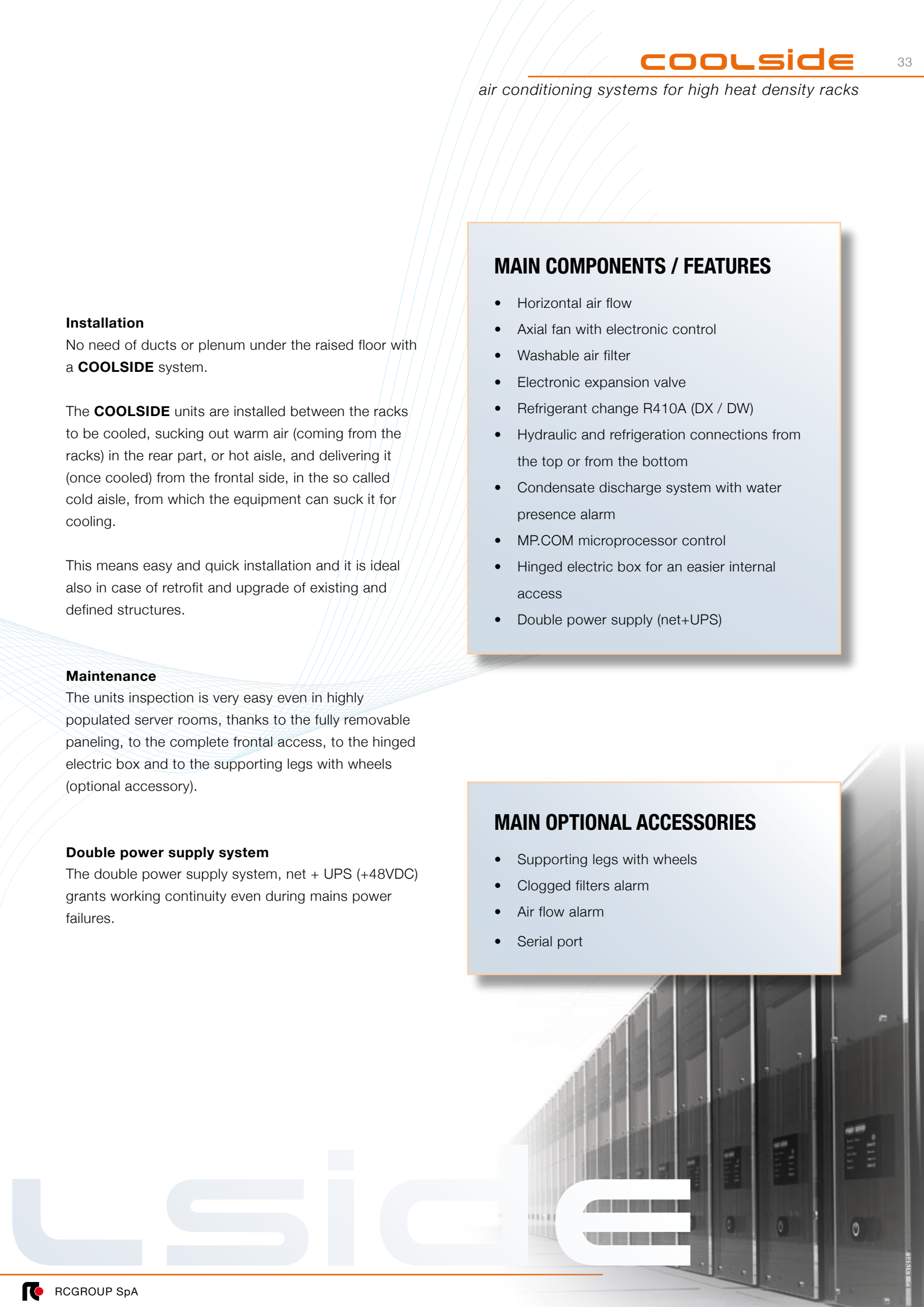
Double power supply system
The double power supply system, net + UPS (+48VDC) grants working continuity even during mains power failures.

MAIN COMPONENTS / FEATURES

- Horizontal air flow
- Axial fan with electronic control
- Washable air filter
- Electronic expansion valve
- Refrigerant change R410A (DX / DW)
- Hydraulic and refrigeration connections from the top or from the bottom
- Condensate discharge system with water presence alarm
- MP.COM microprocessor control
- Hinged electric box for an easier internal access
- Double power supply (net+UPS)

MAIN OPTIONAL ACCESSORIES

- Supporting legs with wheels
- Clogged filters alarm
- Air flow alarm
- Serial port



THE SYSTEMS

COOLSIDE MULTI DX
Cooling capacity up to 80,9 kW

Up to 5 indoor direct expansion units connected to an air cooled condensing unit.

Air cooled condenserless chiller

COOLSIDE MULTI DW
Cooling capacity up to 96,0 kW

Up to 5 indoor direct expansion units connected to a water cooled condensing unit.

Water cooled condensing unit

COOLSIDE MONO DX
Cooling capacity: 21,9 kW

Single indoor direct expansion unit connected to an air cooled condensing unit.

Air cooled condensing unit

COOLSIDE CW
Cooling capacity: 23,3 ÷ 47,2 kW

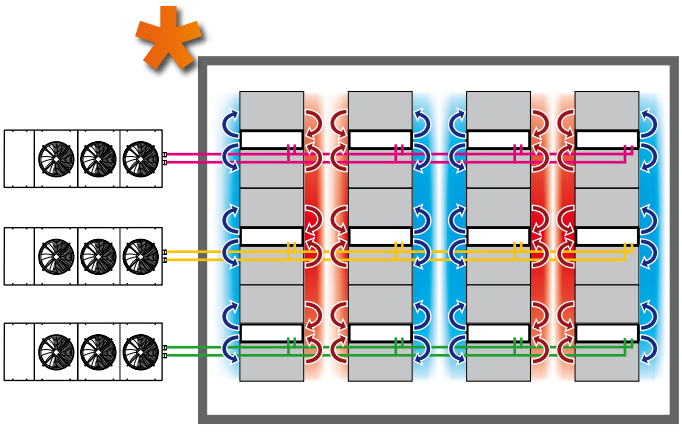
Chilled water terminal unit for connection to a liquid chiller.

Liquid chiller

REDUNDANCY

EXAMPLE OF INSTALLATION WITH REDUNDANCY

The picture is showing the layout of a redundant plant system, that can be realized both with a MULTI DXA system and with COOLSIDE CW terminal units connected to liquid chillers. Please note that each outdoor unit feeds one only terminal unit per rack row. In this way, in case of fault of one of the outdoor units the cooling of every single row is guaranteed.



TECHNICAL DATA AND NOMINAL PERFORMANCES

COOLSIDE MONO DXA air cooled condensing unit

MODEL		17 *P1*	19 *P1*	22 *P1*
Size		R3	R3	R3
Cooling capacity (1)	kW	17,5	19,2	21,9
Air flow	m³/h	8500	8500	8500
Compressors	n.	1	1	1
Weight	kg	185	185	185
Noise pressure (4)	dB(A)	59,0	59,0	59,0

COOLSIDE MULTI DXA air cooled condensing unit

MODEL		T.63 *P2*	T.72 *P2*	T81 *P2*
Size		U6	U6	U6
Cooling capacity (1)	kW	62,9	72,0	80,9
Air flow	m³/h	32400	32400	30600
Compressors	n.	2	2	2
Weight	kg	790	805	830
Noise pressure (4)	dB(A)	62,0	62,0	62,0

COOLSIDE MULTI DXW water cooled condensing unit

MODEL		T.75 *P2*	T.87 *P2*	T.97 *P2*
Size		H3	H3	H3
Cooling capacity (2)	kW	74,2	85,3	96,0
Water flow	m³/h	4,85	5,60	6,30
Compressors	n.	2	2	2
Weight	kg	390	430	480
Noise pressure (4)	dB(A)	58	58	58

COOLSIDE DX evaporating unit

MODEL		020
Size		300
Cooling capacity (3)	kW	20
Air wlow	m³/h	4800
Weight	kg	145
Sound pressure (4)	dB(A)	72

(1) Referred to external air temperature 35°C and expansion temperature 12°C.
(2) Referred to water to the condenser temperature 15/30 and expansion temperature 12°C.
(3) Referred to entering air 35°C with 30% RH and expansion temperature 12°C.
(4) Sound pressure 1m far in free field according to ISO3744 norm.
POWER SUPPLY: 400.3.50+N / condensing units.
POWER SUPPLY: 230.1.50+N / evaporating units.

TECHNICAL DATA AND NOMINAL PERFORMANCES

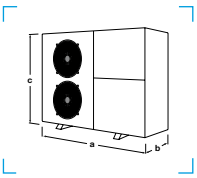
COOLSIDE CW terminal units for chilled water systems

MODEL		*020*	*040*
Size		300	600
Nominal cooling capacity (1)	kW	23,3	47,2
Air flow	m^3/h	4800	9600
Water flow	n.	3,33	6,75
Weight	kg	145	252
Sound pressure (2)	dB(A)	72	75

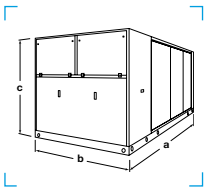
(1) Referred to entering air 35°C with 27%RH and 7/13°C in/out chilled water temperature.
(2) Sound pressure 1m far in free field according to ISO3744 norm.
POWER SUPPLY: 230.1.50

DIMENSIONS (mm)

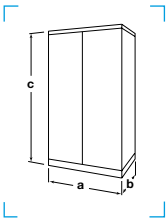
Size	a	b	c
MONO DXA	1.305	580	1.285



Size	a	b	c
MULTI DXA	2.580	1.200	1.630



Size	a	b	c
MULTI DXW	1.085	750	1.925



Size	a	b	c
COOLSIDE 020	2.020	300	1.020
COOLSIDE 040	2.000	600	1.000