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- FEEDING IN THE LATEST
- FEEDING OF CERAMIC RINGS
- VARIOUS TYPES OF FEEDING SYSTEMS

Components for which systems are available

# Elscint Ahead

## Feeding In The Latest . . .

*Monish Shete*

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A very Happy New Year 2022. Hope this new year is the harbinger of good things for all, especially hoping for the end of the pandemic! the Welcome to the January edition of the Elscint Ahead Newsletter. Coming to this edition, the first news story is about a recent supply of a feeding system for feeding of Ceramic Rings while the second is about various types of feeding systems. As usual you can download the pdf version of this newsletter as also the back copies of the Elscint Ahead Newsletter.

### Auto feeding of Ceramic Rings for Centreless Grinding

Elscint recently manufactured and supplied an auto feeding system for feeding of ceramic rings to a centerless grinding machine. The requirement was to feed 5 types of ceramic rings of various dimensions, right from diameter 15 mm to diameter 50 mm and thickness varying from 4 mm to 10 mm. The internal diameter too varied for the various rings, but mostly being 8 to 12 mm less that the outer diameter. For feeding to the customer's centerless grinding machine, the rings were required to be fed axially. Due to the huge variety, to make the changeover between the rings easy, Elscint manufactured a special bowl made in cast aluminium with the changeover tooling being in stainless steel for each of the rings. As the rings were having less thickness, there was a tendency of their toppling over. However, the tooling developed by Elscint ensured that this did not happen and the rings were fed in a stack to the grinding machine. Additionally, a linear vibrator with tubes was provided to accommodate different sizes of components for further feeding to the centreless grinding machine. This provided a constant pressure and push to the parts when they entered the grinding machine. The bowl was coated with Elscinthane PU coating, ensuring that the noise level was less by eliminating the contact between the bowl surface and the components. The complete system was mounted on a stand having height adjustment of (+/-) 100 mm to ensure that the outlet tube can be aligned to the machine work-rest, whenever the ring size changes. The equipment was built and installed at the customer's end, resulting in a productivity improvement of almost 30% over the manual process. You can watch the video of this feeding system for feeding of dia 50 mm rings and the video showing dia 20 mm rings

**Elscint Automation**
W-191 Bhosari MIDC
Pune 411 026. India Tel.: +91-20-27122059
Email – sales@elscintautomation.com
Website – www.elscintautomation.com

# Automatic Feeding of Parts

Feeding parts manually is most beneficial for loading a low volume of complex parts at a slow speed. On the other hand, for large-scale productions, using automated feeding systems is more cost-effective. Manual feeding of bulk minute workpieces is a repetitive task that can be physically taxing for the workers when done for long periods. Because of that, frequent breaks are inevitable, which negatively affects productivity.

Elscint offers a wide selection of machines for automating small parts handling. We have been in the business for four decades, and have highly skilled engineers designing our equipment. With the highest quality standards, we guarantee our customers the best parts feeding solutions they can find.

**Benefits of Automatic Feeding of Parts**
In addition to boosting work productivity, here are other benefits of automating parts feeding:

***Sanitary Working Environment***
Having workers handle bulk parts manually can create a messy environment. Spills are more likely to happen in manual loading of parts to machines than in automated systems. With automated parts feeders, the risk of contamination is also lower since the workers hardly come in contact with the materials and the machine components.

***Safer Working Conditions***
Lifting heavy loads is an ergonomic hazard. Leaving bulk parts loading and feeding for automated systems reduces the risk of a worker injuring a hand, back, or limb.

***Effective Utilization of Manpower's Skills and Talents***
Automating parts feeding frees workers from simple and monotonous tasks. That way, workers can gain more knowledge and do more valuable types of work, which can significantly contribute to the business's success.

**Types of Feeder Systems for Automated Assemblies**
There is a wide range of automated feeding systems available on the market, and choosing the most suitable parts feeding system for the application is critical to a successful operation. Some factors to consider when selecting a part feeding system include each part's shape, geometry, size, loading speed, and orientation. The location and size of the parts feeding system should also be considered.

Here are common types of feeder systems for automated assemblies.

***Vibratory Bowl Feeders***
Vibratory bowl feeders are circular, inclined tracks used in aligning and feeding bulk components into subsequent processing lines. They are widely used in handling parts in the automotive, cosmetics, electronics, pharmaceutical, and packaging industries, to name a few.

***Linear Feeders***

Linear feeders are vibratory inline tracks that move parts. They can also be stationary, relying on gravity to transport parts to subsequent operations. Sometimes, they are placed after a vibratory bowl feeder.

***Rotary Feeders***
Rotary feeders or centrifugal feeders are ideal for very high-speed orientation and feeding of parts. They are equipped with double disks, with the outside disk rotating faster than the inside disk, which creates a centrifugal force that efficiently moves parts. They can also handle a variety of parts with simple tooling changeovers.

***Conveyor Systems***
Hand-carrying too heavy and bulky materials can be time-consuming and are prone to accidents. Conveyor systems use belt systems to efficiently transport parts from one workstation to another. They come in varying lengths and speeds, depending on the application's requirements.

Automating parts feeding may require high upfront costs, but its benefits far outweigh its disadvantages. With increased productivity and lower occupational health costs because of a more efficient and safer working environment, the business can be more profitable in the long run rather than sticking to manual systems. Furthermore, seeking help from an experienced, reliable, and well-respected supplier such as Elscint will bring you in the right direction.

Do not hesitate to contact us for any inquiries!


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