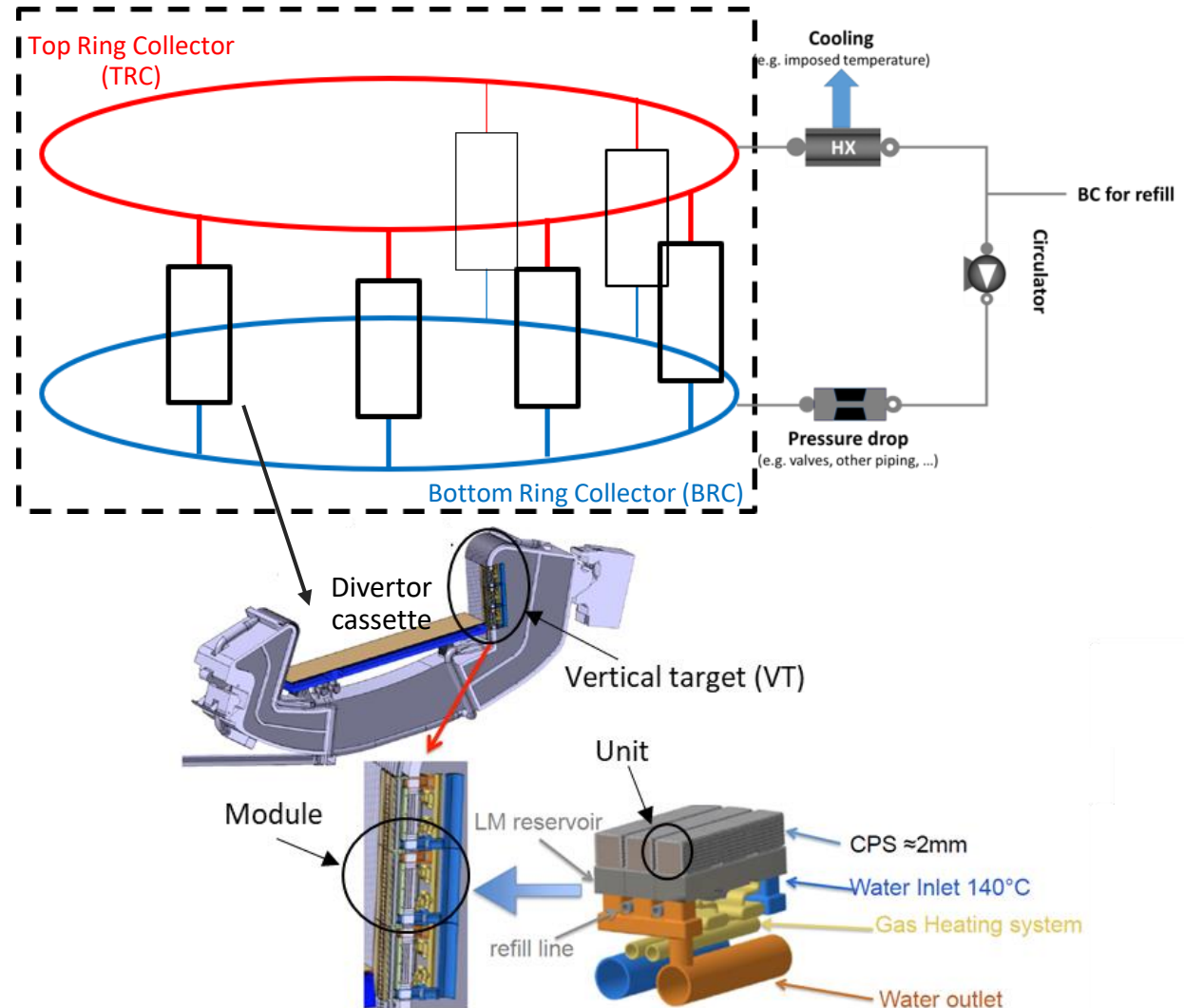


# Development of a system-level model of the Liquid Metal Divertor

- Problem: transient analysis of the LMD divertor system (including the LM loop) during a plasma pulse.
- Aim of the work: development of a Modelica thermal-hydraulic model of the LMD target, including:
  - LM flow and evaporation
  - LM refill circuit
  - Water cooling circuit
  - Gas heating circuit
- Prerequisites: none (but having attended the 30 hours on Modelica in this course is a big plus...)



Schematic of the LM target [1] and refill circuit

[1] G. Mazzitelli, R. De Luca, G. Dose, M. Iafrati, A. Mancini, S. Roccella, "Proposal for a CPS-Based Liquid Metal Divertor. A suitable design for the DEMO divertor (ready to test in DTT)," presented at ISLA-6, – International Symposium on Liquid Metal Applications for Fusion, University of Illinois at Urbana-Champaign, 2019