

What Battery Extractor Is Right For The Job?

Many items impact what Extractor is best for your customer.

To help simplify the decision process you can concentrate on (4) four main areas:

1. Cost \$
 2. Ceiling Height
 3. Room Size
 4. Efficiency/Productivity
- *Cost:* Determining what your customer has budgeted for a project, can quickly eliminate a few possibilities. Often, time and energy is spent engineering a battery extractor layout, only to find out, when presenting a quote to the customer that they have a limited amount to spend. Ask for a ball park budget first.
 - *Ceiling Height:* Allowable ceiling will quickly eliminate which system can or cannot be utilized.

A rule of thumb for ceiling height with stacked chargers is as follows:

- Single Stack 12 Feet
- Double Stack 16 Feet
- Triple Stack 20 Feet
- Quad Stack 24 Feet
- Five Stack 28 Feet
- Six Stack 32 Feet

- *Room Size:* On average 17% floor space can be saved by increasing the system height by an additional level. However, you may want to consult your sales engineer before using this as a rule of thumb. Based on the charger type, the amount that can be

stacked, may impact space requirement. Additional charger storage can result in auxiliary charger stands, thus reducing the potential space savings.

- *Efficiency/Productivity:* One of the most common reasons customers look to installing extractor systems is to reduce the battery change-out time. Reducing change-out times helps eliminate lift trucks from being backed up waiting on change-outs, thus increasing productivity.

Increasing productivity is probably the most important area on which to concentrate. Unfortunately, the increased stacking of systems often robs a customer of valuable change-out time. Extractors are similar to lift trucks in that they travel at greater speeds than they lift. Creating a system where more vertical lift is required, can greatly reduce productivity. When comparing manufacturer's specifications, pay particular attention to reduced travel speed at elevated heights.

Another down fall to multi-level stacking is that not all batteries at higher levels can be extracted using back-up equipment when a machine is down for maintenance.

- *To illustrate this,* if you had 200 batteries stored, the following number of batteries would be available on the lower level when your extractor is down.

System Type	Batteries Available
Single Stack.....	200
Double Stack	100
Triple Stack	67
Quad Stack	50
Five Stack	40
Six Stack.....	34

You can also cut this number in half, if you assume that 50% of the batteries are on charge at any given time. Not many large operations can function long on this few batteries.

Based on change-out times, the following guide can be used as a general rule of thumb to determine what system is best based on the number of stored batteries.

Stored Batteries	System Type
1 - 49	Single Stack
50 - 139	Double Stack
140 - 299	Triple Stack
300 - 619	Quad Stack
620 +	Five Stack

- *Summary:* When discussing system design layouts with your customer ✓ the following:

- ✓ Budget
- ✓ Ceiling Height
- ✓ Space Available
- ✓ Charger Stackability
- ✓ Back-up batteries needed to cover repairs
- ✓ Stored number of batteries

These guidelines should help you dial in on the right system. Call your BHS sales engineer to help put the finishing touches on your layout proposal.



BE-SL (Single Level System)