



# CREATING SPICY CONCOCTIONS

**“Masala” maker upgrades facility** – Spices are an integral part of the Indian kitchen. They add flavor and taste to the food. However, in order to achieve this the spice maker has to make sure that the consistency of spices remains the same. To simplify this, Everest Spices decided to automate its facility for the same reason.

**E**verest Spices is one of the leading spice brands in India. To continue to maintain and deliver the high-quality of spice to its customers, the spice maker desired to automate its Vikhroli facility in Mumbai.

“Recipe secrecy was one of the primary reasons to opt for automation. In order to achieve this, each ingredient had to be ground individually, screened, conveyed and stored in dedicated

silos. We had as many as 45 recipes and 24 ingredients to handle. Moreover, not all the ingredients were easy to handle. Hence, we were in search of a supplier who had enough experience in this area,” recollected Director, Everest Spices, Rajiv Shah.

The company decided to trust AZO – the German food processing automation solution provider to carry out the job. “We found out that AZO was the only company

with enough experience and confidence to handle all the ingredients individually. Also, with AZO’s solution, it was possible to maintain uniformity and consistency of the product,” Shah added.

## Challenges

Sharing the other side of the story, Managing Director, Vedic Pac Systems Pvt Ltd (distributor of AZO in India), Nirav Sampat mentioned, “Earlier Everest was manually dispensing and weighing each ingredient that goes into various recipes. This process could result in operator error. Additionally, the recipe was open to all. For us, the challenge was to deliver a solution from AZO for each individual component. Also, the company used ingredients such as nutmeg, tamarind, etc., which were sticky and did not flow freely and hence difficult to handle.”

Moreover, Everest wanted to implement a totally radical process flow as compared to traditional methods of spice making. “They wished to screen, convey and store each ingredient separately in dedicated indoor silos after grinding them individually. AZO was

A view of the systems installed at Everest Spices’ facility.



Source: Vedic Pac Systems Pvt Ltd



Swati Deshpande  
Associate Editor  
Vogel Business Media India  
swati.deshpande@vogel.de

## RESULTS

### Challenges

- Recipe secrecy
- Congestion of the shopfloor
- Consistency of recipe

### Solution

- AZO's automated batching system

### Results

- No down time
- Easy changeovers
- No spillage
- Elimination of manual intervention

entrusted with the task of designing one system that could handle all the ingredients, at high throughput rate," continued Sampat.

In the process of upgrading the facility, the cost factor was also equally important for the spice maker. "In theory, we could automate all our ingredients, including bulk components such as chilli and coriander. But, in practice, we chose to automate only the core ingredients that made our masterbatch. This made the system cost effective," informed Shah.

### On the production floor

Fulfilling all the expectations that Everest had, AZO designed a complete batching system coupled with automation. The system starts with picking up the ground spices and filling 24 different storage silos. The silos are filled by a pressure conveying system, which is a completely closed loop and is also dust free. From the silos, the material is conveyed to four different weighing scales where all the ingredients are weighed as per the recipe at an accuracy of +/- 0.5 per cent of batch size.



Source: Vedic Pac Systems Pvt Ltd

"The system is designed for high throughputs. AZO was able to do this with small vacuum conveying pipelines, which meant lower air displacement and lower power consumption."

MANAGING DIRECTOR, VEDIC PAC SYSTEMS PVT LTD, NIRAV SAMPAT

Elaborating on the features of the system, Sampat added, "The system is designed for high throughputs. AZO was able to do this with small vacuum conveying pipelines, which meant lower air displacement and consequently lower power consumption. Moreover, lower air displacement also meant lower loss of aroma/volatile oil. This has a significant impact on product quality."

Apart from maintaining integrity and reliability of the recipe, automation also lowered the chances of errors that was caused due to manual intermission. "The entire process of conveying, storing, batching and dosing into the mixer is now handled through the production room. There is no requirement for even a single operator to be present on the production floor. Plus, as it is a closed loop system, there is no powder spillage in the production area. This helps us achieve the highest hygiene standards," Shah mentioned.

### Benefits

Additionally, AZO's system has eliminated the downtime between the changeover of recipes. "Since we are grinding and storing each ingredient separately, the changeover from one recipe to another happens in an instant. For a company like Everest, which has several recipes catering to each

region, this kind of flexibility is a big bonus. All the recipes are stored in the SCADA system, and changeover happens at the click of a button, with total integrity/reliability," Shah noted.

Furthermore, one of the key features of the system is self cleaning. Owing to seamless pipes and post conveying flushing, which is pre-programmed, the system cleans itself during recipe changeovers. This results in virtually nil downtime.

Besides this, the visualization system from AZO provides complete data about the operation of the system, number of ingredients, real value storage and consumption data for all the ingredients.

### In a nutshell

Prior to installing this, the spice maker faced various challenges. Elaborating on the same, Shah said, "Before implementation of the AZO plant, we had two major issues apart from recipe secrecy. Congestion of the shopfloor was one of the main problems that we faced as earlier all the ingredients were kept in sacks on the factory floor, and taken for batching as per the production campaign. This created a logistical nightmare for storing, and also problems in tracking and tracing. Additionally, consistency of the recipe was also a challenge, owing to possible operator errors," described Shah.

On a concluding note, Shah said, "We have never had any issues with the plant. There have been minor issues with the controls largely due to operators getting a bit adventurous on our side. But, these issues have been resolved speedily by AZO. Plus, the Vedic team is always available for our help."

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### Highlights

- AZO designed a complete batching system coupled with automation.
- AZO's system eliminated the downtime between the changeover of recipes.
- One of the key features of the system is self cleaning.