

# Data Sheet

## Hydract Actuator



### Product description

The HYDRACT actuators are working with pressurized tap water or with water containing glycol. The pressurized water is supplied in a 50bar closed leak free system. The pressure is produced by a decentralized power unit called a Power pack together with an accumulator (or uninterruptible power supply) capacity suitable for the number of valves required to go to a safe position in the event of power failure. The actuator will by default open and close the valve slowly and ramp up to full velocity to reduce the risk of creating pressure transients (water hammers). The speed and seat position is fully programmable and can be specified to order. The actuator can be installed as normally closed, normally open and with regulation ability. The double seat actuator can independently control the upper and lower seats (seat lift) to keep the valve clean during service. The HYDRACT Valve internals do not require pressure balancing as a precaution towards pressure transients due to being hydraulically locked.

### Features and benefits

- Hydraulic lock that withstands pressure transients
- Full regulation capability and on/off
- Bi-directional flow
- Inline mixing
- $\pm 0.05$  mm precision
- No unintentional mixing of fluids
- Reduced energy consumption
- All valves work as mix proof and regulating valves

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### Technical data

<b>Double seat Actuator:</b>	Diameter: 100 mm.
	Height: 500 mm.
	Stroke length: Up to 47 mm
<b>Single seat/Divert Valve Actuator:</b>	Diameter: 100 mm.
	Height: 445 mm.
	Stroke length: Up to 47 mm
<b>Communication</b>	AS -i bus, ProfiBUS & Bluetooth 4,0 (tablet) compatible. Other types of communication soon to be available e.g. ProfiNET and I-O Link
<b>Power supply</b>	24-30volt DC supply from bus system or external source. Peak current: <=250mA. Standby current: <=100mA. Optional battery backup
<b>Maximum force</b>	Upper seat: 12500N (downward), 9300N (upward). Lower seat: 4500N (downward), 3200N (upward). Single seat: 12500N (downward and upward).
<b>Filtration requirements</b>	5 $\mu$ m abs. filter on return line. 3 $\mu$ m abs. filter on the pressure line.
<b>Working pressure</b>	4,7 to 5 MPa.
<b>Materials</b>	FDA approved materials. Actuator body and internals: AISI 304 Seals in EPDM, UHMWPE (Ultra High Molecular Weight Polyethylene) and PTFE Plastic housing in plastic coated ABS for cleaning chemical resistance
<b>Opening &amp; closing operations</b>	Velocity: from 0,1 - 11,5 mm/s <i>Opening and closing times are dependent on valve stroke and configuration. Range from 3-10s.</i>
<b>Position control</b>	Accuracy $\pm$ 0.05 mm (both single, upper, and lower seat).
<b>Flow direction</b>	Hydraulic actuator gives the possibility of bidirectional flow when installed on a suitable process valve
<b>Seat calibration</b>	This feature allows for the setup of the actuator when connected to a process valve. It searches and saves the seat positions in the valve house by applying pressure and recording movement.
<b>Shutoff hydraulic valve</b>	Fitted to the front of all actuator types is a hydraulic shut-off/isolation valve block. This incorporates 2 isolation valves inside, one for pressure and one for return. Enabling the user to remove an actuator from a system without affecting other parts of the hydraulic system.