

HFPTC Pulse-Tube

*Miniaturized high-frequency
Pulse-Tube.*



Absolut System has developed a miniaturized high-frequency Pulse-Tube for space and terrestrial applications between 75 K and 150 K.

The HFPTC is a high-frequency Pulse-Tube based on our expertise in cryogenic cooler design for the space industry. Our engineering teams have developed a cooler with reduced dimensions and high performance.

The HFPTC combines a Thalès Cryogenics B.V compressor with a cold finger developed by Absolut System.

The HFPTC is a compact cooler that can be used in terrestrial imaging to cool infrared detectors, particularly for civilian and military security cameras, and for surveillance of strategic areas.

This instrument, also designed for Earth observation missions, is particularly well-suited to nanosats and smallsats thanks to its compact size.

**Unique on the market,
this high-frequency Pulse-Tube
is reliable and has a service life
of over 10 years.**

- ▶ **Welded architecture.**
- ▶ **Full or split configuration.**
- ▶ **No launch pad for cold finger.**
- ▶ **Compatible thermal links (TRL 9).**
- ▶ **Reduced dimensions, weight and power.**

»»» Application fields

Spatial	Earth observation missions.
Security & Defense	Cameras for civil and military security, and for surveillance strategic areas.

»»» Technical datas

<p>Mechanical characteristics</p> <ul style="list-style-type: none"> ▶ Weight: 1kg ▶ Dimensions: 160 x 105 x 50 mm ▶ Low vibration level ▶ Service life: 10 years 	<p>Electrical characteristics</p> <ul style="list-style-type: none"> ▶ Electrical power: < 20 W ▶ No launch support required
<p>Thermal characteristics</p> <ul style="list-style-type: none"> ▶ Cooling capacity: 1 W @ 77 K @ 300 K ▶ Cold temp.: 77K à 150K ▶ Operating Temp. : -73°C ; 40°C ▶ Non-operating Temp. : -80°C ; 80°C 	<p>Welded architecture</p> <ul style="list-style-type: none"> ▶ Full or split configuration
	<p>Addition if necessary :</p> <ul style="list-style-type: none"> ▶ Compatible TLA TRL 9