

CK33365 6 Way Valve Retrofit

For Platinum 1.0 or Platinum 2.0 16 tier P120 or P60 machines

Operational Changes and Orientation

The 6 way valve retrofit kit is designed to give P120 and P60 machines additional cooling after 14 days in cycle. Prior to 14 days in cycle, the Platinum machine will operate normally. After 14 days in cycle, the 6-way valve will enable and will use both the heating and cooling coils for the supply of chilled water through the cabinet, thereby increasing the total amount of cooling available in the cabinet.

System Requirements

The 6 way valve will allow some mixing of the hot and chilled water streams when the mode of operation is changed over. Because of this, **the hot and chilled water characteristics must be the same and remain the same**. All treatments should be applied equally to both water supplies including the use of inhibitors and anti-freeze products such as glycol treatments.

The pressure in the two water supplies, hot and cold, should be **within 1-2 psi** of each other. This prevents excessive migration from one loop to the other, and ensures the system runs as efficiently as possible.

The chilled water flow through the cabinet will now be reduced from 5.0 GPM (19.0 L/min) per ECU to 3.0 GPM (11.5 L/min) per ECU. This means that the system will have to be re-balanced to ensure the correct flow across all machines. The flows should be check routinely to ensure its compliance.

Heat Mode after 14 Days in Cycle

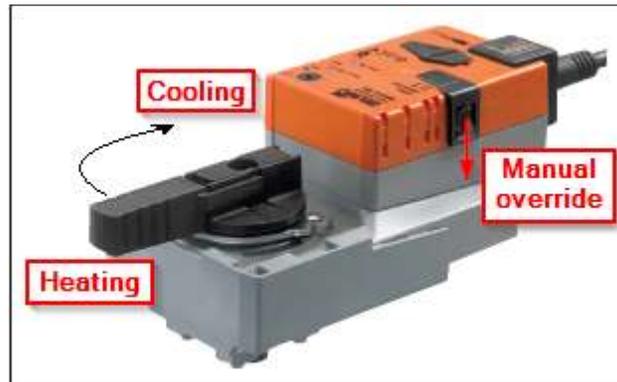
After 14 days in cycle and all the coils are switched to cooling mode, the heating will not function, even if the actual temperature fell below the setpoint. At this stage, the **eggs are in the exothermic stage**, and are therefore producing heat. If heat is required at this point, the following procedure must be followed.

1. Stop the active profile
2. Manually adjust the temperature set point; ensuring it is set low enough that the eggs will not be overheated.

Caution: If using a Pilot-controlled profile, do not accept the default value in the *Enter value* pop-up when stopping the profile. Enter the last air temperature setpoint known, or a reasonable setpoint similar to an air profile temperature (i.e. 97.0°F), to avoid overheating the eggs.

Manual Operation of the 6 Way Valve

The 6 way valve may be operated manually if the motor should fail. Press the *Manual Override* button towards the valve body while rotating the valve arm towards the required position – Cooling (using all coils) or Heating (allowing the use of the heating coils for heating).



Testing Procedure

1. Start a profile with current date and time. Confirm heat is on and flowing through hot coils (front and rear) only. Adjust profile temperature if necessary, e.g., 100°F to ensure heat is on. Allow machine to warm up for 15 – 30 minutes before proceeding to next step. (Valve should remain in default heating position)
2. Adjust profile temperature to value lower than current cabinet temperature, e.g. 70°F. Confirm cooling is on and flowing through cold coils (front and rear) only.
3. Adjust profile temperature to value somewhat higher than current temperature, e.g., 100°F. Allow machine to warm up for 15 – 30 minutes before proceeding to next step.
4. Restart profile and back date so Day in Cycle (DIC) is 14.0 or greater. Adjust profile temperature so cooling comes on. Valve will rotate from heating to cooling position. Cold water should flow through all coils (front and rear). Bring temperature down to set-point, e.g., 70°F.
Note: The valve takes approximately 150 seconds to switch over to double cooling.
5. Disable profile and ensure 6-Way valve returns to the default position – Heating.
6. Check current cold water pressure, flow and temperature. Flow should be 3 GPM (11.5 L/min).

Fail-Safe Testing Procedure

1. Repeat step 4 above and ensure the valve is in cooling mode and chilled water is flowing through all coils. Change dip switch to OFF position – valve should return to default position.
Note: It is not necessary to turn the machine off.
2. Enable dip switch – ON – and allow valve to switch back to double cooling.
3. Simulate power failure by turning machine power off. Valve should remain in cooling position.
4. Turn power back on.
5. Repeat step 1 above and allow machine to warm up. Check coils – only heating coils should have hot water flowing.
6. Repeat step 2 above and ensure chilled water is flowing through cold coils only.