

DATASHEET
CoolSpot
Air Conditioning
Units

CONTEG

COOLSPOT AIR CONDITIONING UNITS



CoolSpot DX



CoolSpot CW



- **CoolSpot** products are small air conditioning units designed for Conteg PREMIUM and OPTIMAL IT racks to provide the desired environment inside the rack. In spite of the fluctuating ambient conditions in the room, CoolSpot keeps a set temperature for IT equipment installed in the cabinet, which should be protected against dust and outside humidity (IP 54).



MAIN ADVANTAGES

- Perfect separation of cold and hot zone
- Compatible with CONTEG racks RDF and RSF series
- No filters required
- Individual cooling control at the level of a single rack
- Cost effective cooling

SUITABLE FOR

- Remote communications rooms
- Site offices
- Telecommunications closets
- Racks with no or insufficient air conditioning
- Dusty space

DESCRIPTION

- Two different cooling principles – direct expansion with complete compressor circle inside (DX) and chilled water system (CW) connected to the building cold water piping system. Both cooling versions are produced in two basic designs for two different applications— Top Mount and Wall Mount.
- CoolSpot DX units include a complete refrigerant circuit with compressor, evaporator, condenser, and all

necessary components and control systems. This air-condition is designed to deliver cooling capacity up to 6 kW for standalone cabinets. CoolSpot DX units are designed as Plug & Play cooling system easy to use that requires only power supply, and condensate drainage. Cooling capacity of the air-conditioning unit is controlled by EMB controller with a simply display to keep the set temperature in the rack.

- CoolSpot CW was developed for places where heat and noise from compressor could be disturbing in the room. It requires connection to the chilled water piping system of the building. Cooling capacity of the air-conditioning unit is controlled by 2-way valve inside to keep the set temperature in the rack cabinet.

COOLSPOT DX



➤ **CoolSpot DX** unit is a standalone direct expansion solution with a compressor inside, which means that no additional plumbing or piping is required.

MAIN ADVANTAGES

- Complete refrigerant circuit is inside
- Equipped by condensate dissipater
- Triple condensate protection
- No fi lters required
- Top and wall mount solution
- Plug and play equipment, only power supply is needed

| CoolSpot DX—Top Mount Version | | | | | | | |
|-------------------------------|-------------------|-----------|-----------|-----------|--------------|--------------|-----------|
| Direct expansion | Unit | AC-TM2-10 | AC-TM2-14 | AC-TM2-20 | AC-TM2-28 | AC-TM2-41 | AC-TM2-60 |
| Cooling capacity (L35L35) | W | 900 | 1400 | 2000 | 2700 | 3800 | 5200 |
| Cooling capacity (L35L50) | W | 760 | 1170 | 1700 | 2300 | 2700 | 4100 |
| Power supply | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 400/3/50 |
| Width | mm | 325 | 400 | 400 | 450 | 450 | 600 |
| Height | mm | 335 | 450 | 450 | 480 | 480 | 550 |
| Depth | mm | 600 | 600 | 600 | 800 | 800 | 800 |
| Maximum current | A | 3,2 | 5,2 | 5,7 | 7 | 9 | 4,6 |
| Starting current | A | 15 | 17 | 22 | 32 | 36 | 25 |
| Prefuse | A | 6 | 8 | 8 | 12 | 16 | 10 |
| Power consumption | W | 630 | 950 | 1200 | 1580 | 2000 | 2540 |
| Rack airflow | m ³ /h | 575 | 575 | 860 | 860 | 1450 | 1720 |
| Rack temperature | °C | +25/+45 | +25/+45 | +25/+45 | +25/+45 | +25/+45 | +25/+45 |
| Ambient temp. limit | °C | +20/+55 | +20/+55 | +20/+55 | +20/+55 | +20/+55 | +20/+55 |
| IP rating | IP | 54 | 54 | 54 | 54 | 54 | 54 |
| Noise level | dB(A) | 67 | 58 | 62 | 77 | 77 | 77 |
| Weight | kg | 32 | 48 | 51,5 | 74,5 | 76,5 | 94 |
| RACK COMPATIBILITY | | | | | | | |
| Width | cm | 60, 80 | | | | | |
| Height | U | all | | | | | |
| Depth | cm | 80 | 80 | 80 | 80, 100, 120 | 80, 100, 120 | 100, 120 |

CoolSpot DX—Wall Mount Version

| Direct expansion | Unit | AC-WM4-03 | AC-WM4-05 | AC-WM4-08 | AC-WM4-10 | AC-WM4-15 |
|----------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|
| Cooling capacity (L35L35) | W | 320 | 550 | 750 | 1000 | 1500 |
| Cooling capacity (L35L50) | W | 200 | 410 | 470 | 680 | 1220 |
| Power supply | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 |
| Width | mm | 280 | 315 | 315 | 315 | 395 |
| Height | mm | 500 | 650 | 650 | 650 | 980 |
| Depth | mm | 200 | 260 | 260 | 260 | 260 |
| Nominal current | A | 1,9 | 2,1 | 2,3 | 3,2 | 4,6 |
| Maximum current | A | 2,8 | 2,5 | 3,8 | 4,1 | 5,6 |
| Starting current | A | 6,1 | 9,8 | 10,1 | 15,9 | 21,2 |
| Prefuse | A | 6 | 6 | 6 | 10 | 10 |
| Power consumption | W | 335 | 370 | 410 | 550 | 800 |
| Rack airflow | m ³ /h | 115 | 200 | 200 | 300 | 385 |
| Rack temperature | °C | +20/+50 | +20/+50 | +20/+50 | +20/+50 | +20/+50 |
| Ambient temperature limit | °C | +10/+55 | +10/+55 | +10/+55 | +10/+55 | +10/+55 |
| IP rating | IP | 54 | 54 | 54 | 54 | 54 |
| Weight | kg | 18 | 27,7 | 27,7 | 30 | 39,7 |
| COOLING CAPACITY (L35L35) | | | | | | |
| Cooling capacity (L35L50) | cm | all | | | | |
| Power supply | U | 42 | | | | |
| Width | cm | 60, 80, 100 | 60, 80, 100 | 60, 80, 100 | 60, 80, 100 | 60, 80, 100 |

CoolSpot DX—Wall Mount Version

| Direct expansion | Unit | AC-WM4-20 | AC-WM4-25 | AC-WM4-30 | AC-WM4-40 |
|----------------------------------|-------------------|-------------|-----------|-----------|-----------|
| Cooling capacity (L35L35) | W | 2000 | 2500 | 3000 | 4000 |
| Cooling capacity (L35L50) | W | 1600 | 1970 | 2380 | 3180 |
| Power supply | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 |
| Width | mm | 395 | 500 | 500 | 500 |
| Height | mm | 980 | 1230 | 1230 | 1230 |
| Depth | mm | 260 | 340 | 340 | 340 |
| Nominal current | A | 5,5 | 3,9 | 5,6 | 8,9 |
| Maximum current | A | 9,4 | 6,6 | 9,2 | 14,2 |
| Starting current | A | 22,3 | 23 | 25,1 | 29,6 |
| Prefuse | A | 10 | 10 | 16 | 20 |
| Power consumption | W | 1300 | 910 | 1330 | 1880 |
| Rack airflow | m ³ /h | 470 | 550 | 860 | 860 |
| Rack temperature | °C | +20/+50 | +20/+50 | +20/+50 | +20/+50 |
| Ambient temperature limit | °C | +10/+55 | +10/+55 | +10/+55 | +10/+55 |
| IP rating | IP | 54 | 54 | 54 | 54 |
| Weight | kg | 44,2 | 65 | 67,5 | 69 |
| COOLING CAPACITY (L35L35) | | | | | |
| Cooling capacity (L35L50) | cm | all | | | |
| Power supply | U | 42 | | | |
| Width | cm | 60, 80, 100 | 80, 100 | 80, 100 | 80, 100 |

TARGETED COOLING & AIRFLOW MANAGEMENT

COOLSPOT CW



➤ **CoolSpot CW** units are designed to be connected to any chilled water system. Temperature inside the rack is controlled by 2-way valve.

MAIN ADVANTAGES

- All heat load is transferred to the water out of the room
- Operation in unlimited room temperature
- No filters required
- Top and wall mount solution

CoolSpot CW—Top and Wall Mount Version

| | | Top mount | | Wall mount | | | |
|---------------------------|-------------------|--------------|----------|--------------|----------|----------|----------|
| Chilled water | Unit | AC-TW-15 | AC-TW-50 | AC-WW-06 | AC-WW-15 | AC-WW-25 | AC-WW-50 |
| Cooling capacity (L35W10) | W | 2200 | 6700 | 870 | 2200 | 3100 | 6700 |
| Power supply | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 |
| Width | mm | 772 | 905 | 306 | 402 | 402 | 503 |
| Height | mm | 189 | 255 | 403 | 916 | 916 | 1091 |
| Depth | mm | 404 | 509 | 113 | 206 | 206 | 293 |
| Maximum current | A | 0,23 | 1,02 | 0,28 | 0,23 | 0,36 | 1,02 |
| Prefuse | A | 2 | 4 | 2 | 2 | 2 | 4 |
| Power consumption | W | 52 | 260 | 33 | 52 | 80 | 230 |
| Rack airflow | m ³ /h | 575 | 1450 | 330 | 575 | 860 | 1450 |
| Rack temperature | °C | +10/+65 | +10/+55 | +10/+55 | +10/+55 | +10/+55 | +10/+55 |
| Pressure drop (water) | kPa | 30 | 30 | 2 | 30 | 63 | 40 |
| Max. pressure (water) | kPa | 1000 | 1000 | 500 | 1000 | 1000 | 1000 |
| Waterflow | l/h | 150 | 860 | 150 | 150 | 500 | 860 |
| Water connection | "G | 1/2 | 1/2 | 3/8 | 1/2 | 1/2 | 1/2 |
| IP rating | IP | 54 | 54 | 55 | 55 | 55 | 55 |
| Noise level | dB(A) | 58 | 58 | 58 | 58 | 58 | 58 |
| Weight | kg | 30 | 39 | 7 | 20 | 21 | 39 |
| RACK COMPATIBILITY | | | | | | | |
| Width | cm | 60, 80 | 60, 80 | all | | | |
| Height | U | all | | 42 | | | |
| Depth | cm | 80, 100, 120 | 100, 120 | 80, 100, 120 | 80, 100 | 80, 100 | 80, 100 |

TOP COVER OR SIDE PANEL

CoolSpot units are installed on the top or side of the rack. For these installations is necessary to order top cover or side panel (adapter) together with specific CoolSpot unit. These panels are ready for modification – cutouts.

| SIDE PANEL | |
|---------------------|---|
| Code | Description |
| RSF-SP-42/60-WM-CS | Side panel for installation of an AC-Wx unit, ready for modification—cutout by type of CoolSpot unit, for PREMIUM rack 42U, depth 600 mm |
| RSF-SP-42/80-WM-CS | Side panel for installation of an AC-Wx unit, ready for modification—cutout by type of CoolSpot unit, for PREMIUM rack 42U, depth 800 mm |
| RSF-SP-42/100-WM-CS | Side panel for installation of an AC-Wx unit, ready for modification—cutout by type of CoolSpot unit, for PREMIUM rack 42U, depth 1000 mm |

| STŘEŠNÍ KRYT | |
|--------------------|---|
| Code | Description |
| CO-TU-60/80-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for PREMIUM rack width 600mm, depth 800 mm |
| CO-TU-60/100-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for Premium rack width 600mm, depth 1000 mm |
| CO-TU-60/120-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for Premium rack width 600mm, depth 1200 mm |
| CO-TU-80/80-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for Premium rack width 800mm, depth 800 mm |
| CO-TU-80/100-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for Premium rack width 800mm, depth 1000 mm |
| CO-TU-80/120-TM-CS | Top cover for installation of a AC-Tx unit, ready for modification—cutout by type of CoolSpot unit, for Premium rack width 800mm, depth 1200 mm |

MODIFICATION

Modification of the side panel or the top cover of specific CoolSpot unit.

| Code | Description |
|------------|--|
| XOM555-xxx | Modification of the side panel or the top cover for CoolSpot unit, (xxx = type of modification), necessary to use with the side panel or the top cover and specify type of the CoolSpot unit |

HOW TO ORDER

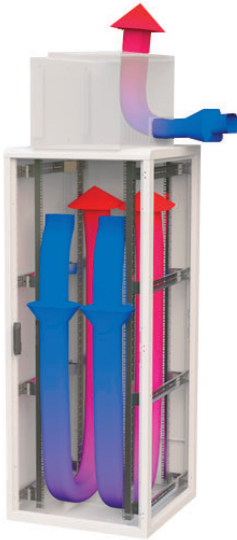
CoolSpot unit needs to be ordered together with the side panel or the top cover and its modification.

| | | | | |
|--------------------|---|-----------|---|-------------------|
| COOLSPOT UNIT CODE | + | RACK CODE | + | MODIFICATION CODE |
|--------------------|---|-----------|---|-------------------|

An example of a correct Code

AC-WM4-20-4000 + RSF-SP-42/100-WM-CS + XOM555-xxx

DETAILED TECHNICAL INFORMATION



Air flow through the rack—
CoolSpot DX TM version



Air flow through the rack—
CoolSpot DX WM version

COOLSPOT DX

The CONTEG CoolSpot DX unit is a standalone direct expansion solution with a compressor inside, which means that no additional plumbing or piping is required. The condensate is removed thanks to a condensate dissipater (1.4 kW version and above) and water detection is guaranteed by a triple condensate protection system. This means that the condensation normally associated with air conditioning systems is reduced or eliminated, giving total flexibility for deployment. The special condenser coil design enables perfect operation without any air filter, which reduces maintenance costs.

CoolSpot DX units feature electronic control boards as standard, which allows for superior control of the air conditioner over standard electromechanical types. The electronic control board ensures that the CONTEG air conditioning units are running at optimal efficiency and not overcooling the cabinet.

When installing these units into closed areas always make sure that the room has sufficient clearance and adequate ventilation so that environmental operating conditions (up to 55 °C) are not exceeded.

CoolSpot cooling units are easily integrated with the monitoring system RAMOS to provide remote notification about the temperature inside the rack.

COOLSPOT DX TOP MOUNT (AC-TM-xx)

Delivers exceptional cooling capacity without needing additional floor area required for a rack. The CoolSpot TM solution is available in capacities ranging from 0.9 kW to 5.2 kW to provide required cooling of the rack. The air conditioning unit is delivered with a special rack top-mount plate adapted to perfectly fit the selected size of the CoolSpot unit. These CoolSpot TM cooling units are compatible with the free-standing RSF and RDF rack series.

COOLSPOT DX WALL MOUNT (AC-WM-XX)

Ideally suited for spaces where there is insufficient clearance to install a roof-mount solution. CONTEG CoolSpot WM solutions are available with capacities ranging from 0.4 kW to 4.0 kW per one cooling unit. Up to two CoolSpot WM cooling units can be fitted to one rack for desired redundancy and safety. The air-conditioning unit is delivered with a special rack side panel adapted to perfectly fit the selected CoolSpot unit size. These CoolSpot WM cooling units are compatible with the free-standing RSF and RDF rack series.



The standard warranty period is 12 months.
For more information visit www.conteg.com



Air flow through the rack—
CoolSpot CW TW version

COOLSPOT CW

The CoolSpot CW unit can be installed in rooms where people are working since it makes little noise, and there is no heat load coming out of the unit. When installing these units into closed areas, always make sure that the room has sufficient space above or to the side of the cabinet.

The CoolSpot CW includes a 2-way solenoid valve with a gas-loaded mechanical thermostat in return air. Temperature set point can be adjusted from 20 to 46 °C. Cooling control band is 4K. If high condensate level is detected, it closes solenoid valve while fans keep running.

CoolSpot cooling units are easily integrated with the RAMOS monitoring system to provide remote notification about the temperature inside the rack

COOLSPOT CW TOP MOUNT (AC-TW-XX)

CoolSpot units have an exceptional cooling capacity and do not need additional rack floor area. The CoolSpot AC-TW-xx solution is available in nominal cooling capacities, ranging from 2.2 kW to 6.7 kW (cooling capacity depends on the water, air temperature and water flow). Since it is mounted on the roof of the rack, some overhead clearance will be necessary. CoolSpot AC-TW-xx cooling units are compatible with the free-standing RDF and RSF rack series.

The big advantage of this top-mount model is that it perfectly matches the CONTEG racks that's fitted with a separation frame and blanking panels. This arrangement ensures that the cold zone is in the front of the IT components in the rack. The air from the hot zone in the rear part of the cabinet is sucked into the CoolSpot cooler.



Air flow through the rack—
CoolSpot CW WW version

COOLSPOT CW WALL MOUNT (AC-WW-XX)

The solution is available in nominal cooling capacities, ranging from 0.9 kW to 6.7 kW (cooling capacity depends on the water, air temperature and water flow). Since CoolSpot AC-WW-xx cooling units are installed instead of one of the rack's side panels, there is no need for overhead clearance. CoolSpot AC-WW-xx cooling units are compatible with the free-standing RDF and RSF rack series.

It is recommended for projects with insufficient clearance to install a top-mount solution and cold water is present. Hot air is sucked from the top of the rack, and the cold air is delivered to the bottom. The advantage of this wall-mount model is that it makes it possible to connect two CoolSpot AC-WW-xx cooling units to one rack. This way the required redundancy of the cooling source is ensured



The standard warranty period is 12 months.
For more information visit www.conteq.com



CONTEG, spol. s r.o.

Headquarters:

Na Vitezne plani 1719/4
140 00 Prague 4
Czech Republic

Production plant:

K Silu 2179
393 01 Pelhrimov
Czech Republic
Tel.: +420 565 300 362
conteg@conteg.com

www.conteg.com

CONTEG