

If you only need to test a few large parts it may make sense to consider the All-In-One LPI System.



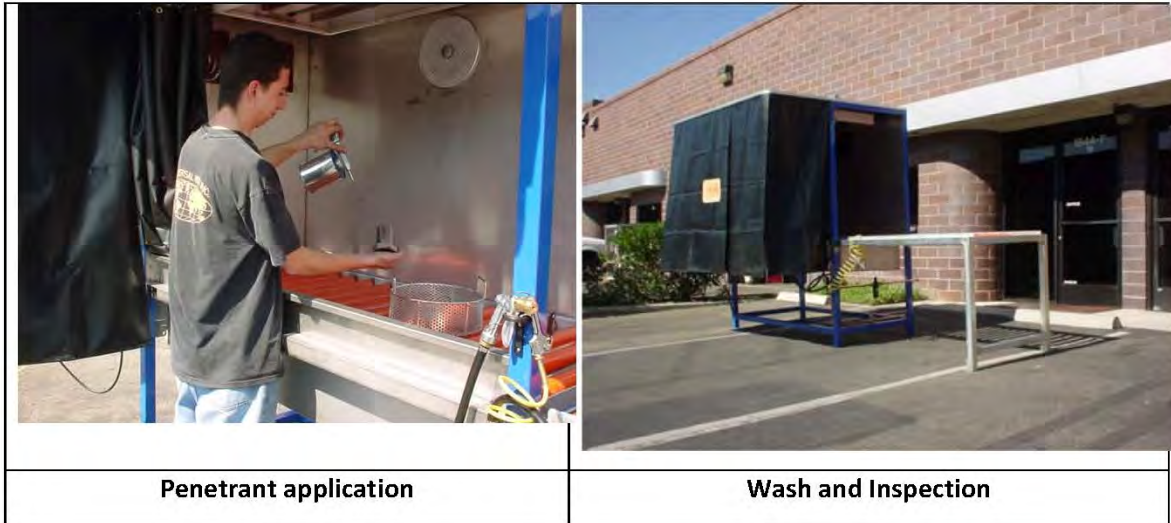
System overview

The Universal NDT All-In-One Fluorescent Dye Penetrant Inspection System is great for customers with large parts and low production requirements.

- Small footprint makes it ideal where space is a premium.
- The stainless steel tank and flame retardant curtains make it a long lasting, reliable system.
- Exhaust fan is included to remove excess overspray and/or heat during the penetrant process.

Universal All-In-One LPI System

- The integral wash water monitoring accessories and air blow-off accessories help the ease of installation to complete a proper penetrant testing process.
- The All-In-On System can be customized to your size of width and length requirements.



The All-in-One Penetrant System, incorporates penetrant application, dwell, wash, air blow-off, drying, developer application, and inspection in one, stand-alone station.

It is meant to fit the needs of Customer's with large parts but small production requirements or small parts with small production requirements.





Specification:

1. 32" left to right and 56" front to back and 10" deep I.D. tank and enclosed side and backsplashwall made of 304.2B stainless steel, welded to a 2" steel, square tubing frame with an overhead canopy, which makes for a 36" x 60" x 84" high O.D. frame.
2. The 84" high overhead canopy is made of plywood and extends out 2' to form an operator's section, which makes for a 60" x 60" O.D. footprint.
3. The 36" working height has a 10" high, stainless steel, removable splashguard along the front operator section.
4. Both sides and the rear of the booth are covered with stainless steel, sheet metal walls.
5. The tabletop has (2) 24" diameter, manually operated, open frame, aluminum tumtables, for easy of rotation of processing parts.
6. The stainless steel, sheet metal ceiling holds an LED black light lamp to reach the Boeing required $50 \mu\text{w}/\text{cm}^2$ of UVA black light required for parts washing.
7. The operator section of the overhead canopy is surrounded by split, flame retarding curtains to keep ambient white light out.
8. Parts washing is accomplished with a specification required Tri-Con Wash Gun plumbed in-line with the water-pressure regulator and a pressure and temperature gauge to monitor the wash process.
9. After washing, a pressure regulated air hose and nozzle plumbed in-line with a pressure gauge can be used to blow off the excess water to aid the drying process.
10. On the top of the stainless steel, left sidewall is a 1650 watt, electric fan heater, to circulate the hot air in the chamber for even part drying. Note: Heater does not have a calibratable temperature control.
11. A transformer is mounted on the roof to convert the 120 VAC/ 60 Hz electric fan heater to 220 VAC/50 Hz power.
12. When parts are being dried, a flame retardant, water resistant, UV resistant curtain can be pulled shut to keep heat in. The curtain is held on a Track & Trolley for ease of movement.
13. A LED, black light lamp on an adjustable arm is placed along one of the side frame supports for hands free black light inspection process. This allows for $1700 \mu\text{w}/\text{cm}^2$ of UVA black light at a 15" distance from the face of the lamp.
14. The LED black light lamp also has an integral LED white light, capable of reaching much more than the required 100 footcandles needed for inspection marking of parts.
15. The exterior of the unit is powder coated for a durable top coat.
16. All controls and electrical components are housed in splash resistant electrical boxes.
17. 1 year non-expendable, parts warranty and 3 year welded assembly repair or replacement.
18. Crating: Packed in Overseas Shipping Crate



1- Penetrant Application/Dwell:

Can be performed by spray, brush, or dipped into an optional small parts Dip Tank depending on the part size and/or inspection requirements. After application an optional Timer can aide in the controlled dwell of the penetrant on the surface of the parts.

2 - Wash Process:

A specification required Tri-Con Wash Gun plumbed in-line with a pressure regulator, pressure gauge, and temperature gauge allow for the monitoring of the wash water parameters. The wash process is illuminated with sufficient fluorescent blacklight tubes to reach the required illuminance of $50 \mu\text{w}/\text{cm}^2$ of UV-A at the parts surface during washing. The Air-Blow Off Gun plumbed in-line with a pressure regulator and pressure gauge allow for excess water to be blown off the parts prior to parts drying to lessen the drying time.

3- Parts Drying:

When you close the curtains and switch on the fan the forced air heater(s) come on starting the drying sequence. The heat is evenly distributed throughout the enclosed space facilitating drying in even high humidity locations.

4- Developer Application:

After the parts have thoroughly dried, Dry Developer can be applied with a powder bulb or other applicator. Nonaqueous Developer can be sprayed on by aerosol can or spray gun, or Wet Developer can be brushed on or dipped into with an optional small parts Dip Tank. After application an optional Timer can aide in the controlled dwell of the developer on the surface of the parts.

5- Inspection:

A high-intensity UV lamp is provided to inspect the part/s after developer dwell. The blacklight lamp is held on an adjustable arm with a bracket and rod to allow for hands free inspection under the UV lamp. The curtains surrounding the operator section keep ambient visible light from outside the inspection station below 2 footcandles. A whitelight flood bulb is mounted on the ceiling of the Inspection Station for part marking and other required inspection tasks.

Optional Items:

Loading Station, Rollers, Polyurethane covered Rollers, small parts Dip Tanks,
Dust Collector, Industrial Evacuator, Thermostatic Mixing Valve, and Timers.

PLUS all the supplies and accessories needed to perform the Penetrant Inspection process