

STACK TYPE ACTUATORS SERIES PSt 1000/10 VS18

SERIES PST WITH CASING AND PRELOAD,
DIAMETER 18 MM



Concept

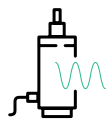
Solid Stack type actuators with casing and preload are based on a special smart material known as PZT ceramics. This enables these actuators to achieving outstanding performance with a motion range from 0 μm to 150 μm or even higher on request, while generating maximum forces of up to 4kN. The actuators are available in different lengths, a stack with a length of 50 mm usually possesses a maximum motion of 50 μm to 70 μm (0.1% - 0.15% of the length)

Product highlights

- max. load: 5000 N
- max. force generation: 4000 N
- high stiffness
- high resonant frequency

Options

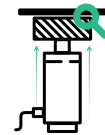
- low temperature modification
- ultra high vacuum (UHV) modification
- strain gage (SG) measurement system
- piezo material HP (high power & capacitance)



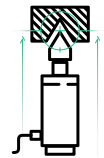
MODAL
ANALYSIS



VIBRATION
CONTROL



MATERIAL
TESTING



MECHANICAL
ENGINEERING

Applications:

Technical data of PSt 1000/10 VS18 series

| type | motion, μm | voltage range, V | Length, mm | resonant frequency, kHz | Blocking force, N | Maximum load, N | Capacity, nF | Stiffness, N/ μm |
|----------------------|--------------------------|---------------------|---------------|-------------------------------|----------------------|--------------------|-----------------|--------------------------------|
| PSt 1000/10/7 VS18 | 7 | 0...+1000 | 24 | 40 | 4000 | 5000 | 20 | 300 |
| PSt 1000/10/20 VS18 | 20 | 0...+1000 | 33 | 35 | 4000 | 5000 | 45 | 450 |
| PSt 1000/10/40 VS18 | 40 | 0...+1000 | 51 | 27 | 4000 | 5000 | 110 | 75 |
| PSt 1000/10/60 VS18 | 60 | 0...+1000 | 69 | 23 | 4000 | 5000 | 170 | 50 |
| PSt 1000/10/80 VS18 | 80 | 0...+1000 | 87 | 20 | 4000 | 5000 | 220 | 35 |
| PSt 1000/10/100 VS18 | 100 | 0...+1000 | 105 | 15 | 4000 | 5000 | 270 | 30 |
| PSt 1000/10/150 VS18 | 150 | 0...+1000 | 145 | 5 | 4000 | 5000 | 390 | 17 |

STACK TYPE ACTUATORS SERIES PSt 1000/16 VS25

SERIES PST WITH CASING AND PRELOAD,
DIAMETER 25 MM



Concept

Solid Stack type actuators with casing and preload are based on a special smart material known as PZT ceramics. This enables these actuators to achieving outstanding performance with a motion range from 0 μm to 150 μm or even higher on request, while generating maximum forces of up to 12kN. The actuators are available in different lengths, a stack with a length of 50 mm usually possesses a maximum motion of 50 μm to 70 μm (0.1% - 0.15% of the length)

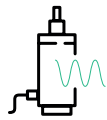
Product highlights

- max. load: 15000 N
- max. force generation: 12000 N
- high stiffness
- high resonant frequency

Options

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

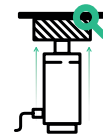
Applications:



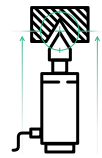
MODAL
ANALYSIS



VIBRATION
CONTROL



MATERIAL
TESTING



MECHANICAL
ENGINEERING

Technical data of PSt 1000/16 VS25 series

| type | motion, μm | voltage range, V | Length, mm | resonant frequency, kHz | Blocking force, N | Maximum load, N | Capacity, nF | Stiffness, N/ μm |
|----------------------|--------------------------|---------------------|---------------|-------------------------------|----------------------|--------------------|-----------------|--------------------------------|
| PSt 1000/16/7 VS25 | 7 | 0...+1000 | 29 | 40 | 12000 | 15000 | 60 | 800 |
| PSt 1000/16/20 VS25 | 20 | 0...+1000 | 35 | 35 | 12000 | 15000 | 150 | 400 |
| PSt 1000/16/40 VS25 | 40 | 0...+1000 | 53 | 30 | 12000 | 15000 | 360 | 200 |
| PSt 1000/16/60 VS25 | 60 | 0...+1000 | 71 | 27 | 12000 | 15000 | 540 | 120 |
| PSt 1000/16/80 VS25 | 80 | 0...+1000 | 89 | 23 | 12000 | 15000 | 720 | 90 |
| PSt 1000/16/100 VS25 | 100 | 0...+1000 | 107 | 20 | 12000 | 15000 | 900 | 75 |
| PSt 1000/16/150 VS25 | 150 | 0...+1000 | 147 | 7 | 12000 | 15000 | 1400 | 50 |

STACK TYPE ACTUATORS SERIES PSt 1000/25 VS35

SERIES PST WITH CASING AND PRELOAD,
DIAMETER 35 MM



Concept

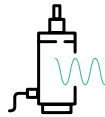
Solid Stack type actuators with casing and preload are based on a special smart material known as PZT ceramics. This enables these actuators to achieving outstanding performance with a motion range from 0 μm to 150 μm or even higher on request, while generating maximum forces of up to 25kN. The actuators are available in different lengths, a stack with a length of 50 mm usually possesses a maximum motion of 50 μm to 70 μm (0.1% - 0.15% of the length)

Product highlights

- max. load: 35000 N
- max. force generation: 25000 N
- high stiffness
- high resonant frequency

Options

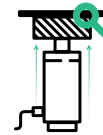
- low temperature modification
- ultra high vacuum (UHV) modification
- strain gage (SG) measurement system
- piezo material HP (high power & capacitance)



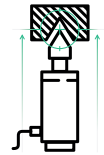
MODAL
ANALYSIS



VIBRATION
CONTROL



MATERIAL
TESTING



MECHANICAL
ENGINEERING

Applications:

Technical data of PSt 1000/25 VS35 series

| type | motion, μm | voltage range, V | Length, mm | resonant frequency, kHz | Blocking force, N | Maximum load, N | Capacity, nF | Stiffness, N/ μm |
|----------------------|--------------------------|---------------------|---------------|-------------------------------|----------------------|--------------------|-----------------|--------------------------------|
| PSt 1000/25/7 VS35 | 7 | 0...+1000 | 33 | 40 | 25000 | 35000 | 140 | 1800 |
| PSt 1000/25/20 VS35 | 20 | 0...+1000 | 42 | 35 | 25000 | 35000 | 350 | 900 |
| PSt 1000/25/40 VS35 | 40 | 0...+1000 | 60 | 30 | 25000 | 35000 | 800 | 450 |
| PSt 1000/25/60 VS35 | 60 | 0...+1000 | 78 | 27 | 25000 | 35000 | 1250 | 300 |
| PSt 1000/25/80 VS35 | 80 | 0...+1000 | 96 | 23 | 25000 | 35000 | 1700 | 250 |
| PSt 1000/25/100 VS35 | 100 | 0...+1000 | 114 | 20 | 25000 | 35000 | 2150 | 180 |
| PSt 1000/25/150 VS35 | 150 | 0...+1000 | 154 | 7 | 25000 | 35000 | 3200 | 120 |

STACK TYPE ACTUATORS SERIES PSt 1000/35 VS45

SERIES PST WITH CASING AND PRELOAD,
DIAMETER 45 MM



Concept

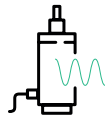
Solid Stack type actuators with casing and preload are based on a special smart material known as PZT ceramics. This enables these actuators to achieving outstanding performance with a motion range from 0 μm to 150 μm or even higher on request, while generating maximum forces of up to 50kN. The actuators are available in different lengths, a stack with a length of 50 mm usually possesses a maximum motion of 50 μm to 70 μm (0.1% - 0.15% of the length)

Product highlights

- max. load: 70000 N
- max. force generation: 50000 N
- high stiffness
- high resonant frequency

Options

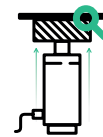
- low temperature modification
- ultra high vacuum (UHV) modification
- strain gage (SG) measurement system
- piezo material HP (high power & capacitance)



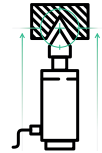
MODAL
ANALYSIS



VIBRATION
CONTROL



MATERIAL
TESTING



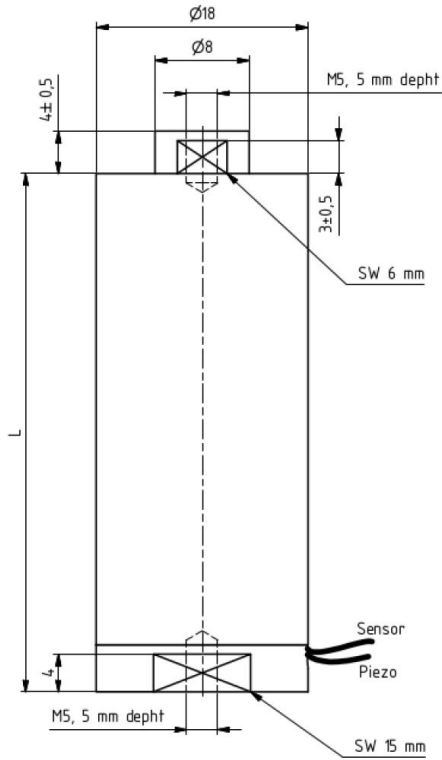
MECHANICAL
ENGINEERING

Applications:

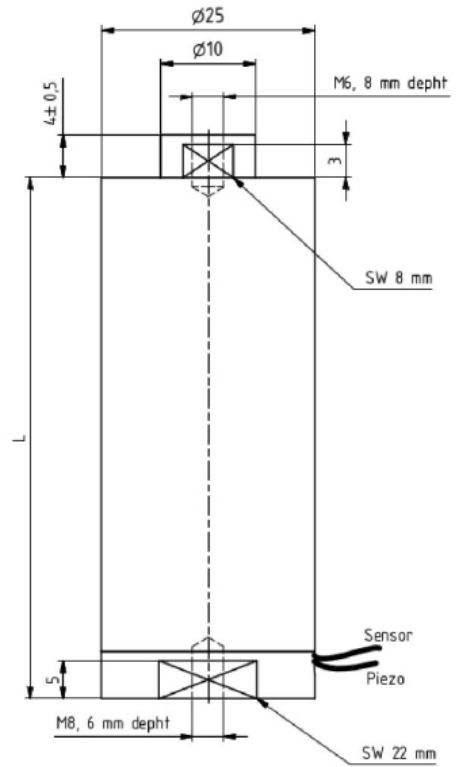
Technical data of PSt 1000/35 VS45 series

| type | motion, μm | voltage range, V | Length, mm | resonant frequency, kHz | Blocking force, N | Maximum load, N | Capacity, nF | Stiffness, N/ μm |
|----------------------|--------------------------|---------------------|---------------|-------------------------------|----------------------|--------------------|-----------------|--------------------------------|
| PSt 1000/35/7 VS45 | 7 | 0...+1000 | 33 | 37 | 50000 | 70000 | 300 | 4000 |
| PSt 1000/35/20 VS45 | 20 | 0...+1000 | 42 | 33 | 50000 | 70000 | 800 | 2000 |
| PSt 1000/35/40 VS45 | 40 | 0...+1000 | 60 | 28 | 50000 | 70000 | 1600 | 1000 |
| PSt 1000/35/60 VS45 | 60 | 0...+1000 | 78 | 25 | 50000 | 70000 | 2500 | 600 |
| PSt 1000/35/80 VS45 | 80 | 0...+1000 | 96 | 21 | 50000 | 70000 | 3300 | 450 |
| PSt 1000/35/100 VS45 | 100 | 0...+1000 | 114 | 18 | 50000 | 70000 | 4100 | 350 |
| PSt 1000/35/150 VS45 | 150 | 0...+1000 | 154 | 7 | 50000 | 70000 | 5700 | 220 |

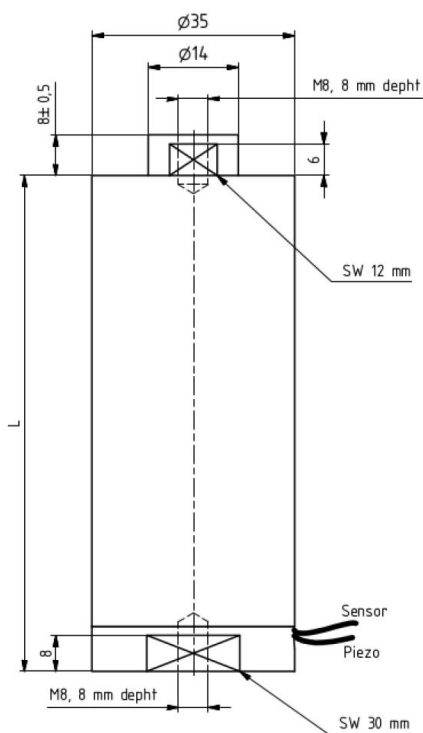
Technical drawing of PSt 1000/10 VS18 series



Technical drawing of PSt 1000/16 VS25 series



Technical drawing of PSt 1000/25 VS35 series



Technical drawing of PSt 1000/35 VS45 series

