

# HLLU:

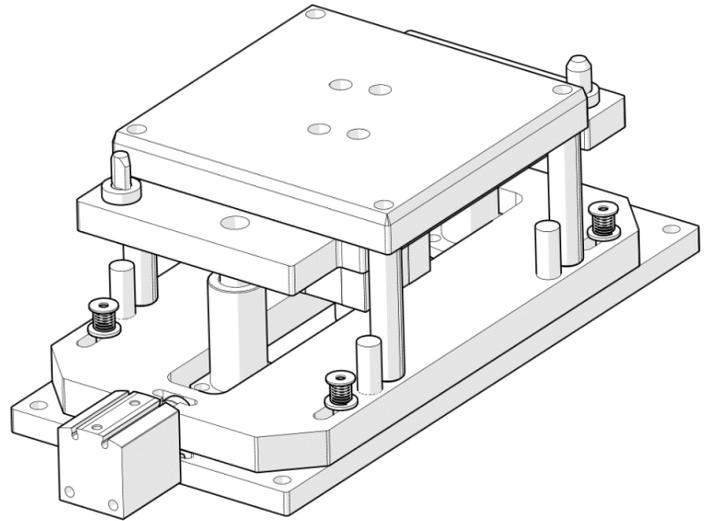
## The Heavy Duty Lift Locate Unit

### The Device:

The Heavy-Duty Lift and Locate Unit (HLLU) delivers repeatable, positional accuracy within  $\pm 0.05\text{mm}$ . The vertical lift position is fixed at 1.5mm above the belt, and the unit is designed to handle heavy loads for press operations such as swaging and ultrasonic welding. This unit utilizes a pneumatic shuttle that slips between the baseplate and the lift anvil once the pallet is raised into position. Heavy Duty Units must be station-mounted on suitable structures to absorb the required loads; accuracy and repeatability are relative to the mounting structure.

### Basic Order of Operation:

1. Pallet is conveyed to device
2. Pallet is stopped directly over device by stop (not included)
3. Lift actuates and rises, with the top plate pins engaging the Work Piece Pallet's locating bushings
4. Shuttle Plate moves support pins into position
5. Release air from lift cylinder so support pins make contact
6. Operations completed to workpiece
7. Re-engage lift cylinder, Shuttle Plate pulls support pins out of position.
8. Lift cylinder lowers, disengaging locating pins from pallet
9. Pallet Stop drops
10. Pallet conveyed out of work area



### Part Number: HLLU-(A)-(B)

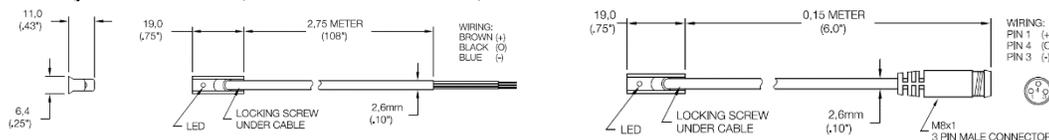
- A** = Pallet Width Range 160mm to 400mm\*  
**B** = Pallet Length Range 160mm to 400mm\*

\* = Pallet sizes can exceed this size, but will require additional engineering/material  
 = Non-evenly distributed center loads may require additional engineering/material

### Technical Specifications

Lift range:	1.5mm (above belt)
Lift cylinder bore:	40mm
Lift capacity:	150 Lbs. @ 80 psi.
Load Absorption:	20,000 Lbs. (Starting)
Pallet length range:	160mm to 400mm in 1mm increments.
Pallet width range:	160mm to 400mm in 1mm increments.
Pneumatic Ports:	G1/8

### Recommended Cylinder Sensor (Manufacturer: Nason):



- SCP/P-00770 = Electronic Reed Switch, M8x1 3-Pin Male, PNP  
 SR/P-00771 = 5m Long M8 Female Locking Connector for SKP/SCP

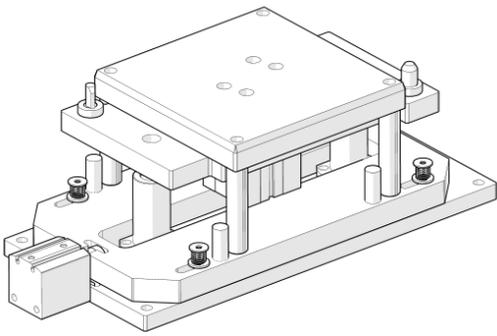


Figure 1

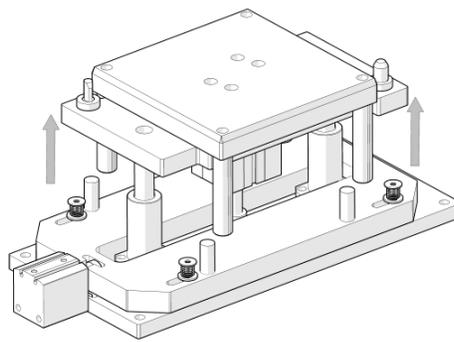


Figure 2

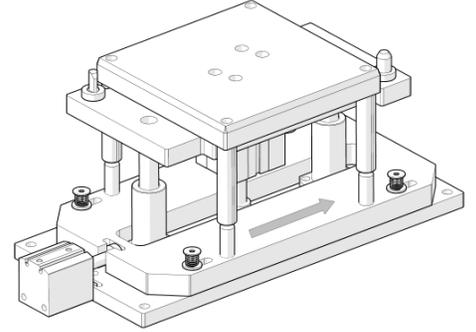


Figure 3

From left to right, the process of lifting into locked position

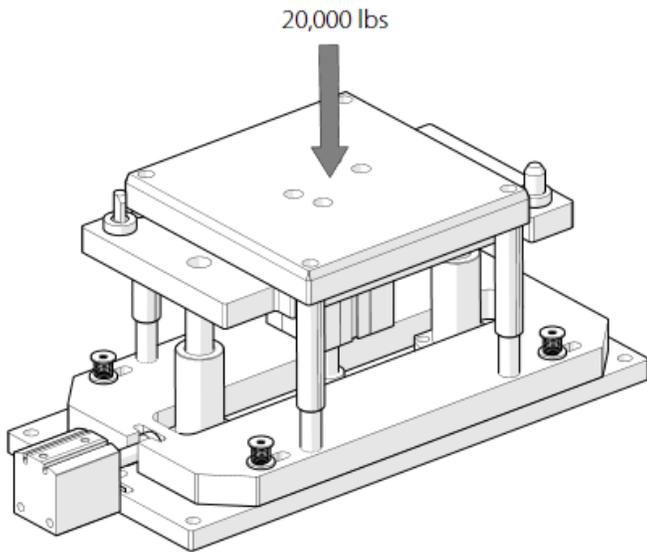


Figure 4: While in the locked position, the anvil plate can support press loads up to 20,000. Additional press capacity available on request.

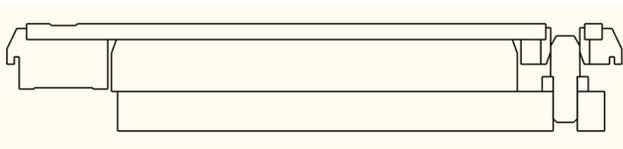


Figure 5: Cross Section view of locating pins engaging pallet bushings

**Recommended Pneumatic Schematic:**  
 \*Fittings and Valves not included

