

## The Investor: Turkven



**Fund Manager:** Turkish Private Equity Fund III LP

**Fund Name:** Turk Venture Partners III Limited

**Fund Size:** USD840 million

**Total AUM:** USD1.5 billion

*Founded in 2000, Turkven is a private equity firm in Turkey. Funds advised by Turkven have invested over USD5 billion in 26 companies.*

## The Company: Vansan Makina



**Company:** Vansan Makina

**Website:** [www.vansan.com.tr](http://www.vansan.com.tr)

**Industry / Sector:** Submersible motor and pumps

**Location:** Turkey

*Vansan produces a wide range of pumps and motors that service agribusinesses, power plants, industrial companies, and municipalities. The company operates two factories and a research and development center. Exporting to 70 countries across six continents, it is the second largest centrifugal water pump and motor company in the European, Middle Eastern, and African region as of September 2020. Vansan has recently launched a magnetic bearing submersible motor that increases efficiency by 10% versus standard motors.*



**Date of Investment:**  
**November 2017**

**Amount:**  
**Undisclosed**

**Participation / Stake:**  
**60%**

**Company Size:**  
**USD80 million**  
(in revenues, 2020)

## Opportunity

Turkven began closely following Vansan's operations in 2012. The private equity firm believed that water was becoming an increasingly important resource around the world—and valued the company's mission to bring deep underground water to ground level affordably for farmers, geothermal power plants, industrial companies, and more. According to the U.S. Department of Energy, approximately 20% of the world's electricity consumption is tied to moving water, and Turkven recognized that any efforts to make that process more

energy efficient had the potential for global impact. In addition, as pumps and motors remain the only way to transport water, the company's business model could not be digitally disrupted.

The Turkven team was in close contact with Vansan's founding family for several years and was impressed by the company's engineering and in-house manufacturing capabilities. The quality of its products was showcased by the fact that while farmers typically have to replace

pumps and motors every five years, Vansan's standard products lasted an average of ten years, resulting in significant cost savings. Five years after taking an initial interest, the first-generation founders decided to hand over the business to the second generation. Turkven facilitated the succession process in 2017 and acquired a 60% share in Vansan, with the new Chief Executive Officer, a second-generation family member, retaining the remaining 40%.

## Execution

Through its prior investment experience, the Turkven team had seen numerous family-owned companies take the approach of focusing heavily on sales and production while neglecting, to an

extent, the necessary infrastructure investment to make the business truly scalable—and Vansan was no exception. Turkven worked with the CEO to implement new processes

and systems around cash flow management, human resources, information management, and enterprise resource planning to prepare the company for rapid export growth.

The Turkven team devoted much of 2018 to spearheading initiatives related to Vansan's production processes. The company's original production system, which had individual employees responsible for multiple tasks and separate factories producing pumps and motors, became strained as Vansan began to grow. Inspired by best practices from the automotive industry, Vansan and Turkven moved the company to an assembly line manufacturing system and adopted serial production processes for pumps and motors, merging both within a new factory with room to grow. A second factory was then retrofitted and dedicated to larger custom pumps and engineering. Vansan also expanded task-based trainings in order to overcome capacity constraints due to a lack of skilled labor. By eliminating these production bottlenecks, Vansan achieved a 50% increase in capacity.

This increase in manufacturing efficiency did not negatively affect employment. In fact, Vansan's labor force has grown from 470 employees in 2017 to 600 as of September 2020—largely

## Outcome

Three years into its investment, Turkven's priority is to continue expanding the company's export markets given that Vansan already has a greater than 50% market share in Turkey. When Turkven first invested in 2017, Vansan was selling its products to 50 countries; by the first half of 2020, that number had increased to 70, representing approximately 65% of sales. While Turkish exports are commonly found throughout Europe and the Middle East, Vansan's products travel as far as Chile, where they are competitive from a quality, efficiency, and cost perspective. In the process, Turkven and Vansan are

due to a growth in export markets. In order to reduce turnover, Turkven worked with Vansan to introduce a number of initiatives, including creating feedback loops between the workforce and management, improving overall working conditions, and implementing a bonus scheme tied to production. Vansan also began providing health insurance to all employees and their immediate families.

Governance was also a priority for Turkven as it sought to achieve a strategic balance between the shareholders and management. Following Turkven's investment, three external consultants were added to the board of directors with expertise in production, sales, marketing, and human resources. These consultants included the former CEO of one of the leading automobile manufacturers in Turkey, a former executive who held various roles at the largest pump manufacturer in the world, and a former human resources director at a Turkish conglomerate. Regular board meetings, which had not taken place prior to Turkven's involvement, were established.

showcasing Turkey on a global stage, particularly as the company's products are increasingly being recognized as efficient and long lasting with an overall failure ratio of less than 1%.

Vansan is also focused on further commercialization of the geothermal line shaft pump and permanent magnet motor product lines. While the former is supporting production of one of the cleanest energy sources in Turkey, Turkven views the latter as a pathway to widespread electricity savings.

## Spotlight: Driving Innovation in Sustainability and Efficiency

After 2018, Turkey's geothermal industry started to grapple with decreasing levels of carbon dioxide (CO<sub>2</sub>) in its reserves. As a result, water cannot be extracted from wells without a pump that can work in depths greater than 500 meters and at temperatures of over 200 degrees Celsius.

Vansan saw an opportunity in this lucrative and technically demanding segment and developed a special purpose line shaft pump. The product consists of an above-ground motor and an underground pump, which can withstand the extreme depth and temperature conditions. The new product enabled these geothermal wells to stay functional and profitable. Most submersible motor and pump systems in geothermal wells have lifespans of three to four months, generating high replacement costs and reducing productivity. As of September 2020, Vansan has installed two line shaft pumps, both of which have been working without incident for over two years. The company expects to sell between eight and ten pumps per year beginning in 2021, generating annual revenues of USD5 million.

In another important research and development project, the company developed motors with permanent magnet bearings during the Turkven partnership. The standard magnetic motor pump system requires expensive frequency converters. As a result, although magnet motors typically result in a 10% reduction in electricity consumption, 50% of this benefit is lost due to the costs associated with the converter. Vansan created a new design that eliminates the need to use a frequency converter while retaining the efficiency gains, resulting in a much more affordable system. Farmers and other customers get an immediate 10% savings on electricity, leading to a payback period of six to nine months versus four to five years. This product has the potential to save several percentage points of electricity consumption at the national level given the weight of irrigation motors in overall energy consumption.

