



IBPSA Project 1

BIM/GIS and Modelica Framework
for
building and community energy system
design and operation

WP 1.1- Modelica Library for Design and Operation

October 1, 2018

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Progress in last half year

Release 3.0.0 (September 27, 2018)

Reached 1000 issues

The screenshot shows the GitHub repository page for `ibpsa / modelica-ibpsa`. At the top, there are navigation links for Code, Issues (34), Pull requests (2), Projects (0), Wiki, Insights, and Settings. On the right, there are buttons for Unwatch (28), Star (45), and Fork (47). A banner message encourages labeling issues and pull requests for new contributors with labels like `help wanted` or `good first issue`, with a `Go to Labels` button. Below the banner, there is a search bar with the filter `is:issue is:open` and buttons for Labels, Milestones, and a green `New issue` button. The issue list shows 34 open issues and 455 closed issues. The first two issues are:

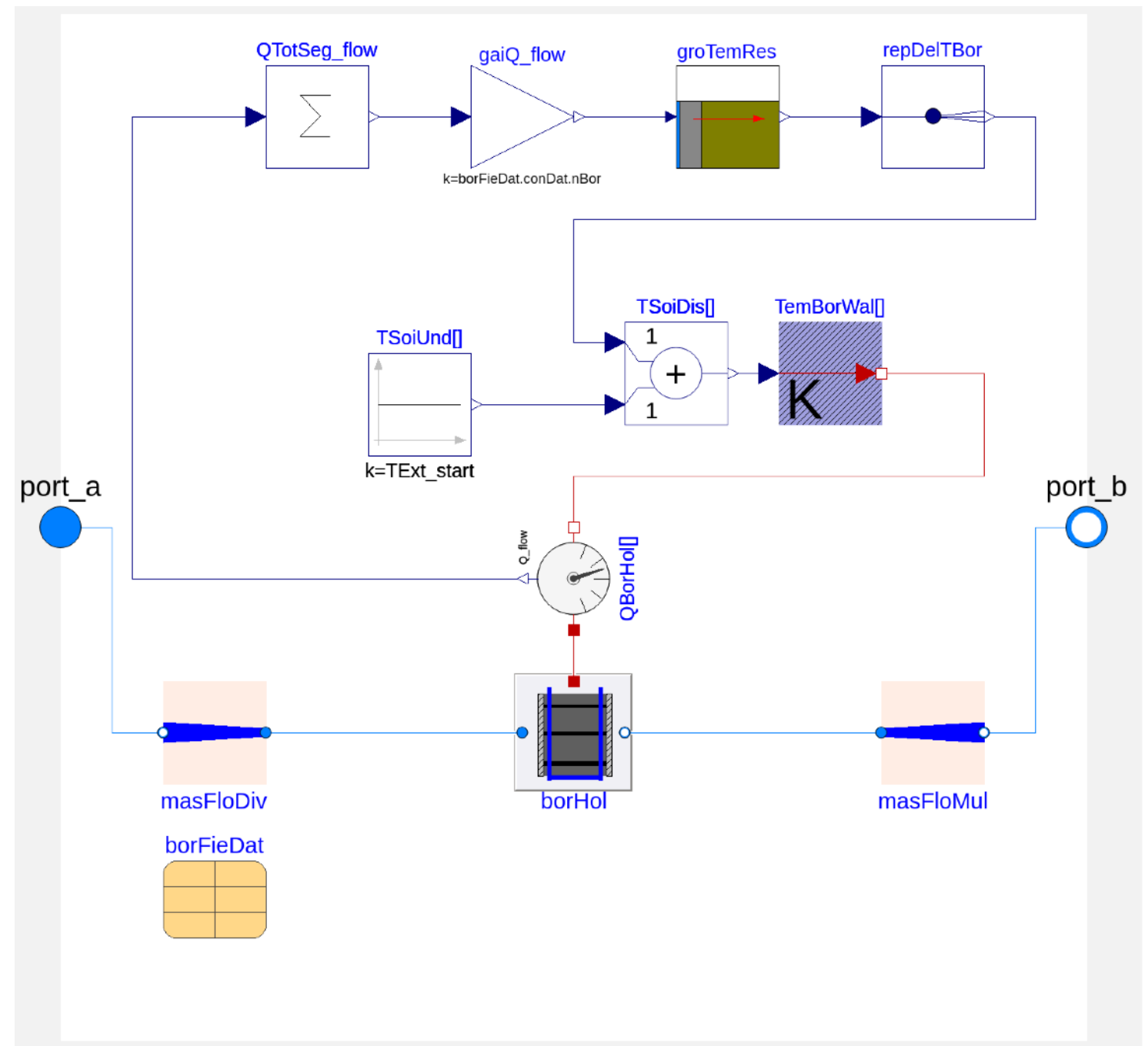
- `Fluid.Movers with Modelica.Media.IdealGases.MixtureGases on OpenModelica` (#1037) opened 3 hours ago by `kiddjmadd`
- `1000 issues identified and most of them solved, hooray!` (#1000) opened on Aug 16 by `Mathadon` with 1 comment

Progress in last half year — New models

Borefield heat exchanger

- Based on IDEAS implementation and combined with latest research from University of Montreal
 - Allows steady-state or transient simulation of borehole
 - Computes far field boundary condition based on g-function
 - Allows for any configuration of vertical boreholes
 - Validated against literature data
 - Caches g-functions on disk for use in future simulations

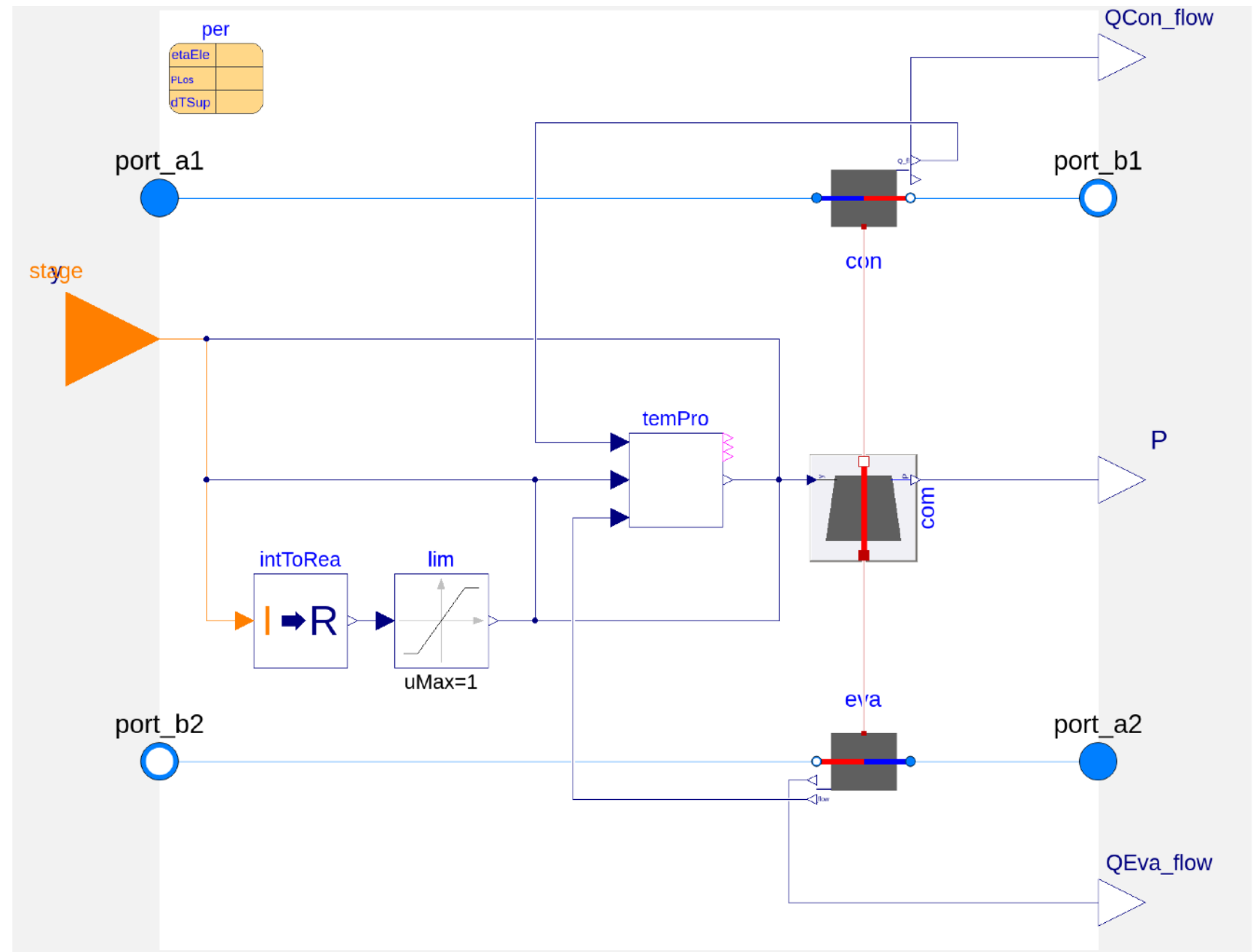
CSVWriter and CombiTimeTableWriter



Progress in last half year — New models

Heat pumps

- water to water
- scroll or reciprocating
- eps-NTU heat exchangers



Progress in last half year — New models

Propylene glycol mixture with mass fraction as a user-specifiable constant

R410A

Closed 50 issues