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▶ FEEDING IN THE LATEST

▶ FEEDING OF LARGE PARTS IN A BOWL FEEDER – HALF BEARING FEEDING SYSTEM

LOW COST FREQUENCY CONTROLLERS INTRODUCED

# Elscint Ahead



Components for which systems are available



*Feeding In The Latest ...*  
*Monish Shete*

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First of all, here's wishing you a very happy and prosperous New Year 2013. In this newsletter which is the first one of this New Year, as usual two topics are covered, first one being about an innovative feeding system while the second news is about a new low cost, no frills version of frequency controllers for vibratory feeders introduced recently. This will surely make a Frequency Controller affordable for all customers. The comparison chart of these vis a vis the regular frequency controller is also given separately for better understanding. Do send us a mail in case you want the quotation for any of these. Further, you can always write to us about your feedback and also download the back copies of the [Elscint Ahead Newsletter](#) and also download the [pdf version](#) too.

## Feeding of Large Parts in a Bowl Feeder - Half Bearing Feeding System

Feeding of large parts in a bowl feeder is always difficult, firstly as the number of components which can be accommodated in the bowl is limited and secondly the speed or feed rate which can be achieved is less due to the size of the components. Hence, for feeding large components, many times a different type of vibratory equipment is required. Taking the example of half bearings, these can be upto dia 90 mm or even more. For feeding and orienting these half bearings an innovative system has to be designed. This consists of a vibratory hopper feeder (for extra loading capacity), two linear vibratory feeders and a small parts (elevator) feeder. With this system, the speed of operation or the feed rate can be upto 60 pieces per minute in an oriented manner. Of course, this speed can be varied through a potentiometer. Various sizes of the half bearings can be easily accommodated in the same equipment with proper electronic controls. A small parts (elevator) feeder is used for recirculation of unused parts while a special orientation device is used for orientation of the half bearings. Upto 150 Kgs of material can be loaded in the vibratory hopper. This makes the system totally man-less.



[more...](#)

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## Low Cost Frequency Controllers introduced

Elscont Automation has recently introduced a low cost, no frills version of its Frequency Controllers with limited functionality, namely, EFQC6 and EFQC3. EFQC6 is a 6 Amp version suitable for large vibratory bowl feeders having VA rating of more than 600 VA while EFQC3 is for smaller vibratory bowl feeders and linear vibrators having VA Rating of 600 VA or less. The main features of these Frequency Controllers are –

1. Frequency Adjustment – The major advantage of using a frequency controller is that one can adjust the output frequency of the controller to get the best resonant frequency at which vibratory feeder works best, eliminating the need for manually tuning the vibratory feeder.
2. Automatic Voltage Regulation – This feature helps to eliminate the speed variation caused due to mains voltage fluctuation.
3. Automatic Frequency Adjustment – In case the input frequency changes (due to genset operation), the output frequency remains the same at the preset level.
4. Maximum Output Voltage Adjustment – This provision helps to adjust the maximum output voltage, which in turn reduces chances of damage to a vibratory feeder.
5. Overheat Protection – If the internal voltage in the controller increases, it switches off.
6. Overload cut-off – In case the vibrator current increases its rated value, there is a provision of overload cut-off

Thus, the major advantages of using an Elscint Frequency Controller are –

1. No variation in case of input frequency change (genset working)
2. Mechanical Adjustment / tuning of the Vibratory Bowl Feeder / Linear Vibrator is not required
3. The resonance frequency once determined remains stored even after the loss of power
4. No need to change the coils / springs / vibrator in case of 50 Hz and 60 Hz input
5. No variation in case of input voltage fluctuation
6. It is Short Circuit Proof
7. There being no Potentiometer on the Controller (there are up / down buttons), changes of any misuse is eliminated. Locking arrangement / password provision possible.

The technical specifications of these two frequency controllers vis a vis the regular EFQ1 N DIG are given on the second page



Particulars	EFQC3	EFQC6	EFQ1 N DIG
Input Voltage Range	85 V to 260 V	85 V to 260 V	230 V (+/-) 5%
Output Voltage Range	0 V to 260 V	0 V to 260 V	0 V to 240 V
Output Frequency	40 Hz to 180 Hz	40 Hz to 180 Hz	5 Hz to 180 Hz
Vibrator VA Rating	Upto 600 VA	600 VA to 1300 VA	Upto 1500 VA
Voltage Adjustment Accuracy	1 V	1 V	1 V
Frequency Adjustment Accuracy	0.1 Hz	0.1 Hz	0.1 Hz
On / Off Delay	0 to 20 sec	0 to 20 sec	0 to 20 sec
PLC Control	Start Stop possible from PLC	Start Stop possible from PLC	Variation of speed through PLC possible with 0/10V-0/20mA input
Locking provision	Possible	Possible	Yes. With Password
Sensor with timer control	PNP * 1 no.	PNP * 1 no.	PNP * 2 nos.
Amplitude Sensor	Not Applicable	Not Applicable	Provision for ESind3
Soft Start time	0 to 10 sec	0 to 10 sec	0 to 5 sec
Display	Digital LED	Digital LED	Digital LED
Can connect to	1 Vibratory Feeder	1 Vibratory Feeder	1 or 2 Vibratory Feeders
Air Blow Arrangement	Not possible	Not possible	Available (2 sec delay)

