HEATCRAFT™ Worldwide Refrigeration

Frequently Asked Questions

Q1. What is the Quick Response Controller?

A1. The Quick Response Controller or QRC is a factory mounted electronic control solution for evaporators that provides automatic superheat, room temperature and intelligent defrost control capability for walk-in coolers and freezers. The QRC provides superior system performance and energy savings over traditional electro-mechanical controls commonly used on refrigeration equipment today.

Q2. What are the key benefits of the Quick Response Controller?

A2. The Quick Response Controller provides the following benefits:

To End Users

- Eliminates the need for a mechanical defrost time clock, defrost termination switch and room thermostat.
- Energy savings through optimized defrost cycles on electric defrost units, reduce system run time through automatic superheat control, and evaporator fan cycling in the off cycle.
- Improved product integrity and food savings due to more stable walk-in box temperatures allowing customers to maintain produce and fresh food longer.
- Enables remote monitoring of the refrigeration system with the addition of a Smart Controller and Remote Refrigeration Control.

To Contractors

- Simple programming
- No need to re-check or reset the system superheat after installation and system run-in.
- Superior system performance with no additional installation complexity or retrofitting of control solutions in the field.
- Eliminates the need for a mechanical defrost time clock, defrost termination switch and room thermostat
- Eliminates need to run low voltage wiring between the condensing unit and evaporator.
- Intelligent demand defrost without the need to add a Smart Controller.
- Evaporator can be purchased as a stand-alone solution and is compatible with standard condensing units.

To Wholesalers

- Evaporator can be stocked as a stand-alone solution and is compatible with standard condensing units.

Q3. What advantage will the Quick Response Controller provide to my walk-in?

A3. Mounted on the evaporator within a walk-in freezer or cooler, the Quick Response Controller performs the necessary defrost operations directly from the electronic control, eliminating wiring back to the condensing unit. Additionally, fan cycling during compressor off cycle provides an energy saving feature. Fans will continuously cycle on for 7 minutes then off for 5 minutes during the off cycle until the compressor restarts.

Q4. Is this product available on all Heatcraft evaporators?

A4. The Quick Response Controller is available on Heatcraft walk-in cooler and freezer evaporators.

Q5. Can this product be used within applications where one condensing unit is connected to multiple evaporators?

A5. Yes. The Quick Response Controller is designed to work in applications where more than one evaporator (up to four) is needed in a walk-in cooler or freezer and piped to a single condensing unit.

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Q6. Can I install this product on existing Heatcraft evaporators in my walk-in cooler or freezer?
A6. No. The Quick Response Controller is only available as a factory-installed controls solution on a walk-in cooler or freezer evaporator.

Q7. How durable is the Quick Response Controller in a cold environment?
A7. The Quick Response Controller board and components are designed to operate inside the walk-in freezer or cooler environment down as low as -30°F room temperature.

Q8. What are the key benefits of the electronic expansion valve?
A8. The electronic expansion valve provides the following benefits:
- Accurately controls the flow of refrigerant into the evaporator
- Replaces both traditional thermostatic expansion valve and liquid line solenoid valves
- Closes automatically on loss of power

Q9. Is wiring from the evaporator to the condensing unit required for operation?
A9. The use of the Quick Response Controller eliminates the need for wiring from the evaporator to the condensing unit. The required components for system operation are built into the Quick Response Controller.

Q10. Will the Quick Response Controller enable me to remotely monitor my refrigeration system?
A10. Yes. The Quick Response Controller enables a user to remotely monitor their refrigeration system with the addition of a Smart Controller and Remote Refrigeration Control.

Q11. Can a remote display be added to the Quick Response Controller?
A11. Yes. An optional remote display or user interface is available for use with the Quick Response Controller and is called a Smart Controller. Please note that adding this Smart Controller to the Quick Response Controller will automatically change the intelligent defrost routine from a pure Demand Defrost to a Smart Defrost routine. However, it can be reset manually to a pure Demand Defrost function. For more on the differences between Smart and Demand defrost, please refer to Question 14 below.

Q12. What is the standard manufacturer warranty for the Quick Response Controller?
A12. 3 years from date of original installation or 42 months from date of shipment, whichever occurs first.

Q13. Will the Quick Response Controller work with multiple evaporator configurations?
A13. Yes, you may connect and control up to four QRC systems with one Smart Controller.

Q14. What is the difference between Demand Defrost and Smart Defrost?
A14. With Demand Defrost, defrosts are initiated only when needed. The system will detect a decrease in evaporator performance and will initiate defrost. Demand Defrost does not offer defrost “lock-out” capabilities to prevent the system from going into defrost during set, specific times. Smart Defrost will look for opportunities to skip defrost at set, specific times and requires these times to be predetermined. As such, Smart Defrost will allow for time periods to “lock-out” defrost cycles from occurring during busy periods such as during a lunch or dinner rush.

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Q15. How does evaporator fan cycling work on the Quick Response Controller?

A15. As an additional energy saving feature, fan cycling is initiated during the system off-cycle when compressor is off. During this off-cycle, the evaporator fans will run for 7 minutes then turn off for 5 minutes, unless system/compressor restart occurs. Fan Cycling is "Off" by default, but is user configurable to set "On" or "Off" based on user preference.

Q16. Is programming the Quick Response Controller difficult?

A16. No. The Program Review button is used to review and change all program settings for the system. Factory default set points reflect the most common settings used in the field and are easily adjustable.

Q17. Can I add Quick Response Controller evaporator to an existing air or electric defrost condensing unit?

A17. Yes. The Quick Response Controller is sold as a stand-alone evaporator solution and can be installed with an existing air or electric defrost condensing unit. Some rewiring will be required to shift defrost control from a mechanical time clock to the QRC control.

Q18. What refrigerant does the Quick Response Controller Support?

A18. Quick Response Controller supports refrigerants R-404A and R-22.

Q19. Is technical support and training available for Quick Response Controller?

A19. Yes. Professional technical telephone support is available by calling (770) 465-5600. An installation Tips & Programming video is also available at www.heatcraftrpd.com/QRC. For more information regarding technical training, please contact your local Heatcraft sales representative or go to http://www.heatcraftrpd.com/training.

Q20. Does the Quick Response Controller eliminate the need for a solenoid valve?

A20. Yes. The solenoid valve is eliminated by the use of an electric expansion valve.