

BLOW MOULDING CONTROLS

LEAKING NEWS



If one word could be used to describe the blow moulding industry, the word *change* seems to be the most appropriate. In the 21 years I have been serving the industry we have seen the evolution of PET, co-extrusion, the replacement of traditional packaging materials with plastic and the consolidation of smaller companies with larger multi-national groups. Where will *change* lead us? I can't speak for the industry, but I know that as test equipment manufacturers we face many opportunities to develop products that are more user friendly, easier to set up, and give greater repeatability. Our research program will focus on features such as automatic weighing, on – line wall thickness measurement and vision systems. I hope you find this latest issue of Leaking News interesting and as always we welcome your comments.

**Best Regards,
Robin Enderby**

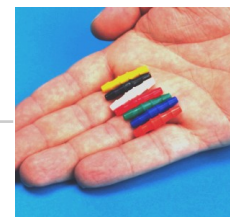
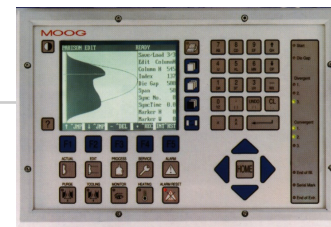
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LEAK TESTERS FASTER THAN EVER TO SET UP

What is involved in changing a leak tester over to another job? That's the question we asked ourselves and here is what we did:

Conveyor Height

At Interplas you will see our leak tester on the BBM machine that has electrical height adjustment. No bolts to undo, and as solid as a rock.

Test Head Position

Our unique "no tools required" cam action clamps are so easy to set that a two finger force locks the head up at any angle you want . . . In seconds . . .

The SureSeal[®] head gives a perfect seal even if the head is set as much as 20° in angle, so it is not important to spend ages "fine tuning" the test head position.

The Leak Tester settings can be stored for immediate recall, so test time and other characteristics take only seconds to recall.

The Auto-Zero, Auto-Tracking and Auto-Calibrate software tracks product and temperature variations to ensure that sensitivity is maintained without the excessive rejection of good containers.

WHAT IS A HOLE?

Although "Grantham" may immediately spring to mind, we're really talking about the holes in plastic containers. On the face of it, this is a very simple subject, but as you dig deeper it opens up to a veritable "iceberg" of hidden information. Most holes in plastic containers are caused by contamination that usually enters the system during the handling of regrind, and cardboard particles appears to be the most common culprit.

It is normal practice to test the leak tester at regular intervals to ensure it is working properly, but some consideration should be given to how the test hole is produced:

1. Stabbing with a knife blade.

This is the worst way of making a hole as it does not represent any specific hole size, and is impossible to repeat.

2. Sticking a pin or needle in.

Pushing a 0.5mm pin into a plastic container will not produce a 0.5mm hole because the hole will close down to a smaller diameter immediately the pin is withdrawn, and will then continue to shrink down for hours afterwards.

3. Melting a hole with a heated wire

This technique prevents a lot of the "shrink-back" but requires a steady hand. Where do you get ultra-fine steel wire ?

4. Drilling Holes

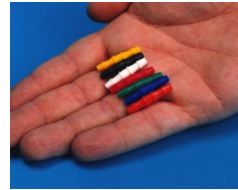
Although obvious, drilling a .3mm hole in a 25Lt. Drum may not be as easy as it sounds! There is still some "shrink-back" due to the elastic nature of most plastic materials. Try drilling a piece of rubber and see what size hole you are left with.

5. Calibrated Orifices

The most accurate way of producing a "precision leak" is to fit an orifice into the test line.

We stock calibrated orifices in a wide range of sizes from 0.03mm upwards.

One of the best ways of ensuring that a leak tester is functioning correctly is to use our Automatic Self-Test option. This system has been proven over many years on our QXT series of testers, and is also available in the new AccuSense systems.



DYNAMIC CHECK WEIGHER/LEAK TESTER SYSTEM LAUNCHED AT INTERPLAS '99

If we could claim to be the pioneers of anything at all it would be in the field of automatic container weighing for blow moulding applications. From the start we felt that our customers would eventually see that measuring the weight of every moulding was another way of ensuring that only products within specification were shipped to their customers. We were the first leak tester manufacturer to integrate the weighing system into the leak testers electronics, which gave us numerous advantages over companies that just "bolted on" a commercially available system.

Up to now the "pick-and-place" method of weighing was generally fast enough for most applications, but as multi-head machines have sprouted even more heads, conventional weighing systems were just not fast enough. "Dynamic" weighing works by having the load cell attached to a special conveyor so that the bottle is weighed as it travels, without the time consuming system of stopping the container. This enables you to weigh every container, not just a sample, so you can assure your customer that all containers conform to his requirements.

Our patented Automatic Weight Correction system (AWC) is also available that maintains a constant container weight by automatically adjusting the die gap. A special version of AWC is also available for "wheel" types of machines.

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