

## Mode of operation

### Releasing the brake

If the 2/2 directional seat valve is energized, it is in closed position. The hydraulic pump motor starts working. Thus, the hydraulic pressure is increased up to the value adjusted with pressure switch. When reaching the adjusted pressure, the caliper is fully released.

The caliper release time is approximate 1 s from energizing of hydraulic pump motor and 2/2 directional seat valve.

### Brake in released position

The higher order control system switches off the hydraulic pump motor with motor contactor via control signal from pressure switch. The caliper remains in released position due to check valve and the 2/2 directional seat valve is set to closed position ( energized ).

### Loss of pressure

The hydraulic system pressure could drop under the value adjusted on pressure switch due to possible leakage of hydraulic piping. The motor contactor switches on the hydraulic pump motor via control signal from the higher order control system. Thus, the hydraulic pressure is increased up to the value adjusted with pressure switch.

### Closing the brake

For closing the brake, the 2/2 directional seat valve and the hydraulic pump motor are disenergized

simultaneously. Thus the hydraulic pressure returns to the reservoir and the caliper is applied immediately. The closing times of the brakes in data sheet M 1501 259 E are valid after switch off power supply. In case of emergency switch off or power failure the brake closes as discribed above.

### Emergency condition

The hand pump is designed for an operating under emergency condition.

For releasing the caliper by hand pump the 2/2 directional seat valve must be closed manually in order to close the return line.

### safety drive

It's necessary to control from the customer control system to switch off the pump motor in every case after approx. 15 s ( depends on the system ). If the pressure switch don't react after approx. 15 s there is a system failure. This failure is to report from the customer control system.