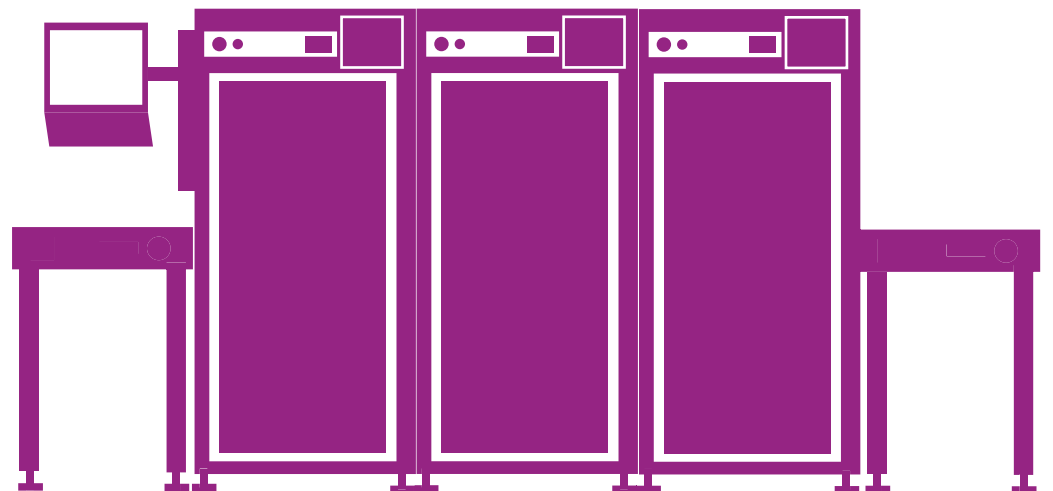


fastATE<sup>®</sup>  
Technology



Test Handlers



## Test Handlers

More than 1 million TV motherboards are tested every year using 6TL FastATE test-handling equipment, and this is only because thanks to 6TL33 systems, the production testing environment will be flexible and efficient, helping towards the always valued Return of Investment.

6TL's portfolio of test handlers is enough to fulfill the needs of every electronics production line. It ranges from small to big PCBs, up to 600x455mm and 8000 test probes.

The concept of the system allows flexibility to increase the production throughput when necessary by just adding an additional test handler into the line. But the flexibility goes further, since Test fixtures debugged offline, are compatible with the inline equipment.

Those in charge for the production will understand how important it is to have test automation ready for the new industrial revolution: the Industry 4.0, where shorter time to market, flexibility and more efficiency are key parameters.

To measure the efficiency of a line, Production engineers use the OEE, that explains them how much right-first time product the line produces compared to what it should have produced in the allocated time.

6TL Test handlers will help to achieve a high OEE:

Setting up the handlers for testing different products will be a fast operation. Automatic engagement mechanisms for both, the bed of nails and the push plate will make the changing time fast. In addition, test engineers will be able to develop test sequences Off-Line, without disturbing the production and only when the test fixture will be debugged, it can be moved in to the in-line system (from off-line system to in-line system with the same fixture kit).

A combination of functional test and in-circuit test is possible thanks to the multi-stage contacting technology enabled by the heavy-duty servo actuated mechanical press, with pushing forces up to 600Kg. Devices under test can be either PCB level or Finished product ones.

6TL test handlers will operate in a coordinated manner to reach the highest up time, and this is thanks to the integrated bypass function, that makes the 6TL33 more flexible than any other in-line test handling device in the market: when a handler in the line is not working, the rest of them will continue testing parts and the percentage of time the line will be operating effectively, will be higher.

When it comes to integration, 6TL handlers offer enough space to integrate 19" rack instruments, and are equipped with VPC 9025 series receivers, so that all the YAV modules family can be directly adopted to end-up with a minimum-wire system. For maintenance purposes, there's easy access to any part of the system through side panels and front or rear door.

The system setup, control or fault-diagnose is an easy task for operators thanks to the 6TL user interface software.

**Use 6TL Test Handlers, and enjoy the application of the Industry 4.0 in your production environment**

## Key features

- Heavy-duty, reliable and high precision system for high demanding production environments
- Bypass: Scalable solution to avoid bottlenecks in production
- Short handling time
- Easy and Short set up time: Fast fixture exchange time, automatic belt width adjustment and automatic test sequence detection
- Able to handle both PCBAs and DUT carriers (Finished products)
- Industry 4.0 ready. Flexible and Efficient system

## Standard features

- FastATE technology: Modular, scalable and top flexible approach; Minimum wiring and easy maintenance
- Servo driven pushing mechanism
- Automatic PCBA width adjustment
- VPC 9025, 25 slot receiver for direct integration of YAV modules
- Standard SMEMA extended interface
- LabVIEW drivers
- ESD safe
- OE compliant

## Options

- Third conveyor for Product Carrier return
- Light tower
- Input and Output handling equipment.
- Data Matrix kit.



	6TL31	6TL33	6TL33PD	6TL34	6TL35	
General	<b>Feature List</b>					
	<b>Power Requirements</b>	800VA (190..265VAC), Single 1Ph, 50/60Hz	1200VA (190..265VAC), Single 1Ph, 50/60Hz	1200VA (190..265VAC), Single 1Ph, 50/60Hz	1200VA (190..265VAC), Single 1Ph, 50/60Hz	1200VA (190..265VAC), Single 1Ph, 50/60Hz
	<b>Weight</b>	350Kg	440Kg	440Kg	380Kg	490Kg
Pushing	<b>Dimensions (WxDxH)</b>	766x1600x1300	800x1500x1800	800x1500x1800	1122x1750x1638	1122x1750x1638
	<b>Compressed air</b>	6bar	6bar	6bar	6bar	6bar
	<b>Press Unit</b>	Servo actuated	Servo actuated	Servo actuated	Servo actuated	Servo actuated
Fixture	<b>Technology</b>	Rack&Pinion, Cantilever	4 Linear Spindle, Ball Bearing, Lift Up	4 Linear Spindle, Ball Bearing, Push Down	4 Linear Spindle & Ball bearing; Push Down	4 Linear Spindle, Ball Bearing, Lift Up
	<b>Press Force (Kg; TPs)</b>	90Kg; 450 TPs	350Kg; 1500 TPs	600Kg; 3000 TPs	600Kg; 3000 TPs	255Kg; 1250 TPs
	<b>InLine Fixture</b>	Manual	Semi-automatic, auto-engagement	Semi-automatic, auto-engagement	Semi-automatic, auto-engagement	Semi-automatic, auto-engagement
Line Integration	<b>Mass Interface</b>	VPC Receiver, 9025, 25 slots	VPC Receiver, 9025TR, 25 slots	VPC Receiver, 9025TR, 25 slots	VPC compatible, 8 slots	VPC Receiver, 9025TR, 25 slots
	<b>Number of Fixture insertions</b>	20000	20000	20000	20000	20000
	<b>Fixture Exchange Time</b>	60s	20s	20s	20s	20s
	<b>Fixture compatibility</b>	No	Yes, with 6TL off-line systems	Yes, with 6TL off-line systems	Yes, with 6TL off-line systems	Yes, with 6TL off-line systems
	<b>Double deck Fixture management</b>	Yes	Yes	Yes	Yes	Yes
	<b>Board Warp Sensor</b>	Not necessary	Not necessary	Yes, in Fixture (Application available)	Not necessary	Not necessary
	<b>Bypass Conveyor</b>	No	Yes	Yes	No	Yes
	<b>Retour Conveyor</b>	No	Optional	Optional	Optional	Optional
	<b>InLine Integration</b>	SMEMA extended	SMEMA extended	SMEMA extended	SMEMA extended	SMEMA extended
	<b>Barcode reader</b>	Optional (directly integration through bxt file)	Optional (directly integration through bxt file)	Optional (directly integration through bxt file)	Optional (directly integration through bxt file)	Optional (directly integration through bxt file)
DUT	<b>Conveyor height</b>	925-975mm (SMEMA)	925-975mm (SMEMA)	925-975mm (SMEMA)	925-975mm (SMEMA)	925-975mm (SMEMA)
	<b>Conveyor width adjustment</b>	Automatic	Automatic & synchronized for all handlers in a line	Automatic & synchronized for all handlers in a line	Automatic	Automatic & synchronized for all handlers in a line
	<b>Transport Speed</b>	50-600 mm/s	50-600 mm/s	50-600 mm/s	50-600 mm/s	50-600 mm/s
Integr.	<b>SW+HW for handler assignment</b>	No	Included (extra IPC and UPS in "Line Master Handler")	Included (extra IPC and UPS in "Line Master Handler")	No	Included (extra IPC and UPS in "Line Master Handler")
	<b>PCB size (min - max)</b>	60x50 - 394x382mm	60x50 - 350x450mm	60x50 - 350x450mm	60x50 - 600x455mm	60x50 - 600x455mm
	<b>PCB thickness</b>	1mm	1mm	1mm	1mm	1mm
	<b>PCB exchange time</b>	5,5s	4,5s	3,5s	4,5s	4,5s
	<b>Top and bottom contact</b>	Yes	Yes	Yes	Yes	Yes
	<b>Max Height Components</b>	Top: 90mm; Bottom: 30mm	Top: 90mm; Bottom: 30mm	Top: 90mm; Bottom: 30mm	Top: 90mm; Bottom: 30mm	Top: 90mm; Bottom: 30mm
	<b>Fixture Kit P/N</b>	H72008050	AB799	AB799	AG588	AH500
Integr.	<b>Adapter for Off-Line Fixture P/N</b>	No	AH257	AH257	No	AH500
	<b>19" Free Rack space</b>	26 HU	20 HU	19 HU	58 HU	35 HU
Integr.	<b>Receiver Postion / Capacity</b>	Horizontal / 25 modules	Vertical / 25 modules	Vertical / 25 modules	Vertical / 8 modules	Vertical / 25 modules
	<b>Controller</b>	IPC	IPC	IPC	IPC	IPC
Integr.	<b>Test Rack power management</b>	Yes, Temperature and Power consumption	Yes, Temperature and Power consumption	Yes, Temperature and Power consumption	Yes, Temperature and Power consumption	Yes, Temperature and Power consumption
	<b>Operator Interface</b>	No	14" touch TFT monitor and 19" TFT in Line Master	14" touch TFT monitor and 19" TFT in Line Master	No	14" touch TFT monitor and 19" TFT in Line Master
Integr.	<b>Standards</b>	CE	CE	CE	CE	CE

# Order Information

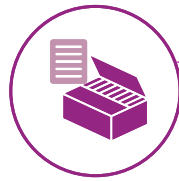
P/N	Description	Comment
<b>H71003100</b>	6TL31 Test Handler, Single Operation	Group Operation is not available with 6TL31 Handling technology
<b>H72008050</b>	Bare Fixture Kit for 6TL31 Test Handler	
<b>H71003400</b>	6TL34 Test Handler, Single Operation	Group Operation is not available with 6TL34 Handling technology
<b>AG588</b>	Bare Fixture Kit for 6TL34 Test Handler	
<b>H71003300</b>	6TL33 Test Handler, Single Operation (no bypass)	Box to adapt 6TL08N fixtures to 6TL33 Test Handlers
<b>H710033PD</b>	6TL33 Test Handler, Single Operation (no bypass), Push Down	
<b>H71003302</b>	6TL33 Test Handler, Group Operation (with bypass), Master	
<b>H710033P2</b>	6TL33 Test Handler, Group Operation (with bypass), Master, Push Down	
<b>H7100330S</b>	6TL33 Test Handler, Group Operation (with bypass), Slave	
<b>H710033PS</b>	6TL33 Test Handler, Group Operation (with bypass), Slave, Push Down	
<b>AB799</b>	Bare Fixture Kit for 6TL33 Test Handlers	
<b>AH257</b>	Fixture Adapter from 08N to 33	
<b>H71003500</b>	6TL35 Test Handler, Single Operation (no bypass)	Box to adapt 6TL08X fixtures to 6TL35 Test Handlers
<b>H71003502</b>	6TL35 Test Handler, Group Operation (with bypass), Master	
<b>H7100350S</b>	6TL35 Test Handler, Group Operation (with bypass), Slave	
<b>AH500</b>	Bare Fixture Kit for 6TL35 Test Handlers	
<b>AL417</b>	Fixture Adapter from 08X to 35	
<b>AJ299</b>	Barcode Reader, without support. To install in previous conveyor	Mandatory for Group Operation. Other non homologated code readers, will require additional engineering quotation
<b>H71003390</b>	Slave to Master Conversion Kit (Traceability Station)	Include parts to update a Slave system into Master system: Controller, TFT, keyboard, Smema-Link, Ethernet switch, UPS
<b>AK125</b>	Linking conveyor Inspection 1 segment (600mm)	The P/Ns listed are the most common products used by our customers. For much other options, please, contact 6TL.
<b>AK142</b>	Single Magazine Loader	
<b>AK127</b>	Double Magazine Unloader	
<b>AK128</b>	Repair Verification Station 2 Level 1 Segment (800mm)	

## Support:



### Your project always on time, on budget and fulfilling the agreed specification.

Close collaboration between 6TL and production team is important when starting to fit the FastATE concept into the customer process



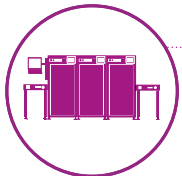
### Spare parts

Available spare part kits according to agreed 6TL warranty terms.



### Repair Service

We are able to repair very fast any damaged part.



### Product installation

6TL engineers may be available for installation of systems according to our guidelines and standards to secure the Start of Production date.



### On-Site support

Whenever needed, 6TL technical staff is ready to help so that your line downtime is minimized.



### Maintenance

Preventive maintenance plans



### Headquarters:

Solsonès, 87-89  
E-08211 Castellar (Barcelona)  
Catalonia, Spain  
Phone +34 937 270 074  
Fax +34 937 253 576  
info@6TL.es