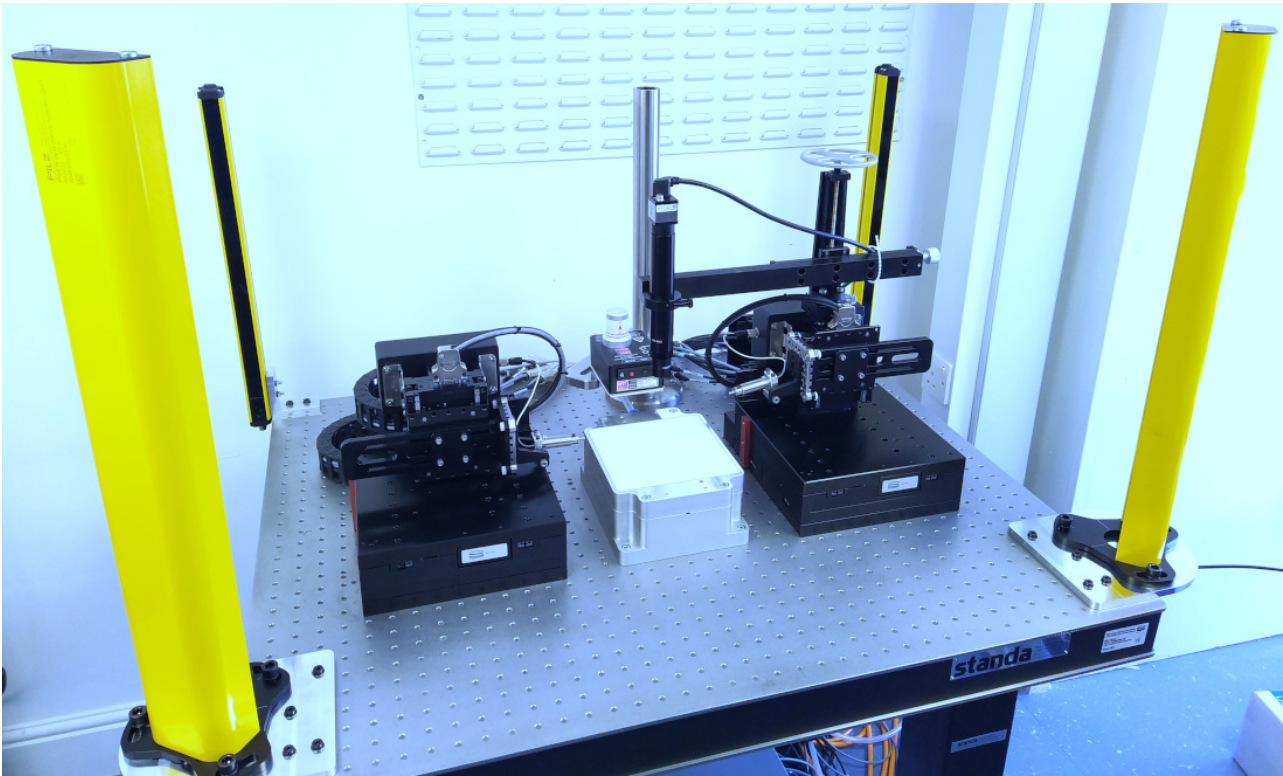


110 mm Automated Test System **ATS-8000G**

Advanced TLP/HMM/HBM Solutions

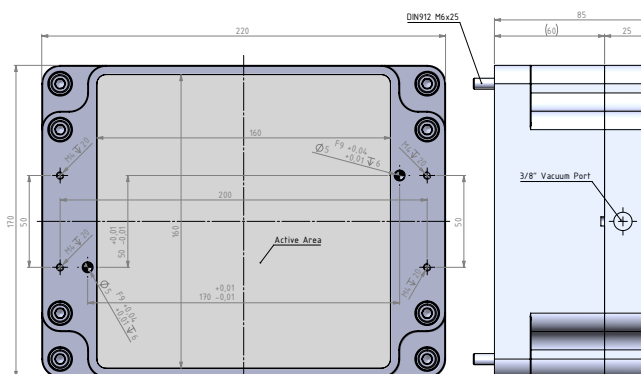
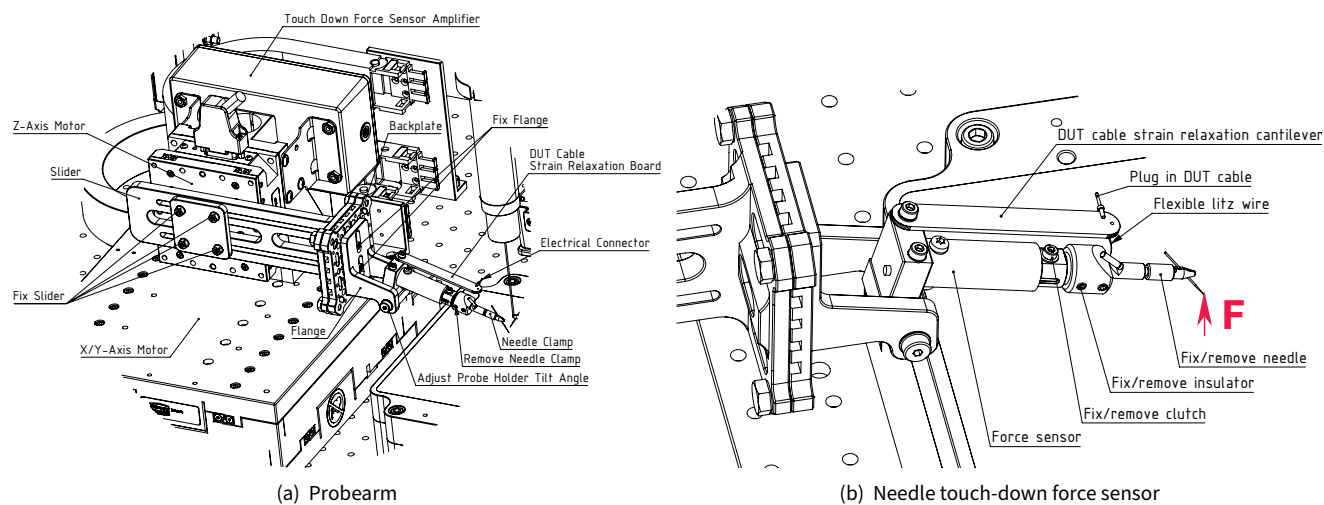


1 Features

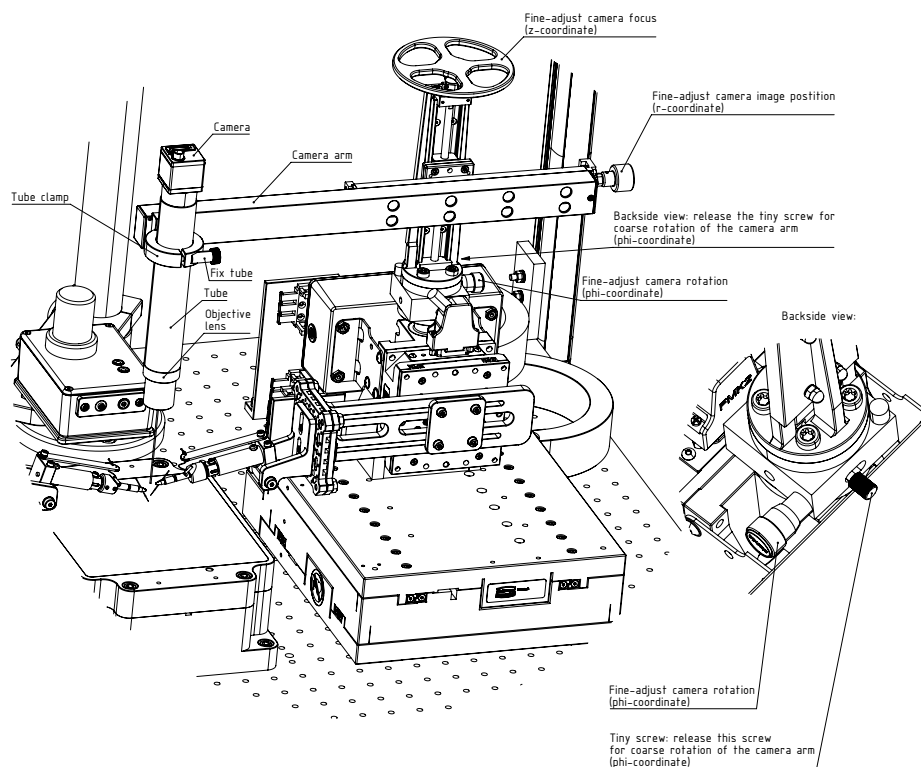
- Fully automated 110 mm probe station for HBM, TLP, VF-TLP, HMM and CC-TLP on package-, system (PCB) and wafer-level
- Automation software remote control including:
 - physical alignments (3D, multi-device)
 - automatic BGA/QFP/DIL/etc pin map generator
 - test definition and setup (e.g. ANSI/ESDA/JEDEC JS-001 table 2A, 2B)
 - real time task view
 - moving camera setup
 - probe setup
 - motion controller, pulse generator, SMU(s) setup and operation
 - measurement data analysis and storage
- Flexible pitch 2-pin or fixed pitch 4-pin (Kelvin-type) probe arms
- Ultra-fast needle force touch-down sensors at [milli-Newton] force precision
- Automatic probearm and needle crash avoidance system
- Moving target camera
- Microporous vacuum chuck
- Safety shut-down light curtain (optional)
- Compact size: 1.2 m (width) x 0.8 m (depth) x 1.5 m (height)
- 160 kg weight

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(c) Vacuum chuck for any package shape, any package size and wafers



(d) Moving target camera system

Figure 1: Features

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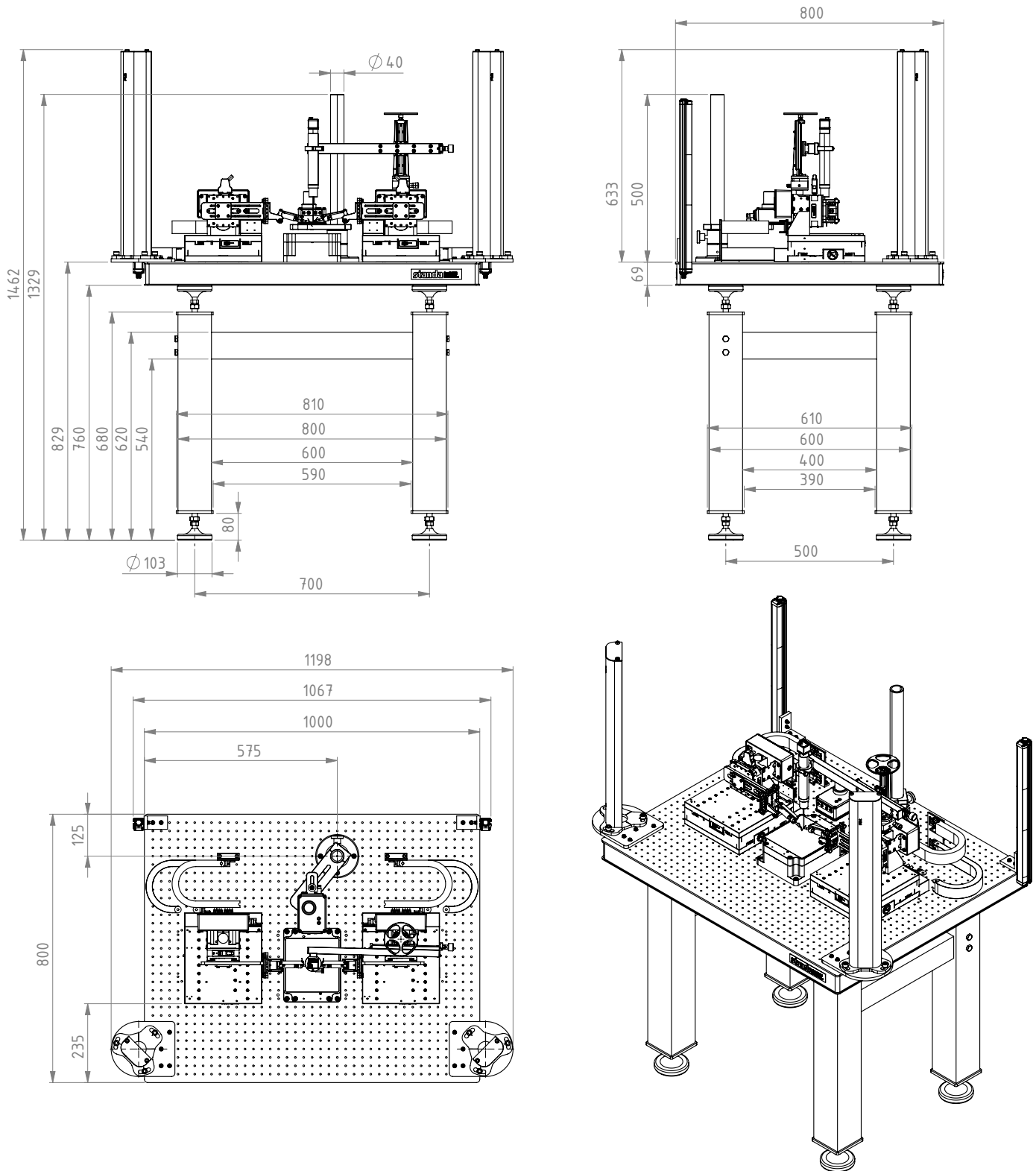
2 System Specifications

Parameter	Value	Unit	Remarks
XY-Stages			
XY-Travel	110	mm	between hard stops
Repeatability unidirectional	±0.3	μm	
Repeatability bidirectional	±0.4	μm	
Accuracy	±2	μm	
Flatness	±2.2	μm	
Straightness	±1.7	μm	
Positioning speed	200	mm s ⁻¹	
Max. acceleration	4	mm s ⁻²	
Max. load F_x	15	N	
Max. load F_y	15	N	
Max. load F_z	50	N	
Max. torque M_x	2.6	N m	
Max. torque M_y	2.6	N m	
Max. torque M_z	2.4	N m	
Pitch	±100	μrad	
Yaw	±50	μrad	
Weight	12	kg	
Motor	Ironless Dynamic Linear Motor		
Feedback	Linear Scale		
Z-Stages			
Z-Travel	40	mm	between hard stops
Repeatability unidirectional	±1.5	μm	
Repeatability bidirectional	±3.5	μm	
Accuracy	±4.8	μm	
Flatness	±2	μm	
Straightness	±1.4	μm	
Positioning speed	±1.1	mm s ⁻¹	
Max. acceleration	0.02	mm s ⁻²	
Max. load F	30	N	
Max. torque M	1.1	N m	
Pitch	±65	μrad	
Yaw	±40	μrad	
Motor	DC Motor		
Feedback	Motor-Encoder		
Z-Stage Touch-Down Needle Force Sensors			
Resolution	0.3	mN	
Relative accuracy	1	mN	after touch-down reference setting
Minimum readout force	−617	mN	equivalent to probe arm weight
Maximum readout force	394	mN	touch-down overdrive
Maximum overload force	5	N	mechanical overload protection
Force sampling interval	1	ms	depending on software readout
Microporous Vacuum Chuck			
Active Area	160 x 160	mm ²	
Moving Target Video Camera			
Resolution	18.1	MPix	UI-3590CP-C-HQ Rev.2 (AB00606)
Frame rate	21	fps	
Sensor resolution	4912 x 3684	Pixel	
Sensor area	6.140 x 4.605	mm ²	
Field of view	6.140 x 4.605	mm ²	Mitutoyo Tube Lense CDF 1X
Working distance	73.7	mm	Mitutoyo Tube Lense CDF 1X
Field of view	2.0467 x 1.5350	mm ²	Mitutoyo Tube Lense CDF 3X
Working distance	77.8	mm	Mitutoyo Tube Lense CDF 3X
ATS-8000G Platform			
Size	1198 mm x 800 mm x 1462 mm		W x D x H
Weight	160	kg	max.

110 mm Automated Test System **ATS-8000G**

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3 Physical Dimensions



110 mm Automated Test System **ATS-8000G**

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4 Ordering Information

Pos.	Description	Part No.
01	<p>110 mm Automated Test System:</p> <ul style="list-style-type: none"> • Two 110 mm X/Y-stages , linear scale encoder • Two 40 mm Z-stages, motor encoder <ul style="list-style-type: none"> - Probearm fixture platform - Touch-down probe needle force sensor • 2 x TPA-GFG probe arm kit • Microporous ceramic compound vacuum chuck 160 mm x 160 mm • Moving target video camera system • Motion controller • Honeycomb breadboard 1000 mm x 800 mm x 70 mm • Accessories fixture kit • Table support • Safety shut-down light curtain (optional) • HPPI automation software <p>Note: Darkbox not included.</p>	ATS-8000G

General

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