SIMATIC SimaHyd V1.0
Toolbox for hydraulic axes
for SIMATIC S7-1500/S7-1500T
SIMATIC SimaHyd
Overview

Intelligent Solutions for Hydraulic Systems

The SIMATIC S7-1500 controller generation is ideally suited for the automation of complex hydraulic applications.

The hydraulic toolbox SimaHyd developed by Siemens in the TIA Portal enables the user to realize individual concepts on the basis of modularly applicable function blocks. As a result, engineering expenditures are significantly reduced.

The innovative servo pump solution by Siemens, which offers maximum energy efficiency and flexibility in interaction with the SINAMICS S120 drive system, represents an example.
### Key features of the toolbox

- Easy integration into already existing PLC program
- Runs on all S7-1500 CPUs → no extra hardware needed
- Realize hydraulic applications with a modular principle, adjustable to your needs
- Individual interconnection of the set point (e.g. analog output for a valve or servo pump on a SINAMICS drive system)
- Open software library, programmed according to PLCOpen standard
- Expandable by adding self-written functions
# SIMATIC SimaHyd

## Key features

### Functionality of the hydraulic toolbox

<table>
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<tr>
<th>Positioning</th>
<th>Setpoint generation (interpolation)</th>
<th>Command value coupling between axis</th>
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<tr>
<td>Force control</td>
<td>Open loop control</td>
<td>Rapid / creek feed</td>
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<td></td>
<td>Closed loop control</td>
<td>Relative / Absolute Positioning</td>
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<td>Closed loop force control</td>
<td>Switching between position and force control</td>
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<td>Superimposed pressure limiting</td>
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</table>
## SIMATIC SimaHyd

### Key features

### Functionality of the hydraulic toolbox

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>The main FB HydAxis</td>
<td>Provides a basic framework for controlling a hydraulic axis</td>
</tr>
<tr>
<td>Freely programmable FBs/FCs for TIA portal</td>
<td>(no DCC / no TO required, but can be combined)</td>
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<tr>
<td>Direct switching between position and force control</td>
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<td>Coupling of the command value for simple gearing</td>
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<tr>
<td>Measurement function for the valve characteristic</td>
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<td>Control panel function for testing &amp; commissioning</td>
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<tr>
<td>Example project available including HMI</td>
<td></td>
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</table>
Positioning absolute or relative

Positioning with or without position control (closed / open loop)

Setpoint for valve or servopump

Movement Data

interpolator

actual value system

Force Control Data

position control with precontrol

force / pressure control

Superimposed pressure limiting / pressure control

Switching of position and force control

Setpoint with valve characteristics
Example project with HMI
### Content:
- Information material (german / english)
- manuals (english)
- application example for SIMATIC S7-1500 including HMI

### The application is offering:
- simplified engineering
- optimized project structur
- simplified support
- documented and tested software

### Costs:
- the application is free of charge

### Available from:
- on request to DF FA PMA BR3-2 or APC
- „Online Support“  https://support.industry.siemens.com
Feel free to contact us!

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