ECM-2 G/SR25.2

# Gas Cooler Series EC®

Compact Version ECM-1 and ECM-EX2-1
for 1x 250 Nl/h
Compact Version ECM-2 and ECM-EX2-2
for 2x 150 Nl/h

6.3 10.99/06.06

| Special Features |
|---|
| Small dimension and light weight |
| Explosion proof version according to ATEX, CSA, FM and NEPSI for zone 2 |
| Both versions with approval according to $CSA_{US}$ |
| Gas flow 1x 250 or 2x 150 Nl/h |
| Jet Stream heat exchangers in 3 standard materials |
| Ambient temperature up to 50°C |
| Outlet dew point adjustable from +2 °C to +7 °C |
| Dew point stability ± 0,1 °C |
| Digital temperature indication |
| Configurable status alarm contact |
| Compact wall mounting housing |
| Optimum reliability |

## Application

The M&C gas cooler ECM is used in gas analysis to lower the dew point of humid gas to avoid condensation in the analyser(s). An extremely stable and low gas dew point avoids water vapour cross-sensitivity and volumetric errors.

## Description

Compact, maintenance-free and self-controlling. Intelligent detailed solutions provide optimum cooling of the sample gas and direct separation of condensate to avoid contamination effects.

The new controlled compressor cooling system and the special design of the jet stream heat exchanger guarantee an optimum dew point reduction to a low, stable value. An additional pre-drainage device is not necessary in normal applications.

The condensate should be removed with integrated small peristaltic pumps SR25.2 or optionally by external condensate traps AD... respectively collection vessels TG../TK..

The simple construction enables heat exchangers of different materials to be used depending on the application. Heat exchangers to be ordered optionally.

The digital indicator in the front panel displays the cooling temperature. The function of the cooler can be externally controlled via the alarm contact, configurated at <+2 °C and >+8 °C as a standard.

The gas cooler ECM-1 (1-channel) can be equipped with one Jet-Stream heat exchanger with a flow capacity of max. 250 Nl/hr.

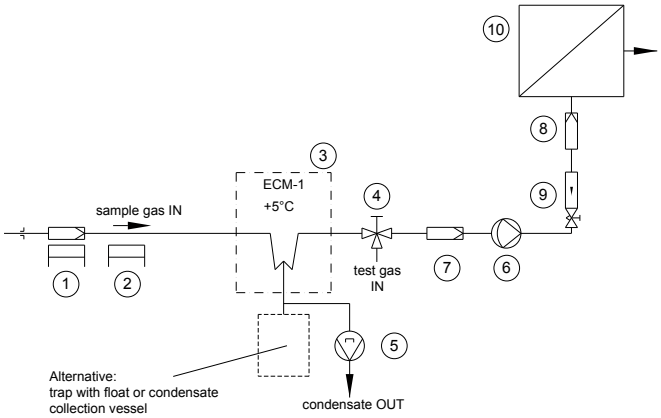
The gas cooler ECM-2 (2-channel) can be equipped with two Jet-Stream heat exchangers with a flow capacity of max. 150 Nl/hr each.

The explosion-proof versions ECM-EX2-1 and ECM-EX2-2 can be used in Ex-zone 2 and, they too, may additionally be equipped with up to 2 standard peristaltic pumps SR25.2.

The compact and light weight construction allows a simple and space-saving installation. The ECM gas coolers are self controlling and maintenance free in operation.

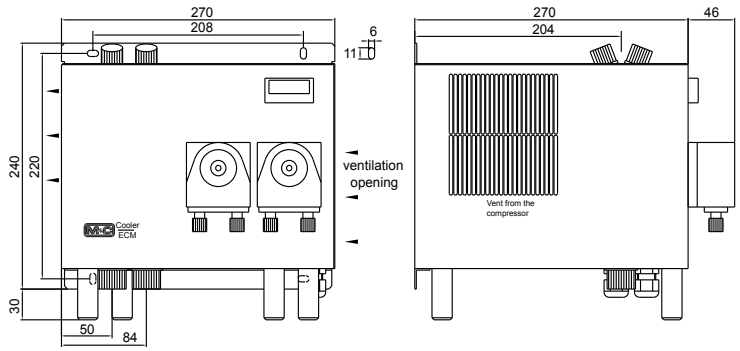
## Application example for ECM-1

1 Heated filter sample probe SP210-H or SP2000-H
2 Heated sample line 4M4/6
3 Cooler ECM-1G
4 3-way ball valve 3L/PV-1
5 Peristaltic pump SR25.2
6 Diaphragm pump MP47 or MP06/12 or N5KP
7 Fine filter FP-2T-D with liquid alarm LA1
8 Aerosol filter CLF-5 /W optional according to application
9 Flow meter FM10 or FM40, 25-250 Nl/hr
10 Analysers f. e. PMA100




## Dimensions

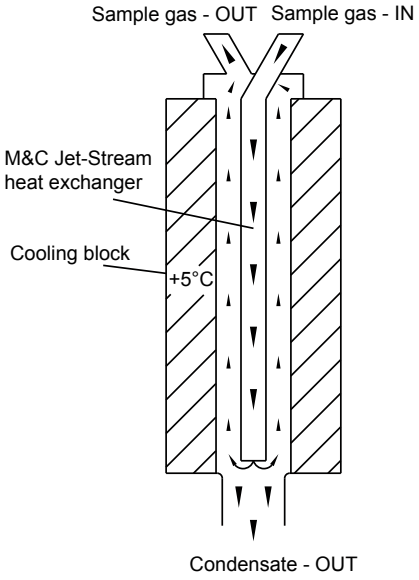
## Compact gas cooler ECM-1 / ECM-2 / ECM-EX2-1 / ECM-EX2-2



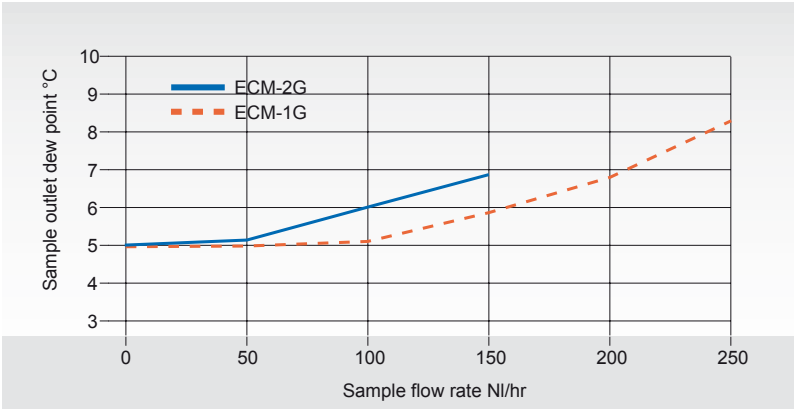

Dimensions in mm

Drawing shows ECM-2G with two heat exchanger out of glass.
Heat exchanger(s) and peristaltic pump(s) to be ordered optionally!

## Functioning diagram of patented M&C Jet-Stream heat exchanger




## Sample gas outlet dew point stability




Sample gas outlet dew point stability at gas inlet dew point of 60 °C.
Characteristics of heat exchanger out of PVDF or stainless steel on request.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