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## **Modular Control Tool for 1-D Simulation of Cylinder Deactivation of ICE**

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This control tool provides modular, parametric and reliable steady state simulation of advanced static cylinder deactivation in 1-D code (GT-Power). The simulation runs in two phases: the first lets steady the engine model in full cylinder mode; this triggers the second phase at which the valve lifts of required cylinders are deactivated (or additional lift profiles are switched) in a specific order to obtain desired cylinder charge in deactivated cylinders. The tool is also able to pick important data from firing and deactivated cylinders separately and correspondingly feed sub-models. Advanced control of the throttle valve and waste-gate (VGT) actuators is also included in this software. Friction loss model is also amended to work with the cylinder deactivation. The tool is applied on a 4-cylinder turbocharged light duty SI engine.

### **Vlastník**

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