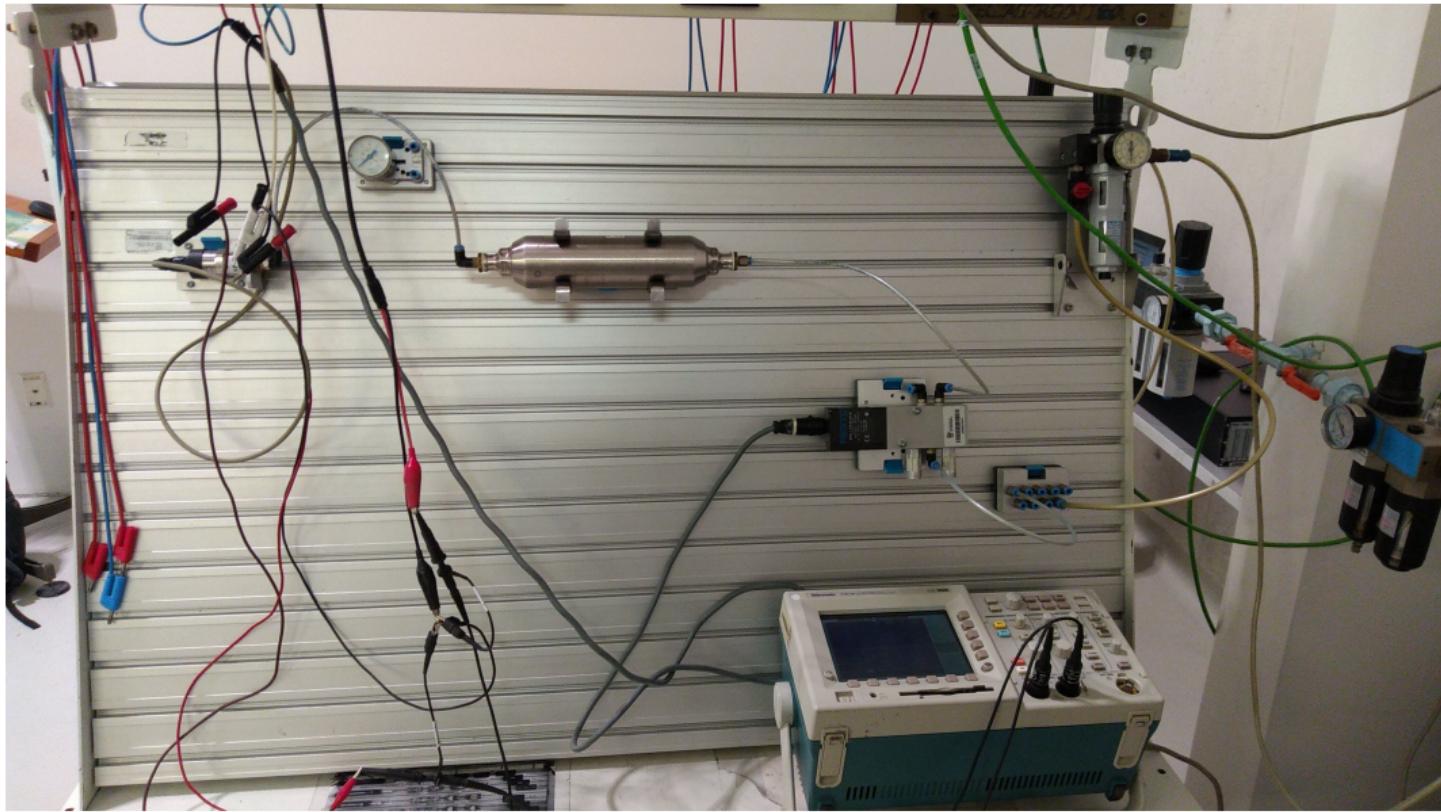


Pneumatic tank system

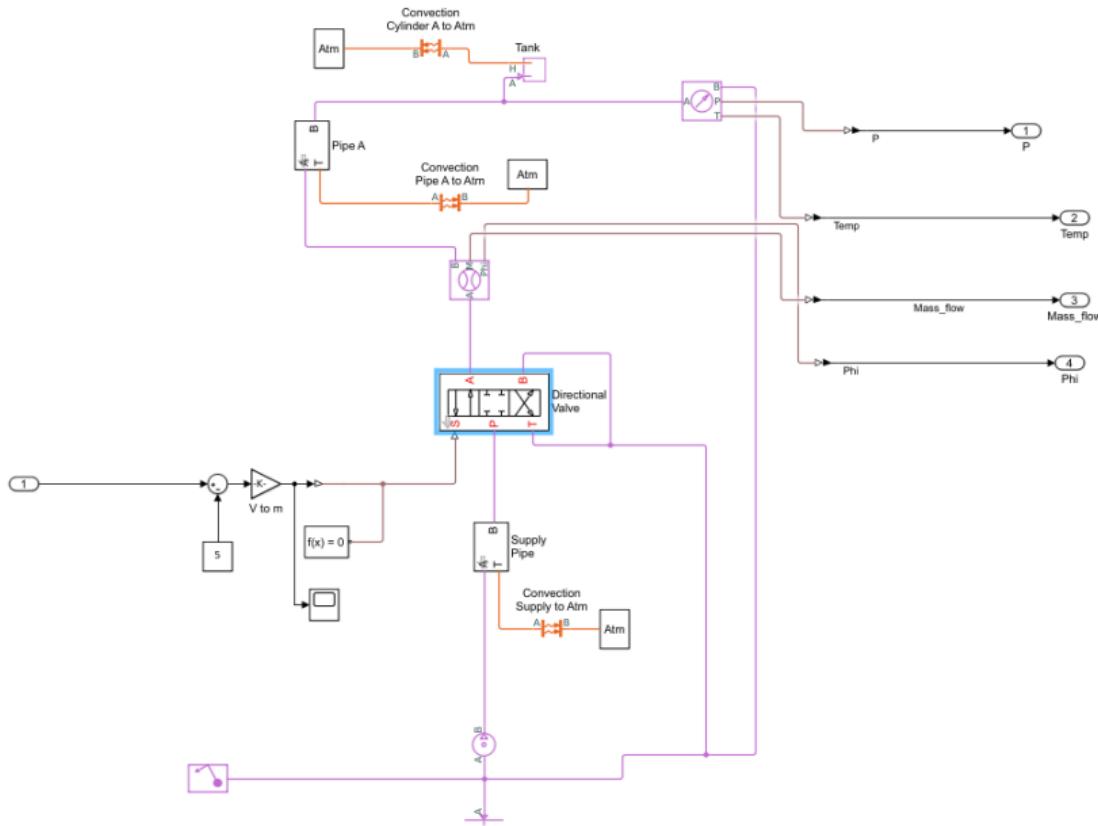
Kjartan Halvorsen

March 20, 2020

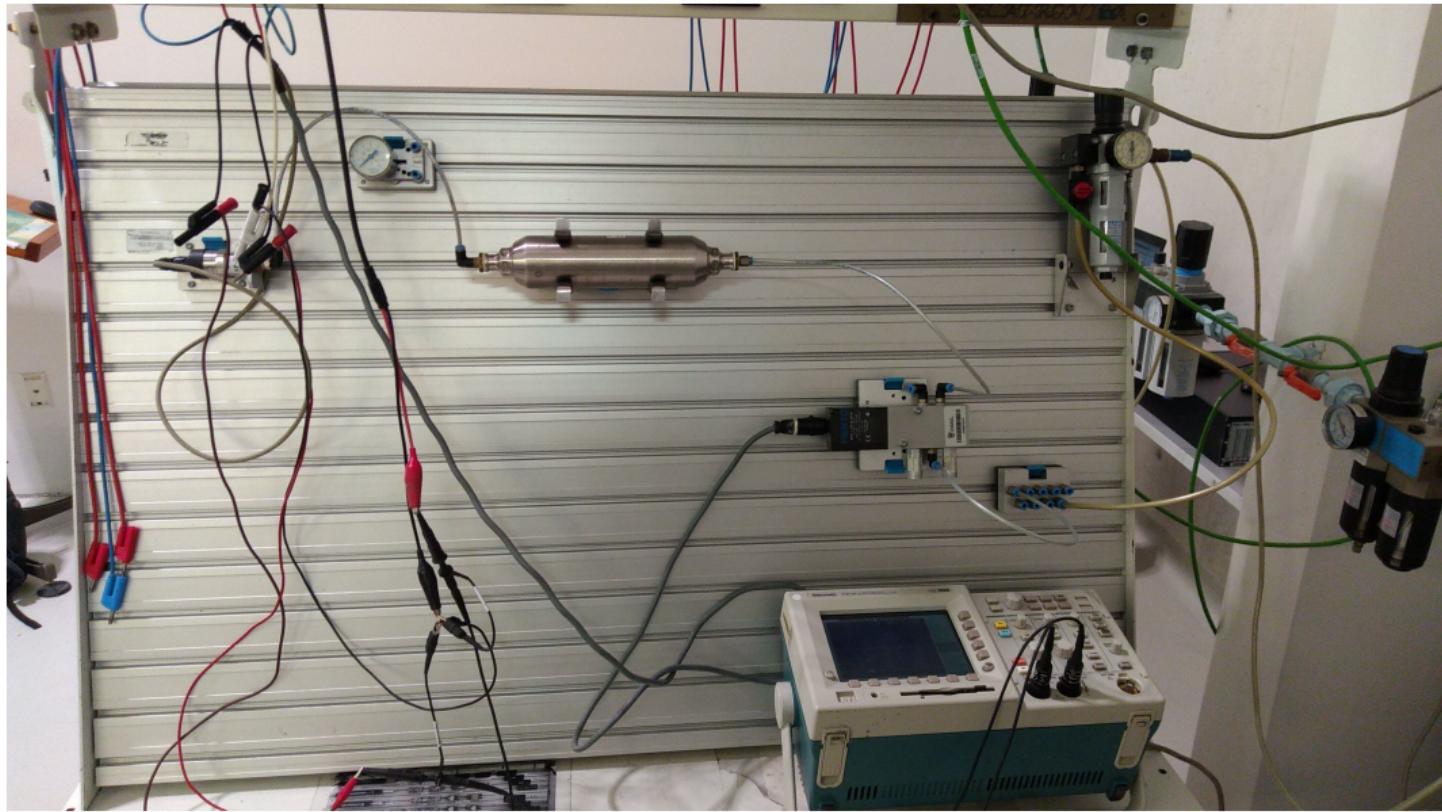
Lab experiment



Simulink simulation



Pneumatic elements



Valve

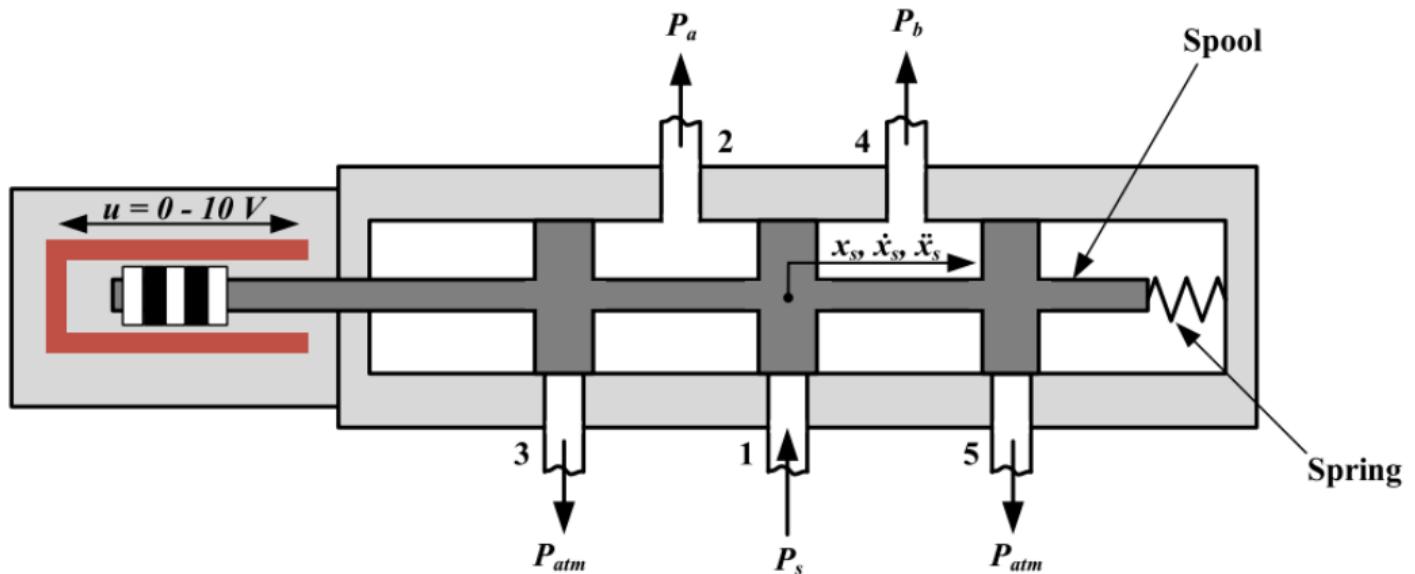
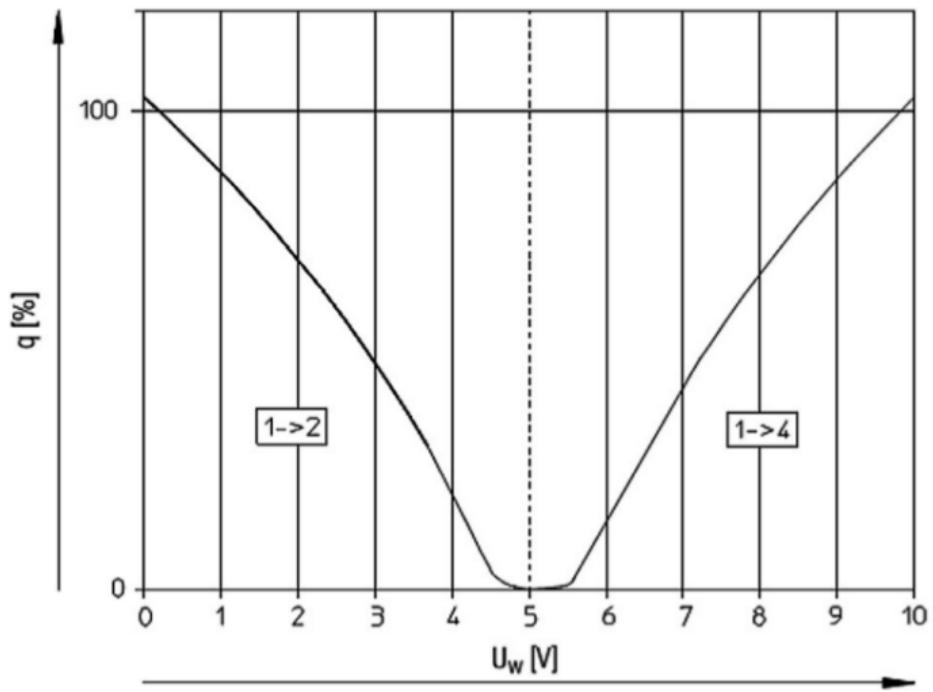


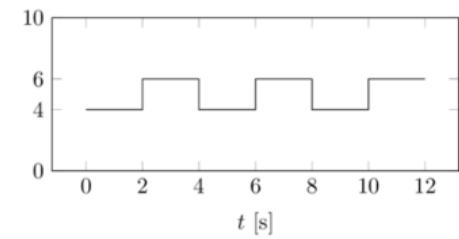
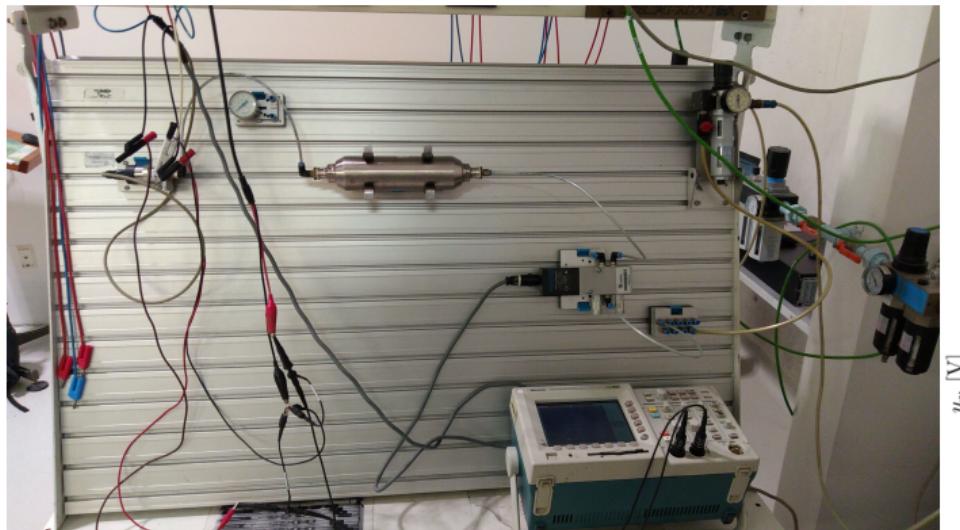
Fig. 3. Conceptual representation of the proportional directional control valve.

From "An improved nonlinear modelling and identification methodology of a servo-pneumatic actuating system with complex internal design for high-accuracy motion control applications" Simulation Modelling Practice and Theory 2017

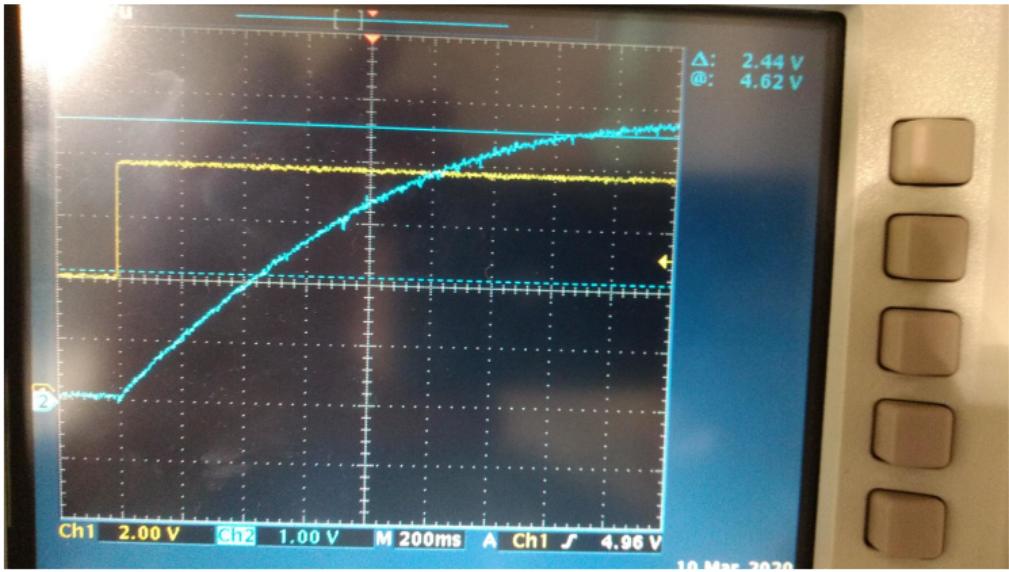
Valve, contd



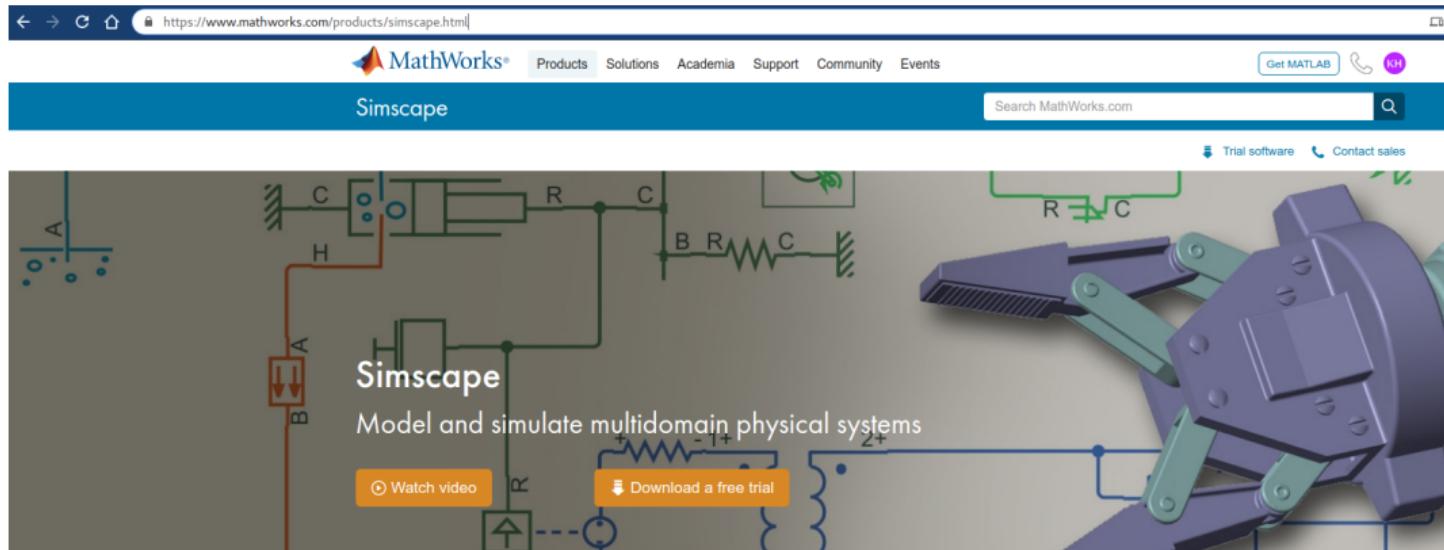
Experiment



Result

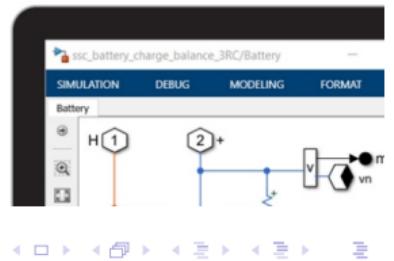


Simscape



The screenshot shows the official Simscape product page on the MathWorks website. At the top, there's a navigation bar with links for Products, Solutions, Academia, Support, Community, and Events. Below the navigation is a search bar labeled "Search MathWorks.com". A prominent feature is a large circuit diagram on the left with various resistors (R), capacitors (C), and voltage sources. The word "Simscape" is overlaid on the diagram. To the right of the circuit is a 3D rendering of a robotic arm holding a component. Below the main image, there are two orange buttons: "Watch video" and "Download a free trial". The text "Model and simulate multidomain physical systems" is displayed between the buttons.

Simscape™ enables you to rapidly create models of physical systems within the Simulink® environment. With Simscape, you build physical component models based on physical connections that directly integrate with block diagrams and other modeling paradigms. You model systems such as electric motors, bridge rectifiers, hydraulic actuators, and refrigeration systems, by assembling fundamental components into a schematic. Simscape add-on products provide more complex



Simulation model

