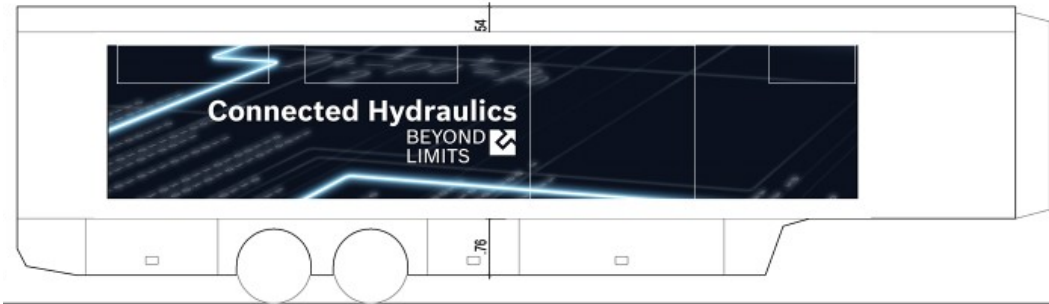
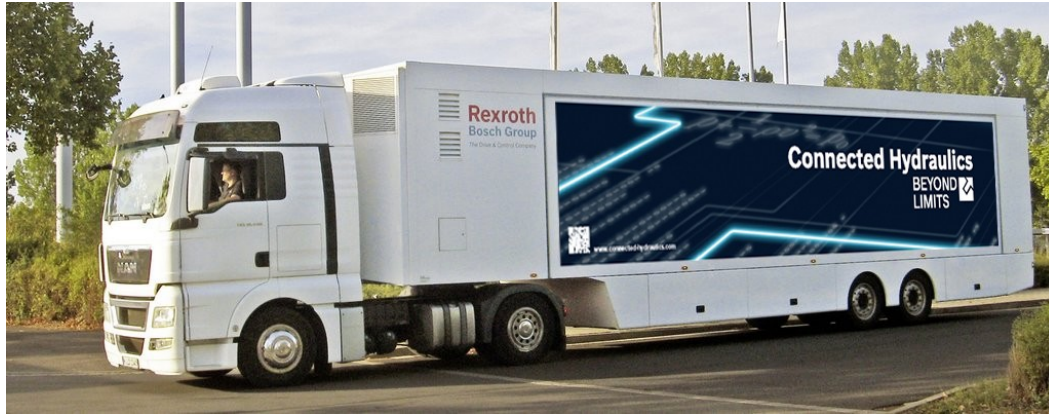


Connected Hydraulics Truck Roadshow Europe 2018



Connected Hydraulics Truck

Goals, target group, topics



Goals:

- To position hydraulics as a future-oriented technology and Rexroth as market leader in hydraulics
- To intensify cooperation with our sales partners
- To be close to our customers

Target group:

- Design engineers (OEM) & service engineers (enduser)
- Key influencers and – to a lesser extent – decision makers

Topics:

- Connected and Standard products
- Plug and Run Systems
- Smart hydraulic power units
- Motion control & connectivity
- Fluid management

Connected Hydraulics Truck

Overview of exhibits in the truck

Product program:
New 3a. (Wall) Motion Control & IndraWorks
New 3b. IO-Link for hydraulics
 2. Pumps, Motors
 1. Valves, Cylinders

New
4. Plug & Run Systems:
 Servo hydraulic Actuator

Power units:
 6. CytroPac
 5. ABPAC, Cooling, Accumulators

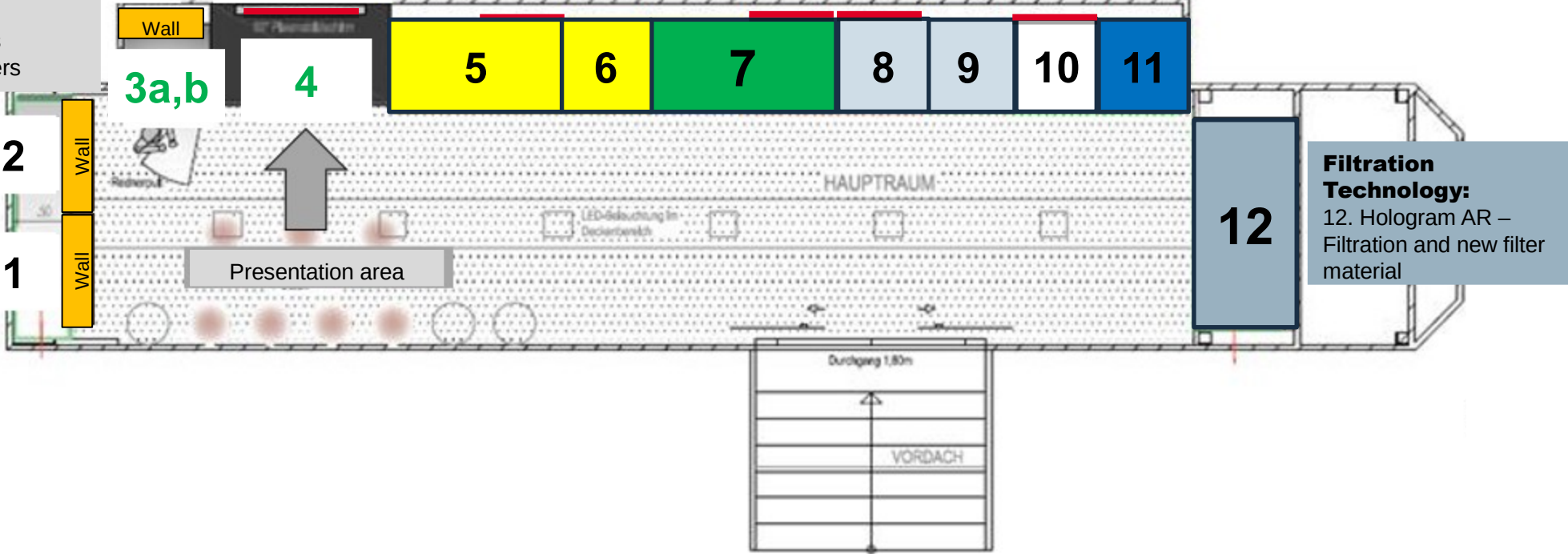
Actuator:
 7. Functional Model with Cylinder and Directional control valve; **New:** ODiN

Systems :
 8. Sytronix Komp. & Set

Actuator :
 9. LHD -CAb10 Motor

Manifold
 10. Sensor range

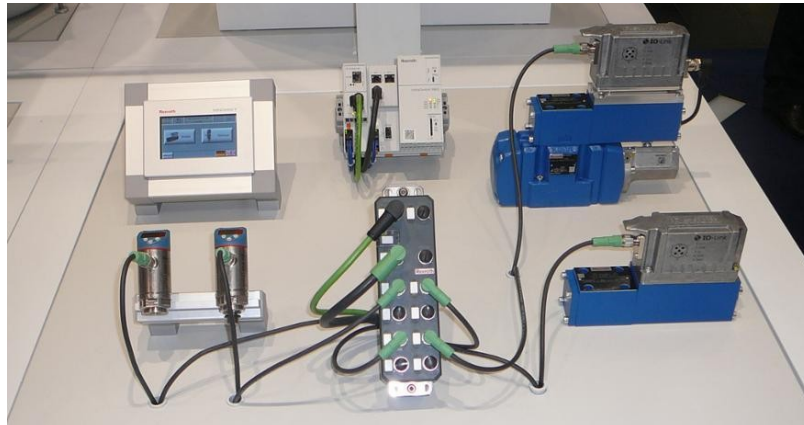
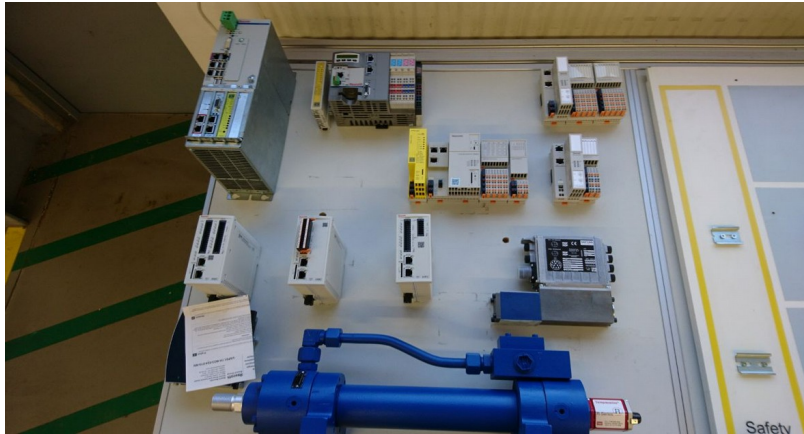
Sensors :
 11. Customized Manifold, IH20-Plate



Filtration Technology:
 12. Hologram AR – Filtration and new filter material

Connected Hydraulics Truck

Connected Hydraulics Portfolio of Motion Control



Range of Motion Control for hydraulics:

- PC-based with integrated safety functions
- Embedded – MLC, XM
- Axis Controller HMC, IAC
- Pump Control HPC

IO-Link for hydraulics (Industrial USB):

- Functional model
- Shows the functionality of IO-Link live
- Valves with IO-Link, 4WRPEH6, 4WRLE10
- Pressure switch HEDE10
- IO-Link Master IndraControl S67E

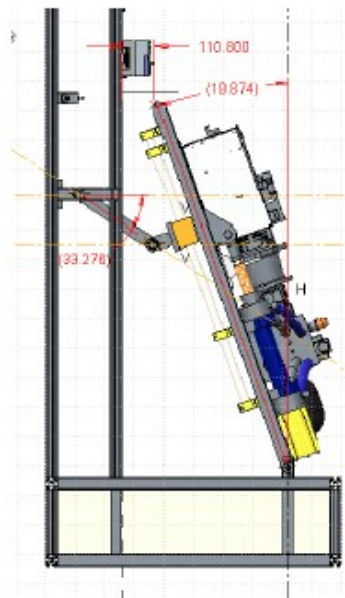
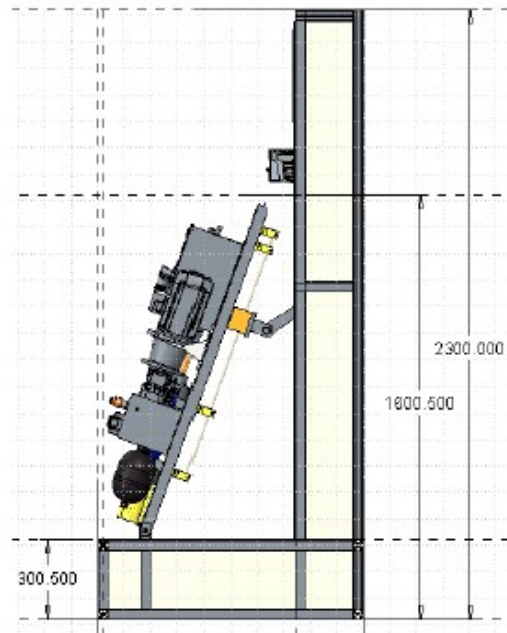
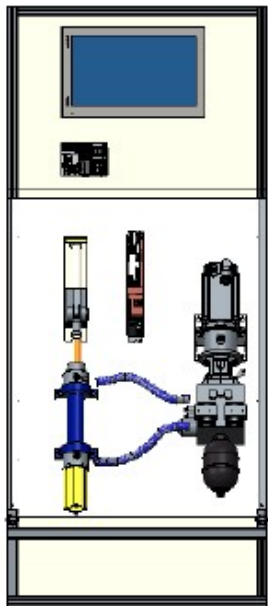
Connected Hydraulics Truck

Connected Hydraulics Plug & Run Systems

▪ **Servo hydraulic Actuator (SHA)**

- Functional model Self contained hydraulic axis
- Motion via tablet and HMI
- Components:
 - Sytronix
 - Indradrive
 - Embedded Motion Control - XM

Final-Concept



Connected Hydraulics Truck

Predictive Maintenance with ODiN (Online Diagnostic Network)

Predictive Maintenance



Predictive Analytics



Process Optimization



Data Services



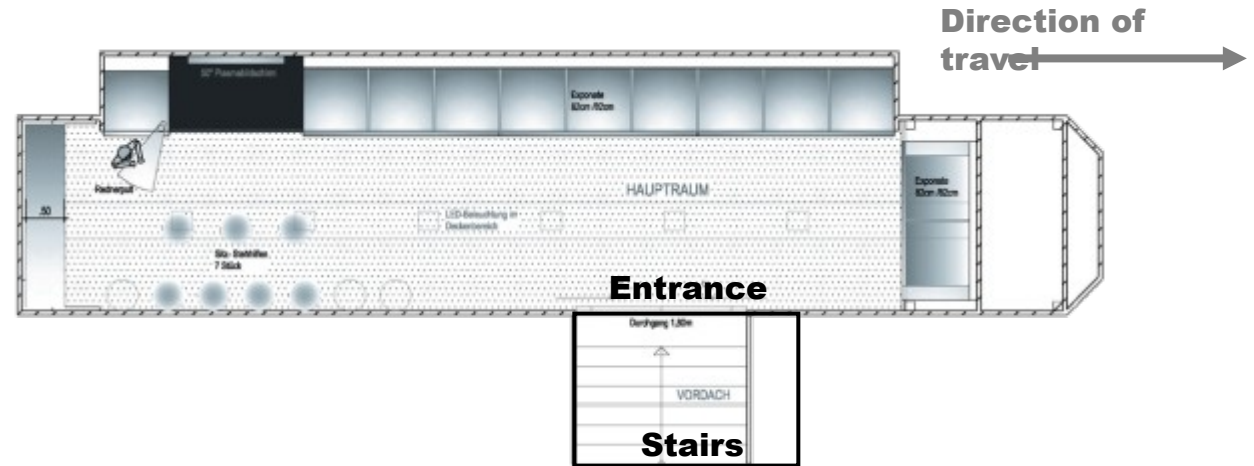
- Modern connected hydraulics, IoT Gateway and predictive maintenance.
- Sensors and data capturing of all functional models. The visualization of the Predictive Analytics and the Machine Health Curve will be on a tablet.
- All functional Models, the “Servo hydraulic Axis” and the “High Striker with the CythroPac” are included.

Sales Truck

Truck Crew, Steering and Rest Times, and Truck Data

- Driver: Ronny Erneker
- Max daily driving time: 9 hours
- Break: after 4 hours driving, a 45 minutes break must be done
- Daily rest time: 11 hours per day
- Weekly rest time: 45 hours

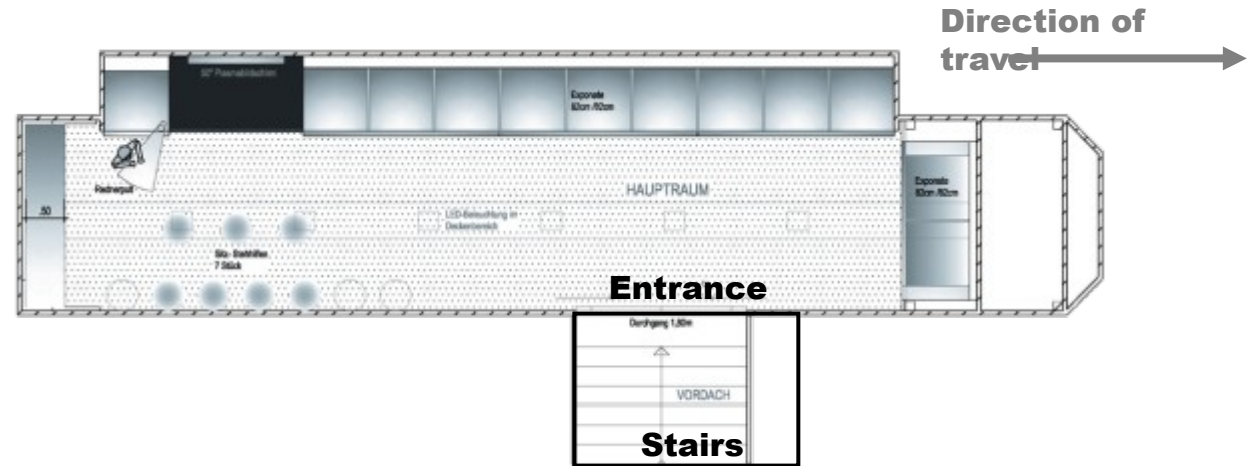
- Max Speed of the truck: 80 km / hour



Sales Truck

Truck Data and Equipment

- Truck dimensions, closed L 16.55 m x W 2.55 m x H 4.00 m
- Truck dimensions, open and fully set up L 16.55 m x W 5.91 m x H 4.00 m
- Truck weight 25 tons = 17 t trailer + 8 t tractor
- Pivoting radius 2.04 m
- Truck plate no: H - LD 1045
- Trailer no: MSP - CC 10
- Air compressor
- Power unit
- External power supply (front left in the direction of travel):
 - CEE plug, 400 V, 32 A, without RCD
 - 4 extension cables, each 15 m long, are in the trailer



All Information about the Truck and the
Connected Hydraulics Campaign are
available on our Community.

[Click here](#)

Connected Hydraulics Truck

Timeline - Tour plan (2018)

- KW12 19.03.-21.03. IFK-Kongress Aachen
- KW14 02.04.-06.04. DCHU Mariann Bogar
- KW15 09.04.-13.05. DCHU Mariann Bogar
- KW16 16.04.-20.04. DCEM Carla Wollert
- KW17 23.04.-27.04. Hannover Fair
- KW18 30.04.-04.05. DCEM Carla Wollert
- KW19 07.05.-11.05. DCSN-FI Anna Heim
- KW20 14.05.-18.05. DCSN-SE Anna Heim
- KW21 21.05.-25.05. DCSN-SE Anna Heim
- KW22 28.05.-01.06. DCSN-DK Rikke Norgaard
- KW23 04.06.-08.06. DCSN-NO Anne Braenden
- KW24 11.06.-15.06. DCGB Sean Kilgallen
- KW25 18.06.-22.06. DCGB Sean Kilgallen
- KW26 25.06.-29.06. open
- KW27 02.07.-06.07. open
- KW28 09.07.-13.07. open
- KW29 16.07.-20.07. open

Connected Hydraulics Truck

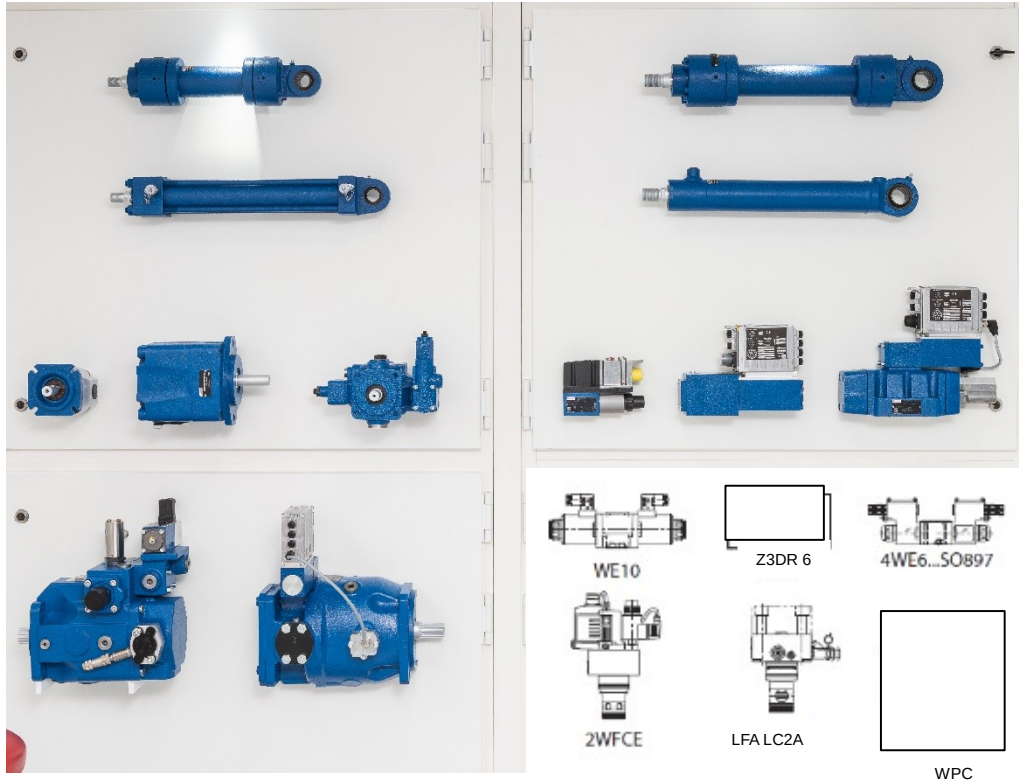
Timeline - Tour plan (2018)

- KW30 – KW34 Time of vacation and holidays => no requirements of the regional areas
- KW35 27.08.-31.08. DCEM-CH Jochen Amberger
- KW36 03.09.-07.09. DCEM Jochen Amberger
- KW37 10.09.-14.09. DCPL Magdalena Chmielewska
- KW38 17.09.-21.09. DCPL Magdalena Chmielewska
- KW39 24.09.-28.09. DCPL Magdalena Chmielewska
- KW40 01.10.-05.10. DCCZ Veronika Mala
- KW41 08.10.-12.10. DCFR Stéphane Attagnant
- KW42 15.10.-19.10. DCFR Stéphane Attagnant
- KW43 22.10.-26.10. DCFR Stéphane Attagnant
- KW44 29.10.-02.11. DCFR Stéphane Attagnant
- KW45 05.11.-09.11. Transfer to DCHU
- KW46 12.11.-16.11. DCHU Mariann Bogar
- KW47 19.11.-23.11. DCHU Mariann Bogar
- KW48 26.11.-30.11. DCTR Seda Tacer
- KW49 03.12.-07.12. DCTR Seda Tacer

Back UP

Connected Hydraulics Truck

Standard Portfolio Industrial Hydraulics



Portfolio Industrial Hydraulics:

- Valves
- Cylinder
- Pumps/Motors

Connected Hydraulics Truck

Functional model - Motion Control for Hydraulics ,High Striker‘

Pressure supply:
CytroPac



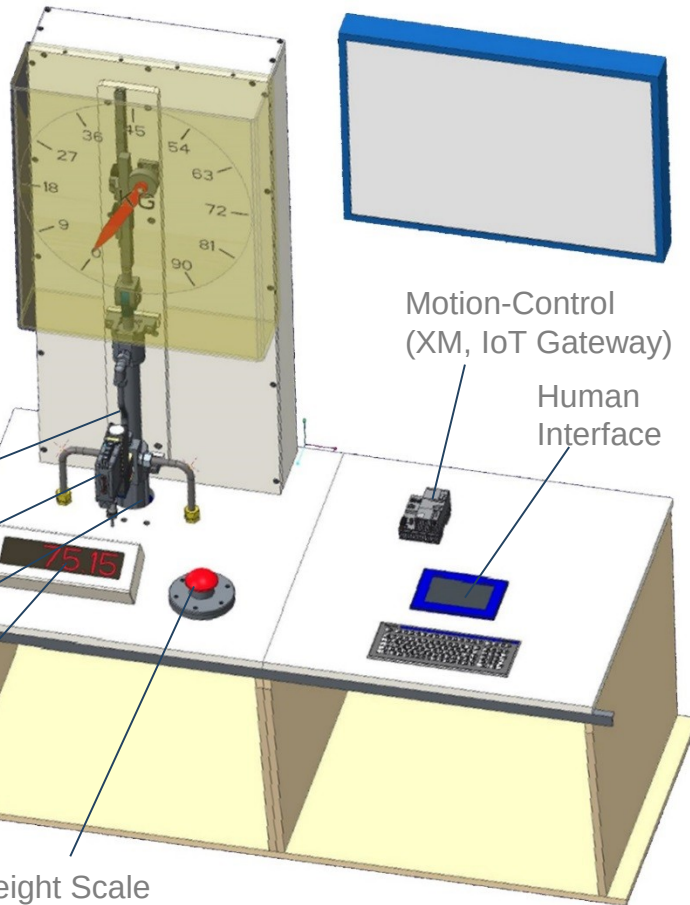
Pressure sensor

Directional control valve

Position sensor

Display

Weight Scale



Core messages:

- Position control in real time (position and force control)
- Modern connected hydraulics, IoT Gateway and predictive maintenance.
- Sensors and data capturing
The visualization of the condition monitoring systems will be on the Human Interface and the LCD screen are the Dashboard of the IoT Gateway, and the WebApp with the status diagrams.

Connected Hydraulics Truck Sytronix

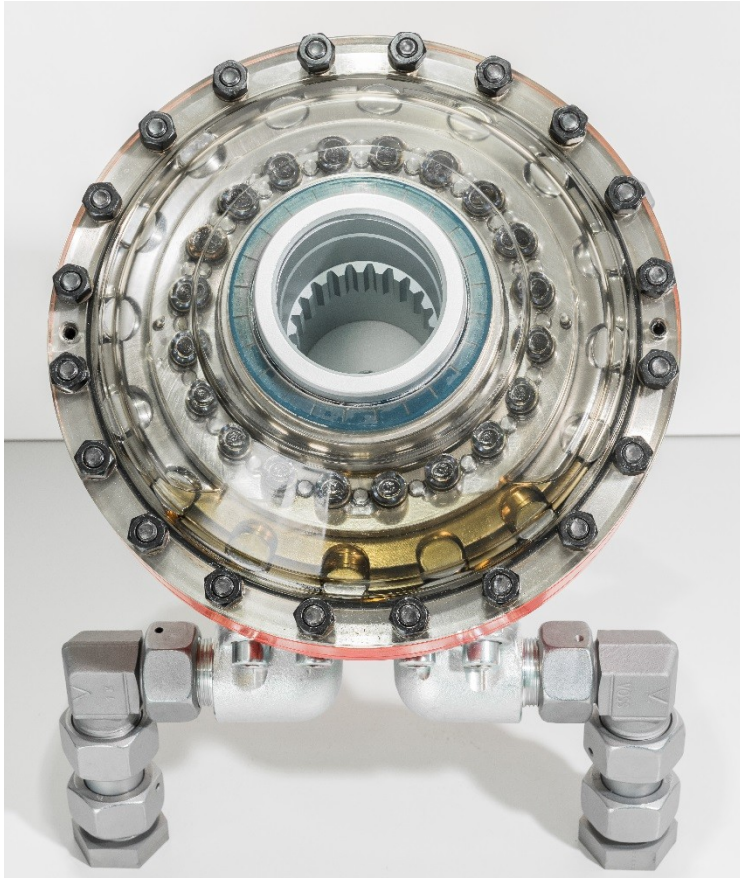


Sytronix-Set:

- Variable-speed pump drive Sytronix for demand-oriented power supply
- Integrated frequency converter with Multi-Ethernet connectivity (e.g. Sercos, EtherCAT, EtherNet/IP, PROFINET RT)

Connected Hydraulics Truck

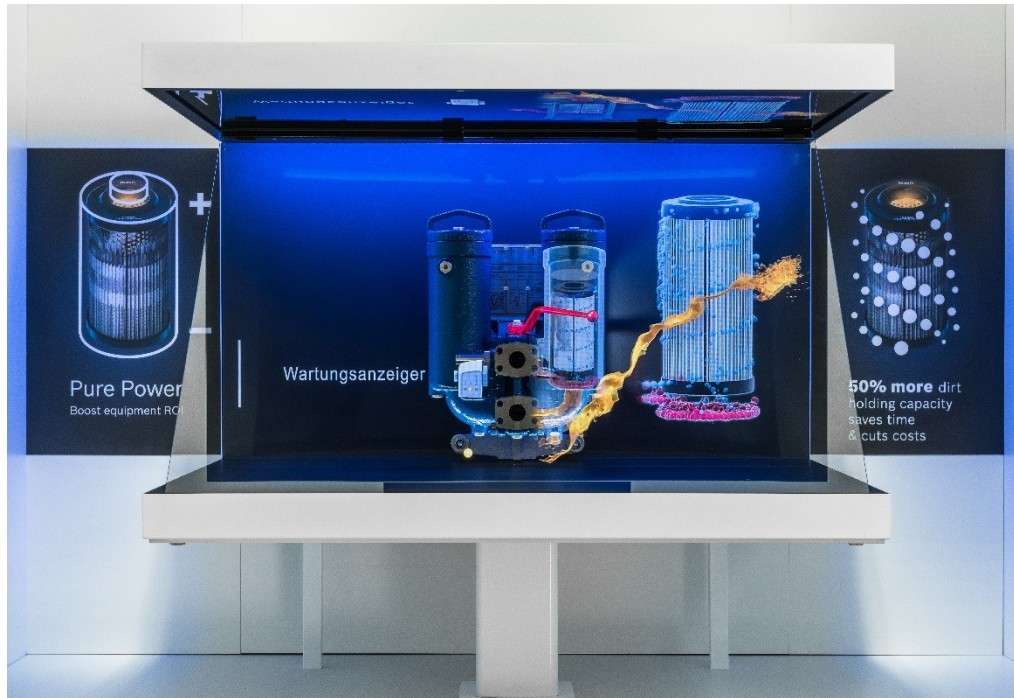
Functional model – Hägglunds CAb10



Core messages:

- Hägglunds direct drives and drive systems
- Robust design with outstanding reliability
- Full torque throughout the complete speed range
- Insensitive to tough and demanding environments
- Full control of speed and torque for precise and smooth operation
- Shaft mounted motor with freely placed drive unit for flexible installation

Connected Hydraulics Truck Filters



Longer service life and reduced operating costs:

- Lower operating cost
- Less downtime
- Longer equipment life