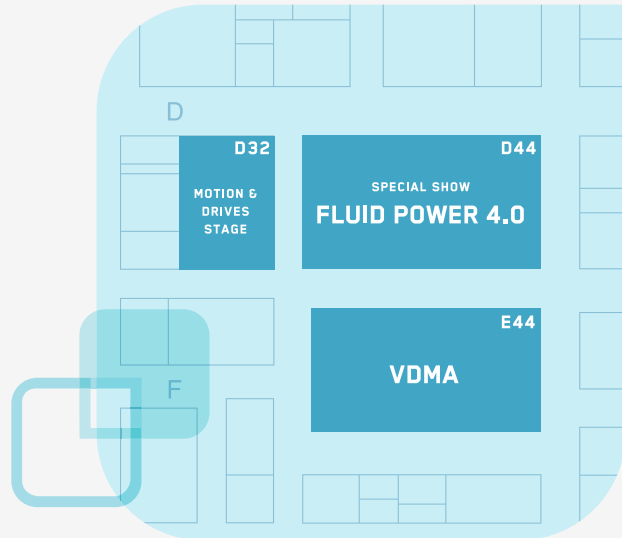


## Special Show FLUID POWER 4.0:

Together with the Fluid 4.0 consortium and the VDMA, Deutsche Messe AG is organizing the special show **FLUID POWER 4.0** in Hall 5, Booth D44. Daily guided tours of the special show are offered at 11:00 and 15:00 hours.

Meeting point: Counter of the Motion & Drives Stage (D32).

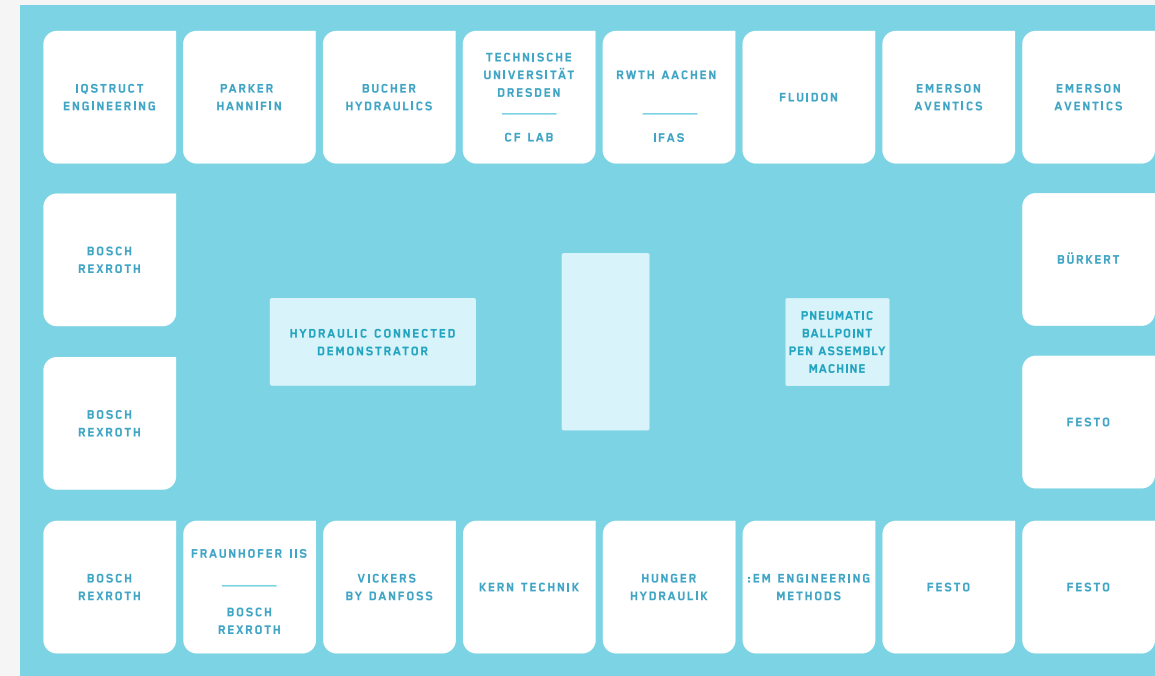


Experience digitalization in Fluid Power through the two central eye-catchers such as the **Hydraulic Connected Demonstrator** and the **Pneumatic Ballpoint Pen Assembly Machine** showcasing **Asset Administration Shell (AAS)** solutions and applications in a Fluid Power data space. Visitors can also explore the innovations of **16 participating companies**, who will present their individual solutions, as well as concepts on digital twins, sustainability, and Fluid 4.0 use cases.

**VDMA** | Lyoner Straße 18 | 60528 Frankfurt a.M. | Germany  
**M** fluid40@vdma.org | **T** +49 69 6603-1562



The Special Show is organized by VDMA and Deutsche Messe AG



## Fluid 4.0 Project

The Fluid 4.0 project is funded by the European Union (NextGenerationEU) and supported by the German Federal Ministry for Economic Affairs and Climate Action to enable cross-industry information exchange along the product lifecycle of Fluid Power products and systems. It brings Fluid Power manufacturers and users together and digitizes practical use cases for Industry 4.0. It aims at the automation of processes, the simplification of workflows, the digitalization of products and services and the use of data to increase productivity and efficiency and establish sustainability along the entire value chain.

Learn more about the project on [www.fluid40.de](http://www.fluid40.de) or visit the Fluid 4.0 booth in Hall 5, Booth E44 at the VDMA joint stand.



Hall 5  
Booth D44



## CONFERENCE STAGE

At the Motion & Drives Stage, you can find out about digitalization trends and exchange ideas with experts. Presentations, discussions and country-specific events await you right next to the FLUID POWER 4.0 special show.

DAY	AM 10–13	PM 14–16:30
<b>Mo</b> 31.03.25	–	Fluid 4.0
<b>Tue</b> 01.04.25	Fluid 4.0	Smart Power Transmission Engineering
<b>Wed</b> 02.04.25	Fluid 4.0	Italy Day + Eurotrans-CETOP-Summit
<b>Thu</b> 03.04.25	Fluid 4.0	India Day
<b>Fr</b> 04.04.25	Fluid 4.0	–

Special Show  
**FLUID POWER 4.0:**  
Experience the Future  
of Digital Fluid Power

## FLUID POWER 4.0 | The Exhibitors

**rexroth**

A Bosch Company

### Digital Product Twins @Rexroth

Unlock the future of hydraulics with Bosch Rexroth Digital Twins – provided as Asset Administration Shells (AAS):

- Digital Engineering: Streamline your design process with technical data & models
- Carbon Footprint: Identify CO<sub>2</sub> reduction opportunities
- Paperless Documentation: Ensure compliance while minimizing paper waste
- Circular Economy: Use a data-driven approach to identify the optimal R-strategies
- Plug & Produce: Implement workflows for seamless factory orchestration
- Energy efficiency: get transparency to optimize systems

[B D44 | 14](#) [W boschrexroth.de](#) [M martin.hankel@boschrexroth.de](#)

## BUCHER hydraulics

### Internal Gear Pump QXEHX

Bucher Hydraulics is aware of the importance of digital information in the machine industry and uses the example of a QXEHX internal gear pump to demonstrate the potential even for non-smart components without their own electronics. In addition to product and test data, other technical information about the component can be easily accessed at any time.

[B D44 | 3](#) [W bucherhydraulics.com/hmi25](#) [M info@bucherhydraulics.com](#)

**bürkert**  
FLUID CONTROL SYSTEMS

### Showing the Interoperability and Vision of AAS

Learn about the concept, the status quo and the vision for the use of AAS in value creation networks throughout the whole life cycle of an industrial product.

[B D44 | 8](#) [W burkert.com](#) [M info@burkert.com](#)

**CF LAB**  
future of construction

### Fluid 4.0: Control configuration via AAS for mini hydraulic wheel loader

The CFlab is part of the Fluid 4.0 research project and is responsible for the overall coordination of the project and the “control system development” use case. Together with the “Fluidtronic” chair at TU Dresden, a mini-hydraulic wheel loader demonstrator was set up. It enables visitors to configure the application software of a mini-hydraulic wheel loader and to move the results immediately. The classic way of programming and the future way with AAS submodels and infrastructure can be compared.

[B D44 | 4](#) [W fluid40.de](#) [M benjamin.beck@cflab.de](#)

**em** engineering methods AG

### :em AG Digital Twin Showcase

Using a model railway as an example, engineering artefacts are bidirectionally linked with field data to create digital twins in a heterogeneous IT landscape. The backend of the showcase is based on the Bosch Semantic Stack as a platform for managing the twins and the Asset Administration Shell as a standardized transfer format for the data. The use cases shown are transferable to other sectors and industries, e.g. verification and optimization of the CO<sub>2</sub> footprint.

[B D44 | 10](#) [W em.ag](#) [M erik.claassen@em.ag](#)

**EMERSON**

### Fluid Power 4.0

Through two live demonstrations, we aim to illustrate the integration of valuable energy data and product carbon footprint into the Asset Administration Shell (AAS) for both final products and manufacturing machinery involved in mixed production sets. Our objective is to demonstrate the added value that harmonized data via the AAS can provide, as well as the process of generating and integrating such data.

[B D44 | 7](#) [W emerson.com](#) [M Discrete.Marcoms@Emerson.com](#)

## FESTO

### Sustainable Fluid Power thanks to digitalization

Discover how Digital Twins transform automation systems by enhancing simplicity, efficiency, and quality in engineering and operations. Experience this innovation firsthand in our interactive demonstrator. Additionally, explore three engaging physical demos: learn how the asset administration shell delivers harmonized data on energy consumption and carbon footprint, seamlessly integrating into your system. Plus, see how intelligent control boosts the energy efficiency of pneumatic motion.

[B D44 | 9](#) [W festo.com](#) [M digital\\_twin@festo.com](#)

**FLUIDON**

### Fluidon | Cube

An example demonstrates how the Technical Data submodel is used to parameterize a fluid power system simulation, which calculates key metrics such as a product's carbon footprint and transfers this value to the Carbon Footprint submodel. By leveraging the Asset Interfaces Description submodel and MQTT, the cloud-based simulation serves as the numerical representation of the machine. The underlying FMU model is fully prepared for integration into the provision of Simulation Models submodel.

[B D44 | 6](#) [W fluidon.com](#) [M heiko.baum@fluidon.com](#)

**Fraunhofer**  
IIS

### Smart Circular Economy

The Fraunhofer IIS presents use cases and business opportunities for the implementation of the circular economy in the industry. Key technologies include data spaces, asset administration shells (AAS), and the digital product passport (DPP). Use cases illustrate how circular economy strategies for example in service processes enhance business resilience and sustainability. In this context, Fraunhofer IIS presents insights from the Fluid 4.0 research project.

[B D44 | 14](#) [W scs.fraunhofer.de/fs-sce](#) [M scs-kontakt@iis.fraunhofer.de](#)

**HUNGER**  
Hydraulik

### Fluid Power 4.0 – HungerDrive

Hunger shows a hydraulic cylinder with built-in components, bluetooth and web interfaces. This electro-hydraulic axis includes a variable-speed hydraulic pump with an AC servo motor, integrated position, speed and load control, and a max. push force of 2,500 kN. It is available as a compact unit as shown or with a separate cylinder and drive unit.

[B D44 | 11](#) [W hunger-hydraulik.de](#) [M i.ruehlicke@hunger-hydraulik.de](#)

**ifas** Institute for Fluid Power Drives and Systems | **RWTH AACHEN UNIVERSITY**

### Fluid 4.0 – Demonstrator

Using various use cases from the fields of engineering, energy monitoring and carbon balancing, we and our co-exhibitors (TU Dresden Fluid-Mechatronic Systems and CFlab) will use demonstrators to bring the current interim results of the Fluid 4.0 research project to life.

[B D44 | 5](#) [W fluid40.de](#) [M malte.becker@ifas.rwth-aachen.de](#)

**IQSTRUCT**  
ENGINEERING

### Industrial IoT Data Acquisition System Connecting AAS Use Cases

Our data acquisition, processing and monitoring system deployed on Cloud, Panel and IPC hardware is connected to different Industrial IoT protocols (e.g. MQTT/JSON, OPC UA), represented by hydraulic and pneumatic demonstrators. Both locally located and cloud connected use cases showing the system interoperability for acquisition, real time processing and visualization of energy consumption, machine state and on demand product information retrieval using Asset Administration Shell features.

[B D44 | 1](#) [W iqs-e.de](#) [M info@iqs-e.de](#)

**FLUID 4.0**

**KERN**TECHNIK

### Fluid Power 4.0 – electromagnetic future drive

Smart & Efficient for a Sustainable Future: Kern Technik presents a PCF-reduced, compact, and digitized high-performance hydraulic magnet that cuts energy and material by up to 50 percent.

[B D44 | 12](#) [W kern-technik.de](#) [M info@kern-technik.de](#)

**Parker**

### Interoperable Dataexchange via AAS

Discover Parker Hannifin's solution of innovative Digital Twins based on AAS technology. Our solutions encompass all our products and provide unique identifiers for part and serial numbers to improve tracking and management. Access this information effortlessly via QR codes on the products and standardized AAS APIs. Experience seamless digital data exchange and discover how it can transform your operations and prepare you for the Digital Product Passport.

[B D44 | 2](#) [W parker.com](#) [M PSC.DACH.webform@support.parker.com](#)

**FLUID-MECHATRONISCHE SYSTEMTECHNIK DRESDEN**

**TECHNISCHE UNIVERSITÄT DRESDEN**

### Fluid 4.0: pneumatic handling system with AAS based energy monitoring

The Chair of Fluid-Mechatronic Systems (Fluidtronics) at TU Dresden presents an interactive exhibit on energy monitoring.

Using a pneumatic handling system, visitors can manually operate the cycle and observe the energy consumption in an Asset Administration Shell (AAS).

[B D44 | 4](#) [W fluid40.de](#) [M thomas.kramer@tu-dresden.de](#)

**VICKERS**  
by Danfoss

### Solutions for the digital transformation of hydraulics

The electrohydraulic actuator as plug and play solution, focuses on energy efficiency and reduces CO<sub>2</sub> footprint. It simplifies hydraulic integration and offers condition-based monitoring.

The AxisPro Proportional Valve is our electrohydraulic valve with closed-loop control and real-time diagnostics. It enables energy efficiency and digital transition, including Pro-FX configure software.

[B D44 | 13](#) [W danfoss.com](#) [M imcproductsupport@danfoss.com](#)