

HAL5224 HOT AIR SOLDER LEVELER

The HAL5224 Hot Air Solder Leveling System is designed to provide the highest quality solder leveling at high throughput rates while preserving the highest reliability and serviceability standards available. Argus International has been designing, building and operating HASL systems for over a decade. The experience earned in a decade of dedication to engineering the HASL process is evident by the high quality work produced.

Stainless steel construction, integrated exhaust hood ducting, complete solder pot accessibility, high speed DC motor driven vertical arm, and fixed angle air knives are just a few of the features that are standard on the HAL5224. Also available are a variety of 'quick-change' clamping mechanisms, remote control console and solder refinement systems. These features combine to produce 200 panels an hour average, 350 panels an hour maximum.

The clamp/knife arrangements most commonly used are the 'Pressure' and 'Pin' type clamp/knife arrangements. The 'Pressure' type clamp utilizes air pressure to apply a finger type force to the panel. The 'Pin' type clamp uses two tooling pins to 'hang' the board and air pressure force pulling the board upward and locking it into place. The 'Pin' type clamp requires that the board have two strategically placed holes for proper operation. The Standard clamp/knife arrangement is named such because it is designed to provide the user with the uniform coatings over the largest range of thickness' available. The 'Pin' type clamp/knife arrangement is intended for use with applications that require very thin (.1 mil and less), highly uniform solder coatings. This is accomplished by bringing the air knife blast in very close proximity to the board surface. Flexible Circuit clamping mechanisms are also available.

AVAILABLE OPTIONS

INCREASED HEATING CAPACITY: This greatly reduces heat sinking of solder temperatures during heavy work load demand.

BOTH PRESSURE AND PIN CLAMP/KNIFE ARRANGEMENT: Either of the two clamping mechanisms maybe selected as standard with the machine. This option provides the user with both of the most common clamp/knife arrangements.

REMOTE CONTROL CONSOLE: Provides a separate NEMA rated console placing the system controls a distance of up to 10 feet away from the machine.

ELECTRICAL SERVICE REQUIREMENTS

Circuit Breaker service is 3-phase configuration with a good Ground.

ITEM	200-240V 50/60HZ	380-415V 50HZ	440-480V 50/60HZ	POWER
HAL5224 CIRCUIT BREAKER	150A	100A	70A	45kVA

EXHAUST SYSTEM REQUIREMENTS

NOTE: The HAL5224 does not include an exhaust blower. Most facilities utilize fume scrubbing equipment that has the capacity to provide exhaust draw. A 10" diameter exhaust port is provided at the top of the machine. The exhaust draw should be rated at 2500CFM. Ducting must be capable of handling corrosive fumes at 150 degrees Fahrenheit.

COMPRESSED AIR REQUIREMENTS

NOTE: The HAL5224 requires 90CFM at 100PSI minimum. It is recommended that a 300 gallon air reservoir be included in the air compression system. A 25 to 30 HP compressor will normally provide the minimum compressed air requirements.

SHIPPING DATA

ITEM	CRATE SIZE	AIR FREIGHT CRATED WEIGHT	COMMON CARRIER CRATED WEIGHT
HAL5224	102" x 63" x 72"	2,300 lbs.	2,500 lbs.

Note: Crating dimensions and weights are approximate and may vary within 10%.

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1. **Production Capacity** - Up to 150 18" x 24" panels per hour
2. **Maximum Panel Dimension** - 24" X 30"
3. **Minimum Panel Dimension** - Need minimum of a ¼" (6mm) edge only
4. **Tin Lead Thickness** - :>0.1 to <1.5 mil topography dependent
5. **Panel Clamp Mechanism** - Pneumatic pressure-type clamp device - **Option:** "Flex" clamp
6. **Machine Cover** - Stainless steel
7. **Exhaust Hood** - :Stainless steel 10 " diameter exhaust port
8. **Exhaust System** - Designed provides a internal ducting double wall structure
9. **Electrical Power** - Required 45kVA, 3phase, 60/50 Hz
10. **Air Knife** - Removable, factory preset
11. **Air Knife Heating** - Air heated before reaching the knives
12. **Board Guides** - Adjustable, removable, Tin Lead Free
13. **Up Speed Control** - Regulated DC drive, Touch screen control
14. **Yield First Pass** - Excellent
15. **Mean Time Between Failure** - Over 5,000 hours on air and solder tank heaters
16. **Noise Level** - < 85 dB
17. **Between Shift Maintenance** - 30 minutes per shift total time for cleaning the solder tank surface and maintenance for the air knives
18. **Equipped Solder Refinement System** - To work efficiently, about 6-8 hours stand by time every 24 hours to keep the copper concentration level below 0.3%
19. **Setup Time For Different Panels Sizes** - Less then 2 minutes

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HAL5224 Physical Dimensions

