**EDS® Nacelle – Wind Power Generation**

**Compact and robust**

The "pitch" The EDS® Nacelle – Wind Power Generation Training System is a complete scaled-down version of commercial wind turbine nacelles, making it an excellent substitute for expensive real-life equipment. Space efficient and affordable, the machine fully interacts with users, thus enhancing the learning experience.

**Fully-loaded**
The training system consists of a complete drive train that includes the main shaft, a gearbox with a transparent side cover, speed sensors, a hydraulic brake, and an asynchronous generator. The yaw system is fully operational and features a 61 cm (24 in) slewing bearing, a gear motor, a drive, a position sensor, and fail-safe hydraulic brakes. A manual hydraulic pump and an accumulator, as found in real-world wind turbines, are also included. A PLC controls the different functions of the nacelle and is located in an electrical enclosure together with all the other electrical components.

**Simulating Reality – working for real**
A wind vane and an anemometer are located in a transparent enclosure on top of the training system to monitor wind speed and wind direction. Although they are not measuring actual wind, the control system managed by the user, simulates the process, causing the weather sensors to react and send signals to the control system which take the simulated parameters into account.

**Technical data**

**Nacelle 230 V/50 Hz**
- Nominal Voltage: 230 V AC
- Current: 5 A
- Power: 1.15 kW
- Net weight: 417 kg
- Hydraulic pressure range: 57 – 64 bar
- Reservoir: 3.8 l

**Nacelle 120 V/60 Hz**
- Nominal Voltage: 120 V AC
- Current: 12 A
- Power: 1.44 kW
- Net weight: 417 kg
- Hydraulic pressure range: 57 – 64 bar
- Reservoir: 3.8 l

**Interface/Control**
- PLC: Siemens SIMATIC S7-1200
- HMI: Siemens SIMATIC HMII TP1500 Comfort
- CE Version

**Training content**
- Nacelle Familiarisation, Safety, and Control System
- User Interface and Wind Simulation
- Gearbox, Coupling, and Alignment
- Basic Hydraulic Circuit
- Hydraulic Brakes
- Electrical Circuit and Panel
- Troubleshooting

**Training course documents**

**Nacelle – Operation and Maintenance**

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**Necessary accessories, also order:**
- IEC Power cable 90° ≥ www.festo-didactic.com
- IEC Power cable 225° ≥ www.festo-didactic.com

**CE Version**

The leakage current of the EDS® Nacelle – Wind Power Generation is high (> 30 mA) due to its industrial components. This can cause 30 mA Residual Current Devices (RCDs) to trip. RCDs are required by certain local regulations for leakage current detection. As an alternative, it is possible to use a 300 mA RCD. User safety remains ensured due to additional grounding cable supplied with the system. If the use of 300 mA RCDs is prohibited by local regulations, an isolation transformer is available (part number 8064538). It is specially designed to eliminate high leakage currents and avoid the undesired tripping of RCDs. For more information, refer to the Optional Equipment section of the datasheet.

**Isolation Transformer 230 V/50 Hz**

**8064536**