

# PROCESSHYDRAULICS TOOLBOX

## FREQUENTLY ASKED QUESTIONS

Q: Does Process Hydraulics Toolbox support compressible flow?

A: Yes, Process Hydraulics Toolbox support isothermal compressible flow for pipes and adiabatic compressible flow for nozzles and control valves.

Q: Does Process Hydraulics Toolbox support adiabatic compressible flow for pipes?

A: No.

Q: Does Process Hydraulics Toolbox support 2-phase flow ? If so, which methods?

A: Yes, Process Hydraulics Toolbox supports Dukler no slip, Dukler constant slip, Lockhart-Martinelli, Chisholm, Beggs-Brill horizontal, Chenowet-Martin.

Q: Does Process Hydraulics Toolbox produce 2-phase flow map?

A: Yes, Process Hydraulics Toolbox support the Fair, Mandane, Dukler-Taitel and Golan maps.

Q: Does Process Hydraulics Toolbox support flash calculations?

A: Yes, but only for mixtures of pure components. Psuedo components are not supported yet. You can perform the simulation in Hysys and import results directly into Process Hydraulics Toolbox using OLE.

Q: Can Process Hydraulics Toolbox simulate flare headers?

A: Yes, but if flash calculations are required, it can only be used for mixtures of pure components.

Q: How many users are allowed with a site license?

A: Unlimited number of users at a single business site.

Q: Does Process Hydraulics Toolbox support pump/compressor curves?

A: Yes.

Q: Process Hydraulics Toolbox complains that the specifications are not independent?

A: Process Hydraulics Toolbox is extremely flexible in what you can specify, as long as a solution is theoretically possible. But, for complex circuits it becomes increasingly difficult for a user to use independent specifications. The most common mistakes are (a) not specifying a pressure anywhere and (b) specifying the overall mass balance directly and (c) provided two specifications that are contradictory or a duplication of each other.

Q: Process Hydraulics Toolbox does not converge?

A: For the vast majority of cases Process Hydraulic Toolboxes converges quickly based on default settings. Some circuits, such as complicated Tee arrangements and multiple parallel pumps with pump curves, sometimes fail to converge and the user may need to adjust the default settings to achieve convergence.

Q: Does Process Hydraulics Toolbox support gas choked flow?

A: Yes, through orifices, control valves and at pipe expansions (pipe exit and expanders).

Q: Does Process Hydraulics Toolbox support flashing liquid choked flow?

A: No.

Q: Can pipes be automatically divided into segments?

A: No, where required, manually split the pipe into multiple pipes connected with expanders/reducers.

Q: Can Process Hydraulics Toolbox be used for condensate systems?

A: Yes, providing flashing liquid choked flow is not encountered.

Q: What is Process Hydraulics Toolbox used for most often?

A: Process Hydraulics Toolbox is most often used for complex cooling water and hot oil piping networks. However, Process Hydraulics Toolbox is equally well suited for applications ranging from a single pipe to multiple cases of complex two phase piping circuits.

Q: Can Process Hydraulics Toolbox be used for sizing pipes?

A: Yes, pipes can be sized based a combination of velocity or pressure drop/length criteria.

Q: Does Process Hydraulics Toolbox have sales offices in India, Europe or the Middle East?

A: Yes.