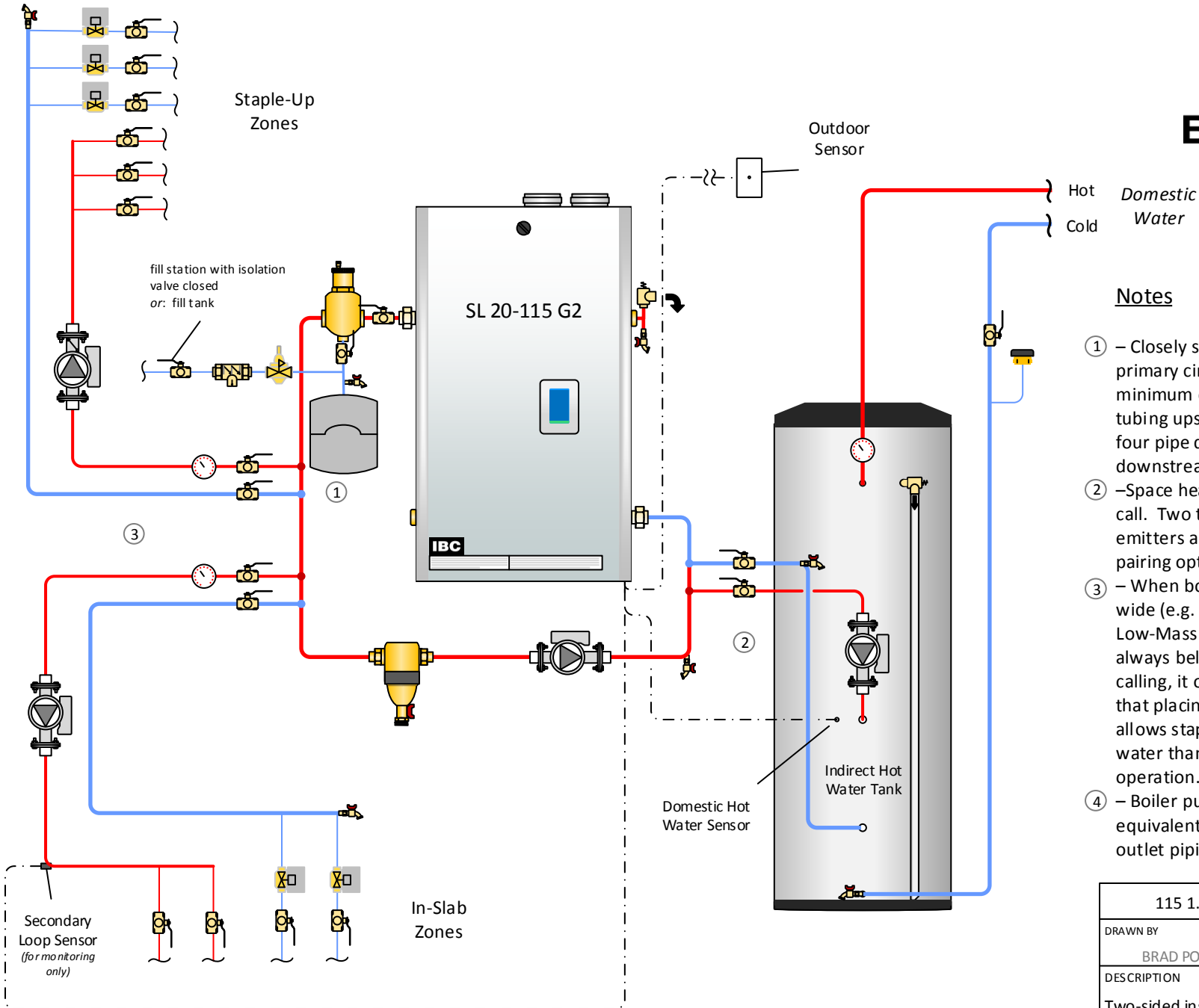




Better Boilers

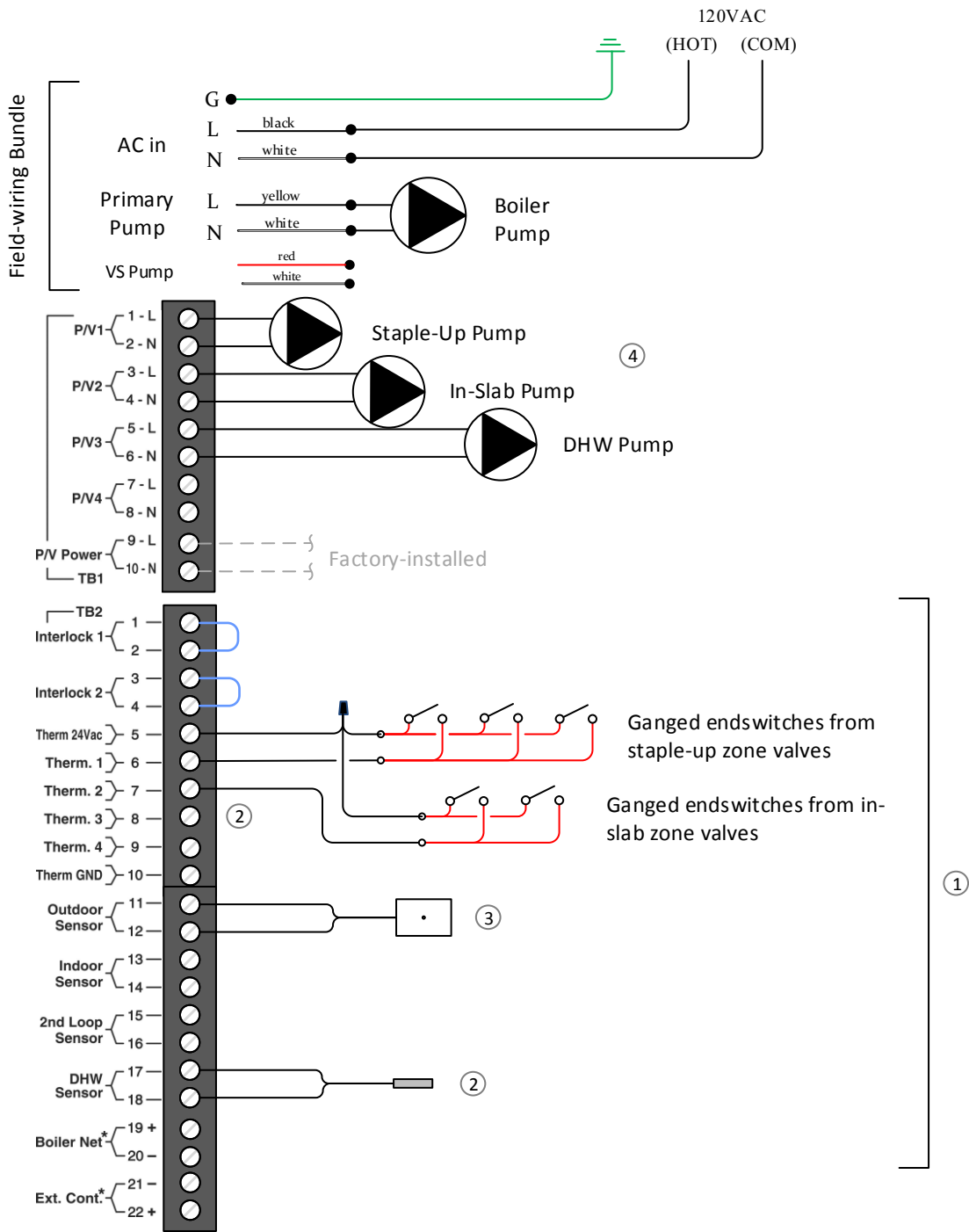


Notes

- ① – Closely spaced tees are maximum four primary circuit piping diameters apart, with a minimum of eight pipe diameters of straight tubing upstream of first tee and a minimum four pipe diameters straight tubing downstream of second tee.
- ② – Space heating will be paused during DHW call. Two temperatures of space heating emitters are combined with with the load pairing option.
- ③ – When both space heating calls are active, a wide (e.g. 44°F) *Supply Differential* on the Low-Mass (staple-up) load allows it to run always below 125°F. When only Low-Mass is calling, it operates at e.g. 135-140° F. Note that placing staple-up tees before in-slab tees allows staple-up zones to receive hotter water than in-slab during simultaneous operation.
- ④ – Boiler pump is UPS 15-58 (speed 2) or equivalent; minimum flow is 2 gpm; inlet and outlet piping is 1" NPT.

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.

| | | | |
|---|------------|-----------------------|--------|
| 115 1.3.staple | | IBC SL 20-115 3 loads | |
| DRAWN BY | DATE | | |
| BRAD POULSEN | 03/03/2016 | | |
| DESCRIPTION | | | |
| Two-sided installation with three loads. Domestic hot water gets priority operation. Load Pairing allows both loads to run simultaneously despite different design temps. | | | |
| PAGE | | | 1 OF 2 |



Wiring Diagram



Better Boilers

Wiring Notes

- ① – No external voltages to be applied to TB2 control terminal strip connections 1-20.
- ② – Indirect tank DHW Sensor to terminals 17 and 18; if an aquastat is used connection will be to terminals 5 and 8 (Therm 24V and Therm 3).
- ③ – Outdoor sensor installed on North exterior wall, exposed to actual outdoor air temperature.
- ④ – Pump circuits are fused for a total draw of 5A; maximum amperage draw of 4A is recommended.

Programming Notes

- Ⓐ – In *Installer Setup* Menu set Load 1 to *Reset Heating* or *Set Point* as desired. Set Load 3 to *DHW*, and for this load only set *Boiler Pump* to *Off*.
- Ⓑ – Note that other *Therm.* and *P/V* connections are possible: the installer may program any of the four Loads as any type (e.g. *Setpoint*, *DHW*, etc.). **Every Load number (1-4) is associated with a corresponding Therm. connection (1-4) and P/V (pump) connection (1-4).**
- Ⓒ – In *Installer Setup* Menu / *Load Pairing* select Load 1 as *Primary Load* and Load 2 as *Secondary Load*. Confirm that temperatures and priorities are compatible in the *Status* line at bottom of menu. Selecting high *Supply Differential Temperature* (max. 60°F) allows a load to run at a compromised temperature when it must be compatible with another load but still operating near its ideal temperature when it is the only load calling. See *Load Pairing Tech Memo* for more information.

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.

| | | | |
|---|--|-----------------------|--------|
| 115 1.3.staple | | IBC SL 20-115 3 loads | |
| DRAWN BY | | DATE | |
| BRAD POULSEN | | 03/03/2016 | |
| DESCRIPTION | | | |
| Two-sided installation with three loads. Domestic hot water gets priority operation. Load Pairing allows both loads to run simultaneously despite different design temps. | | | |
| PAGE | | | 2 OF 2 |