



**The initial effort was to design and manufacture Air-Operated Vacuum Pumps/Generators based on the venturi principle.**

The product line expanded to include single and multistage pumps, and the ability to custom manufacture pumps provided a unique and efficient vacuum solution for developing other products.

**AV Design**

Standard Venturi,  
90° Vacuum Passage



**TD Design**

Straight Through Vacuum Passage



**MF Design**

Multistage, Initial High Vacuum Flow



**Custom Designs**

- Various Configurations, Shapes, Materials
- Specific Vacuum Levels "Hg
- Maximum Vacuum Flow
- Minimum Air Usage



**ITD & IAV Design**

Inserts/Cartridges, An Integral  
Part of Your Product



**TDSS & HAVSS Designs**

Chemically Resistant 316  
Stainless Steel



**UV Design**

Ultra-Vac, Near Perfect Vacuum  
of 29.7"Hg



**During the next few years, Air-Vac's Vacuum Technology provided three additional product lines:**

**Vacuum Technology to prevent loose scrap from interfering with high speed fabricating dies.**

The TD Design provides a straight through vacuum passage allowing the loose scrap to pass completely through without disrupting the vacuum flow.



**A smaller Vacuum Pump provided the vacuum required for handling small, delicate parts.**

The system included various vacuum probes and tips for instantaneous pick up and release of parts with finger tip control.



**Hand Held Vacuum Desoldering Tool for Through-Hole Components.**

Vacuum Pump is mounted on the handle of the soldering iron. Instant vacuum with the simple touch of a button. Heat is transmitted into a solder joint and vacuum removes the solder leaving leads and holes clean.



**As Assemblies became more complex, component lead counts increased.**



**Through Hole Rework and Selective Soldering Modules.**

The PCBRM2 Printed Circuit Board Reflow Module was introduced in 1971 and made it possible to reflow multiple through-hole leads simultaneously using molten solder.



As component and assemblies evolved, successive generations of the PCBRM Module kept pace with expanded features to changing customer requirements. The PCBRM15 is the current module for Lead-Free Through Hole Rework and Selective Soldering. The system includes a long lasting solder pot and pumping system with temperature and process control for repeatable results. The PCBRM System 5.2 Module was introduced to meet increased production requirements and to meet the needs of thermally challenging assemblies using a preheater, motorized carrier, and process control software.



**PCBRM15**  
Solder Pot & Pumping System  
with Process Control



**PCBRM System 5.2**  
PCBRM15 plus Preheater, Motorized  
Carrier, Process Control Software



**PCBRM100**  
• Large, High Thermal Mass Assemblies  
• Next Generation Solder Fountain Technology  
• Focused Convective Heating, EZ Alignment



**Flow Well Tooling**  
Matching Solder Wave Shape  
to Component Lead Pattern

When Surface Mount Technology emerged, Air-Vac continued to keep pace with the rapidly changing technology, to provide semi and fully automated systems for removal, site clean, and replacement of virtually any device.



**SMT Rework, Soldering and Assembly Modules.**

Air-Vac led the industry with the introduction of the DRS22 Beam-Splitter Rework, System used for components such as BGA's, Connectors, etc. Air-Vac's Next Generation system, the DRS24C provided automated process controlled rework capabilities for a wide range of packaging and assembly designs. The DRS24C became an Industry Standard.



**DRS22**



**DRS24**

To meet the demand for automation, precision motion, placement and process control, four additional surface mount rework modules were introduced. The DRS25 and DRS27, the ONYX29 Robotic Hot Gas Reflow Module, and the most recent AVX1000.



**AVX1000**  
Fully Automated Precision Control. High Speed Force Feedback provides Sensitivity for Delicate Placement.



**ONYX29**  
Robotic Production with High Performance and Unparalleled Automation & Process Control.



**DRS27**  
Large Thermally Challenging Assemblies processed with Powerful Heating and Multiple Field of View Vision.



**DRS25**  
Semi-Automated and Repeatable Thermal Performance with Highly Accurate Vision Alignment.



**Nozzle Tooling**  
Expertise to Developing Nozzles and Process for every SMD.

In 1998, Air-Vac established a business relationship with Swiss-based Infotech AG, whose initial development for Air-Vac was the ONYX32 Module. This represented the first fully automated rework and assembly system using Hex Sight Vision software.



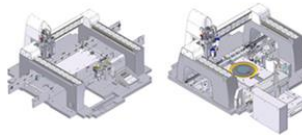
Today, Air-Vac Automation is a partner with Infotech Automation. The Automation product line expanded again with the introduction of the IC Series Production Cells which incorporated high precision, fully automated IP Robot Platforms. These platforms can be combined with a comprehensive range of head/table peripherals and configured for Precision Positioning, Handling, Bonding & Dispensing Systems



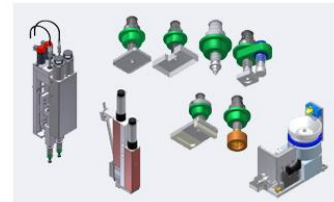
**IC Production Cells**  
Highly Automated, Multi-Functional Systems, add a Robot Platform and Custom Peripheral.



**IP Desktop Platform**  
Desktop and Cell Modules with Unique Configurations for Customer Specific Automation Applications.



**IP Robot Platforms**



**Feeder/Table Peripherals**  
Peripherals that provide Highly Accurate and Innovative Solutions for various Automation Processes including Assembly, Dispense, & Feeder.

Here in Connecticut, Air-Vac provides Automation service and support, from engineering design and proof of concept, to installation, training, service and on-going technical support. Air-Vac also has a Rework service, training and demonstration center in Carlsbad, California. You are welcome to visit either of our facilities.



**Automation**



**Rework**