



Components for which systems are available

▶ FEEDING IN THE LATEST

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▶ CHOOSING THE RIGHT CONTROLLER FOR YOUR VIBRATORY FEEDER

Elscint Ahead



Feeding In The Latest ...
Monish Shete

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It is always good to meet customers. September saw me travelling to the UK to meet some of our happy customers over there. A major one is in London who has purchased 8 bowl feeders from Elscint. It has helped the customer increase his production from semi-automatic machines from 1500 an hour to more than 2500 an hour! (You can see his photo with Elscint bowl feeders). Another customer has purchased four bowl feeders with extra capacity hoppers. He too is very happy with the performance of Elscint vibratory feeders. On an encouraging note, he mentioned that the Elscint feeders were better than the local ones he purchased previously. (The photo on the 2nd page shows his bowl feeders installed). Coming to this edition of the Newsletter, the first story is about how you can now follow Elscint on Twitter while the second is how to choose the right controller for your vibratory feeder. Last but not the least, wish you a very happy Diwali & prosperous New Year ahead!

Follow Elscint on Twitter!

Social networking is supposed to be the next big thing as it helps one bypass the traditional phone, fax and e-mail routes to getting your message across. Elscint can't be left behind and now you can follow Elscint on Twitter. If you are already having an account, go to <http://twitter.com/elscint> to follow the updates from Elscint on Twitter. If not, you can always open an account to follow Elscint on Twitter. You will get updates on new products developed, promotions, events, latest news releases from Elscint, changes made in the Elscint website, new videos and photos uploaded on the net and everything about Elscint which you would like to follow! Further in case one does not have a Twitter account, the updates can be seen on <http://www.elscintautomation.com/elscint-twitter-updates.html> on real time basis. Further you can leave your comments on each tweet!



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Choosing the right Controller for your Vibratory Feeder

There are various types of controllers for vibratory feeders. Knowing the features as well as advantages and disadvantages of each of them can help one take a right decision about choosing the correct controller -

1. Variac / Dimmerstat / Variable Transformer – This varies the voltage. It produces flux and therefore, reduces the voltage. It is the most simple controller available for a vibratory feeder. If a diode is used, it can even be used for half wave vibrators. The disadvantage of this is that there is no soft start provision available and hence it starts with a jerk, which can damage the vibrator coils. Another problem is that any change in the input voltage supply results in a corresponding change in the output supply. Even a change in the frequency or load on the vibrator has an effect on the working of the vibratory feeder. This is a very low cost option.
2. Electronic Voltage Controllers – These work on the principle of chopping of the sine wave to ensure control over the voltage. This is superior to the variac / dimmerstat as soft start and soft stop can be provided in the circuit and some amount of voltage fluctuation too can be taken care of. However, the disadvantage is that any change in frequency has an effect on the working of the vibratory feeder. Another disadvantage is that any change in the load on the vibrator has an effect on the working of the vibratory feeder. Additionally, overload cut-off provision can be provided. This is quite important as in case the current drawn exceeds set limit, the power supply to the vibrator is switched off automatically,

thus saving the vibrator coils from getting burnt. The cost is quite reasonable and hence this type of controller is usually provided with majority of vibratory feeders.

3. Analog Frequency Controllers – These can vary the voltage and to some extent the frequency. Therefore, one can get constant voltage and constant frequency, thereby improving the functioning of the vibratory feeder. However, the problem of load remains whereby any change in the load on the vibratory feeder has an effect on its performance. The cost is more than that of an electronic controller.
4. Digital Frequency Controller – In addition to the above i.e. providing constant voltage and constant frequency, it can vary the frequency in order to find out the optimum frequency at which the vibratory feeder works best. Thus the time spent in manual tuning of the vibratory feeder can be eliminated as this can be done with the help of the Digital Frequency Controller. The cost of this type of controller is quite high.
5. Auto-Tuning with Digital Frequency Controller – This helps in finding the optimum frequency at which the vibratory feeder works best automatically, further reducing the manual error and time. However, this further increases the cost.
6. Feedback Control – In case of a Digital Frequency Controller, feedback control can be added whereby an accelerometer is provided. This not only improves the speed of the vibrator but acts as a load cell wherein it provides feedback to the controller about the load on the vibrator and the controller can adjust itself automatically. This can further improve the performance of the vibratory feeder. The price of an accelerometer is added to that of the digital frequency controller, making it more costly.
7. Double Speedy - In all the above Models, double speedy can be incorporated i.e. two potentiometers are given whereby one is used for coarse adjustment and one for fine adjustment. These are of tremendous use in case of weighing and batching systems.



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