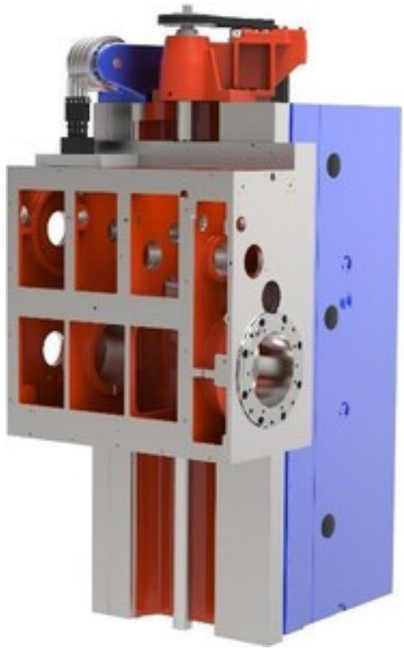
BALANCEAMENTO DO CABEÇOTE
HEADSTOCK BALANCE



Motivation

The ball screw motors must continuously overcome gravity as the headstock moves on the Y-axis. Our goal is to minimize this force in order to increase the efficiency and accuracy of the control of the vertical axis motion.

Description

On TOS Varnsdorf machines, the weight of the headstock is balanced (depending on the type of machine) by means of counterweights inside the stand or by means of a hydromechanical system.

These systems reduce the feed forces required to control the axis and minimize the power consumption when the axis is stopped in position. By balancing system, without introducing additional forces into the frame and guide, we significantly reduce wear on the ball screws on the Y-axis.

Benefits

- Lower required feed forces for axis movement (especially when moving upwards)
- Minimal energy consumption during positional binding
- Extended lifetime of mechanical parts of the guides and vertical axis drive