

# PAHS

## Stack Actuator with Direct Translator



*> 4x the stroke at lower capacity  
at only 20% more length*



*Similar repeatability as a  
standard system*



*Works with existing controllers*



*Easy plug and play solution  
when space is critical*



The new actuator series PAHS from piezosystem jena achieves higher motion at similar length as conventional actuators. With **more than 4 times higher travel** than normal piezo actuators, they are a perfect solution when space is limited but still high resolution requirements exist.

PAHS actuators operate with the same **voltage band of 150V** and can therefore easily be integrated into existing systems by using the same con-trollers and amplifiers from piezosystem jena.

Like the PAHL Series, these actuators have high blocking forces and can move large masses. Due to the **integrated mechanical preload**, they can work under tensile forces and work well in dynamic applications. Their high resonant frequency guarantees fast settling times.

### Variants:

- Standard
- With strain gauge
- Vacuum

### Recommended Controller:

NV200/D Net

### Applications

- Small space positioning applications
- Larger travel, medium speed dynamic motion
- Quasi static motion for medium masses

# PAHS

## Technical Data

Part #		P-181-00	P-182-00	P-184-00	P-186-00
<b>Actuator Name</b>	<b>Unit</b>	<b>PAHS 40</b>	<b>PAHS 80</b>	<b>PAHS 180</b>	<b>PAHS 240</b>
<b>Motion @ -20 .. 130V*</b>	<b>µm</b>	<b>40</b>	<b>80</b>	<b>180</b>	<b>240</b>
<b>Motion Closed-Loop*</b>	<b>µm</b>	<b>32</b>	<b>64</b>	<b>144</b>	<b>192</b>
<b>Capacitance**</b>	<b>µF</b>	<b>3.5</b>	<b>7</b>	<b>14</b>	<b>21</b>
<b>Resonant Frequency @ 5 gr</b>	<b>Hz</b>	<b>630</b>	<b>600</b>	<b>540</b>	<b>480</b>
<b>Blocking Force</b>	<b>N</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>800</b>
<b>Resolution Open-Loop***</b>	<b>nm</b>	<b>0.09</b>	<b>0.18</b>	<b>0.36</b>	<b>0.54</b>
<b>Casing Diameter</b>	<b>mm</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
<b>Casing Length</b>	<b>mm</b>	<b>46</b>	<b>55</b>	<b>73</b>	<b>91</b>

\* Typical value measured with 0.3mV Controller.

\*\* Typical value for a small electrical field strength.

\*\*\* Typical values measured at -20 V ... +130 V.