

ACCURATOR

INFORMATION

The Hydract actuators are working with pressurized tap water or with water containing glycol. The pressurized water is supplied in a 50 bar closed leak free system. The pressure is produced by a decentralized power unit called the 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/or with regulation ability. The double seat actuator can independently control the upper and lower seats (seat lift) in order to keep the valve clean during operation.

The Hydract Valve internals do not require pressure balancing as a precaution towards pressure transients due to being hydraulically locked. Furthermore, the lower seat shape ensures optimal flow conditions. During upper and lower seal flush, the upper or lower disc of the valve internals are independently lifted enabling the seals to be cleaned.

TECHNICAL DATA

DOUBLE SEAT:	HDm: Diameter: 99 mm Height: 418 mm Stroke length: Up to 47 mm	HDs: Diameter: 99 mm Height: 380 mm Stroke length: Up to 30 mm
SINGLE SEAT:	HSm: Diameter: 100 mm Height: 445 mm Stroke length: Up to 47 mm	
COMMUNICATION	AS -i bus & Bluetooth 4,2 (tablet) compatible. PROFIBUS and IO_Link	
POWER SUPPLY	24-30 volt DC supply from bus system Peak current: <=250mA Standby current: <=100mA Optional battery backup	
MAXIMUM FORCE	Upper seat: 12500N (downward), 9300N (upward) Lower seat: 4500N (downward), 3200N (upward) Single seat: 12500N (downward and upward)	
FILTRATION REQUIREMENTS	5 µ m abs filter on return line It is recommended that a 3 µ m filter is used on the pressure line	
WORKING PRESSURE	4,7 to 5 MPa	
MATERIALS	FDA approved materials Material not in contact with product: AISI 304 Seals in EPDM Control top Housing in ABS with cleaning chemical resistant coating	
OPENING & CLOSING OPERATIONS	Velocity: from 0,1 - 11,5 mm/s Opening and closing times are dependent on valve stroke, between 3 and 12 seconds. Each actuator can be also configured with normal or fast speed for open/close operations.	
POSITION CONTROL	Accuracy ± 0.05 mm (both single, upper, and lower seat)	
SEAT CALIBRATION	The upper seat seal compression can be adjusted by connecting the actuator to a tablet (Hydract app). This ensures the seal can be adjusted during it's lifetime and ensure the correct expansion.	
AMBIENT TEMPERATURE	-20°C to +45°C	

CONTROL & COMMUNICATION

Full digital process control! Standard communication is I/O link ensures that every Hydract Valve communicates individually. This enables proactive performance reporting and maintenance procedures. Precise valve position is essential to optimal system operation and automation. The control and communication is fully digital and programmable to meet your production needs. The 360° LED display for easy visual valve status is also fully programmable.

HYDRAULIC CYLINDER

The piston rod of the cylinder transmits the power from the displacement of pressurized hydraulic fluid via the piston inside the cylinder.

LANTERN

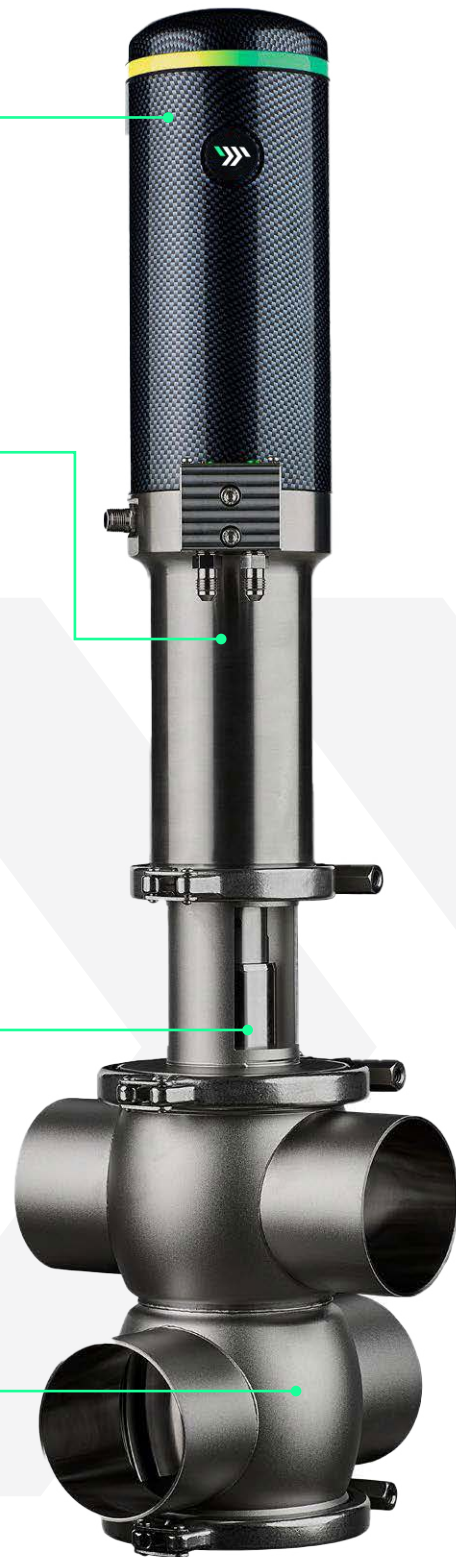
The lantern works as a separation between the actuator and the valve house. The design is open which allows for visual inspection of the piston seal and leakage.

VALVE HOUSES

Hydract offers a broad and versatile valve house programme for different process applications. The Hydract Valve house internal is elliptical which creates a more uniform flow velocity and thereby better cleanability. Houses can be combined crosswise and can be either clamped or welded.

ACTUATOR

The Hydract actuator has tremendous force of up to 12.500 N and is hydraulically locked – eliminating the risk of unintentional mixing of fluids. Due to the precise control and power the actuator can position the piston by 5/100 mm. As water is incompressible it grants better mechanical work. It simply uses the energy better. 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 Hydract actuator reduces the electrical power consumption by more than 95 % for valve actuation.



FEATURES AND BENEFITS

- » Hydraulic lock that withstands pressure transients
- » Full regulation capability and on/off
- » Bi-directional flow
- » In-line mixing
- » 5/100 mm precision
- » No unintentional mixing of fluids
- » Reduced energy consumption
- » Fast calibration via app
- » Fully digital and can be programmed to meet any demand
- » Upper and lower seat can be programmed to fit your CIP cleaning (pulse, spray, small opening, etc.)
- » Can be configured to be both NC/NO