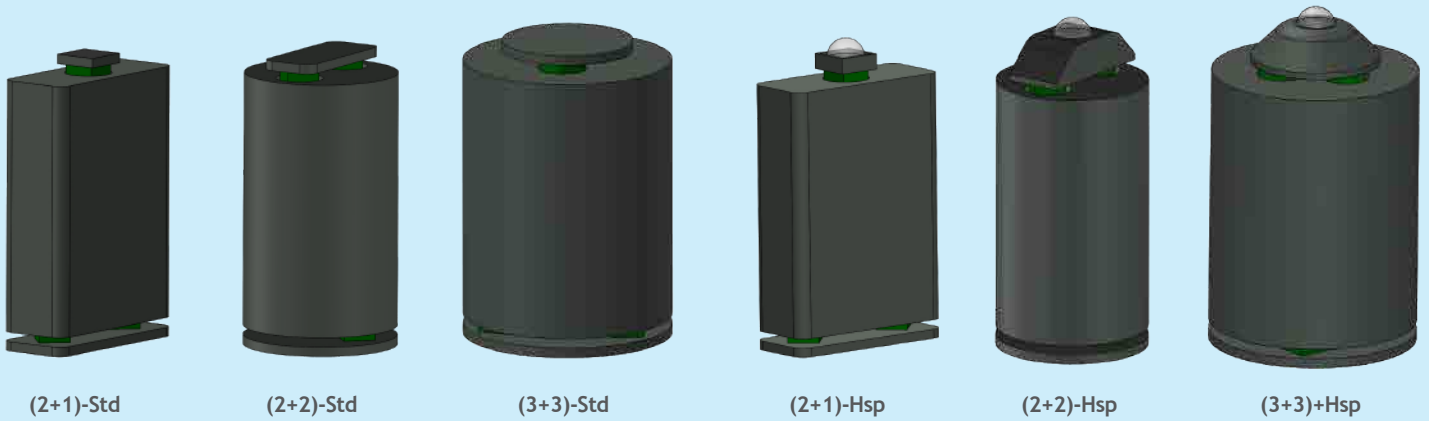


High-Authority Piezoelectric Actuators (HAPA)

- Via MMT patented High-Bending-Stiffness 2-level Connector (HBSC)
- $\geq 85 \mu\text{m}$ stroke & $>800\text{N}$ blocking force but compact in length



Performance specifications					
Dimensions ^[1,3] (mm)	Stroke @ 150V (μm)	Blocking Force (N)	Stiffness (N/ μm)	Operating temp. range ($^{\circ}\text{C}$)	Product No.
29x12x46 ^{L[1]} (49 ^{L[2]})	≥ 85	850	15	-25 to +80	HA-(2+1)-29-Std
$\varnothing 24 \times 46$ ^{L[1]} (53 ^{L[2]})		1700	20		HA-(2+2)-D24-Std
$\varnothing 32 \times 46$ ^{L[1=2]} (53 ^{L[2]})		2500	30		HA-(3+3)-D32-Std

^[1] *i* and *j* in (*i*+*j*) give the number of piezoceramic stack at the lower and upper level, respectively.

^[2] Std version comes with flat anodized aluminum end cap for mounting via epoxy bonding, Hsp version with sapphire hemispherical end cap. Values within parentheses gave the overall lengths of the Hsp versions. Replace “Std” in product no. by “Hsp” when this feature is required.

^[3] Smaller footprint versions (of 25x12, $\varnothing 22$ and $\varnothing 30 \text{ mm}^2$ respectively) are also available upon request which have same performance specifications as the Std. versions.

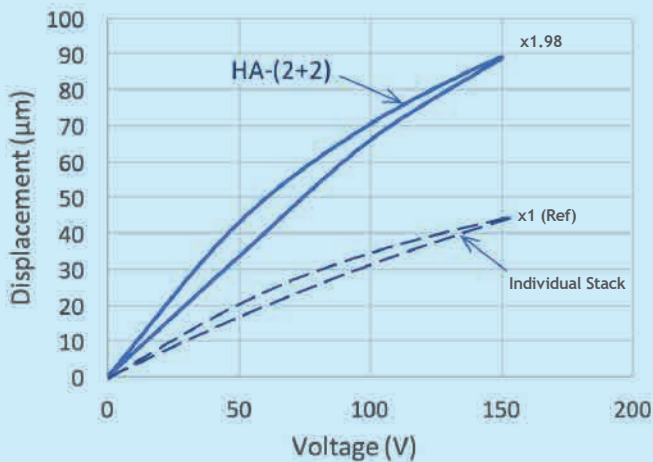


Fig.1 Displacement vs. Voltage

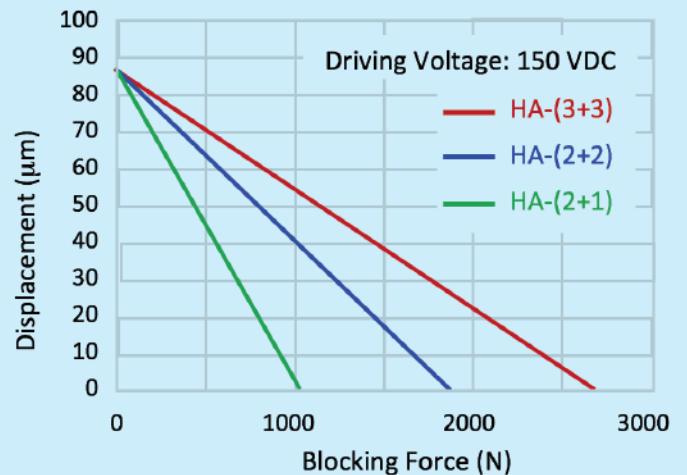


Fig. 2 - Displacement vs. Blocking Force