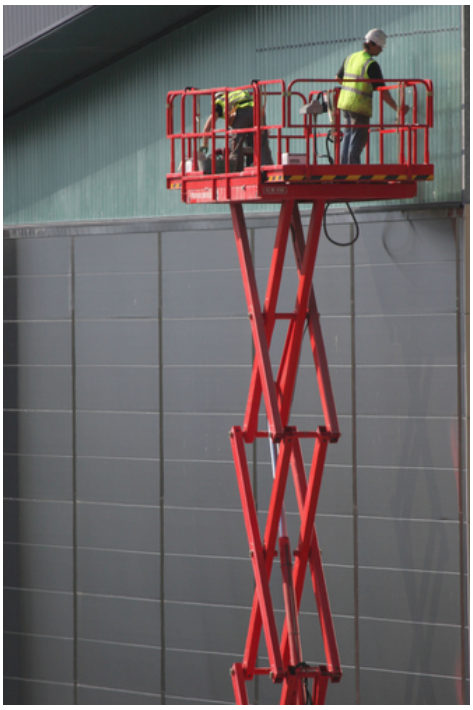
Aerial Lifts Buyer's Guide

By the purchasing experts at BuyerZone



Aerial lifts come in several varieties, but they all share a basic purpose: lifting employees and their equipment to do above-ground work. They're used in warehouses, manufacturing plants, retail stores, construction, utility work, and any application where the work that needs to be done is in a hard-to-reach location.

To start, here's a look at how much you might pay for some typical aerial lifts.

Type	Estimated cost
Scissor lift, 19', new	$11,000 to $12,000
Scissor lift, 19', used	$3,000 to $6,000
Scissor lift, 30', new	$21,000
Scissor lift, 30', used	$14,000 to $15,000
Boom lift, 30', new	$25,000 to $45,000
Boom lift, 30', used	$10,000 to $30,000
Boom lift, 110', new	Over $100,000
Boom lift, 110', used	$80,000
Vertical personnel lift	Under $10,000

Whether you need to rent a basic lift for annual maintenance, or buy a high-end boom lift for everyday use, this BuyerZone **Aerial Lifts Buyer's Guide** will provide valuable information to help you make a decision including:

- How to choose the right size aerial lift
- Differences between scissor lifts, boom lifts, and vertical personnel lifts
- What to look for in an aerial lift dealer
- How much you can expect to pay for your lift

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Purchasing basics

The most basic question you need to answer when choosing an aerial lift is how high you need it to reach. Measure the height of the shelves you need to access, the equipment you need to service, or the location of the work you need to do, and you'll be on your way to a smart aerial lift buying decision.

Lift heights are measured to the **platform height** – how high the floor of the lift platform (or bucket) goes. The working height is 6' above that: a lift with a platform height of 19' will enable you to work at heights up to 25'.

Next, consider **lifting capacity**: how much weight the lift needs to support. Also known as operating capacity, this can range from 300 to over 2,000 lbs. Many standard lifts have capacities of 500 to 700 lbs, enough for two workers and their equipment.

There is a limiting factor on height and capacity, though: lifts with greater capacities are also physically larger machines. If your lift is for indoor use, make sure it can move through any doorways or tight spaces. Even outdoor lifts have to fit through gates or on trailers at times. Remember to balance your requirements for height and capacity with the physical constraints of your workspace and the space leading to it.

Power choices

Most aerial lifts are self-propelled, using electricity, gas, diesel, or propane as a power source. Indoor lifts are almost exclusively electric. Most outdoor lifts run on gas or diesel for greater power and easy refueling without having to recharge for hours. Dual fuel lifts provide more flexibility by allowing you to switch between gasoline for outdoor use and propane for indoor use.

Slab or rough terrain?

The industry divides aerial lifts into two major categories: **slab** and **rough terrain** lifts. Slab lifts are designed to be used indoors or on flat, smooth surfaces. Rough terrain lifts can work on uneven ground. The main differences are in the power systems and tires (read more about tires in **Features**.)

Slab lifts are often electric powered so they can be used indoors and have non-marking solid rubber tires. **Rough terrain lifts** are more commonly gas, diesel, or dual-fuel powered, and usually have pneumatic tires for better stability and traction.

Types of lifts

There are three main aerial lift designs. Choosing the right one can be fairly straightforward, once you understand the differences: your application will define which is right for you. They include:

- **Boom lifts –** Buckets on the end of extendable or jointed arms. If you need to reach up and over obstacles, you'll probably need a boom lift, as other types of lifts move mainly straight up and down.
- **Scissor lifts –** Flat platforms that travel straight up and down. Best for moving multiple people or large amounts of equipment or product up and down, as they offer more lifting capacity and larger workspaces than bucket lifts.

- **Personnel lifts –** Single-user, vertical travel buckets. The most economical choice for single-user operations that only require vertical travel.

Boom lifts

Boom lifts come in two distinct varieties. **Telescopic boom lifts** (also called **stick booms** or **straight booms)** have long, extendable arms that can reach up to 120' at almost any angle. They're often used in construction, where their long reach lets workers get access to upper stories of buildings. For the highest and longest reach, these are your best choice.

Articulating-boom lifts have arms that bend. Sometimes called **knuckle booms**, they can reach over and around obstacles to position the bucket exactly where it needs to be. They're popular in utility work where power lines, trees, and other obstacles make positioning tricky, but they're also used in plant maintenance, where they allow workers to reach over immovable equipment.

Boom lifts offer the best combination of vertical and horizontal flexibility: some models can even position the bucket lower than the base if needed. Typical boom lifts fall in these ranges:

- Platform heights from 20' to 110'; most fall into the 20' to 50' range.
- Lifting capacities most commonly 500 lbs.

Many boom lifts can be fitted with a jib. This adds about 6' to the height and allows the bucket to be moved up and down (and sometimes side to side) without moving the main boom.

Another variety of boom lift is the trailer-mounted boom lift. These battery-powered lifts are towed to work locations behind other vehicles, instead of being able to move on their own. They can reach heights of 30' to 50'.

Scissor lifts

Unlike boom lifts, scissor lifts only travel vertically. However, they generally offer larger platforms and lifting capacities. The larger platforms provide more space for material and personnel, and allow workers to access a larger work area without repositioning the lift.

Many scissor lifts have a **platform extension** that provides a horizontal reach of 4' to 6' out from the top of the lift. While very limited compared to a boom lift, platform extensions do provide an important amount of flexibility.

Scissor lifts most often fall into these ranges:

- Platform heights from 19' to 50', with the low end being much more common.
- Lifting capacities from 500 to 2,500 lbs, most commonly 500 to 1,000 lbs.

Vertical personnel lifts

As their name makes clear, vertical personnel lifts move users straight up and down. They're less expensive than other types of lifts and are often small enough to be moved through a standard doorway in their collapsed state.

Some specialized vertical personnel lifts can handle two workers, overlapping with low-end scissor lifts, but most common specifications for these lifts are:

- Platform heights from 12' to 50'.
- Lifting capacities around 300 lbs. – enough for one worker and tools.

Features

Many of the extras that can make an aerial lift more efficient are for the use of the employees actually up on the lift. These can include built-in carriers for tools, fluorescent bulbs, or welding equipment.

For lifts that will be used in muddy or slippery environments, four-wheel drive is a popular add-on feature. Some lifts even have traction-control systems that distribute power in response to changing traction.

For electric lifts, look for automatic chargers: you simply plug the unit into an outlet and it charges itself as necessary. Also, high amp-hour batteries give you longer-lasting power.

Tires

The main choices for aerial lift tires are pneumatic – hollow rubber tires filled with either air or polyurethane foam – or solid rubber tires.

- **Pneumatic tires** are the best at smoothing the ride on bumpy or uneven surfaces, but you run the risk of getting a flat. They're also the least expensive. **Foam-filled pneumatic tires** are impervious to flats, but are more costly.
- **Non-marking tires** are typically solid rubber and much thinner than pneumatic tires. They never go flat, and they're specifically designed not to mark up warehouse floors. They do give the roughest ride, but that doesn't make much difference indoors where the floors should be smooth.

Aerial lift safety

Aerial lifts are potentially dangerous machines – anything that puts a worker 20' or higher in the air creates a certain amount of risk. But because that danger is so apparent, lift owners and operators are careful to follow proper procedures and maintain their equipment: accident rates involving aerial lifts are actually fairly low.

The safety specifications ANSI A92.6 (scissor lifts) and ANSI A92.5 (boom lifts) put the burden for safe aerial lift operation on the user: even if you rent the machine for a day, you're responsible for understanding how to safely operate the lift.

Knowing that, the most basic safety features of an aerial lift are the **operating manual** and **safety decals**. These provide important information about operating procedures, maintenance, and safety equipment.

New lifts will come with decals and manuals in place – the operating manual should be stored on the lift itself. If you're buying a used lift, make sure the manual is included and that important decals haven't been painted over.

Other essential safety features include guardrails and restraints that prevent operators from falling. These are mandatory and standard on all types of lifts.

Additional safety features

Most lifts can be driven from the bucket: even with the lift extended, the operator can move the entire rig. However, an important safety feature called a **high speed cutout** limits the overall speed to a slow crawl when the lift is above a certain height.

A related safety feature found on newer lifts is **pothole protection**. With this feature, arms come out to stabilize the unit when the lift is raised. If it hits a pothole while moving, the arms prevent the base of the machine from tipping more than an inch or two, preventing a "catapult effect" that can send an operator flying.

One of the leading causes of accidents with boom lifts is uneven ground: even a slight incline can shift the center of gravity enough to destabilize the machine. **Level warnings** prevent that by sounding an audible alarm and disabling boom operation if they sense the lift isn't level.

If you choose a lift with non-marking tires, it should also have **static straps.** These straps ground the lift, preventing potentially dangerous static build-up from shocking your workers.

A **manual descent valve** is another important safety feature. If your lift loses power while a worker is up in the air, someone on the ground can use this valve to safely lower the platform.

Finally, **LCD displays** provide information from diagnostics and sensors, improving safety and maintenance operations.

Choosing dealers

Buying an aerial lift involves more than just choosing the right model: you have to choose from several dealers to find one you can work with for the long term. Aerial lifts require annual inspections and ongoing maintenance, making your relationship with the dealer important.

Many dealers have worked in the industry for decades. Finding someone who's been in business for that long is a good indication that they'll be in business for years to come and be able to support your purchase.

Look for dealers who are knowledgeable about the product, too. Many aerial lift dealers do more of their business in forklifts and other types of machines, so some may not be familiar with the ins and outs of aerial lifts. Choosing a dealer who sells multiple brands of lift will give you more of a range to choose from.

Service counts

Aerial lifts require ongoing maintenance – lubrication, hydraulic fitting upkeep, and more – so ask dealers about their service policies. Will they schedule regular maintenance visits to top off fluids and inspect the machine?

Also, find out how they'll handle breakdowns: do they come to you for quick repairs? If your lift needs to go into the shop for more extensive work, will they pick it up and return it, or do you need to transport it yourself?

Ask about their technicians' qualifications, as well. How long have they been on staff? What kind of training do they have? How quickly do they work?

Because of the service needs, you'll want to choose a dealer that is reasonably close to you. Don't feel like you have to choose the absolute closest dealer, but try to find one no further than 100 or 150 miles, keeping a round trip to around half a day.

A transaction or a relationship?

Don't underestimate personal reactions in your search. Choose a dealer you feel is honest with you and who is easy to work with: those impressions are often accurate. Better dealers will carefully evaluate your needs, sometimes making site visits to help you make the right decision. Saving a thousand dollars on your initial purchase is insignificant compared to the ongoing costs you'll incur over the years.

Check references

Talking to customers can provide insight into a dealer's strengths and weaknesses. Ask for customer references, preferably of customers with aerial lift applications similar to yours.

When checking references, you can ask questions like:

- How long have you been a customer of theirs? How many lifts have you purchased?
- Did you get the right lift for your application?
- Has the dealer done a good job with maintenance?
- How was their turnaround for repairs?
- Did they provide training for your operators?
- Would you buy from this dealer again?
- What could the dealer improve about their operation?

Pricing

Depending on how often you'll need an aerial lift, you can buy a new lift, buy a used lift, or simply rent one for a short time.

Businesses with dedicated maintenance departments and substantial facilities to operate are the most likely to purchase a new lift. The increased dependability and lifespan make it a worthwhile investment.

Buying used is a great way to save money on the purchase, but as with any used vehicle, you are taking a greater chance on the machine eventually breaking down. A good service plan can help offset this risk, and if the lift won't be a central piece of your day-to-day operations, a day or two of downtime won't be a major problem. Buy from a reputable dealer and you'll have even less chance of running into problems.

For annual inventory, occasional maintenance work, and other part-time use, renting a lift is the best choice. In addition to saving money, renting a lift removes the burden of maintenance and inspection. The rental firm is responsible for all necessary lubrication and repairs, and you get a lift that's safe and ready to work.

Aerial lift prices

A standard new 19' scissor lift might have a list price of $16,000, but that's not the price you'd pay on the street. Dealer prices are closer to $11,000 or $12,000. A new 30' scissor lift will set you back around $21,000.

Prices for used lifts can be 60% or less than new prices. That same 19' scissor lift that costs $11,000 new can be found for $3,000 to $6,000, depending on condition and extras, while a 30' model may cost $14,000 or $15,000.

Boom lifts are somewhat more expensive. New 30' to 40' booms can go for $25,000 to $45,000, and used models range from $10,000 to $30,000.

The largest lifts are much more expensive: 110' boom lifts are well over $100,000, and even used ones can be around $80,000.

Vertical personnel lifts are the least expensive, and can be purchased new for well under $10,000. For the most budget-minded companies, "push-around" models with no propulsion can cost as little as $2,000.

Among the options that have the greatest impact on pricing, 4-wheel drive is one of the biggest: you can expect to pay a $4,000 to $5,000 premium to get a 4-wheel drive machine. Also, rough terrain lifts are generally more expensive than their slab counterparts.

Rental prices

Rental prices for standard scissor lifts in the 19' to 30' platform height range can be between $100 and $150 per day, or $350 to $500 per week, with the larger lifts falling on the higher end of that range.

Boom lift rentals are more expensive. A 40' boom might rent for $300 to $350 per day or $1,000 to $1,400 per week, and a 65' boom could go for $350 to $400 per day or $1,300 to $1,800 per week.

30' single-person vertical lifts are the least expensive to rent and can be found for $75 per day or $200 per week.

Warranties

You can expect a basic manufacturer's warranty on new aerial lifts. As with cars, you may get longer warranties on some subsystems: two or three years on the powertrain, for example. Used lifts will rarely come with anything more than a 30-day guarantee – and low-end used lifts are often sold "as-is."

Buying tips

- **Don't buy on price alone.** As with many industrial purchases, trying to save a few hundred dollars up front can cost you in the long run. Instead, focus on choosing a quality dealer and getting a lift that meets all your needs.
- **Keep up the maintenance.** Aerial lifts require some attention to detail: prompt hydraulic fluid and oil changes are a must, and annual inspections are required. Safety is too important to let these tasks slide.
- **Watch out for user modifications.** Some rental companies and owners "customize" their lifts by cutting, welding, or otherwise changing the railings or bucket walls. While the work may look strong, it may not stand up to ongoing use.
- **Check the odometer or hour meter – but check more than that.** Some dealers replace or reset hour meters or odometers when a machine is refurbished – if the machine looks much older than the gauge indicates, be sure to ask about the real age of the machine.
- **Measure before you shop.** Knowing what limits you have on the size of your machine is important – measure doorways, aisles, overhead clearance, and any other restricted areas your lift will need to navigate.