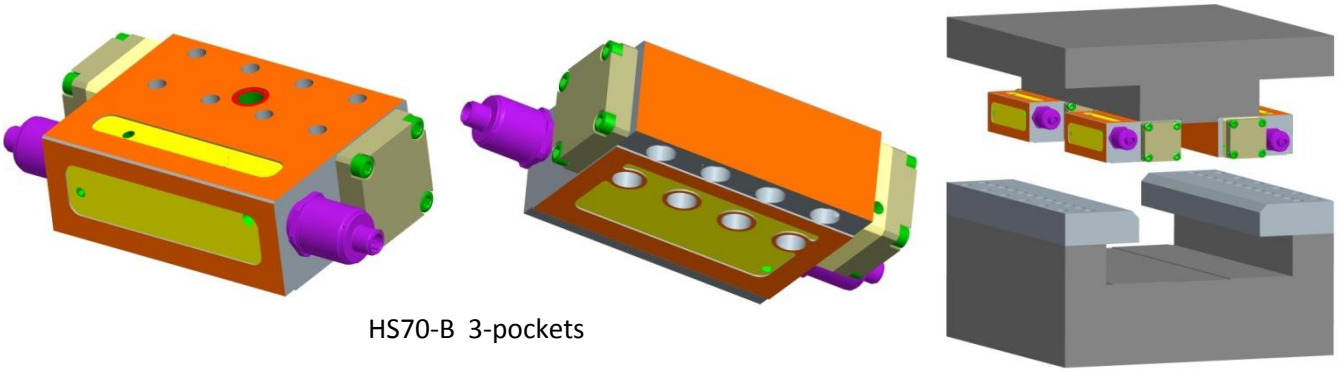
HYDROSTATIC GUIDE SHOES 70x140



HS70-B 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 70

pressure	**32 bar**	**50 bar**	**80 bar**	**32 bar**	**50 bar**	**80 bar**
shoe length	**180 mm**	**180 mm**	**180 mm**	**280 mm**	**280 mm**	**280 mm**
max. force F1↓ ①	28000 N	46000 N	70000 N	45000 N	72000 N	115000N
max. force F2↑ ①	10000 N	16000 N	30000 N	16000 N	28000 N	48000 N
max force F3→ ①	13000 N	22000 N	37000 N	21000 N	36000 N	60000 N
max force F4← ①	13000 N	22000 N	37000 N	21000 N	36000 N	60000 N
stiffness ↕ ②	1750N/µm	2500N/µm	3400N/µm	2700N/µm	3700N/µm	5500N/µm
stiffness ↔ ③	1500N/µm	2000N/µm	2600N/µm	2400N/µm	2900N/µm	4000N/µm
max. speed VG68 ④	30 m/min	35 m/min	40 m/min	30 m/min	35 m/min	40 m/min
max. flow VG68 ⑤	0,10 l/min	0,17 l/min	0,30 l/min	0,14 l/min	0,22 l/min	0,43 l/min
max. speed VG46 ④	50 m/min	60 m/min	75 m/min	50 m/min	60 m/min	75 m/min
max. flow VG46 ⑤	0,15 l/min	0,24 l/min	0,45 l/min	0,19 l/min	0,33 l/min	0,65 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 0N 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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