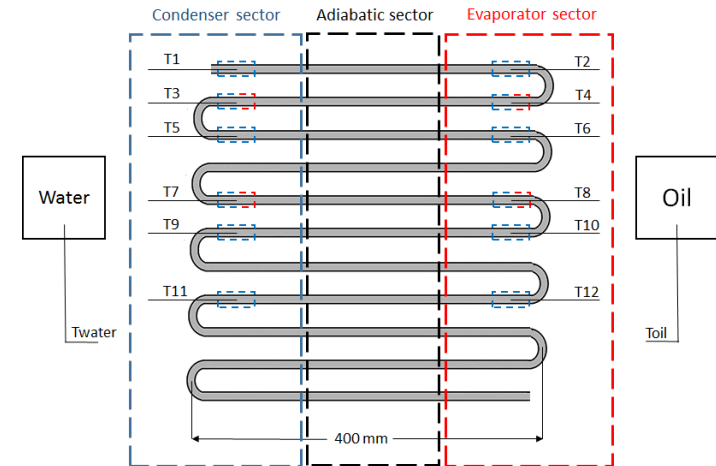


# Pulsating Heat Pipe (PHP) for heat transfer in solar system

- Heat transport from hot side (evaporation) to cold side (condensation) is pressure driven with dynamic slug flow: heat transfer by phase change (bubble region) and by sensible heat (liquid slug region)
  - Less dependence on gravity – can have horizontal pipe geometry
  - Used in micro scale systems (CPU cooling etc)
- Question: can PHP be a feasible heat transfer mode for solar cooking (absorber to storage and storage to cooker)?
- Answer from limited tests: probably difficult to scale up from micro systems
  - Pulsation requires high heat transfer rates (large temperature differences in our case) and high filling ratios
  - Difficult to see application to solar heat transfer



Test setup

(Willy Olsen)