LCT1-1 Series

Collating Table With Integrated Leak Detector

PLASTECH
CONTROL SYSTEMS

Description

The LTC-1 system is an integrated system including a bottle leak detector and a bottle collating table for semi-automatic tray packing of bottles.

After passing through the leak detector at the in-feed of the machine, bottles are taken off of the infeed conveyor one row at a time onto the collating table. When a full pack has accumulated, it is moved out of the accumulation area so that the operator can then remove the completed pack from the machine.

Features

- ***High accuracy leakage measurement***

The system uses a sensitive pressure transducer with a low noise amplifier and high speed, high resolution analog to digital converter. This minimises measurement errors.

- ***Flexible bottle transport system***

Timings can be easily adjusted to optimise bottle transport, where required, without sacrificing test time.

- ***Microprocessor control system***

Reliable - Hardened against very high levels of mains spikes and static discharges.

Flexible - can quickly be re-programmed for special needs.

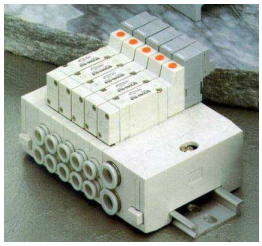
Future-proof - Spare inputs and outputs to allow future expansion provided at no extra cost.

Easy to Set - Touch Screen graphics display allows quick, accurate setting and display of test parameters.

Easy to Fault Find - Diagnostics are provided from the front panel, allowing engineers to quickly verify every part of the system.

International - Since all information is presented on the front panel display, it is easy to change the program to use another language (where the system is to be used in a non - English speaking country).

- ***Modular pneumatic system***



Allows quick customisation for special needs.

Allows easy expansion of system to include extra facilities even after installation.

- ***Cost Effective***

The circuit cards have been designed and programmed specifically for this application. Great care has been taken to ensure that the system is easily re-programmable, expandable and reliable. This means that the performance and cost limitations of using a bought-in Programmable Logic Controller are avoided.

- ***Wide Range of Options***

The design is highly flexible with respect to software, electronics, pneumatics and mechanics. This allows a wide range of options (see following page) to be added at any time, even after installation.

Options

Choked Bore / Ovality Test

A probe fitted to the test head checks whether the neck is occluded or deformed.

Height Check

A fibre-optic sensor checks that the bottle is not too tall. This can detect folded over base flash on some bottles, as well as neck flash.

Auxiliary Sensors

Spare inputs are available which can be used to connect other sensors which examine the bottle during the leak test. Examples might be label sensors, flash detection sensors or vision systems. The leak tester would fail the bottle if any of these inputs are triggered.

Bottle transport options

A variety of bottle transport options can be fitted to replace the standard method. It is recognised that the standard method may not always be suitable, although we have found that is the most flexible as well as the most cost effective. Options include side clamps and holding moulds.

Stabilisation Plate / Brush

A pneumatically operated mechanism can be fitted to the infeed of the leak tester. This is only required when the conveyor is to be fed directly from the output of a blow moulding machine with violent take-out movements. The queue of bottles is supported by the plate when push-out occurs. The plate then opens, allowing the bottles to travel down the conveyor.

Vacuum Operation

The system usually pressurises the bottles during the leak test. However, it is possible to supply the system for vacuum operation where required.

Special test pressure

The system test pressure is adjustable over a limited range (see specification). If this range is not sufficient, a different transducer can be fitted to allow any test pressure desired.

Data logging / SPC

The standard system maintains counts of passed and failed bottles. More extensive data logging and SPC features can be implemented by exchanging the controller pcb for one with the SPC option fitted.

Specification

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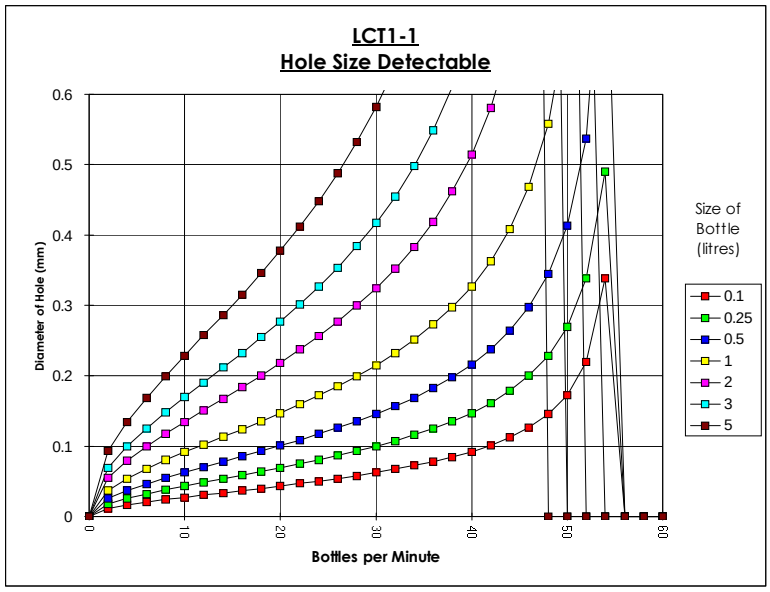
Electrical Power Supply	220/250 VAC single phase
Electrical Power consumption	50 VA maximum
Air Supply	4-10 bar
Air Consumption	1 litre / minute typical
Minimum bottle volume	750 ml
Maximum bottle volume	10 litres.
Test Pressure	Adjustable, 10 - 40 mB . This range can easily be changed on request.
Cycle Time	1.0 - 20.0 seconds, adjustable.
Hole Size Detected	Dependent on cycle time and container size. (See graph below). For a 1 litre bottle at 30 bottles per minute, the hole detected would be approximately 0.2mm



For more details contact the office, or see our web site

www.plastech-controls.com ,

where you can obtain complete on-line sales literature, user manuals and technical documentation.

PRODUCTS

- ***Leak Detection Equipment***
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- ***Control Systems***
- ***Bottle Quality Control***
- ***Electronics Design***
- ***Collating Tables***
- ***Conveyor Systems***
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- ***Design, Installation, Service & Support***

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