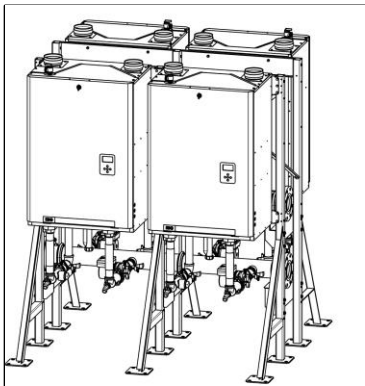
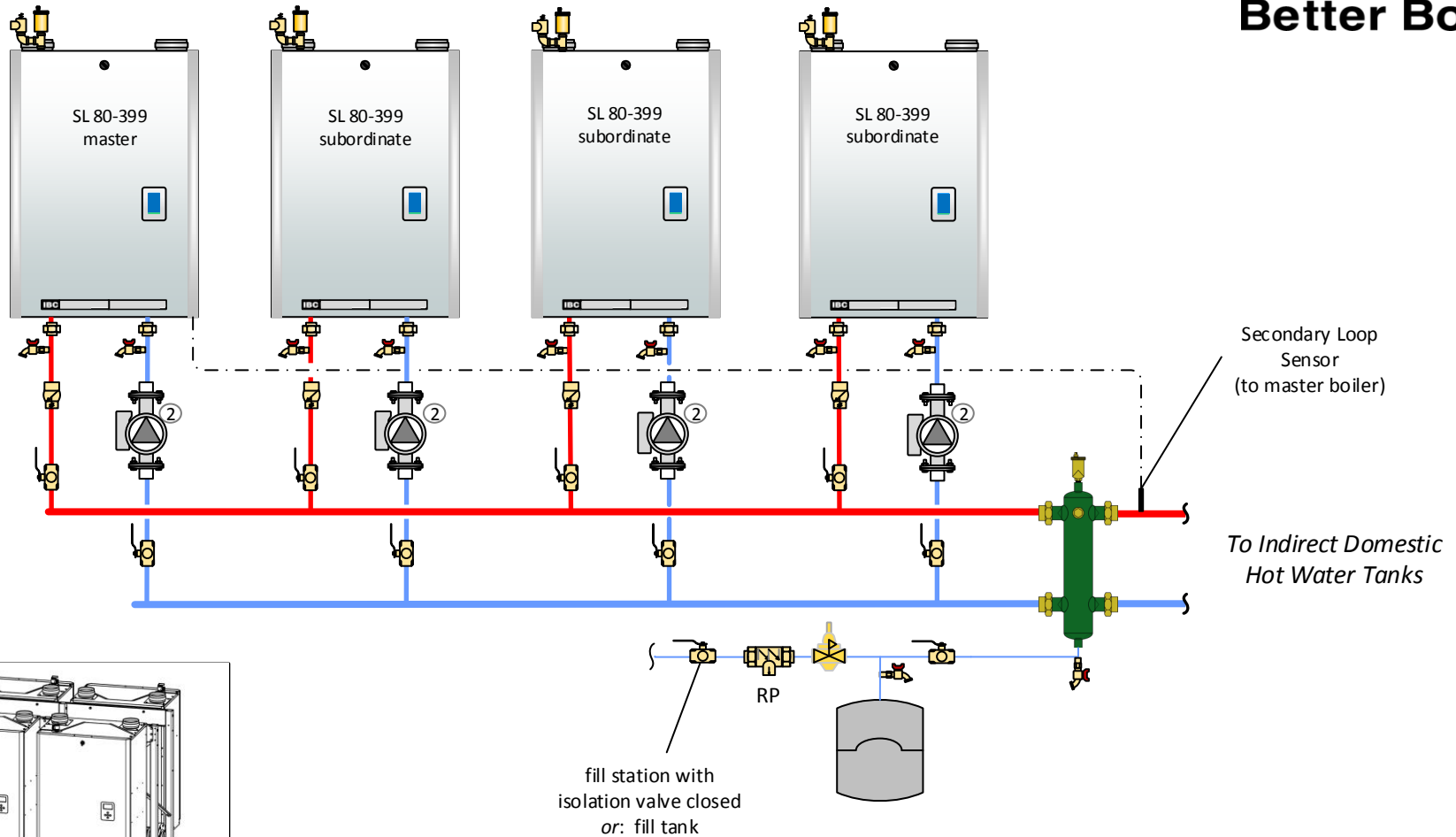




Better Boilers



IBC Multiplex Racking System, model 90-167
2+2 back-to-back, with 4" manifold headers

Notes

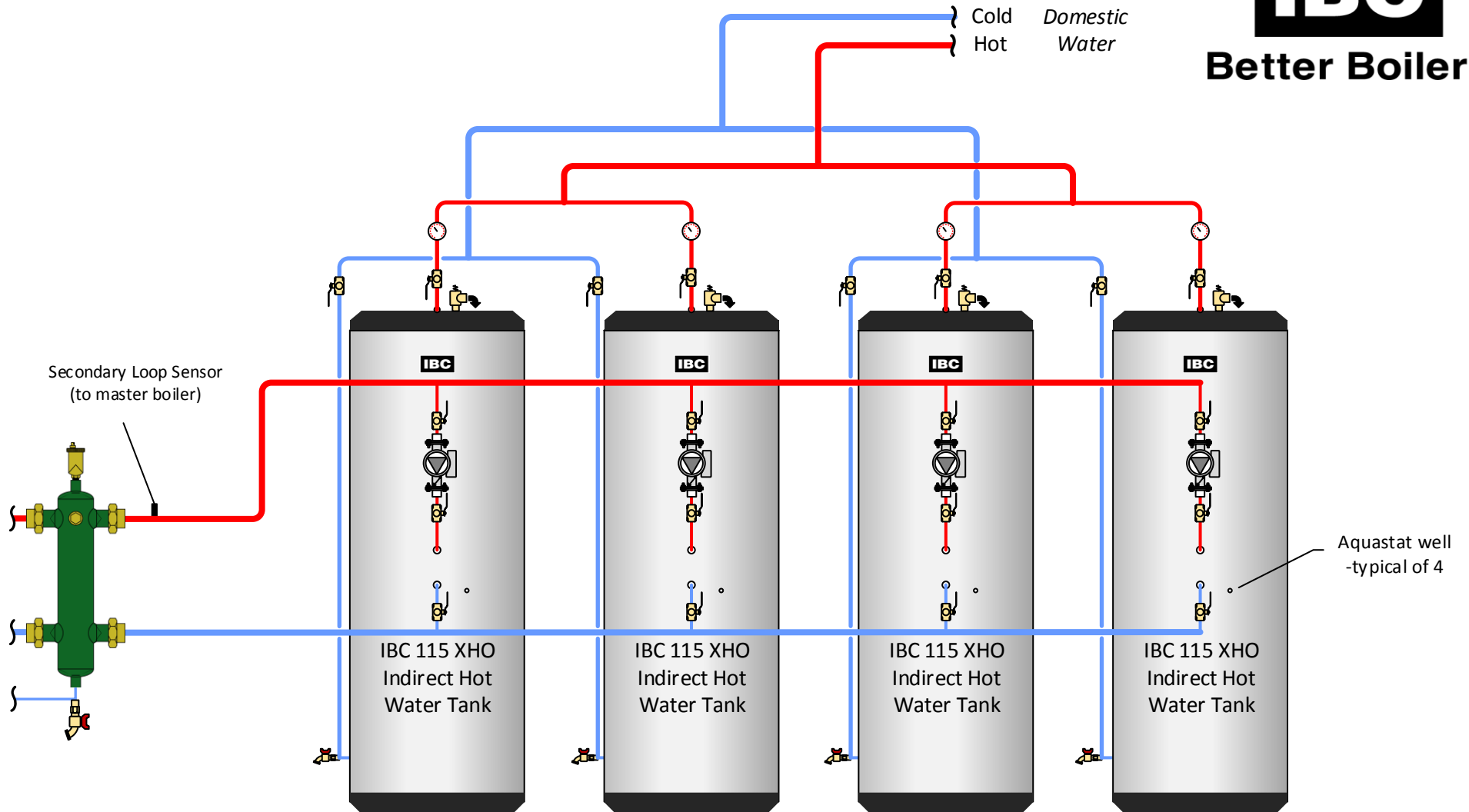
- See p.2 for domestic indirect tank piping.
- See p.3 electrical diagram
- Note integral check valves for each load pump.
- 4-Boiler back-to-back Multiplex racking system shown, IBC part 90-167. System comes complete with UPS 43-44 boiler pumps, near boiler piping, valves, check valves and 4" manifold headers.

CAUTION: This drawing is a simple schematic guide to a successful installation. There may be many necessary components not shown here. We require that our boilers be installed by licensed and experienced trades people who are familiar with the applicable local and national codes. System design is to be completed by an experienced hydronic designer or Engineer. It is necessary to carefully read and follow the installation instructions that come with the boiler along with the application drawing that fits your system.

IBC 399 4.1.ind		IBC SL 80-399 4 boiler network DHW	
DRAWN BY BRAD POULSEN		DATE 06/06/2016	
DESCRIPTION Multi-boiler DHW installation with four Extra High Output Indirect Tanks.			
			PAGE 1 OF 3



Better Boilers



Notes

- Note integral check valves for each load pump. Recommended pump UPS 43-100 on speed two, or other pump sized for 28 gpm and 16 feet of head.
- Symmetrical piping on Domestic piping (shown) delivers equal temperature water to all four tanks for added redundancy. Reverse return piping would achieve the same benefit.

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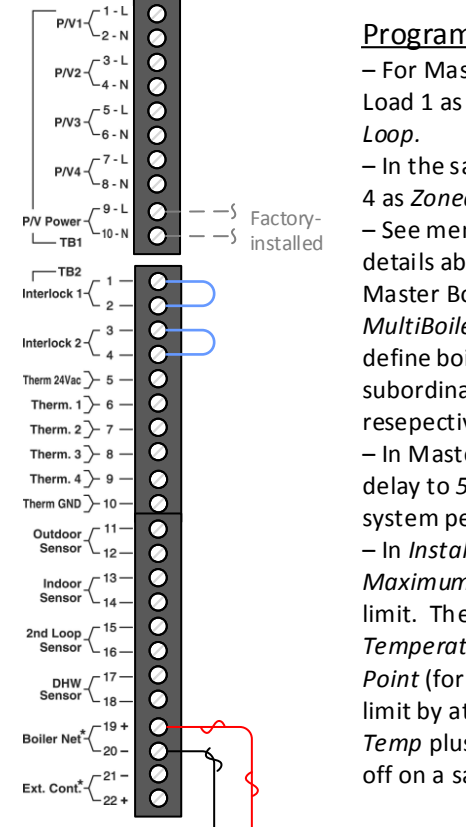
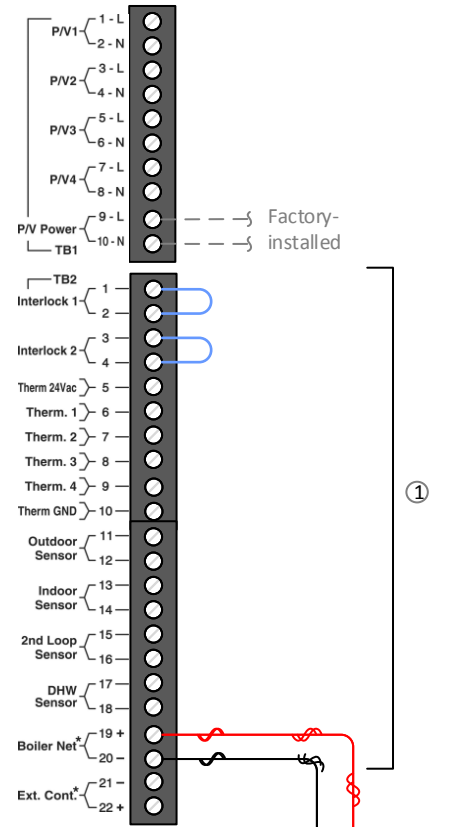
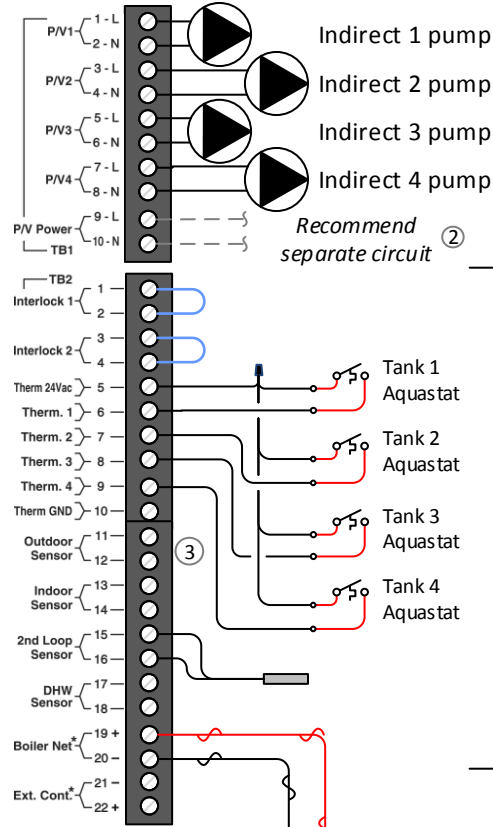
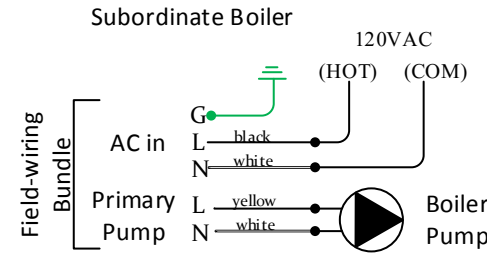
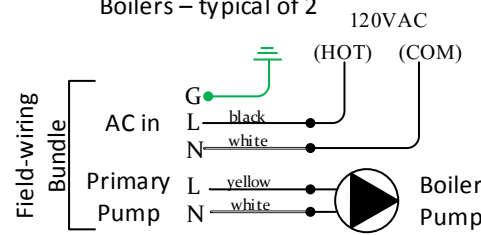
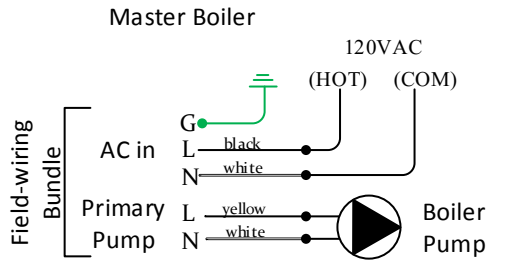
IBC 399 4.1.ind		IBC SL 80-399 4 boiler network DHW	
DRAWN BY BRAD POULSEN		DATE 06/06/2016	
DESCRIPTION Multi-boiler DHW installation with four Extra High Output Indirect Tanks.			
			PAGE 2 OF 3



Better Boilers

Wiring Diagram

Middle Subordinate
Boilers – typical of 2



Programming Notes

- For Master Boiler, in *Installer Setup* menu set Load 1 as *DHW*. Set *Water ° From* to *Secondary Loop*.
- In the same *Installer Setup* menu set Loads 2-4 as *Zoned, "Of Load 1- DHW"*.
- See memo *Multiple Boiler Systems* for full details about network configuring. For the Master Boiler only, in *Installer Setup Menu / MultiBoiler*, turn Master Boiler to *On*, and define boiler ID as "1". Set boiler ID at subordinate boilers to "2", "3" and "4" respectively, leaving Master Boiler *Off*.
- In Master Boiler *MultiBoiler* menu, set staging delay to *5 min*. This value is an estimate; system performance may require its revision.
- In *Installer Setup Menu / Edit*, for any load: *Maximum Supply Temperature* acts as a high limit. The operating limits *Design Supply Temperature* (for Reset Heating) or *Supply Set Point* (for Set Point) must remain below this limit by at least half of the *Supply Differential Temp* plus 2°F to prevent the boiler from cycling off on a safety limit.

Wiring Notes

- No external voltages to be applied to TB2 control terminal strip connections 1-20.
- Pump circuits are fused for a total draw of 5A; maximum amperage draw of 4A per pump is recommended. Total power consumption of the four UPS 43-100 pumps selected nearly fills the 15A circuit allowance; wire a separate circuit into *P/V Power*.
- Outdoor sensor not installed for this application.
- Boiler network wires are polarity-sensitive, and must be twisted once per inch, and not be routed parallel to line voltage wires
- Boilers 2 and 3, being non-terminal boilers in the network, have their Jumper A02 removed, as illustrated in *Multiple Boiler Systems Tech Memo* (or see Touch Screen manual page 25).

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