



▶ FEEDING IN THE LATEST

▶ VIBRATORY BOWL FEEDER & PNEUMATIC CONVEYOR FOR SMALL BRASS PARTS

▶ WEIGHT CARRYING CAPACITY OF VIBRATORY FEEDERS

Elscent Ahead

Components for which systems are available



Feeding In The Latest . . .
Monish Shete

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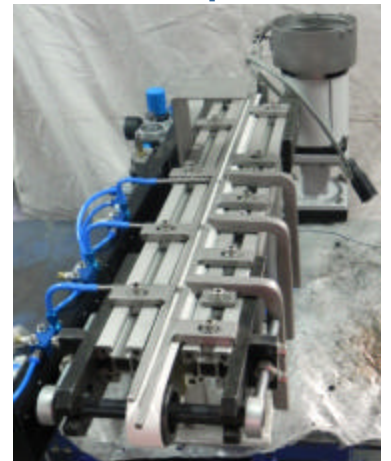
Good Morning!

First of all, a very happy and prosperous new year 2011, and a happy new decade to you! All of us at Elscint wish you a successful and prosperous new year. What a year and decade it has been, a truly rollercoaster one. The new year too comes along as a mixed one. One side there is the uptrend being witnessed in India & China and slowly being spread over to other countries. On the other side, there is the worrisome price rise, especially of food items, at least here in India. It will have repercussions in all walks of life. In case you are thinking of ordering new vibratory feeders, I would suggest that you take action immediately to avoid the expected future price increases and increased delivery schedules. (Of course, the price increase won't be as huge as that of onions, for sure!)

Coming to this edition of Elscint Ahead Newsletter, the first news is about a recently supplied bowl feeder while the next one is technical information about the weight carrying capacity of vibratory bowl feeders, something which will be useful for you when you order your next bowl feeder.

Vibratory Bowl Feeder & Pneumatic Conveyor for small brass parts

Elscent recently completed a project for an overseas customer wherein a very small brass cap having diameter of just dia 3 mm, was required to be fed with the open side facing sky. Thereafter, the cap was to be conveyed on a belt conveyor for vision inspection. Elscint supplied a complete system to the customer including air jet system to throw out the defective parts. The customer had to just mount his vision camera and program the software. He had to provide a 24V DC signal to thrown out the defective parts. The rest of the system was designed and completed by Elscint. Further the system was to be kept in an explosive atmosphere. Hence, Elscint provided a pneumatic motor for the conveyor and the complete electrical panel was housed in a flame proof control box. The vibrator too was made flame proof. The vibratory bowl feeder too was a very small one having a diameter of 130 mm. This equipment was supplied to a customer in Iran.



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Weight carrying capacity of Vibratory Bowl Feeders

While choosing a vibratory bowl feeder, it is important to check two basic things –

1. Whether the vibratory bowl feeder is full wave or half wave
 - a. Due to full wave operation, the vibrations are smooth and spring breakage is negligible as compared to half wave operation, which leads to regular spring breakage / bolt breakage
 - b. Further full wave vibratory feeders consume 60% less energy as compared to half wave vibratory feeders, leading to huge savings on the energy costs.

2. The weight carrying capacity of the vibratory bowl feeder. Essentially, there are two types of constructions in case of vibratory bowl feeders.
 - a. One type (mentioned as others in the table below) is a very light duty one used mainly for feeding of plastic parts
 - b. While the other type (mentioned as Elscint in the following table) is a robust one which can be used for feeding plastic as well as metal parts.

The following table shows the huge difference in the weight carrying capacity of the vibratory feeders –

	Others	Elscint	Others	Elscint	Elscint	Others	Elscint
Elscint Model	250		400 / 400 HD			630	
Drive Unit diameter	300	300	400	450	450	600	630
Max. capacity in ltrs.	3	3 & 5.5	7	7 & 9	12	22	18
Max. capacity by weight (kgs)	7	12	12	30	40	15	50
Power (VA)	550 VA	520 VA	700 VA	780 VA	1000 VA	874 VA	1200 VA

As can be observed, in case of Elscint vibratory feeders, not only is the weight of the drive unit more but the load carrying capacity of the vibrators is much more. In case of Model 250, it is 71% more, 150% more in case of Model 400 and 233% more in case of Model 630.

This is not only due to the weight of the drive unit being more but also the vibratory drive unit being correctly configured with respect to the weight between the bottom and top portion as well as the coils being correctly designed. Further the spring plates too play a part in this. The right type of spring steel plates, that too, correctly processed provide better rigidity to the drive unit vis-à-vis fiber / composite spring plates whose weight carrying capacity as well as their flexural and tensile strength is less. The fatigue life of composite / fiber spring too is less as compared to correctly processed spring steel plates. Hence, it is important to compare the weight carrying capacity of vibratory bowl feeders from various manufacturers before choosing one.

(read more at - http://www.elscintautomation.com/Pdf_files/White-paper-on-weight-carrying-capacity-of-vibratory-bowl-feeders.pdf)



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