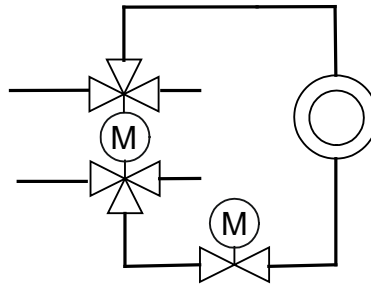


Frequently asked Questions

Product Certification Electronic Individual Zone Control

Is interchangeability test needed for 6-way valve in case it is used as change-over valve?

If a 6-way valve is used as change-over valve only to divert between heating and cooling flow (however not to control the flow), the 6-way valve is not part of the control loop. In this case 6-way valve interchangeability test and certification is not needed, as separate control actuator/valve will be part of the control loop.



How to get a CA-value for an actuator/valve combination?

CA-values are linked to a control loop. An actuator/valve combination cannot get a CA value without a specific controller.

ETT-IZC-Testing is measuring the CA value for a control loop, consisting of the elements room temperature sensor / controller / actuator / valve.

The interchangeability test is only confirming similar performance of the tested actuator/valve combination compared to a reference actuator/valve combination used in test control loop.

What is the benefit of a PICV in respect of CA value?

The test procedure defined in EN15500 does not take into account pressure variations in the hydronic circuit. Therefore, PICV benefits are not represented in the CA value.

PICV is having a number of other benefits, but they are not rated in EN15500.

Why the CA value on the real plant may be different to the CA value measured on the eu.bac test bench?

The CA value measured on the eu.bac test bench is based on the test specification in EN15500. This covers load changes executed on a specific plant.

The benefit of this test is the comparability and reproducibility of the test results.

But this test does not take into account other impacts like:

- Mounting position of the room unit
- Dimensioning of HVAC equipment
- Hydronic impacts like pressure control, hydronic cross coupling, ...
- User behavior
- The load situation changes during heating/cooling season

As a result, CA value does not represent expected room temperature deviations in real application. Nevertheless, a control loop with lower CA value will result in lower room temperature deviations

Why the valve characteristic is not important in case of PWM and TPI -Control?

PWM and TPI- (On/Off-) Control lead to open/closed valves. Therefore LIN or EXP valve characteristics does not have significant effect on flow control and temperature regulation if PWM or on/off control is used.

As a result, interchangeability tests for on/off and PWM control that are confirming actuator/valve combination with LIN (linear) characteristic are applicable for same actuator/valve combination with EXP (exponential) characteristic and vice versa.

Why to take the time constant of a wall hanging room temperature sensor for the eu.bac test?

Eu.bac Test Tool (ETT-IZC) is based on a room model having wall hanging sensors. In order to have a comparison between controls, all of them need to be tested with the same boundary conditions. The resulting CA value will help to compare the performance of different controls under the same test conditions, but the CA value is not exactly what will be the resulting CA value on a real project.