

Rail clamps are designed to work with side surfaces of the running rail heads. Their purpose is to prevent displacement of a machine caused by external forces, while in standstill (e.g. wind in the case of cranes or forces exerted by a conveyor belt in the case of throw-off carriages). They prevent the machine from moving once it has come to a standstill, independently of the brake installed in the power transmission system of the travel mechanism. They are not designed to brake a machine in motion (unless agreed in advance). The drive control system should be designed in such a way that the drive motor is started when the brake shoes are open, i.e. after confirmation of brake release by the brake release sensor fitted on the clamp, and braking is achieved once the machine has come to a halt.

The clamps are fitted with guiding rollers, adjusting their position so as to prevent the friction lining of the brake shoe from rubbing against the rail head while in motion. It is recommended to use the clamps symmetrically on both rails.

To ensure correct operation, it is necessary to select the appropriate size of the clamp. The mechanical connection can be adapted to the user's existing structure and, due to design differences, is determined on an individual basis.

The clamps can be manufactured:

- with an electro-hydraulic release mechanism: ZS.02, ZS.03 or AHS (automatic braking after loss of voltage)
- with ZS.04 hydraulic power pack (automatic braking after loss of voltage)
- with ZS.06 electric drive (no automatic braking after loss of voltage).

ZS.02 AND ZS.03 RAIL CLAMPS WITH ELECTRO-HYDRAULIC RELEASE

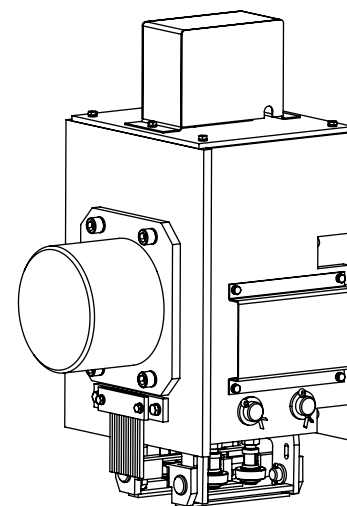
The braking force (clamping of the shoes on the running rail) is mechanically induced by a spring integrated in the body of the release mechanism. Release of the clamp (spreading of the brake shoes) occurs once the release mechanism has been energised, causing the pump that pumps oil into a chamber located under the release mechanism piston to be switched on. This results in an upward movement of the piston and the brake arms and shoes are moved away from the head of the rail by an articulated lever system, which allows unobstructed movement of the machine. If the voltage supply to the release mechanism is interrupted, the spring in the release immediately moves the piston downwards automatically and braking is performed by pressing the brake shoes against the side surfaces of the rail head.

The connection dimensions and fitting method can be adapted to suit the requirements of the installation.

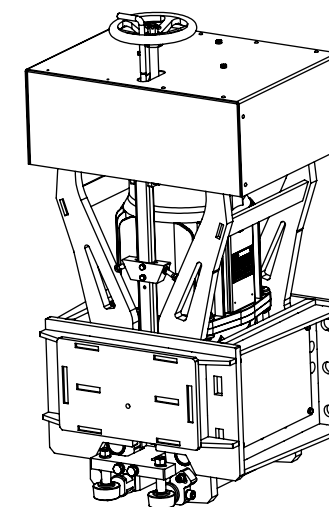
The clamp can be optionally provided with:

- manual brake release mechanism
- external mechanical switch (brake release indication)
- release with a built-in mechanical connector (brake release indication)
- mounting holes for a bumper

Power supply voltage: 3×220 V, 3×400 V, 3×500 V (or different, as agreed)



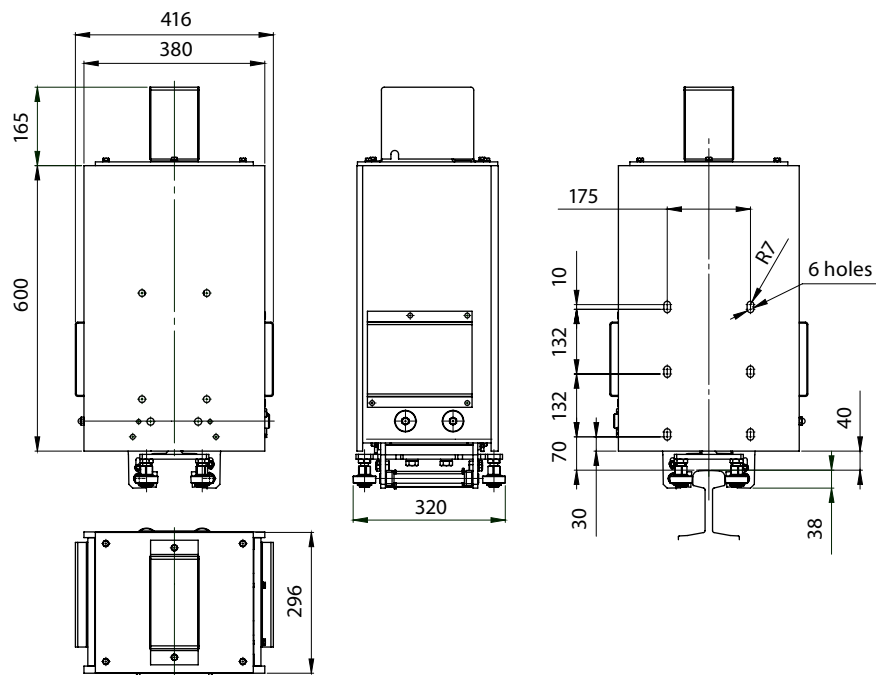
ZS.02 rail clamp



ZS.03 rail clamp

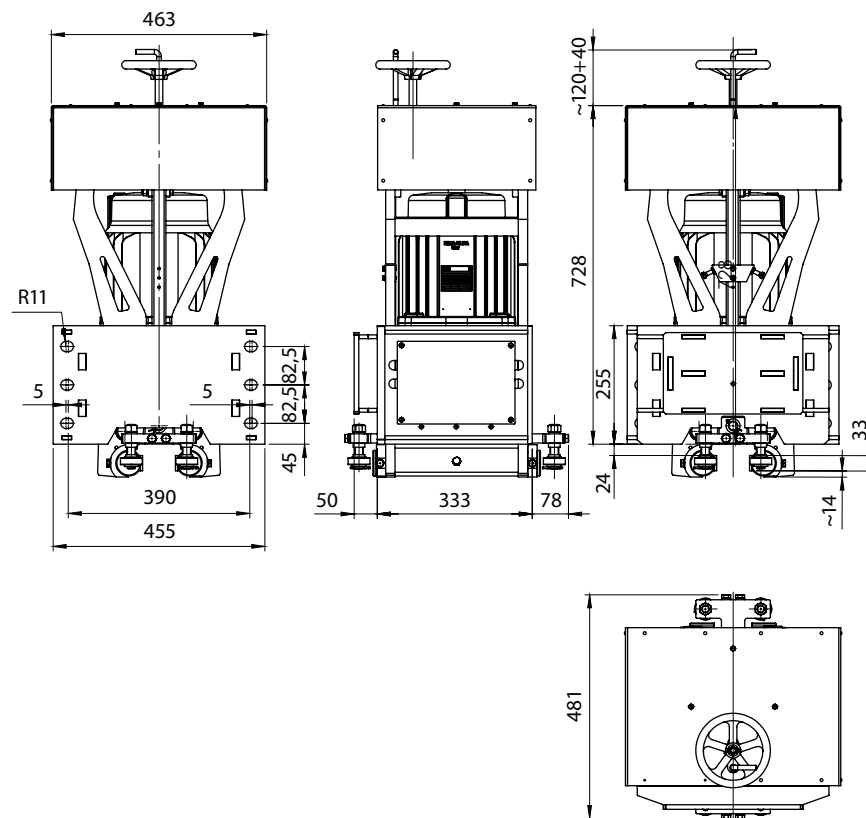
ZS.02

without a manual brake release mechanism



ZS.03.02 – ZS.03.03

with a manual brake release mechanism



Type	Electro-hydraulic release	Braking force	Weight [kg]
ZS.02	ZE...500 S 500...	4 kN	125
ZS.03.02	ZE...1500 S 1250...	10kN	160
ZS.03.03	ZE...2500 S 2000...	18kN	170