

Instructions to build the library:

A – Replace Branch.ssc file from the *Hydraulic* library

1. copy the branch.ssc file
2. Replace the branch.ssc file located in:
MATLAB_R2020a/toolbox/physmod/simscape/library/m/+foundation/+hydraulic

B – Download and build the *Cardiovascular* library

1. Take the +*Cardiovascular* folder and add it to the following path:
MATLAB_R2020a/toolbox/physmod/simscape/library/m.
2. Open any of the .ssc files on MATLAB and change the current folder to:
MATLAB_R2020a/toolbox/physmod/simscape/library/m/+Cardiovascular
3. Build the library by executing the “ssc_build” command in the Command window or follow the instructions on the relative documentation:
https://www.mathworks.com/help/physmod/simscape/ref/ssc_build.html
4. The Cardiovascular_lib.slx file should become visible in the /m directory and ready to use.

NOTE: use Matlab_R20020a for these files to run properly because I generate these libraraies at R20020a version

Notes:

- a) Windows users may need to have full writing permissions of the
MATLAB_R2020a/toolbox/physmod/simscape/library directory.
- b) If the following error occurs:
*Failed to generate 'Cardiovascular_lib',
caused by: error using feval, unrecognized function of variable
"Cardiovascular.variable_c_chamber"*
change the name of the file giving the error (both .ssc and .svg) as well as that
in the block definition (line #1 of code), and ensure that they are given exactly
the same name. Run again the ssc_build command to build the library (step
B3).

Element description:*Variable-Compliance Compliance Chamber:*

The block represents a variable-compliance compliance chamber. It is based on the constant volume hydraulic chamber element of the *Hydraulic* library with flexible walls. This element takes the compliance of the chamber as a time-varying user-defined input.

See documentation on *Hydraulic* library elements on:

https://www.mathworks.com/help/physmod/hydro/hydraulics-modeling.html?s_tid=CRUX_lftnav