



# COOLING UNITS FOR IT

Modern | Flexible | Effective | Energy Saving

**CONTEG**



# WE ARE CONTEG

## Leading Producer of IT, Data Center, and Industrial Solutions

Our purely Czech manufacturing company was founded in 1998. Today we are one of the leading manufacturers of complex solutions in the field of data centers, telecommunications and industry. We provide a global sales and technical support, have manufacturing plants equipped with latest technologies.

Individual cooling units from the Targeted Cooling portfolio are an integral part of our comprehensive data center solution. Our product range includes in-row, above-rack, in-rack and room cooling units for IT as well as all types of individual cooling units for industrial and outdoor solutions—roof-, wall- and side-mounted. We can also offer you ventilation units and other airflow routing products, the use of which is a prerequisite for efficient cooling of installed technology.



### Complete portfolio

cooling units for IT, industry and outdoor solutions



### High quality construction

latest technology and components, environmentally friendly refrigerants



### Variability of use

cooling units for all types of applications: in-row, above- and in-rack, room; roof-, wall- and side-mounted



### Customized solutions

specific solutions according to customer's requirements



### Energy-saving solutions

unique innovations with low operating cost



Extended 5-year warranty  
for CONTEG cooling units



Comparison	CoolTeg Plus				CoolTop		CoolSeven	CoolRAC		
	CW	DX	XC	DF	CW	DX		CW	XC	DF
<b>Installation</b>										
Between IT racks	✓	✓	✓	✓	-	-	-	-	-	-
On top of IT racks	-	-	-	-	✓	✓	-	-	-	-
Inside of 19" racks	-	-	-	-	-	-	✓	-	-	-
Farther from IT racks	-	-	-	-	-	-	-	✓	✓	✓
<b>Cooling medium</b>										
Water/glycol	✓	-	-	-	✓	-	-	✓	-	-
R410A	-	✓	✓	-	-	✓	✓	-	✓	-
R410A + water/glycol	-	-	-	✓	-	-	-	-	-	✓
<b>Application</b>										
Smaller	✓	✓	✓	✓	✓	✓	✓	-	-	-
Medium	✓	-	✓	✓	✓	✓	-	✓	✓	✓
Bigger	-	-	-	-	-	-	-	✓	✓	✓
<b>Occupied floor area (in data center)</b>										
None	-	-	-	-	✓	✓	✓	-	-	-
Small	✓	✓	✓	✓	-	-	-	-	-	-
Large	-	-	-	-	-	-	-	✓	✓	✓
<b>Nominal cooling capacity</b> <span style="float: right;">Air temperature in hot zone: 35 °C; water temperature of 6/12 °C (for CW units), no condensation.</span>										
7-19 kW	-	DXSmall DX30	-	-	-	-	CoolSeven	-	-	-
20-39 kW	CW30 CW30 SuperC	DX30	XC30	DF	CoolTop2	CoolTop2 CoolTop3	-	-	-	-
40-100 kW	CW60	-	XC40	-	CoolTop3	CoolTop2 CoolTop3	-	CoolRAC CW CoolRAC XC CoolRAC DF		
<b>Suitable for</b>										
Smaller applications – e.g. Modular Closed Loop	-	✓	-	✓	-	-	✓	-	-	-
High outside temp.	-	-	✓	-	-	-	✓	-	✓	-
Cooling system with a cold-water source	✓	-	-	-	✓	-	-	✓	-	-
No water in a data center	-	✓	✓	-	-	✓	-	-	✓	-
Free-cooling	✓	-	-	✓	✓	-	-	✓	-	✓

# CoolTeg Plus

CoolTeg Plus in-row cooling units are specifically designed for easy integration between IT racks. With various cooling principles, sizes and capacities—they are our main product line for effective targeted cooling, from server rooms to large data centers.

## MAIN ADVANTAGES

- Small occupied floor area
- Brings chilled air directly to server rack
- Raised floor unnecessary for air distribution
- Very low power consumption, due to EC fans and control software
- Modern and user-friendly control system
- Flexibility of room arrangement
- Perfect compatibility with CONTEG IT racks
- Wide range of accessories

## Suitable for:

- Contained cold aisle
- Contained hot aisle
- Modular closed loop system—high capacity cooling system, where air is recirculated inside the rack and no heat is released into the environment
- Open aisle



## CoolTeg Plus CW

CoolTeg Plus CW in-row cooling unit is designed to be connected to any type of chilled water.

### MAIN ADVANTAGES

- Virtually unlimited number of indoor units per hydraulic circuit
- Free-cooling system saves significant amount of power
- Water temperature variable during the year, saving energy while controlling humidity level
- Variable chiller types fulfill any requirements
- Operation water temperature between 6 °C and 30 °C



## CoolTeg Plus DX

CoolTeg Plus DX in-row cooling unit works on the direct expansion principle, with refrigerant circulating between one indoor and one outdoor unit (equipped with a compressor).

### MAIN ADVANTAGES

- No water in data center
- Independent indoor and outdoor unit system ensures the whole system's redundancy
- Easy installation and additional capacity expansion
- R410A refrigerant
- Fluent cooling capacity control

# CoolSeven

7U tall in-rack cooling unit is integrated into 19" racks and utilizes a split cooling system composed of two components—an indoor and an outdoor unit.

## MAIN ADVANTAGES

- Unit is a direct expansion type which provides precision cooling inside racks
- Compatible with all 19" IT racks
- Individual cooling control on rack level
- EC fans with very low power consumption
- Heat dissipation directly from the racks to outside areas
- Precise and fluent cooling capacity control corresponding to air temperature
- A variant of the outdoor unit for very low temperatures is available
- Can operate without filters
- A wide selection of accessories
- Capable of communicating with a monitoring system (e.g. CONTEG Pro Server)
- Emergency door opening function when the emergency temperature is exceeded. Compatible with the EOS—Emergency opening system.

## Suitable for:

- Office spaces
- IT racks or compact data centers (MCL—Modular Closed Loop)
- Racks with insufficient or no air conditioning
- Dusty environments



## CoolTeg Plus XC

CoolTeg Plus XC in-row cooling unit is based on the direct expansion principle. A compressor is integrated inside the indoor unit, which is connected to its outdoor condenser.

### MAIN ADVANTAGES

- Remarkable energy efficiency and stepless cooling capacity control
- Operation in extreme temperatures (–45 °C up to +55 °C)
- Regulation between 10-100 % cooling capacity
- No water in data center
- Compressor safely positioned inside the data center
- Variable design of outdoor unit (with regards to temperature, space, noise level, etc.)
- Low level of outdoor unit's noise
- R410A refrigerant



## CoolTeg Plus DF

CoolTeg Plus DF in-row cooling unit is based on an innovative principle of dual-fluid cooling that combines water-based and direct expansion cooling.

### MAIN ADVANTAGES

- Integrated free cooling
- Width of only 40 cm and a maximum cooling capacity of up to 24.5 kW
- The most efficient dual-fluid heat exchanger in its category
- Low operating costs
- Redundancy within one system



# CoolTop

CoolTop above-rack cooling units are specially designed for easy installation on the top of IT racks, and are perfectly suitable for effective targeted cooling of server rooms and large data centers.

## MAIN ADVANTAGES

- Does not occupy floor area
- Brings chilled air directly to cold aisle in front of server racks
- Vertical air loop, with local flexibility
- Extremely low power consumption due to large heat exchanger and EC axial fans
- Modern and user-friendly control system
- Allows flexibility of room arrangement
- Raised floor unnecessary for air distribution
- Installs easily in contained hot or cold aisle
- Perfectly compatible with CONTEG IT racks + wide range of accessories
- Controller with ModBus communication (contained in the controller)

## Suitable for:

- Contained cold aisle
- Contained hot aisle
- Can be combined with CoolTeg Plus units in the same zone (aisle)



## CoolTop CW

CoolTop CW above-rack cooling unit is specially designed for easy installation above IT racks, and is uniquely suitable for effective targeted cooling of server rooms and large data centers.

## MAIN ADVANTAGES

- Regulation between 0-100 % cooling capacity
- Virtually unlimited number of indoor units per hydraulic circuit
- Free-cooling system saves significant amount of power
- Water temperature variable during the year, saving energy while controlling humidity level
- Variable chiller types fulfill any requirements
- Operation water temperature between 6 °C and 30 °C

## CoolTop DX

Indoor CoolTop DX above-rack cooling unit is connected with outdoor condensing unit/units via refrigerant piping. CoolTop DX includes special heat exchanger with two separate refrigerant circuits.

## MAIN ADVANTAGES

- No water in data center
- Dual-circuit heat exchanger
- Regulation between 30-100 % cooling capacity
- If the CoolTop DX unit is connected to the CoolOut unit—the cooling capacity control is then starting from 11 %
- Ready to be connected to 2 outdoor units

# CoolOut

The CoolOut outdoor condensing unit is specially designed for conducting heat out of data centers. The unit meets all the strict demands on precision, stability and service life required for data centers.

## MAIN ADVANTAGES

- Advanced communication and cooling regulation based on commands from the data center
- Very low consumption thanks to high-quality EC fans and active regulation of condensing pressure
- Inverter-controlled BLDC compressor
- Wide range of cooling power from 11 % upwards
- Versions for extreme ambient temperatures available
- Robust frame and housing made of high-quality corrosion-resistant materials
- Ability to communicate with a monitoring system (SNMP, Modbus TCP, Modbus RS485)
- Ability to monitor and control operating parameters through the indoor unit
- Simple to install and operate
- Option for remote servicing after connecting a PGDx service display
- Specially designed for precision cooling
- Linear electronic expansion valve



# CoolRAC

A range of indoor room cooling units with cooling capacities from 40 to 100 kW and with three different cooling technologies. Variable fan module installation with air outlet above the floor, in a double floor or on the ductwork. CoolRAC units can be equipped with a large number of additional accessories. They can also be fitted with one or two powerful radial EC fans to increase redundancy.

## CoolRAC CW

Indoor room cooling unit designed to be connected to any type of chilled water.

- Variable chiller types fulfill any requirements
- Free-cooling system saves significant amount of power
- Virtually unlimited number of indoor units per hydraulic circuit

## CoolRAC XC

Indoor room cooling unit based on the principle of compressor cooling and direct evaporation. The compressor is integrated into the indoor unit, which is connected to its external condenser unit.

- Operation in temperatures from  $-40^{\circ}\text{C}$  up to  $+55^{\circ}\text{C}$
- Regulation between 17–100 % cooling capacity

## CoolRAC DF

Indoor room cooling unit based on an innovative principle of dual-fluid cooling that combines water-based and direct expansion cooling.

- Indirect free-cooling integrated in the indoor room cooling unit, which can be connected to one or more outdoor dry coolers
- The indoor room cooling unit automatically switches between compressor, mixed and water mode according to the temperatures outside and inside the data center, to minimize the energy consumption of the system







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