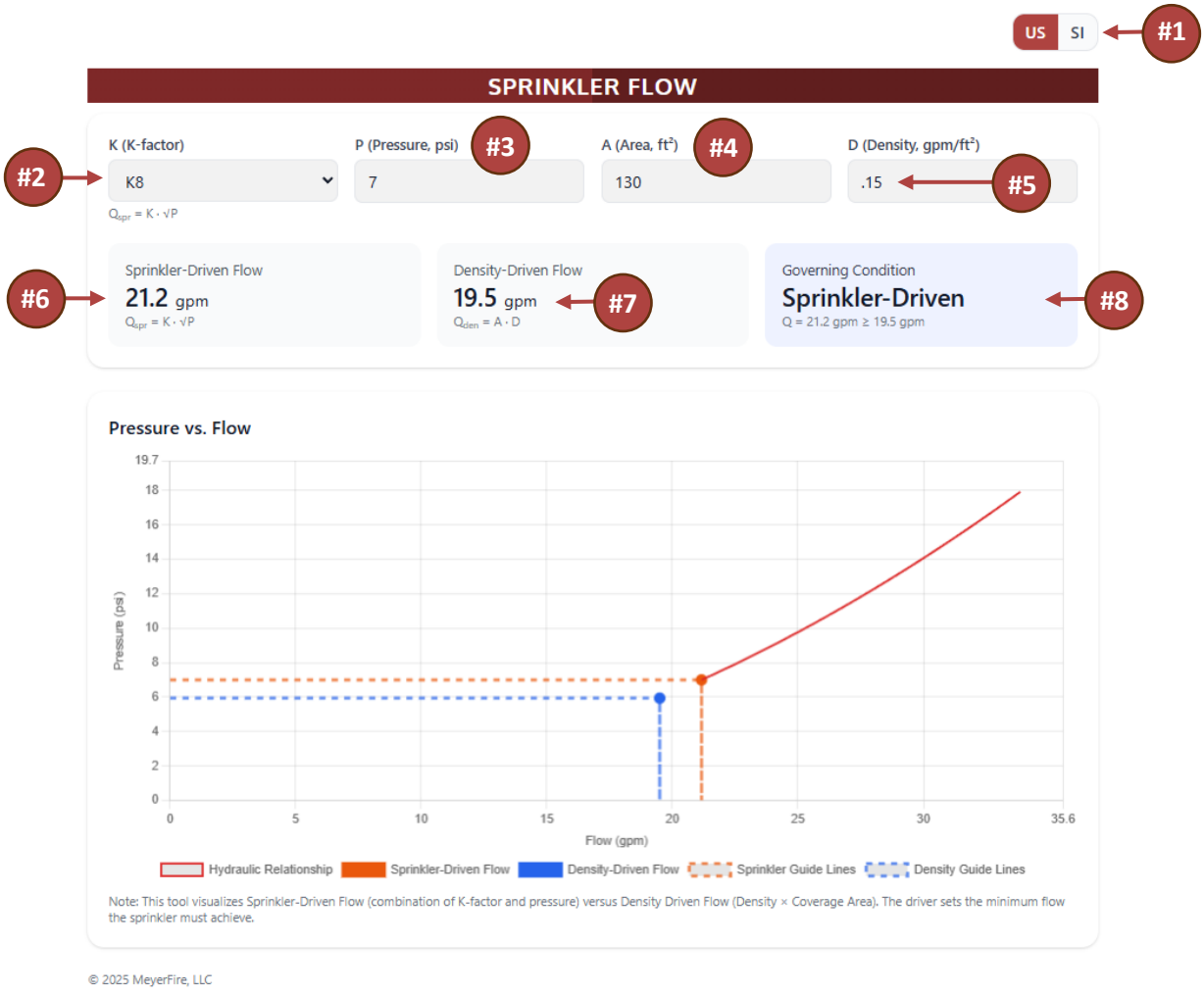
DRIVERS FOR SPRINKLER FLOW

A USER'S GUIDE



DESCRIPTION

#1 UNIT TOGGLE: Flip the toggle to switch between US Imperial units (US) or metric (SI).

#2 K-FACTOR: Select a k-factor, which represents the resistance that the sprinkler has to allowing a fluid to pass through (like a throttle). Higher k-factors need lower pressure to achieve a given flow.

#3 PRESSURE: The minimum pressure at the sprinkler. This is typically 7 psi (0.5 bar) as a minimum, but can be higher if the sprinkler's listing mandates. Higher pressure values are typically found in a sprinkler manufacturer's product data.

#4 COVERAGE AREA: The coverage area per sprinkler. Larger coverage areas will require more flow through a sprinkler to achieve the same density.

#5 DENSITY: The required design density of the area/hazard. This is governed by the hazard.

#6 SPRINKLER-DRIVEN FLOW: The amount of water flowing through the sprinkler to meet it's own minimum pressure. This is calculated as $Q_{spr} = k\sqrt{p}$.

#7 DENSITY-DRIVEN FLOW: The amount of water flowing through the sprinkler to satisfy the required density for the hazard, over the sprinkler coverage area. This is calculated as $Q_{den} = A \times D$.

#8 GOVERNING CONDITION: Identifies which of the two mechanisms drives the minimum flow for the sprinkler.