

Characteristics



**Versatile** HBV hydraulic speed control cylinders may be used to precisely regulate the speed or feed rate of any moving device. Use it to control the speed or air cylinders, automatic machines, slides and carriages. To regulate the feed of drills, grinders and cutting tools.

**Leakproof** HBV hydraulic speed control cylinders are hermetically sealed and may operate in any position. These units are excellent for use on food processing equipment, business machines, medical and optical equipment and automatic production machinery.

**Precision design** A patented rolling diaphragm seal provides leakproof, frictionless sealing of the piston rod and makes a HBV unsurpassed for smooth, dependable, constant speed control. They are more precise in movement than conventional speed controls because the super-clean Silicone fluid they contain is sealed in for life and filtered every stroke.

**Long life** HBV speed controls are guaranteed to provide millions of trouble-free cycles without noticeable wear. All cylinders contain a tool steel cylinder that is hardened to 60 Rockwell, honed to a mirror finish, and precisely mated to a special alloy all metal piston. This combination is virtually impossible to wearout.

**Maintenance free** The rolling diaphragm successfully withstand endurance tests of 10 million cycles without leaking. An internal rod wiper protects the seal and other internal parts from contamination by cutting oils, moisture and dust. All moving parts are permanently lubricated and contribute to an extremely long life without maintenance.

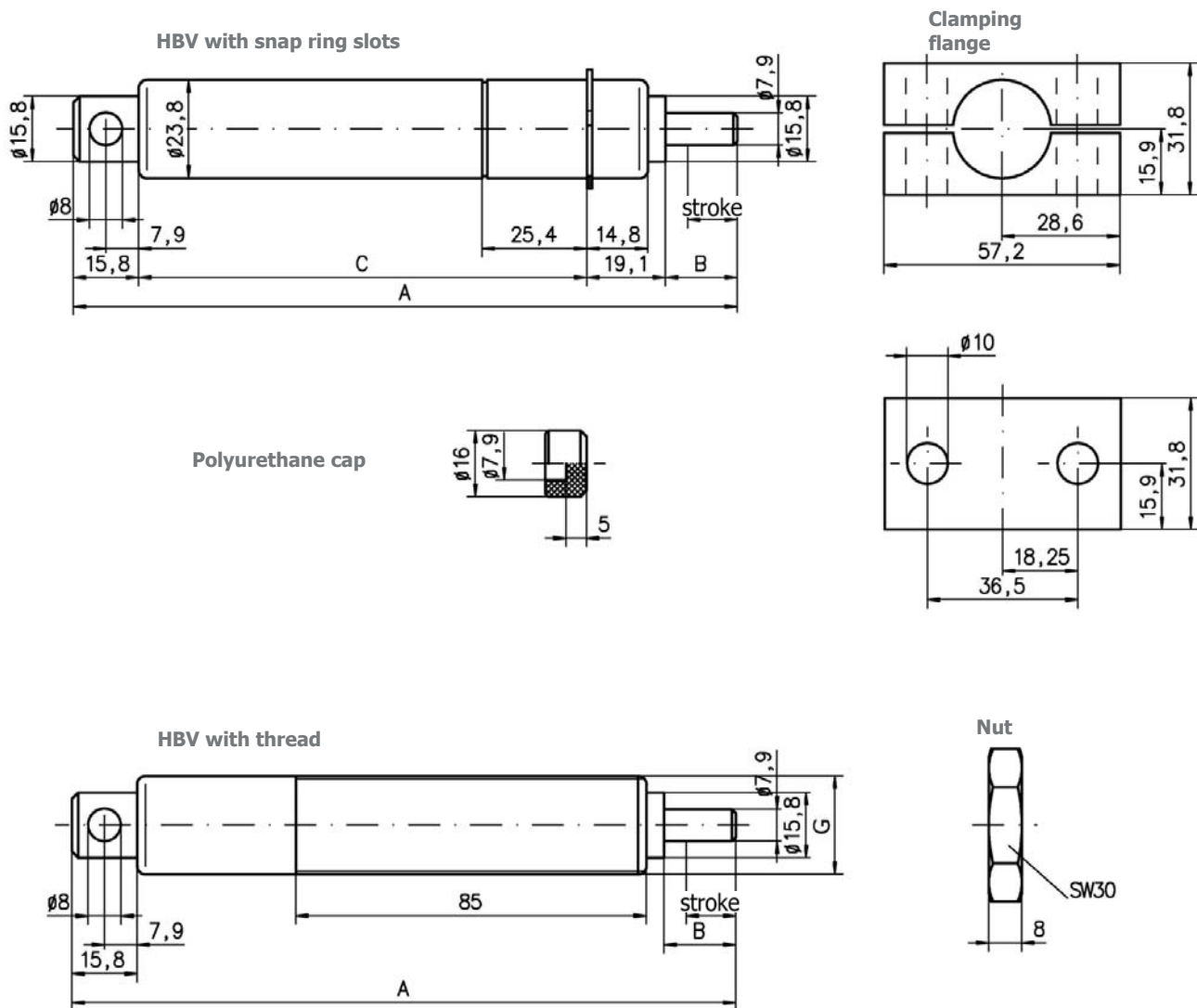
**Reliability** Each HBV speed control has to pass a 48-hour endurance test under different load conditions. This guarantees excellent function of each HBV speed control cylinder.

Stroke	Load that will push plunger 25 mm/s at fastest adjustment	Load that will push plunger 100 mm/s at fastest adjustment	Time for full stroke of plunger at slowest adjustment and 500 kg load.	Time for full stroke of plunger at slowest adjustment and 50 kg load.	Return spring force	Time for return
[mm]	[N]	[N]	[s]	[s]	[N]	[s]
12	50	150	8	150	18	0,03
25	50	150	15	300	18	0,06
50	50	150	30	600	18	0,10
75	50	150	45	900	18	0,23

Technical Data



- Temperature range from + 5 °C to + 60 °C.
- Fitting position according to your requirements.
- Install a mechanical stop 1 mm before end of the stroke.
- Do not distort piston rod – this causes damage of the rolling diaphragm.
- Snap ring slots standard, external thread optional.
- Use of the clamping flange always with snap ring to transfer the braking force.



Type	Stroke [mm]	Brake force [N]		G (screw thread optional)	A [mm]	B [mm]	C [mm]	Weight [g]
		min.	max.					
<b>HBV 0.5</b>	12	25	5400	M24x1,0 or M24x1,5	161	17,4	109	330
<b>HBV 1</b>	25	25	5400	M24x1,0 or M24x1,5	199	30,1	134	350
<b>HBV 2</b>	50	25	5400	M24x1,0 or M24x1,5	276	55,5	186	470
<b>HBV 3</b>	75	25	5400	M24x1,0 or M24x1,5	352	81,0	236	540