

A STUDY IN LIFT DESIGN

9,000-Pound Capacity Four-Post Series Models: HD-9ST / HD-9 ANSI/ALI ALCTV-2006 CERTIFIED PRODUCT





Dare to Compare / Separating Fact from Fiction

In the highly competitive auto lift business, especially the DIY sector, many judgments are being passed on with no merit based solely on uneducated bloggers being sold on creative marketing. Always study thoroughly, then look, compare and decide.

Full Range of Lift Models to Chose From

BendPak has 72 unique lift models ranging from lightweight to super-duty. Many "hobby" lift companies could not come close to a fraction of lifts BendPak sells globally. Investigate thoroughly on the web using various search engines to see how many pages other lesser known lift companies appear on compared to a true world-leader like BendPak.

Optional Equipment

Many valuable options are available for your BendPak four-post lift.



Service is our Specialty

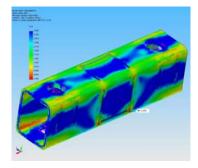
BendPak has over 650 installation and service centers located in the United States. These fully equipped installation and service centers have specialty service fleets that make a living installing and servicing large car dealerships, national accounts, auto repair centers and occasional auto enthusiasts and DIY'ers.

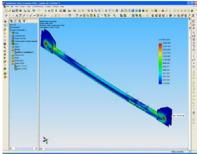


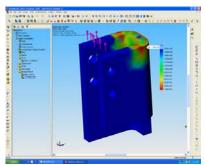
Engineering Excellence

BendPak has a staff of seven full-time engineers who do nothing but design, test, and evaluate lift systems. BendPak lifts have changed and evolved over the past 40-years not because they like making changes but because they are constantly improving the structural integrity and design of our lifts to meet constantly changing world standards. On the surface, many lifts look "engineered", but what lies under the surface? All BendPak lift designs are computer modeled for design function and structural integrity then undergo simulation of applied forces, axial force, bending moment, etc. using Solid Works Cosmos and other FEA programs. After the design is sound, they proceed with actual destructive (physical) testing.

There is only one real national lift standard for quality and safety - OSHA endorsed ANSI/ALI ALCTV-2006. If you don't see any reference to this standard, then ask yourself if saving a few extra bucks on a non-certified lift is really worth jeopardizing the safety of you and your loved ones. BendPak gives you value, but more important, a peace of mind.



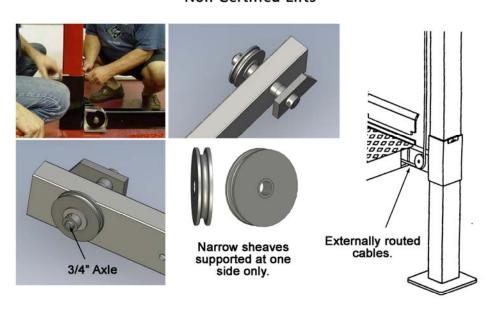


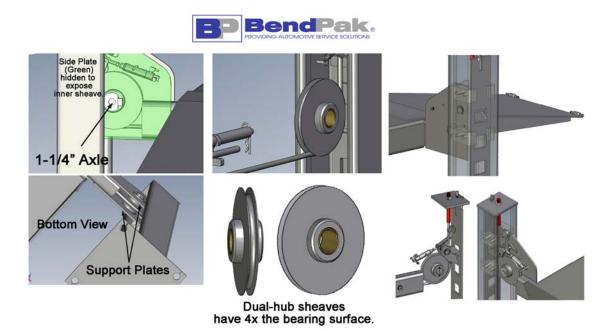


ETL Certified

Why are other lesser known lifts not approved to meet the requirements of ANSI/ALI ALCTV-2006? - Quite simply, because their lifts could not pass the standard. Particularly their lack of a slack-cable lock system, a substantiated engineering report from an accredited PE (professional engineer) verifying that all components could withstand a load of 150% capacity with no permanent yield or deformation of any kind, their absence of an ample cable guard to prevent unintentional displacement, and more.

Non-Certified Lifts



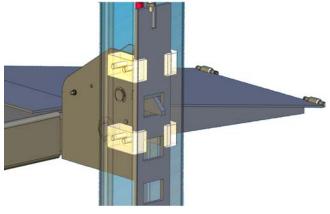


Common Misleading Claims

- Claims that state "Meets or Exceeds Standard ANSI/ALI B-153.1" are meaningless. This standard no longer exists.
- Claims that state "Meets all ANSI Standards" are meaningless. No other standards apply to lift construction except ANSI/ALI ALCTV. In order to meet ANSI/ALI ALCTV, Certification is required. Look for the Mark.
- Claims that state "Meets all OSHA Requirements" are meaningless. OSHA has no requirements governing
 automotive lifts, but they do write citations applying to automotive lifts. They do this under the General
 Duty Clause and recommend to those cited that it would be prudent for the cited party to follow the
 directives in the various standards developed by ALI.
- Any claim that implies "This lift is ALA Certified" is worthless. ALA (Automotive Lift Association) is reported
 to be an organization of suspect lift suppliers with no endorsement by ANSI or OSHA. ALA appears to be
 purely fictitious and created merely to confuse purchasers, users and inspectors.
- Any claim that implies "This lift is MAMTC Certified" is worthless. MAMTC (Mid-America Manufacturing Technology Center) is a unit of Wichita State University which, in one instance, attempted to certify a lift model. Test Reports on MAMTC letterhead stated that a particular lift complied with ANSI B153.1 – 1990. Of course this is meaningless because MAMTC is not a NRTL (Nationally Recognized Test Facility), and the standard cited is obsolete.

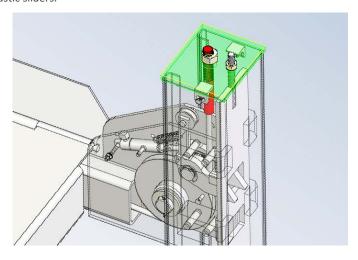
Safety First

BendPak lifts incorporate UHMW (Ultra-High Molecular weight) Polyethylene glide blocks to maintain proper alignment of lifting and safety components. UHMW is often referred to as the world's toughest polymer. UHMW is a linear high density polyethylene which has high abrasion resistance as well as high impact strength. UHMW is also chemical resistant and has a low-coefficient-of-friction which makes it highly effective in a variety of applications. BendPak glide blocks are simply guides that keep the cross tubes and safety ladder centered within the column and minimize sway.



Designed for Longevity

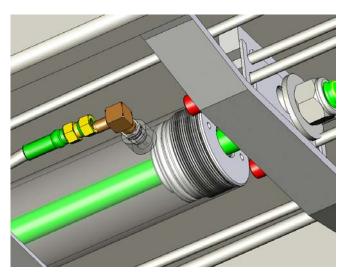
BendPak lifts feature cable sheaves that are precisely centered within the cross tube meaning the cross tube tends to stay level during the entire lifting motion thereby eliminating side loads of any kind. Lesser know lift brands employ cross tube sheaves and axles that are located outside the cross tube body forcing the cross tubes to twist or rotate away from the sheave as the lift raises. This twisting occurrence tends to develop side-loading on their cross tube components and plastic sliders.



Hydraulic Cylinder Design

All of BendPak lift cylinders use internal flow-restrictors to prevent rapid fall in case of a hose or fitting failure. This is a worldwide safety standard that is required for all commercial lift manufacturers. International lift standards prohibit the use of quick-disconnect fittings on vehicle or personnel lift applications. Quick disconnect fittings have spring loaded ball-in-seat components. If the ball does not "seat" like you expect it due to contamination or faulty ball-seat, there is nothing to shut off the flow of oil and the uncontrolled descent of your lift. Hose "blow-outs" simply do not occur under normal use. As part of the ANSI/ALI ALCTV-2006 standard all BendPak hoses have a 400% safety factor based on the pressure required to operate the lift at its rated load capacity.

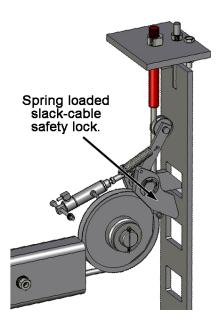
BendPak HD-9 series lift models feature a single 3" diameter hydraulic cylinder hidden away under the runway for maximum performance, reliability and minimum exposure to the elements. Our industrial-grade hydraulic cylinders feature a one-piece, pilot fitted, machined steel piston wrapped with specially designed, pressure loaded U-cup piston seals, backups and wear bands that virtually eliminates any fluid bypass. The micro-smooth chrome-rod is machined from high yield, ground & polished C-1045/50 micro-alloy steel and plated to a minimum of .001" diametrically, to ensure superior cylinder operation and life. Specially designed, high durometer, mechanically loaded rod seals virtually eliminate rod seal leakage and a specially formulated abrasion resistant urethane rod wiper provides exclusion protection. The welded cylinder body is made from high yield-strength steel tubing produced to exceed ASTM specifications. This combination of superb base material and superior processing ensures straight, smooth and long duty life cylinders.



Redundant Safety Lock System

BendPak four-post lifts employ eight independent safety lock devices - four primary and four back-ups.

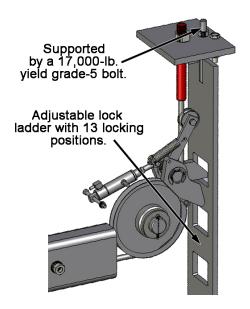




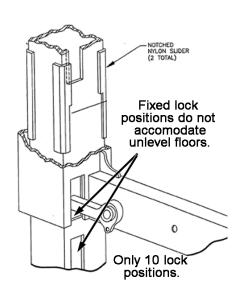
Adjustable Safety Locks

BendPak's adjustable ladder provides adjustment for unlevel floors enabling your vehicle to sit safely in a level position even if your floor is unlevel - an important feature that other lift brands lacks. BendPak features 13 adjustable lock positions providing greater versatility and storage height coverage.

BENDPAK ADJUSTALBE LOCK STOPS



OTHER BRANDS - FIXED LOCK STOPS



Commercial-Grade Pneumatic Safety Lock System

Our commercial-grade pneumatic safety lock system ensures that your locks release simultaneously every time. Other lifts use linkage rods to release the four spring loaded locks – that means a lot of resistance to overcome. That combined with the accumulation of slop for all of the linkage points means that the safety lock furthest from the operator has a good chance of not being "pulled back" far enough. Think about what would happen if three corners descended and one stuck. The worst cause of lift failures or vehicle "drops" are caused by the runways becoming unlevel due to seized column or stuck lock. Mechanical linkage systems are more prone to failure.



Anti-Twist Cable Block

BendPak's cable block attached to the chrome rod features "outrigger" sleds that ride on the inside rails of the runways to ensure the cable block remains square at all times. Lifts that do not incorporate this device can experience cable block misalignment (the cylinder rod tends to **rotate as the cylinder moves due to the** inherent nature of the cables trying to "unwind" and/or the rifling surface inside the cylinder bore) which ultimately causes premature wear of cables and/or sheaves.



6" Diameter Cable Sheaves

Our 6" diameter cable sheaves are a tad bit on the large size but these super size sheaves will add years of service life to the lifting cables. The largest contributing factor for premature cable wear is bending fatigue as the cable wraps around the sheaves under load.





Powder Coat Paint Finish

All BendPak lifts feature a durable powder coat finish that gives the metal a high-quality, extremely durable finish which can withstand even the harshest environmental or chemical conditions. Unlike other companies that claim to powder coat, we take pride in our meticulous process. First, all parts are visually inspected then sandblasted then washed in our five-stage phosphate tanks. They're immediately dried, to avoid rust production then any surfaces and/or threaded holes that need to be masked or plugged are done so with high-temperature masking tape and silicone plugs. Next, the parts are given a quick thinner wipe to remove any light debris or fingerprints then hung on an electrostatically grounded conveyor line. The powder is then applied using an electrostatic spray gun. The powder "sticks" to the parts similar to how dust sticks to a television screen. Once the parts are powder coated, the carts are rolled into our curing oven and baked at 400 degrees for 15 for 45 minutes.





Professional Appearance

BendPak lifts are more visually attractive because they feature lifting cables that are routed internally through the cross tubes and columns and are void of clumsy linkage rods and external safety locks.





Other Brands



Immediate Shipping

BendPak has one of the largest inventories of lifts in the world with over 3000 ready-to-ship models available for immediate shipment. Our in-stock units offer consumers a variety of lift designs and capacities, as well as several options to choose from. If we do not have it in stock, our experts can help you spec the specific lift your job demands.



State of the Art Manufacturing Facility

BendPak delivers the highest quality, most technologically advanced lifting products in the world thanks to our state-of-the-art manufacturing facilities. In September 2006, we inaugurated a brand new 300,000 square foot facility specifically for production of our popular HD-Series four post lifts and XPR-Series two-post lifts. This new facility, designed for maximum efficiency and safety employs the best steel fabrication equipment from around the world.

A Computer Numerically Controlled (CNC) sheeting line forms various profiles of panels up to 30 feet in length in a wide range of gauges. CNC machines use streams of digital information from our CAD-CAM outputs to cut, roll form, and pre-punch bolt holes in steel components.





Innovative BendPak manufacturing processes are centralized and deliver cutting edge technology and unprecedented quality control. All of BendPak's manufacturing facilities are efficient with state-of-the-art processes to serve our customers' needs in the most cost-effective ways possible. Companies that want to be competitive in an increasingly global marketplace must have a global outlook and presence. BendPak continually looks for opportunities to strengthen our existing presence in the global arena and strives to meet and set world-class standards in everything we do.







Our multi-department manufacturing complex has allowed us to add machinery and employees giving us opportunity to triple the amount of daily production. All BendPak employees are well skilled and Q.C. trained following strict guidelines as outlined by ISO-9001. Every day, more than 700 employees around the world dedicate themselves to putting our core values into action. Safety is first - it's our company's top priority. Our other core values are environmental responsibility; focus on cost, quality, customer service and accountability for all departments. Focusing on these values guides our highly skilled workforce toward realizing our vision - making BendPak world competitive and a dominant leader.



BendPak prides itself on being a leader in both process and product technology and has three research and development facilities dedicated to advancing the boundaries of vehicle and parking lift technologies. BendPak's research and development divisions are the catalyst for innovation. Our R & D personnel are best equipped to properly explore and expand opportunities to deliver superior products to consumers.

Reliability, accuracy and durability are the hallmark of our products. BendPak follows stringent quality control measures at every level of manufacturing that facilitates smooth and efficient production from every stage. We are the perfect blend of ultra modern machines and an excellent workforce that enables us to deliver safe, well-built products made from the best materials. All of our manufacturing facilities employ state-of-the-art metallurgy equipment to assure all materials meet or exceed worldwide standards.

Our facilities employ equipment such as Tensile Testing Machines, Impact Testing Machines, Metal Hardness Testers, Brinell Hardness Testers, and Vickers Hardness Tester









BendPak customers are supported by a specialized service program known as Certified Service SM. Our fully staffed Customer Care Center (CCC) is available to meet all of your support needs including; highly responsive technical support, one-on-one communication with account representatives and technical experts, electronic data interchange (EDI), a highly-efficient logistics support chain, automated dispatch and communications system and a tightly integrated system that allows incident management, trouble-shooting and reporting to be provided to customers seamlessly, regardless of location.



