Absolute Perfect Inventory Planning

Most manufacturers offer a wide range of residential products to take care of the various applications, size, efficiency and other considerations. Here are just a few examples:

**Split System Consideration:**

* **Furnaces**
* Up-flow for basement & closet applications.
* Horizontal for attic & crawlspace applications.
* Down-flow for crawlspace & special applications.
* **Condensing Units**
* **Heat Pumps**
* **Air Handlers**

**Packaged Equipment**

* **A/C and Gas Combination (both ground level & rooftop applications)**
* **Heat Pump (both ground level & rooftop applications)**

**Size Considerations**

* **Condensing Unit & Heat Pump Tonnage**
* **Gas Heating BTU Capacity**
* **Strip Heat KW Capacity**

**Efficiency Considerations**

* **Various SEER Ratings for condensing units & heat pumps**
* **Various AFUE Ratings for gas furnaces**

**Other Considerations**

* **Refrigerant Types**
* **Gas Fuel (Natural & LP)**
* **Variable Air Volume**
* **Two Stage Gas Heating Options**
* **Etc.**

Consequently it’s difficult for most manufacturers and distributors to maintain enough stock for immediate delivery. ***Some can and do and some do not do so well at this most important function of having what you need when you need it!***

Manufacturers and distributors recommend and try to position the proposition so their dealers take responsibility for stocking all immediate needs and then rely on them for backup inventory.

This solves their distribution inefficiencies and lowers their working capital requirements.

Distributors/manufacturers often offer various programs like **Early Season Stocking Programs and** **Consignment (pay only after you sell it) / Floor Planning (Pay when you sell it or mandated pay after a term)** to encourage their dealers to stock equipment.

As an owner or General Manager you have to evaluate the benefits and your need to participate in these programs. Sometimes they are worthwhile and the considerations range from your space, to the financial aspects of such a program or deal? Lucrative cash discounts may be offered and make the proposition worthwhile. Each program stands on its own!

As mentioned previously in this article, you should stock the most used items that represent 75% to 80% of your business.

Your distributor or manufacturer’s ability to replenish this stock is the critical question.

The conventional logic says that a company should try to stock for a 30 – 45 day period.

This logic implies 8 to 12 equipment turns a year. Considering the need for safety stock and the probability of missing forecast, the turns will be less. Keep in mind the quicker the distributor or manufacturer can restock orders, the inventory turns increase, less inventory is needed and less capital is tied up in inventory.

**Absolute perfect** is zero inventory in your stock while the supplier never misses order fulfillment so you never miss a sales opportunity due to inventory!

In this scenario you both win, as you get to keep your capital, reduce your costs of warehousing, and all the variable and fixed expenses that go with the warehouse such as taxes, maintenance, damage, and the raw real estate expenses. So the goal is simple – Pick a strategy for your inventory planning:

1. Move toward absolute perfect and find a supplier who can support this, or
2. Negotiate the very best inventory stocking deal you can, knowing that supply, availability, finance, productivity, and customer satisfaction all hinge on this deal structure.

**Either # 1, or # 2 –** Or some variation is a must. So which strategy is best?

Begin by understanding the risks of not having inventory when you need it.

Obviously if you do not have the product, you can’t install it. Customers may not be willing to wait for the product to arrive. Like say a really hot summer?

They may not purchase in the first place or even cancel the sale once they find another company that has product.

In the end, you lose sales. Considering all the effort that went into marketing to get the lead and all the effort that went into creating a sales organization that’s able to close the sale, this is a **MAJOR tragedy**. There’s also the chaos within your company as people try to find equipment. So we affect productivity in multiple areas. How do you quantify that expense? No one tracks that yet we know it exists and it costs us countless hours!

Also recognize the potential costs in ordering frequently. There’s the additional time required to generate the purchase order and to receive the order itself. There’s also freight cost considerations on small orders.

There are things you can do to help the distributor or manufacturer improve their replenishment capability and move closer to **absolute perfect.**

1. Narrow your product offerings. Instead of letting your sales people sell from the manufacturer’s ‘sales book’, select what products your company intends to sell for residential replacement. Cookbook pricing is excellent means of defining your company’s product offerings. This does not prevent you from using other equipment to fit a special application or a customer request; however, this should be the exception and not the rule. **We can and do install ALL equipment makes; however, we focus on selling the key products in our selected offering!**
2. Have some idea as to quantity of equipment model numbers and sizes you intend to sell and when you will need it. This is called **‘forecasting’**. No one is perfect at forecasting equipment needs, but it’s still a very proactive exercise that helps you plan and manage your company. Here are some insights into forecasting:
3. Look at the company’s previous sales history. What product has sold in the past, in what quantities and at what time of year? Your distributor or manufacturer should be able to provide your equipment purchase history if your company has not maintained close records. Ask the TM for a report that details what you have bought from the supplier.
4. Think about external influences such as Utility Rebate Programs or distributor ‘pull through programs’ such as rebates. Will external influences affect your product purchasing patterns?
5. Are you planning for growth? What influence will company growth have on your purchasing patterns?
6. Create and begin executing marketing strategies to increase equipment sales during slow times of the year. This flattens your sales curve and provides consistency to equipment purchases, which is important to the distributor/manufacturer.
7. Check with your distributor/manufacturer to see what models will become obsolete and what new models are being introduced. Get a written agreement from your TM to remove obsolete equipment when it goes obsolete, or get a large price concession for obsolete equipment. If they do not want to play ball, a second line of equipment usually helps solve this issue.
8. Check closely with your distributor/manufacturer on model positioning and possible and the impact on pricing. For example, how do new refrigerant model condensing units stack up against the R22 models?

 Will this impact your company’s product positioning? See the other articles on Price Positioning on the web site for more information on positioning.

1. Update the forecast throughout the year.
2. Partner with your distributor/manufacturer to come up with an equipment replenishment plan that makes sense for your business. There are two options here:

**Option 1-** Negotiate a supplier warehouse inside your warehouse – You buy only from that supplier. The supplier sets up a warehouse inside the back of your warehouse. You set your OWN PRICES! You GUARANTEE the supplier an EBIT on the Sales price. The employee is owned by the supply house and expensed to them not you so you have eliminated your employee related warehouse costs. However you gain access to 24/7/365 inventory that is 100% coverage! Unconventional – You bet!

**Option 2 -** A conventional supplier relationship.

1. Share your forecast needs with your distributor/manufacturer. This lets the distributor/manufacturer be aware of your purchasing plans for the future and will better enable them to know what equipment to have when needed.
2. Negotiate with the distributor/manufacturer on their commitment to increase inventory turns as well as on price. Price is not the only consideration in these negotiations. There is ‘value’ to your company in the distributors/manufacturer’s ability to increase turns while having the equipment delivered when it’s needed.
3. Give special consideration to the distributor/ manufacturer’s ability to deliver product in a timely manner. What does your past experience with the distributor/manufacturer tell you? Have they run out of product in the past? What’s their freight policy? What’s the normal delivery time from their facility to yours?
4. Only stock what you need and not what the distributor/manufacturer wants to sell you. This often comes up in early season stocking programs and special pull-through marketing programs where the supplier is trying to move particular models of equipment.
5. Also consider your company’s ability to stock product. Consider the impact on cash flow and working capital needs. Do you have the space to stock product if you must stock extra product because of the distributor/manufacturers distribution inefficiencies or because you want to participate in some of their stocking programs?

Financial Considerations in Stocking

The preceding step mentioned the need to consider the impact a stocking order has on cash flow and on working capital.

You also want to consider the inventory carrying costs associated with stocking product.

See article on Understanding Inventory Management on this web site for more

information on inventory carrying costs.

Keep in mind that cash flow can affect your ability to take advantage of the distributor/manufacturers discounting terms.

This is usually around 2%. By planning your stocking and ordering, you are able to take the cash discount, which puts this 2% of the purchase amount down to the net profit line on your income statement.

**Some suppliers offer cash discounts, and others amazingly do not? Once again, a second line can help remedy this situation (See article on negotiating with suppliers)!**

If cash flow is a concern, consider the power of **financing through a bank line of credit**. Look at this scenario.

A company is considering borrowing $9,500 for one year to purchase inventory. Let’s be conservative and say the interest rate is 6%. Typically a bank line is 2% points over prime – Which is really around 4%, but stay with the 6% example since rates vary.

The interest cost will be $570 for 12 months.

* At 8 turns, the company could purchase $76,000 in equipment over the course of the loan.
* Since equipment is about 25% of direct costs for residential replacement sales, this could represent $304,000 in revenue.
* If the company achieves 10% net profit, this represents $30,900 profit less the interest cost.
* Since the money is available to take the cash discount (2% of $76,000), this means a savings of $1,520, which is $400 over the interest costs.
* This increases the net profit to $32,400. To make this work, you have to get the inventory turns for the equipment you purchase. This means selling and moving the product. You also want to be careful how financing will impact your current liabilities on the Balance Sheet. Still, financing can be a powerful tool in solving your inventory stocking needs.

Seasonal Stocking Programs

Distributors and manufacturers often offer Stocking Programs to their dealers.

They will generally give:

* Special payment terms.
* Special discounts or both as an incentive to placing a large equipment stocking.
* Extra Co-op or advertising allowance.
* Trip allowances or some form of incentive to the key manager/owner.
* Tie the Pull through consumer promotions to the programs.

They often tie the program to special dealer trips depending on the size of the order. It’s important to understand why they do this. The reasons include:

* Early Season Stocking Programs help them move boxes during slow times of the year. Most of their dealer’s sales fluctuate up and down based on seasonal demand. The Early Season Stocking Programs help them flatten their sales curves throughout the year. This is an important consideration for publicly traded companies.
* The whole industry is relatively questionable at forecasting channel demand. Many manufacturers make educated guesses in determining what products and sizes are needed in their production processes and have little reach into the dealers supply channel – So they really are guessing based on history.

Seasonal Stocking Programs provide a means of pushing products through the supply chain and softening their forecasting misses – Less pressure.

* Also moving product during slow-times of the year helps their cash flow and working capital positions. These are the same issues you face when you accept an early season order. In other words, they are transferring these issues down to their dealers.
* By ‘filling the barn’, some of the distributor/manufacturers feel like they have their dealer network focused on selling boxes. Knowing if you are plump with their product, you will SELL their product and not someone else’s product. It does make perfect sense!
* As selfish as this may sound, some executives at manufacturing companies want the free vacations that dealer trips provide. They would never admit it publicly, but it is accurate, and happens more than you care to ponder? Ask any former executive of a major supplier and see what they say about their wives expecting a trip each year?

As you are making a decision on participating in a, Seasonal Stocking Program, begin by accepting the fact that there is no ‘free lunch’.

There are a lot of administrative costs associated with Stocking Programs and with dealer trips.

Ask yourself who pays these costs?

You’ll quickly realize these costs are hidden in the price of the product. **It’s a FACT!**

Also always remember that Seasonal Stocking Programs are compensating for distribution inefficiencies in the manufacturer’s supply chain.

Consider the following when making your decision to participate in the program:

* Have you negotiated the best price upfront with your distributor/manufacturer? If your distributor/manufacturer talks about “zone pricing’ for all dealers in the area, realize that exceptions are always made to this policy. **See additional articles on this web site for more information on negotiating with manufacturers.** It’s better to negotiate the best pricing for your company than to be sucked into a trip that you’re company has to pay for.

It’s always an interesting exercise to compare fellow dealer prices from across the country.

* How reliable is your distributor/manufacturer? Do they have a history of running out of product? If so, perhaps you should consider taking on another line. Otherwise recognize your need to stock.
* Analyze your equipment needs through the peak season.
* Look closely at the payment terms and the equipment discounts being offered in the promotion. Consider all of your costs in stocking equipment. After negotiating your best price upfront, does the program make sense for your company?
* Do you have the warehouse space needed for the order you would like to make? Can you make arrangements to stagger deliveries over the course of the season? If you answer no to these questions, you may need to rent additional warehouse space. Some companies rent trailers, which store the equipment until needed. Often you can even negotiate the rental cost with the distributor/manufacturer having them pay the rental costs if the order is large enough.
* Be sure to negotiate the right to exchange product that did not move in the season for product needed in the next season. This lowers the risk and cost of holding product until next year.

Consignment/Floor Planning

Distributors/manufacturers call this practice by different names.

Essentially it puts the distributor/manufacturer’s equipment into the dealer’s warehouse.

The dealer draws upon this stock during the month. Towards the end of the month, the remaining stock is counted, the dealer is invoiced for what was used and a new consignment/floor plan stocking order is placed.

There are advantages and disadvantages to this type of program. The advantages include:

* Because you do not pay for equipment until you actually use it, the equipment invoice does not hit until after the installation is complete. This enhances cash flow and lowers working capital needs.
* Depending on the distributor or manufacturers CYCLE time – when they count and when they invoice you can often get extended terms without asking for them. Have your TM count the inventory on the 28th of the month, and you will likely miss the last billing cycle and get an extra 15-20 day terms and still be able to take cash discounts!
* Having equipment on hand improves the company’s productivity and increases the chances of making sales.

**The disadvantage includes:**

* Once again there is no ‘free lunch’. Just as with Seasonal Stocking Programs, be sure to negotiate your best deal for equipment pricing upfront.
* Many distributors/manufacturers require a minimum amount of turns to qualify for the program. Consequently dealers will probably need to stock their own equipment inventory in addition to the consignment/floor plan stock. This may create confusion doing the consignment/inventory counts.
* The consignment/floor plan stock will not fit in some computer inventory management software programs because it is not actually owned by the company and is not actual inventory on the Balance Sheet. The equipment is owned by the supplier, not the retailer.

If this is the case, you will need to create a tracking system on your own. Because the count is manual for most distributor/manufacturers programs, there’s always the possibility of creating errors. It’s a good idea to note both the model and serial numbers on the tracking system. It’s also a good idea to note what job the equipment was used. This quickly helps reconcile issues that may arise during the counts and when the invoice arrives.

* Many distributor/manufacturers require that product be used within a set time frame. This means you need to rotate the consignment/floor plan.
* Always have someone from your company be involved in the consignment/floor plan count.

Other Equipment Stocking Considerations

As mentioned earlier, the common recommendation was for companies to stock their needs for a 30 to 45 day period. If this is done well, it will result in 8 to 12 turns per year.

There’s a business philosophy that was introduced in the mid-90’s called **‘Lean Thinking’.**

One of the basic principles in this philosophy is for suppliers to deliver stock ‘Just-in-Time’ for replenishment.

Keeping stock inventory is considered a **‘non-value’ function.** This requires partnering with suppliers to achieve this ‘Just-in-Time’ goal.

Many suppliers are currently able to achieve daily replenishment and some even twice daily. At the manufacturing level, two weeks is what the distributor gets at present, and this will no doubt continue to improve as manufacturers battle for market share by trying to improve their distribution capabilities.

For more information on vendor relationships regarding inventory control processes, read ***Lean Thinking by James P. Womack and Daniel T. Jones***. Much of the information in this book concerns manufacturing and production, but the basic principles apply to any business that needs to replenish raw materials, parts and equipment. There’s an excellent reference in the book about a homebuilder who has incorporated ‘Lean Thinking’ among his sub-contractors including HVAC and Plumbing companies.

However, for those companies unable to partner with their suppliers, there’s still the need for stocking inventory, the need for safety stock and the need for all the carrying expenses associated with maintaining inventory.

Here are some ordering considerations for this situation:

* Early Season Stocking Programs or Consignment/Floor Planning will not take care of all of your stocking needs. To be safe, place your replenishment orders every month, a month ahead of when you need it.
* Look at the stock on hand. Is it balanced? Are some items moving slower than expected? Your next order should call for less of those items. Did some units move faster than expected? Your next order should call for more of these items.
* What time of year is it? How will the seasonal sales curve influence your inventory needs? Use your budget to determine how much you will sell, and what you may want to stock based on the budget. Will you need to add more or less air conditioning and heating items due to the upcoming season?
* How does the upcoming month’s sales look compared to an average month? If it looks heavier than usual, add to the order. If it looks less than usual, order less.

In our own companies one aspect we incorporate that may help you is this:

1. Set seasonal min-max quantities for what inventory you want to keep.
2. We establish these seasonal indicators based on what we call “Velocity”. This just means how fast we sell and install.
3. We look at these indicators each month to adjust them if needed. After a while you get pretty good at knowing the “Velocity”.
4. We then get our supplier to commit to an “economic Order Quantity”. This just means if we say we want to keep a minimum of 5 on hand, and we have 7 currently, and this week we sell 3, we now have 4. So we dropped below our minimum meaning we need to place an order.
5. We order – An economic order quantity is 5 and no freight costs from the supplier. So the 5 plus the 4 on hand brings us to 9. So we may carry two extra now, but the freight costs are zero
6. Each item has a min-max-economic order quantity and we review them 1 time a month in an operations meeting at the same time we review the financial and operational results. Changes are made based on what is happening in the business.