

○ 05/2015 | ○ May | ○ 2015



Components for
which systems are
available

▶ FEEDING IN THE LATEST

▶ FEEDING OF TWO TYPES
OF STEEL COVERS

▶ ELSCINT FEEDING SYSTEM
FOR WATCH BASES

Elscint Ahead

Feeding In The Latest . . .
Monish Shete

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As this Newsletter reaches you, the summer is reaching its peak along with the IPL! The first news of this Elscint Ahead Newsletter is about a bowl feeder for feeding two types of steel covers, while the second one is about a recently completed feeding system which was supplied to a watch manufacturer. As usual, you can write to us with your feedback and also download the back copies of the [Elscint Ahead Newsletter](#) and the [pdf version](#) of this newsletter too.

Feeding of two types of Steel Covers

[Elscint](#) recently supplied a [vibratory bowl feeder](#) for feeding of two steel parts in a single row. The part was very difficult to orient as there was a small tail on one side and no other difference. It was a “C” shaped part and the requirement was to get it in “open side facing sky with tail trailing”. There were two parts of same type but different sizes. Elscint removed the wrong parts by the use of a small air jet and then used machined outer chute to ensure that the orientation of the parts did not change afterwards during transfer to a linear vibratory track of 400 mm length. Elscint I linear vibrator was used for this purpose, again with a machine chute. A sensor was provided on the linear track to switch off the bowl feeder when the chute was full. Two separate tracks (orientation track in the bowl and the linear track were supplied for each of the components). The complete unit was supplied on a base plate to a special purpose machine builder.



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Elscint Vibratory Bowl Feeder for feeding various types & sizes of Watch Bases

Feeding of watch bases for assembly has to be automatic. However, the problem faced by a major manufacturer of watches was the variety of bases. Firstly, the dimensions change from 10 mm to 70 mm and more importantly the geometry of the bases too was numerous i.e. round, rectangular, oval, square and so on. Further, the height of the component too varied from 3 mm to 10 mm. The challenge given by the customer was to accommodate all these sizes in a single bowl with minimum changeover tooling and as less adjustment as possible. Loading quantity too had to be more than 4 hours of operation as the station was supposed to be totally unmanned and pick up was by a robot. Noise level was to be below 70 Db and space utilized was to be the bear minimum. As the parts were being used in a consumer product (watches), the customer insisted that there should be no scratches on the surface of the cases.

Elscint suggested a single [vibratory bowl feeder](#) with a conical design bowl for feeding of the various stainless steel watch bases. As there were a total of 30 various sizes / dimensions comprising of 2 basic families of components (3 mm thickness and 10 mm thickness). The requirement was to get them in a single row with the open side facing ground on a conveyor in lengthwise direction. With the conical type of bowl, double components got automatically removed and orientation with respect to the face (open side up / down) too was possible with negligible changeover to ensure operator ease. The changeover tooling too was made very easy with no adjustments and change parts were laser marked with the part number to make it easy for the operator to remember. Elscint bowl coating was provided to ensure that the metal to metal contact between the bowl and the components was eliminated, resulting in no scratches due to moment of the watch cases in the bowl.

For the requirement of 4 hours loading, a 50 ltr. hopper was provided with a level controller. This ensured that the operator load the parts once every 4 hours. A conveyor was provided with a variable drive with adjustable side guides. The top guide was made removable with no adjustment. In order to contain the noise level, the vibratory bowl feeder was enclosed in a circular noise enclosure lined from inside with acoustic foam. This ensured the noise level was less than 68 Db.



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