

## ABOUT HPOWER

hpower actuators combine fastest response times in  $\mu\text{s}$ , superior kHz dynamics, high force generation in the range of tens of kN and nanometer precision in a way that is unmatched by any other linear driving system. The actuation can be obtained without any mechanical wear, making the actuators extremely durable. hpower products include ring and stack type actuators, as well as shakers and shock generators. hpower is the result of the collaboration between piezosystem jena and Piezomechanik GmbH and therefore combines centuries of piezo expertise with new innovations.

## RING TYPE ACTUATORS SERIES HPSt 1000/10-5 VS18

SERIES HPST WITH CASING AND PRE-LOAD, DIAMETER 18 MM



### Concept

Ring type actuators based on a hollow cylindrical design. Compared with stack type actuators, ring actuators have a higher bending stability, better heat management efficiency and allow access to system axis. Given the same volume of PZT material, a ring actuator has a larger total diameter, which results in increase in stability against bending and buckling forces applied to the actuator. Their overall larger surface also removes heat quicker from the system, which allows them to run at much higher frequencies without overheating.

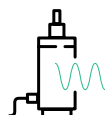
### Product highlights

- max. load: 3500 N
- max. force generation: 2800 N
- free opening aperture
- heat abstraction
- high bending stability

### Options

- low temperature modification
- ultra high vacuum (UHV) modification
- strain gage (SG) measurement system
- piezo material HP (high power & capacitance)

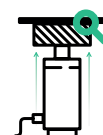
### Applications:



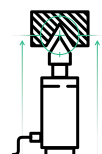
MODAL  
ANALYSIS



VIBRATION  
CONTROL



MATERIAL  
TESTING

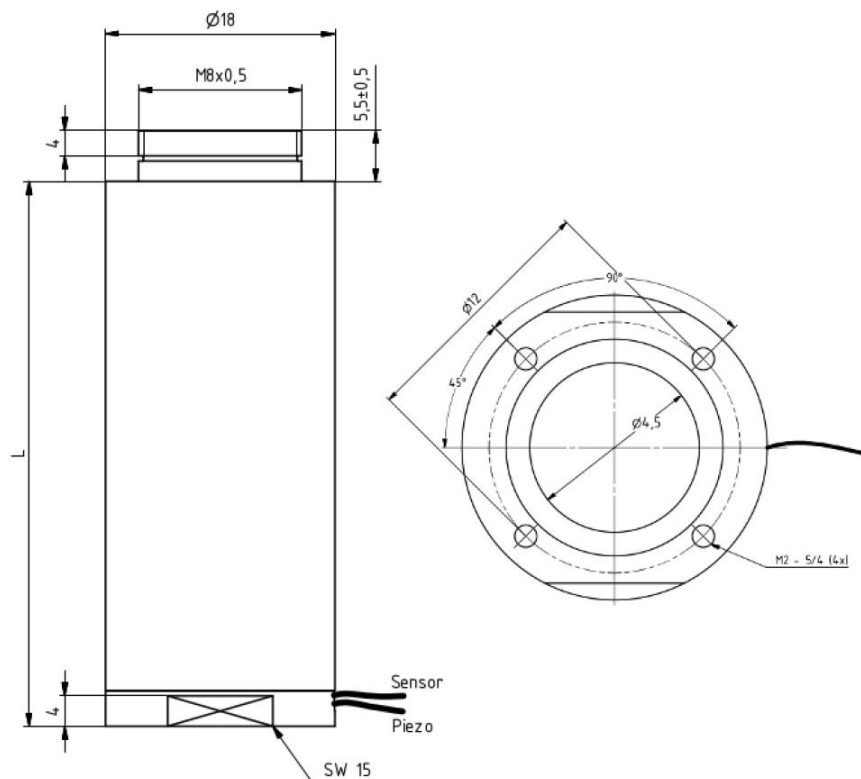


MECHANICAL  
ENGINEERING

**Technical data of HPSt 1000/10-5 VS18 series**

type	motion, $\mu\text{m}$	voltage range, V	Length, mm	resonant frequency, kHz	Blocking force, N	Maximum load, N	Capacity, nF	Stiffness, N/ $\mu\text{m}$
HPSt 1000/10-5/7 VS18	7	0...+1000	24	35	2800	3500	15	210
HPSt 1000/10-5/20 VS18	20	0...+1000	33	27	2800	3500	40	110
HPSt 1000/10-5/25 VS18	25	0...+1000	42	22	2800	3500	65	75
HPSt 1000/10-5/40 VS18	40	0...+1000	54	20	2800	3500	90	55
HPSt 1000/10-5/60 VS18	60	0...+1000	69	17	2800	3500	140	35

**Technical drawing of HPSt 1000/10-5 VS18 series**



**Get in touch with us**  
and we will help configuring  
the best solution.

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