

## MPS 403-1 | Advanced mechatronics and I 4.0 learning system

The logical evolution of MPS 203 I 4.0 is the core of all MPS based systems to follow in the new MPS 400 series. Upgrade to the future.

Planned release Q2 2020

October 2019

Denkendorf, Germany

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# MPS 403-1 in a nutshell

Large touch screen

MES4web

Touch HMI

HMI programming

Analogue signals

Advanced I/O

IO-Link gateway

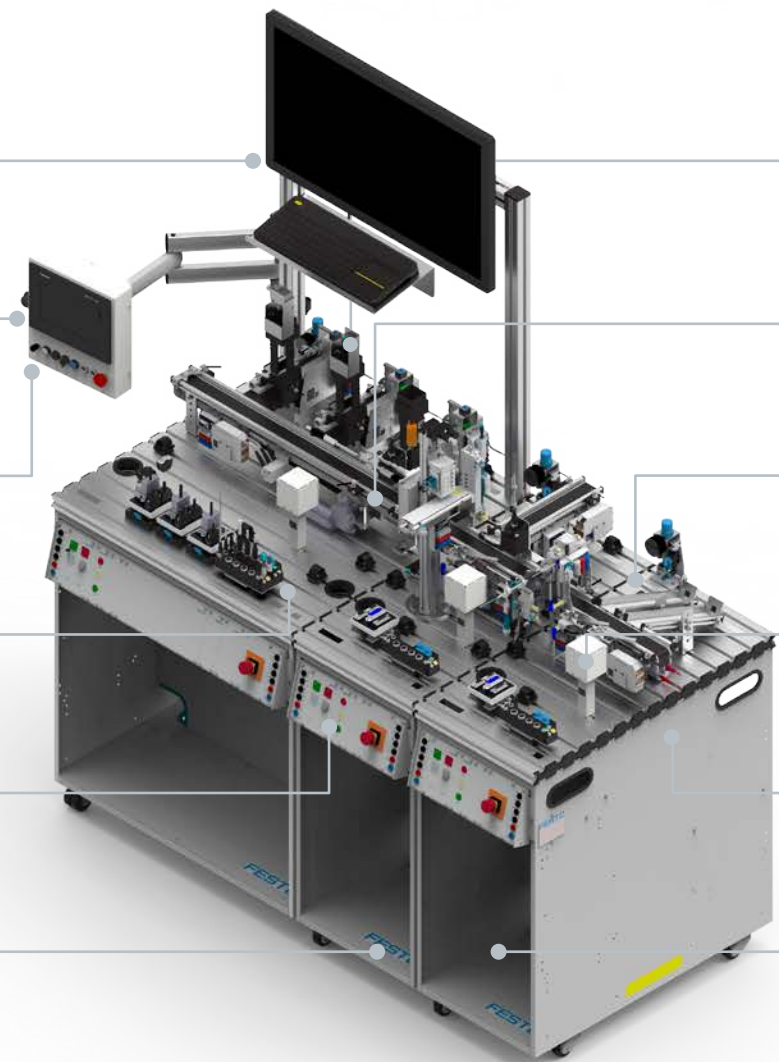
Industrial networking

LED indicator lights

Station status indicated

OPC UA

I 4.0 communication



Smart sensors

Laser, ultrasonic, capacitive

AC ready

Prepared for AC drives

IoT

Raspberry Pi + Webcam

Augmented Reality (AR)

AR assisted learning

Add new stations

No HW changes required

Siemens S7-1500 PLCs

AB and Festo will follow

# MPS 403-1 | Included I 4.0 related technologies and directly addressed learning content

|   |   |   |  |  |   |
|---|---|---|--|--|---|
| <p><b>MES4web</b><br/>Web based,<br/>touch optimized MES</p>  | <p><b>Touch HMI</b><br/>HMI programming</p>              | <p><b>RFID</b><br/>Digital product memory</p>               | <p><b>Augmented Reality (AR)</b><br/>Real time system<br/>monitoring</p>  | <p><b>Smart products</b><br/>Microcontroller<br/>programming</p>  | <p><b>IO-Link based sensors</b><br/>Smart sensors</p>  |
| <p><b>Web shop</b><br/>Horizontal integration</p>           | <p><b>IO-Link controller</b><br/>smart networking</p>  | <p><b>Advanced PLC</b><br/>I4.0 program architecture</p>  | <p><b>OPC UA</b><br/>Industrial<br/>communication</p>                   | <p><b>ProfiNet I/O</b><br/>Industrial networking</p>            | <p><b>IIoT</b><br/>IIoT based retrofitting</p>       |

# MPS 403-1 | Additional **learning content** through optional addon packages

Packages not included in MPS 403-1  
planned release later 2020

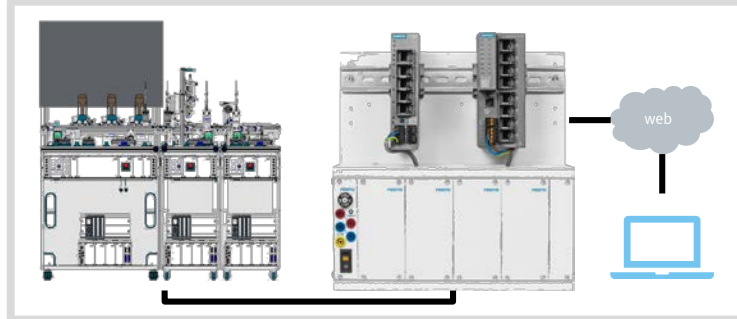
## Energy management

Monitor and improve energy efficiency



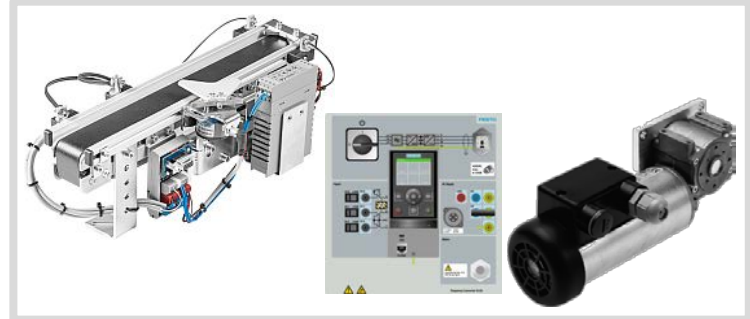
## Industrial IT-Security

Understand and secure industrial IT networks



## AC technology

Add frequency converter and AC drive



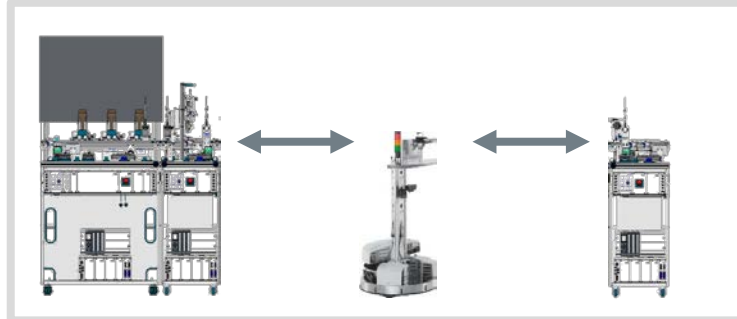
## Machine Safety

Integrate safety concepts in existing system



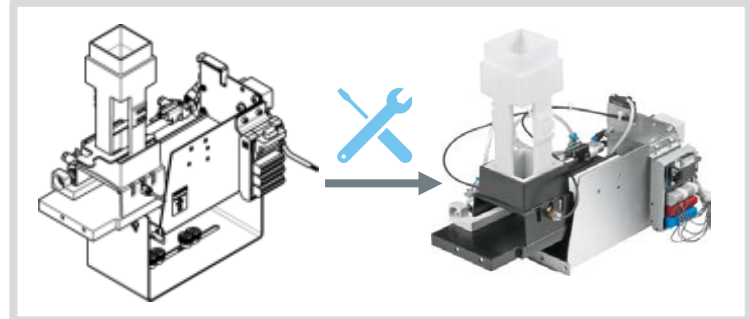
## Industrial AGV integration

Robotino integration in MPS 400 systems



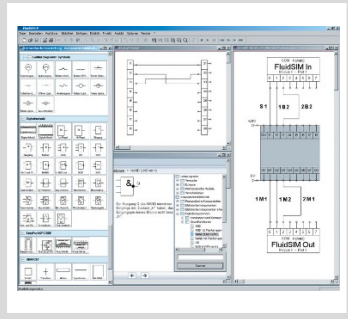





## Basics metal working

Manufacture your own stack magazine from scratch



## MPS 403-1 | Recommended learning accessories (partially included)

| Simulation box (digital)   | Easyport  | FluidSim   | Failure simulation box  | Lockout/Tagout  | Sim box (analogue)  |
|--|---|--|---|---|---|
| Quick and easy learning  | Digitalization, simulation  | Schematic simulation   | Troubleshooting   | Service safety  | Analogue simulation   |
|  |  |  |  |  |  |
| 170643<br>included   | 548687<br>included  | included   | 8074292<br><b>not</b> included  | 8064829<br><b>not</b> included  | 526863<br><b>not</b> included   |
| Used in Curriculum   | Used in Curriculum  | Used in Curriculum   | Used in Curriculum  |   |   |



# MPS 403-1 | Digital Curriculum

1. Start with the basics of I3.0 → 2. Expand your knowledge in I3.0 → 3. Start with the basics of I4.0 → 4. Become an expert!

