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NICOL SCALES & MEASUREMENT

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Nicol Scales & Measurement is an ISO Accredited Calibration Company that has provided calibration, repair and sales of all types of weighing and measurement products since 1931.

DIMENSIONING WHITE PAPER

Effects of Dimension-Based Weight on Shipping Prices What is Dimensional Weight?

Commercial freight transport as well as courier and postal companies use dimensional weight to estimate shipping weight that is based on total package volume. Dimensional weight is calculated by totaling a parcel's L X W X H and dividing it by a shipping company's dimension divisor. This forms a theoretical weight that builds options for markets participating in dimensional weight pricing models.

Why is Dimensional Weight Important?

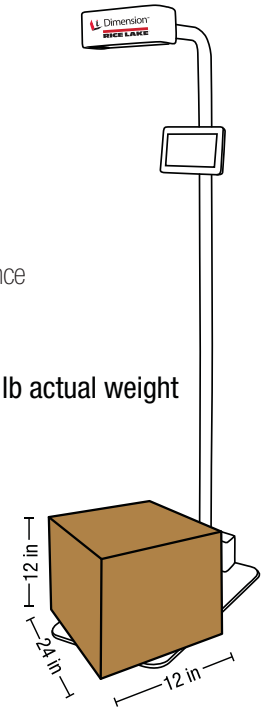
Carriers determine billable weight by comparing dimensional weight to actual weight and charging whichever price is the greater of the two. An oversized package, for example, is often billable by dimensional weight rather than actual weight in favor of the carrier.

Significance of Dimensional Weight Divisors

When shipping carriers adjust their dimensional weight divisors, it has a profound effect on pricing. FedEx® and UPS® lowered their dim weight divisors in January 2017 from 166 to 139, and this increased the billable dimension weight. Consider how a change in divisors affects a package as light as five pounds actual weight. This is a compound difference of billable weight for companies that ship 500 or more packages per day.

2016 Dimensional Weight
(24 x 12 x 12) / 166 divisor = 20.819 rounded up to billable **21 lb**

2017 Dimensional Weight
(24 x 12 x 12) / 139 divisor = 24.863 rounded to billable **25 lb**



Customer Best Practices to Reduce Shipping Costs

Customers should review their shipping invoices for avoidable costs and have knowledge to compare products and processes that include dimension-based shipping.

Packaging Methods

Customers are becoming increasingly cautious about their packaging methods. With a focus on reducing overall dimensional weight, companies are switching from boxes to poly bags, which can condense the package dimension.

Multi-Carrier Shipping Software

UPS and FedEx use the dimension divisor as a negotiating tactic to compete in the marketplace for high volume shipping customers. FedEx uses 139 as a divisor for all package dimensions, while UPS uses 139 for all packages over one cubic foot and 166 for those less than that. A customer with multi-carrier shipping software can compare different rate options by providing ship-to information, actual package weight and dimensions.

Rice Lake Weighing Systems' Dimensioning Solutions

Rice Lake offers both parcel and pallet dimensioning products for a large array of shipping needs. Both models act as a network device and use a simple API for integration with existing software via using ethernet or RS-232 converter to connect to your PC.

iDimension® 100

For parcels, the iDimension 100 captures an overhead image of regular (cuboid shapes) and irregular (any non-cuboid shape) and calculates dimensional weight in under one second. Combined with a shipping scale, this system provides dimension, actual weight and dimensional weight.

iDimension® 400

For pallets, the iDimension 400 captures dimensions of any shape pallet in under two seconds by taking one overhead image and one side image.

NTEP Legal for Trade Specifications		
	Size Range	Accuracy
Parcel Size—Regular Shapes	48 x 28 x 28 in – 5.6 x 5.6 x 2.4 in	0.2 in
Parcel Size—Irregular Packages	48 x 28 x 28 in – 6 x 6 x 6 in	0.5 in
Pallet Size	96 x 96 x 96 in – 12 x 12 x 12 in	0.5 in