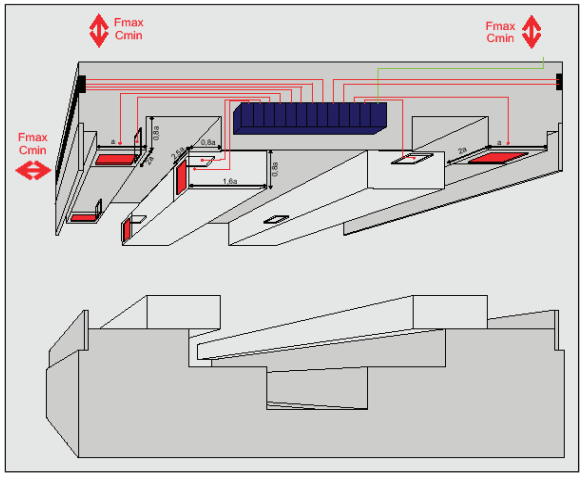
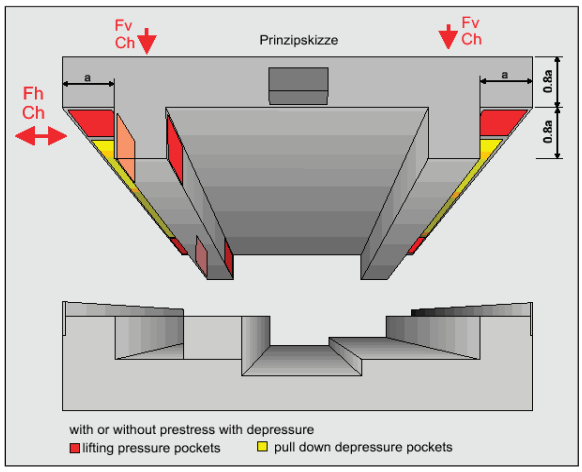
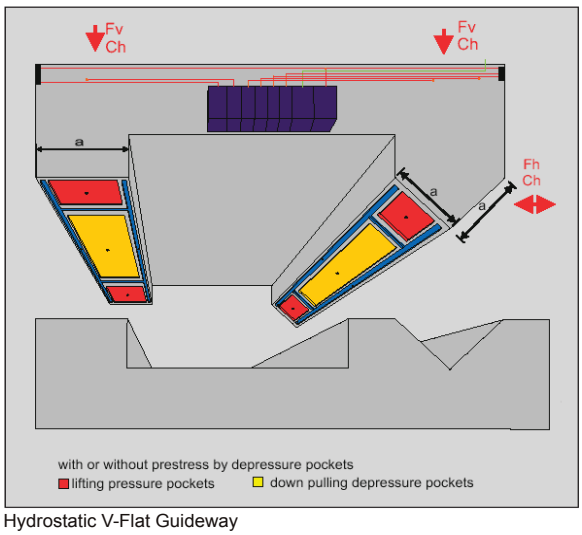


Hydrostatic Slide with Keepers



Hydrostatic Guideway without Keepers



Hydrostatic V-Flat Guideway

Features of Hydrostatic Slides

- Very low friction, no friction at positioning
- Movement of 0.1µm possible
- No reversal backlash of friction force
- No slip-stick effect at slow motion
- Zero wear because there is no contact when operating
- No precision or stiffness loss, even under full-load machining and oscillating motion
- No friction variation caused by ball reversing
- Better damping, resulting in better workpiece finish, longer tool life, and larger cutting volume
- No vibration, which is caused when reversing rolling systems
- Not sensitive to chips and other debris
- Extremely straight movement possible

Technical Features of Hydrostatic Slides

- High precision and extremely parallel horizontal pocket gaps — gaps at the keepers stay parallel even when bending forces are applied
- No deformation caused by screws in the slide or guideway
- Low production costs because no rails are necessary and no parallel grinding with small tolerances is required
- Ideal for horizontal applications, where machining and acceleration forces are lower than the weight forces on the pockets
- Ideal for horizontal and vertical slides with high forces and torque load
- Very effective for cylindrical grinders, flat grinders, measuring machines, and ultra-precision machines
- The side stiffness increases with increased force on the V-pockets
- Hydrostatic guideways can compensate for forces resulting from weight, machining and acceleration. In addition, high speed operation as well as tight stiffness and damping requirements are obtainable