

LIFT / F.A.Q's

The automotive lift institute describes certain types of lifts and explains their characteristics in detail. These are some of the things that you should be looking for when making a decision to purchase an auto lift, vehicle lift, in ground lift, mid rise lift, low rise lift, four post lift, two post lift, or custom lift.

In-Ground Auto Lifts

Lifts whose lifting assemblies are situated below the garage floor are known as in-ground lifts. These lifts employ one or more pistons, depending on the type of vehicle and how much weight is to be lifted. For example, many one or two-piston lifts are used to hoist compact, mid- and full-sized passenger vehicles. Three or more piston lifts are used mostly for larger vehicles, such as transit coaches and fire engines. In-ground lifts are manufactured to suit almost any type of vehicle and any type of undercarriage service; there is the basis single post model, the drive-through model, the drive over model, the pad type and the multi-post axle-engaging (fixed and movable piston) models to name a few.



Surface Mounted Auto Lifts

Until the 1980's, most automotive lifts were of the in-ground type. Today, surface mounted lifts make up a large part of the total automotive lifts in use. Surface mounted lifts are bolted to the garage floor and are generally powered by an electric motor which operates either a hydraulic pump or a screw type drive.

Two Post Surface-Mount Style

This is the most popular surface mounted lift purchased today. The lift arms ride up each column and are usually synchronized in one of several ways; mechanically, hydraulically or electronically.



Frame Engaging Hinge Surface-Mount Style

These lifts usually engage the vehicle's frame or its perimeter. The lift operates in either a parallelogram-style (which moves fore or aft as it rises and lowers) or a scissors-style (which moves in a straight vertical direction). These lifts may be powered by an electric hydraulic-power unit or, in the case of some short-rise service lift, by compressed air. The primary uses of the short-rise lift are tire and brake service and auto body repair.



Wheel Engaging Surface-Mount Four Post Style

This lift is the primary lift of many muffler, oil change, and transmission shops or specialty shops that perform wheel alignment. It allows the vehicle to be driven onto two runways and lifted by its tires, exposing the underside of the vehicle.



Wheel Engaging Surface-Mount Four Post Style, Open-Front

This lift is the primary lift of wheel alignment shops. Since the front of the lift is not a closed cross beam design, the user has free access to the front underside of the vehicle where alignment adjustments are made.



Wheel Engaging Surface-Mount Full-Rise Hinge Style

This lift is the primary lift of many wheel alignment service centers. Since there are no columns, the floor plan is smaller making it a preferred choice for shops with minimal floor space.



Portable Surface Mounted Styles

Portable lifts are available in low rise pad styles, mid-rise frame engaging styles, four-post styles and also unique “forklift” styles. Portable styles are effective if you have ample space outside to accommodate the lift size or in an area that does not utilize existing floor space. Service centers often purchase portable lifts so they can locate the lift outside and do service in the parking lot in the event inside lifts are filled to capacity. Hobbyists may elect to purchase a portable style so they can move the lift outside instead of leaving it installed in a residential garage that is cramped for space.



Surface Mounted "Parking" Styles

Smaller floor plan four post lifts or specialized platform lifts are commonly referred to as parking lifts. Runways or deck styles are preferred for parking due to safety reasons. On the west coast where earthquakes are prevalent four post lifts or platform styles are the preferred model for parking or long term vehicle storage. Also, if a lift is used in a residential environment where children are present it is not recommended to have a vehicle in the air "balanced" on four pads typical of a two-post model.



Q. What Should the Capacity of My Auto Lift Be?

A. As a general rule, the capacity of a lift is probably the most important consideration. Overloading any lift is dangerous and can be costly to repair if damaged. You should try to choose a weight capacity at least 10-20% higher than the maximum weight you will be lifting most of the time. This will give you a safety factor and longevity well beyond what you need.

Q. Two-Post Auto Lift vs. Four-Wheel Post Auto Lift

A. Certain industries prefer different styles of lifts. A general maintenance shop will almost always prefer a two post lift because under car maintenance as well as tire and wheel work can be performed with this single lift. Specialty shops, such as muffler and transmission repair, will choose a four post because they rarely do tire or wheel work. With four post styles, wheel work is impossible unless a separate rolling jack bridge is purchased. Two post lifts take longer to load a vehicle as it is necessary to get down on your knees and position the arms. In the case of four post models, drive the car on, set the brake and you're ready to lift.



Q. Symmetric Two-Post Lift vs. Asymmetric Two-Post Lift

A. Although these models look similar at first glance, there are some important differences. If you take a closer look, you will notice that symmetric styles have four equal length arms. This provides equal balanced loading of vehicles, however it positions the vehicle doors at the centerline of the columns making it more difficult to exit a vehicle. Asymmetric styles have rotated columns and extended rear arms allowing you to offset the centerline of the vehicle towards the rear of the lift. This positions the vehicle door away from the column. Asymmetric styles are recommended for lifting cars and light trucks that are not rear heavy. Asymmetric styles are not recommended for full-size utility trucks (tow trucks, electrical service trucks, welding trucks, delivery vans etc.) as they often have excess weight in the rear of the vehicle which can place added stress on the rear arms.



Asymmetric styles provide added door opening clearance.

Q. Auto Lift with Overhead (Clear Floor Lift) vs. Auto Lift with Floor Plate

A. The most preferable two-post model is a clear floor that eliminates the floor pan. It is much easier to work under a clear floor style because it allows you to easily roll transmission jacks, tool boxes or mobile oil drains under the vehicle. Most clear floor lifts have an overall height of twelve feet which may be too high for low ceiling installations. For low ceiling installations the floor plan style is recommended as the columns are usually just under 10-feet tall.



Q. Do I Need a Four Post Open Front Auto Lift?

A. A four post open front lift is generally used in high use front end alignment applications. It gives the user better access to the front end of the vehicle where the alignment work is being performed. Not always necessary, but sometimes preferred.



Q. What options are available for a four post “parking” style lift?

A. Solid deck options give you the ability to store items other than vehicles. Motorcycles, ATV’s, lawn equipment and more can be stored on the solid deck surface increasing the service capability.

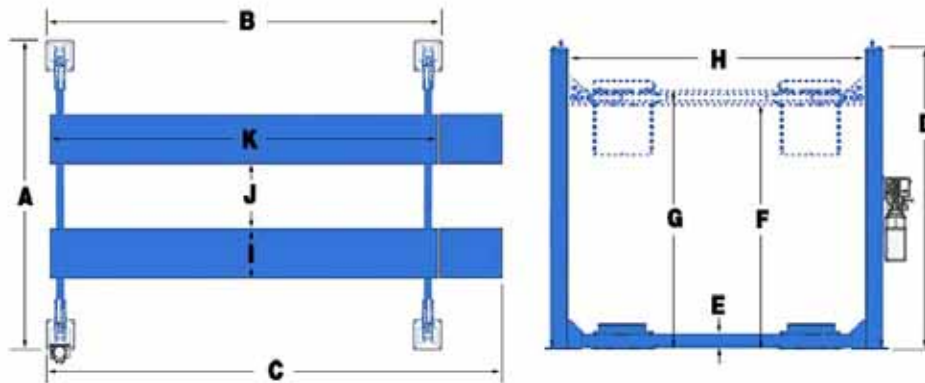


A. Rolling bridge jacks or jack trays give you the ability to remove wheels increasing the service capability.



Dimensions & Installation Requirements

General dimensions for lifts are usually listed on the manufacturers web site. A typical Bend-Pak floor plan is shown here.



MODEL	HD-9ST	HD-9STX	HD-9	HD-9XW
Lifting Capacity	9,000 lbs. / 4082 kg.	9,000 lbs. / 4082 kg.	9,000 lbs. / 4082 kg.	9,000 lbs. / 4082 kg.
A - Overall Width	103-3/4" / 2635 mm.	103-3/4" / 2635 mm.	120-3/4" / 3067 mm.	120-3/4" / 3067 mm.
B - Outside Length	174" / 4420 mm.	198" / 5029 mm.	174" / 4420 mm.	198" / 5029 mm.
C - Overall Length	200" / 5080 mm.	224" / 5690 mm.	200" / 5080 mm.	224" / 5690 mm.
D - Height of Columns	88" / 2235 mm.	100" / 2540 mm.	88" / 2235 mm.	100" / 2540 mm.
E - Min. Runway Height	4-1/2" / 114 mm.	4-1/2" / 114 mm.	4-1/2" / 114 mm.	4-1/2" / 114 mm.
F - Max. Rise	70" / 1776 mm.	82" / 2083 mm.	70" / 1776 mm.	82" / 2083 mm.
G - Max. Lifting Height	74-1/2" / 1892 mm.	86-1/2" / 2197 mm.	74-1/2" / 1892 mm.	86-1/2" / 2197 mm.
H - Width Between Columns	89-3/4" / 2280 mm.	89-3/4" / 2280 mm.	106-3/4" / 2711 mm.	106-3/4" / 2711 mm.
I - Runway Width	19" / 483 mm.	19" / 483 mm.	19" / 483 mm.	19" / 483 mm.
J - Width Between Runways (*)	37-1/4" / 946 mm.	37-1/4" / 946 mm.	37-1/4" - 44"	37-1/4" - 44"
K - Length of Runways	164" / 4166 mm.	188" / 4775 mm.	164" / 4166 mm.	188" / 4775 mm.
Locking Positions	12	15	12	15
Lock Spacing	Every 4" / 102 mm.	Every 4" / 102 mm.	Every 4" / 102 mm.	Every 4" / 102 mm.
Lifting Time	45 Seconds	50 Seconds	45 Seconds	50 Seconds
Standard Motor (**)	220 VAC / 60 Hz. 1Ph.	220 VAC / 60 Hz. 1Ph.	220 VAC / 60 Hz. 1Ph.	220 VAC / 60 Hz. 1Ph.

* This dimension may be limited with the addition of rolling jacks. See rolling jack specifications on separate page.

** Special Voltages Available Upon Request

The design, material and specifications are subject to change without notice.

In some cases it is helpful to request a copy of the installation manual prior to making your purchase. Many installation manuals can be downloaded from the manufacturers website or can be emailed to you in the form of a PDF document.

Bend-Pak
INCORPORATED

Forward this manual to all operators.
Failure to operate this equipment as
directed may cause injury.

Revised 4/15/04

INSTALLATION AND OPERATION MANUAL

**12,000 POUND
CAPACITY
FOUR-POST LIFT**

Models:
HD-12SS
HD-12
HD-12X



Keep this operation manual near the
equipment at all times. Make sure that
ALL USERS read this manual!

SHIPPING DAMAGE CLAIMS
When this equipment is obtained, the purchaser is responsible for the equipment upon arrival from the carrier. Consequently, claims for the return damaged or equipment must be made by the purchaser against the transportation company at the time shipment is received.

BE SAFE
This new lift was designed and built with safety in mind. However, your personal safety can be increased by proper training and thoughtful operation on the part of the operator. For best results, we urge the equipment without reading this manual and the important safety instructions shown herein.

Bend-Pak
INCORPORATED

1800 Lakeshore Dr.
Newport, CA 95057, USA
Tel: 1-800-833-8895
Fax: 1-800-833-1100

Shipping & Delivery

Q. Are shipping charges included in the price of the equipment?

A. Many lift sellers advertise a delivered price but it always pays to double check. If a product has a delivered price listed there should be no additional freight charges. Customers will be responsible for unloading the equipment from the truck when it arrives. Freight companies do not require their drivers to unload shipments. In some cases trucking companies may be able to provide a truck with a lift gate. This usually applies for smaller shipments. Additional charges may apply. In some cases you may get the manufacturer or contracted installer to deliver your product.

Four post lift ready for shipment.



Two post lift ready for shipment.



Mid-rise lift ready for shipment.



Q. How do I get my equipment off the truck?

A. Lift products will almost always require a fork lift, cherry picker or roll back truck.

Q. How will I know when my equipment is arriving so I can make arrangements to unload it?

A. Request to have the trucking company call you 24-hours before delivery. You can also arrange to have the lift supplier contact you after your equipment ships and provide you with shipping information, such as the freight carrier name and tracking number so you can make prepare for your unloading arrangements.

Q. Is installation included in the price of a lift?

A. Almost always, the answer to this question is no. In many cases customers find it fairly easy to install lifts themselves. If you would like to have someone install your lift most lift suppliers can recommend qualified installers in your area.

Q. How much does it cost for a professional installer to install my lift?

A. The cost depends on the type of lift you want installed. Professional installation fees will typically be between \$300.00 and \$500.00 for a full-rise two-post or four-post lift.

Q. Do I need any special tools to install my lift?

A. The only tool you will need that you probably don't have already is a rotary hammer drill for the anchor bolts. If you don't have one you can usually rent one. Rental prices vary from location to location. Other tools required will be standard hand wrenches, sockets, adjustable wrench and screwdrivers.

Q. Is electrical hard wiring included in an installation?

A. No, electrical codes vary from place to place no electrical work is included in any installation price. Please contact a local electrical contractor.

Q. How safe are Bend-Pak lifts?

A. At Bend-Pak we don't just claim to make safe lifts, we make them, label them and back them up with the only real lift certification program and standard. The OSHA endorsed ANSI/ALI ALCTV "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" standard. Don't accept false claims. Be sure to look for the ALI/ETL mark to insure the highest level of safety and quality standards have been met. If you don't see the label, ask yourself if saving a few extra bucks on a non-certified lift is really worth jeopardizing the safety of you and your employees. At Bend-Pak we don't put safety in the back seat to price. We give you value, but more important, a piece of mind. Combine that with our worldwide distribution channels and sales and service network, and you can count on Bend-Pak to deliver our promise of total customer satisfaction.



Q. What type of power outlet/source is needed to operate my lift?

A. Our standard lift power units use a single-phase 220V power source (a 30-amp breaker is recommended). We also have available 110V power units for residential installations if required. Our commercial power units use a standard 220 volt single phase power unit.

Q. Will my lift require special hydraulic fluid to operate properly?

A. Most auto and truck lifts are designed to operate using standard 10-weight, non-foaming, non-detergent hydraulic oil or ATF fluid. This is available in virtually any automotive store.

Q. Do I need a special type of floor or foundation to support my lift?

A. Just about every home or commercial foundation is strong enough to support a typical lift. In most applications, minimum requirements are 4" thick concrete, 3000 PSI. Some lifts don't even need to be anchored down. Be sure to check your floor on the possibility of it being a post tension slab. IN this case contact the building architect before drilling.



Q. Do I need a building permit to install my lift?

A. Permit requirements, if any, vary depending on the city and the type of lift being installed. Obtaining a permit is the responsibility of the person buying the lift, so please check with your local building department.

Q. Are your lifts easy to operate?

A. Yes, very easy. Simple ergonomic controls require little if any training. Up button to raise the lift, a down lever to lower, and a safety button to push (or lever to pull) to release the locks.

Q. What if my requirements are so unique that none of the offered models meet them?

A. In many cases, certain modification can be made to accommodate special circumstances.