

... know the difference



HORIZON 01i

TECHNICAL SPECIFICATION

Basic Configuration	Specification
Accuracy and Repeatability	2 Cpk @ +/- 25µm #
Cycle Core Time	10 seconds
Max. Board Size (Print Area)	610mm* (X) x 508mm (Y)
Print Speed	2mm to 150mm/sec
Squeegee Pressure Mechanism	Software controlled, motorised, with closed loop feedback
Stencil Alignment	Motorised via actuators X Y and Theta
Stencil Positioning	Manual with screen depth adjuster
Tooling	Magnetic tooling pins 19mm dia x 25 4mm dia x 25
Camera	Hawkeye 400 digital camera, using IEEE 1394 interface. Multi channel. LED lighting. FOV 5mm x 8.5mm
Fiducial Recognition	Automatic fiducial teach and find incorporating 0.1mm fiducial capture
Operating System	Windows XP
Operator Interface	Colour TFT touch screen display, keyboard and trackball with DEK Instinctiv™ software
Connectivity	RJ-45LAN (networking) and USB2 interface available
Tooling Deviation Monitor	Verification of tooling setup via squeegee pressure feedback
Temperature / Humidity Sensor	Monitoring of the process environment
Printer Construction	One piece optimised welded frame
ISCAN™ Machine Control	Motion control using CAN BUS network
Camera Positioning	Rotary motors and encoders, with 4 micron resolution
Machine Interface	Upline and downline FMI included
Squeegee	Clamped double trailing edge squeegee (1 set included)
Documentation	Hard copy manuals comprising: Operator, Installation, Electrical Drawings. On board technical manuals and tutorials supporting operator functions. CD containing manuals and tutorials

Process Parameters	Specification
Print Pressure	0kg to 20kg
Print Gap	0mm to 6mm
Screen Separation	Speed: 0.1mm to 20mm/sec Distance: 0mm to 3mm
Print Modes	ProFlow™ Print/Print Print/Flood Flood/Print Adhesive
Paste Knead	Programmable: number, period, on demand

* Not HTC machines, see HTC Technical Specification...For Paste Dispenser - Max of 508mm
For Paper USC - Max of 508mm. Vortex USC available to 610mm

DEK's machine accuracy and repeatability qualification is undertaken using production environment process variables. Print Speeds, Print Pressures, Rising Table and Camera Movements are included in the process capability figure.

HORIZON 01i

TECHNICAL SPECIFICATION

Transport System	Specification
Type	Single piece with 3mm round transport belts
Rail Justification	Front fixed rail
Width Adjustment	Programmable motorised rear rail
Min. Board Size (Handling)	50mm (X) x 40mm (Y)
Max. Board Size (Handling)	508mm (X) x 508mm (Y)
Transport Direction	Left to right Right to left Left to left Right to right
Substrate Location	Patented over the top clamps
Underside Component Clearance	3mm to 42mm
Substrate Thickness	0.2mm to 6mm
Substrate Max. Weight	1kg
Substrate Warpage	Up to 8mm including substrate thickness

Vision	Specification
Vision System	Cognex
Camera Lighting	Software controlled programmable LED lighting
Fiducials	2 or 3
Fiducial Types	Synthetic fiducial library or unique pattern recognition
Fiducial Size	0.1mm to 3mm
Fiducial Locations	Anywhere on substrate
Fiducial Error Recovery	Auto lighting adjustment Auto fiducial search

Operating Environment	Specification
Temperature	10° to 35° C (50° to 95° F)
Humidity	30% to 70% Relative Humidity (non condensing)

Services	Specification
Voltage	100 Volts to 240 Volts +/-10% Single Phase 50/60Hz
Max Current @ 115V	20 Amps with vacuum pump 6 Amps without vacuum pump
Max Current @ 230V	10 Amps with vacuum pump 3 Amps without vacuum pump
Over Current Protection	An external circuit breaker ≤ 25 Amps is required to be fitted in line with the machine supply
Air	To ISO 8573.1 Standard Quality Class 2.3.3 Pressure 5 bar to 8 bar at 5 Litres/min

Certification	Specification
CE	98/37/EC 89/336/EEC 73/23/EEC Subsequent Amendments
ETL	UL61010A-1 1st Edition 2002 CAN/CSA-C22.2 No 1010.1-92
Accoustic Noise Level	Less than 70dB 2003/1/EC

HORIZON 01i

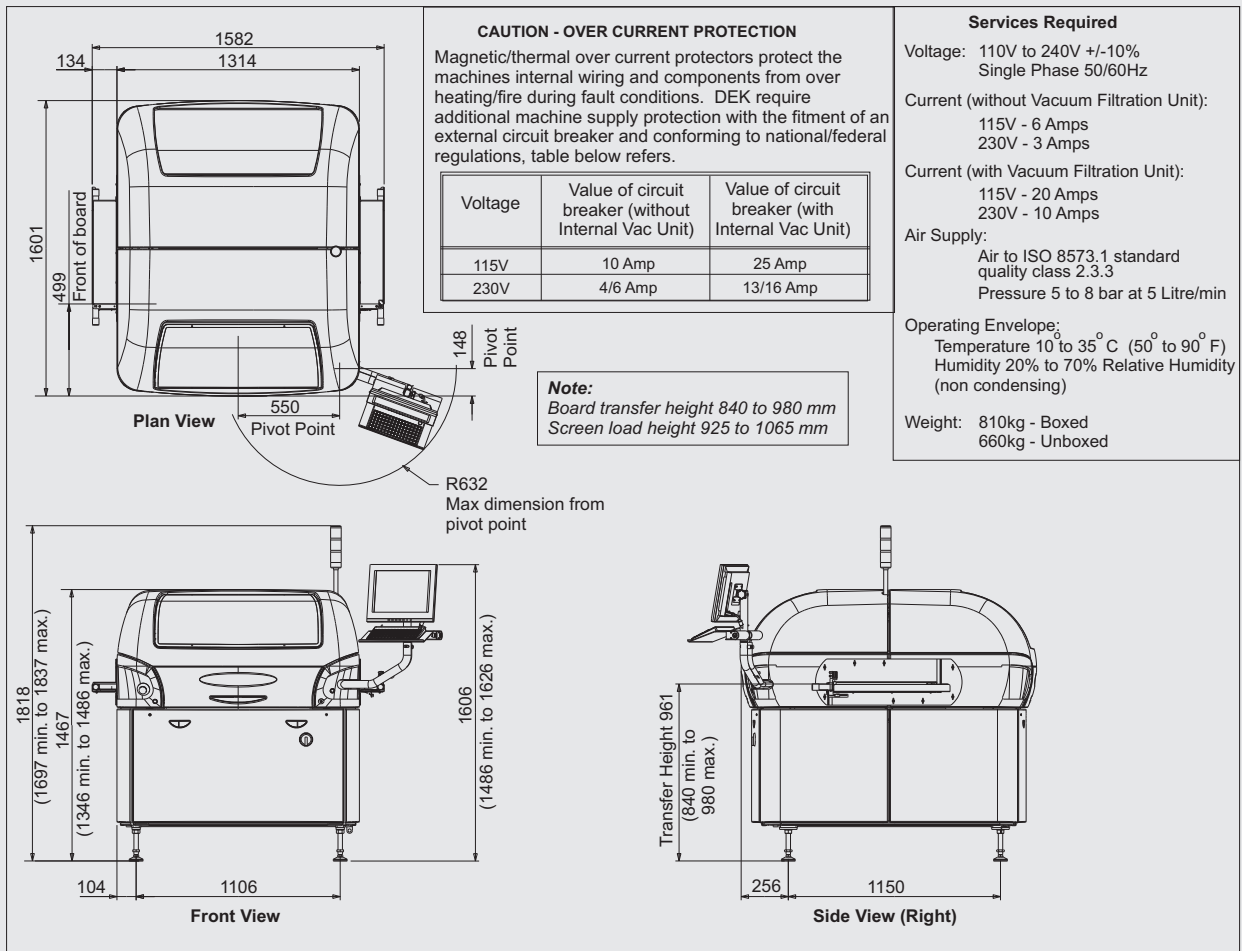
TECHNICAL SPECIFICATION

Available Options	Specification
Camera	Gold Camera Hawkeye 1200
Inspection	Basic stencil and board Advanced stencil and board
Print Method	Paste dispenser Paste roll height monitor ProFlow™ ProFlow low volume head
Substrate Transport	Single piece conveyor with flat belts (heavy boards) High Throughput Conveyor (HTC) with round belts Snuggers (edge clamping) Foil-less clamps Board clamp regulator (standard fit) Remote board stop (for use with heavy board option)
Substrate Support	Vacuum tooling capability Vacuum Cups Grid Lok tooling
Substrate Handling	Flexible boards Selective print pass through Singulation Soft rail lift/land Virtual Panel Tooling (VPT)
Software & Communications	Off Line Editor (OLE) GEM on TCP/IP Remote event monitoring
Product Data Capture	Remote bar code reader Hand held bar code reader
Printing Environment Control	Static - Air Ioniser Temperature - Temperature Control Module (TCM) Air Particulate - In-line Filtration Module for use with TCM
Screen Frame	Vector Guard Universal screen frame adaptor
Adjustable Screen Mount (ASM)	Screen Frame Variants - Fully adjustable to accommodate screens in the range of 305mm to 736mm (12" ** to 29") by 38mm height Image Position - centre, front, custom
Time To Go (TTG) Capability	Consumable warnings via level gauges for paper, solvent, paste
Statistical Process Control	On board, reported via operator interface (QC-CALC)
Stencil Loading	Automatic (includes squeegee drip tray)
Under Screen Cleaning	Paper cleaner, fully programmable with wet/dry/vacuum wipe with external solvent tank Cyclone paper cleaner, fully programmable with wet/dry/vac wipe with external solvent tank. Including oscillation and quick change cassette. Vortex with external solvent tank
Vacuum Assist for USC	On board vacuum unit 35 litres/sec airflow On board vacuum unit 26 litres/sec airflow
Shipping Information	Specification
Approx. Weight	820kg boxed 677kg unboxed
Approx. Dimensions	2060mm x 1500mm x 1570mm (81.1" x 59" x 61.8")

** Minimum screen width limited to 381mm (15") with 300mm USC and 250mm board clamps

Machine Footprint

Configured with HTC Option



Machine Footprint

Configured without HTC Option

