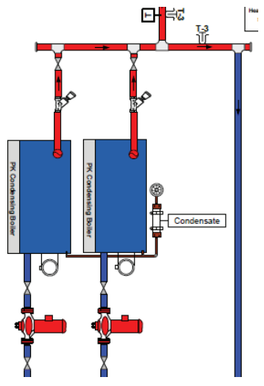
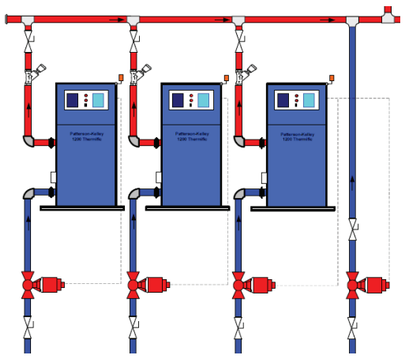
PATTERSON-KELLEY





Commercial Piping Diagram

Summer 2020

For proper formatting, download to computer and view in Adobe Acrobat

1

PATTERSON-KELLEY

Disclaimer:

These piping diagrams are an example of possible configurations which may not work in all applications. Local codes and authorities should be always be verified with a qualified engineer's consultation on all installation details including piping schematics. Please consult Patterson-Kelley, LLC Boiler & Water-Heater Owner's Manuals for correct operational standards for all P-K boilers and water-heaters. Patterson-Kelley LLC cannot, and will not, be held liable for any lack of due diligence of any party involved in the installation of its products.

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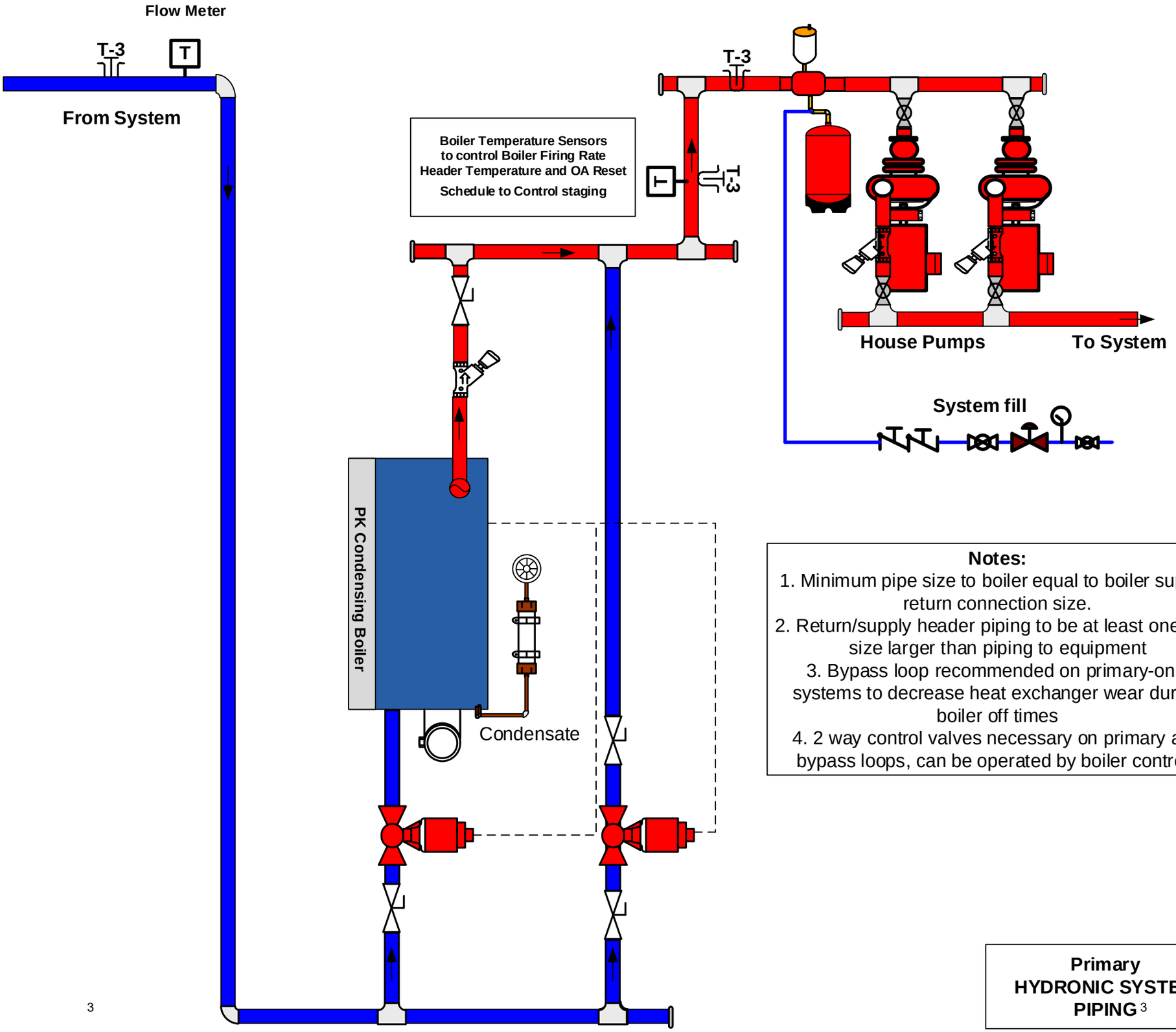
Primary loop diagram

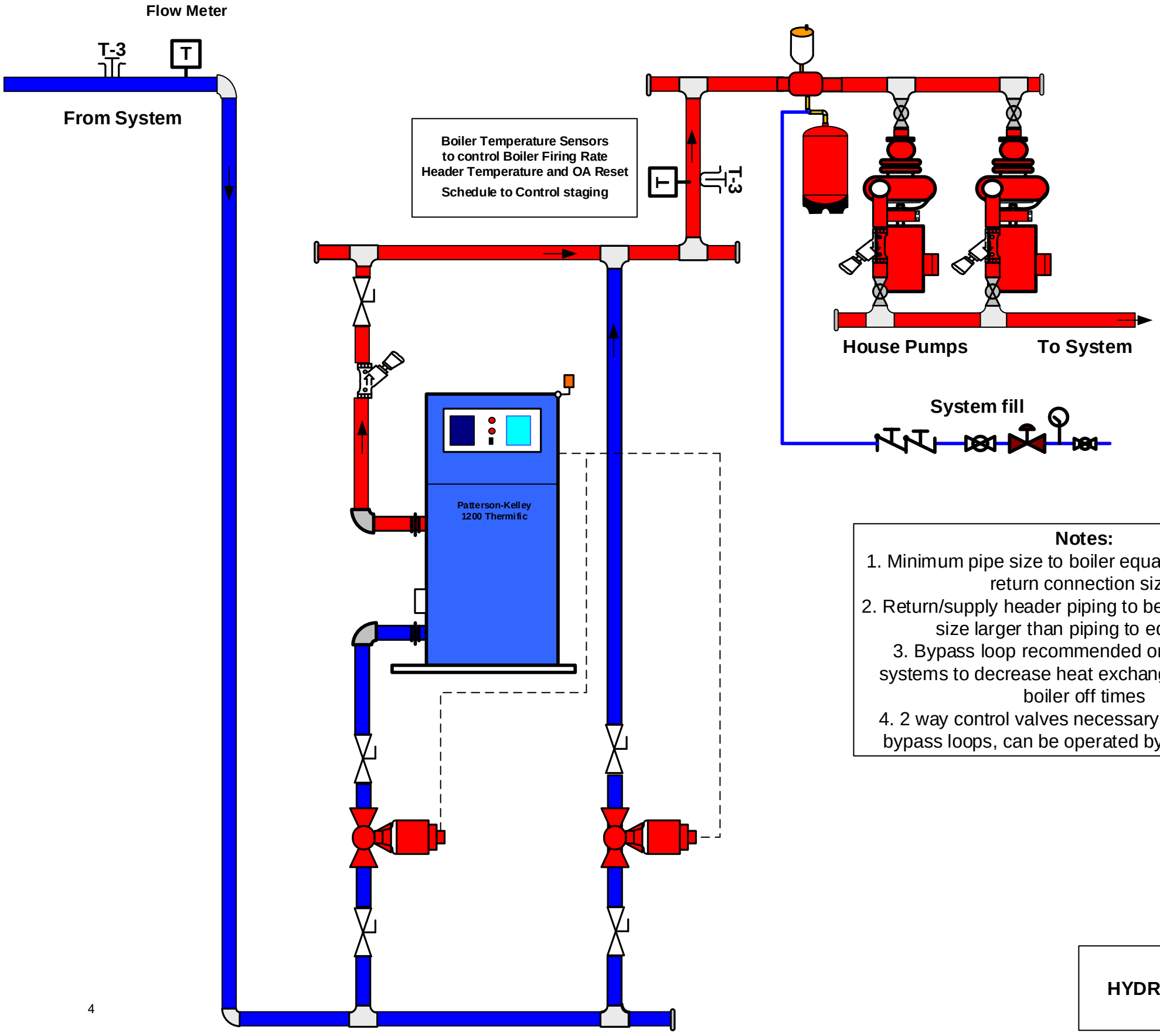


Notes:

1. Minimum pipe size to boiler equal to boiler supply/ return connection size.
2. Return/supply header piping to be at least one pipe size larger than piping to equipment
3. Bypass loop recommended on primary-only systems to decrease heat exchanger wear during boiler off times
4. 2 way control valves necessary on primary and bypass loops, can be operated by boiler controls

Primary HYDRONIC SYSTEM PIPING 3

Primary loop diagram



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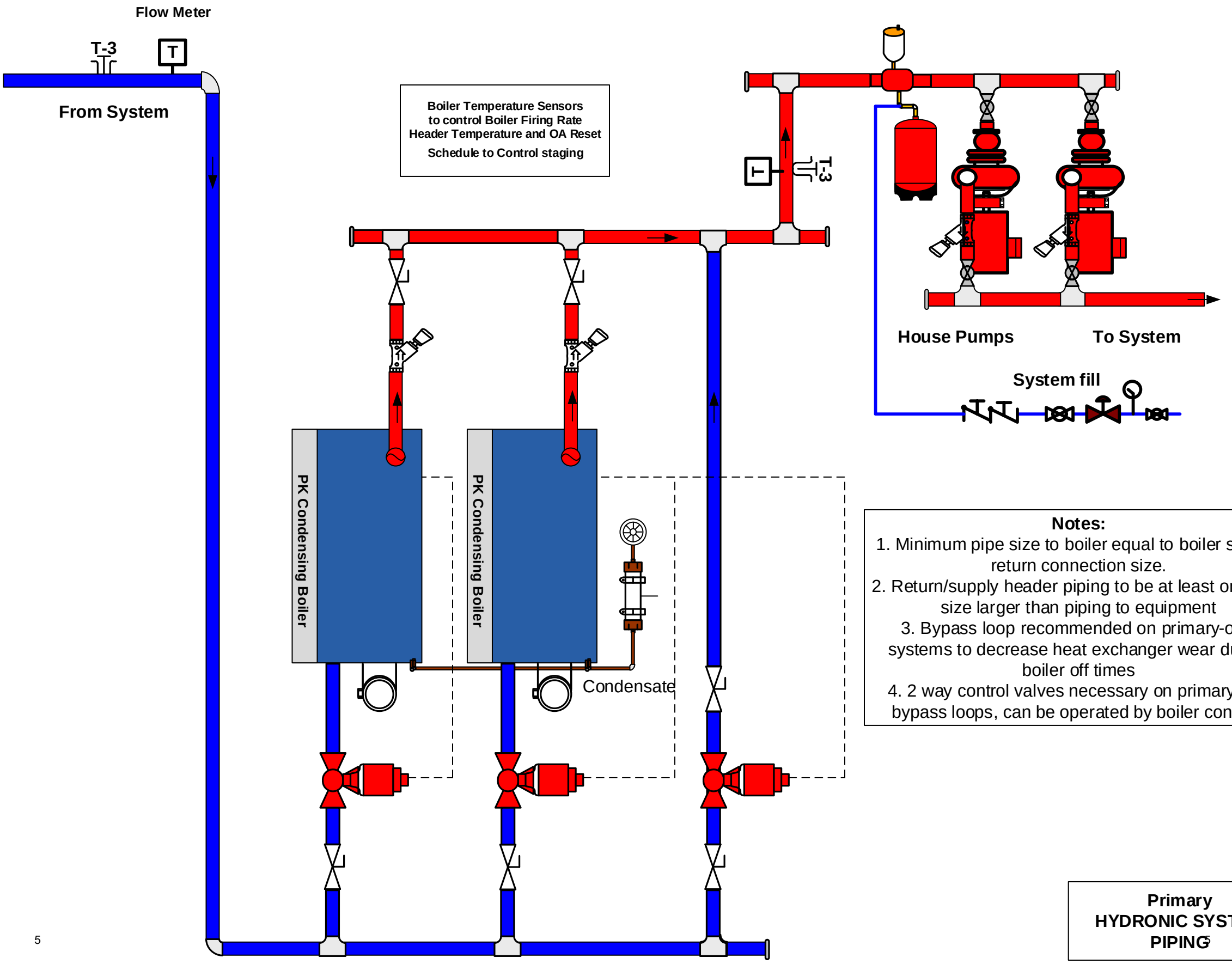
Primary
HYDRONIC SYSTEM
PIPING

Primary loop diagram



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Primary HYDRONIC SYSTEM PIPING

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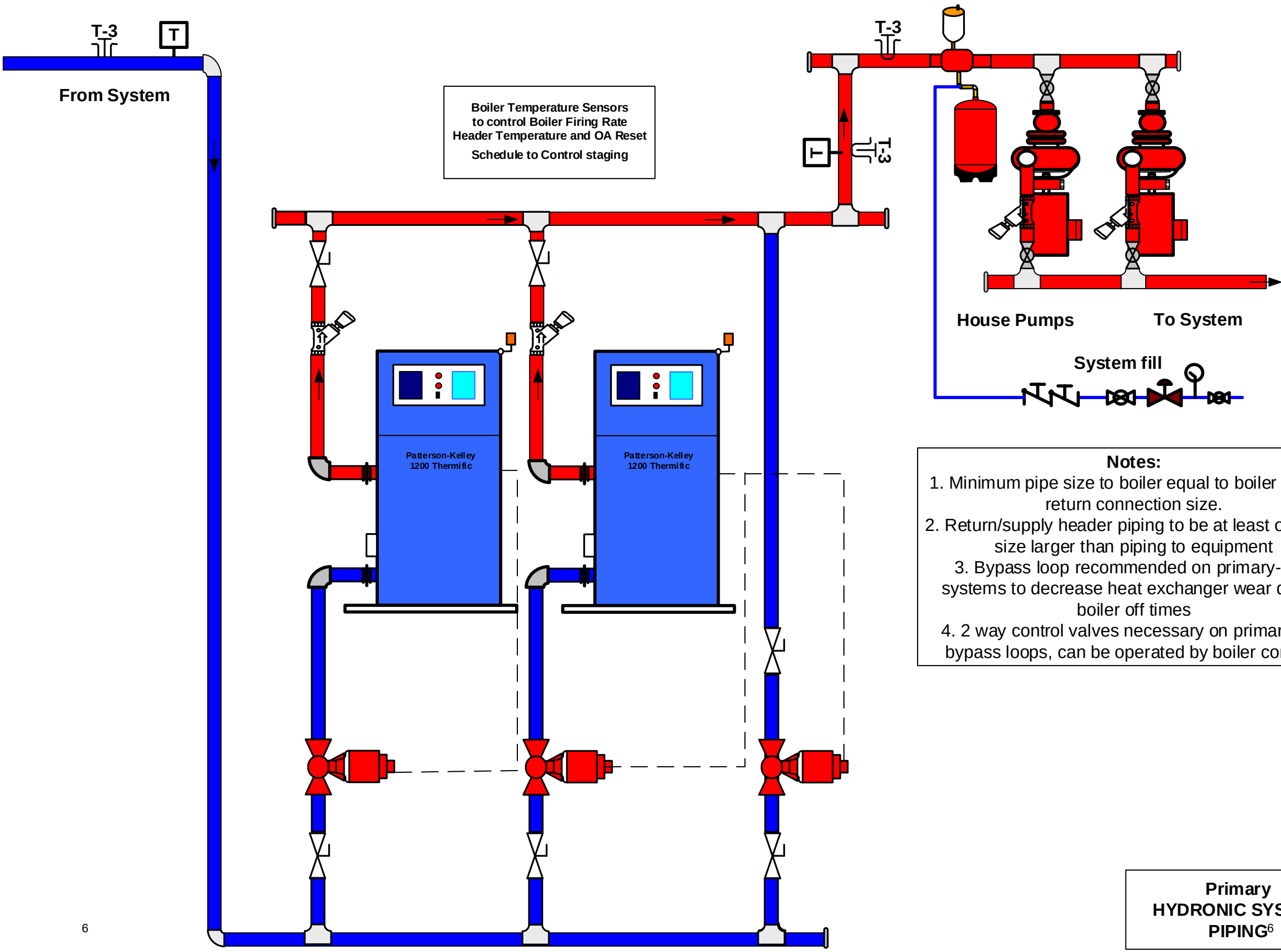
Primary loop diagram



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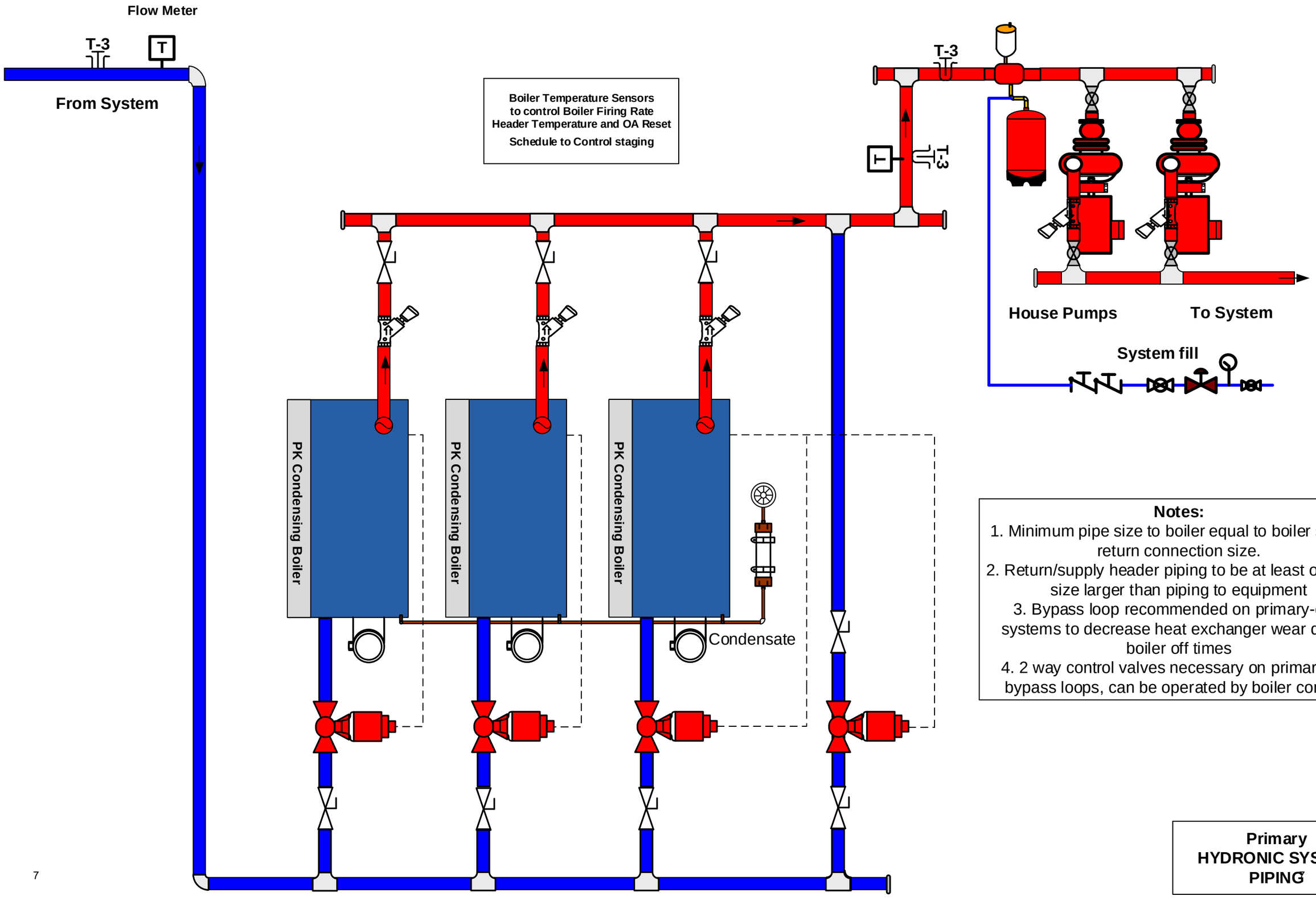
Primary
HYDRONIC SYSTEM
PIPING[6]

Primary loop diagram



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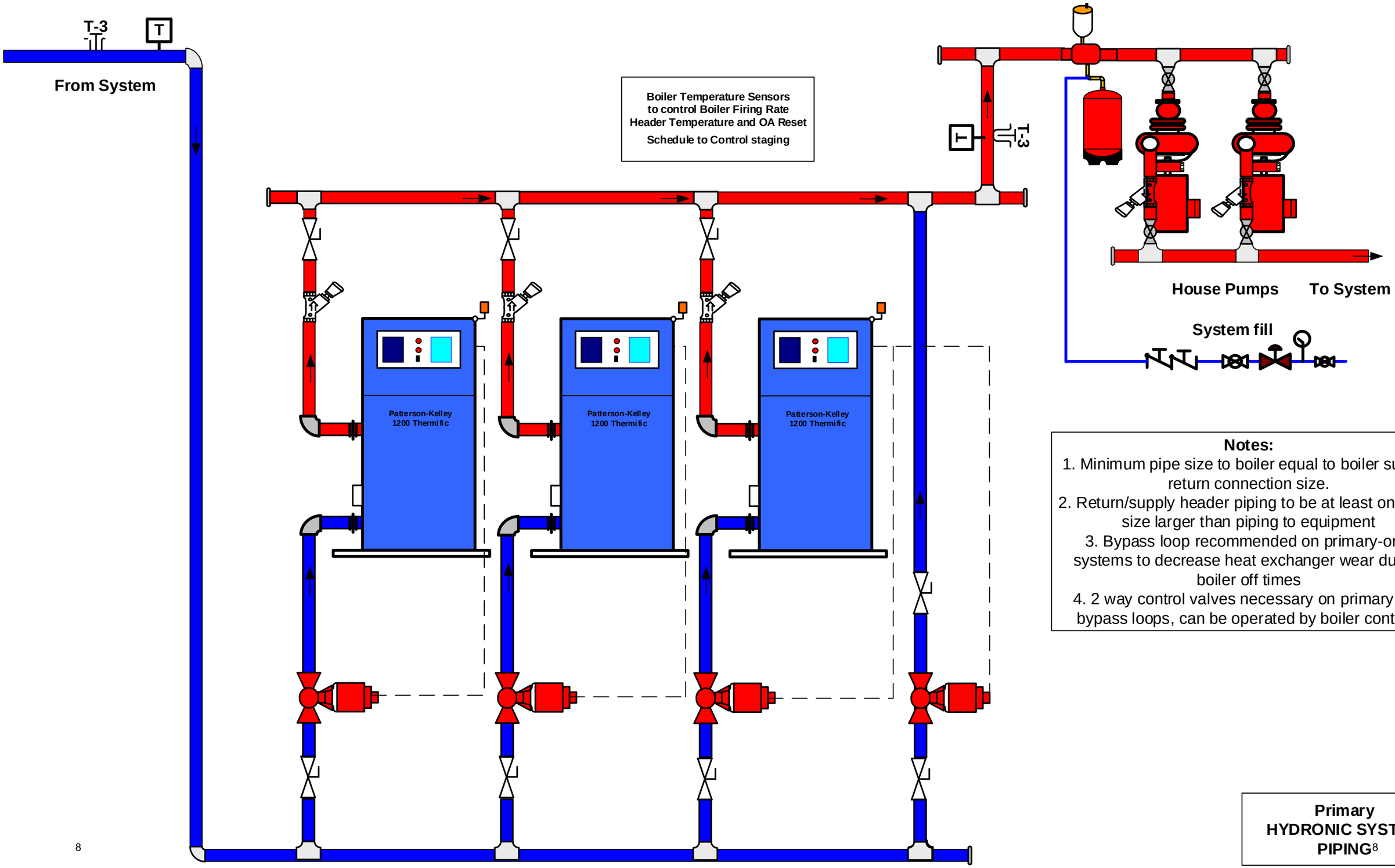
Primary
HYDRONIC SYSTEM
PIPING

Primary loop diagram



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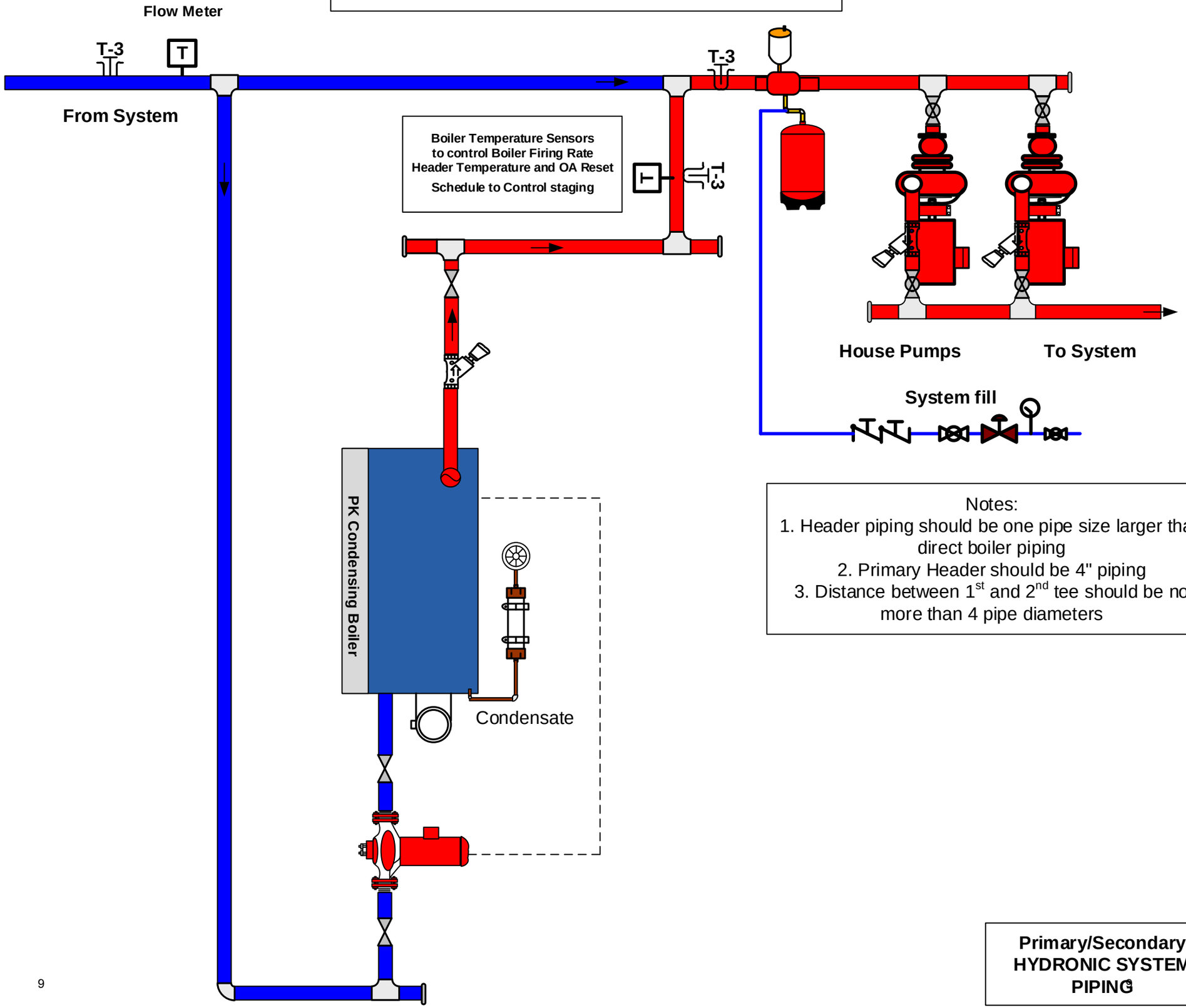
Primary
HYDRONIC SYSTEM
PIPING[8]

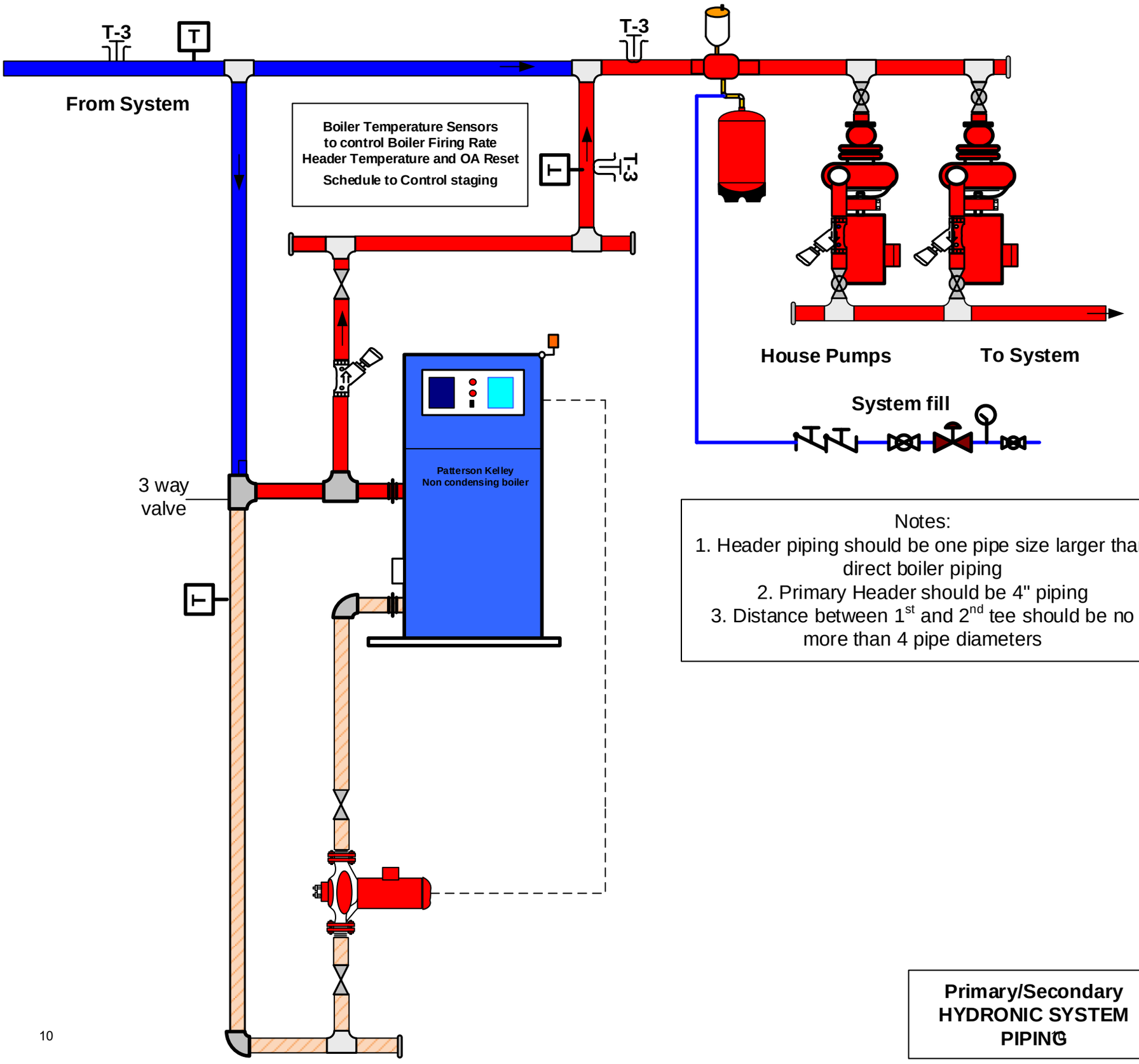
Primary/Secondary loop diagram



Notes:
1. Header piping should be one pipe size larger than direct boiler piping
2. Primary Header should be 4" piping
3. Distance between 1st and 2nd tee should be no more than 4 pipe diameters

Primary/Secondary HYDRONIC SYSTEM PIPING

Primary/Secondary loop diagram



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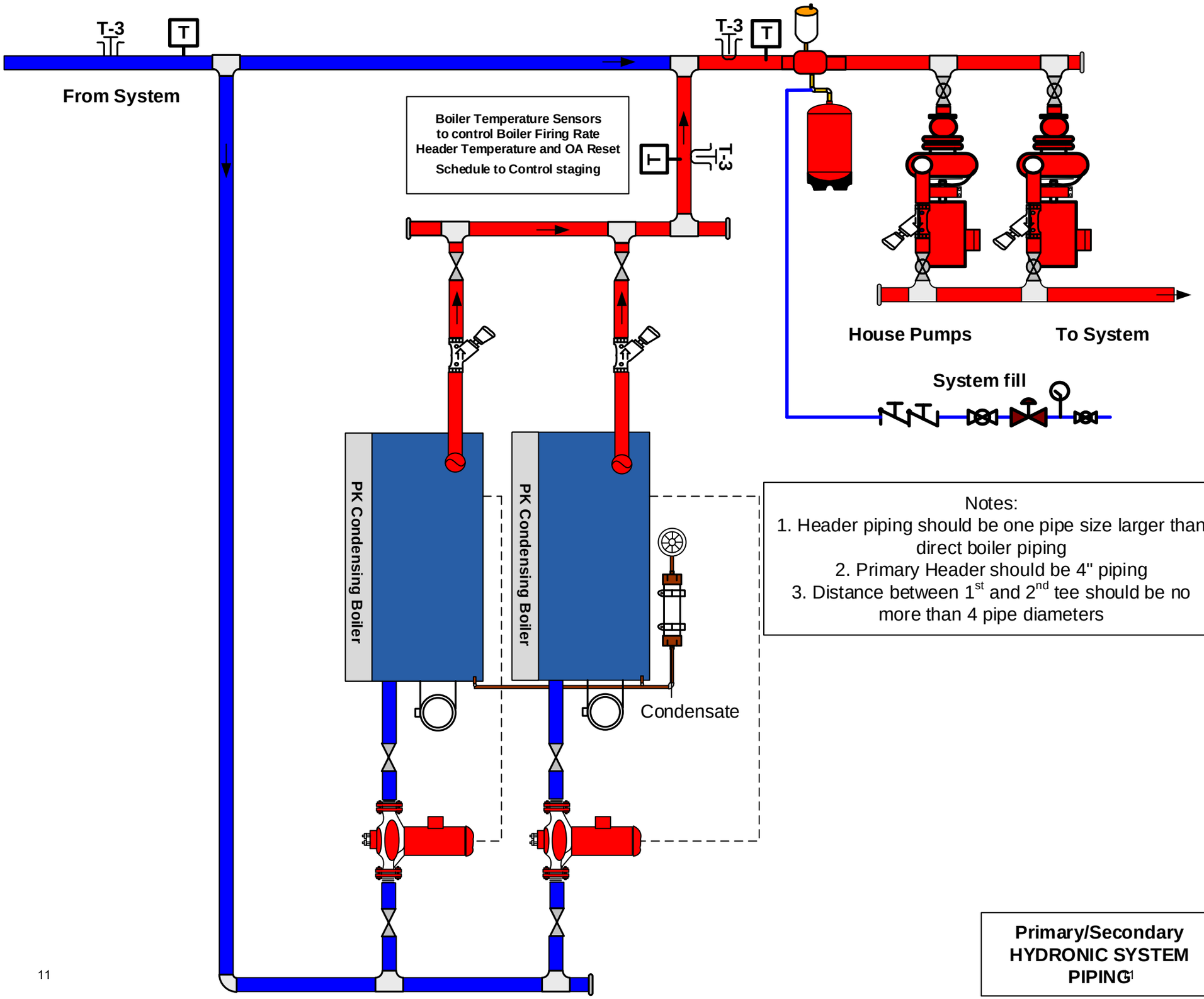
Primary/Secondary HYDRONIC SYSTEM PIPING

Primary/Secondary loop diagram



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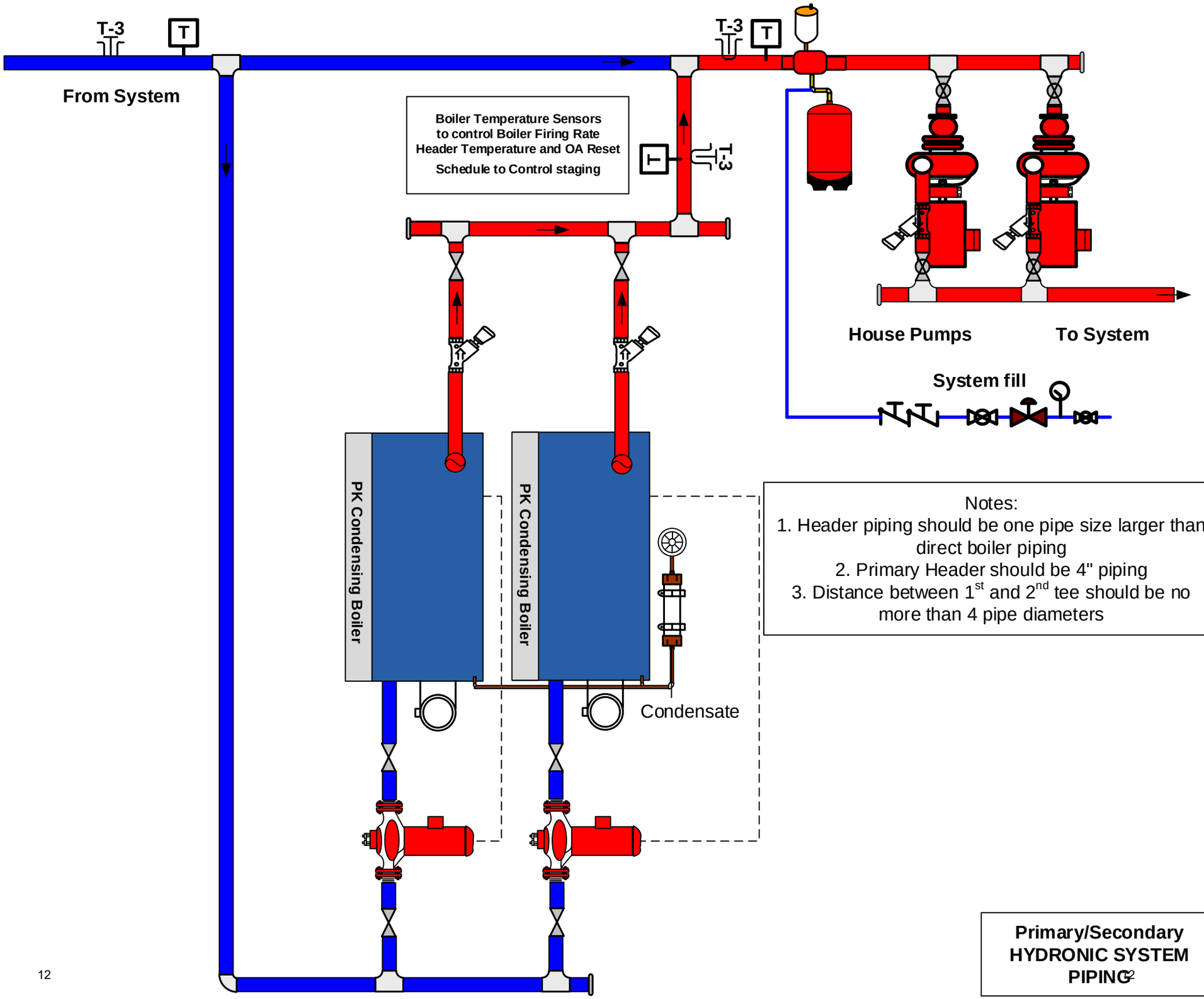
Primary/Secondary HYDRONIC SYSTEM PIPING

Primary/Secondary loop diagram



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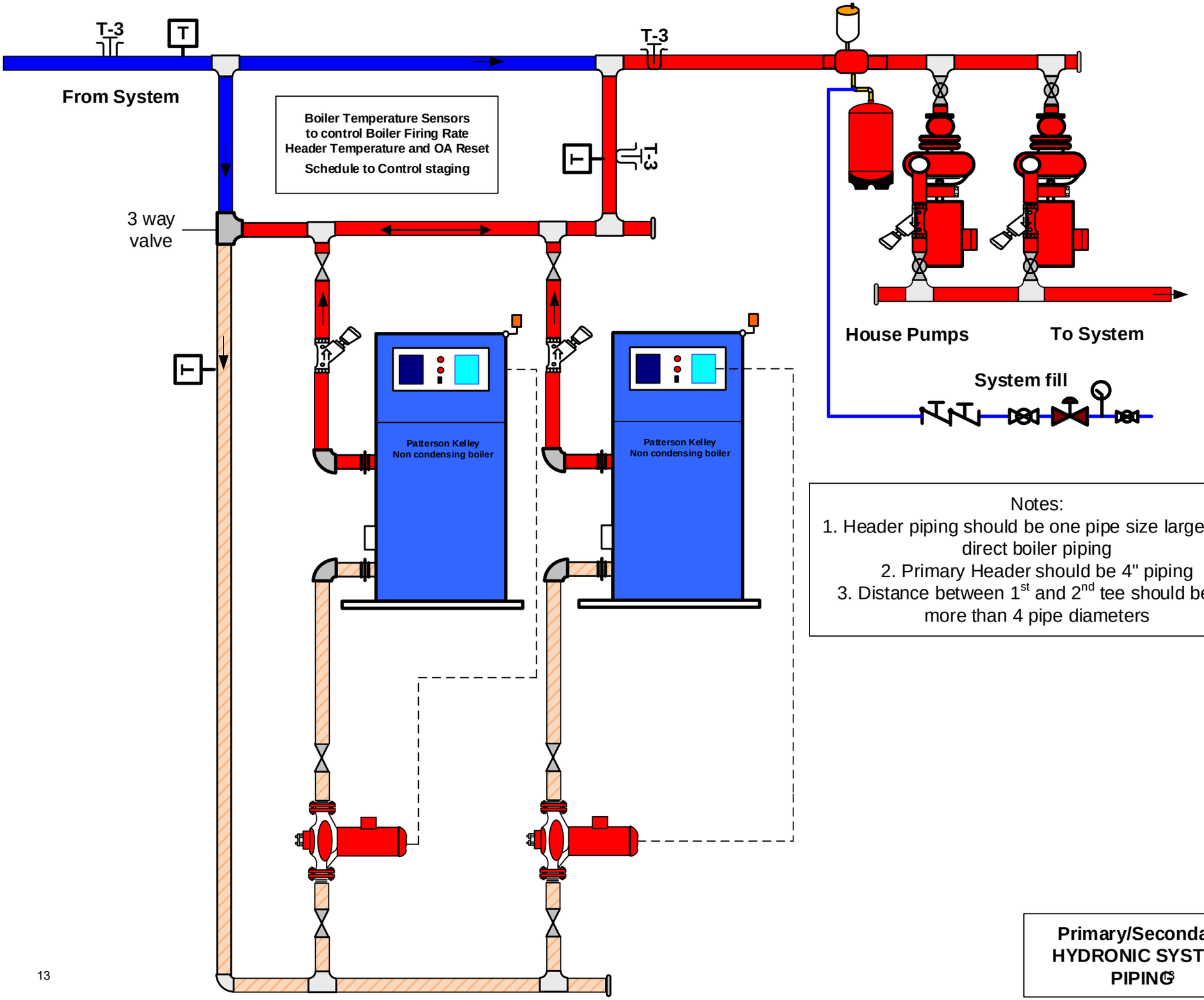
Primary/Secondary HYDRONIC SYSTEM PIPING

Primary/Secondary loop diagram



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Primary/Secondary HYDRONIC SYSTEM PIPING

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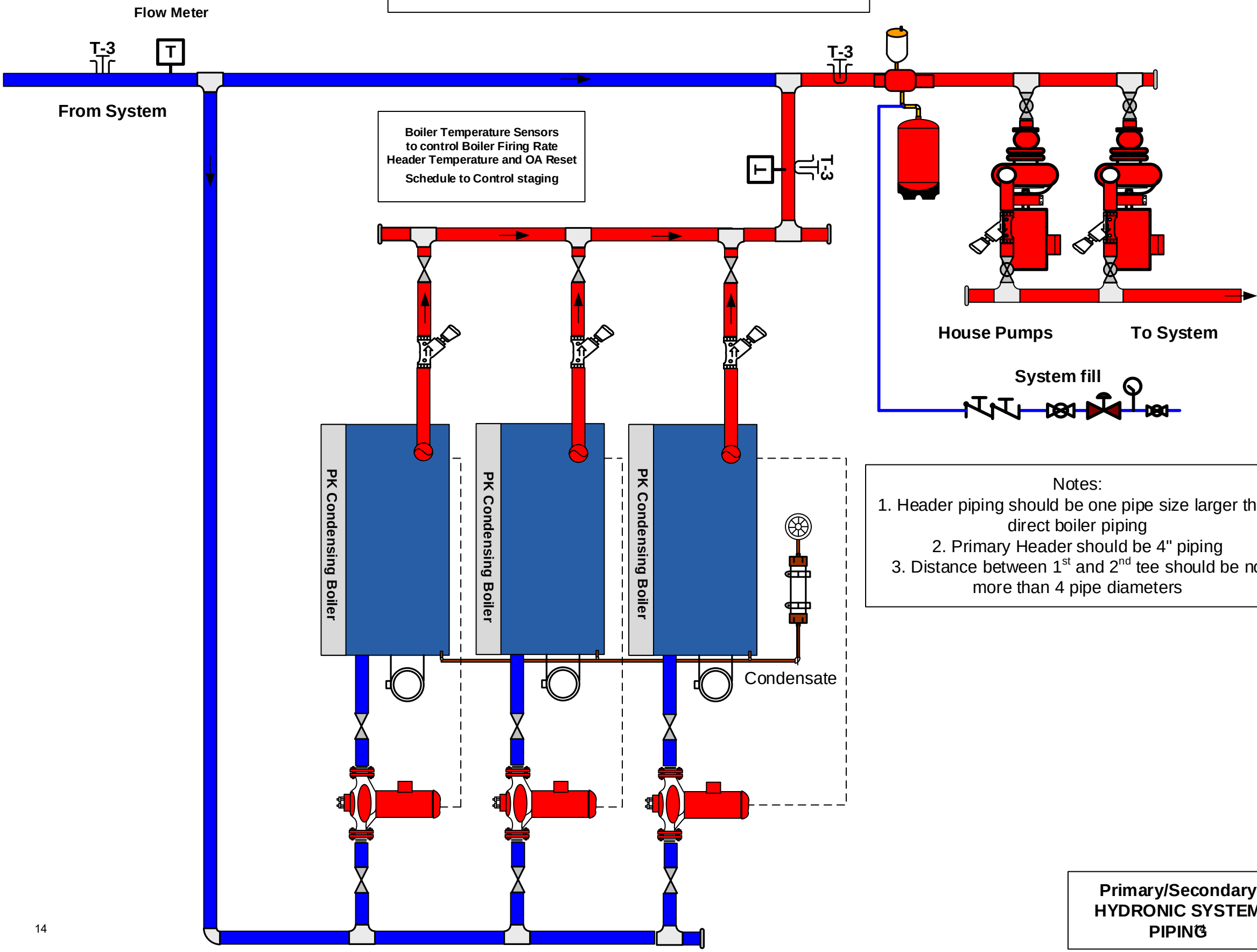
Primary/Secondary loop diagram



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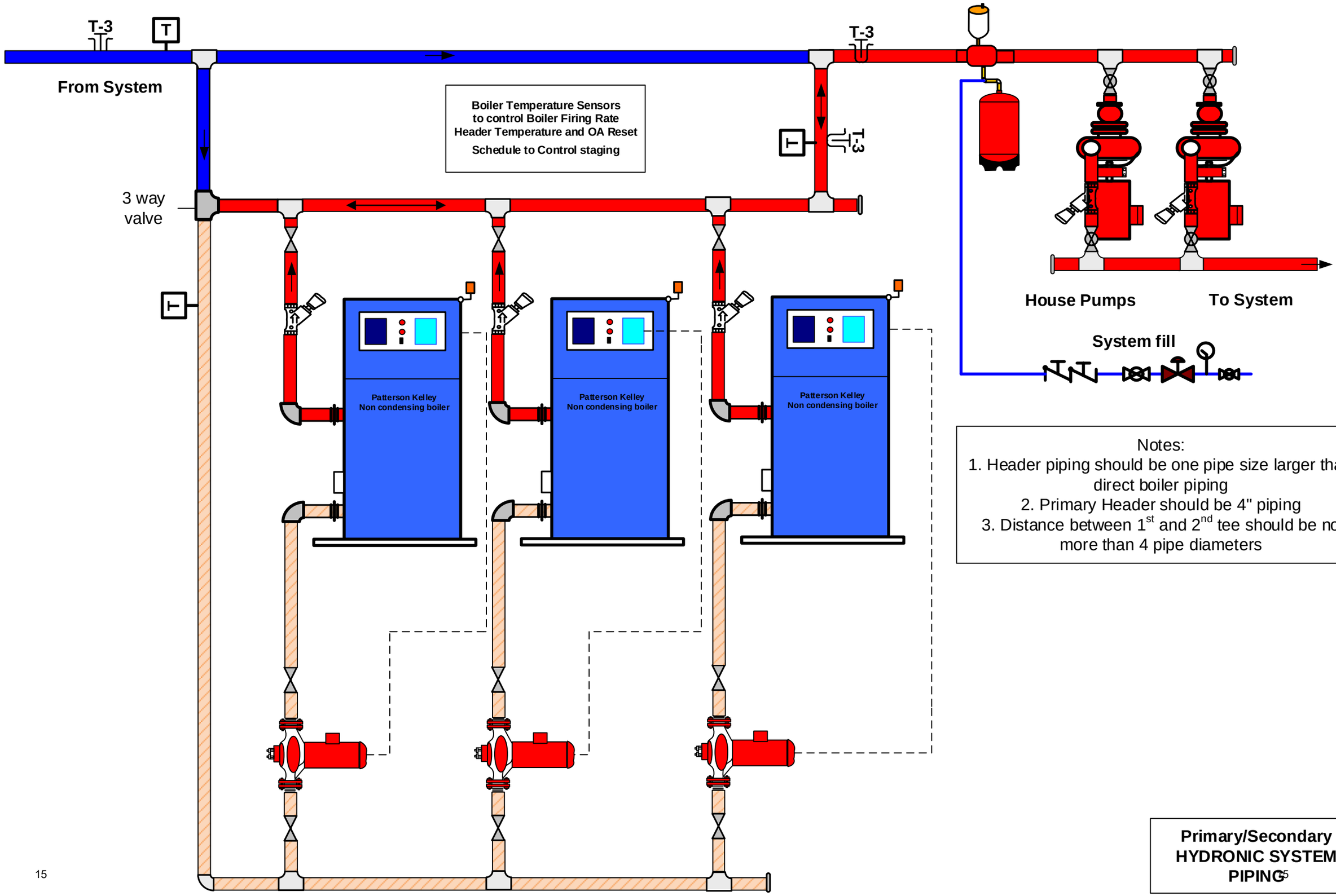
Primary/Secondary HYDRONIC SYSTEM PIPING

Primary/Secondary loop diagram



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Primary/Secondary HYDRONIC SYSTEM PIPING

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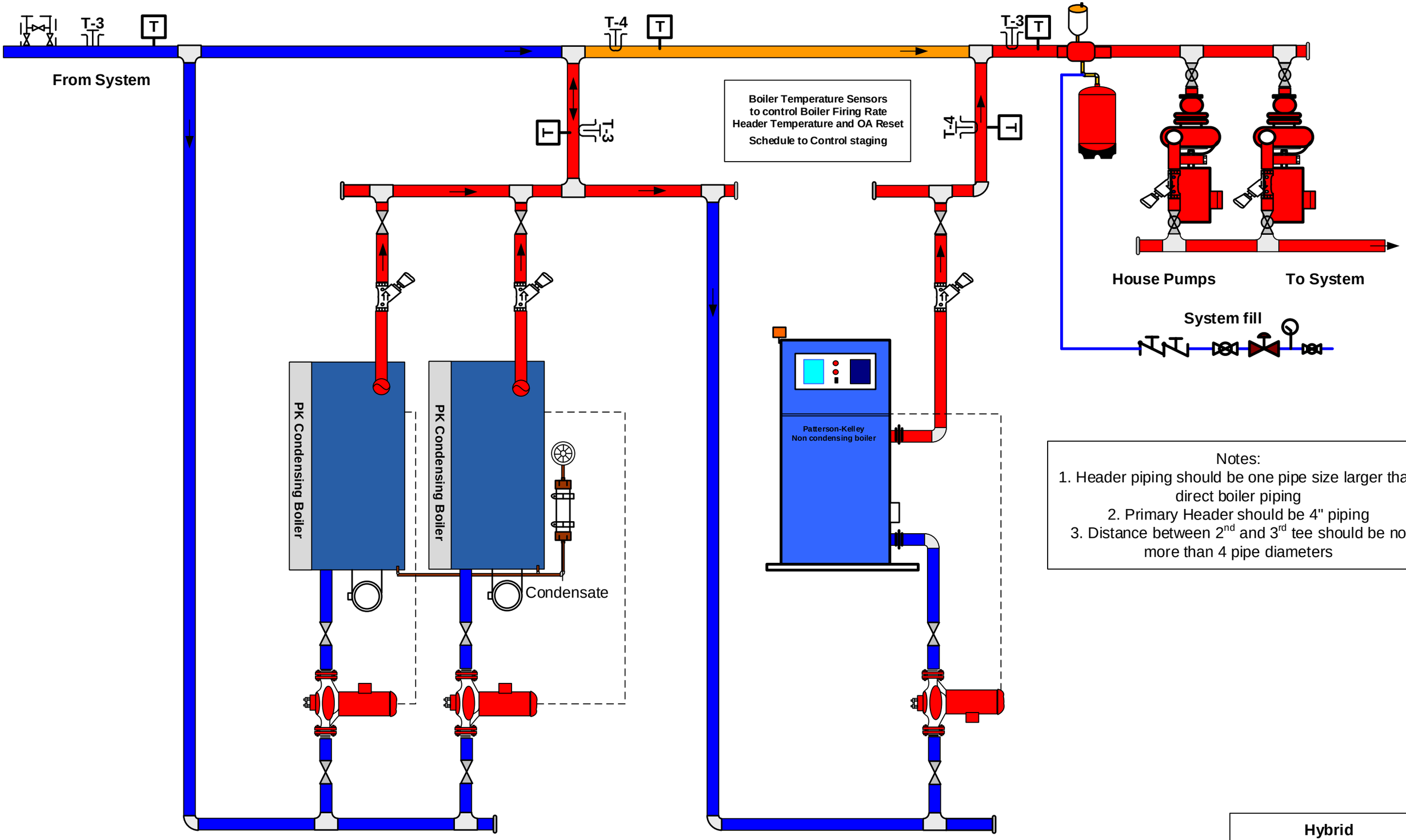
Three Tee Piping allows for pre-heating from Condensing Boilers to Non-condensing Boilers

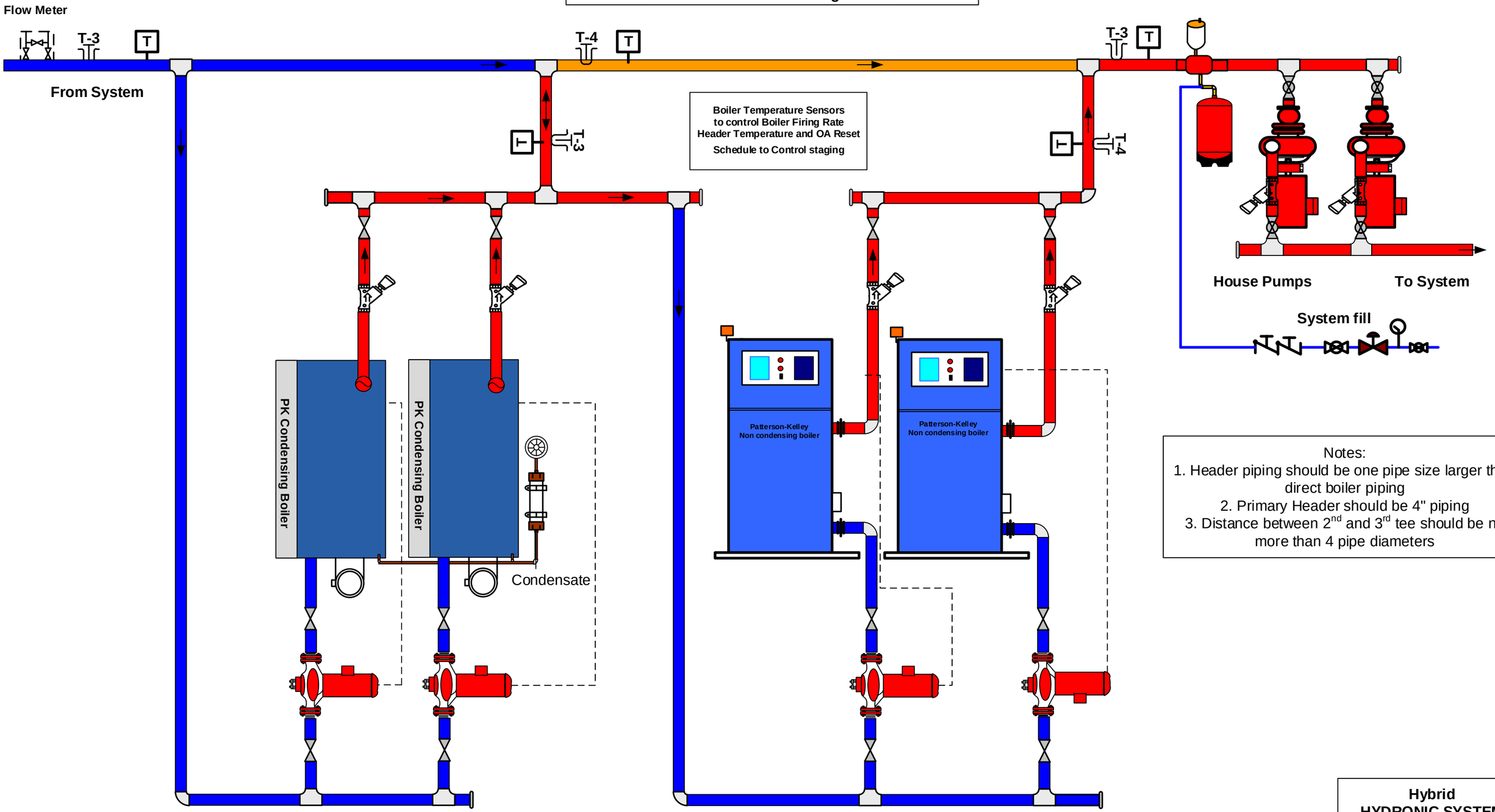


Notes:
1. Header piping should be one pipe size larger than direct boiler piping
2. Primary Header should be 4" piping
3. Distance between 2nd and 3rd tee should be no more than 4 pipe diameters

Hybrid
HYDRONIC SYSTEM PIPING

16

Three Tee Piping allows for pre-heating from Condensing Boilers to Non-condensing Boilers



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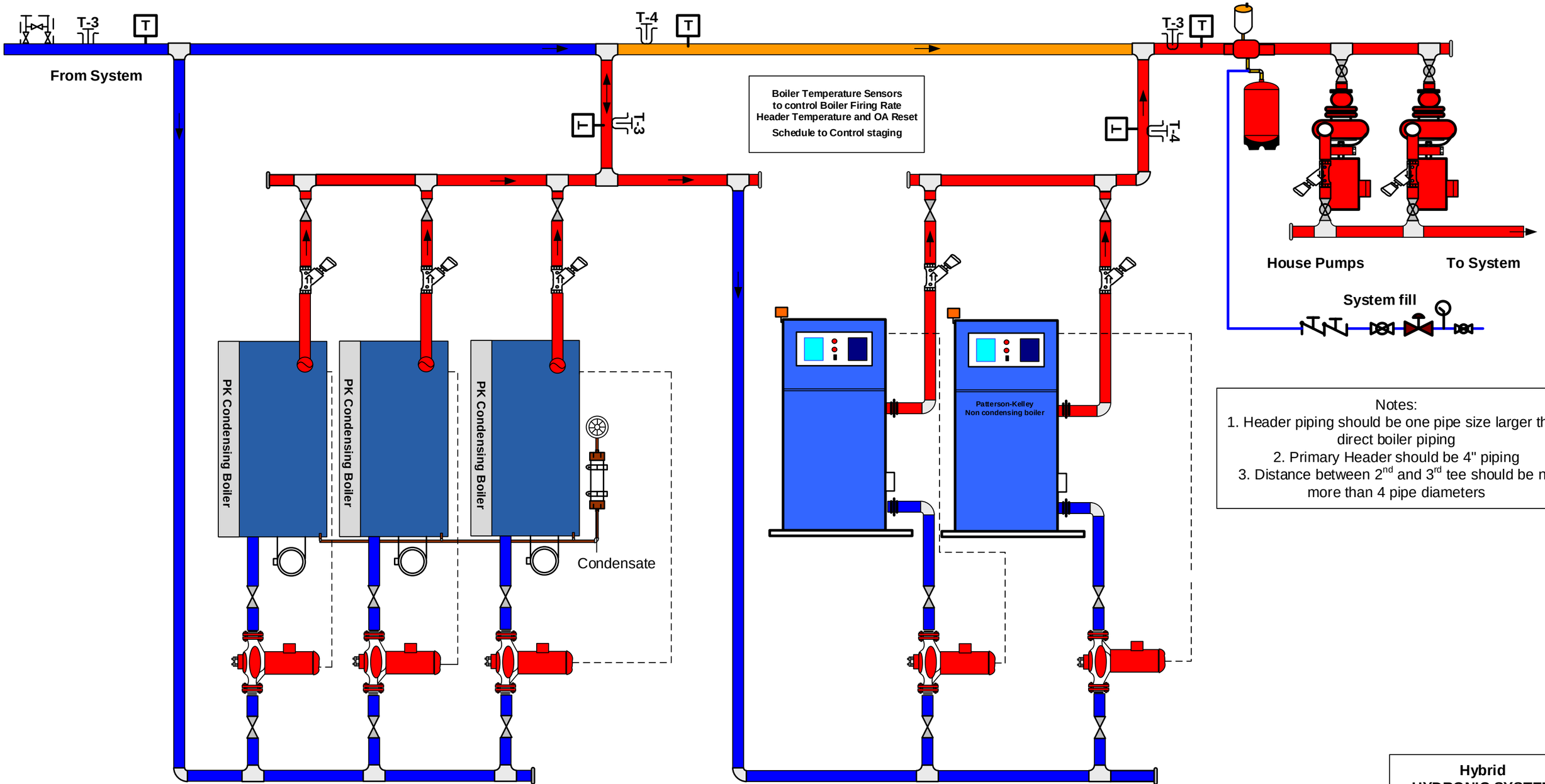
Three Tee Piping allows for pre-heating from Condensing Boilers to Non-condensing Boilers



Notes:
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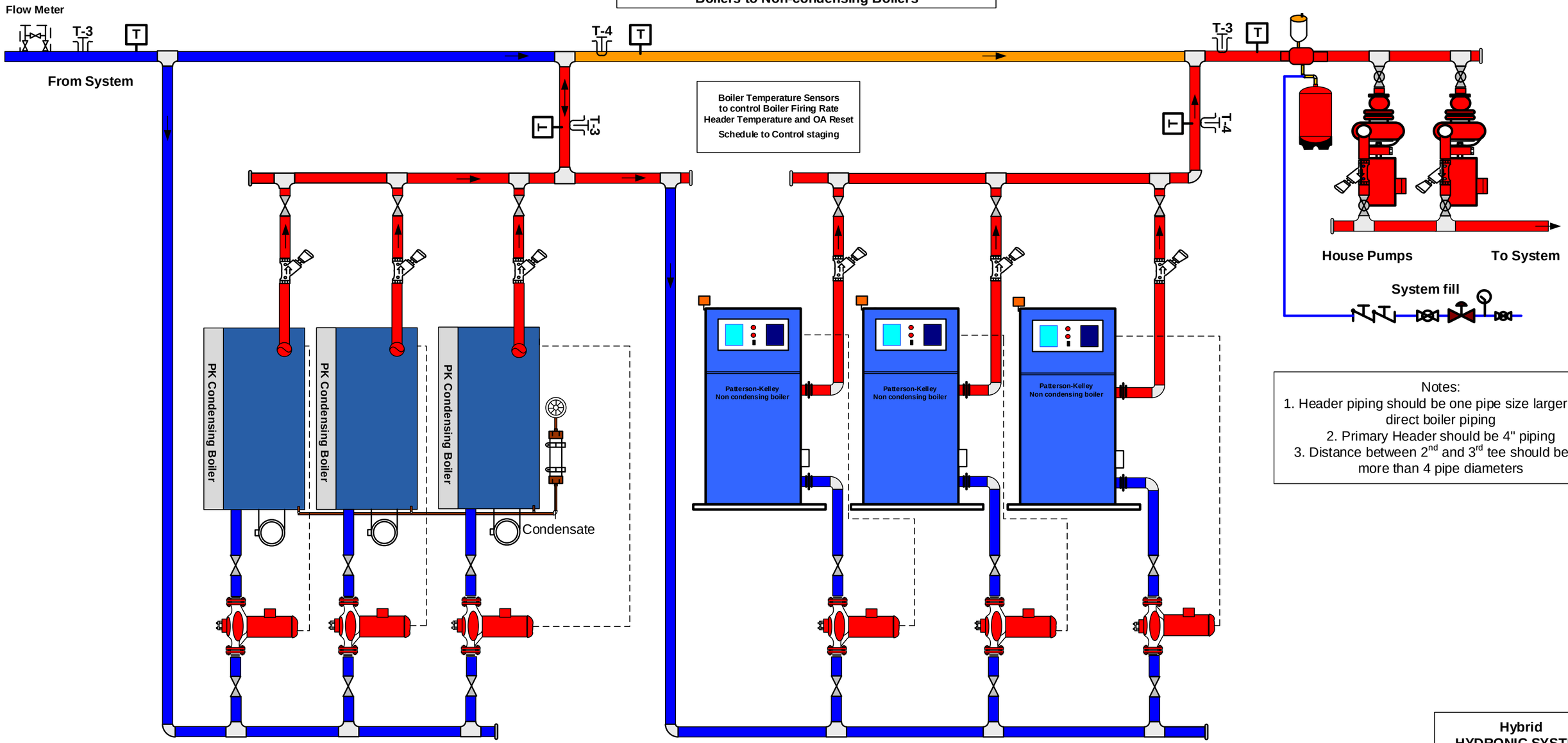
Hybrid
HYDRONIC SYSTEM PIPING

18

Three Tee Piping allows for pre-heating from Condensing Boilers to Non-condensing Boilers



Notes:
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Hybrid HYDRONIC SYSTEM PIPING[9]