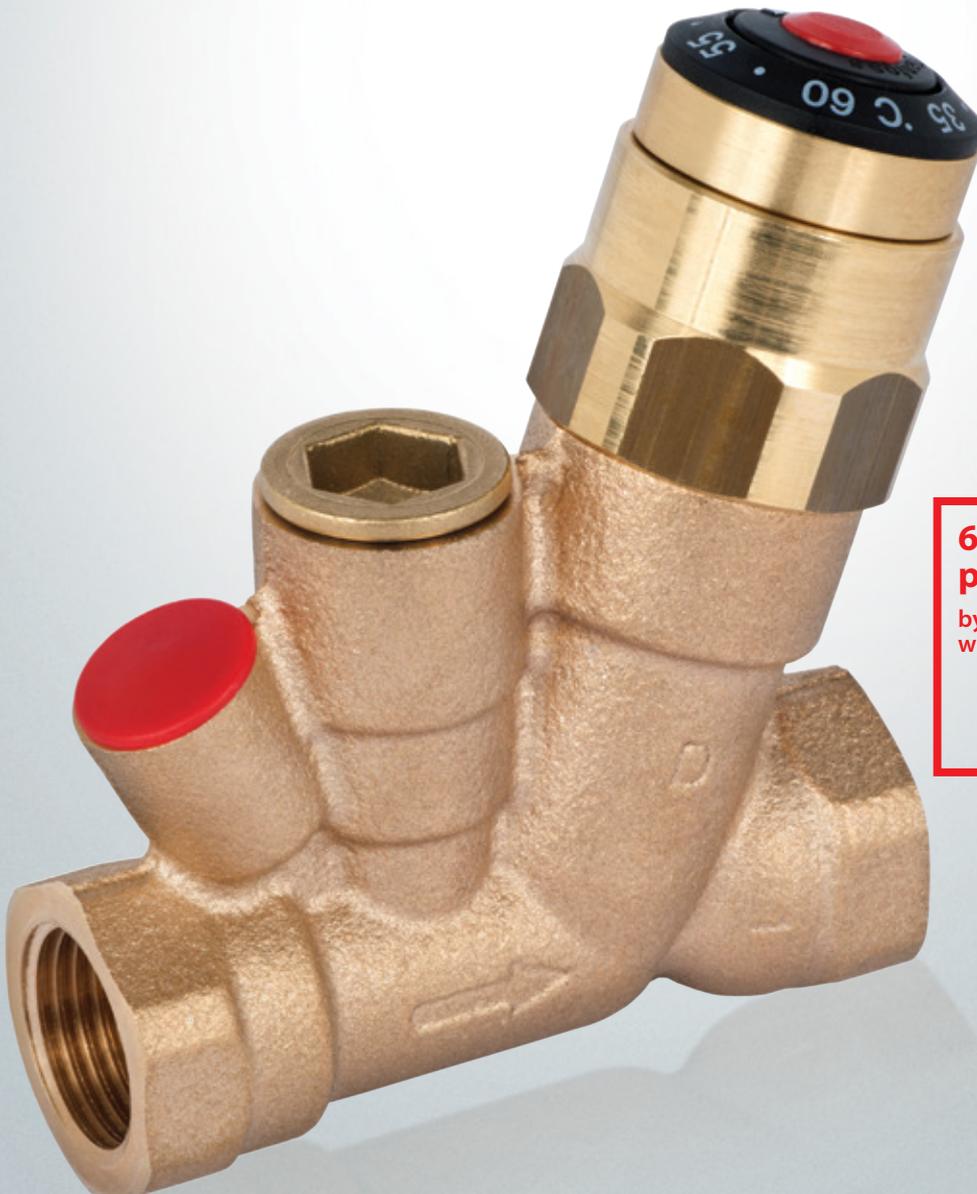


Hydronic Balancing and Control | MTCV

# Optimize the performance of domestic hot water systems

The Multifunctional Thermostatic Circulation Valve (MTCV) offers a simple and reliable solution to increase energy efficiency and stabilize temperatures in domestic hot water systems while Legionella growth is prevented.



**6 months  
payback time**  
by saving  
water and energy

# MTCV – for thermal balancing of DHW systems

Many Domestic Hot Water systems in residential and commercial buildings are not optimized to perform to their best. Hydronic imbalance causes temperature differences, waste of energy and poor user comfort. Worst case, the systems can even allow growth of the dangerous Legionella bacteria.

Danfoss MTCV optimizes the performance and eliminates the disadvantages in an efficient way. Hot water is available when and where you need it while the pump energy is reduced. The investment is typically paid back within a year and installation of the valves offers significant benefits:

- ✓ Energy saving
- ✓ Improved user comfort
- ✓ Less water waste
- ✓ Prevention from Legionella growth

The balancing valve is mounted in the circulation pipe of all hot water risers. It provides a thermostatic balancing function within the temperature range of 35 to 60 °C. It ensures a constant temperature in every circulation pipe, automatic hydronic balance of the system and sufficient high temperatures at all the water taps.

## Disinfection options

The basic version (MTCV-A) provides proper system optimization and prevents Legionella to grow. For systems where periodical thermal disinfection\* is required the basic valve can – under operation conditions – easily be upgraded with the following modules and accessories:

- an automatic (self-acting) thermal disinfection module (MTCV-B)
- an electronically controlled disinfection module (MTCV-C, in combination with CCR2+)
- a thermometer or electronic temperature registration

\* To disinfect the system, modules alone are not enough. The water in the system must first be overheated to a "disinfection temperature" and maintained at this temperature for a certain period of time. Danfoss CCR2+ is recommended to ensure sufficiently high temperatures when using electronic disinfection.

## MTCV products, modules and accessories

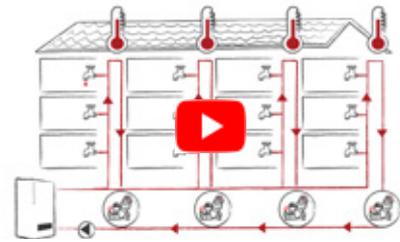
Type	DN	Code no.
MTCV-A	DN15 DN20	<b>003Z4515</b> <b>003Z4520</b>
Thermostatic disinfection module – B	DN15/DN20	<b>003Z2021</b>
Electronic disinfection module – C	DN15/DN20	<b>003Z1022</b>
Thermometer with adapter	DN15/DN20	<b>003Z1023</b>
Socket for ESMB PT1000	DN15/DN20	<b>003Z1024</b>
CCR2+ electronic controller (for 20 sensors) CCR+ slave unit (for 16 sensors)	24 VDC	<b>003Z3851</b> <b>003Z3852</b>
Set containing TWA-A thermal actuator and ESMB temperature sensor	24 VAC, NC	<b>003Z1043</b>

## Danfoss A/S

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## Domestic Hot Water application



## Animation video

Click the image to watch the animation video "How to balance Domestic Hot Water circulation systems".

## High quality materials

As personal health is always at stake, the system and all its components need to be in top-class condition to ensure the strict, increasing demands to the quality of drinking water are met.

Danfoss MTCV valves are made from various lead-free materials:

