

CONTEG



CLIMATE CONTROL SOLUTIONS

Modern • Flexible • Effective • Energy Saving



IT Air Conditioning Units

CoolTeg Plus

CoolTeg Plus represents a family of precision cooling units specifically designed for easy integration between IT racks. These air conditioning units, which offer a variety of commonly used cooling principles, sizes and capacities, are Conteg's main product line for effective targeted cooling of server rooms and large data centers.

MAIN FEATURES:

High-efficiency centrifugal EC fans

- Up to 50% energy savings compared to AC motors
- Perfect speed control from 20 - 100%
- Server-friendly air flow and pressure control

Perfect project adaptability

- Variable architecture, depths and heights
- Top and bottom connection
- Optional built-in humidifier
- Group management SW, wide range of accessories
- Raised floor in IT room is not necessary
- Easy installation and maintenance

Modern control system

- Precise monitoring, intelligent control, friendly communication
- Two humidity and four temperature sensors per unit
- 4,3" colour touch-screen display
- TCP/IP communication via Ethernet connector
- Standard web server remote-control
- Wide range of communication options



SUITABLE FOR:

- Open or closed (hot/cold) rack aisles
- **Conteg's Modular Closed Loop** - a custom-built cabinet in which IT components can be arranged to fit a variety of server racks and cooling equipment.

BASIC TECHNICAL DATA:

Feature		AC-TCW-xx-30	AC-TCW-xx-60	AC-TDX-xx-30
Dimensions	Width	300 mm	600 mm	300 mm
	Depth	1000 and 1200 mm		
	Height	42U (1978 mm), 45U (2111 mm), 48U (2245 mm)		
	Weight	163-185 kg	248-280 kg	163-185 kg
Cooling capacity	Nominal	26 kW	61 kW	7 / 12 / 20 kW *
	Maximal	35 kW	82 kW	8,1 / 14,1 / 21,6 kW *

* Three different capacity types

TO COMPLETE YOUR NETWORK

CoolTeg Plus CW

CoolTeg Plus CW units are focused on saving energy and ease of operation, and can be installed in any chilled water system with variable coolants.

MAIN FEATURES:

Flexible cooling capacity

- 7-35 kW or 16-82 kW (depending on the actual water and air temperatures)
- Controlled by air and water flow
- Each unit comprised of a two- or three-way water valve
- Perfect coil temperature control prevents undesirable condensation and energy loss
- Ready for higher water temperatures and free-cooling

Perfect project adaptability

- Two sizes (CW30 and CW60)
- Very low operating costs
- Unlimited size and cooling capacity of the complex system

SUITABLE FOR:

- Any type of data center
- Applications with cooling capacity over 100 kW
- Cooling systems with chilled water source and theoretically unlimited cooling capacity
- **Free-cooling systems**

CoolTeg Plus DX

CoolTeg Plus DX units are focused on low investment cost and ease of operation. Direct Expansion system consists of indoor CoolTeg Plus DX unit and outdoor condensation unit with compressor.

MAIN FEATURES:

Flexible cooling capacity

- 3-21 kW (depends on outdoor unit size and temperatures)
- Automatically adaptable to IT demands
- Three sizes of outdoor condensation units
- Compressor with very low power consumption and variable capacity control

Perfect project adaptability

- Very low investment costs
- High substitutability (redundancy) thanks to several independent cooling systems
- Numerous group functions (sequencing, emergency mode, overload, etc.)
- Connects to Mitsubishi outdoor condensing units, with refrigerant pipework up to 100 m!

SUITABLE FOR:

- Any type of data center
- Server rooms with total capacity up to approximately 100 kW
- Small applications – e.g. Modular closed loops in branch offices



CoolTop

CoolTop represents a family of precision cooling units specifically designed for installation on top of IT racks in server rooms and large data centers. An ideal cooling system for Conteg-contained IT rack aisles. Unique solution for IT environments without occupied floor area in data centers.

MAIN FEATURES:

Effective use of data center floor space

- Cooling systems with Cooltop units occupy zero floor area
- Raised floor unnecessary for air distribution

Very low power consumption

- Set of highly-efficient fans with EC technology motors
- Perfect airflow control
- Optimized heat exchanger and interior aerodynamics
- Recommended pressure control

Perfect project adaptability

- Easy grouping of CoolTop units to meet requested capacities
- Ideal for contained hot or cold aisles



CoolTop Unit

SUITABLE FOR:

- Any type of data center
- Applications with large amounts of floor space
- Clients focused on saving energy

BASIC TECHNICAL DATA:

Feature	CoolTop2	CoolTop3
Number of EC fans	2	3
Max. air flow	7 700 m ³ /h	11 000 m ³ /h
El. consumption at this capacity	710 W	1 107 W
Net cooling capacity with the following parameters: air 35 ° C, 25% rh; water 10/15 ° C	37,8 kW	46,9 kW
Dimensions (D x W x H)	300 x 2400 x 600 mm	

Our Advantages

1. CoolTeg Plus versus CRAC unit

CoolTeg	CRAC unit	Advantages of CoolTeg Plus
Delivers cold air to where it's needed - air in front of server	Cold air travels a long way	Air, energy and value savings.
Cold or Hot Containment available	Cold aisle room arrangement only	CoolTeg units deliver the cooling solution best suited for your data center. And you will benefit from substantial energy savings.
Open or Closed Architecture	Open architecture only	Conteg manufactures Modular Closed Loop (MCL), custom-made containers with variable server racks and cooling units. Keeps your servers safe and in perfect condition.
Easy to plan different power and temperature zones - each rack aisle can use different temperature. Different heat-density zones per rack	One temperature in the entire room	Better addresses IT equipment needs while reducing the cooling system's power consumption.
Step-by-step enlargement of data center	Large initial investment, with poor efficiency in partially-used data center	Easily expands to fit the needs of a growing data center, allowing you to enjoy maximum efficiency from the very beginning.

2. Save your money with our CoolTop system

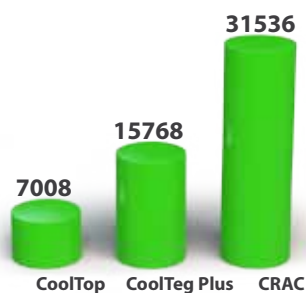
Case study:

Server room with 16 IT racks of 60x100 cm in a contained cold or hot aisle arrangement. The temperature in front of the servers is 25°C and the hot zone maximum temperature is 35°C. Chillers with free-cooling function prepare 10/15°C cold water. The total cooling capacity is 96 kW (6 kW per rack), with n+1 redundancy.

3 option comparison:

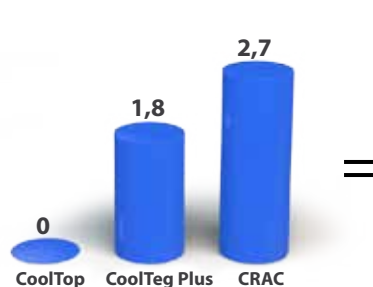
1. 4 **CoolTop** units
2. 6 **CoolTeg Plus** CW30 units (in-row design)
3. 2 chilled water **CRAC** units (Computer Room Air Conditioner)

Annual power consumption (kWh)

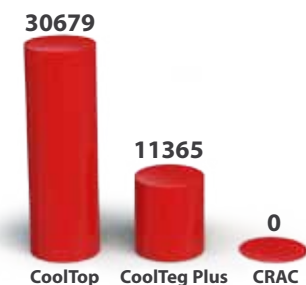


Under optimum use conditions of redundant units.

Occupied floor area (sqm)



Total annual savings €/year



Assuming the cost of energy is 0,15 €/kWh and a charge for 1 footprint (0,6 m²) in a DC is 500 €/month.

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