

Internal Cascading Sequencer

Control up to 8 KNIGHT Heating Boilers

The KNIGHT Heating Boiler is standard with an internal cascading sequencer built-in its SMART SYSTEM™ operating control. The standard internal sequencer allows for control of up to eight KNIGHT Heating Boilers.

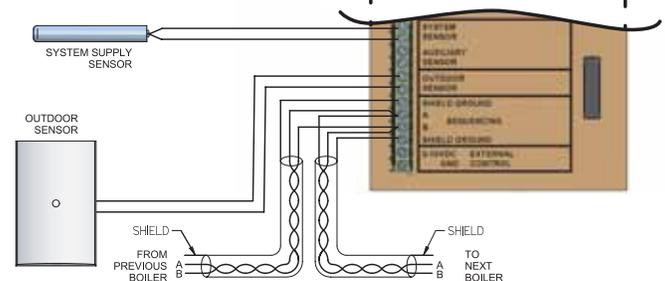
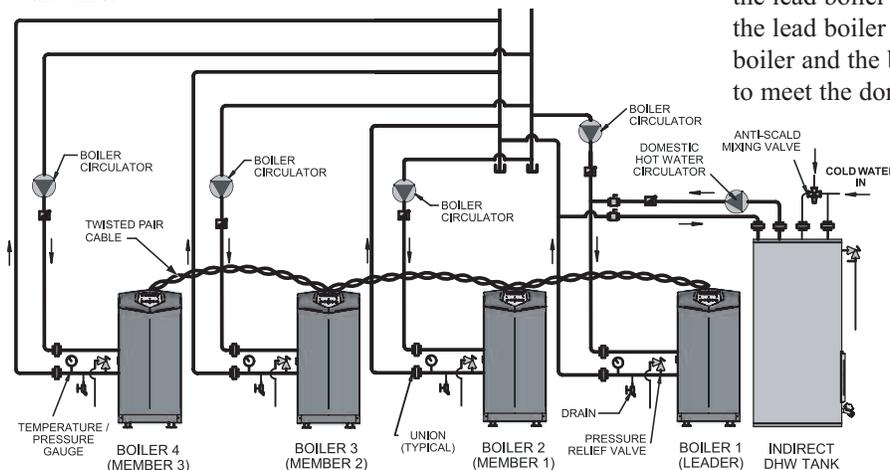
Cascading allows multiple KNIGHT Heating Boilers to be controlled by an assigned “lead” boiler. The remaining boilers in the multiple boiler system act as “followers” of the lead boiler. This feature not only increases system efficiency, it lowers the initial cost to the building owner since no third party external control is required to turn multiple boilers on and off.

How does it work?

Each boiler in the system is connected via a daisy chain 2-wire communication cable. When demand occurs, the “lead” boiler will fire at 50 percent input. Depending on the load, the “lead” boiler will modulate input to meet load. The second boiler in the arrangement will not fire until the demand has exceeded the capacity of the lead boiler by 20%. At this point the second boiler will fire, and modulate to meet load. If the system reaches 220% of load, the third boiler will fire. This process repeats until all boilers are in operation or the demand is met. Once the output of the boilers starts to meet set point, the last boiler initiated will modulate down until it is no longer needed, the next boiler will follow until set point is maintained.

Lead – Lag

In continual operation, the KNIGHT SMART SYSTEM™ operating control will rotate the lead boiler every 24 hours. Lead Lag rotates the firing order of each boiler in a multiple boiler system. This insures that each boiler see equal amount or run time.



Domestic Hot Water Prioritization

When multiple KNIGHT Heating Boilers are set up for cascading and domestic hot water prioritization, the SMART SYSTEM operating control will always give DHWP priority. If the boiler with DHWP assignment is the lead boiler when a call for domestic hot water occurs, the lead boiler automatically switches to the next available boiler and the boiler tagged for DHWP will modulate up to meet the domestic load.

Standard Features & Benefits

- Lead Lag Operation
- Sequence up to 8 KNIGHT Heating Boilers
- Domestic Hot Water Priority
- Equal Run Time of Boilers
- Lower Initial Cost