

HYDRO-MITE CSP-1H

Takes the work out of jacket making, swaging and reloading!

Instructions for the Hydro-Mite Press

The CSP-1H Hydro-Mite has a maximum 4-inch ram travel, similar to a reloading press, which can be limited to 2 inch stroke for use with standard -S type bullet swage dies by means of a sturdy stroke-limiting pin, inserted through the ram. This pin is required for use with the -S type dies. Damage to the punch holder or dies may occur if bullet swaging is attempted without this stroke limiting pin in place to stop the upward ram travel at 2 inches.

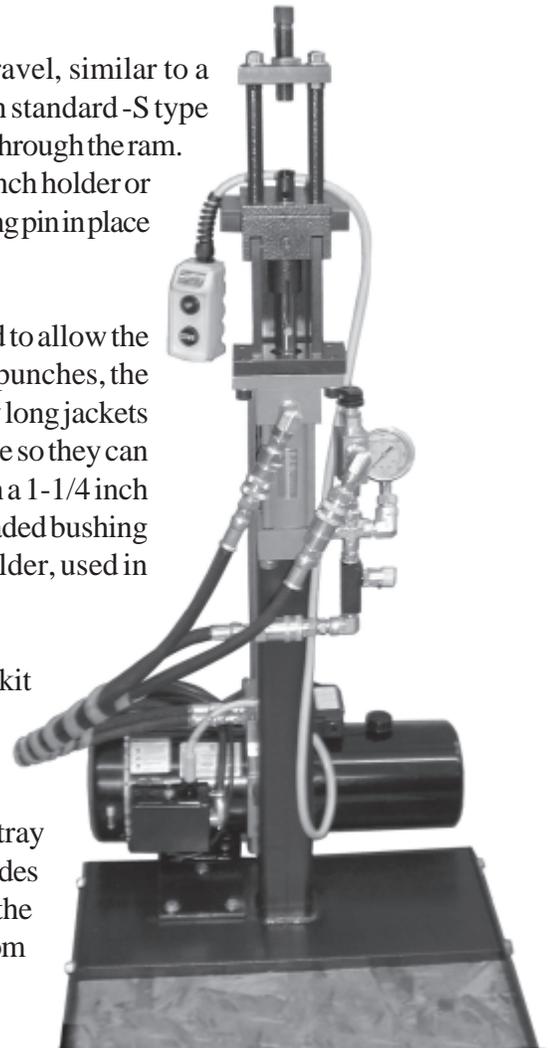
For jacket drawing, the stroke limiting pin can be removed to allow the full four-inch ram travel. With standard jacket drawing dies and punches, the physical dimensions of the press head and stroke are such that fairly long jackets can be placed on the punch, and raised up past the top of the draw die so they can be stripped off on the down stroke. The press head is threaded with a 1-1/4 inch x 12 threaded hole (1.25-12 pitch) and equipped with a 7/8-14 threaded bushing to accept standard -S draw dies (as well as the FPH-1-S punch holder, used in the 2-inch stroke mode when holding the external swage punch).

For reloading, an optional reloading kit is available. This kit includes a shell holder adapter to accept standard RCBS-type button shell holders. The adapter also extends the length of the ram far enough to provide an angled spent primer port, allowing primers to drop into a primer catching tray, also provided with the kit. The tray fits over the ram and lifts off to dump spent primers. The kit also includes a special counter-bored 7/8-14 to 1.25-12 adapter bushing, so that the shell holder will be able to rise the full 4 inches, taking it past the bottom edge of the top plate and bushing.

Caution: using the standard bushing with the reloading adapter in the 4-inch stroke mode will damage the bushing or reloading adapter! Always unscrew the swaging and drawing (standard) bushing, and replace it with the optional reloading bushing, before operating the press in long stroke (stroke limiter pin removed) and a reloading adapter in the ram.

The hydraulic hoses are equipped with quick disconnect fittings. You must not remove them when the pump is running, but you can remove them when the pump is turned off, with little or no loss of oil. Use CHEVRON 48 hydraulic fluid, or Corbin CHF-128 (one gallon container) to replace any lost fluid. Do NOT use a non-petroleum or water base or synthetic fluid, as the seals and pump are designed for the oil-based, non-foaming hydraulic fluid, and would be damaged by any other type.

The pump motor has a name-plate rated voltage, which is typically set up for 115-120 volts 60 Hz. Do not operate the pump on 220-240 volts unless both the pump motor wiring AND the solenoid valve coils are also changed. Voltage change should only be done by a qualified industrial electrician.



CSP-1H Instructions, continued...

Using the hydraulic press requires more careful attention to the way the components are forming than using a hand press, since you can't feel any pressure differences but must rely upon observation and measurement of the components. However, once you have set up a job, the use of the hydraulic press is much more consistent and simple, since there is no fatigue-induced difference in how the operations feel. There is a pressure gauge on the system which will read the force being applied to the components within the die. The gauge is filled with glycerine to stabilize the needle and protect it against vibrations: if you see a bubble in the gauge glass, this is not a defect but is expansion room for the glycerine damping liquid (fluid expands when it gets hot and the air bubble gives expansion room inside the gauge).

For bullet swaging, adjust the insertion of components by starting with the threaded floating punch holder (in the press head) adjusted as high as possible. Lower the punch holder with a component in the die and the ram extended to its maximum height, until you feel the punch encounter resistance. Turn the holder by hand, not with a tool. At this point, lower the ram slightly, give the punch holder a quarter turn further down, and raise the ram. Continue this until the component is formed correctly. Do not continue past this point, or you may over-stress and break the die.

Never operate the press with your hand anywhere near the moving ram! The press has more than enough power to drive a punch through your finger. This is a professional, commercial tool intended for use by responsible operators. Read the safety warnings before operating the press. Do not hold parts in your fingers while moving the ram up. Always make sure the ram is down and stopped before placing a part either in the die or on a drawing punch. Do not try to remove partially ejected components while the ram is moving.

The press has more than enough power to collapse an ordinary reloading die. Therefore, make sure the die is not used to stop the press ram. Run the ram to the top, and then lower the die a little at a time as you test the setting with a component in place. Stop before the shell holder or any part held in the ram contacts the face of the die.

When reloading, use the counter-bored top bushing (1-1/4 x 12 to 7/8-14 thread) so that the shell holder and reloading adapter can rise past the bottom of the adapter without contacting any threads. The 4-inch or long stroke mode is used for both reloading and for many jacket drawing operations. When jacket drawing, the punch base normally will be short enough so it cannot touch the bushing at the top of the stroke, even with the stroke limiting pin removed, so the standard bushing can be used. The counterbored bushing may or may not provide enough support for swaging and drawing operations, so be sure to replace it with the standard bushing when changing from reloading to either jacket drawing or bullet swaging operations.

The POWER switch is located on the pump motor. Ram travel is controlled by holding push buttons on the hand-held control. It does not hurt the ram to let it come to the top or bottom of the stroke and stall against the ends of the cylinder for a short time (several minutes). If you should happen to operate the press for a long period of time (15-20 minutes or more) with the ram stalled up or down and the pump delivering full power to the cylinder (such as might happen if you held down the UP or DOWN switch for that long a period) the oil may begin to heat, and become thinner. Eventually the pump might start to cavitate, which could cause failure of seals or overheat the motor. There is no practical reason to do this. All operations take a few seconds at most. You can tell by the change in sound level when the oil is getting too hot by being forced through a pressure relief valve instead of just flowing normally.

The optional reloading kit, cat.no. RLA-1-S, is available separately or can be ordered with the press.

WARNING:

For your own protection, do NOT attempt to over-ride safety devices!

The Hydro-Mite press is equipped with electrically-operated remote control. The ram travel takes place when the buttons on the remote cable are held in the UP or DOWN position.

Never install a punch or die with the motor turned on (pump running). Always turn OFF the main power switch on the hydraulic pump before installing, removing, or adjusting the die in the press ram, or installing or removing the external punch. The press has sufficient power to drive a punch through any part of the body which is placed in the path of the die and external punch. Never reach into the area in which the ram can move, unless the ram is stopped.

Releasing the hand control button will bring the ram to a stop. As an additional safety measure, use tongs or tweezers to grasp components being placed into or removed from the die. Under no circumstances should your fingers or hand be placed in the path of the moving ram!

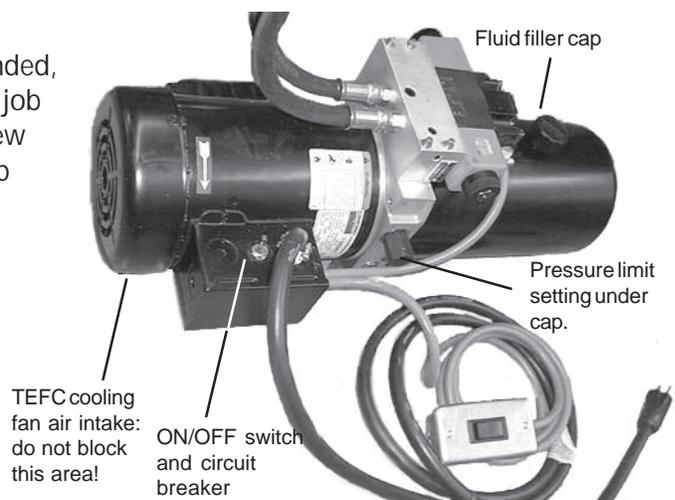
Wear safety glasses to guard against possible eye injury in the event of a die or punch failure. Lead alloys increase the swaging pressure by the square of the increase in hardness. Doubling the hardness raises required swaging pressure by four times. Hard lead tends to fracture rather than flow smoothly. As a result, the extrusion holes in certain kinds of dies may throw pieces of lead with high enough velocity to cause injury, under certain circumstances. A sheet-metal guard placed between the die and your body can be used to block the expelled lead extrusions.

Never detach any hoses or attempt to work on the fittings for any hydraulic lines or devices on this machine while the pump motor is running. Always turn off the power and unplug the power cord from the wall outlet whenever you do any sort of maintenance on the machine. Do not attempt to turn the safety pressure limiter, located on the pump base, beyond the factory-set level to gain more power from the press: to do so voids the warranty and may place you in danger of physical injury.

The hoses have color coded bands on both ends, to match their respective connectors. This will help you place them on the correct fittings. Normally it is not necessary to disconnect them again. The electrical control unit is attached with a quick connector also, for easy service and routing.

Do not operate this machine when children are present, or if you are under the influence of drugs, alcohol, or medicines which may cause drowsiness or lack of attention. All bystanders should stay well back of the machine when it is being operated, both to avoid distracting the operator, and to prevent injury to themselves.

Start all adjustments with the ram fully extended, and slowly lower the draw die or punch holder until the job is accomplished. Do NOT start with the ram down, screw in the punch holder or draw die, and then run the ram up to make adjustments: you may destroy the die or punch when the press forces them together improperly before the adjustment has been made. The press includes a floor stand and precision pressure and speed controls, which help you use the most comfortable speed and the minimum pressure that will get a particular job finished. Use only the minimum pressure needed to make a part form.



RLA-1-S Reloading Adapter Kit

The CSP-1H HydroMite press can be configured in three ways:

1. Bullet Swaging

The press ram has the stroke limiting pin installed (2-inch stroke) and the press head has the standard CSP-1B1 bushing, to hold the 7/8-14 threaded FPH-1-S floating punch holder. The press can also be used for jacket drawing in this mode if the punch and jacket length could be drawn in the CSP-1 hand press. In this configuration, the press is set up to simulate the CSP-1 hand press ram travel and swaging functions.



CSP-1B2

2. Jacket Drawing

The press ram has the stroke limiting pin removed (4-inch stroke) and the press has the standard CSP-1B1 bushing installed. This configuration allows the drawing of longer jackets, providing room to load the jacket on the punch and sufficient punch length to push the jacket through the die so it can be stripped off at the top. This mode must not be used with a reloading adapter! Doing so can crash the adapter into the threads of the bushing with destructive results.



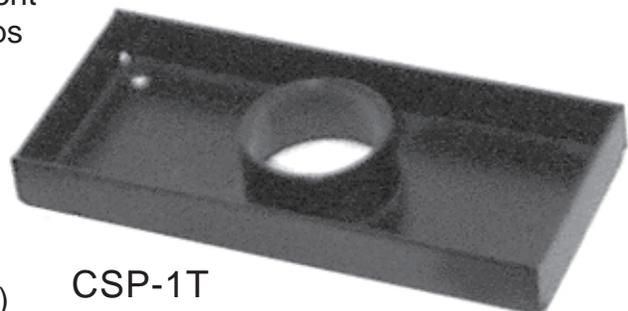
CSP-1B1



CSP-1R

3. Reloading

With the optional RLA-1-S reloading adapter kit, standard 7/8-14 reloading press dies and RCBS-style button shell holders may be used. The kit consists of three components. These are the CSP-1R shell holder adapter for the ram, with angled primer port for spent primers, the CSP-1T primer catcher tray which slips over the top of the ram to catch spent primers (it moves up and down with the ram), and the CSP-1B2 reloading adapter bushing, which fits the press head in place of the standard CSP-1B1 bushing, and provides for clearance for the length of the shell holder and ram adapter. The press stroke limiting pin is removed (4-inch stroke) and the bushing is screwed into the press so that the counter-bored lower portion faces down toward the ram. The threads inside the adapter bushing are above the top of the press head, allowing additional space for the shell holder and adapter to travel upward, into the recess or counter-bore at the bottom of the adapter.



CSP-1T