Precision-Hayes International manufactures the 5DA1, 5DA1-AL, and 6DA1 Series jacks from a single piece of hardened steel to exacting specifications. The result is a durable, lightweight, and compact stressing jack. These attributes make the 5DA1, 5DA1-AL, and 6DA1 the jacks of choice for elevated construction projects.

- Double-acting jacks with power-seater
- 5DA1 - 20 ton, stresses up to .5" strands
- 5DA1-AL - 20 ton, stresses up to .5" strand and weighs only 34 lbs.
- 6DA1 - 30 ton, stresses up to .6" strand
- 6" and 12" nose assemblies in stock for immediate delivery; other nose assemblies are available

Compact, lightweight, double-acting – ideal for elevated construction projects.

From stressing accessories to hardware, Precision-Hayes International carries the most complete line of jacks and related components in the industry.
**About Our Company**
Precision-Hayes International offers a complete line of anchors, chucks, wedges, and jack stressing systems for the post tension, prestress and mining industries. With over 30,000 square foot of manufacturing space, we are located in Seagoville, Texas, just south of Dallas. Our dedication and commitment to excellence have made our company the leading supplier to these industries.

**Double-Action System**
The 5DA1, 5DA1-AL, and 6DA1 jacks are double-acting, meaning that the jacks open and retract using hydraulic power. Both jacks use power wedge setters to seat the wedges into the anchor. After the desired stressing pressure is achieved, the valve on the pump is switched to the retract position. The valve then maintains pressure on the strand. Engaging the pump causes the wedge setter to push forward and seat the wedges; when a preset pressure is achieved, the jack will then begin its return stroke.

**Capacities**
5DA1 and 5DA1-AL - 20 ton jacks, stress strand up to .5" in diameter. For use with smaller strand, jack grippers of different sizes are available.

6DA1 - 30 ton jack, stresses strand up to .6" in diameter. For use with smaller strand, jack grippers of different sizes are available.

6" and 12" nose assemblies are in stock for immediate delivery; other nose assemblies are available per customer requirement.

**Systems and Parts**
The 5DA1, 5DA1-AL and 6DA1 jacks can be purchased as single complete units with pump, hoses, and gauge.

We carry all of the pumps and valves necessary to operate our jack systems, along with a full line of replacement parts.
**5DA1, 5DA1-AL Jack**

**Stressing Jacks**

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<table>
<thead>
<tr>
<th>Item No.</th>
<th><em>5DA1 Part No.</em></th>
<th><em>5DA1-AL Part No.</em></th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>401520</td>
<td>401520</td>
<td>Nose Body, 3”</td>
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<td>1A</td>
<td>401535</td>
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<td>Nose Body, 4”</td>
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<td>2</td>
<td>302050</td>
<td>302050</td>
<td>Wedge Setter Spring</td>
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<td>305306</td>
<td>305360</td>
<td>Wedge Setter, 3”</td>
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<td>3A</td>
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<td>Wedge Setter, 4”</td>
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<td>401600</td>
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<td>Power Seater Piston</td>
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<td>5</td>
<td>340660</td>
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<td>Power Seater O-ring</td>
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<td>5A</td>
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<td>Back-up O-ring</td>
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<td>401540</td>
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<td>Power Seater Housing</td>
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<td>3/8” NPT Pwg</td>
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<td>305480</td>
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<td>Retainer Ring</td>
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<td>401650</td>
<td>401645</td>
<td>Front Cylinder Bushing</td>
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<td>Cylinder Rod</td>
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<td>Rear Cylinder Bushing</td>
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<td>5DA1 Seal Kit</td>
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<td>Cylinder Rod Cap</td>
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<td>Red Decal</td>
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<td>401780E</td>
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<td>401005</td>
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<td>Gripper Handle</td>
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<td>20</td>
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<td>Warning Decal - YELLOW</td>
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<td>401685</td>
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<td>Gripper Plate</td>
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<thead>
<tr>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Stroke</th>
<th>Weight</th>
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<tr>
<td>18-1/2”</td>
<td>7-1/2”</td>
<td>2-3/4”</td>
<td>8-1/2”</td>
<td>Steel = 42 lbs.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Aluminum = 34 lbs.</td>
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* Effective cylinder area 6.28 sq. in.

** Power Seater Housing Kit includes o-rings, back-up seals and is pressure tested
**Effective cylinder area 7.95 sq. in.**

**Power Seater Housing kit includes o-rings, back-up seals and is pressure tested**
Operation

Stressing Jacks

1. Improper care and use of stressing equipment may result in property damage, and/or personal injury. Only trained, qualified personnel should be allowed in the immediate vicinity of equipment during use. Personnel doing the stressing and inspectors should remain clear of the strand being stressed at all times. Never permit anyone to stand in the immediate vicinity of the jack and the pump while stressing.

2. Open the jack gripper by pulling back on the gripper handle or cable.

3. Position the jack on the strand to be stressed and push forward until the jack nose bears on the anchor. Never attempt to adjust the position of the jack, either by striking or pushing after any load has been applied. Remove the jack and reposition if necessary.

4. Push the jack grippers forward to engage the strand making sure that:
   a. Jack grippers are parallel to avoid damage to themselves or the strand
   b. Strand is in proper position within the jack grippers.

5. Place the pump 4-way valve in stressing position.

6. Operate the pump by use of the pendent switch. (Use of the pendent switch allows the operator to stand at the side of the pump, out of harm’s way, should the strand or jack grippers fail.)

7. On pumps equipped with a sequence valve or automatic seating valve:
   a. Start pump motor and run until proper pressure is indicated on the pressure gauge.
   b. Switch 4-way valve to retract position.
   c. Pressure will remain on the pressure side of the jack, but gauge will drop to zero and start to rebuild pressure.
   d. When preset pressure is achieved (depending on the equipment used), the seating plunger will be fully pressurized, a popping noise will be heard, and the jack will start to retract.
   e. When the jack is fully retracted, stop the pump and switch the 4-way valve to stressing position. The seating plunger should fully retract. It is important to stop the pump and switch the valve quickly to avoid excessive pressure build-up in the jack after it has completely returned. This excessive pressure build-up can cause premature failure of the jack seals, hoses and fittings.
   f. Slide the jack forward to release the jack grippers and remove the jack from the strand.

NOTE: 1) For jacks without power seating wedge setters, after proper gauge pressure is achieved, by switching the valve to the retract position, the jack will begin to retract.

2) For maximum jack life, please keep cylinder rods retracted when not in use!
**SCJ-Short Cable Jack**

- Safe and effective for pulling 4" cables.*
- No need for chairs or other cumbersome accessories.
- Gripper jaws release when jack is fully retracted.
- Requires only single hose and standard pump.
- Uses standard 10" stroke cylinders; other strokes are available - call for quote.
- Replacement parts readily available.

* For shorter cables, consult factory.

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**Don'ts of Stressing**

1. Don’t stress any tendons which contain concrete slurry inside the anchor cavity. Concrete in the anchor cavity will prevent proper seating of the wedges. It is safer and less expensive to clean out concrete slurry than to have detension, repair or replace tendons, or repair the jack.
2. Don’t use the jack when you can see that it does not seat properly on the face of the anchor.
3. Don’t overstress tendons in order to achieve proper elongation.
4. Don’t allow obstructions in the path of the jack extension.
5. Don’t use extension cords longer than 100 ft. (30m) or less than 3 wire, 12 gauge.
6. Don’t continue stressing if you suspect that something is not working properly.
7. Don’t detension with loose plates, spacing shims or piggy backing.
8. Don’t stand in immediate vicinity of the jack, or between the jack and the pump during stressing or destressing.
9. Don’t permit other workmen in the immediate area of the jack or pump during stressing operations.
10. Don’t hammer or beat on the jack or jack cylinders.
11. Don’t do anything if your not sure – ask someone who knows.

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ALL OF THE INFORMATION LISTED IS MEANT TO BE A GENERAL GUIDELINE FOR OPERATION OF POST TENSION STRESSING EQUIPMENT. THE POST TENSIONING INSTITUTE PUBLISHES A “FIELD PROCEDURES MANUAL FOR UNBONDED SINGLE STRAND TENDONS” WHICH CAN BE OBTAINED BY CALLING (248) 848-3180.
Stressing Accessories

ZU4908PB Stressing Pump with Powerseat Valve

Stressing Jacks

.5” Trouble Shooting Anchor
.6” Trouble Shooting Anchor

Jack Feet

Hand Wedge Setter

5DA1 Grippers with Handle, Standard Grippers with Handle

Reusable Splice Chuck and Short Cable Tube with Detachable Nose Piece

Chrome Pulling Wedges
Sure-Lock® Multi-Use Chucks

Designed for repeated use, Sure-lock® spring-loaded chucks are 100% mag particle inspected for cracks and imperfections, and each body is proof-tested to 125% of ultimate strand breaking load. Carefully controlled heat-treatment of components provides you with Extended Life and fully-warranted products. Bayonet-style caps allow quick release for easy cleaning and inspection. Combination reusable splice chucks for all types and sizes of strand are readily available.

Sure-Lock® One-Time Use Chucks

Our one-time use chuck is available with 2 or 3 piece wedge set. Cost effective design and reliable quality have been the Sure-Lock® standard for more than 15 years. One-time use splice chucks are also available, for all types and sizes of strand.

Sure-Lock® Anchorage Systems

The Sure-Lock® system is the industry “standard”, and has been fully tested to all PTI requirements. This system is used worldwide, in thousands of applications.

Barrier Cable Products

GRABB-IT® and other barrier cable components are available from stock for next day delivery.

We also offer . . .

Fabrication Equipment
- Complete Fabrication Lines
- Material Handling Equipment
- Expert Advise and Installation

Strand Extrusion Systems
- Turn-Key Extrusion Systems
- Custom Components for Upgrade
- Over 25 Years Experience Building Production Equipment

Wedges

Wedges are machined from high quality steel and case hardened to precise specifications. All Sure-Lock® wedges are lot-controlled. They can be supplied in sizes 3/8” thru .7” with 2 or 3 piece wedges and retaining rings available.