X.1 | Divide By Field

About

The available options for the **Quantity** field (explained in the "Quantity Field" section) do not fully allow the user to define the units of some service types, such as the following:

Service Type	Unit
Cutting: Usually priced by number of	Lifts
Drilling: Usually priced by number of	Lifts
GBC Hole Punch: Usually priced by number of	Lifts
Padding: Usually priced by number of	Pads
Wrapping, Packaging: Usually priced by number of	Packages

Therefore, to accurately set up these services, you must use the **Divide by…** field in addition to the parameter you choose in the **Quantity** field. In some cases, you may also need to use the **Multiply by** field to define the final quantity of the service.

In the following pages, the setup configuration for a Cutting service is explained. The setup configurations for the other service types mentioned above follow a similar pattern and the differences are explained after the Cutting service.

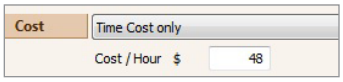
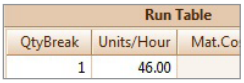
First, a brief review of the basic setup configuration of a Cutting service may be helpful.

Cost and Price Setup of a Cutting Service – A Brief Review

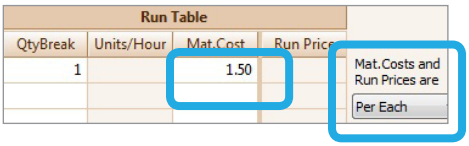
As with some other Printer's Plan services, you can set up a Cutting service as:

- Time Cost only, or
- Material Cost only.

The following chart shows the setup guide for both options and how Printer's Plan calculates the cost of the service for each option.

If the "Cost" field contains:	and the Run Table setup contains:	Service Cost is Calculated as:
	Units/Hour is Lifts/Hour 	Service Time = Number of Lifts/ (Lifts/Hour) Service Cost = Service Time * Cost/Hour

X.1 | Divide By Field

	Material Cost is Cost/Lift 	Service Cost = Number of Lifts * (Cost/Lift)

If the **Run Price** column or the **Price Table** is used, the prices must be entered as Price per Lift, Price per Thousand Lifts, or Price for Total Lifts, depending on the choice selected in the **Mat. Costs and Run Prices are** field.

Using the "Divide by…" Field for a Cutting Service

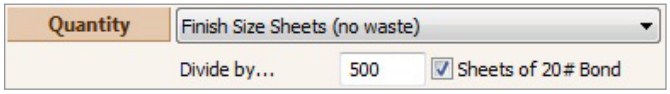
Defining the Quantity as "Number of Lifts"

To define the quantity of a cutting service in Lifts:

Select, in the **Quantity** field, what is to be cut, such as Finish Size Sheets, and, in the **Divide by…** field, enter the number of sheets that can fit into the cutter in one lift, such as 500. Then, the quantity of sheets to be cut is divided by the number in the **Divide by…** field to calculate the number of Lifts.

EXAMPLE A

A Cutting service is set up as follows:



Assume the job is to trim one side of 2,000 Finish Size sheets. Then:

Number of Lifts = (total number of sheets to be cut) / (number of sheets that fit into the cutter in one lift)

= 2,000 / 500 = 4 Lifts

"Sheets of 20# Bond" Check Box

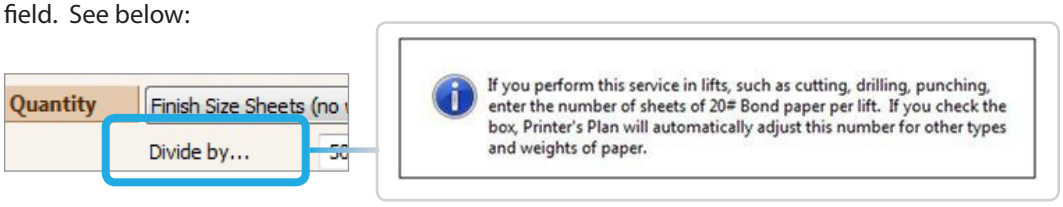
In Printer's Plan you can control the lift capacity of your cutter for each paper type as explained in the following paragraph:

A checked box next to **Sheets of 20# Bond** specifies the quantity in the **Divide by…** field as "Sheets of 20# Bond". Therefore, if the box is checked, then it is necessary to enter, in the

X.1 | Divide By Field

Divide by… field, the number of 20# Bond sheets that fit in the cutter in one lift. Then, Printer's Plan adjusts the Lift capacity for other papers by comparing the caliper for the paper used in the job with the caliper for 20# Bond paper.

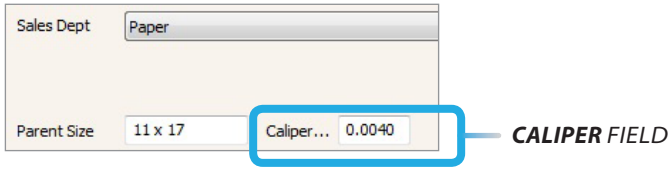
Clicking the **Divide by…** field name displays a window that summarizes the function of this field. See below:



CLICK TO SEE THE WINDOW ON THE RIGHT

NOTE: *For the **Divide by…** field, Printer's Plan always assumes the caliper for 20# Bond paper is 0.0040 regardless of the caliper value you assign to the actual 20# Bond paper. If another caliper value should be assigned to the 20# Bond paper, the software will adjust the lift capacity for that 20# Bond paper just like it does for other papers.*

REMINDER: *Caliper value is assigned within a paper type's setup window.*



Services | Papers | Paper Setup Window

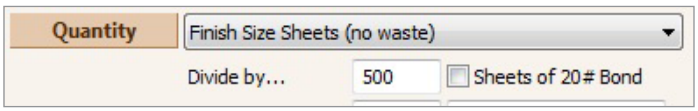
EXAMPLE B

*Assume a caliper value of 0.0095 is assigned to 65# Cover. Printer's Plan compares 0.0095 with 0.0040 (the default Printer's Plan caliper value for 20# Bond). Then, the software adjusts the number in the **Divide By…** field (500 in example A) to arrive at 210 as the Lift capacity for 65# Cover. Therefore, if 65# Cover is used in Example A for 2,000 finish quantity:*

*Number of 65# Cover sheets that can fit in the cutter in one Lift = 500 *0.0040 / 0.0095 = 210*

Number of Lifts = 2000 / 210 = 9.52 ⟶rounded up to 10 lifts.

What if the "Sheets Of 20# Bond" Box Is Not Checked?



If the **Sheets of 20# Bond** box has not been checked, Printer's Plan assumes a Lift capacity of

500 sheets for all types of paper, regardless of their caliper value. Therefore, for 65# Cover in Example B, the calculation would be:

Number of Lifts = 2000 / 500 = 4 Lifts

If you have upgraded from version 2008 or earlier:

In versions 2008 and earlier in which the **Caliper** field did not exist and additional paper categories were not available, Printer's Plan adjusted the lift capacity automatically, using the paper category and the paper weight information, such as 20# Bond and 80# Cover. In those versions, the property of each category was fixed; therefore, Printer's Plan was able to recognize each one. The program continues to use the same method if 1) the **Caliper** field is left blank, 2) the paper names start with the weight, and 3) the paper is created in one of the categories that also existed in the previous versions. However, if you add new Paper categories, the properties of which are more flexible, you must assign the caliper value to the papers you create in them. We recommend that, for consistency, you assign calipers to all your papers, including the ones in the categories which also existed in previous versions.

Multiple Cuts Per Sheet

If a job requires multiple Cuts per Sheet, Printer's Plan multiplies the Lift quantity for One Cut by the number of Cuts per Sheet. Therefore, if the job described in Example A requires four cuts per sheet, such as trimming all four sides of the finish size sheets, then:

*Total Number of Lifts = Number of Lifts for one cut * Number of Cuts per sheet*

= 4 x 4 = 16 Lifts

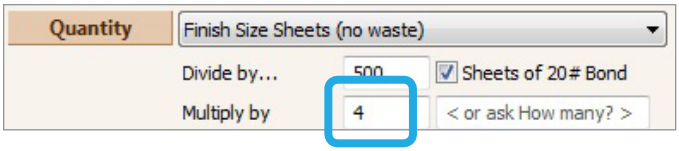
Assigning the "Number of Cuts Per Sheet"

To tell Printer's Plan how many cuts per sheet a specific cutting service needs, enter the number in the **Multiply by** field.

EXAMPLE C

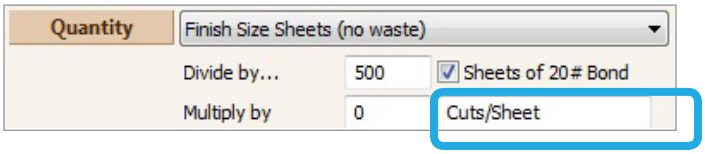
A Cutting service for trimming the finish size sheets on all four sides (4 cuts/sheet):

X.1 | Divide By Field

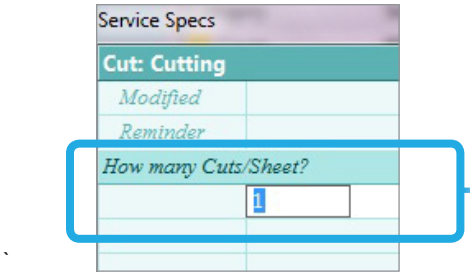


PRINTER'S PLAN MULTIPLIES THE NUMBER OF LIFTS FOR 1 CUT BY 4.

If you want Printer's Plan to ask for the Number of Cuts per Sheet when you define a job, enter `Cuts/Sheet` in the < or ask How Many? > field *(see the following setup graphic)*:



Then, when you define a job, Printer's Plan will display the following window to allow the desired Number of Cuts to be entered.

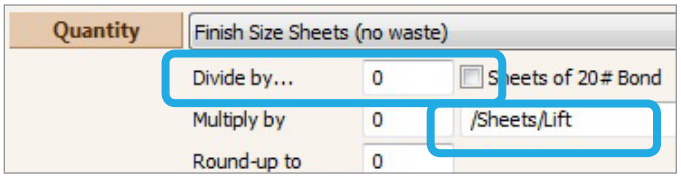


REPLACE "1" WITH THE NUMBER OF CUTS PER SHEET, SUCH AS 4.

Jobs Section | Specs Page | Cutting Service Specs Window

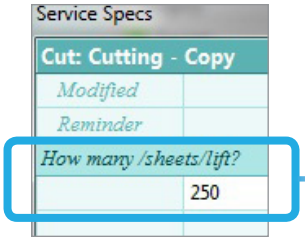
Printer's Plan Can Prompt for the Lift Capacity

If you want Printer's Plan to ask for the lift capacity when you define a job, enter 0 (zero) in the **Divide by...** field and leave the Sheets of 20# Bond check box blank. Then, enter /Sheets/Lift in the **< or ask How Many? >** field (*see the following setup graphic*):



Then, when you define a job Printer's Plan will display the following window to allow the desired Number of Sheets Per Lift to be entered.

X.1 | Divide By Field



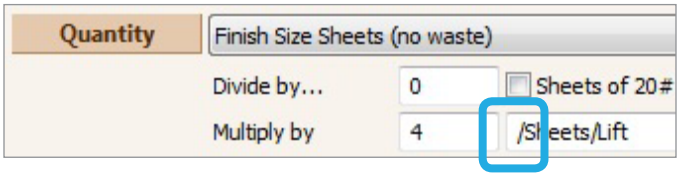
ENTER THE NUMBER OF SHEETS PER LIFT, SUCH AS 250, IN THIS FIELD.

Jobs Section | Specs Page | Cutting Service Specs Window

NOTE: *The forward slash (/) in front of the first word tells Printer's Plan to divide the quantity of the service by the number entered in this field.*

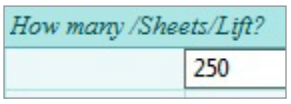
EXAMPLE D:

A Cutting service is set up as follows:



and,

when you define a job, you enter 250 as the Number of Sheets Per Lift:

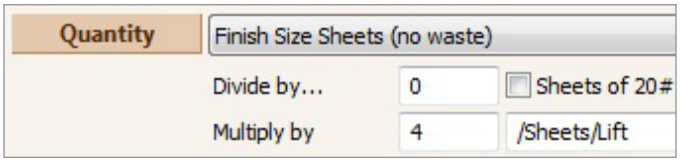


Jobs section | Specs window | Cutting Service Specs Window

Then for 2,000 finish size sheets:

Total Number of Lifts = 2000 / 250 = 8 Lifts

In the setup above, if you also enter a number in the **Multiply by** field so the setup looks as follows:



then Printer's Plan will multiply that number by the calculated Number of Lifts. See the following:

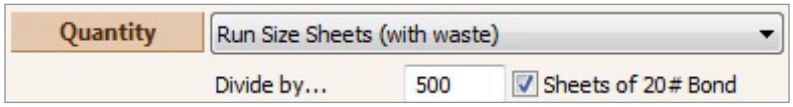
EXAMPLE D *(continued):*

For 2,000 finish size sheets:

*Total Number of Lifts = 2000 / 250 * 4 = 32 Lifts*

Cutting Run Size and Parent Size Paper

If Run Size sheets will be cut, select **Run Size Sheets (with waste)** in the **Quantity** field of the Cutting service. Then, Printer's Plan will use the Number of Run Size sheets to calculate the number of lifts.



Similarly, if Parent Size sheets will be cut, then it will be necessary to select **Parent Size Sheets** in the **Quantity** field.

Special Cutting Services: "To RunSz", "To FinSz"

When the Run Size in a job is smaller than the Parent Size, Printer's Plan automatically assigns the **To RunSz** cutting service to the job. Similarly, if the Finish size is smaller than the Run size, the program assigns the **To FinSz** service.

When Printer's Plan assigns these services in the Specs window of an Item, it also calculates the number of Cuts per Sheet automatically and uses this number in the price calculation. (The number of Cuts per Sheet calculated by Printer's Plan in an Item can be edited in the Specs window of the cutting service. See the "Jobs" chapter.)

NOTE: *In the database that originally comes with Printer's Plan, the **To RunSz** service is located in the **Bindery** category under the **Prep** department, and **To FinSz** is located in the **Cut** category under the **Finishing** department.*

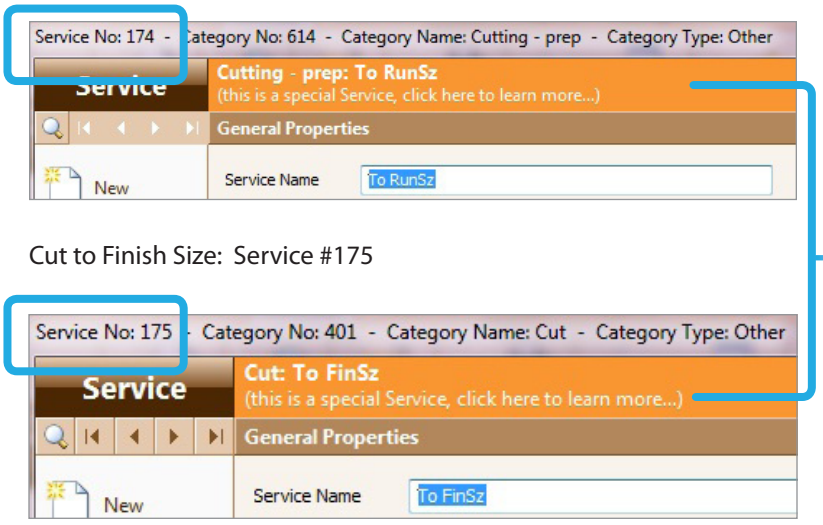
How Does Printer's Plan Know To Assign These Specific Cutting Services?

Printer's Plan knows these two cutting services from their Service Numbers—not from their names.

NOTE: Service Numbers are assigned by Printer's Plan internally and cannot be changed.

Cut to Run Size: Service #174

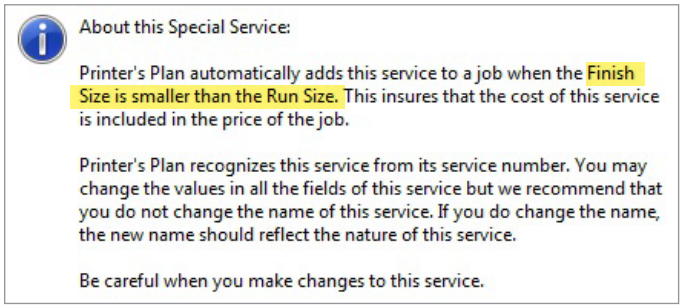
X.1 | Divide By Field



Cut to Finish Size: Service #175

CLICK TO OPEN THE ABOUT THIS SPECIAL SERVICE WINDOW.

If you want Printer's Plan to assign these cutting services automatically, you must preserve their nature as cutting to run size and cutting to finish size and must not change the default option selected in the **Quality** field ("Run Size Sheets (with waste)" and "Finish Size Sheets (no waste)" respectively). However, you may change their other properties, such as the speed and the cost. This prerequisite is also explained in the window that appears when the flashing orange bar is clicked. (This orange bar flashes four times and then returns to its normal color.)

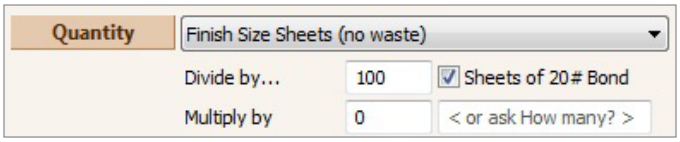


*READS AS "RUN SIZE IS SMALLER THAN THE PARENT SIZE" WHEN THIS WINDOW APPEARS IN THE **TO RUNSZ** SERVICE.*

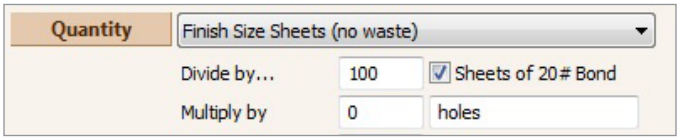
NOTE: *Printer's Plan does not allow services #174 and #175 to be deleted. Even if you delete them, Printer's Plan, when closed and reopened, will re-create the services again as **Discontinued** services. The services will have been re-created in category #401, which is the Cut category in the database that originally comes with Printer's Plan. Therefore, if you do not want to use these two cutting services, change each of their statuses to **Discontinued**.*

Drilling Service

If Drilling services are priced by Number of Lifts, then the setup of a Drilling service is similar to the setup of a cutting service: In the **Divide by…** field, enter the number of sheets that can fit in the driller in one lift; and, if Printer's Plan should adjust this number for Caliper, check the **Sheets of 20# Bond** box.



TIP: *If one hole per lift is drilled at a time and you want Printer's Plan to prompt for the number of holes per sheet, enter the word* `holes` *in the* ***< or ask How Many? >*** *field.*



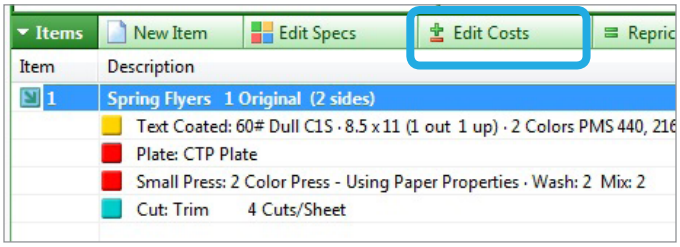
GBC Hole Punch

Follow the guidelines of a Drilling service to set up a GBC (or similar) Hole Punch service.

In a Job, Where Do I See the Lift Capacity Adjusted for the Paper Used?

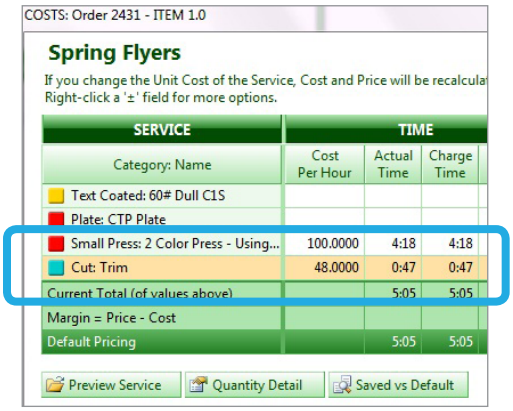
In a job, to see the Number of Sheets per Lift that Printer's Plan has adjusted for the Paper used:

1. In the Job window, highlight the Item, and click to open the Costs window of the Item.



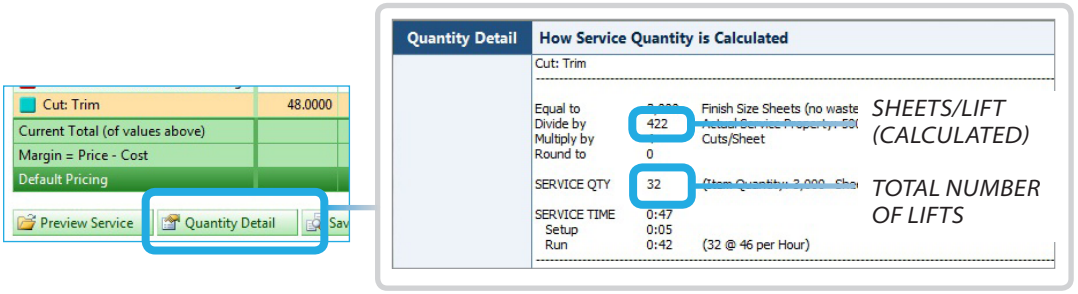
Job Window

2. Click on the Cutting service to highlight that row.



Costs Window of an Item

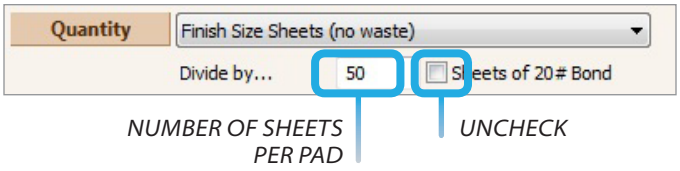
3. Click **Quantity Detail** to see the How Service Quantity is Calculated window.



How Service Quantity is Calculated Window

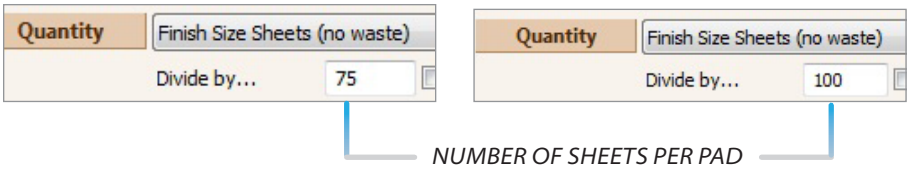
Padding Service

If Padding services are priced by Number of Pads, then the setup of a Padding service is similar to the setup of a Cutting service: In the **Divide by…** field, enter the number of sheets per Pad. Uncheck the **Sheets of 20# Bond** check box since adjustment for paper caliper is not necessary.



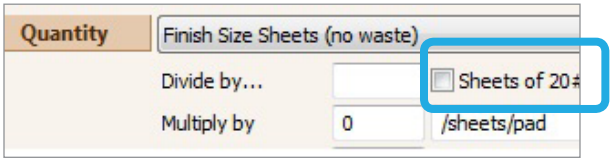
You must set up one Padding service for each pad size, such as 75 sheets/pad and 100 sheets/pad.

X.1 | Divide By Field



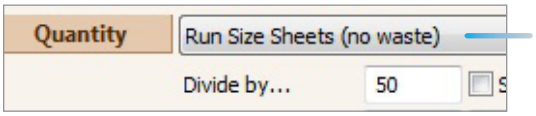
Printer's Plan Can Prompt for the Number of Sheets Per Pad

If you want Printer's Plan to ask for the number of sheets per pad when you create a job, the setup is similar to the cutting and drilling setup for the same set of conditions.



Running a Pad Job 2-Up

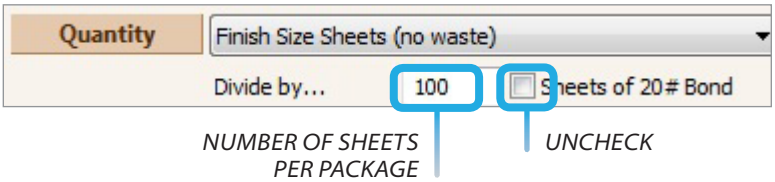
Often you may run a pad job 2-up, pad it, and then cut it to finish size. For this situation, set up a separate Padding service as follows:



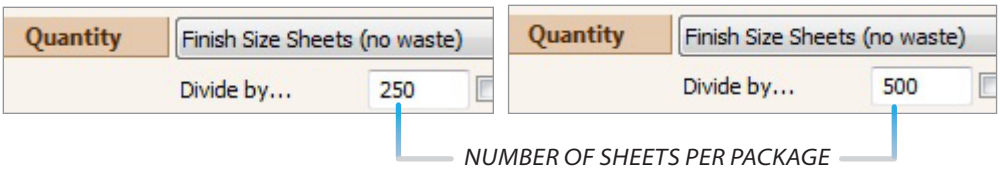
USE THIS SELECTION IN THE QUANTITY FIELD. CHOOSE THE ONE WITH (NO WASTE) BECAUSE YOU'RE PADDING THE RUN SIZE SHEETS AFTER THE WASTE SHEETS ARE USED UP.

Wrapping/Packaging Service

If you price the Wrapping or Packaging services in Number of Packages, then the setup of a Wrapping/Packaging is exactly like a Padding service setup: In the **Divide by...** field, enter the number of sheets per Package. Uncheck the **Sheets of 20# Bond** check box since adjustment for paper caliper is not necessary.

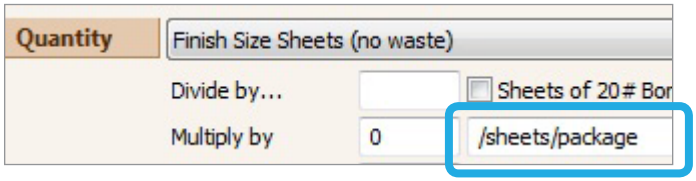


You must set up one Wrapping/Packaging service for each package size, such as 250 sheets/package and 500 sheets/package.



Printer's Plan Can Prompt for the Number of Sheets Per Package

If you want Printer's Plan to prompt for the number of sheets per Package, the setup is similar to the Padding, Cutting, and Drilling services setup for the same set of conditions.



Divide By Exception

If a Service is set up such that **Item Quantity** is selected in the **Quantity** field, Printer's Plan divides the **Divide by** value by the Number of Sheets per Set instead of dividing the Item Quantity by the **Divide by** value. This setup configuration is especially useful for a cutting service that will be used for trimming books.

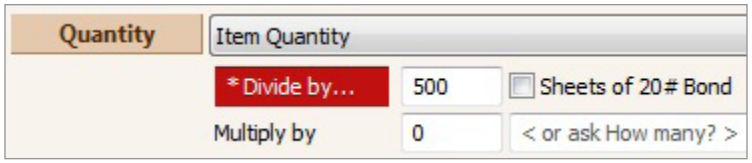
EXAMPLE E:

You want to trim 1,000 books after they are assembled, and each book has 75 sheets as shown below:

Item Specs Window of the Book Job

Your cutter can handle up to 500 sheets per lift. ***Item Quantity*** *is selected in the* ***Quantity*** *field of the cutting service as shown below:*

X.1 | Divide By Field



Cutting Service Setup Window

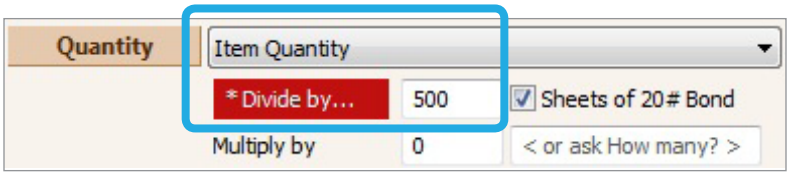
To calculate the total number of Lifts, Printer's Plan calculates the Number of Books per Lift and then calculates the total number of Lifts.

Books per Lift = Divide by Value / Sheets per Set

= 500 / 75 = 6 books per Lift

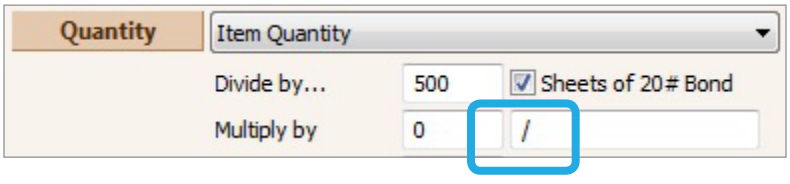
Service Quantity = 1000 / 6 = 167 Lifts

NOTE: *When a Service is set up as* ***Quantity = Item Quantity*** *and a value is assigned to the* ***Divide by...*** *field as in Example E, the* ***Divide by...*** *field name turns red and is marked with an asterisk to indicate that the* ***Exception*** *is enabled. See below:*



To Turn Off the "Divide by Exception":

Type / in the **< or ask How Many? >** field.



THIS SPECIAL CHARACTER TURNS THE EXCEPTION OFF. THEN: SERVICE QUANTITY = ITEM QUANTITY / VALUE IN THE DIVIDE BY FIELD AND IN EXAMPLE E: SERVICE QUANTITY = 1000 / 500 = 2

NOTE: *Services, such as Cutting, Padding, and Wrapping sheets are usually set up as Quantity = Finish Size sheets or Quantity = Run Size sheets. For this reason, these services are not affected by the Divide By Exception.*