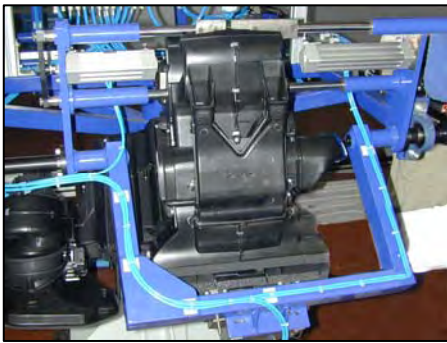




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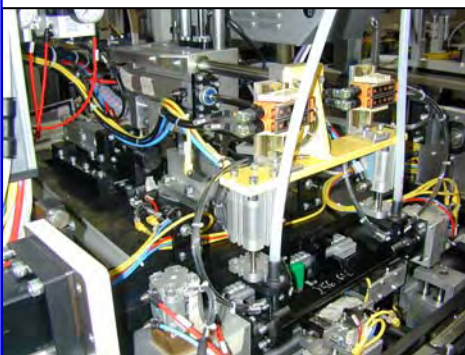
HVAC Assembly Machine

The HVAC Assembly Machine is flexible manufacturing line that can produce a range of HVAC assemblies. The machine is based on a pallet conveyor system with manual, semiautomatic and automatic work stations, including automatic welding and final test. The manufacturing line can be configured with varying levels of automation, depending on Customer's need. Flexible machine architecture/layout allow to comply with specific floor space constraints. Loading of components throughout the assembly process is manual, while handling of the HVAC is assisted/robotized.



MACHINE GENERAL CAPABILITY:

Operating Rate:	Up to 150 parts per hour
N° of product variants	Up to 12
LHD & RHD versions:	Yes



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MACHINE CYCLE (for mid-complexity HVACs)

Evaporator preparation & assembly:	Manual/Assisted
Carters preparation & assembly:	Manual/Assisted
Carters US welding:	Automatic
Exchanger preparation & assembly:	Manual/Assisted
HVAC sub-ass.y handling	Robotized/Continuous
Fan, actuators and components assembly:	Manual/Assisted
HVAC leak test	Automatic/Continuous
HVAC electric test	Automatic/Continuous
HVAC functional test	Automatic/Continuous
Finished HVAC unload	Manual//Assisted

PRODUCTION RATE

Output Rate: 120 parts/hour

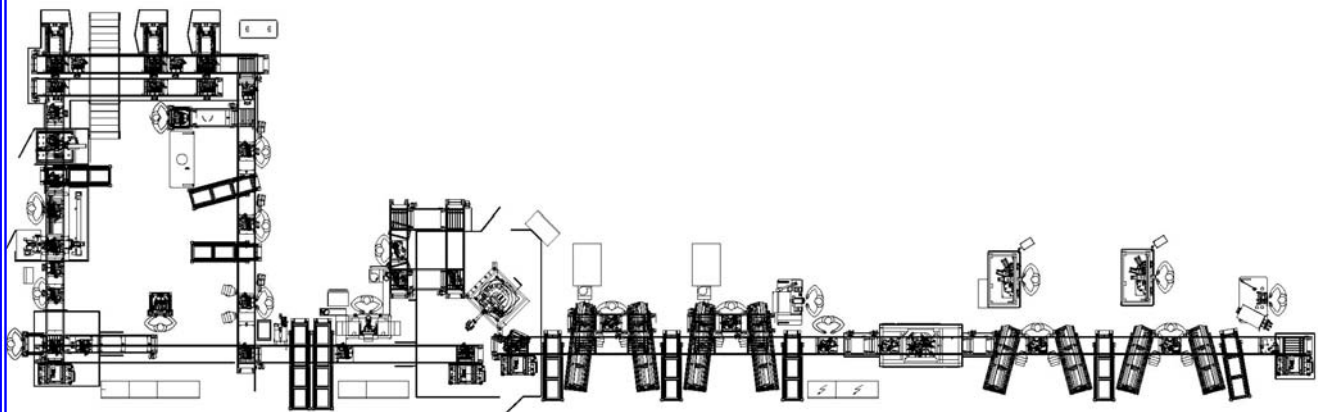
GENERAL DESCRIPTION

The HVAC assembly machine will consist of the following (for mid-complexity HVACs):

- Transfer conveyer, motor driven, double chain, vertical (upper) return path
- 21 manual, semiautomatic and automatic workstations
- Pallet stop and index units
- 60 pallets with work-piece holder tooling and on-board memory
- Components feeding racks, on one side
- Automatic carters US welding
- Full leakage test
- Full electric/functional test
- Repair station
- Distributed or localized control system (PLC)
- Supervision and traceability system on PC
- Transfer robot, w/ gripper
- Safety Guarding
- (1) Set of Operator/Maintenance Manuals

LINE FOOTPRINT:

Length	38.000 mm ()
Width	11,500 mm ()
Height	2,500 mm (8'-2 1/2")
Estimated Weight	18,000 kg ()



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