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▶ FEEDING IN THE LATEST

▶ FEEDING OF PLASTIC BOTTLES

SELECTION OF CORRECT TYPE & MATERIAL FOR BOWLS

# Elscint Ahead



Components for which systems are available

*Feeding In The Latest . . .*  
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It is always challenging to feed light weight plastic bottles. They require very innovative thinking on the part of the bowl tooler. The first news story of this edition of the [Elscint Ahead Newsletter](#) mentions feeding of such plastic bottles. The second news story is information about how to choose the correct type of bowl material. 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 Plastic Bottles

Feeding of bottles where the length of the bottle is larger than its diameter is very difficult as the plastic bottles being light in weight, do not come standing and additionally further cannot also be made upright. However, [Elscint](#) recently manufactured a bowl feeder for feeding of small plastic bottles having diameter 21 mm x 48 mm length with one side closed and one side open. The requirement was to get the bottles in closed side facing sky orientation. The dimensions of the bottle were such that the bottles moved in the bowl feeder in axial or lengthwise direction. Hence, Elscint employed certain innovative tooling to ensure that the bottles got into the required orientation. Thereafter, proper tooling called scalloping was employed to make the bottles with the open side facing sky fall back into the bowl. A speed of 80 bottles per minute was achieved very easily. The bottles were used for storing homeopathic tablets and hence a stainless steel medical grade bowl was used for this purpose. You can watch the video of the Elscint [Bowl feeder for feeding the plastic bottles](#).



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## Selection of correct type & material for a Vibratory Bowl

Vibratory bowls can be made in a variety of material like cast aluminium, mild steel, stainless steel, polyamide, etc. Each of these materials has certain advantages as well as disadvantages. Bowls made of mild steel are not long lasting due to rusting and not so wear resistance. Over time, their performance deteriorates drastically. Aesthetic wise too, it does not look good. Hence, it is not recommended to select mild steel bowls. Polyamide bowls have certain advantages like machining ease and repeatability but the disadvantages are the size (small) and type (conical). Step design bowls, which provide a lot of tooling flexibility, convenience and high loading volumes are not possible in case of polyamide bowls. These disadvantages are not there in stainless steel and cast aluminum bowls. The advantages of these types of bowls are tooling flexibility, convenience and high loading volume. Secondly, it is possible to provide irregular and complicated bowl tooling and shapes in case of stainless steel fabricated bowls. But these are costly as compared to cast aluminum bowls and further in case the component changes or any further change is required, one needs to cut and re-weld the bowl. The advantages of using cast aluminum bowls are the ease and speed of tooling and lower cost. Further, they are modular in construction. The tooling being fixed, can easily be removed and changed. However, proper coating is required for all cast aluminum bowls. Elscinthane spray able polyurethane coating is the best choice for cast aluminum and stainless steel bowls. Not only does the coating reduce the noise level drastically in case of metallic components by eliminating the metal to metal contact, but the life and performance of the bowl too improves

substantially. The [Elscinthane](#) bowl linings are available in various thicknesses ranging from 0.40 mm to even upto 2 mm and above. [Elscinthane](#) spray able polyurethane coatings have very high shore hardness and this increases the life of the Bowl tremendously. Further, it avoids discoloring of the components and reduces chances of damages to components. In case of stainless steel bowls, cylindrical bowls are quite popular possible but they have a lot of disadvantages like jamming of components between the track, less area for tooling, low loading capacity etc. Another possibility in case of stainless steel is outer track bowls. These are costlier to make but still have the problems relating to cylindrical bowls like jamming of components between two tracks. However, they do have an inherent advantage like optimum area for tooling. In case there is a requirement for high speed and complicated orientation, then outer track bowl can be the only solution. However, the disadvantage is the high cost of such bowls. The time taken for making such bowls too is more. Selection of the right type of material and shape for a bowl feeder has repercussions on the continuous maintenance free working of the bowl feeder in the long run and hence the proper material and shape of the bowl is very important. Before ordering a bowl feeder, the customer should discuss with the bowl feeder manufacturer about the shape and the material he has planned for the bowl and the reasons for the same. Though these are usually the prerogative of the bowl feeder manufacturer, the customer, being the user of the bowl, should try to get the reasons behind the same. Secondly, while selecting the type of material and shape for a bowl feeder, one should check whether the bowl feeder manufacturer has the required coating expertise and technology, otherwise, the life of the bowl reduces and feeding too becomes problematic and erratic. To sum up, the best possible design of a bowl is step / cascade and the best type of material is cast aluminium with [Elscinthane](#) bowl coating. Read [More...](#)



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