

Powered Exoskeleton Market in Japan: Key Research Findings 2015

◆ **Research Outline**

Yano Research Institute has conducted a study on the domestic powered exoskeleton market with the following conditions:

1. Research period: From July to September, 2015
2. Research target: Domestic powered exoskeleton manufacturers, sales agencies, universities, etc.
3. Research methodologies: Face-to-face interviews by the expert researchers, surveys via telephone/email, and literature research

<What is the Powered Exoskeleton Market?>

The powered exoskeletons in this research indicate those suits that assist the wearers in some ways (i.e., walking assistance, lightening the heaviness, etc.) by wearing them, regardless of whether or not the suits have power sources for such functions. This research does not require the following three conditions for powered exoskeletons, which are, sensing, self-control, and driving that non-industrial robots generally have. Therefore, those that have some kind of assisting functions, regardless of whether or not they have the above-mentioned three conditions are the target of the research. The market size is calculated based on the shipment value of those that aim to assist walking and lighten the heaviness at manufacturers.

◆ **Key Findings**

■ **Powered Exoskeleton Market Size in FY2015 Estimated as 2,571 Million Yen**

The domestic powered exoskeleton market in FY2015 is likely to attain 2,571 million yen, 396.8% of the size in the previous year, based on the shipment value at manufacturers. Until FY2013 powered exoskeletons were sold sporadically and the scale of such sales was not large enough to form a market. However, in FY2014 and beyond, the increasing numbers of companies and products have emerged and begun forming the market.

■ **Existing Products are Mostly for Corporate Customers, Challenge is to Appeal to Individual Customers**

Two types of powered exoskeletons are currently in the market: those that support walking and those that lighten the heaviness. However, there are various ways to achieve such functions with different effects, using different materials, forms, and structures. Also, every product has introduced unique sensing method that each of the manufacturers have developed. Since the existing products mostly target corporate demands, only few target private customers, because of limited use conditions and high prices. There is room for powered exoskeletons for individual use to be developed.

■ **Powered Exoskeleton Market Size in FY2018 Projected to Achieve 5.8 Billion Yen, with Increasing Number of Products, Large Potential, Lower Costs, More Applications and Effects Expected**

The powered exoskeleton market in FY2018 is expected to attain 5.8 billion yen, based on the

shipment value at manufacturers. With increasing number of new products likely to be developed, sufficient product lines can be available to respond to the user needs and effects. This may lead to lower prices. There are still some challenges in functions, effects, safety, product prices due to the short period of time since the market has been established, but considering the market potential both for corporate users and private users it is natural to expect the market expansion for the future.

◆ Report format

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Price: 150,000 yen (The consumption tax shall additionally be charged for the sales in Japan.)

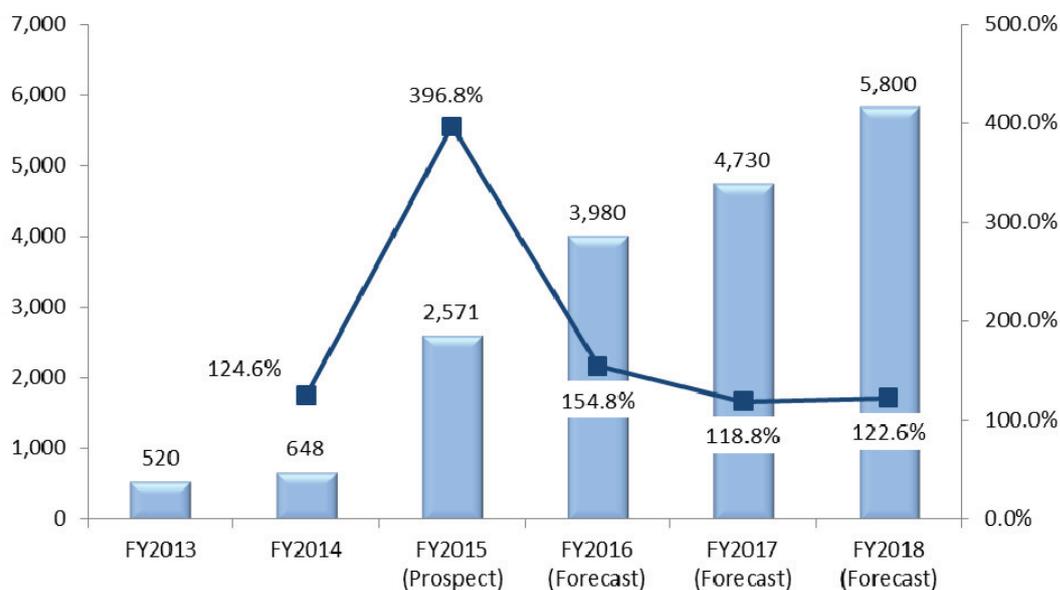
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■ Figure & Table 1: Transition of Powered Exoskeleton Market Size



Estimated by Yano Research Institute

	FY2013	FY2014	FY2015 (Prospect)	FY2016 (Forecast)	FY2017 (Forecast)	FY2018 (Forecast)
Powered Exoskeleton Market Size	520	648	2,571	3,980	4,730	5,800
Y-o-Y Comparison	-	124.6%	396.8%	154.8%	118.8%	122.6%

Notes:

1. The market size is based on the shipment value at manufacturers.
2. The market size targets those that aim to assist walking and lighten the heaviness.