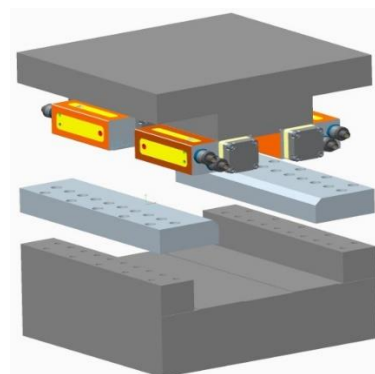
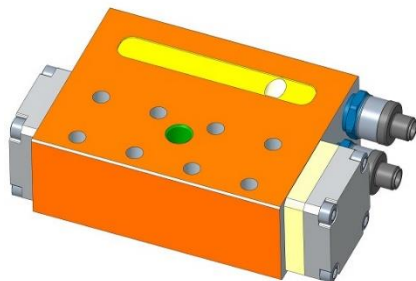
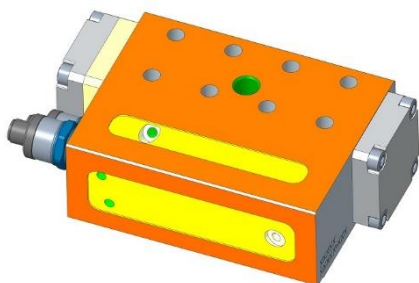


# HYDROSTATIC GUIDE SHOES



HS50-B/E 3-pockets

## Advantage

- **wear free**  
=> life unlimited  
=> machine quality does not change
- **no friction at slow move – no stick slip effect**  
=> positioning precision no more limited by guide.  
=> very small steps and very slow move possible
- **no vibration by rolling elements**  
=> improved surface quality  
=> sound free move
- **excellent damping**  
=> improve surface quality at work piece  
=> longer tool life
- **very high load capacity by large pocket surface**
- **very high stiffness by using PM-flow controller**
- one oil enter with constant pressure
- attached PM-flow controller
- attached pressure sensors can supervise forces
- no deformation of screws in rails
- simple design of slide parts and rails
- available for different pressure and oil type

## Technical data hydrostatic guide shoes size 50

pressure	32 bar	50 bar	80 bar	32 bar	50 bar	80 bar
shoe length	130 mm	130 mm	130 mm	200 mm	200 mm	200 mm
max. force F1↓ <sup>①</sup>	12000 N	20000 N	30000 N	20000 N	32000 N	45000 N
max. force F2↑ <sup>①</sup>	5000 N	8000 N	13000 N	7500 N	12000 N	19000 N
max. force F3→ <sup>①</sup>	6500 N	12000 N	18000 N	11000 N	19000 N	28000 N
max. force F4← <sup>①</sup>	6500 N	12000 N	18000 N	11000 N	19000 N	28000 N
stiffness ↑↓ <sup>②</sup>	1500N/μm	2200N/μm	3500N/μm	2300N/μm	3500N/μm	5500N/μm
stiffness ↔ <sup>③</sup>	1000N/μm	1300N/μm	2100N/μm	1500N/μm	2200N/μm	3500N/μm
max. speed VG68 <sup>④</sup>	25 m/min	30 m/min	35 m/min	25 m/min	30 m/min	35 m/min
max. flow VG68 <sup>⑤</sup>	0,08 l/min	0,12 l/min	0,18 l/min	0,10 l/min	0,16 l/min	0,27 l/min
max. speed VG46 <sup>④</sup>	40 m/min	50 m/min	55 m/min	40 m/min	50 m/min	55 m/min
max. flow VG46 <sup>⑤</sup>	0,11 l/min	0,20 l/min	0,28 l/min	0,15 l/min	0,23 l/min	0,40 l/min
max. speed VG32 <sup>④</sup>	60 m/min	70 m/min	80 m/min	60 m/min	70 m/min	80 m/min
max. flow VG32 <sup>⑤</sup>	0,16 l/min	0,29 l/min	0,39 l/min	0,21 l/min	0,33 l/min	0,55 l/min

- Calculate max. force, put safety factor on, select needed pressure according forces  
- select oil viscosity according needed speed.

① max. forces when function guaranteed. Theoretical limit is 40% higher.

② gap stiffness at force 20% of F1      ③ gap stiffness at ON side force

Total stiffness is reduced by deformation, depending rigidity of slide and guide.

④ speed when oil heat by friction about 8°K      ⑤ oil flow per pocket at max. 40°C

Oil flow at 20°C is about 35% of oil flow at 40°C.

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