

Wave Soldering Equipment Check List

Bob Willis

Here is a simple reference document that may be beneficial when looking at new or second owner equipment. We have produced interactive CD ROM and videos on wave soldering, machine maintenance and quality control.



Wave Solder Checklist

Company Name
Size of Company (People)
Years of Business in Machine Soldering
Sales and Manufacturing locations
Machines in the Field
Customer List
Technical Support
Maintenance Support
Spare Parts Holding

This form is used for reference when assessing different wave soldering machines, notes may be made on the form for each of the machines technical features. A simple scoring system is used to grade the equipment features to aid the final assessment.

WAVE SOLDERING EQUIPMENT EVALUATION

SCORE PER MACHINE TYPE: (1 Low 5 High)

1 2 3 4 5

MAXIMUM BOARD WIDTH SOLDERABLE

TYPES OF FLUXER

Foam
Wave
Brush
Spray

Air Knife
Roll out facility
Different Flux Unit Retrofittable
Flux Density Controller
Other Option

TYPES OF PRE HEATER:

Cal Rod
Metal Plate
Lamp Type
Infra Red
Hot Air

Bob Willis Process Guides

Number of heater units
Top pre heaters retrofitable
Board Temperature Monitoring
Closed Loop System
Other Options

TYPE OF SOLDER WAVE:

Single Wave
Double Wave
SMT Options

Oil/Cover Coat
Air Knife
Nitrogen options

Type of Heaters
Size of Tank
Roll Out Solder Tank
Wave Height Monitoring
Board Support
Lead Free Compatible

TYPE OF CONVEYOR SYSTEM:

Finger
Chain Drive

Conveyor Angle Adjustment
Finger Cleaner
Direct Speed Indicator/Compensation
Different Pallet Designs
Different Finger Designs
Conveyor Robustness/Repeatability

BOARD PRODUCTION THROUGHPUT (THEORETICAL)

MACHINE CONTROLS:

Manual
Computer
Computer/Manual Backup
Time Clocks
Digital Readouts

GENERAL MACHINE:

Build Standard
Access for Maintenance
Aesthetics of Machine
Process Viewing

TYPE OF TRAINING PROVIDED:

Theoretical
Operator Hands On
Machine Maintenance
Course Outlines
Course Instructor
Other Training Aids

MACHINE OPTIONS:

Fire Protection System
Nitrogen System/Retrofit
Solder Feed

MATERIALS SUPPLIED WITH SYSTEMS:

MANUALS SUPPLIED:

OTHER DOCUMENTATION:

RECOMMENDATION SPARE PART LIST:

DELIVERY:

SAFETY:

MACHINE EVALUATION SCORE FACTORS

Bob Willis is a process engineer providing engineering support in conventional and surface mount assembly processes. He can assist companies evaluating soldering systems and comparing yields. He also runs production lines at exhibitions, provides lead free wave and reflow seminar and workshops world wide. Bob has one of the largest collection of training videos, interactive CD-ROMs and training material in the industry. These feature tapes and CD's on wave soldering. Bob will be presenting four Master Classes at APEX in California, he will also be presenting classes at SMT Nuremberg in Germany for those engineers visiting the show. For further information on how Bob may be able to support your staff contact him via his web site www.bobwillis.co.uk

Don't forget to pass this paper on to a friend!