

## The original MINIMESS® Minivalv

Chokes for safety, comfort and stability

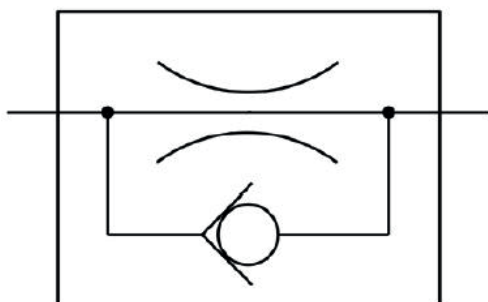


**In hydraulic systems, the actuator, typically one cylinder, must exhibit smooth-start acceleration in order to be able to guarantee safety, comfort and extreme durability. No one wants to sit in an excavator and move the joystick only to watch the boom shoot forward at full speed, scaring those working nearby, jolting the excavator driver and, what's more, placing unnecessary strain on the mechanics. In fact, it is imperative that even an unexperienced driver can work in a controlled, precise and, at the same time, comfortable manner. MINIMESS® Minivalv by Hydrotechnik is an effective, economical and easy-to-integrate solution for this**

Complex controls and servo valves make it possible to control the movements of an actuator in any possible way and to optimize them for every situation. However, if yours is a cost-sensitive market segment and you want to use conventional directional valves with a hydraulic joystick, MINIMESS® Minivalv offers an ideal alternative.

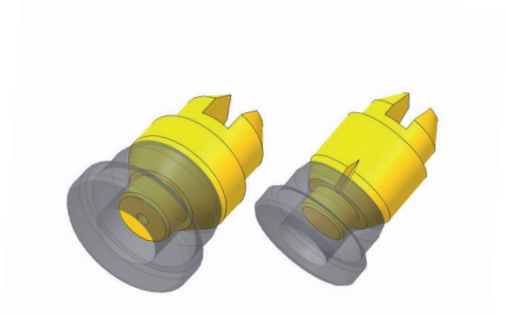
MINIMESS® Minivalv is a throttle check valve that restricts the flow rate through a notch or hole in one direction and, in the other direction, releases it without restriction. It can be mechanically pre-loaded if desired. It is typically integrated in the hydraulic pre-control line with throttle where the directional valve terminates and ensures that the valve piston is somewhat restricted in its movement from or into neutral position. In contrast to a simple throttle, the return valve's design ensures that negative pressure does not build up during the supply process.

Depending on the desired degree of throttling, either a hole in or a notch on the valve piston is used to show the throttle cross-section. Preferably, the notched valve piston is used when throttle cross-sections are very small. This has the advantage that it is easy to flush out any dirt particles that collect in the notch when the flow direction is reversed. The more economical bored valve pistons are used when cross-sections are larger





**MINIMESS®** Minivalv is known for its compact design. It is the size of a customary male connector and can therefore be integrated without additional effort. It is suitable for system pressures up to 400 bar. Mechanical connections, the size of the orifice or notch and the pre-load or cross-section are adapted to the requirements of your application. Hydrotechnik has more than 50 years of experience developing and producing small hydraulics products so it can offer high-quality, yet economical, solutions.



Typical applications include switch speed limitation of excavator booms, excavator bucket movement or the rotation of the cab as well as the optimization of the pre-control of counter-balance valves. The image shows how Minivalv can be integrated in the pre-control line for rotation of the cab of the Volvo Construction Equipment ECR50D mini digger.



### Technical data

Working pressure	> up to 400 bar
Versions	> Throttle bore $\varnothing$ 0.5 mm to 1.0 mm > Throttle slot, equivalent to throttle bore $\varnothing$ 0.3 mm to 0.6 mm
Port Connection	> 9/16-18 UNF, ISO 11926-2 > ISO 228-G1/4, ISO9974-2
Connection Stud	> 9/16-18 UNF, ISO 8434-3 > 11/16-16 UN, ISO 8434-3 > M14x1.5 8L, DIN 2353