


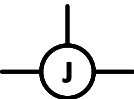


















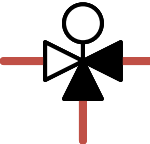
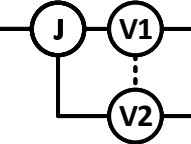

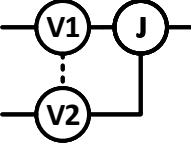

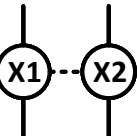
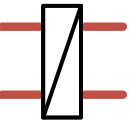
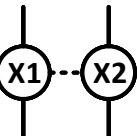
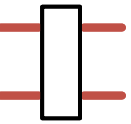
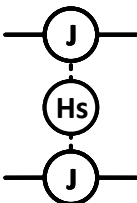

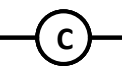

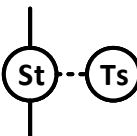




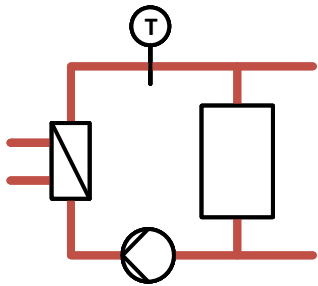
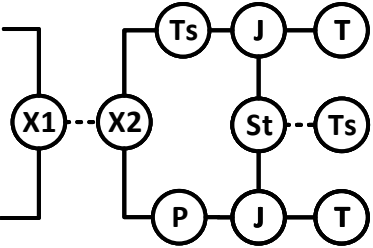

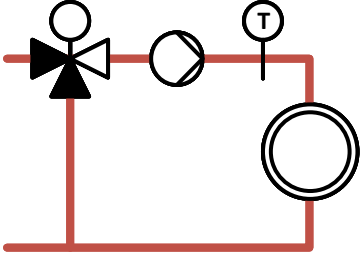
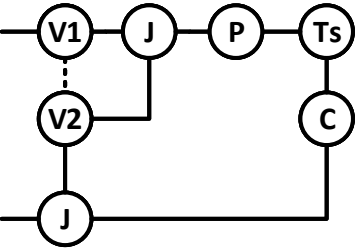

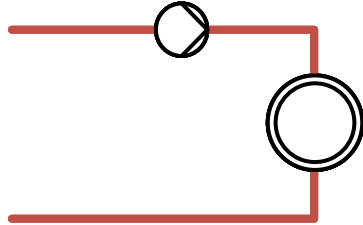
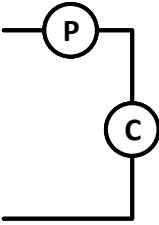

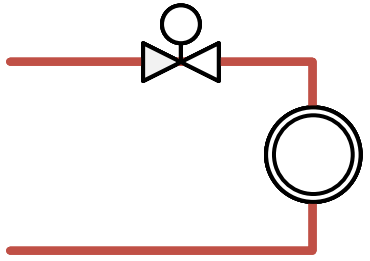
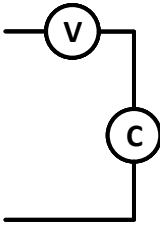

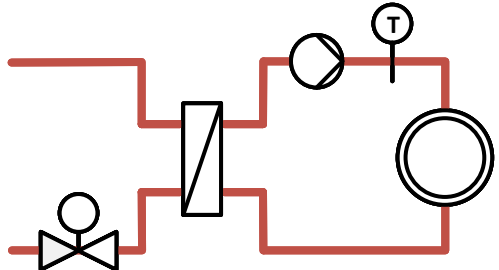
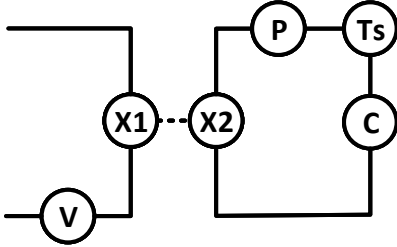

Name	Hydraulic symbol (Hyd)	Node model	Comments
Pipe (Pp)			<i>both ends connected to other elements</i> <i>rotations: yes</i>
Pipe junction			<i>vertex / junction / node</i> <i>rotations: yes</i>
Pipe crossing			<i>pipes are connected (flow)</i> <i>rotations: yes</i>
Pipe terminal			<i>one end without conection</i> <i>rotations: yes</i>
Temperature sensor (TSen)			<i>rotations: yes</i>
Pressure sensor (PSen)			<i>rotations: yes</i>
Volume flow sensor (VfISen)			<i>rotations: yes</i>
Temperature monitor (TMon)			<i>rotations: yes</i>
Volume flow monitor (VfIMon)			<i>rotations: yes</i>
Water pump (Pu)			<i>optional: directed</i> <i>rotations: yes</i>
2-port valve (Vlv) with actuator			<i>rotations: no</i>

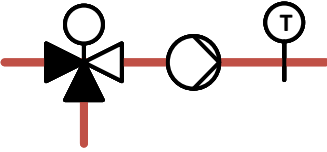
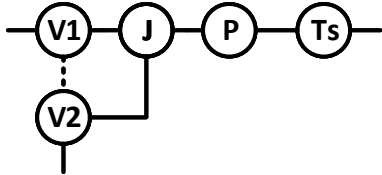
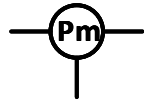
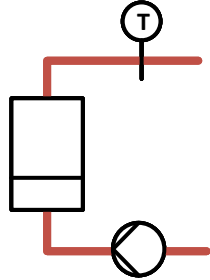
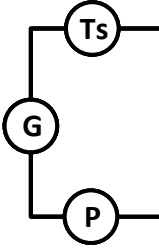

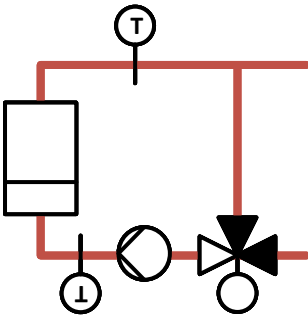
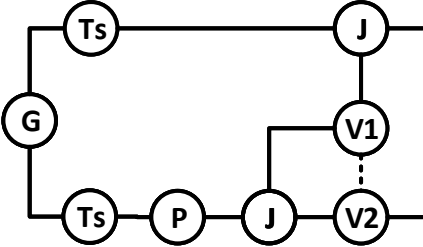

Name	Hydraulic symbol (Hyd)	Node model	Comments
3-port valve with actuator Mixing valve (Mxv-1)			<i>Orientation given by collector (non-filled triangle)</i> <i>dashed line: Synched valve controls (one open, one close)</i> <i>rotations: no</i>
3-port valve with actuator Mixing valve (Mxv-2)			<i>Orientation given by collector (non-filled triangle)</i> <i>dashed line: Synched valve controls (one open, one close)</i> <i>rotations: no</i>
Heat exchanger (HEXg-1)			<i>dashed line: heat flow</i> <i>rotations: no</i>
Heat exchanger (HEXg-2)			<i>second variant of the symbol with same meaning (i.e. same node model)</i> <i>dashed line: heat flow</i> <i>rotations: no</i>
Hydraulic separator (Hyds)			<i>dashed line: water flow</i> <i>rotations: no</i>
Consumer (Cns)			<i>rotations: no</i>
Storage tank (Stk)			<i>Integrated temperature sensor (inside tank)</i> <i>rotations: no</i>
Heat generator general (Gen)			<i>rotations: no</i>

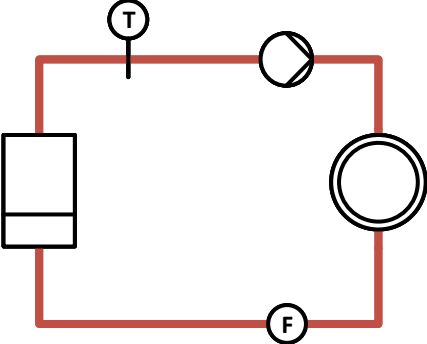
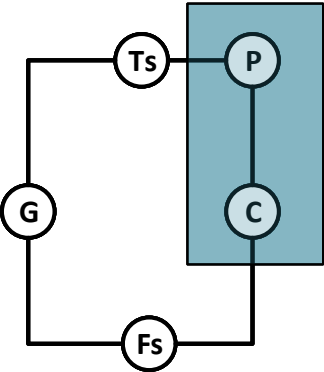
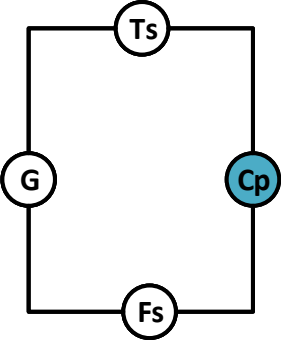
General rule for all symbols with rotations: yes

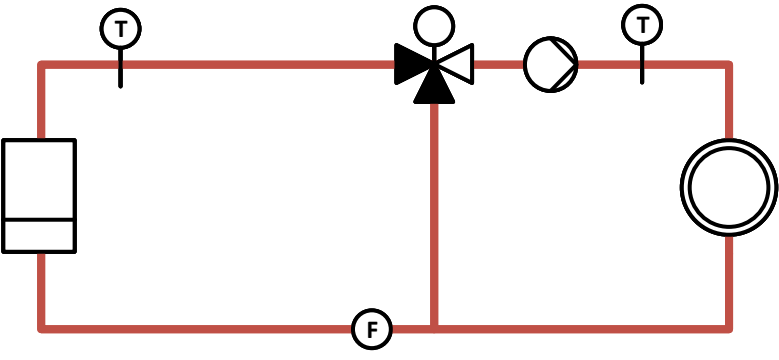
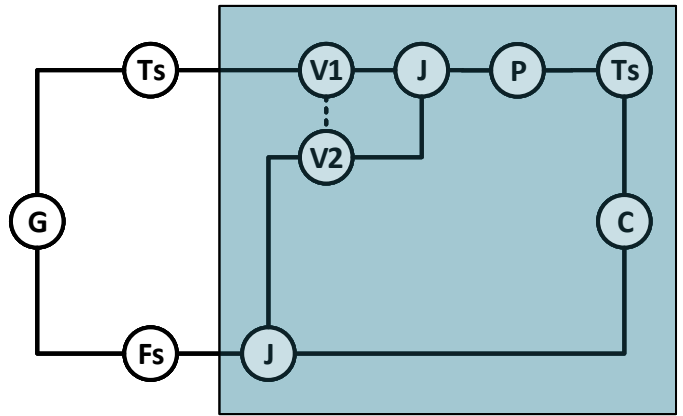
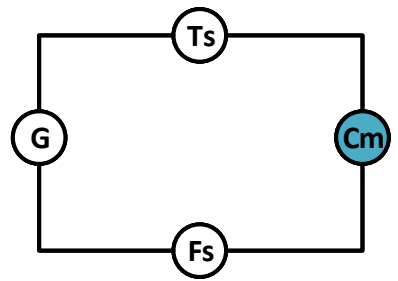
90°, 180°, 270° rotations of hyraulic symbol are possible



Name	Partial diagram	Node model	Supernode
Domestic hot water tank with external HExg			
Consumer with Mxv			
Consumer with Pu			
Consumer with Vlv			
Consumer with HExg			

Name	Partial diagram	Node model	Supernode
Precontroler with Mxv			
Generator with Pu			
Generator with return Mxv			

Hydraulic diagram	Node diagram	Node diagram with supernodes
 <p>A hydraulic circuit diagram showing a closed loop. On the left is a rectangular reservoir. The top horizontal pipe contains a valve (circle with a diagonal line) and a pressure tap (circle with a vertical line) labeled 'T'. The right vertical pipe contains a pump (double circle). The bottom horizontal pipe contains a flow meter (circle with a vertical line) labeled 'F'.</p>	 <p>A node diagram representing the hydraulic system. It shows a rectangular loop with nodes labeled G (top-left), Ts (top-right), P (top-right, inside a blue-shaded rectangle), C (bottom-right, inside the blue-shaded rectangle), Fs (bottom-right), and G (bottom-left). The nodes are connected by lines forming the loop.</p>	 <p>A node diagram with supernodes. It shows a rectangular loop with nodes labeled G (top-left), Ts (top-right), Cp (top-right, shaded blue), Fs (bottom-right), and G (bottom-left). The nodes are connected by lines forming the loop.</p>

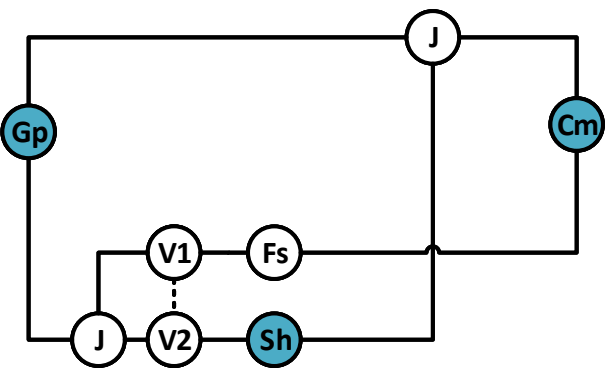
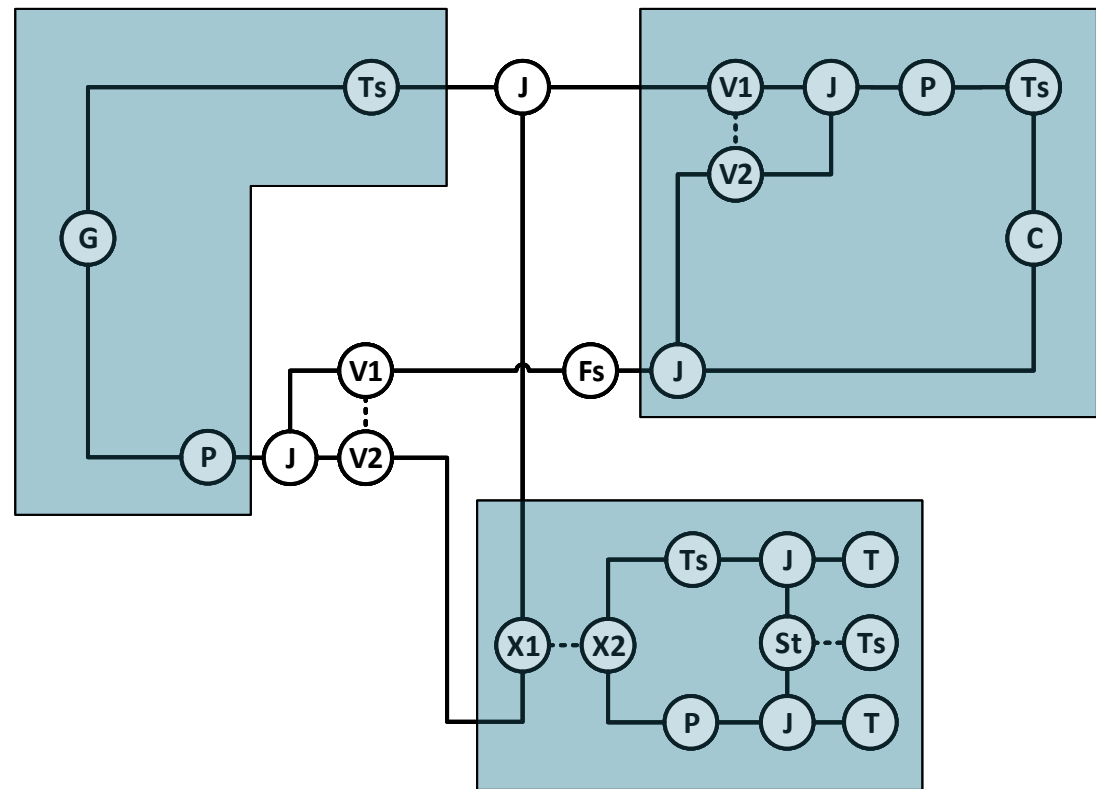
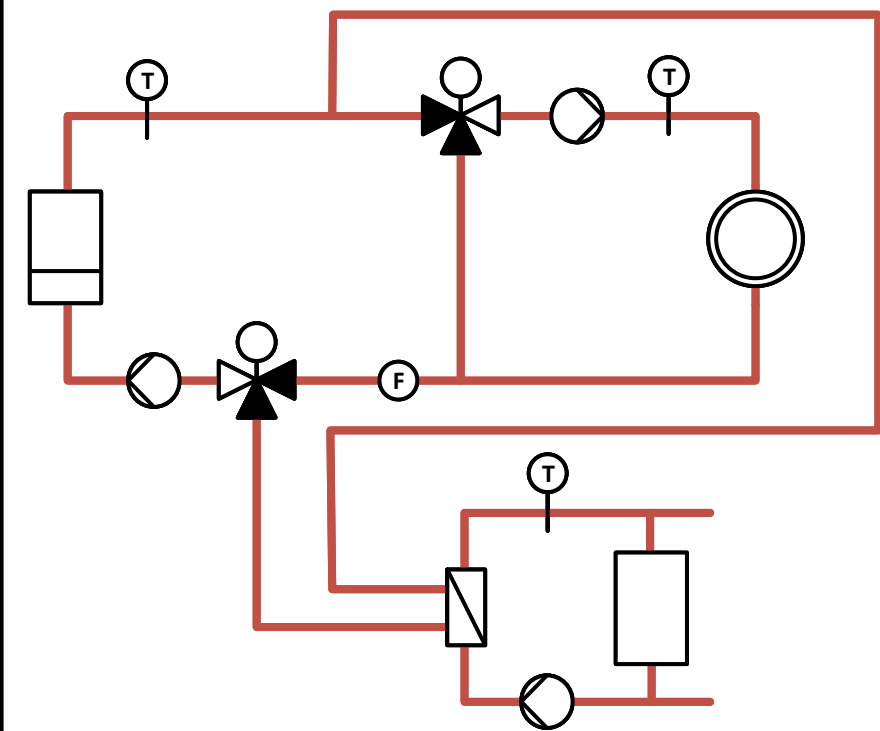
Hydraulic diagram	Node diagram	Node diagram with supernodes
 <p>A hydraulic circuit diagram showing a closed loop. On the left, a vertical rectangle represents a reservoir. A red line (pipe) goes from the reservoir to a top horizontal section. A tee on this section has a circle with 'T' above it. The line continues to a valve symbol (two triangles meeting at a point). From the valve, the line goes right to a pump symbol (a circle with an inscribed triangle). Another tee has a circle with 'T' above it. The line continues to a bottom horizontal section, which has a circle with 'F' below it. This section returns to the reservoir.</p>	 <p>A node diagram representing the hydraulic system. Nodes are circles with labels: 'Ts' (top left), 'G' (left), 'Fs' (bottom left), 'V1' (top of blue box), 'V2' (middle of blue box), 'J' (top right of blue box), 'P' (right of blue box), 'Ts' (top right), 'C' (bottom right), and 'J' (bottom of blue box). A light blue rectangular area highlights a sub-system containing nodes V1, V2, J, P, Ts, C, and J. Connections: 'Ts' to 'G' to 'Fs' to 'J' (bottom of blue box). Inside the blue box: 'J' (bottom) to 'J' (top), 'J' (top) to 'V1', 'V1' to 'V2' (dashed), 'V2' to 'J' (top), 'J' (top) to 'P', 'P' to 'Ts', 'Ts' to 'C', and 'C' to 'J' (bottom).</p>	 <p>A simplified node diagram with three nodes: 'G' (left), 'Ts' (top), and 'Fs' (bottom). A node labeled 'Cm' (highlighted in blue) is on the right. Connections: 'G' to 'Ts', 'Ts' to 'Cm', 'Cm' to 'Fs', and 'Fs' to 'G'.</p>

Hydraulic diagram

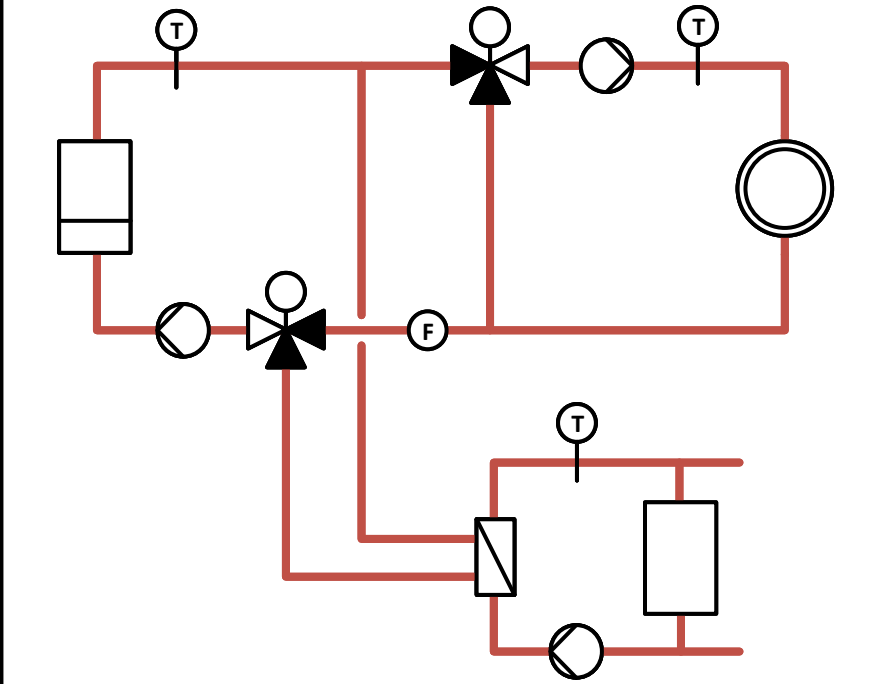
Node diagram

Node diagram with supernodes

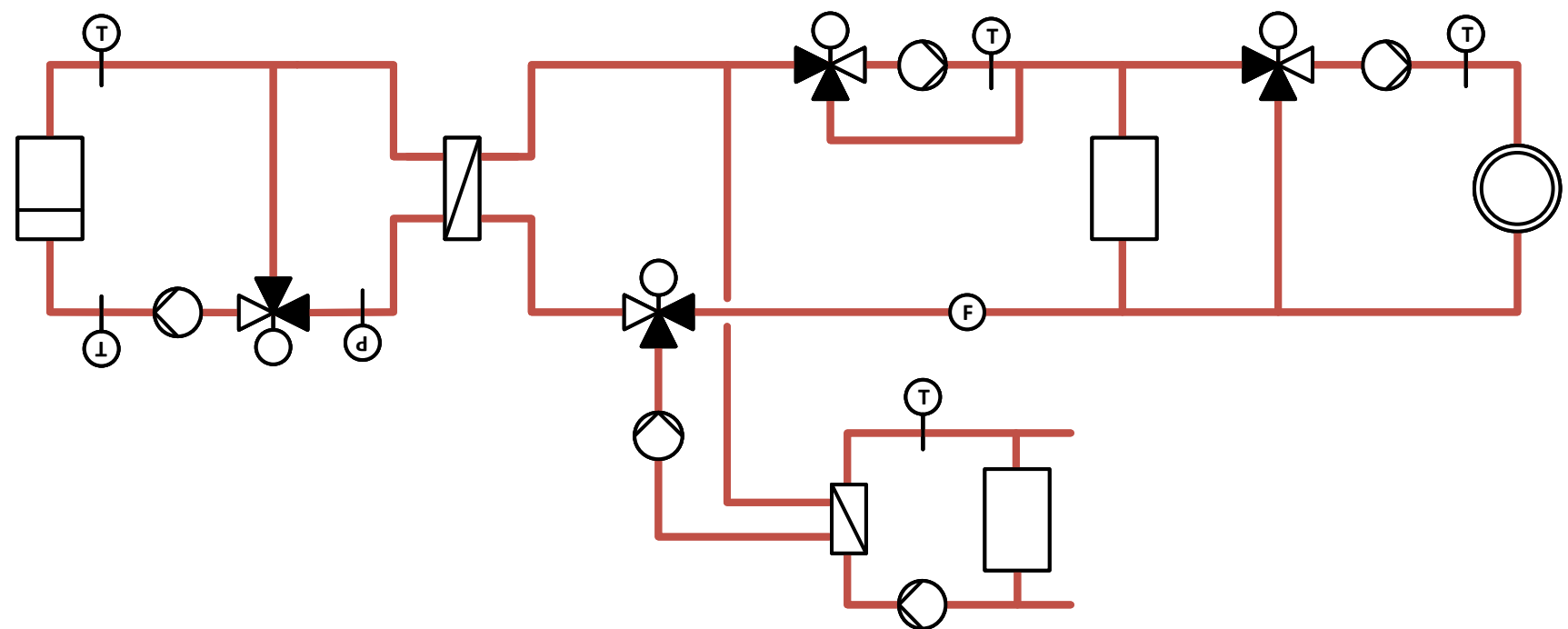
2a



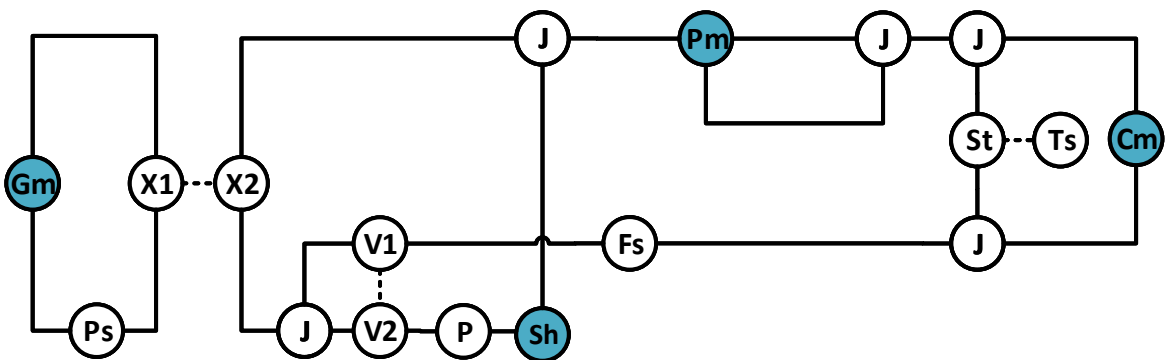
2b



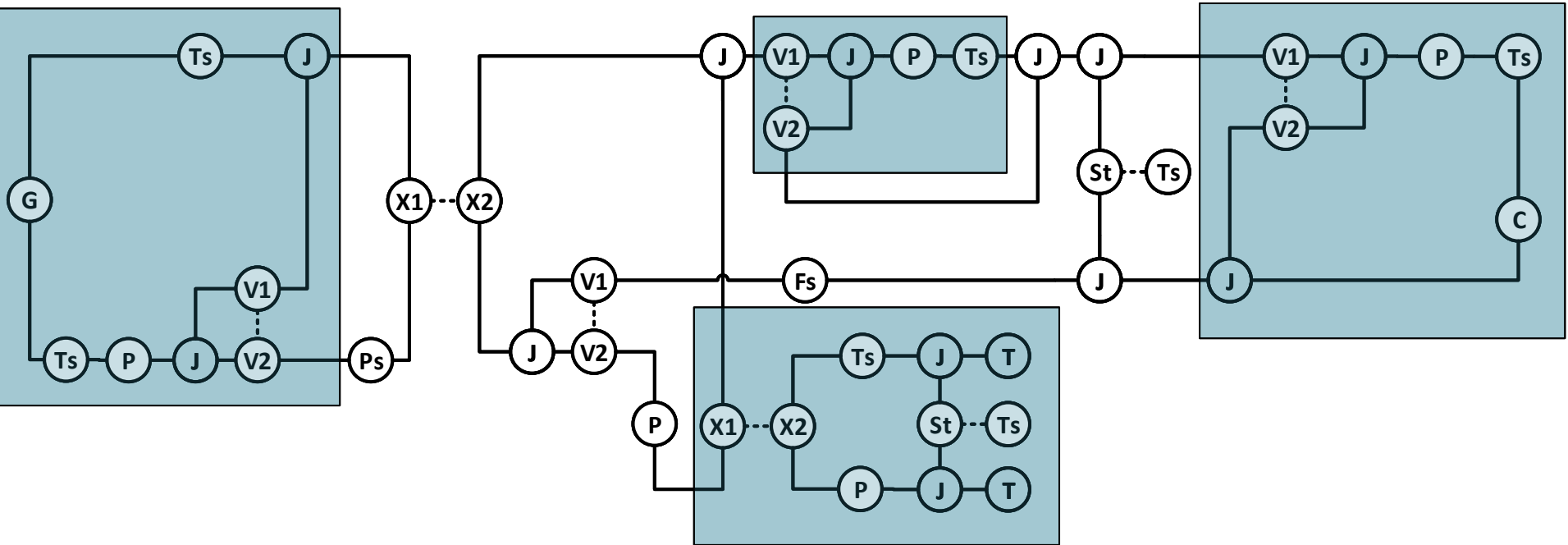
Hydraulic diagram



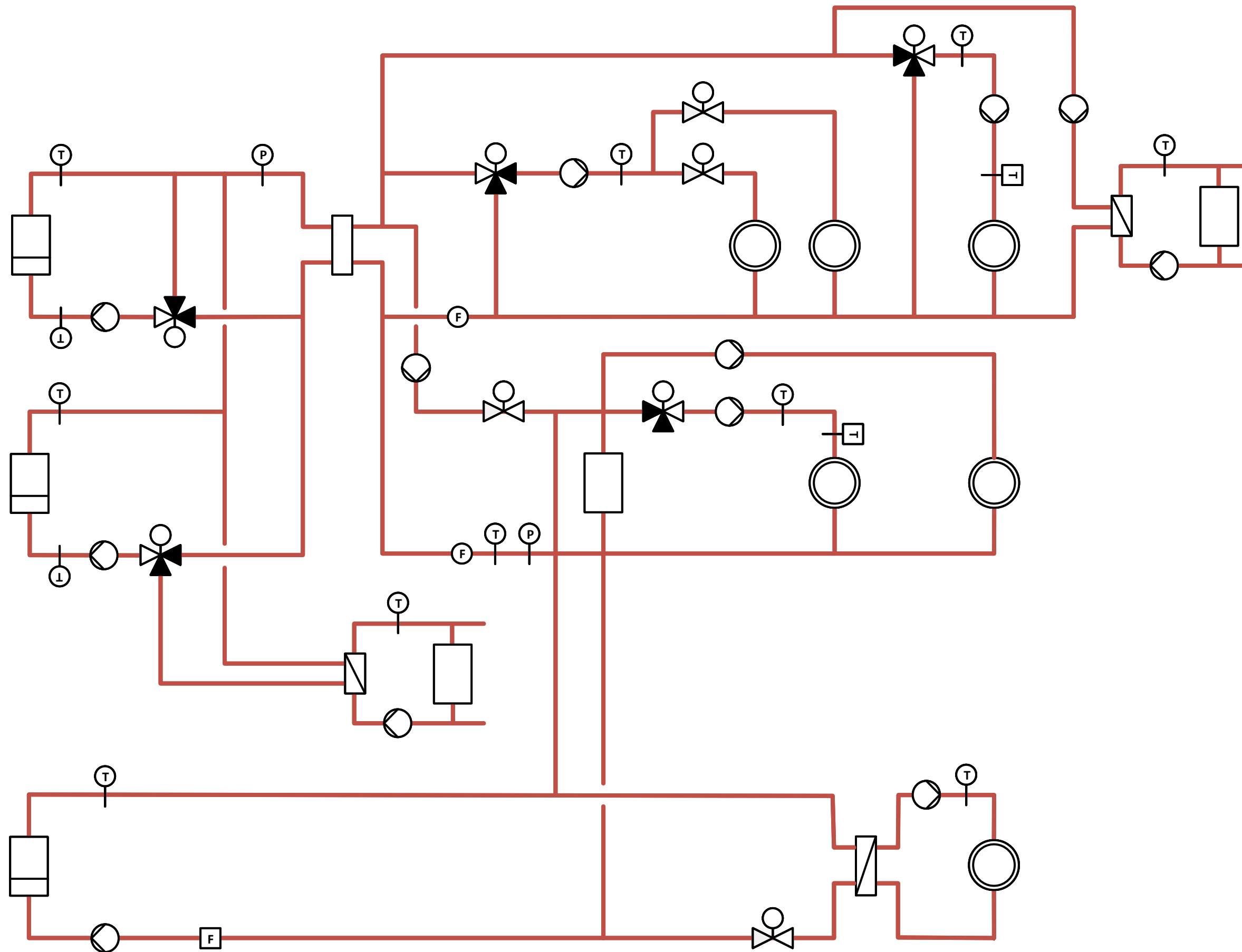
Node diagram with supernodes



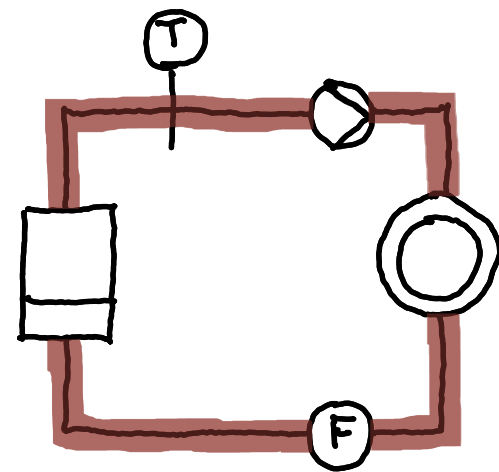
Node diagram



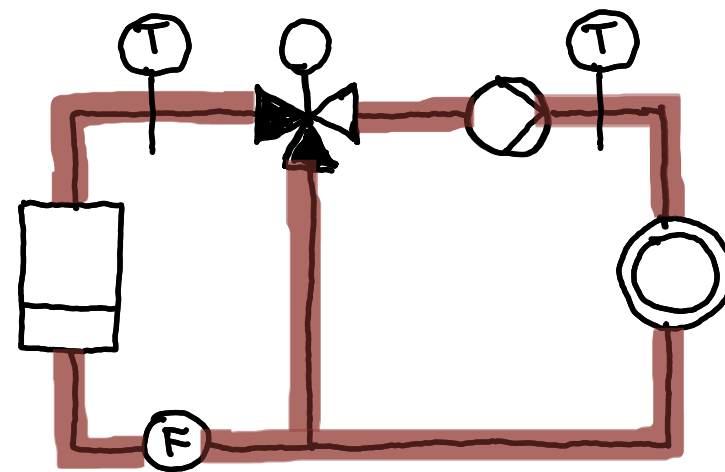
Hydraulic diagram



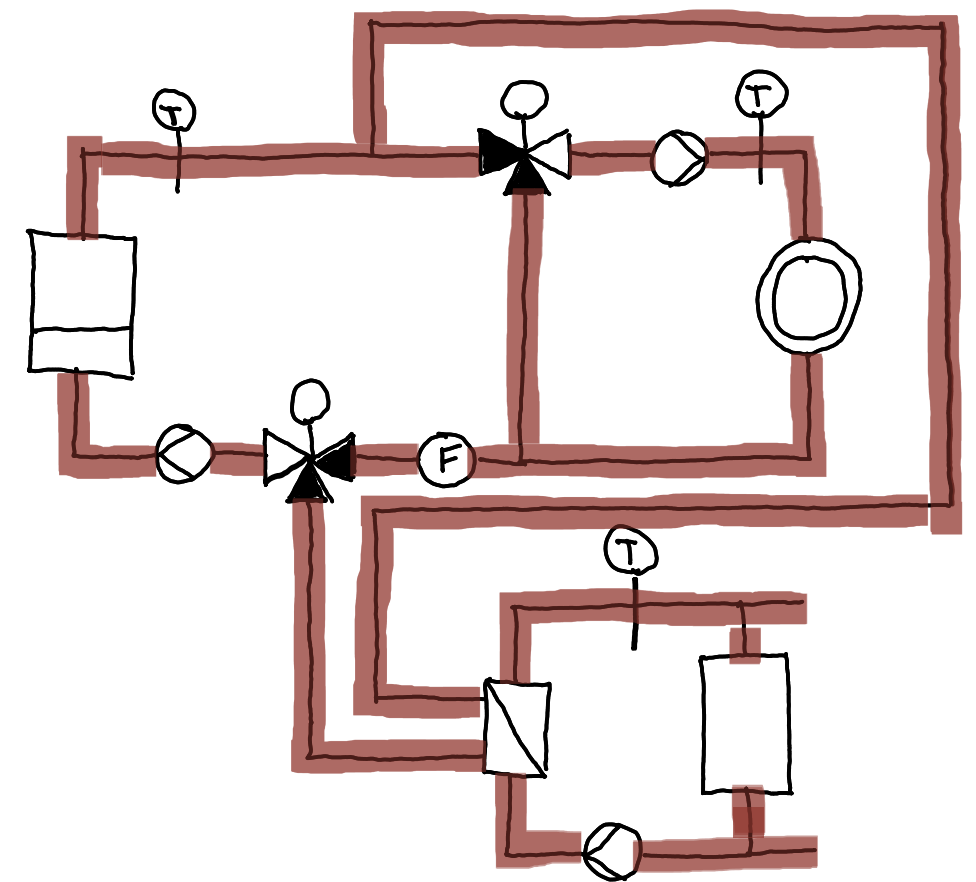
Example 0



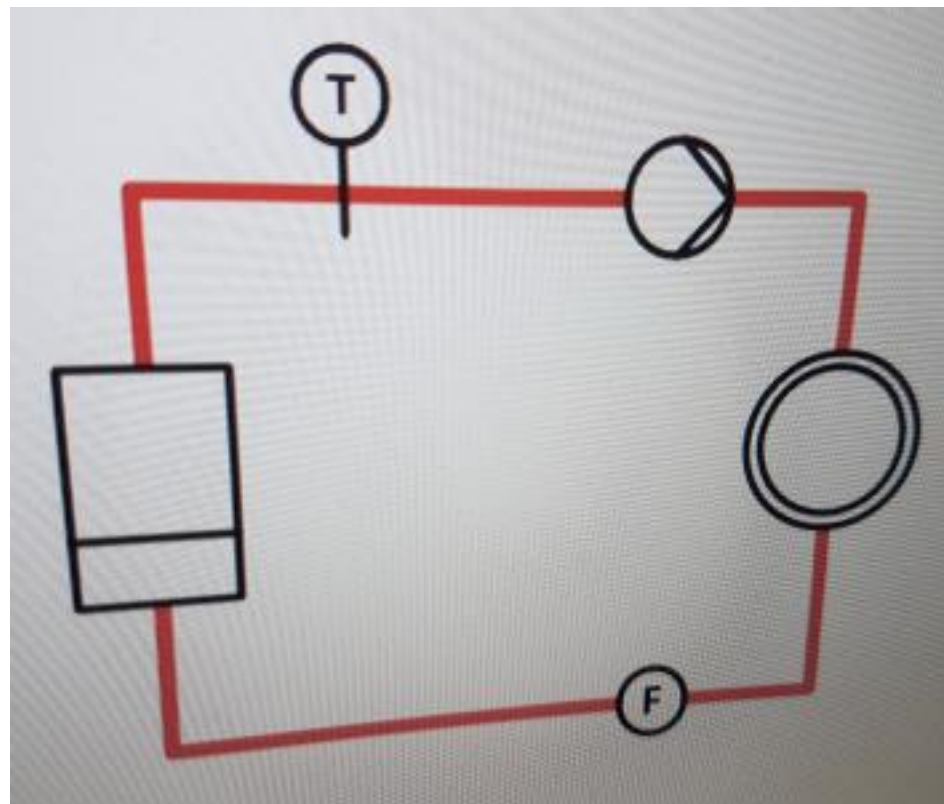
Example 1



Example 2a



Example 0



Example 1

