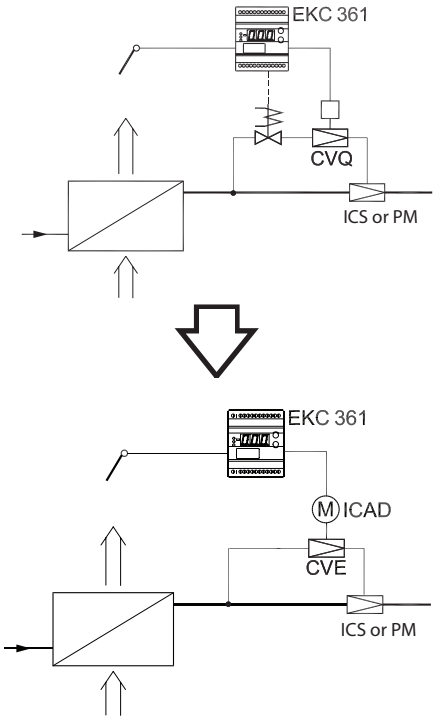
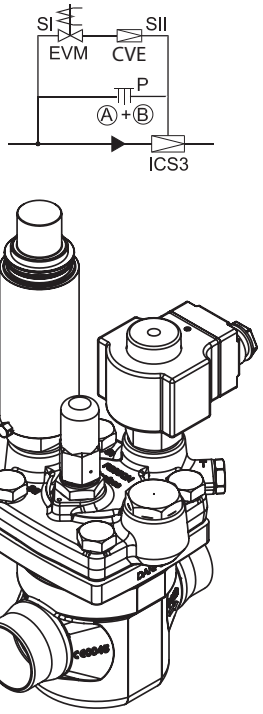
ENGINEERING TOMORROW

User Guide

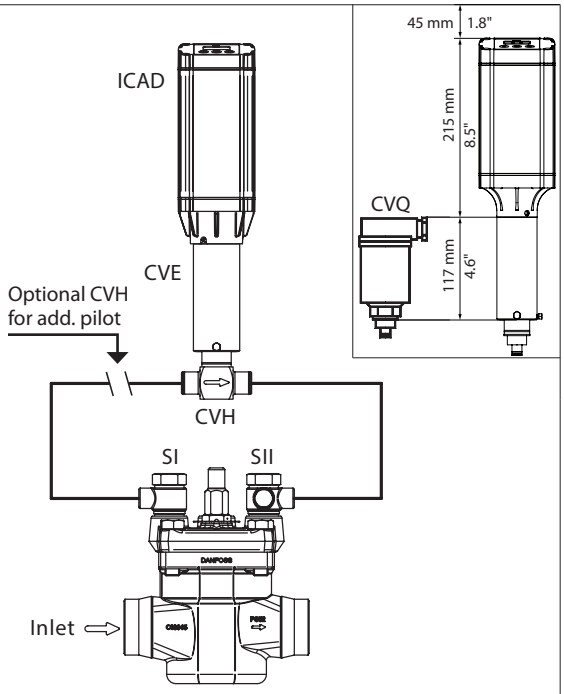
Media temperature controller EKC 361

CVE replacement for CVQ





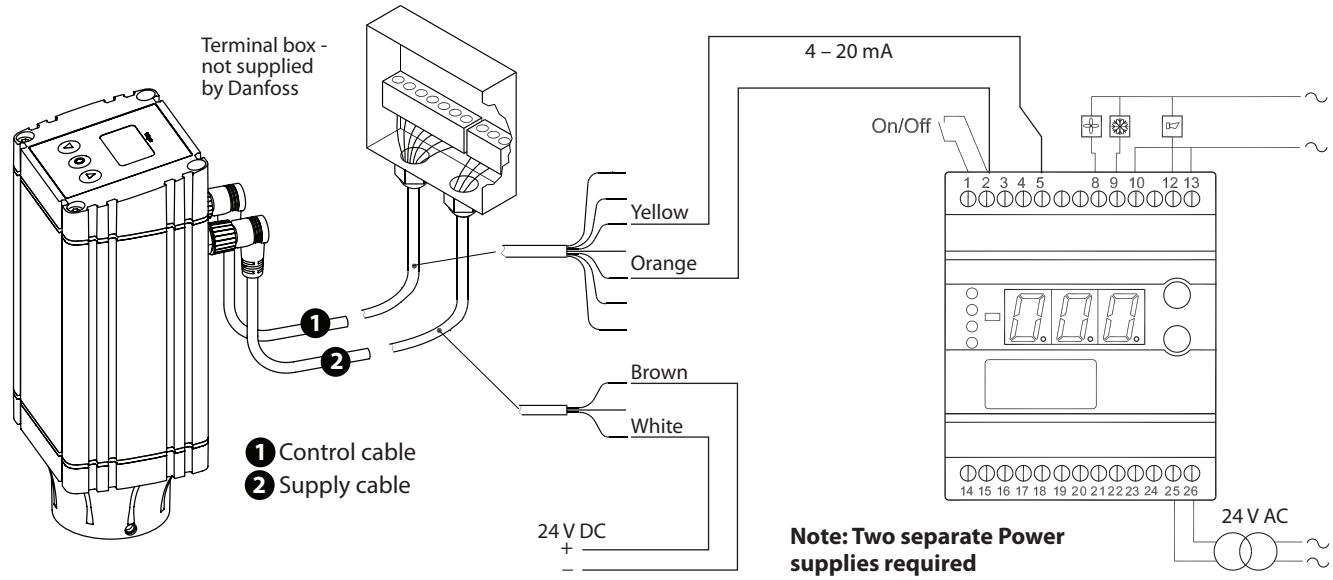
Direct mounted CVE (if solenoid or other additional pilot needed use SI and SII)



Indirect mounted CVE (for remote location). CVH and CVE installation kit (¼"G adapters for SI and SII - **027B0995**) to be ordered separately

ICAD

EKC 361



Note: Two separate Power supplies required

If existing temperature control set-up includes EKC 366 interface controller your PLC needs adaptation to send the proper analog signal directly to ICAD motor. Otherwise it can be replaced with EKC 361 controller and temperature sensor for stand-alone control

CVQ to CVE

027B1139	CVQ (-1 – 5 bar) (-14.5 – 72.5 psi)	is replaced by	**027B0980**	CVE (-0.66 – 8 bar) (-9.5 – 116 psi)
027B1140	CVQ (0 – 6 bar) (0 – 87 psi)			
027B1141	CVQ (1.7 – 8 bar) (24.5 – 116 psi)			

Note: To operate the CVE pilot an ICAD 1200 motor is needed (ordered separately) and will need powered with 24 V DC, 2 amp.

EKC 361 controller configuration

■ Parameter **n03** Actuator type:

1: CVQ -1 – 5 bar
2: CVQ 0 – 6 bar
3: CVQ 1.7 – 8 bar
4: CVMQ
5: KVQ
6: ICM/CVE

Choose **6** (ICM/CVE) instead of 1, 2 or 3:

Parameter **n32** Opening degree Max. limitation – ICM/CVE with ICAD

(When ICM/CVE has been selected (n03 = 6) the maximum opening degree % can be entered. The ICAD motor opening degree will never go above this value). For full working pressure range of the CVE pilot set n32 = 90% OD. To limit the regulating pressure range so the evaporator will not go below a certain pressure/temperature use the below table to determine what the ICAD opening degree % is for the min. evaporator pressure you want and enter that opening degree value in parameter n32.

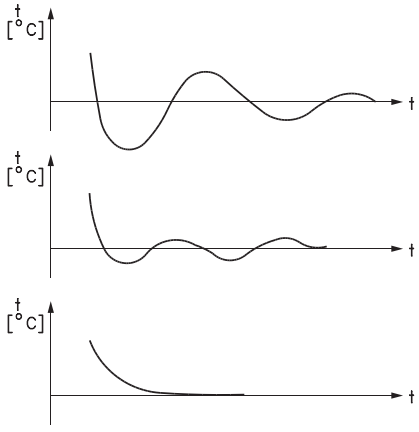
Parameter **n33** Opening degree Min. limitation – ICM/CVE with ICAD

(When ICM/CVE has been selected (n03 = 6) the minimum opening degree % can be entered. The ICAD motor opening degree will never go below this value). For full working pressure range of the CVE pilot set n33 = 23% OD. To limit the regulating pressure range so the evaporator will not go above a certain pressure/temperature use the below table to determine what the ICAD opening degree % is for the max. evaporator pressure you want and enter that opening degree value in parameter n33.

barg	-0.66	0	1	2	3	4	5	6	7	8
psig	19.5 in. Hg	0	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0
mA	18.3	17.1	15.9	14.7	13.5	12.3	11.1	9.9	8.7	7.5
ICAD reading %	90%	83%	75%	67%	60%	53%	45%	37%	30%	23%

■ Parameter **n07** Temperature transient phenomenon:
The EKC 361 controller includes 3 predefined transient phenomenon's for best adaptation to the actual plant

- **Fastest** possible cooling Setting = 1
- Cooling with **less** underswing Setting = 0
- Cooling underswing **unwanted** Setting = 2 (default value = 2)



ICAD configuration

Parameter **;26** Valve type:
Choose 10, CVE pilot with ICAD 1200A (see Quick start guide ICAD)
Note: Parameter ;26 is password protected so a password of 11 will need entered into parameter ;10 to be able to view and make changes to it.

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