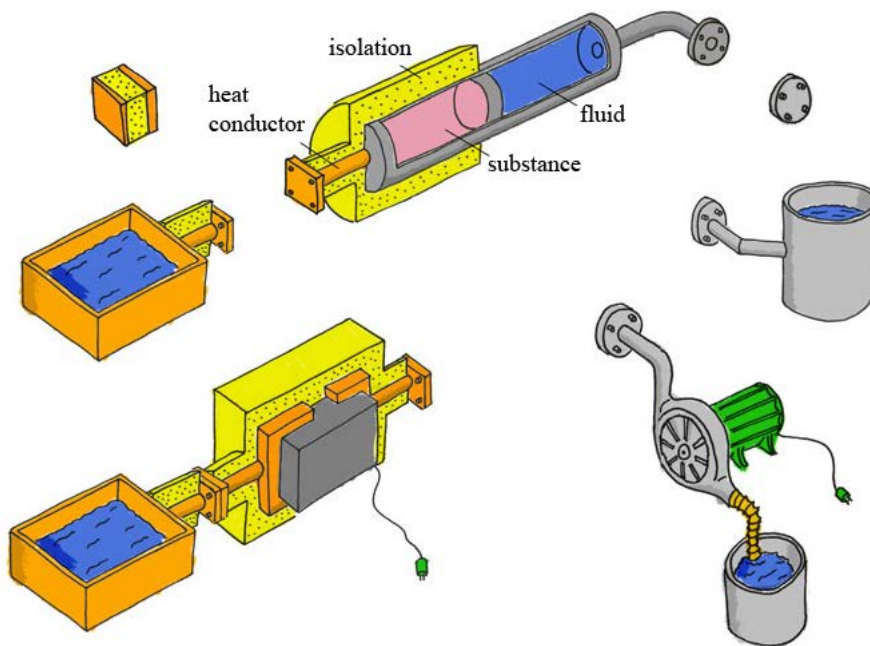


# Systems Physics Library

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In this poster the *Modelica Systems Physics library* is presented. The Systems Physics library is a free open-source library with models for different areas of physics. The primary use of the library is for educational purpose in Systems Physics.

The library contains models from five different domains (hydraulics, translational and rotational mechanics, electrodynamics and thermodynamics). Later on we will add chemistry as a sixth domain. Each domain contains connectors for one quantity and the corresponding potential, basic models (capacitance and resistance), sensors and actuators as well as some domain specific elements like nonlinear accumulator, nonlinear resistors, valves, springs or inductances. In addition to the constitutive equations each model contains an energy balance. Therefore dissipative elements calculate the loss of energy and some of them determine the entropy production with the help of an additional thermodynamic connector.



## References

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