

# 2018-2023 Global Pulse Tube Cryocoolers Consumption Market Report

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#### **Abstracts**

The report requires updating with new data and is sent in 48 hours after order is placed.

In this report, LP Information covers the present scenario (with the base year being 2017) and the growth prospects of global Pulse Tube Cryocoolers market for 2018-2023.

The pulse tube refrigerator (PTR) or pulse tube cryocooler is a developing technology that emerged largely in the early 1980s with a series of other innovations in the broader field of thermoacoustics. In contrast with other cryocoolers (e.g. Stirling cryocooler and GM-refrigerators), this cryocooler can be made without moving parts in the low temperature part of the device, making the cooler suitable for a wide variety of applications.

Pulse tube cryocoolers are used in industrial applications such as semiconductor fabrication and in military applications such as for the cooling of infrared sensors. Pulse tubes are also being developed for cooling of astronomical detectors where liquid cryogens are typically used, such as the Atacama Cosmology Telescope or the Qubic experiment (an interferometer for cosmology studies). PTRs are used as precoolers of dilution refrigerators. Pulse tubes will be particularly useful in space-based telescopes where it is not possible to replenish the cryogens as they are depleted. It has also been suggested that pulse tubes could be used to liquefy oxygen on Mars.

The pulse tube cryocooler market based on type is segmented into single-stage and two-stage pulse tube cryocoolers. The market for two-stage pulse tube cryocoolers is expected to grow at the highest rate between 2016 and 2022 in the global pulse tube cryocooler market. The major factors contributing to the growth of this market include growing adoption of these pulse tube cryocoolers in a variety of applications such as space, military, electronic, and commercial among others.

The key pulse tube cryocooler system providers from North America, Europe and Japan



led the global pulse tube cryocooler market in 2016. These companies have been providing their offerings worldwide and are focusing on expanding their positions in the key markets in APAC and Row. Some of the major companies have adopted strategies such as mergers & acquisitions, partnerships, agreements, collaborations, new product launches, capacity expansions, and joint ventures to expand their global presence and increase their market shares.

The global pulse tube cryocooler market in the Americas held the largest share in 2016; however, the market in APAC is expected to exhibit the highest growth rate during the forecast period. The major factors contributing to the growth of this market include the increasing adoption of wide range of pulse tube cryocoolers in semiconductor fabrication, military, and space applications among others.

Over the next five years, LPI(LP Information) projects that Pulse Tube Cryocoolers will register a 5.1% CAGR in terms of revenue, reach US\$ 320 million by 2023, from US\$ 240 million in 2017.

This report presents a comprehensive overview, market shares, and growth opportunities of Pulse Tube Cryocoolers market by product type, application, key manufacturers and key regions.

To calculate the market size, LP Information considers value and volume generated from the sales of the following segments:

Segmentation by product type:		
	Single-Stage Pulse	
	Two-Stage Pulse	
Segme	Segmentation by application:	
	Military	
	Electronics	
	Energy	

Space



## Research and Development

This re

report also splits the market by region:				
Americas				
	United States			
	Canada			
	Mexico			
	Brazil			
APAC				
	China			
	Japan			
	Korea			
	Southeast Asia			
	India			
	Australia			
Europe				
	Germany			
	France			
	UK			
	Italy			





In addition, this report discusses the key drivers influencing market growth, opportunities, the challenges and the risks faced by key manufacturers and the market



as a whole. It also analyzes key emerging trends and their impact on present and future development.

#### **RESEARCH OBJECTIVES**

To study and analyze the global Pulse Tube Cryocoolers consumption (value & volume) by key regions/countries, product type and application, history data from 2013 to 2017, and forecast to 2023.

To understand the structure of Pulse Tube Cryocoolers market by identifying its various subsegments.

Focuses on the key global Pulse Tube Cryocoolers manufacturers, to define, describe and analyze the sales volume, value, market share, market competition landscape, SWOT analysis and development plans in next few years.

To analyze the Pulse Tube Cryocoolers with respect to individual growth trends, future prospects, and their contribution to the total market.

To share detailed information about the key factors influencing the growth of the market (growth potential, opportunities, drivers, industry-specific challenges and risks).

To project the consumption of Pulse Tube Cryocoolers submarkets, with respect to key regions (along with their respective key countries).

To analyze competitive developments such as expansions, agreements, new product launches, and acquisitions in the market.

To strategically profile the key players and comprehensively analyze their growth strategies.



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