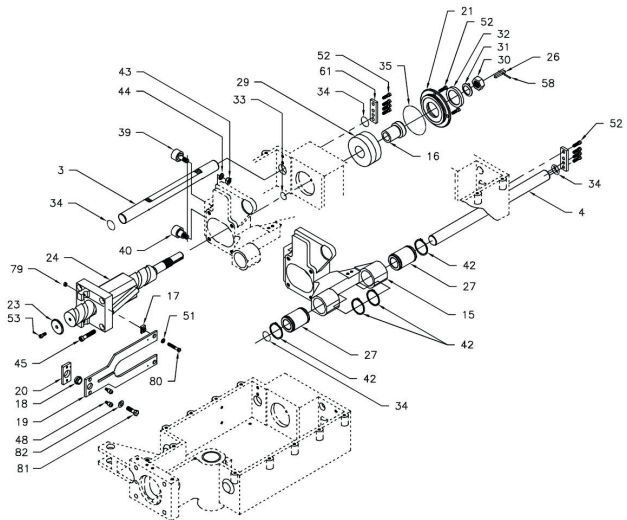


Can you afford not to use original parts?

Garij Göhrich* outlines how the role of the Purchasing Manager has never been easy, and considers a number of questions the manager should regard before making a purchasing decision.

► The 535 mechanism with original parts.



The job of the Purchasing Manager in the container glass industry has never been easy.

In these days of fierce competition from other materials, globalisation of markets and increased quality demands from customers, the purchasing function faces new challenges. This is particularly true in the area of accessories and replacement parts to keep the production and inspection lines operating.

The manager is expected to demonstrate negotiating expertise by continually reducing the cost of purchased materials and services. He or she has to cope with wider product ranges, more flexible production methods and financial penalties for downtime and defects. Add to this the trend away from traditional mechanical methods towards electronic solutions, and it is unsurprising that the purchaser feels under pressure.

One way to react is to use today's improved communication channels to seek out alternative suppliers and to consistently take the business to whoever offers the lowest price. There may be some short-term benefits in this approach, but is this valid in the long term? Before dismissing the original equipment manufacturer as a parts supplier, the manager would be well advised to consider the following questions:

Am I really saving money by purchasing cheaper?

There is no such thing as a free lunch. In almost all cases, lower parts purchasing costs will be accompanied by a higher risk of (at best) early failure and, at worst, expensive damage and long downtime. This is a gamble which some may be prepared to take, but is it a good bet?

Studies carried out by Bucher Emhart Glass show that a modern, well designed and operated IS machine can be expected to produce a contribution of about €1200 per hour, (€20 per minute) depending on size, location and ware produced. By achieving a saving of 15% on one average section part that, for example, has a price of €400, a Purchasing Manager could congratulate himself on a saving of €60.

However, if a lost production time of only three minutes should result for any reason connected to these substitute parts, then the savings would be wiped out, and longer production losses could produce an expensive 'cost saving' exercise.

The same logic applies to larger items: if a purchaser manages to locate an alternative source offering a 20% saving on a particular mechanism which the original manufacturer priced at €1000, then the good news is that on a 10-section machine, this would result in a saving of

€20,000 – at first sight a great deal. The bad news is that if over their lifetime these bargains achieved only two hours less of production (or the equivalent in fewer good containers packed), then the exercise would be a loss-maker. These do not seem like good odds on which to wager the profitability of the business!

Do all suppliers offer the same product quality?

How secure would we feel flying in an aircraft whose maintenance parts had been selected on the basis of cost rather than proven functionality? The fact that a supplier can produce a part to a drawing is no guarantee that it will function as the original machine designer intended.

High-performance mechanisms demand tight tolerances, which some suppliers may not be able to hold, or even be aware of. A cheaper material can be substituted for that specified so that the part looks the same as the original, but how does this affect its functionality?

Surface hardness plays a vital role in the life of many parts, but unfortunately the most effective hardening processes tend to require specialised equipment, which is capital-intensive and difficult to control. A low-price supplier will be sorely

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tempted to cut corners here. Bucher Emhart Glass has designed the tolerances and material specifications of each part to fit the requirements of the entire machine, and already has available the processes necessary to produce them. All of its manufacturing plants are certified to ISO 9001 or 9002.

What is the value of 'one-stop shopping'?

The practice of 'cherry-picking' – placing a multitude of small orders with the cheapest supplier for each item – is tempting, but of questionable value.

It assumes that the purchasing personnel have time on their hands and it fails to take into account the minimum cost of producing and processing an order, which may be in the region of €100 per order if fully costed.

A parts-only supplier would normally offer only those parts which he deems to be profitable or feels capable of producing (typically a few hundred items), and will often be unable to supply many vital items which are slower-moving or difficult to manufacture.

Bucher Emhart Glass maintains more than 50,000 hot end items, together with 40,000 inspection spares.

The story does not end with the breadth of the parts range. Placing a large number of small orders leads to chasing up a large number of uncoordinated shipments through a variety of channels, resulting in high overhead costs at the receiving end.

On a personal level, few of us would choose to spend our free time travelling around between supermarkets, comparing prices and selectively purchasing in each shop only a small number of items from the household shopping list. Any benefits do not justify the effort. We get everything we need at the one location where we feel most comfortable doing business.

Is this really the part I need?

In a perfect world, a Maintenance Manager would know exactly what parts he requires at all times. Reality is different.

Mechanisms are updated, designs rationalised and new functionality introduced. An adaptation is required for a special container or to fit existing equipment. In such cases, competent technical advice is essential and this is most likely to be found at the original machine manufacturer, particularly if the company is large enough to maintain a team of experts for this purpose.

How long do I need to wait?

There is little point in saving a few percent on the cost of a part, only to suffer expensive downtime or damage while waiting for it to arrive.

Only the largest suppliers can sustain the infrastructure to establish and maintain reliable supply and logistics chains to support their global customers. For example, the main Bucher Emhart parts distribution centre has served its European customers with an overnight delivery service for 4,900 of the most commonly required parts (S-Class Parts).

This makes the actual location of the supplier facility irrelevant – the order is placed one day and the goods arrive the next. Destinations in other continents with time-consuming customs formalities can be supplied within days.

What is the lifetime of this part?

If a copied item costs substantially less than the original, then corners must have been cut somewhere. This weakness may not always be immediately apparent, but will often show up in a reduced product lifetime. A 15% cheaper part that lasts only 50% of the life of the genuine article is no bargain.

Is the machine warranty invalidated?

No one would expect a car manufacturer to honour a guarantee if parts from another supplier had been fitted and the same applies to IS machines. Damage resulting from the installation of sub-standard parts may not be limited to the parts themselves.

The performance of whole mechanisms can be severely degraded by the use of lower quality copies of seemingly unimportant items such as bushings or pins. If the mechanism is located outside the section, (for example in the feeder, shear or gob distributor), then the entire machine may be shut down.

What effect could this have on plant liability?

Any powerful equipment can be dangerous if operated or maintained incorrectly, and glassmaking machinery is no exception.

Given the exposed mechanisms in an IS machine, mechanical and electronic reliability of operation are vital to the maintenance of safety standards.

Through its network of customer relationships, Bucher Emhart Glass monitors under-glass performance of

their machine components. This enables design and operating parameters to be adjusted if necessary to preserve safety levels. Can you be sure that the parts you install will be compatible with the operating environment your workforce is expecting? Using non-original copies in place of original parts could raise unpleasant legal liability issues.

Can I afford to get it wrong?

Buying a part that does not fit the household appliance for which it was intended is frustrating.

The stakes are much higher in round-the-clock glass plant operations. A replacement part that fails to fit or perform as expected, produces not only great frustration, but also expensive downtime (€20 per minute) and even this is only the start of the story.

The cost of fitting a new part will often be similar to the cost of the part itself. Imagine the financial effect of having to remove an entire mechanism from a machine because a small 'alternative source' replacement part was not up to the standard of the rest of the assembly?

Add to this the effort to find a properly functioning item quickly and then go through the installation procedure a second time. Any initial savings would have evaporated long before the machine restarted. Emhart Glass knows of cases where a 'cheap' split ring caused damage to all plunger mechanisms in a machine, which resulted in expensive stripping, rebuilding and downtime.

Conclusion

The capital-intensive nature of the container glass industry, coupled with its 24-hour/seven-day working cycle, puts a high premium on maximising production hours. Sourcing parts from suppliers who did not design the originals carries with it an inherent risk of reduced performance and damage.

Therefore, attractive savings at the time of purchase can quickly turn into the nightmare of expensive downtime.

Purchase cost is only one element (and not even the most important one) of 'total cost of ownership'. The experienced Purchasing Manager knows this, and selects his suppliers accordingly. ■

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