



A schematic diagram of a piston-cylinder system. The cylinder is a vertical container with a thick dark gray wall. Inside, a light gray fluid is shown. A horizontal piston, depicted as a dark gray band, is positioned at the top of the fluid. The fluid is labeled with its chemical formula and pressure. A curved arrow on the right side of the cylinder points into the fluid, representing heat input.

$\text{H}_2\text{O}$

$P = 600 \text{ kPa}$

$Q$