

# Hollow Parallel Pre-Stressed Actuator HPPA



## Description

The Hollow Parallel Pre-stressed Actuator (HPPA) is a Direct Piezo Actuator with a 8mm diameter internal hole available for an optical function. The pre-stress is applied through a monolithic pre-stressing body avoiding stick slip effects.

References	Unit	HPPA-8	HPPA-20
<i>Notes</i>			
Stroke	$\mu\text{m}$	8	22
Voltage	V	-20-150	-20 - 150
Resonance frequency	kHz	25	20
Blocked force	N	2500	2500
Inner hollow diameter	mm	7	7
Outer diameter	mm	30	30
Height	mm	25	37
Mass	g	21	32
Electrical interface		1 pair of twisted cable	1 pair of twisted cable
Mechanical interface		3* M3 on diameter 24 mm	3* M3 on diameter 24 mm

## Applications

- Optical Delay line,
- Refocussing
- Tuning of External Laser Cavity.

## Space evaluation program

- Thermal vacuum (-40 / 65 °C)
- Lifetime test (1e11 cycle for 2  $\mu\text{m}$  of stroke).

## Space heritage

The HPPA-8 is on board on the LIDAR Laser source of ADM-AEOLIUS/ALADIN.  
The flight hardware has been delivered.  
The HPPA-20 is used on the EM magnetometer, proposed for the SWARM Mission.



*HPPA actuator.*

For more information, please contact:

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