

Compact Cooling Module CCDM-series

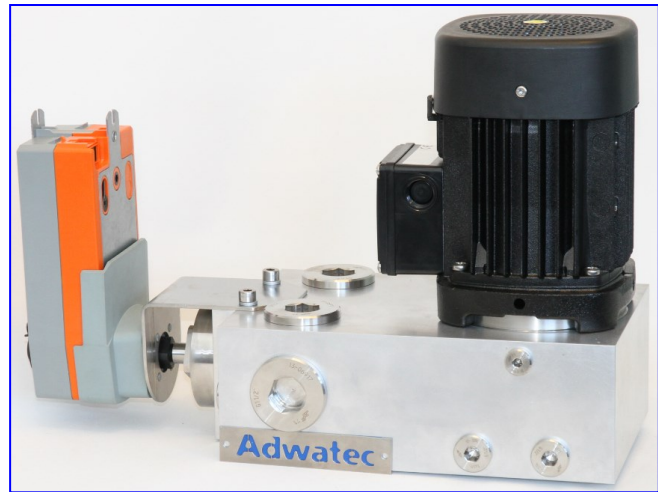
Compact Cooling Modules for closed loop water cooling systems are designed for industrial and marine applications. The module is designed to be powerful compact cooler for applications where easy installation is needed. The use of space is most efficient and the width of the single pump Cooling Module is only 187 mm, height 306 mm and depth 385 mm. The maintenance is easy which is a big advantage especially in marine applications. Both single and double pump versions are available.

Operation

The cooling station circulates coolant between cooled power electronics and heat exchanger. The water to water heat exchanger can be integrated to the station or external water to air heat exchanger can be connected. The station includes integrated 3-way valve ensuring the constant temperature. The size and power combined with economical investment makes CCDM-series superior in the market.

Benefits

- Minimum dimensions
- Stainless steel industrial pumps and copper free materials ensure long and reliable function
- Manifold technique minimizes the risk of leak
- Fast and easy commissioning



Picture 1: CCDM5S-3-E

Technical details:

Cooling capacity up to 125 kW
 Coolant flow up to 250 l/min
 Coolant Water-glycol mixture
 Materials Stainless steel and aluminum
 All materials are copper free and carbon steels are not used

Instrumentation Temperature sensor
 Pressure sensor

Coolant connections G 1½" female

Options:

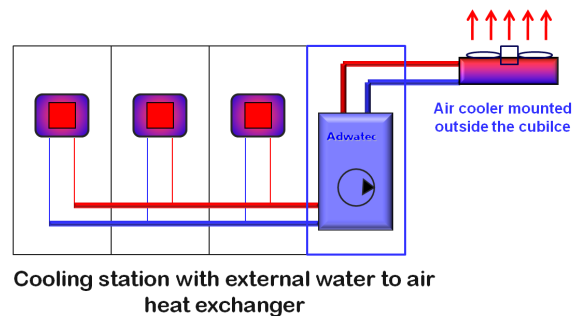
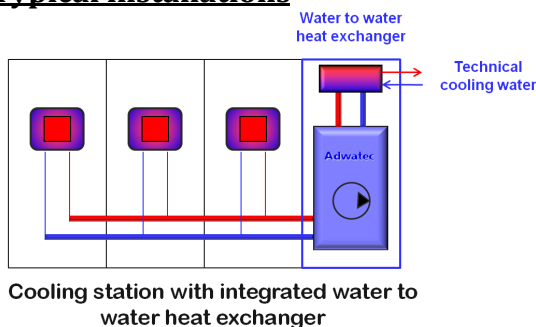
Heat Exchanger Water to water heat exchanger mounted on the module

Water connections Pipe 48,3 mm (DN40)

| Main dimensions Width / Height / Depth | Single pump CCDM | Double pump CCDM |
|---|----------------------|----------------------|
| With pump 1-4 | 187 / 306 / 459 (mm) | 385 / 356 / 473 (mm) |
| With pump 3-4 | 187 / 346 / 459 (mm) | 385 / 396 / 473 (mm) |
| With pump 5-4 | 187 / 446 / 474 (mm) | 385 / 496 / 473 (mm) |

Dimensions without sensors and heat exchanger. There are several instrumentation positions in the manifold.

Typical installations

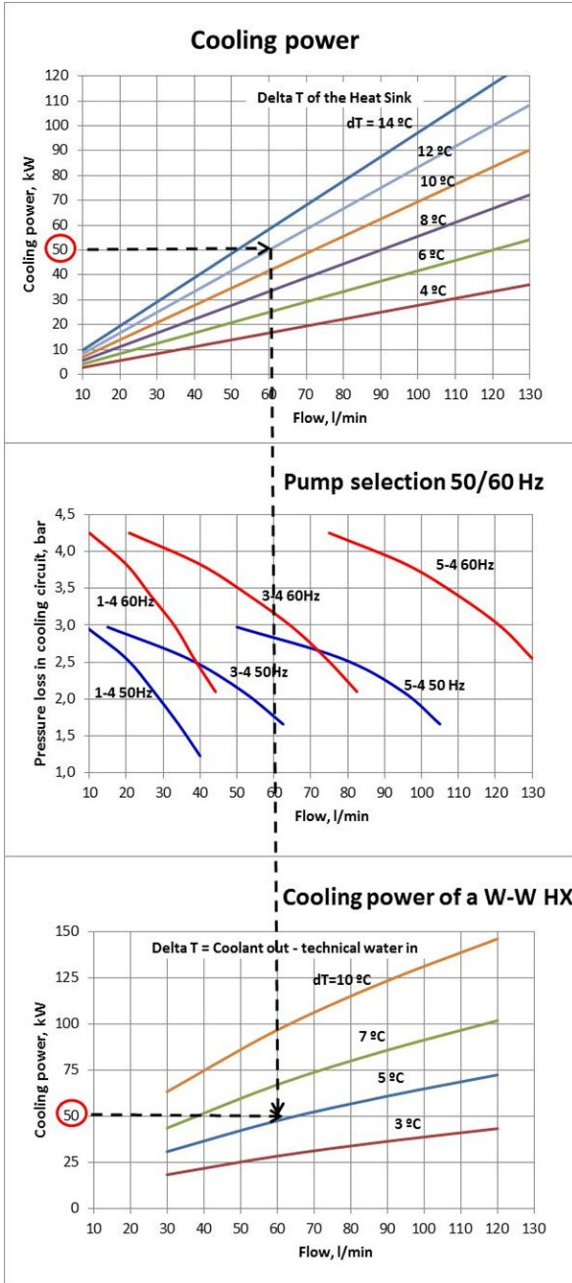


Water Cooling Module

CCDM

Data sheet 2(2)

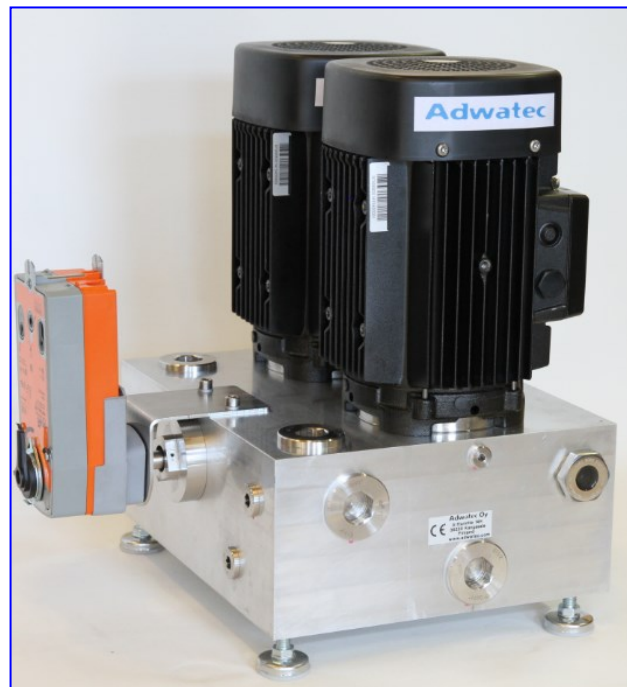
Pump selection curves



The pump selection curves are for single pump cooling station and are only advisory. The pressure loss caused by heat exchanger is not taken into account.

Table 1

| Pump size | 50 Hz | | 60 Hz | |
|-----------|-----------|-----------|-----------|-----------|
| | El. power | Voltage | El. power | Voltage |
| 1-4 | 0,46 kW | 380-415 V | 0,74 kW | 380-440 V |
| 3-4 | 0,46 kW | 380-415 V | 0,74 kW | 380-440 V |
| 5-4 | 0,85 kW | 380-415 V | 1,7 kW | 380-440 V |



Picture 2: CCDM53R-3-E

| CODE KEY FOR CCDMx4S | CCDM x4 | S - 3 - E - D5 |
|------------------------------|-------------------------|----------------|
| Pump size | Look Table 1 | |
| Number of pumps | Single | S |
| | Double | D |
| Bypass valve | 3-way valve included | |
| Heat exchanger | External | E |
| | Water to water included | W |
| Voltage and frequency | 3x380-415V, 50Hz | D5 |
| | Look at Table1, 60Hz | E6 |