# Gordon Graham Order

Point Calculations

Introduction

For years, Gordon Graham taught inventory management to distributors. His method combined several inventory concepts with a focus, letting the computer do what it did best, but turning control over to the buyer when necessary. Future FAQ's will go into detail on those areas the computer software tends to struggle with.

When you go to the inventory inquiry screen below, if you have chosen to use the Gordon Graham method of order point and quantity calculations, the screen will show that in the top right-hand corner.

This screen provides all the information needed to understand how the order points and quantities are being calculated.
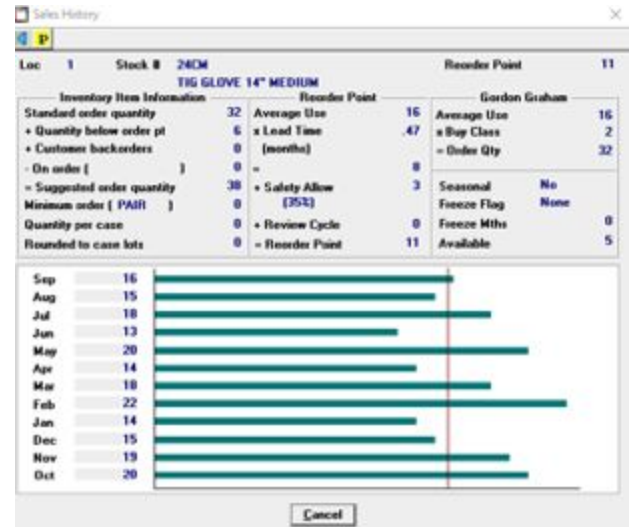
You always start with the average usage. We see here that the average usage is 16. This calculation is pulled from the inventory record and is based on the last six months of sales history. If we look at the sales of these gloves by month for the last six months, we can quickly see that this it's a reasonable average. To confirm it is correct you simply add the sales by month for the last six months and divide the total by six. Our total for September back to April would be 96 and 96 divided by 6 equals and average of 16.

Next you multiply the Average Usage by the Buying Class. The Buying Class on this item is calculated by the system to be 2 which means the system recommends you purchase a two-month supply. The Buying Class will be explained in more detail in a future FAQ. The result of multiplying the Average Usage by the Buying Class is the Order Quantity or Standard Order Quantity. In a perfect world you would order 32 pairs of the 24CM glove when it is time to reorder. But how do you know when to reorder?

The Order Point or Reorder Point is a function of how much you're selling (Average Usage) multiplied by how long it takes to get the item in once it's ordered (Lead Time). The Lead Time is expressed as a percentage of a month. In this example, our Lead Time is 14 days so that works out to just under ½ of a month. Our multiplier then is .47. The reason you need this number is because you cannot order the product and miraculously get it in the same day. This part of the formula tells us how much product will be sold while I am waiting for the product to come in from the vendor. The quantity of 8 in this example is how many we will sell while waiting on the order to come in from the vendor. Theoretically, if you ordered when the available for sale got down to 8, your new inventory would come in just as the last one on the shelf was sold. That rarely happens. Sometimes the

delivery date falls on a weekend or a holiday. Or maybe you're busy and you don't have time to place the order and you don't re-order for several days. Now you're facing an out of stock situation. You don't want to run out of stock, so you use the Safety Allowance to build in a cushion so that you don't run out of stock waiting for delivery of your order. **NOTE**: 35% is a recommended cushion for the Safety Allowance, but if you're constantly running very low, then you can simply increase the Safety Allowance and the system will trigger an order earlier by raising the Reorder Point. The quantity sold during the Lead Time plus the Safety Allowance cushion gives us the Reorder Point. In this example, we should sell (on average) eight pairs of these gloves while we are waiting on the new order to come in. However, we don't want to run out, so we use the Safety Allowance to give us a cushion of 3 which makes our Reorder Point 11.

Once the Available for Sale hits the Reorder Point, you're ready to place an order. Once again, though, we do not live in a perfect world, so we want the system to look at three more things for us:

1. First, we know we should order 32 (Average Usage multiplied by Buying Class), but how far are we below the Reorder Point when we place the new order? In this example our available is 5 which means we are 6 pairs of gloves below the Reorder Point, so we need to factor that in.

TIG GLOVE	
Inventory Item Information	
Standard order quantity	32
+ Quantity below order pt	6
+ Customer backorders	0
- On order ( )	0
= Suggested order quantity	38
Minimum order (PAIR)	0
Quantity per case	0
Rounded to case lots	0

2. Next, we need to know if we have any Customer Backorders. You could go all the way to 0 available and then have a Customer Backorder. So, you need to add any Customer Backorders to the Order Quantity.

3. Finally, what if someone else in the company had just placed an order for these gloves? You would need to subtract what has been ordered so you do not end up with surplus.

The beauty of this method is that the software will do all this for you, but it's still easy to understand and easy to replicate with a simple calculator.

For more information on Order Point and Order Quantity Calculation, contact your Software Support Representative.

Have questions? Feel free to send us an email, we welcome the questions!

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