



# DIM Weight Explained

## The Shipping Solution Provider's Viewpoint

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### CONSIDER THIS POSSIBLE SCENARIO:

*You ship a 14" x 14" x 14" package to your customer on December 10, 2014 which weighs 8 lbs. and the charge is \$8.00 using UPS or FedEx domestic US Ground service. You offer free returns and a 30-day return policy. The customer returns the same item on January 3, 2015 in the same box via the same service level. On the way back to your facility, the box passes through one of the carriers' hub processing facilities and is scanned by a 3-D scanner to determine the dimensions of the box to apply the DIM (dimensional) weight instead of the actual weight.*

*That package now costs you \$13 in shipping charges for which you will be billed by the carrier and which may appear on your February or March invoice. This scenario may be possible after December 29, 2014 when DIM weight will be applied to all boxes shipped via a domestic US Ground service. Are you preparing now for the effects that the change in DIM Weight Pricing will have on your bottom line?*

### Information for companies new to or familiar with DIM Weight Rating and the Upcoming Changes

You are probably hearing and reading a lot about the DIM weight changes that will be taking place in approximately four months. This article can help you better understand how to prepare for the new rating changes. If you are not familiar with DIM weight rating, this paper will explain the basics of DIM weight calculations, the changes that are taking place, how you and your customers may be affected, and what you can do to prepare for those changes.

### Dimensional Weight (DIM) Rating Changes by UPS and FedEx

Beginning December 29, 2014 for UPS and January 1, 2015 for FedEx, anything you ship via a domestic US ground service with either carrier in a one cubic foot box (12" x 12" x 12") should weigh at least 11 pounds. That's the minimum weight you will be paying to ship a one cubic foot box. Of course, that's assuming that the existing domestic US ground service DIM Weight Factor of 166 doesn't change at that time as well. The three dimensions of the box are multiplied together then divided by the factor to calculate the DIM weight. See the formula under How is DIM Weight Calculated?

### Minimum weight: 11 Pounds for a One Cubic Foot Box

To put that into perspective, if the package actually weighs 5 pounds, today you will only pay the shipping rate for 5 pounds for the domestic US Ground shipment. However, after the end of the year, whether the package weighs 2 pounds or 10 pounds, the shipping charges will be calculated as if it weighs 11 pounds at a DIM weight factor of 166, because a DIM weight rating will be applied to ALL packages instead of only a 3 cubic foot or larger package as it is now.

## How is DIM Weight Calculated?

Currently, UPS and FedEx apply DIM weight rating to all air and international service packages and also to ground service packages that are 3 cubic feet or more in size. So the major adjustment is to the size of the box for domestic Ground services.

The dimensional weight of a package is calculated by multiplying its length by its width by its height and then dividing that number by a standard number, the DIM factor. We've included two examples below for reference.

**Length x Width x Height / DIM Factor (166 for domestic air and ground services) = DIM Weight**

- **12 x 12 x 12 / 166 = 10.41 lbs. rounded up, to the next whole number, 11lbs / cubic foot**
- **6 x 6 x 6 / 166 = 1.3 lbs. rounded up to 2 lbs**

Domestic US air and ground services today use the same DIM factor of 166 while international services currently use a DIM factor of 139. Simply stated, with a DIM factor of 166, dimensional weight will be calculated for ground services at a rate of about 11 pounds per cubic foot. Then, the DIM weight is compared to the actual package weight. The larger of the two numbers is used to calculate the shipping charges.

The DIM weight is used to compare the amount of physical space a package occupies to the actual weight of the package. Calculating the DIM weight of a large, light-weight package allows the carrier to more accurately equate the cost of delivering it to the cost of delivering a smaller, heavier package. For example, we learned in grade school that a ton of bricks doesn't weigh more than a ton of feathers, but it would cost a carrier more to deliver a ton of feathers across the country via air service than it would cost to deliver a ton of bricks via the same service.

Immediately following the 2014 holiday shipping demand, carriers will apply the DIM weight rate to a smaller box to cover some of the costs of increased shipping created by the ever increasing volume of online purchases.

Carriers have been affected by the dramatic increase in online shopping and shipping discounts. For the carrier, delivering a larger box is more expensive in terms of fuel costs for more deliveries, space on trucks and airplanes, and additional labor. To accommodate for the additional cost and capacity, shipping charges will be adjusted. While the change will not affect outbound or return shipments prior to December 29, it will affect outbound and return shipments by customers and stores that occur after December 29, 2014 if shipped by UPS and January 1, 2015 if shipped by FedEx.

## YOUR SHIPPING SOLUTION PROVIDER SHOULD BE PREPARING THEIR SOFTWARE TO HELP YOU WITH DIM WEIGHT CHANGES

### Shipping Solution Provider Software Updates

UPS and FedEx made their announcements independently within about a month of each other. Where typically they make announcements regarding any changes affecting shipping rates much later in the year, they made their announcements early, possibly to give everyone involved – shippers, VARs, integrators, software developers, package manufacturers – an opportunity to prepare for the change.

As with annual rate changes, shipping solution providers should already be in the process of preparing software updates to help their customers prepare for the upcoming change. Providers like ConnectShip which develops online and on-premise multi-carrier shipping solutions, are either already looking into updating their software to accommodate the change or soon should be.

Shipping solution providers must update their software to automatically apply the DIM weight based on the dimensions of the package instead of the actual weight. You must apply the update to your software to make the change to your system.

If you already have a shipping solution, there has never been a better time to be on the most current software version than now, before the DIM weight rate change takes effect.

Whether you manufacture and ship your own products or prepare and ship packages for other companies, you are probably already aware that the DIM weight changes will be effective just in time for returns from the 2014 holiday shopping season. You can't afford to wait for the change to take effect. Contact your solution provider to ask when an update will be provided. Here at ConnectShip, we will provide the update to our customers before the DIM weight rate takes effect.

## If you don't use a shipping solution to automate your shipping processes, begin the analysis.

If you are shipping more than 50 packages a day, it is worth the time to begin researching solution providers and get a demonstration and/or proposal for integrating a shipping solution into your business processes such as your WMS, TMS or ERP system. Automating the process of rating and shipping can save you money, time, labor and errors, particularly for shipping charges that are determined by the DIM weight rate instead of the actual weight. Remember, you will be charged the higher of the two.

## Will my customers or I be affected?

Perhaps a more accurate question is "How much will my customers and I be affected?" Industry experts estimate that as much as one third of all domestic ground shipments being handled today will be affected (cost more) by the change if everything else remains the same between now and the end of the year. Of the top 25 most popular box sizes in the US, the dimensions of 15 of them that were previously excluded (less than 3 cubic feet; < 5,184 cubic inches) will put them into the new DIM weight category.

## What can we do to minimize the impact?

Determine what types of products you ship. How much product can you put in a box and still allow room for adequate dunnage? Approximately how much does a box normally weigh in your shipping operation compared to its dimensional weight?

First, take a hard look at your shipping practices.

- A. Review the dimensions of the packages and the services you regularly use. If all of your ground service packages are dimensionally greater than 3 cubic feet (example: 18 x 18 x 16 = 5,184 cubic inches) or all of your shipments go via a UPS or FedEx AIR service, you shouldn't be considerably affected by this change. Your shipments are already being subjected to the DIM weight calculations.
- B. Apply the math:  $5184/166 = 31.23$  pounds rounded up to 32 pounds. The highest dimensional weight that can be calculated for a package that measures less than or equal to 3 cubic feet is 32 pounds. If all of your ground shipments actually weigh 32 pounds or more, even if they are less than 3 cubic feet, the DIM weight calculated won't have an effect on the current freight calculations.
- C. If A and B don't apply to your situation, examine your packaging practices. Is it feasible for you to switch to smaller box sizes? Do you need all of the dunnage you're using? Is a more efficient but less bulky packing material available?

Second, consider reviewing your contract with the carrier. Your existing primary carrier may be willing to compromise on the DIM factor, allow you to continue with the 3 cubic foot threshold, or agree to a different threshold that works well for the majority of your packages. They may also offer to evaluate your packing processes and provide recommendations that will help to mitigate the impact of these changes.

We reached out to Brian Leary, SVP of Postea, a global provider of dimensional and data scanners, to get an international perspective on the changes to DIM weight.

*"If you want to rate shop across carriers, you will need to know the dimensional weight or DIM," explains Leary. "The list of carriers using DIM is going to increase because in the carrier world, trucks and planes fill up before they "weigh out" or reach their maximum weight capacity. In Europe and Asia where we do quite a bit of business, DIM has been used for years. Here are list of considerations from that perspective:*

*DIM Charge Back – The carrier charges for incorrect DIM are much larger than typical carrier assessments and can cost hundreds of dollars. Shippers can contest an erroneous chargeback but they will need to have a process or work with a vendor that can take a picture of the box and record the DIM. Without this formal process, shippers have no way to dispute the charges or the penalty assessed.*

*Customers must consider how they will audit and comply with insurance and other post-shipment issues that arise.*

*Packaging – Many of the customers we work with now are using poly bags and minimal packaging to mitigate waste, DIM, cost and the environmental impact of over packaging. When DIM was first rolled out in Europe and Asia, we saw a faster adoption of minimal packaging techniques. To drastically decrease costs and DIM, think not only in term smaller cuboid or multi-sided boxes, but also of minimal and irregular packaging."*

**Finally, the most important thing is NOT to procrastinate. Right now, there's time to investigate, review your operations and make changes that will save you money. Making some changes in efficiency now may also save you money this peak season.**

## **ABOUT POSTEA**

Postea is forging a new generation of technology solutions for the e-commerce, logistics, freight, distribution, courier and POS industries. Not evolutionary improvements – but disruptive innovations that offer demonstrable efficiencies and new market and revenue opportunities for our customers.

**Brian Leary**, as Senior Vice President of Business Development for Posteo, is responsible for developing channel and business partnership. He has an extensive operational and business development background in the logistics and office equipment industry. He has worked globally for companies such as Pitney Bowes, Neopost, Ascom Hasler, Xerox and UPS, and is a member of the Customer Engagement Technology World Advisory Board.

**Information can be found at [www.postea.com](http://www.postea.com).**

## **ABOUT CONNECTSHIP | ISHIP**

ConnectShip, Inc. and iShip, Inc. are wholly owned subsidiaries of UPS, that collaborate and jointly develop multi-carrier on-premise and off-premise multi-carrier shipping solutions for mid-sized and enterprise level companies looking for one source on which to rely to optimize their supply chain. Information about the company can be found at [www.connectship.com](http://www.connectship.com) and by calling 866.461.4441.

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**Julie James** is a Marketing Manager for ConnectShip. During her six years with the company, Julie has held the position of Product Marketing Supervisor and Marketing Manager. Among her responsibilities are content creation, product communications, brand development, and production of the bi-annual user conference, ICON. She holds a BA in Business Administration and has more than 35 years in various marketing disciplines, including high-tech and consumer marketing strategy, advertising, and public relations.

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