SK SAIFOR®

18.6°C
TEMP.IMPULSION

18.5°C   TEMP.RETORNO
80.3KW CAP.REFIG.

((COOLING)
SOLUTIONS)

english version

SI(SAIFOR®

SAIFOR is an established company with extensive experience in manufacturing and integrating solutions for datacenters and control rooms.

The SAIFOR group has its own manufacturing plant in Barcelona, Spain, equipped with latest generation machinery, which means it can efficiently follow the company's green IT policies.

Saifor has positioned itself as a modern technological company, meeting the most demanding European quality standards. It has its own subsidiaries in Barcelona (Spain), Madrid (Spain), Palaiseau (France), Kontich (Belgium),Santiago de Chile (Chile) and in the Middle East providing support to a network of distributors and partners throughout the world, selling, integrating and offering technical assistance with all Saifor solutions for data processing centers and control rooms.

certifications & warranty

All products shown within this brochure are in accordance at least with one or more of the next certifications. Other certifications are available based on specific market requirements.

CERTIFICATIONS & WARRANTY:

• UNE EN ISO 9001:2008

• UNE EN ISO 14001:2004

• (CE) 1221/2009 EMAS REGULATION

• According CE Marking Directive

• RoHS Compliance 2050/95/CE

solutions for datacenter infrastructures

Saifor offers a full portfolio of products for high-density infrastructures at datacenters.

racks technology

The accumulated experience built up with all implemented projects allows us to ensure that we produce one of the best racks on the market, specially developed to be used in server applications. Designed to fit into Datacenter environments, the Arctic series features the widest possible range of accessories designed to meet all installers' needs while minimising response time in the event of incidents which involve working inside the rack.

cooling solutions

Overheating is one of the key factors severely affecting IT perfomance, due to the fact that server units are reducing in size, day after day. SACS (Saifor Advanced Cooling Systems) is a full range of scalable cooling solutions to effectively handle unwanted heat loads, from a single rack to a complete Datacenter, ensuring the maximum perfomance of the installed equipment.

There is an increasing need to control the power and the electricity supply to the equipment installed in a Datacenter. Power Distribution Units (PDU's) are necessary for every installation. Intelligent PDU's enable controlling and monitoring the equipment's power supply and diversifying power sources.

monitoring & control

Supervision of the installed equipment in a Datacenter gives the system administrator complete local or remote control over both software and hardware. With intelligent systems, like Keyboard Video Mouse (KVM), consultations can be securely performed over the network.

TEMP.IMPULSION
18.5% TEMP.RETORNO

sacs
saifor advanced cooling solutions

SACS is the SAIFOR cooling solutions range for Data Processing Centers, providing bespoke solutions for High and Medium Density facilities.

The products include precise, high performance air/water heat exchangers, air-flow control systems, and other solutions to optimise cooling in existing facilities.

The constant progress of the new technologies has led to increasingly compact and powerful equipment, which means a direct increase in energy consumption for actual operation and to provide the facility with adequate cooling.

The main problem lies in the fact that nearly half of all energy consumption in datacenters is used for cooling, which is in many cases partially wasted due to inefficient design, planning, installation, or maintenance.

SAIFOR, as an industrial specialist providing state-of-the-art solutions for the infrastructure of datacenters, offers its SACS range, an advanced range of solutions that respond to the following issues:

INCREASING COOLING EFFICIENCY

Application of new solutions for datacenter design which, in combination with air containment systems, enable the service temperature of the datacenters to be increased.

REDUCING ENERGY CONSUMPTION AND CO_2 EMISSIONS

More efficient designs combined with the use of cooling solutions with variable operating functionality, which self-regulate their working state in real time according to the specific needs of the time.

OPTIMISING COOLING EFFICIENCY IN EXISTING FACILITIES

Solutions that are easy to apply in pre-installed SAIFOR racks, especially recommended for Low and Medium Density solutions.

SCALABILITY

Modular solutions can be implemented in the future, thus making it possible to grow and invest, according to the needs of the time.

MONITORING AND SAFETY

Specific products for the supervision and management of the physical cooling infrastructure. These enable operability and preventive maintenance of the facility to be monitored.

ECONOMIC SAVING

As a result of their initial planning and the savings resulting from the energy consumption, efficient facilities lead to a fast ROI and provide an essential base for future expansion.

REDUCED TOTAL COST OF OWNERSHIP (TCO)

Thanks to its modular design, the Cool Units can be placed next to heat sources to optimise the cooling resources, at the same time offers the required Flexibility & Scalability to grow according to the needs.

On the oder hand the use of electronic variable-speed fans reduces energy consumption during less active periods.

sacs

saifor advanced cooling solutions

aisle cooling units

This is the most optimal solution for medium-sized and large Data Centres.

The main advantage lies in the fact that the air-conditioning units are placed close to heat sources.

HDC Aisle - Up to 36Kw
MDC Aisle - Up to 17Kw

See page 10.

rack cooling units

This is the most optimal solution for ultra high density racks and for installation in rooms not designed fot this purpose (small datacenters, office environments, production plants, etc.).

HDC Rack - Up to 31Kw
MDC Rack - Up to 13Kw

See page 14.

existing infrastructures optimisation system

SAIFOR proposes 2 simple, highly efficient solutions that guarantee scalability and continuity of facilities already acquired, in environments that were not designed to host medium/high density equipment.

HTRD - High Thermal Rear Door - Up to 6Kw
CADU - Cool Air distribution Unit - Up to 3Kw

See page 19.

CADU

HTRD

supervision and monitoring system

With the **Keep-Cool®** supervision system, it is possible to monitor up to 200 serial-installation units providing real-time monitoring and management of the working state of the operational cooling units.

See page 18.

CUBO®aisle containment system

This is a modular and scalable system that can be used to physically isolate cold and hot aisles in order to increase the efficiency of energy intended for cooling. It prevents the hot air dissipated from the back of machines from being absorbed at the front.

The SAIFOR range offers 3 configuration types for aisle air containment:

Cubo® Active Hot air Containment
Cubo® Active Cold air Containment
Cubo® Cold air Containment

See page16.

40kW

35kW

30kW

25kW

20kW

15kW

10kW

8kW

6kW

4kW

2kW

CADU

HTRD

MDC RACK

MDC AISLE

HDC RACK

HDC RACK (NO FILTER)

HDC AISLE

HDC**AISLE)**
high density cooling

Up to 36kW*

Specifically designed for high density Data Centres, it offers a maximum cooling capacity of up to 36 Kw with a 12°C water inlet and an outgoing air-flow over 5000m3/h, at a temperature of 22°C.

It is ready for operation with ΔT of the air of up to 25°C, so that it can function at high water-intake temperatures, thus reducing condensation levels and chiller consumption. These characteristics make it especially recommended for operation in facilities provided with **Free Cooling** type external Chillers.

This means a total commitment to reduce carbon emissions while optimising PUE (Power Usage Effectiveness) of the datacentre.

It is supplied in standard format, optimised for facilities combined with the SAIFOR CUBO® air containment system for hot aisle. Set up for cold aisle containments is optional.

IMPROVED OPERATING AND ENERGY EFFICIENCY:
• Front temperature control.
• 100% speed control of EC fans.
• Automatic regulation of operation according to real time needs.

OPTIMISED INSTALLATION AND MAINTENANCE COSTS:
• Bespoke design according to needs (not oversized).
• Does not require raised floor, accepts connections from from top and bottom.
• Long-life fans (60.000 hours) located in the cold area (front).

OPERATING AND MONITORING SAFETY:
• Remote management using a display with an integrated web browser.
• Double containment system for condensation and possible leak.
• Optional closing systems with keypad or card reader.
• Three password access levels.
• G4 type high-density filters; 1.5 microns (as per EN-779 standard) MERV 8 in accordance with ASHRAE 52.2.

MDC**AISLE)**
medium density cooling

Up to 17kW*

Designed for medium density datacenters, it offers a maximum cooling capacity of up to 17 Kw with 8°C water inlet and outgoing air-flow of more than 2700m3/h at a temperature of 20°C.

This is an attractive, cost-effective solution for small medium-density facilities, which require high thermal efficiency, with Redundancy N+1 or N+2 for future needs, benefitting from the modularity offered by the aisle solutions.

It is supplied in standard format, optimised for facilities combined with the SAIFOR CUBO® air containment system for hot aisle.

HIGH OPERATING AND ENERGY EFFICIENCY:
• 6 variable-speed fans.
• Automatic regulation of operation according to real time needs.

OPTIMISED INSTALLATION AND MAINTENANCE COSTS:
• Bespoke design according to needs (not oversized).
• Does not require raised floor, accepts connections from from top and bottom.

OPERATING AND MONITORING SAFETY:
• Local management using a display.
• Remote management by SAIFOR RMS system (optional).
• Water containment system for condensation and possible leak.

(*) These values are result of conjunction of 4 variables (water flow, water inlet temperature, Rear Air temperature in rack and airflow) which they depend on each individual installation, and may vary the final cooling capacity. We recomended to consult an expert in each installation to get the optimum results.

aisle cooling solutions

AISLE COOLING UNITS:

This is the most optimal and efficient solution for medium-sized and large data centres.

The aim is to increase efficiency by placing the cool units closer to heat sources, absorbing the air from the cold aisle, cooling it, and blowing it towards the servers' air intakes.

This allows for greater modularity in planning, as the necessary capacities can be provided for the installation date, and the time to adapt the infrastructures to future needs can also be projected.

In this respect, SAIFOR offers empty modules with the same dimensions which can be installed in the same row of racks. The advantage of this is that the hydraulic installation can be fitted in the initial phase of the projects, while the additional Cool Units can be fitted only once they are needed.

Greater efficiency is achieved in combination with the SAIFOR CUBO® air containment systems, as it prevents mixing of hot and cold air which can be absorbed by the installed servers.
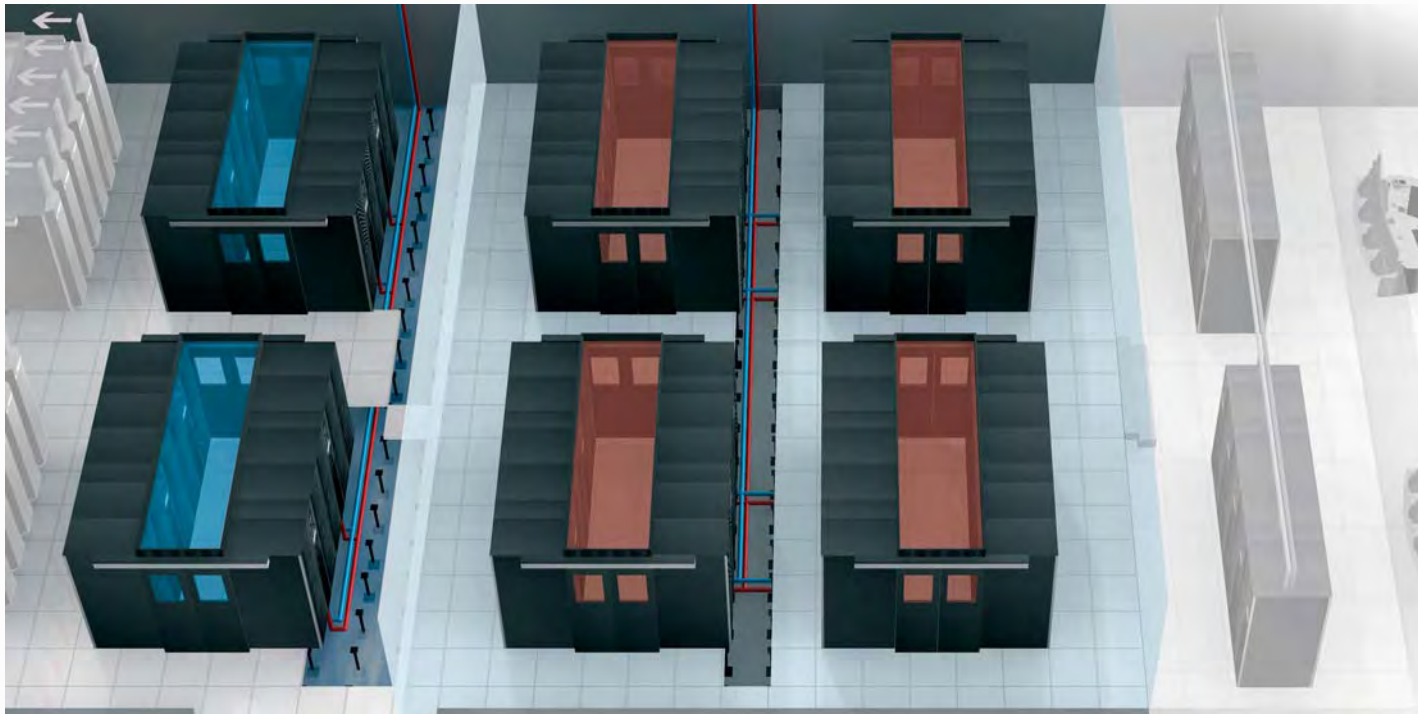
Benefits:

• Possibility to create high-density zones in the same row of racks.
• Stable and constant cooling from bottom to top of the rack.
• Positioning of the cool units next to heat sources.
• Forgoes the room air-conditioning concept in favour of a more efficient concept with cool units for each row of racks.
• All other equipment installed in the room work at more appropriate ambient temperatures than in the case of cold aisle containment.
• Multiple options for simple redundancy N+1 or N+2 by adding more units.
• Redundancy N+2 can be used to incorporate more equipment into the aisle racks in the future, up to solution N+1.
• With redundancy in each aisle, it is possible to stop a unit for maintenance work, reducing downtime for maintenanse & operations.
• Access to vital parts of the product from the front and rear.

18.6°C
TEMP.IMPULSION
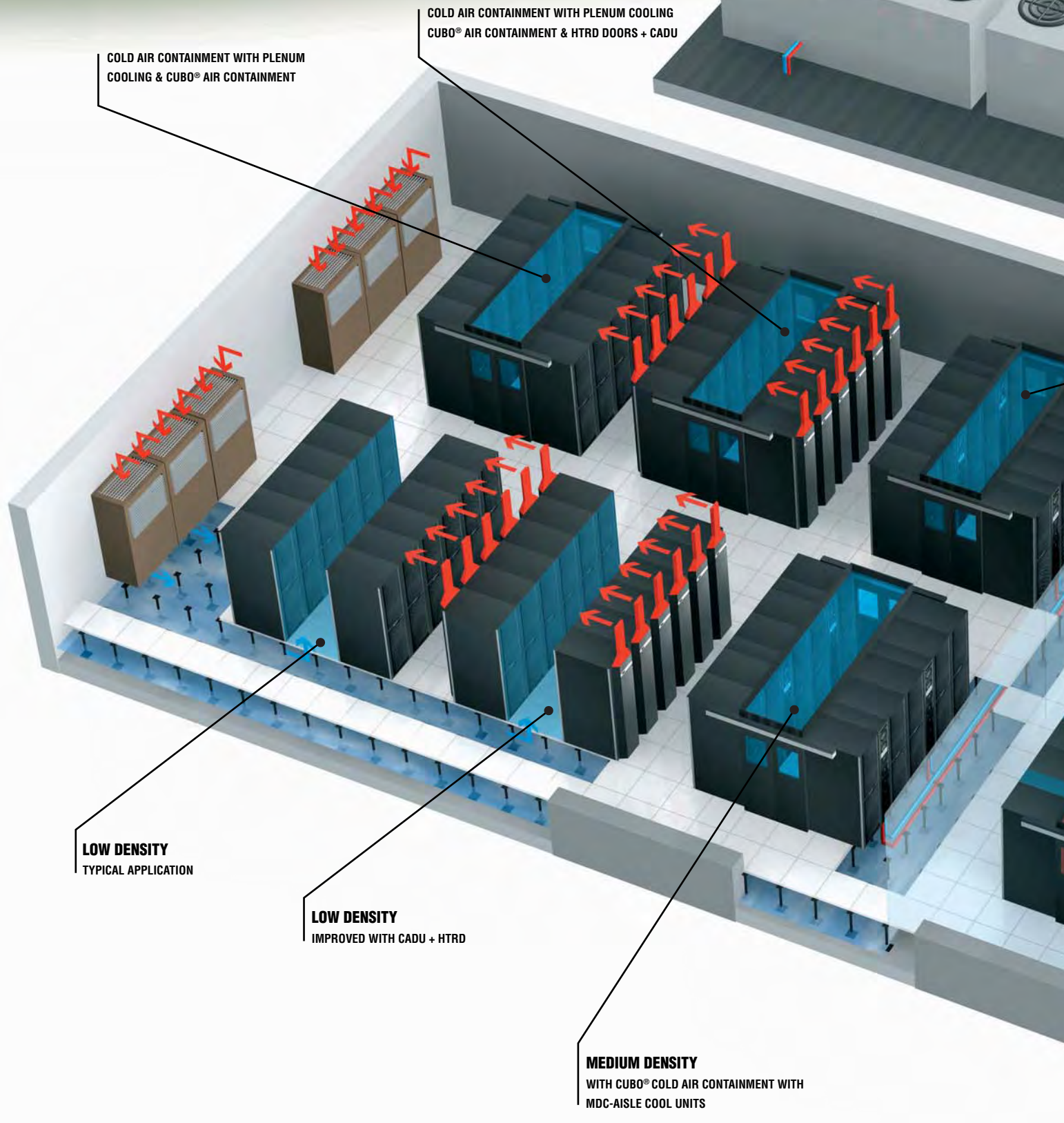
SAIFOR®

COLD AIR CONTAINMENT WITH PLENUM COOLING
CUBO® AIR CONTAINMENT & HTRD DOORS + CADU

COLD AIR CONTAINMENT WITH PLENUM
COOLING & CUBO® AIR CONTAINMENT

LOW DENSITY
TYPICAL APPLICATION

LOW DENSITY
IMPROVED WITH CADU + HTRD

MEDIUM DENSITY
WITH CUBO® COLD AIR CONTAINMENT WITH
MDC-AISLE COOL UNITS

COOLING**SOLUTIONS)**
SAIFOR ADVANCED COOLING SYSTEM

((COOLING)) SOLUTIONS

EXTERNAL CHILLER
FREE COOLING POSSIBLE

HIGH DENSITY
HOT AIR CONTAINMENT WITH CUBO® AIR
CONTAINMENT & HDC-AISLE COOL UNITS

HIGH DENSITY
COLD AIR CONTAINMENT
WITH HDC-AISLE COOL UNITS

HIGH DENSITY
HDC-RACK WITH N+1 CONFIGURATION

NETWORK OPERATION
CENTRE WITH KEEP-COOL
SUPERVISOR MANAGER
& SAIFOR CONSOLES

MEDIUM DENSITY
WITH CUBO® HOT AIR CONTAINMENT WITH
MDC-AISLE COOL UNITS

SAIFOR ®

HDC**RACK**)
high density cooling

Up to 31kW*

The Cool Unit HDC - Rack shares the same functional characteristics as the Cool Unit HDC - Aisle, but with the addition of the rack containment kit.

Given its closed design, and to prevent an excessive intake of air pressure at the front of the servers, it offers a maximum cooling capacity of up to 31kW with a 12°C water intake and an outgoing air-flow of higher than 4000m3/h, at a temperature of 22°C.

It is designed as a response to facilities using ultra high density Blade Server technology in which the equipment is capable of dissipating up to 31kW, or for rooms where, due to space issues, it is not possible to implement aisle air containment solutions.

SAFETY AND MONITORING:
• The standard supply incorporates automatic door opening in the event that the overheating alarm is triggered or in the case of fire.
• An external temperature sensor to monitor sensitive areas of the rack.

MODULARITY:
• This enables configuration of various racks and cool units in the same row to provide air circulation, even in the event that one cool unit fails.

SCALABILITY:
• In in-line configurations in a safe environment, high-performance filters can be replaced to obtain greater air flow and cool capacity.

MDC**RACK**)
medium density cooling

Up to 13kW*

The Cool Unit MDC - Rack shares the same functional characteristics as the Cool Unit MDC - Aisle but with the addition of the basic rack containment kit (no automatic door opening).

Designed for Medium-Density Data Centres, it offers a maximum cooling capacity of up to 13 Kw with a 8°C water intake and an outgoing air-flow of more than 2000m3/h at a temperature of 20°C.

It is an attractive, cost-effective solution for small medium-density facilities that require high thermal efficiency in a very compact space.

MODULARITY:
• Possibility of compact configurations with various racks and Cool Units in the same line, with a Cool Unit placed between every 2 racks. It requires redundancy N+1.

SCALABILITY:
• With in-line configurations, in a safe environment, the filters can be replaced to achieve greater flow rate and power.

(*) These values are result of conjunction of 4 variables (water flow, water inlet temperature, Rear Air temperature in rack and airflow) which they depend on each individual installation, and may vary the final cooling capacity. We recomended to consult an expert in each installation to get the optimum results.

rack cooling units

RACK COOLING UNITS:

With the rack cooling format, a closed loop is created by laterally connecting the rack to the cool unit by means of additional frames placed at the ends of the assembly enabling maximum use of the rack in depth and optimisation of the air flows.

When recirculating the air outside the rack, there are no obstructions or equipment to prevent the installed servers from being cooled properly, thus ensuring that the cool air reaches the front of the rack at all times, regardless of the position in which the servers are set up.

Furthermore, since the air is not expelled outside the aisle but rather moves through the front/rear frames, greater ΔT are achieved which ensures that the units continue to work in best cooling zone.

The HDC-Rack is the most efficient solution, as it is possible to work with ΔT of the air up to 25°C, and is therefore the most ideal solution for ultra high-density applications combined with external Free-Cooling type chillers.

In addition, given that it is a thermally isolated format, with a protection grade of IP 40, it is ideal for installation in industrial and office environments
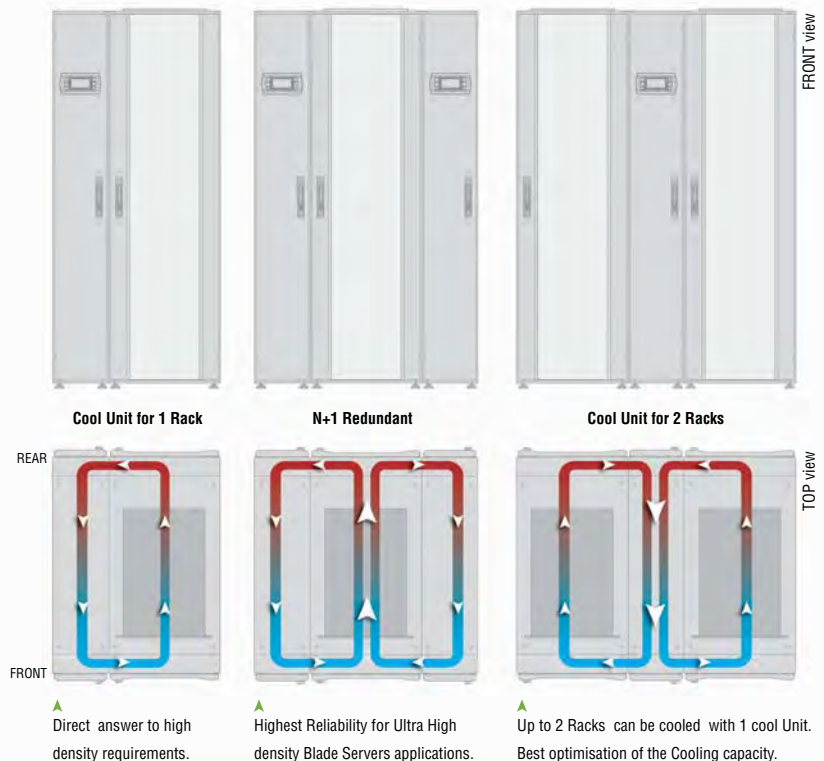
EXAMPLE OF COOLING RACK:

FRONT view

REAR

TOP view

FRONT
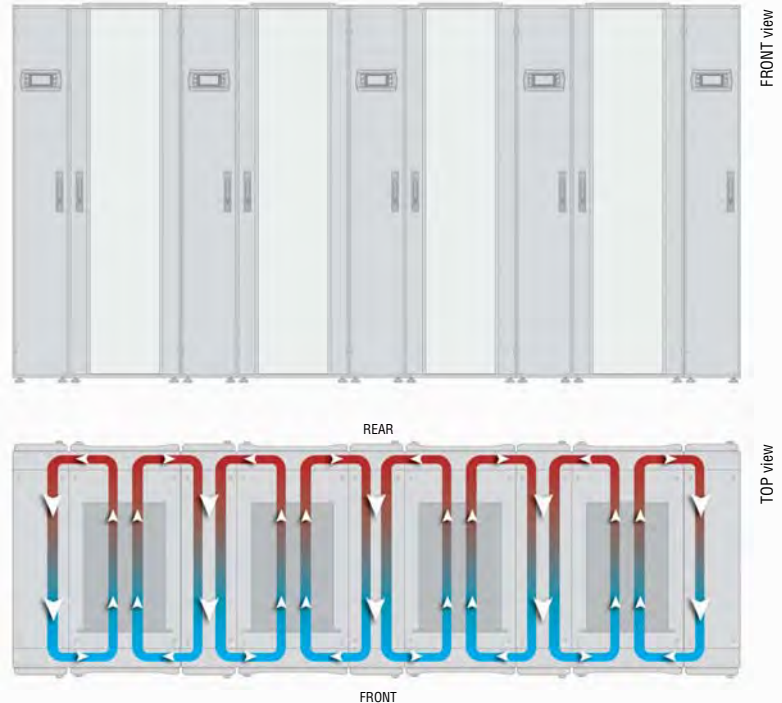
RACK COOLING UNITS SOLUTIONS:
Benefits:
- Individual cooling for 1 or 2 racks.
- Possibility of Redundancy N+1.
- Real time information and supervision at rack-level.
- Fast response capability and regulation of the cooling unit operation.
- The air flows are completely contained within the rack.
- Air conditioning independent of the room conditions (heat and dust).
- Can be implemented in rooms not configured as a Data Centre.
- Can be implemented in rooms whose initial layout was not intended.
  for high-density needs.
- Requires little space.
- Low noise.
- Easy to install hydraulics.
- Possibility to adapt to any ARCTIC rack already in operation.
- Possibility to change over to an aisle system.
- Thermally neutral with the room.

CONFIGURATION OPTIONS:

FRONT view

Cool Unit for 1 Rack   **N+1 Redundant**   **Cool Unit for 2 Racks**

REAR

FRONT

TOP view

Direct answer to high density requirements.

Highest Reliability for Ultra High density Blade Servers applications.

Up to 2 Racks can be cooled with 1 cool Unit. Best optimisation of the Cooling capacity.

CUBO®)

CUBO® aisle containment system

This is a modular and scalable system that physically isolates the cold and hot aisles in order to increase energy efficiency intended for cooling. It prevents the hot air dissipated at the back of the equipment from being absorbed by the front part of the equipment.
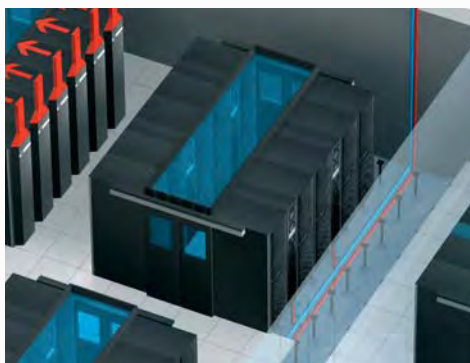

CUBO® ACTIVE HOT AIR CONTAINMENT

The SAIFOR range offers 3 types of configurations for aisle air containment:

CUBO® ACTIVE HOT AIR CONTAINMENT

Hot aisle containment system combined with aisle cool units.
SAIFOR recommends the use of hot aisle containment solutions for various reasons:
1. When the hot air becomes concentrated, air ΔT is increased and the cooling units are kept in the best operating zone.
2. The cold air expelled into the cold aisles can be used to reduce the overall temperature of the room.
3. The room itself acts as a "cold-air containment".
4. More uniform distribution of cold air according to the hot spots in the room.
5. Possibility of higher temperature in the cold aisles so that chillers can work at higher temperatures, reducing CO_2 emissions.
6. Ideal solution for installations with Free Cooling.

CUBO® ACTIVE COLD AIR CONTAINMENT

CUBO® ACTIVE COLD AIR CONTAINMENT

Cold aisle containment system with aisle cool units.
In this case, the Cool Units blow the cold air to the contained aisle, being the hot air dissipated to the room. When the heat of the equipment in the room is dissipated, the ΔT is lowered, making it necessary to work with higher temperatures so as to achieve the best working conditions for the cooling units.
SAIFOR recommends implementing this when CUBO® active hot air containment.

Example: Data Centres with traditional cooling prepared for Medium Density, which need to apply High-Density solutions.
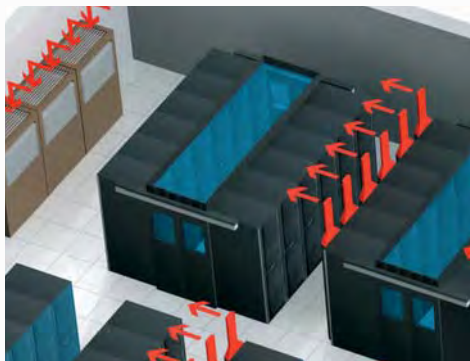
CUBO® COLD AIR CONTAINMENT

CUBO® COLD AIR CONTAINMENT

Cold aisle containment system to optimise facilities with a traditional Plenum cooling system.

Cold aisle containment in datacenters that work with a under-floor cool system increase their efficiency through containment of the cold-air aisles.
By closing off the cold aisles and thus preventing the mixture of hot and cold air, more constant and stable temperatures are achieved in the upper parts of the racks.

These improvements, in conjunction with the optimisation and control of the air flows, enable the room's operating temperature to be increased with the resulting energy saving.

Benefits:

- High energy efficiency.
- Increased operating room temperatures.
- Cool units operating in their optimal performance (Greater ∆T).
- Elimination of Hot Spots.
- Reduced noise from the equipment.
- Predictability.
- Scalability.
- Modularity.

KEEP-COOL®)

supervision and control system

The **Keep-Cool®** supervision module is used to centralise control of up to 200 units installed in serials (up to 600 cool units with additional modules) and offers real-time monitoring and management of the status and functionality of the operating cooling units.

It uses the most advanced web protocols and stores the information in the database (reliability & portability). It is the perfect solution since it is a Plug & Play system which considerably simplifies installation and fast implementation.

The correct use of the control unit, combined with an analysis of data obtained over time will enable the settings for the whole facility to be optimised, from the chiller to the cool units, ensuring the datacenter operate in the most efficient manner according to the real needs of the facility.

Benefits:
• SAIFOR software compatible with existing BMS (Building Management Systems).
• Modbus, SNMP, BACnet, Lonworks interfaces.
• Possibility to control multiple units under a single IP.
• Alarm management.
• Simplification of HACCP management by creating reports and charts for temperatures and alarms.

KEEP-COOL®)

CUBO®)   UP TO 200 UNITS   HDC**RACK**)
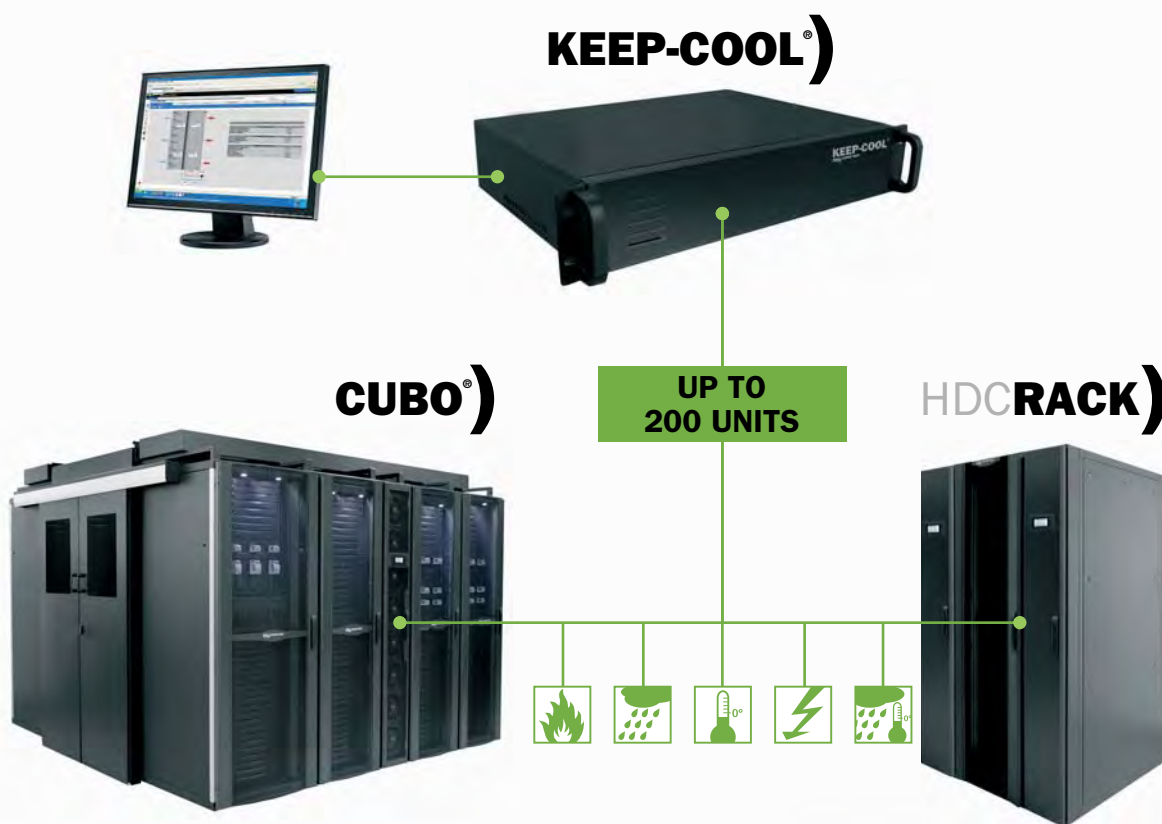
existing infrastructures optimisation system

SAIFOR offers 2 highly efficient and simple solutions to ensure scalability and continuity of facilities acquired previously in environments that were not designed to host medium/high density equipment.

Benefits:
- Easy to integrate into previously fitted SAIFOR racks.
- Work friendly systems.
- Optimum purchase cost.
- Low maintenance cost.
- Quick start-up.
- Does not require modifications to the room.
- Does not require installation of water in the Data Centre.

HTRD - High Thermal Rear Door

High Thermal Rear Door, fitted with variable-speed turbines that function according to preset temperatures which, in combination with room cooling systems, provide cooling of capacity up to 6 Kw.
Product of special delivery.

CADU - Cool Air distribution Unit

Air distribution unit located in the lower units of the rack, which redirects the cold air entering a plenum towards the front of the rack. Combined with room cooling systems, it provides cooling of capacity up to 3 Kw.

CADU
Up to 3kW

HTRD
Up to 6kW
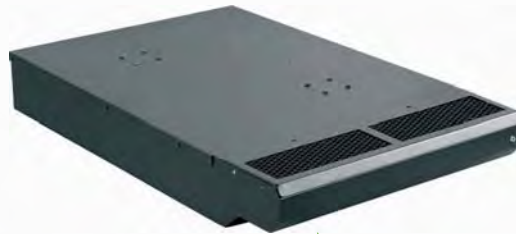
Main features comparison chart

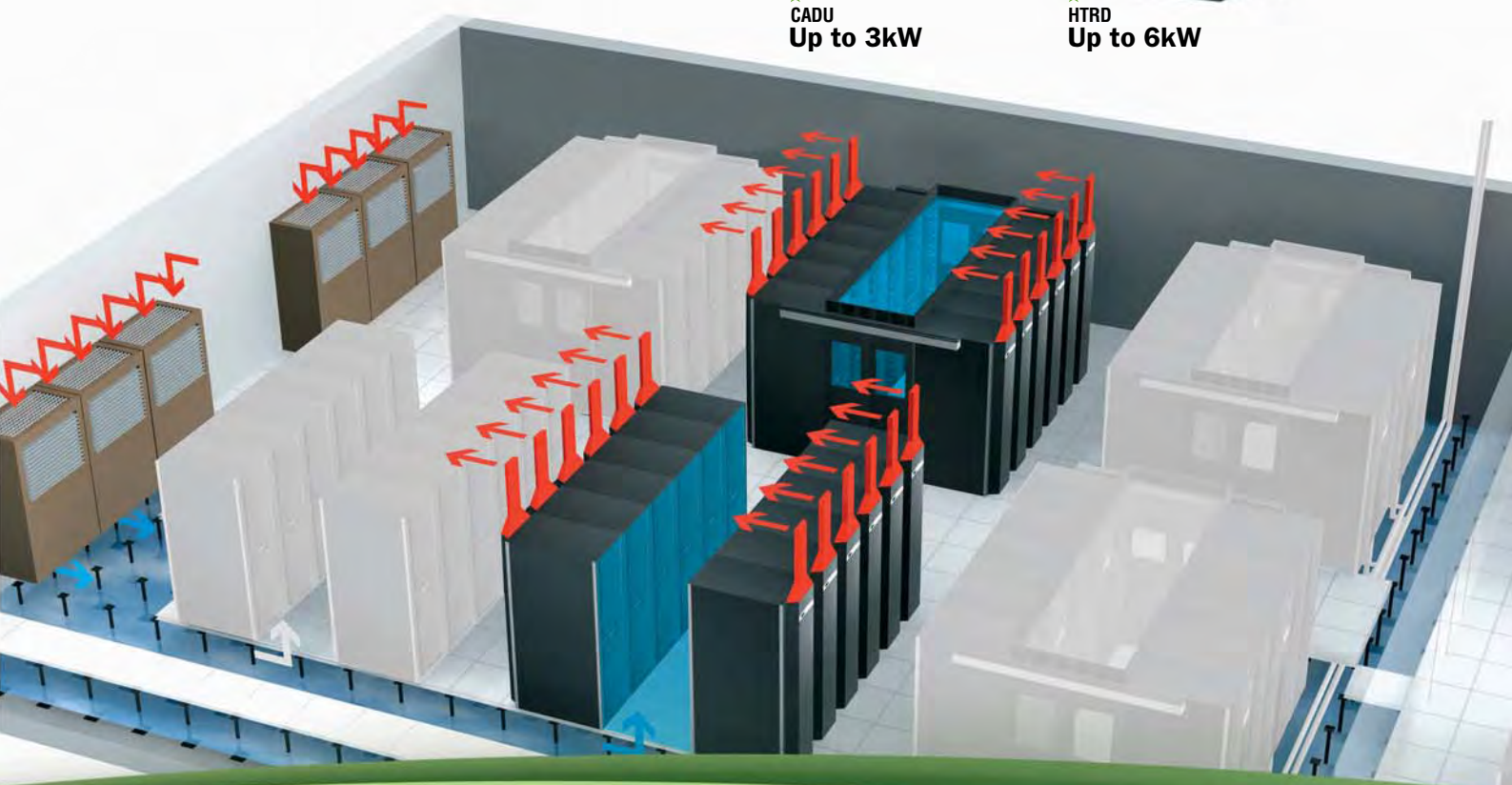|		AISLE		RACK		
		HDC High Density cooling	**MDC** Medium Density cooling	**HDC** High Density cooling (with filters)	**HDC** High Density cooling (without filters)	**MDC** Medium Density cooling
CAPACITY	MAXIMUM CAPACITY	**36 KW**	**17 KW**	**28 KW**	**31,5 KW**	**13 KW**
	Water range in temp	6 a 20°C	6 a 15°C	6 a 20°C	6 a 20°C	6 a 15°C
	Max Flow	1 l/s	1 l/s	1 l/s	1 l/s	1 l/s
	Max ΔT	25°C	25°C	25°C	25°C	25°C
	Max Air Flow	5000 m3/h	2750 m3/h	3800 m3/h	4300 m3/h	2000 m3/h
	Max temp Out	52°C	52°C	52°C	52°C	52°C
FANS	Number of fans	8	6	8	8	6
	Type	EC	AC	EC	EC	AC
	High Efficiency	•	x	•	•	x
	Integrated Electronics	•	x	•	•	x
	Variable fan speed	30-100%	30-100%	30-100%	30-100%	30-100%
	Air Volume	5000 m3/h	2750 m3/h	3800 m3/h	4300 m3/h	2000 m3/h
	Fans life (Hours)	60.000	40.000	60.000	60.000	40.000
FILTERS	Efficiency	G4	G3	G4	x	G3
	Air filter clogged sensor	•	x	•	x	x
POWER	Power Supply(V, Hz)	230/1 ~, 50/60 Hz	230/1 ~, 50/60 Hz	230/1 ~, 50/60 Hz	230/1 ~, 50/60 Hz	230/1 ~, 50/60 Hz
	Max Power consumption	**990 W**	**690 W**	**990 W**	**990 W**	**690 W**
HYDRAULIC	Valve	3 ways iso-percentage	2 ways on/off	3 ways iso-percentage	3 ways iso-percentage	2 ways on/off
	Max pressure drop	1 bar (1l/s)	2 bar (1l/s)	1 bar (1l/s)	1 bar (1 l/s)	2 bar (1 l/s)
	Max pressure	5 bar	5 bar	5 bar	5 bar	5 bar
	Max glycol %	35%	30%	35%	35%	30%
CONDENSATE	Condensate tray	•	•	•	•	•
	Double security tray	•	x	•	•	x
	Maximum recom. head	20 m	20 m	20 m	20 m	20 m
	Water flow rate	15 l/h	15 l/h	15 l/h	15 l/h	15 l/h
CONTROL	Net connection	TCP - IP	x	TCP - IP	TCP - IP	x
	Web browser	integrated	x	integrated	integrated	x
	BMS Compatible	•	x	•	•	x
	Communication Protocols	Modbus, SNMP, BACnet,Lonworks	x	Modbus, SNMP, BACnet,Lonworks	Modbus, SNMP, BACnet,Lonworks	x
DOORS	Automatic door opening	x	x	•	•	x
	Model	Steel, 81% vented	Steel, 81% vented	Steel, thermal insulated	Steel, thermal insulated	Steel, thermal insulated
	Lock	Key - Multi point	Key - Multi point	Key - Multi point	Key - Multi point	Key - Multi point
FIXATION	Feet	Castors and height adjustable feet	Height adjustable feet	Castors and height adjustable feet	Castors and height adjustable feet	Height adjustable feet
SENSORES	Temp sensor	•	•	•	•	•
	External temp sensor	•	•	•	•	•
	Humidity	•	•	•	•	•
	Leak detector	•	•	•	•	•
	Air filter clogged sensor	•	x	•	•	x
	Flow meter	•	x	•	•	x
	Speed fan sensor	•	x	•	•	x
	Power supply	•	x	•	•	x
	Smoke detector	Optional	Optional	Optional	Optional	Optional

• Standard supply

x Not available

configurations & accessories

AISLE COOLING SYSTEMS	MDC	HDC
COOL UNIT X1 42U 1000 AISLE	C.0085095	C.0085688
COOL UNIT X1 47U 1000 AISLE	C.0085096	C.0085690
COOL UNIT X1 42U 1200 AISLE	C.0085306	C.0085689
COOL UNIT X1 47U 1200 AISLE	C.0085307	C.0085691

RACK COOLING SYSTEMS	MDC	HDC
RACK + COOL UNIT		
COOL UNIT X1 + 42U 600X1000 GD/SD	C.0085081	C.0085660
COOL UNIT X1 + 42U 800X1000 GD/SD	C.0085082	C.0085662
COOL UNIT X1 + 47U 600X1000 GD/SD	C.0085083	C.0085664
COOL UNIT X1 + 47U 800X1000 GD/SD	C.0085084	C.0085666
COOL UNIT X1 + 42U 600X1200 GD/SD	C.0085692	C.0085661
COOL UNIT X1 + 42U 800X1200 GD/SD	C.0085693	C.0085663
COOL UNIT X1 + 47U 600X1200 GD/SD	C.0085694	C.0085665
COOL UNIT X1 + 47U 800X1200 GD/SD	C.0085695	C.0085667
RACK + COOL UNIT + RACK		
COOL UNIT X1 + 42U 600X1000 GD/SD + 42U 600X1000 GD/SD	C.0085085	C.0085668
COOL UNIT X1 + 42U 800X1000 GD/SD + 42U 800X1000 GD/SD	C.0085086	C.0085670
COOL UNIT X1 + 42U 600X1000 GD/SD + 42U 800X1000 GD/SD	C.0085087	C.0085672
COOL UNIT X1 + 47U 600X1000 GD/SD + 47U 600X1000 GD/SD	C.0085088	C.0085674
COOL UNIT X1 + 47U 800X1000 GD/SD + 47U 800X1000 GD/SD	C.0085089	C.0085676
COOL UNIT X1 + 47U 600X1000 GD/SD + 47U 800X1000 GD/SD	C.0085090	C.0085678
COOL UNIT X1 + 42U 600X1200 GD/SD + 42U 600X1200 GD/SD	C.0085696	C.0085669
COOL UNIT X1 + 42U 800X1200 GD/SD + 42U 800X1200 GD/SD	C.0085697	C.0085671
COOL UNIT X1 + 42U 600X1200 GD/SD + 42U 800X1200 GD/SD	C.0085698	C.0085673
COOL UNIT X1 + 47U 600X1200 GD/SD + 47U 600X1200 GD/SD	C.0085699	C.0085675
COOL UNIT X1 + 47U 800X1200 GD/SD + 47U 800X1200 GD/SD	C.0085700	C.0085677
COOL UNIT X1 + 47U 600X1200 GD/SD + 47U 800X1200 GD/SD	C.0085701	C.0085679
N+1 REDUNDANT COOL UNIT + RACK + COOL UNIT		
COOL UNIT X2 + 42U 600X1000 GD/SD	C.0085091	C.0085680
COOL UNIT X2 + 42U 800X1000 GD/SD	C.0085092	C.0085682
COOL UNIT X2 + 47U 600X1000 GD/SD	C.0085093	C.0085684
COOL UNIT X2 + 47U 800X1000 GD/SD	C.0085094	C.0085686
COOL UNIT X2 + 42U 600X1200 GD/SD	C.0085702	C.0085681
COOL UNIT X2 + 42U 800X1200 GD/SD	C.0085703	C.0085683
COOL UNIT X2 + 47U 600X1200 GD/SD	C.0085704	C.0085685
COOL UNIT X2 + 47U 800X1200 GD/SD	C.0085705	C.0085687

GD Glass door
SD Steel door

HTRD	
HTRD HIGH THERMAL EXTRACTION DOOR 42U 600	E.0013011
HTRD HIGH THERMAL EXTRACTION DOOR 42U 800	E.0013012
HTRD HIGH THERMAL EXTRACTION DOOR 47U 600	E.0013013
HTRD HIGH THERMAL EXTRACTION DOOR 47U 800	E.0013014

CADU	
CADU - COOL AIR DISTRIBUTION UNIT	E.0012815
CADU FILTER 292x592x48	E.0013196

KEEP-COOL	
SUPERVISION & CONTROL SYSTEM MANAGER	E.0018270

| ACCESORIES & SPARE PARTS	MDC	HDC
100 MM PLINTH DEPTH 1000	E.0013778	E.0018250
100 MM PLINTH DEPTH 1200	E.0016739	E.0018251
ELECTRONIC SECURITY LOCK 2 DOORS	E.0016714	-
UNIT MODULE 2 FANS	E.0013779	E.0018233
SPARE FILTER	E.0013780	E.0018252
MODULE 2 TURBINES 1 EXIT	E.0013781	-
MODULE 2 TURBINES 2 EXITS	E.0014264	-
AIR TEMPERATURE SENSOR	E.0016045	E.0018253
HUMIDITY SENSOR	E.0016046	E.0018254
WATER TEMPERATURE SENSOR	E.0016047	-
LEAK WATER SENSOR	E.0016048	E.0018255
CONDENSER PUMP (20M)	E.0016049	E.0018256
DETECTOR OPEN KIT (x4)	E.0016050	E.0018257
DETECTOR OPEN KIT (x6)	E.0016051	E.0018258
SMOKE SENSOR	E.0016052	E.0018259
VISUAL AUDIBLE ALARM	E.0016053	E.0018260
BAYING KIT COOL UNIT	-	E.0018241
VISUAL SOUNDLESS ALARM COOL UNIT	-	E.0018261
CASTORS + FEET SUPPORT KIT	E.0018884	-
FRONT/REAR PANEL KIT SUP. CASTORS+FEET	-	E.0018885

accessories CUBO®

COL.	DESCRIPTION	PART. NUMBER
	SLIDING DOOR KEYLOCK CUBO® 47U 1000	E.0014258
	SLIDING DOOR KEYLOCK CUBO® 47U 1200	E.0014259
	SLIDING DOOR KEYLOCK CUBO® 47U 1400	E.0014260
	SLIDING DOOR KEYLOCK CUBO® 42U 1000	E.0014369
	SLIDING DOOR KEYLOCK CUBO® 42U 1200	E.0014370
	SLIDING DOOR KEYLOCK CUBO® 42U 1400	E.0014371
	SLIDING DOOR ELEC. KEYLOCK CUBO® 42U 1000	E.0014372
	SLIDING DOOR ELEC. KEYLOCK CUBO® 42U 1200	E.0014373
	SLIDING DOOR ELEC. KEYLOCK CUBO® 42U 1400	E.0014374
	SLIDING DOOR ELEC. KEYLOCK CUBO® 47U 1000	E.0014261
	SLIDING DOOR ELEC. KEYLOCK CUBO® 47U 1200	E.0014262
	SLIDING DOOR ELEC. KEYLOCK CUBO® 47U 1400	E.0014263
	ROOF TILE ELEVATOR CUBO® RACK 300	E.0014375
	ROOF TILE ELEVATOR CUBO® RACK 600	E.0014376
	ROOF TILE ELEVATOR CUBO® RACK 800	E.0014377
	ROOF TILE CUBO® SIMPLE 1000X750	E.0014378
	ROOF TILE CUBO® SIMPLE 1200X750	E.0014379
	ROOF TILE CUBO® SIMPLE 1400X750	E.0014380
	ROOF TILE CUBO® CENTER CABLE TRAY 1000X750	E.0014381
	ROOF TILE CUBO® CENTER CABLE TRAY 1200X750	E.0014382
	ROOF TILE CUBO® CENTER CABLE TRAY 1400X750	E.0014383
	FIREPROOF ROOF TILE CUBO® SIMPLE 1000X750	E.0014384
	FIREPROOF ROOF TILE CUBO® SIMPLE 1200X750	E.0014385
	FIREPROOF ROOF TILE CUBO® SIMPLE 1400X750	E.0014386
	FIREPROOF ROOF TILE CUBO® CENTER CABLE TRAY 1000X750	E.0014387
	FIREPROOF ROOF TILE CUBO® CENTER CABLE TRAY 1200X750	E.0014388
	FIREPROOF ROOF TILE CUBO® CENTER CABLE TRAY 1400X750	E.0014389

COL.	DESCRIPTION	PART. NUMBER
	DIVIDER MODULE 300X1000 42U	E.0015254
	DIVIDER MODULE 300X1000 47U	E.0015255
	DIVIDER MODULE 300X1200 42U	E.0016043
	DIVIDER MODULE 300X1200 47U	E.0016044
	FRONTAL PLINTH BOTTOM CUBO® 300	E.0017611
	FRONTAL PLINTH BOTTOM CUBO® 600	E.0017612
(*)	FRONTAL PLINTH BOTTOM CUBO® 800	E.0017613
	SIDE PLINTH DOOR CUBO® 1000	E.0017614
	SIDE PLINTH DOOR CUBO® 1200	E.0017615

COL.	DESCRIPTION	PART. NUMBER
	DEPTH SUPPORT 600	E.0016770
	DEPTH SUPPORT 800	E.0016771
	DEPTH SUPPORT 1000	E.0016772
	DEPTH SUPPORT 1200	E.0016773
	DUCT 300 UNIT	E.0016778
	DUCT 600 RACK	E.0016779
	DUCT 800 RACK	E.0016780
	DUCT CORRIDOR 1000	E.0016781
	DUCT CORRIDOR 1200	E.0016782
	DUCT CORRIDOR 1400	E.0016783
	TRANSVERSAL DUCT SUPPORT 300	E.0016784
	TRANSVERSAL DUCT SUPPORT 600	E.0016785
	TRANSVERSAL DUCT SUPPORT 800	E.0016786
	CENTRAL SPACER	E.0016787
	SIDE DUCT COVER	E.0016788

(*) Accessorie for the CUBO® bottom closing configuration, in order to prevent the air flow leaking.
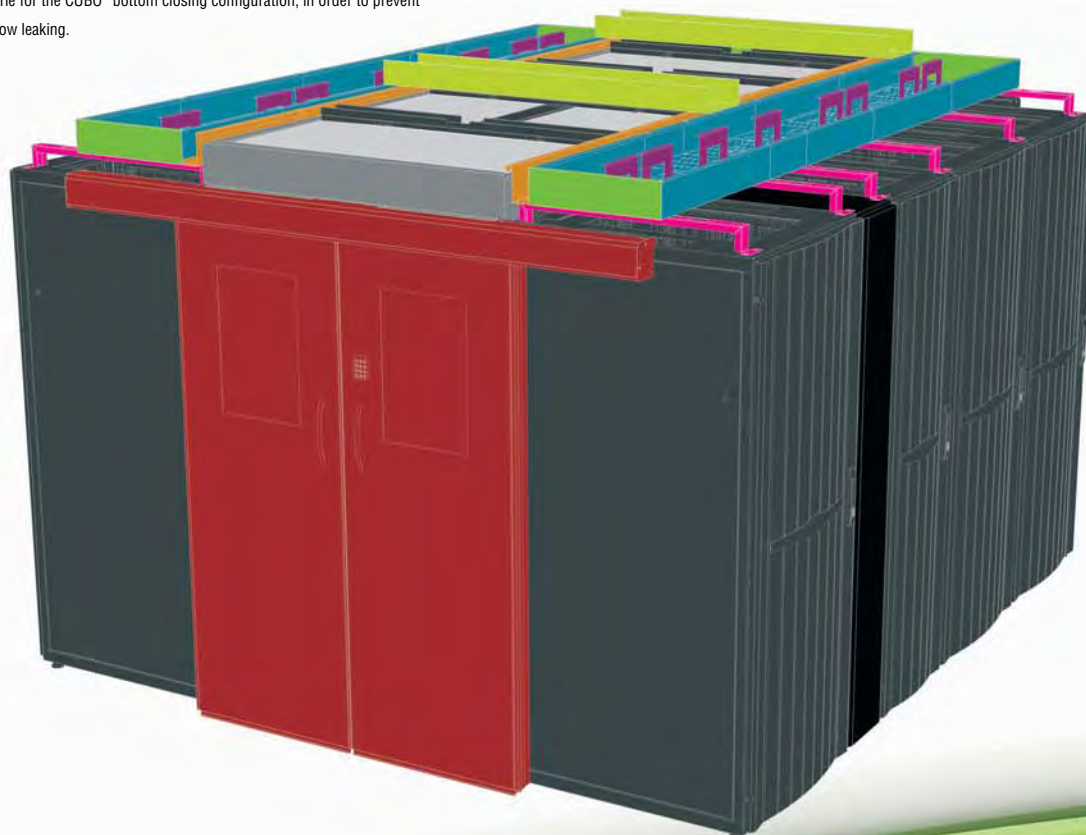
www.saifor.com

SK SAIFOR ®

SAIFOR S.L.
Global Headquarters
WORLDWIDE Sales
Poligono Industrial La Plana, nave 4
08785 VALLBONA D'ANOIA (Barcelona) SPAIN
Tel. +34 93 771 83 38 · Fax +34 93 771 84 47
Email: saifor@saifor.com · www.saifor.com

SAIFOR France S.A.R.L.
Country Sales Office
FRANCE
Zone Industrielle des Glaises
9, Rue Salvador Allende
91120 PALAISEAU – France
Tel. +33 01 69191290 · Fax +33 01 69191291
Email : saifor@saifor.fr · www.saifor.fr

SAIFOR Benelux bvba
Country Sales Office
BELGIUM, NETHERLANDS & LUXEMBOURG
Prins Boudewijnlaan 17, unit 4
2550 Kontich · Belgium
Tel. +32 3 444 05 00 · Fax +32 3 444 05 09
Email: info@saifor.be · www.saifor.be

SAIFOR CHILE
Comercial Danoia Limitada
CHILE
Avenida Carlos Valdovinos, 1380
8910049 SAN MIGUEL (Santiago) - CHILE
Tel. +5627108690 · Fax +5627108689
Email: saifor@saifor.cl · www.saifor.cl

SAITEK, S.L.
Country Sales Office
SPAIN, PORTUGAL & ANDORRA
Parque Empresarial Alvia
José Echegaray, 8 Ed. 3 · Pl. Baja · Mod. 2
28230 LAS ROZAS (Madrid) - SPAIN
Tel. +34 916 402 090 · Fax +34 916 402 067
saitekmadrid@saitek.es · www.saitek.es

www.saiforgroup.com
www.datacentersolutions.eu