

CASE STUDY



CXS VACUUM PUMPS HELPS IMPROVE PRODUCT QUALITY AND MEET REGULATORY COMPLIANCE

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Improving end-product quality and meeting tougher environmental controls

Vijayasri Organics is a manufacturer of complex chemical intermediates and active pharmaceutical ingredients which are used in the pharmaceutical industries. The company employs over 500 people at its two sites in Hyderabad, India where they focus on technology absorption, process improvements, trouble-shooting and manufacturing. Their facilities include development laboratories, pilot plant and large scale production capabilities which comply with cGMP requirements. This provides a total reactor volume of 550 kl made up of over 100 reactors with capacities ranging from 160 lit up to 20 kl along with the ability to handle high pressure reactions up to 20 kg/cm². Vijayasri Organics strives to meet the continual challenges of manufacturing to the highest standards at the most competitive cost, whilst adhering to stringent regulatory guidelines, particularly the increasingly tougher environmental controls being imposed by the Indian government.



KEY FACTS

Customer	Vijayasri Organics
Region	India
Sector	Industrial Vacuum - Pharmaceutical

DRY VACUUM SYSTEMS

1. Challenge

Vijayasri required a pump which would provide consistent and precisely controlled vacuum as part of an acetone recovery process. Traditional steam ejectors were being used for this process but were proving to be unreliable, resulting in production batches being interrupted. The ability to produce a clean vacuum with no effluents or pollutants, and at lower running costs and minimal maintenance were among the other key requirements. ‘Green’ credentials are becoming increasingly important for India’s chemical and pharmaceutical industries so the efficient disposal (and minimising) of pollutants and the associated cost, were important factors to Vijayasri Organics.

2. Solution

Following initial trials of an Edwards CXS250 dry pump it was fully commissioned in June 2012 replacing the conventional steam ejectors. The oil free ‘dry’ plug and pump CXS 250 was seen as being ideally suited to the critical requirements and challenging environment at Vijayasri Organics. The key factors which persuaded Vijayasri Organics to select the Edwards CXS250 pump were the integral process control, the assurance of a clean and consistent vacuum being produced without generating effluent or pollutants along with low maintenance and running costs.

3. Main Benefits

Vijayasri Organics is delighted with the performance of the Edwards CXS250 pump confirming that they have achieved improved end-product quality. Production batches are no longer being interrupted because the pump is providing the required vacuum accurately and consistently. Chief Operating Officer (COO) at Vijayasri Organics, DVS Narayana Raju commented, “We are extremely pleased with the pump and are processing around 45 batches a month, the CXS250 allows us to do this much more efficiently with significant cost savings”. He continued, “End product quality has improved substantially increasing its market value, we have calculated that we will recoup our initial investment in the pump within less than three months”.

