

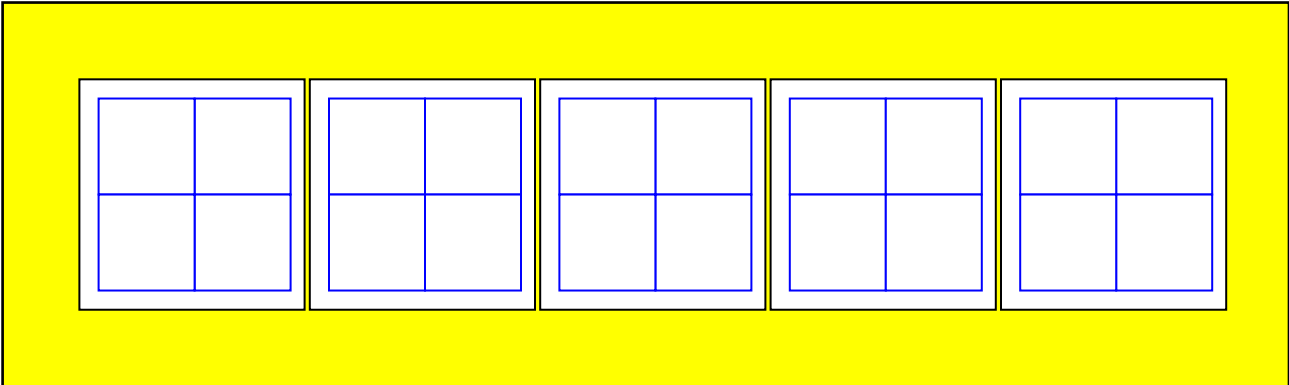
CALCULATION TYPES

MIETrak “Quoting” module has a number of different ways to calculate the cost of Material. To pick which way to calculate material costs you would use the “Calculation Type” field. The following are the calculation types that are available:

1. Single Part Price
2. Calculate Including Scrap
3. Calculate W/Out Scrap
4. Amortize
5. Lot Price
6. Calculate Blanks Including Scrap
7. Calculate Blanks W/Out Scrap

To demonstrate how the different calculation types work, we will assume the following :

Blank Size = 40.625” X 38.125”	Vendor Unit (CRS 16 GA, weight of sheet)= 100.0 lbs.
• Top Trim = 1”	Sheet Size = 48” X 120”
• Right Trim = 1”	Part Size = 18” X 18”
• Bottom Trim = 3.5”	Breakout Price = \$ 0.25
• Slitting Tool = .125”	Part (s) = 4 parts per blank
	Blanks = 3 blanks per sheet
	Quantity Quoted = 10



1. **SINGLE PART PRICE** -- The amount in the price breakout is charged for each part regardless of the quantity quoted. (Note : The breakout quantity is based on per unit.)

(breakout price) = cost per part
\$ 0.25 = cost per part

2. **CALCULATE INCLUDING SCRAP** – Takes the cost of one whole sheet and divides it into the number of parts per sheet to get the cost per part.

$$\begin{aligned} &(\text{weight of sheet}) \times (\text{breakout price}) = \text{cost of a sheet} \\ &100.0 \text{ lbs.} \times \$ 0.25 = \$ 25.00 \end{aligned}$$

$$\begin{aligned} &(\text{cost of a sheet}) / (\text{total number of parts}) = \text{cost per part} \\ &\$ 25.00 / 12 \text{ parts} = \mathbf{\$ 2.08333} \end{aligned}$$

3. **CALCULATE W/OUT SCRAP** – Takes the cost of all the blanks in one sheet and divides it by the number of parts in one sheet to get a cost per part.

$$\begin{aligned} &(\text{width of sheet}) \times (\text{length of sheet}) = \text{sq. inches in a sheet} \\ &48 \text{ in.} \times 120 \text{ in.} = 5760 \text{ sq. inches} \end{aligned}$$

$$\begin{aligned} &(\text{width of blank}) \times (\text{length of blank}) = \text{sq. inches in a blank} \\ &40.625 \text{ in.} \times 38.125 \text{ in.} = 1548.8281 \text{ sq. inches} \end{aligned}$$

$$\begin{aligned} &(\text{sq. inches in a blank}) \times (\text{weight of sheet}) / (\text{sq. inches in a sheet}) = \text{weight of blank} \\ &1548.8281 \text{ sq. in.} \times 100.0 \text{ lbs.} / 5760 \text{ sq. in.} = 26.889376 \text{ lbs.} \end{aligned}$$

$$\begin{aligned} &(\text{weight of blank}) \times (\text{quantity of required blanks}) = \text{weight of all blanks} \\ &26.889376 \text{ lbs.} \times 3 \text{ blanks} = 80.668128 \end{aligned}$$

$$\begin{aligned} &(\text{weight of all blanks}) \times (\text{breakout price}) = \text{price of all parts} \\ &80.668128 \times \$ 0.25 = \$ 20.167032 \end{aligned}$$

$$\begin{aligned} &(\text{cost of all parts}) / (\text{total number of parts}) = \text{cost per part} \\ &\$ 20.167032 / 12 \text{ parts} = \mathbf{\$ 1.680586} \end{aligned}$$

4. **AMORTIZE** – Takes the cost of the whole sheet and divides it by the quantity quoted.

$$\begin{aligned} &(\text{weight of sheet}) \times (\text{breakout price}) = \text{cost of a sheet} \\ &100.0 \text{ lbs.} \times \$ 0.25 = \$ 25.00 \end{aligned}$$

$$\begin{aligned} &(\text{cost of a sheet}) / (\text{quantity quoted}) = \text{cost per part} \\ &\$ 25.00 / 10 = \mathbf{\$ 2.5} \end{aligned}$$

5. **LOT PRICE** – Takes the breakout price and divides it by the quantity quoted to get the cost per part.

$$\begin{aligned} &(\text{breakout price}) / (\text{quantity quoted}) = \text{cost per part} \\ &\mathbf{\$ 0.25} / 10 = \$ 0.025 \end{aligned}$$

6. **CALCULATE BLANKS INCLUDING SCRAP** – Adds the cost of all the blanks to the cost of the scrap (evenly divided) and divides it by the quantity quoted.

$$\begin{aligned} &(\text{weight of sheet}) / (\text{number of blanks per sheet}) = \text{weight of blanks and scrap} \\ &100.0 \text{ lbs} / 3 \text{ blanks} = 33.333333 \text{ lbs.} \end{aligned}$$

$$\begin{aligned} &(\text{weight of blanks and scrap}) \times (\text{breakout price}) = \text{cost of each blank and scrap} \\ &33.333333 \text{ lbs.} \times \$ 0.25 = \$ 8.3333332 \end{aligned}$$

$$(\text{cost of each blank and scrap}) \times (\text{number of required blanks}) = \text{cost of all parts}$$

$$\text{\$ } 8.3333332 \times 3 \text{ blanks} = \text{\$ } 24.999999$$

$$(\text{cost of all parts}) / (\text{quantity quoted}) = \text{cost per part}$$

$$\text{\$ } 24.999999 / 10 \text{ quoted} = \text{\$ } \mathbf{2.4999999}$$

7. **CALCULATE BLANKS W/OUT SCRAP** – Takes the cost of all the blanks and divides it by the quantity quoted.

$$(\text{width of sheet}) \times (\text{length of sheet}) = \text{sq. inches in a sheet}$$

$$48 \text{ in.} \times 120 \text{ in.} = 5760 \text{ sq. inches}$$

$$(\text{width of blank}) \times (\text{length of blank}) = \text{sq. inches in a blank}$$

$$40.625 \text{ in.} \times 38.125 \text{ in.} = 1548.8281 \text{ sq. inches}$$

$$(\text{sq. inches in a blank}) \times (\text{weight of a sheet}) / (\text{sq. inches in a sheet}) = \text{weight of a blank}$$

$$1548.8281 \text{ sq. in.} \times 100.0 \text{ lbs.} / 5760 \text{ sq. in.} = 26.889376 \text{ lbs.}$$

$$(\text{weight of a blank}) \times (\text{breakout price}) = \text{cost of a blank}$$

$$26.889376 \text{ lbs.} \times \text{\$ } 0.25 = \text{\$ } 6.722344$$

$$(\text{cost of a blank}) \times (\text{number of blanks required}) = \text{total cost}$$

$$\text{\$ } 6.722344 \times 3 \text{ blanks} = \text{\$ } 20.167032$$

$$(\text{total cost}) / (\text{quantity quoted}) = \text{cost per part}$$

$$\text{\$ } 20.167032 / 10 \text{ quoted} = \text{\$ } \mathbf{2.0167032}$$