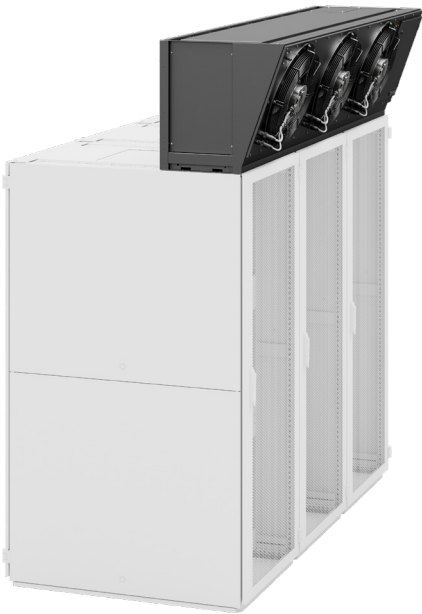


DATASHEET
Cooling units
CoolTop CW

COOLTOP CW COOLING UNITS





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

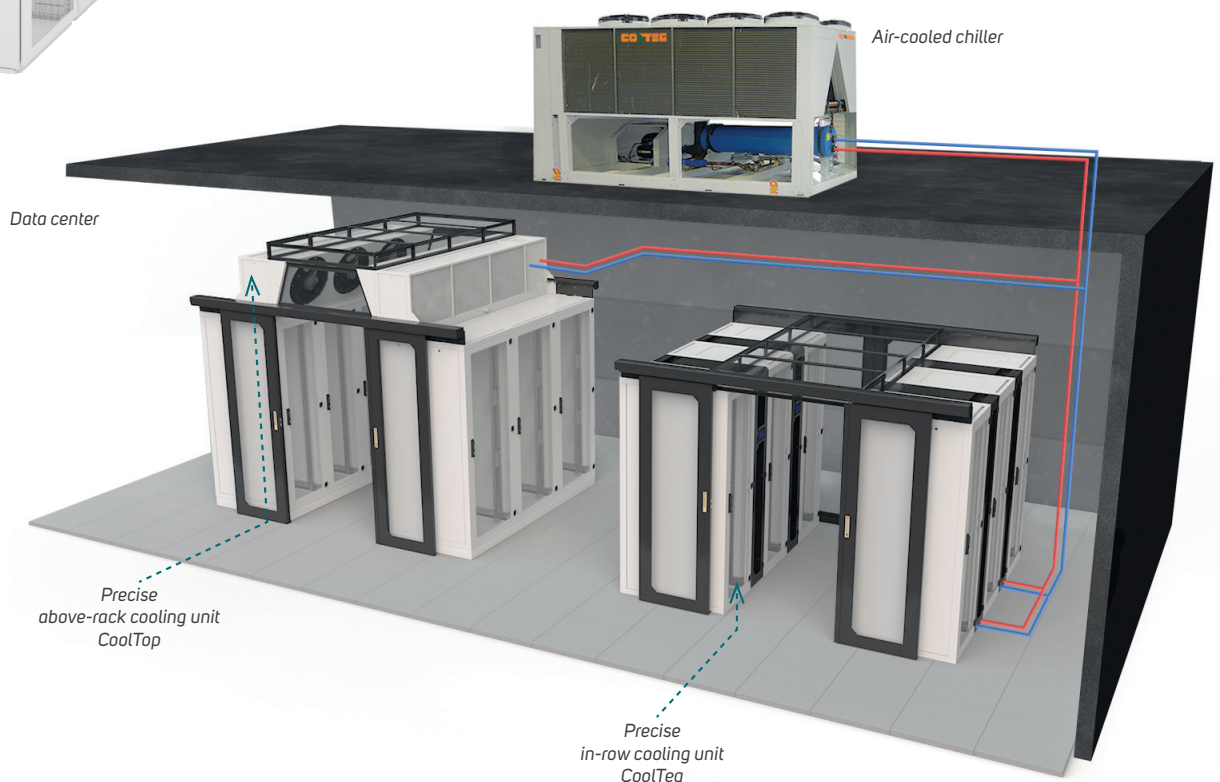
MAIN ADVANTAGES

- 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
- Stainless steel double condensate tray located under the heat exchanger
- Regulation between 0–100 % cooling capacity
- 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)

COLOR:  RAL 9005  RAL 7035



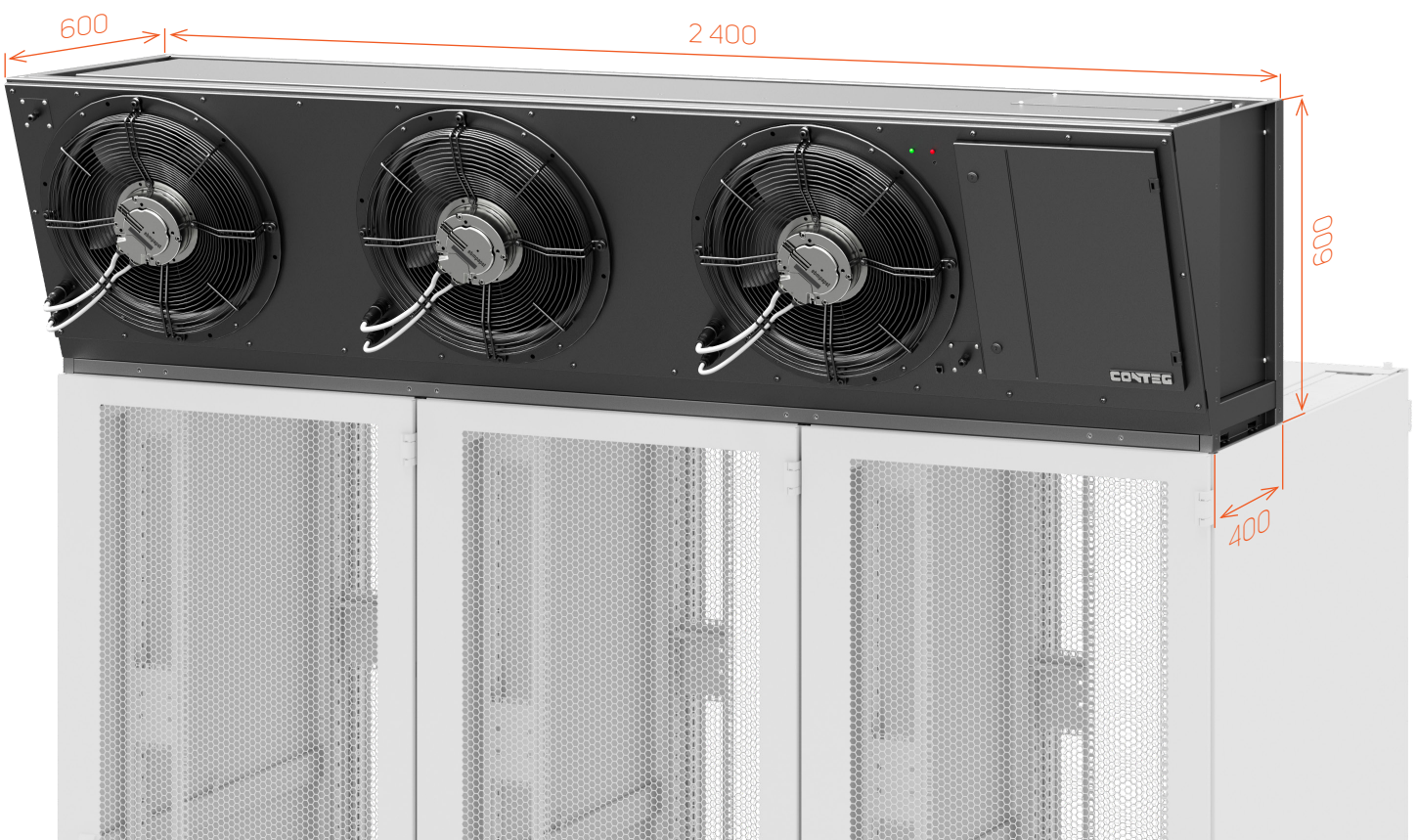
CoolTop CW—technical parameters

| | | CoolTop2 | CoolTop3 |
|---|-------------------|--------------------------------|-------------------|
| Indoor unit code | Unit | AC-TOP2-CW-240/60 | AC-TOP3-CW-240/60 |
| Connected outdoor unit | | Chilled water system (Chiller) | |
| Basic data | | | |
| Cooling system | – | Chilled water | |
| Architecture | – | Open | Open |
| Nominal cooling capacity ¹ | kW | 37.0 | 49.2 |
| Nominal net cooling capacity ² | kW | 36.3 | 48.1 |
| Power supply | V/ph/Hz | 230/1/50 | |
| Running current | A | 3.4 | 5.0 |
| Maximum current | A | 4.6 | 6.8 |
| Nominal power consumption | W | 710 | 1100 |
| Nominal airflow ³ | m ³ /h | 7 700 | 11 000 |
| Number of fans | ks | 2 | 3 |
| Motor fan technology | – | EC | |
| Water flow | l/h | 6 200 | 8 200 |
| Filter class | – | G2 (+ droplet separator) | |
| Dimensions | | | |
| Height ⁴ | mm | 600 | |
| Width | mm | 2 400 | |
| Depth ⁵ | mm | 400 (600) | |
| Weight ⁶ | kg | 175 | 184 |
| Piping connection | | | |
| Supply pipe diameter and type | – | 6/4" female | |
| Return pipe diameter and type | – | 6/4" female | |

¹ Cooling capacity can be changed via electronic controller. Nominal cooling capacity is stated for air temperature of 35 °C in hot zone, without condensation (heat-exchanger's temperature above dew-point). Water temperature is 10/15 °C, clean filters. ² Net cooling capacity (without heat from fans) is usable cooling capacity of entire system.

³ Airflow is changed by control needs. ⁴ Without any base frame. ⁵ Bottom side length 400 mm; top side length 600 mm. ⁶ For weight with droplet separator, add 11 kg.

CoolTop unit dimensions (in mm)



CoolTop CW and CoolTop DX—ordering and shipping information

Configure the above-rack CoolTop cooling unit that meets your requirements. The ordering matrix below will help you create a Code. As soon as you have the Code, please contact your CONTEG products distributor.

FOLLOW THE STEPS FOR DETERMINING THE CODE OF THE REQUIRED COOLTOP UNIT

AC - 1. - 2. - 3. / 4. - 5. 6. 7. 8. 9. 10. 11. 12. 13.

An example of a correct code:

AC - TOP3 - CW - 240 / 60 - 0 R C 0 W P 0 0 0

Explanation of an example of a correct Code: CoolTop3 above-rack cooling unit with three EC fans, chilled water, open architecture, width 2 400 mm, depth 400 mm and height 600 mm. Water rope detector; Condensate pump; Power supply 230V/1ph/50Hz; Communication card SNMP pCO WEB; Pressure control; 3-way valve.

| 1. CoolTop COOLING SYSTEM | |
|---------------------------|-----------------|
| Code | Model |
| TOP2 | With two fans |
| TOP3 | With three fans |

| 2. COOLING SYSTEM | |
|-------------------|------------------|
| Code | Options |
| CW | Chilled water |
| DX | Direct expansion |

| 3. WIDTH | |
|----------|------------|
| Code | Width (mm) |
| 240 | 2 400 |

| 4. HEIGHT | |
|-----------|--------------|
| Code | Height (mm) |
| 60 | 600 |

| 5. DROPLET SEPARATOR | |
|----------------------|-------------------|
| Code | Options |
| 0 | Without |
| E | Droplet separator |

| 6. SECURITY | |
|-------------|----------------------------------|
| Code | Options |
| 0 | Standard |
| S | Dew sensor |
| R | Water rope detector |
| A | Dew sensor + water rope detector |

| 7. CONDENSATE PUMP | |
|--------------------|-----------------|
| Code | Options |
| 0 | Without |
| C | Condensate pump |

| 8. POWER SUPPLY | |
|-----------------|------------------------|
| Code | Options |
| 0 | Standard 230V/1ph/50Hz |
| A | Dual power supply |

| 9. COMMUNICATION | |
|------------------|---------|
| Code | Options |
| 0 | Without |
| M | Modbus |
| W | SNMP |

| 10. CONTROL | |
|-------------|------------------------------------|
| Code | Options |
| 0 | Standard |
| P | Pressure control |
| H | Humidity sensor |
| R | Pressure control + humidity sensor |

| 11. CONTROL VALVES | |
|--------------------|------------------------|
| Code | Options |
| 0 | Standard (3-way valve) |
| 2 | 2-way valve |
| Z | Without valves |

| 12. OTHER ACCESSORIES | |
|-----------------------|---------|
| Code | Options |
| 0 | - |
| D | Display |

| 13. SPECIAL MODIFICATION | |
|--------------------------|--|
| Code | Options |
| 0 | Standard |
| 2 | Ready to be connected to 2 outdoor units (DX only) |



BASIC ACCESSORIES

TOUCH SCREEN

- For more user-friendly communication with the unit's regulator, you can use a 4.3" color touch screen.
- A single touch screen can control up to 16 cooling units. For quick communication and full functionality of BMS, we recommend using a maximum of 8 units.
- RS485 port and Ethernet port enable remote control and monitoring using various master systems. The USB is used primarily for quick and easy software updating and downloading of historical data.
- The touch terminal has a number of functions: connection to a customer network, remote control, ModBus communication and many more.
- The screen can be placed directly onto a CoolTeg unit, on the side of a rack or onto a wall in the data room.

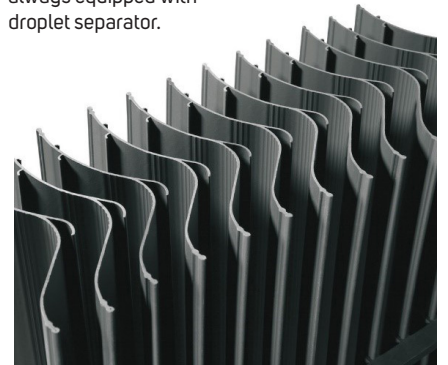


- Minimizes power consumption of the entire cooling system due to precise distribution of cooled air.



WATER DROPLET SEPARATOR

- Horizontal construction located behind the heat exchanger in the direction of airflow.
- The separator prevents dripping of water droplets by the airflow into the fans.
- We recommend using the droplet separator if high relative humidity or low temperature of the chilled water is assumed, generally every time when there is a potential risk of condensation on the heat exchanger. CoolTop DX should be always equipped with droplet separator.



CONDENSATE PUMP

- All CONTEG units can be connected to the sewerage system via gravity feed.
- If there is no sewerage connection in the room, the water can be conducted away using a condensate pump.
- Each unit includes a water detector that activates the pump, and a level sensor that turns off the unit in case of increased water levels.



WATER ROPE DETECTOR

- Device for water detection. It is located at the top edge of condensate pan. If the water level reaches this level, the cooling unit goes to mode Emergency OFF. It is powered directly from the CoolTop controller.



DEW SENSOR

- Dew sensor is placed on a heat exchanger and measures its surface temperature. If the temperature is lower than temperature of dew point, the controller triggers alarm, or switch the unit off.



DUAL POWER SUPPLY

- Electrical PDU for two power branches. The device allows powering the unit from two independent sources.

CONTROL BASED ON PRESSURE

- Each unit can control air flow rate (fan speed) based on differences in temperature between the hot and cool zones or based on pressure differences.
- Flow rate control based on pressure differences ensures that air is supplied to the area in front of the server at the exact same rate as that at which the servers draw the air in.
- Perfect environment for servers (no risk of server damage caused by over- or under-pressure).

HANDRAIL (for moving)

- Special steel handrail designed for easy manipulation and placement of CoolTop units above racks.
- Supplied in a pair.
- Are connected with by screws from front and back side of the unit.

pCO WEB COMMUNICATION CARD

- Accessory compatible with CoolTeg regulators.
- Enables additional individual communication (monitoring and control).
- Communication via Ethernet network protocols.
- Functions: web server, e-mail, FTP, SNMP, BAC-Net, ModBus TCP/IP and more.



| Comparison | CoolTeg Plus | | | | CoolTop | | CoolSeven | CoolRAC | | |
|--|---------------------|-----------------|------|----|----------|----------------------|-----------|--|----|----|
| | CW | DX | XC | DF | CW | DX | | CW | XC | DF |
| Installation | | | | | | | | | | |
| Between IT racks | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - |
| On top of IT racks | - | - | - | - | ✓ | ✓ | - | - | - | - |
| Inside of 19" racks | - | - | - | - | - | - | ✓ | - | - | - |
| Farther from IT racks | - | - | - | - | - | - | - | ✓ | ✓ | ✓ |
| Cooling medium | | | | | | | | | | |
| Water/glycol | ✓ | - | - | - | ✓ | - | - | ✓ | - | - |
| R410A | - | ✓ | ✓ | - | - | ✓ | ✓ | - | ✓ | - |
| R410A + water/glycol | - | - | - | ✓ | - | - | - | - | - | ✓ |
| Application | | | | | | | | | | |
| Smaller | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | - |
| Medium | ✓ | - | ✓ | ✓ | ✓ | ✓ | - | ✓ | ✓ | ✓ |
| Bigger | - | - | - | - | - | - | - | ✓ | ✓ | ✓ |
| Occupied floor area (in data center) | | | | | | | | | | |
| None | - | - | - | - | ✓ | ✓ | ✓ | - | - | - |
| Small | ✓ | ✓ | ✓ | ✓ | - | - | - | - | - | - |
| Large | - | - | - | - | - | - | - | ✓ | ✓ | ✓ |
| Nominal cooling capacity Air temperature in hot zone: 35 °C; water temperature of 6/12 °C (for CW units), no condensation. | | | | | | | | | | |
| 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 | | |
| Suitable for | | | | | | | | | | |
| 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 | ✓ | - | - | ✓ | ✓ | - | - | ✓ | - | ✓ |



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