

CCMT Electric Regulating Valve

Cost-efficient, safe & simpleFor a better control of CO₂ applications

Designed for better high-pressure transcritical control and medium pressure by-pass control.



The CCMT is a highly reliable electric pressure regulating valve optimized for transcritical CO₂ refrigeration. The valve has versatile applications in the transcritical system. The valve is capable of high pressure gas cooler control (transcritical). The CCMT can be used as gas by-pass valve (medium pressure control). If desired, the valve can also be used as a normal expansion valve for evaporators.

CCMT 16, 24, 30, 42

With the CCMT electric regulating valve sizes 16, 24, 30 & 42 you get a fully serviceable three-in-one solution with valve, transmitter* and filter integrated into one, compact unit. The cartridge design of the component means that all functional parts are easy to service and replace; not even the orifice remains in the housing when the valve is dissembled. When you exchange the cartridge, you immediately get a brand new valve, in a matter of seconds. At the same time, the integration of valve, transmitter and filter into one unit allows easy installation with fewer connections and thus reduced risk of leakage. CCMT comes with solder, brazing and weld connections to make it fit in any system.

Combo connections for weld or solder/brazing installation

Fully serviceable cartridge design

Integrated filter with wire mesh 250 µ

Integrated pressure transmitter type MBS 8250 for both high and medium pressure

^{*} There are code numbers without MBS transmitter available



CCMT 3L, 5L, 8L, 10L

The CCMT Light is the latest addition to our CO_2 portfolio. The valve is robust, accurate and easy-to-use and focuses on stress-free valve installation and field service. It is designed to have a high tolerance for dirt and debris which reduces service-related incidences and improves long-term system reliability. Installation time is decreased because the valve is delivered in open position – this means it is ready for welding / brazing which lowers production costs and increases productivity.

A perfect fit for all CO₂ refrigeration systems

The complete CCMT range covers CO_2 refrigeration systems of all types sizes – from very small applications to large systems. The CCMT Light is optimum for condensing units or small packs up to 100 kW and the CCMT 16-42 for medium to large packs from 100 kW up to 600 kW.



MOPD 90 bar / 1305 psi Max. working pressure (PS/MWP) 140 bar / 2030 psig 140 bar / 2030 psig with steel connections 130 bar / 1885 psig with Bi-metal connections Stainless steel Weld/solder combo connections Build in strainer / filter Yes, 250micron No Comply with P.E.D. Fluid group I / Article 3, paragraph 3 Approval CE, UL, EAC, CRN CE, EAC Stepper motor type Bi-polar – permanent magnet Motor enclosure Duty cycle Max 150 steps/sec (constant voltage drive)		CCMT 16-42	CCMT 3L - 10L
Max. working pressure (PS/MWP) 140 bar / 2030 psig 140 bar / 2030 psig with steel connections 130 bar / 1885 psig with Bi-metal connections Stainless steel Weld/solder combo connections Build in strainer / filter Yes, 250micron No Comply with PE.D. Fluid group I / Article 3, paragraph 3 Approval CE, UL, EAC, CRN CE, EAC Stepper motor type Bi-polar – permanent magnet Motor enclosure IP 67 Duty cycle 100% is allowed 20% recommended 20% duty cycle Step rate Max 150 steps/sec (constant voltage drive) Max 200 steps/sec. (chopper current drive) Max 200 steps/sec. (chopper current drive) CCMT 16: 800 CCMT 24: 1400 CCMT 30: 2300 CCMT 42: 2200 Full travel time CCMT 16: 4 sec. CCMT 24: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module EKE 2U	Compatible refrigerants		
Material specification Mode	MOPD	90 bar / 1305 psi	
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Stepper motor type Bi-polar – permanent magnet Motor enclosure IP 67 Duty cycle 100% is allowed 20% recommended 20% duty cycle Step rate Max 150 steps/sec (constant voltage drive) Max 200 steps/sec. (chopper current drive) Max 100 steps/sec. (chopper current drive) Total full steps CCMT 16: 800 CCMT 24: 1400 CCMT 30: 2300 CCMT 30: 2300 CCMT 42: 2200 Electrical connection CCMT 16: 4 sec. CCMT 24: 7 sec. CCMT 42: 11 sec. 2.1 sec. (at 100 steps sec.) Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module EKE 2U	Comply with P.E.D.	Fluid group I / Article 3, paragraph 3	
Motor enclosure Duty cycle 100% is allowed 20% recommended 20% duty cycle Max 150 steps/sec (constant voltage drive) Max 200 steps/sec. (chopper current drive) Max 100 steps/sec. (chopper current drive) CCMT 16: 800 CCMT 24: 1400 CCMT 30: 2300 CCMT 42: 2200 Full travel time CCMT 16: 4 sec. CCMT 24: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module	Approval	CE, UL, EAC, CRN	CE, EAC
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Max 200 steps/sec. (chopper current drive) CCMT 16: 800 CCMT 24: 1400 CCMT 30: 2300 CCMT 42: 2200 Full travel time CCMT 16: 4 sec. CCMT 24: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers Battery back-up module Max 100 steps/sec. (chopper current drive) April 16: 40 sec. CCMT 16: 800 CCMT 24: 1400 CCMT 24: 1400 CCMT 24: 17 sec. CCMT 24: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C	Duty cycle		20% duty cycle
Total full steps CCMT 24: 1400 CCMT 30: 2300 CCMT 42: 2200 Full travel time CCMT 16: 4 sec. CCMT 24: 7 sec. CCMT 30: 11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module EKE 2U	Step rate		Max 100 steps/sec. (chopper current drive)
Full travel time CCMT 30:11.5 sec. CCMT 42: 11 sec. Electrical connection Integrated M12 Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module EKE 2U	Total full steps	CCMT 24: 1400 CCMT 30: 2300	210
Compatible controllers/drivers EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C Battery back-up module EKE 2U	Full travel time		2.1 sec. (at 100 steps sec.)
Battery back-up module EKE 2U	Electrical connection	Integrated M12	
	Compatible controllers/drivers	EKE 1A/1B/1C/1P, AK-PC 572, AK-PC 772A/781A/782A, AK-XM 208C	
Pressure transmitter Yes No	Battery back-up module	EKE	2U
	Pressure transmitter	Yes	No

^{*} For full technical details, please refer to the product datasheet at ccmt.danfoss.com

Related products
Superheat controller/driver,
type EKE 1A/1B/1C/1P



Pack Controller, type AK-PC 572



Pack Controller, type AK-PC 772A/781A/782A



Electronic driver, type AK-XM 208C



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