



TapTone

APPLICATION NOTES

News and information from Teledyne TapTone, a leader in the package inspection industry.

TOP DOWN LEAK COMPRESSION SENSOR

Leak detection sensor from our family of patented technology applications

Application: T550 Compression and Low Profile Compression

Tested: Plastic containers with foil and plastic flexible seals

Inspection Desired: Leak Detection

Tested with: Top Down Leak Sensor Option

Convenience packaging is a growing trend in consumer products. In addition, brand specifiers are light-weighting packaging to reduce cost and post-consumer waste. The need for inspection systems that can reliably inspect these products for leakage is critical to consumer safety as well as brand image.

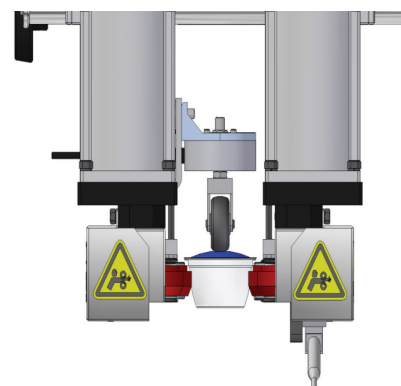
The T550 Compression and T550 Compression Low Profile can be ordered with our optional Top Down Leak Compression (TDLC) sensor. The TDLC sensor improves the resolution of leak detection on plastic containers with a foil or plastic type seal and requires minimal squeezing of the container and therefore less impact on the side walls.



▲ TapTone T550 TDLC on a sauce cup.

TECHNOLOGY CORNER *HOW IT WORKS*

The T550 drive belts apply force to the sidewalls of the container. This action compresses the headspace of the container, which allows the overhead sensor to take a pressure measurement on the lid of the container. Utilizing DSP technology, the controller analyzes the measurement and assigns a merit value to each container. If the merit value is outside of the user set acceptable range, a reject signal activates a remote reject system.



▲ TapTone T550 TDLC on a sauce cup.



APPLICATION NOTES

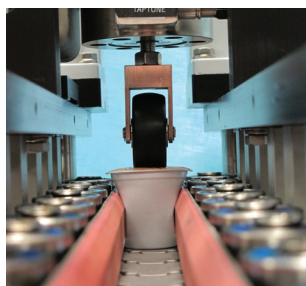


Fig. 1 12 gram Coffee Cup



Fig. 2 6 oz Fruit Cup

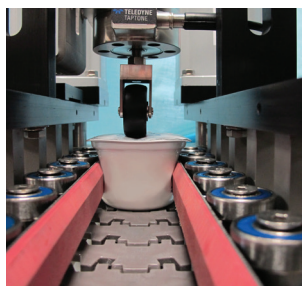
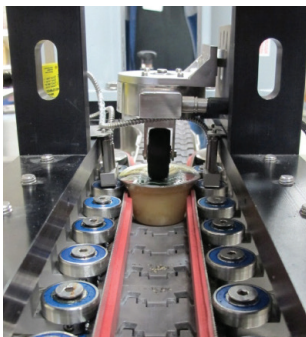


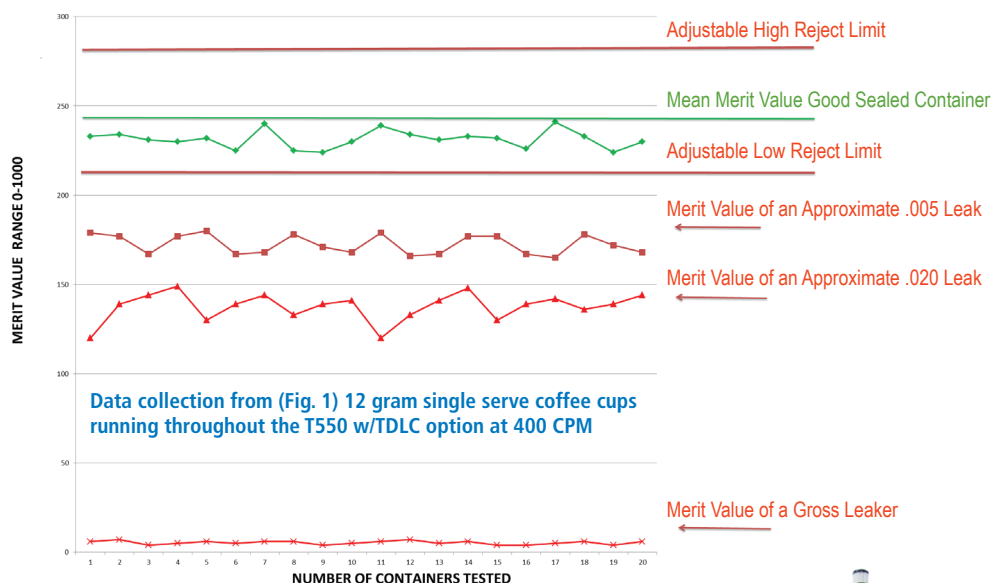
Fig. 3 8 oz Yogurt Cup



Fig. 4 24 oz Soup Cup



▲ TapTone T550 TDLC on a sauce cup.



TEST REVIEW

The graph above represents a sample test done on 12 gram fill weight single serve cups that were tested with the T550 and TDLC sensor. The sensor voltage working range is 0-10 VDC which is then represented as 0 - 1000 Merit value.

TapTone adjustable reject limits are set by the machine operator after determining the average good container merit value and desirable leak size merit value; these limits are your fixed limits.

T550 C/C-LP Product Size Specifications

Container Diameters - 1" to 4.5"

Vertical Adjustment Range - .4" to 3.0" from the center of the belt to the bottom of the sensor wheel

Belt Width - 1.0" to 1.5"

TapTone also utilizes our Autotrack feature, automatically adjusting low and high reject limits working independently from the fixed limits. The Autotrack limits are generated by calculating mean values and adjusting the limits based on production trends.

Test Summary

The TDLC sensor increases resolution for containers with foil or plastic seals by repositioning the side sensor to the top.



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