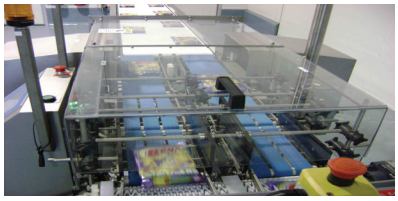
Guide to Checkweighing



Loma Systems offers this guide to checkweighing to assist food and packaging companies in staying within government weights and measures legislation and helping eliminate over- and under-fill situations

EXECUTIVE SUMMARY

Staying within government weights and measures legislation is an important task for food processing companies.

It is also important for maintaining brand integrity, ensuring packs are filled within the tolerance level. Over- and under-filled packs mean you are either giving away product that is costing you money or you are risking customer complaints from missing product.

No matter what your situation is, checkweighing is an important part of the inspection process.

Weights and Measures

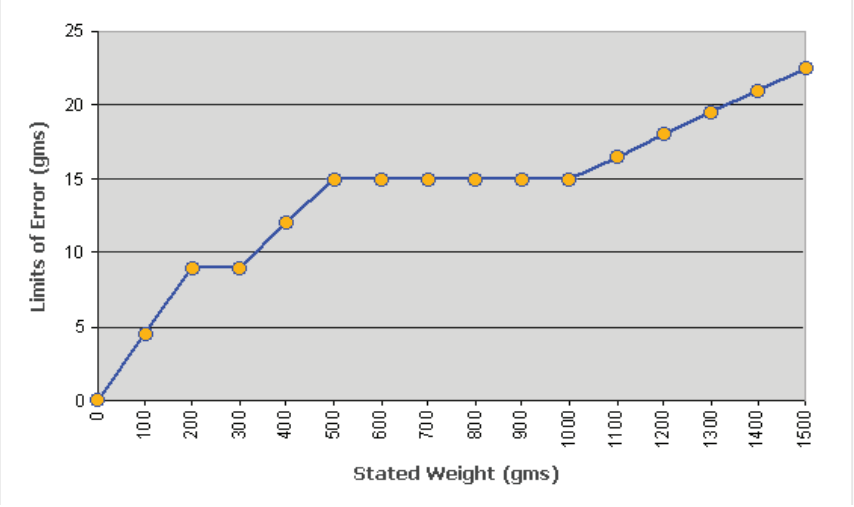
Limits of Error (LOE)

The tolerance below the stated weight within which the Canadian government permits a limited number of packs to be included in the batch. The graphic here shows both a table and a graph representing the limits for the most common pack weights.

LOE - Limits of Error		
Stated Weight	Limits of Error (LOE)	
(grams)	(% of weight)	grams
50 to 50	9	
50 to 100		4.5
100 to 200	4.5	
200 to 300		9
300 to 500	3	
500 to 1000		15
1000 to 10000	1.5	
10000 to 15000		150
15000+	1	

Guide to Checkweighing

Enhanced stability through powerful digital filtering software allows for consistency in extreme environments. High field strength and a low center of gravity control unit eliminates external interference, vibration and delivers the ultimate in noise-free detection. Easily integrated your checkweigher into any production line.



To save space, companies often turn to combination systems, that incorporate both checkweighing and metal detection.

Tolerable Negative Error (TNE)
The tolerance below the stated weight within which the European government permits a limited number of packs to be included in the batch. The 'TNE' table is the same as the 'LOE' table for Canadian legislation.

Maximum Allowable Variation (MAV)
The tolerance below the stated weight within which the American government permits a limited number of packs to be included in the batch. The 'MAV' table is different to the Canadian legislation.

Stated Weight
The label weight on the package is the quantity of product the consumer is paying for. Depending on the company and/or country, this is often referred to as 'Label Weight,' 'Declared Weight,' 'Nominal Weight' or sometimes 'Target Weight.' The Loma checkweighers in the Canadian mode of operation use the 'Nominal Weight' terminology.

T1 Setpoint
The T1 setpoint is a dividing line between two weight zones. Weights falling below the T1 setpoint cannot exceed 2.5% of the batch; weights above the T1 setpoint can be of unlimited quantity, though the average of the batch must exceed the stated weight. The default T1 setpoint for Canadian weight legislation is sStated Weight' or 1 x LOE.

T2 Setpoint
The T2 setpoint is a dividing line between two weight zones. There can be no weights accepted below the T2 setpoint; weights above the T2 setpoint (but below the T1 setpoint) cannot exceed 2.5% of the batch. The default T2 setpoint for Canadian weight legislation is 'Stated Weight' or 2 x LOE.

Guide to Checkweighing

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Lot

For the purposes of legislation, this is a continuous run of production, packaged ready for dispatch to the consumer (also commonly referred to as the 'Batch'). Determination of the exact size of a 'Lot' or 'Batch' is made by a government inspector.

Sample Size

For the purposes of this explanation, the sample size is the number of packs from the 'Lot' or 'Batch' which the inspector chooses to test. The graphic here shows the minimum sample sizes called for by the weights and measures legislation, depending on the size of the batch or lot.

Sample Size	
Number of Units in Lot/Batch	**Minimum Sample Size for Testing**
2 to 10	All the units in the lot
11 to 39	10 units
40 to 128	25% of the lot
129 to 4000	32 units
4001 to 8000	64 units
8001 to 12000	96 units
12000+	125 units

T1/T2 Allowance

For the purposes of this explanation, the T1/T2 allowance is the number of packages the inspector is permitted to accept between the T1 and T2 setpoints in the sample tests. This allowance is geared to the size of the sample itself and the graphic shows this allowance as called for by the weights and measures legislation.

T1 / T2 Allowance	
Number of Units in the Sample	**Number of Units Allowed between T1 and T2**
2 to 8	0 units
9 to 20	1 unit
21 to 32	2 units
33 to 50	3 units
51 to 65	4 units
66 to 80	5 units
81 to 102	6 units
103 to 125	7 units

About Loma Systems

Loma Systems is the world's leading engineering and manufacturing company specializing in metal detection, checkweighing and x-ray inspection systems. Our products are uniquely engineered for consistent quality with a low cost of ownership. We have successfully partnered with the world's largest food and packaging companies, located in over 100 countries, to comply with product safety standards and retailer codes of conduct.

Loma has over 120,000 metal detection systems installed worldwide and the IQ3 technology is the premier inspection system on the market today.

For More Information

To learn more about the checkweighing technology featured in this guide, please visit: www.loma.com