



Fully automated bond tester

## Site map

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  - P3: What is Possible with Modern Automation?
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  - Cold Bump Pull test force, cleaning and jedec

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#### **Other offices**

- Germany  
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- Thailand  
- United Kingdom  
- USA: California  
- USA: Massachusetts  
- Distributors

#### **Bond testers**

- Condor *Sigma*  
- Condor *Sigma Lite*  
- Condor *Sigma W12*  
- Condor *150HF*

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- How to: Wire Pull
  - Wire Pull Tool design and quality
  - Wire Pull Alignment
  - Wire Pull Loop height measurement and work holder
  - Wire Pull Variants: vector pull, gull wing leads
  - Wire Pull Test method settings
  - Wire Pull Failure modes
  - Wire Pull Force calculations
  - MIL-STD-883 2011.9 bond strength (bond pull test)
  - MIL-STD-883 2023.7 nondestructive bond pull
  - MIL-STD-883 2023.7 Appendix A
  - MIL-STD-883 2004.7 lead integrity
  - MIL-STD-883 2004.7 A - Tension
  - MIL-STD-883 2004.7 A1 Lead braze integrity
  - MIL-STD-883 2004.7 B1 Bending stress
  - MIL-STD-883 2004.7 B2 Lead fatigue
  - MIL-STD-883 2004.7 C1 Lead torque
  - MIL-STD-883 2004.7 C2 Stud torque
  - MIL-STD-883 2004.7 D Solder pad adhesion
  - MIL-STD-883 2004.7 E Lead plating integrity
  - MIL-STD-883 2024.2 Lid torque glass-frit-sealed
  - MIL-STD-883 2019.9 Die shear strength
  - MIL-STD-883 2031.1 Flip chip pull off test
  - How to: Tweezer Pull
  - Tweezer Pull Tweezer Design
  - Tweezer Pull Alignment and Failure Modes
  - Tweezer Pull Ribbon Pull and Peel
  - Tweezer Pull Copper Pillar
  - Tweezer Pull Stud Pull and Pick and Place
  - External sources
  - Semiconductor alliances
  - Semiconductor engineering
  - Process control
- Looking for: Electronic Engineer
  - Case studies and references
    - Danfoss
    - Fully automated wafer testing
    - Heraeus rates XYZTEC as excellent supplier
    - Large heater stage on Condor Sigma W12
  - Research partners
  - Contact us
  - Search

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- [Site map](#)

## News

- [News archive](#)
  - [Visit us at Semicon China](#)
  - [XYZTEC at Semicon Korea](#)
  - [Presentation at CSPT 2018](#)
  - [Matelec show 2018 for the Electrical and Electronics Industry with Antycip](#)
  - [Successful ESTC Conference in Dresden, Germany](#)
  - [LEGO® for Nepal sponsored by XYZTEC](#)
  - [Visit us at SMT Hybrid Packaging Nuremberg](#)
  - [Smart LED and Solar panels for XYZTEC head office](#)
  - [XYZTEC workshop at IMAPS UK](#)
  - [ODEOM shows Condor Sigma in Istanbul](#)
  - [Semicon China under way](#)
  - [Condor Sigma W12 at Semicon Korea](#)
  - [Condor Sigma stars in Audi Tech Day video](#)
  - [Raysun to represent XYZTEC in China](#)
  - [Award for First Technology China](#)
  - [XYZTEC granted subsidy for further accuracy improvements](#)
  - [Presentation at CSPT 2017 by Bob Sykes](#)
  - [Condor Sigma in São Paulo, Brazil](#)
  - [Fully automatic lead frame tester introduced at SMT Hybrid Packaging](#)
  - [Semicon Penang 2017 successful](#)
  - [Pizza and Go cart racing at K1 Speed in Northern CA](#)
  - [Visit us at Semicon China](#)
  - [Job opening for Junior Mechanical Design Engineer \[closed\]](#)
  - [Successful seminar in Russia with Sovtest](#)
  - [Market leading Condor Sigma bond tester at TPCA Taiwan](#)
  - [Automation features draw attention at Semicon Taiwan 2016](#)
  - [HTMG represents XYZTEC in South America](#)
  - [Bob Sykes speaks at China Semiconductor Packaging Test Symposium \(CSPT\) \[UPDATED\]](#)
  - [Purchase wire hooks, shear tools, tweezer tips by PayPal](#)
  - [SMT 2016 all about automation](#)
  - [Annual sales and service event in Bangkok big success](#)
  - [Come visit us at Semicon China](#)
  - [HiSOL new distributor in Japan](#)
  - [Cellphone display LCD driver IC testing](#)
  - [ISO-Dynamique and Axend represent XYZTEC in Malaysia, Singapore, Thailand, Indonesia and Vietnam](#)
  - [Wire detect functionality popular at Productronica](#)
  - [How to: Cold Bump Pull](#)

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- Condor Sigma draws attention at Semicon Taiwan
- Exciting sales and service meeting in Bangkok
- Bond Test Measurement Accuracy
- Condor Sigma software now available in Vietnamese
- Automatic wire detection draws attention at SMT 2015
- SST joins XYZTEC in Taiwan and mainland China
- More on loop height testing
- BaiTech to represent XYZTEC in Southern California, Tijuana Mexico
- Copper pillar testing
- Subscribe to the XYZTEC newsletter
- Increase your knowledge about bond testing and visit a bond testing seminar
- Successful distributor training during XYZTEC week
- Highlighted: Condor Sigma W12 for 300mm wafer testing
- XYZTEC shows full automation on the Condor Sigma at the SMT 2014 in Nürnberg
- Advances in tweezer pull testing
- Maestro payment method accepted in webshop
- XYZTEC launches webshop for consumables
- ODEOM new distributor for Turkey
- Condor Sigma attracts attention at Productronica
- XYZTEC Sales Director Dirk Schade joins the IMAPS board
- Antycip Technologies new distributor for France, Spain, Portugal and North Africa
- Busy IMAPS show in Orlando, Florida
- Creep test
- SMD shear test
- Spring rigidity test
- New Condor Sigma videos available
- Condor Sigma celebrated at Red Dot Gala
- Visit us at PCIM Asia in Shanghai
- A bond tester that can grow with your company
- Condor Sigma wins Red Dot design award 2013
- Condor Sigma draws attention at Semicon China
- Condor Sigma Vision solutions
- 3H Corporation new distributor in Korea
- Heraeus: XYZTEC class A supplier
- Crockett Southwest new XYZTEC sales partner in Texas, Oklahoma, Louisiana and Arkansas
- GIO Award for Condor Sigma
- Alternative Testing Methods for Electronic Assemblies
- USB Tweezers: a unique electrically actuated micro grippers solution
- NW Test Solutions to represent XYZTEC in Pacific Northwest
- Condor Sigma nominated for European Aluminium Award 2012
- Visit us at Semicon Taiwan 2012 in Taipei
- New uni-axial bending test for ultra-thin die

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- Busy first show for Tom Haley
- XYZTEC welcomes new sales manager for United States and Canada
- Condor Sigma at Dutch Technology Week 2012
- Condor Sigma attracts attention on ECTC 2012
- High interest in self-alignment tool on Fraunhofer Technology Day
- Introduction of Sigma at Semicon Korea
- Condor Sigma in Japan
- Interelec Electronics AG switches to XYZTEC
- Successful seminar at Tianjin University on Packaging High-temperature Electronics
- Condor Sigma: Performance and Flexibility
- New test method for mechanical strength evaluation of solar cell solder joints
- Case studies: Danfoss, flexibility and deep access
- Fully automated LED wafer testing
- Employees donate to Japan relief effort
- XYZTEC participates in Solar Module Value Chain for International BIPV Concepts
- XYZTEC proudly presents its Korean website
- Aubert Dupont speaks at IEEE CPMT 2010
- XYZTEC launches new website
- Charity event for RETT syndrome big success
- Technical Informer: USB Tweezers
- XYZTEC introduces Condor EZ: the next generation in bond testing
- Technical Informer: Solar Cell Ribbon Peel Testing
- Bob Sykes joins XYZTEC

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- Twitter @bondtesters
- Weibo XYZTEC?????
- YouTube bondtesters
- Facebook @XYZTEC
- LinkedIn
- Newsletter
  - Free SMTconnect ticket? Register now
  - Is Fully Automatic Bond Testing Possible?
  - Advances in Thin, 3D and MEMS Die Bond Strength Testing
  - Shear testing copper pillar
  - Fracture strength of thin wafers and die
  - Centralized database for enhanced security and SPC options
  - Full Automation with Improved Pattern Recognition, Fiducial Marks Analysis, Wire Detect and Failure Mode Analysis
  - Coating and film testing
  - Latest software release enables automatic grading
  - Vision enhanced materials testing
  - XYZTEC makes lid pull easy

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- Condor Sigma W12 with large heater stage
- How to: Wire Pull
- Get 10% off your next tools order
- Pull testing bumped wafers
- SMD gull wing leads testing
- Automation: matrix bond testing made easy
- Fully integrated solution for automated wafer testing
- In bond testing, size does matter
- XYZTEC goes from strength to strength
- Automatic wire detect
- Highly reproducible stud pull tests are possible
- What is the quality of your coatings?
- Loading samples has never been so easy
- Axis accuracy of  $\pm 1\mu\text{m}$ : essential for automatic bond testing
- Increase your bondtesting throughput
- USB Tweezers
- Analyze not only forces but also distances on your product
- Technology leader XYZTEC raises the bar in bond testing once again with new software release
- Why all bond testers should have an RMU
- Copper pillar testing
- Is process verification important to your business?
- Fully automated bond tester
- Ideal solution for 300mm (12 inch) wafer testing

## Condor Sigma

- Condor Sigma Lite
- Condor Sigma W12
- Condor Sigma MAG
- Automation
- Ergonomics
- Revolving (RMU) and single heads (PMU, SMU)
  - Sensor modules
- Tweezers
  - CBP Jaw Cleaner
- Work holders
- Software / Vision
  - Vision
- Calibration

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- Specifications

## Condor 150HF

- Ergonomics
- Revolving Measurement Unit (RMU)
  - Comparison with single heads
- Pull & Push Measurement Unit
- Shear Measurement Unit
- Impact Measurement Unit
- Tweezers
- Work holders
- Software
- Specifications
- Condor EZ, 70, 100, 150, 250

## Test types

- Bending testing
- Cavity shear testing
- Cold Bump Pull (CBP) testing
- Connector Test testing
- Copper pillar testing
- Creep test testing
- Die shear testing
- Fatigue testing
- Gold ball shear and Solder ball shear testing
- High speed impact testing
- keypad testing
- Lead integrity / Micro torsion test testing
- Lid pull testing
- Lid torque testing
- Loop height test testing
- Overhanging die testing
- Passivation layer gold ball shear testing
- Probe test testing
- Ribbon peel testing
- Ribbon pull testing
- Scratch test / coating test testing
- SMD Gull Wing Leads testing
- SMD shear testing
- Spring rigidity testing
- Stud pull testing

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- Total Ball Shear (TBS) / Zone shear testing
- Tweezer pull testing
- Vector pull testing
- Wedge shear testing
- Wire pull testing

## Markets & solutions

- Aerospace
- Automotive
- Hybrid and substrate
- LED
- Medical devices
- PCB assembly
- Power devices
- Research & Development
- Semiconductor
- Solar

## Sales & support

- North and South America
- Europe, Middle East, Africa
- Greater China
- Japan
- Asia, Pacific

## Downloads

- XYZTEC software
- External software
- Manuals
- Grading library
- Brochures and flyers
- Articles and papers
- Press releases

## Events

- Bond testing seminars
- Requests

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- SMTconnect Germany 2019
- Space Tech Conference USA 2019
- ECTC Las Vegas 2019 (IEEE 69th)
- IMS Boston 2019
- IMAPS SIP USA 2019
- CIOE China 2019
- EMPC Italy 2019
- Semicon Taiwan 2019
- IMAPS USA 2019
- Productronica Germany 2019

## Shop

- Sigma wire hooks
- Sigma shear tools
- Sigma sleeves
- Classic wire hooks
- Classic shear tools
- Classic sleeves
- USB Tweezers tips
  - Checkout



## About XYZTEC

- Our team
- Patents
- Simac group

## News

16 Apr  
20 Mar  
29 Jan  
21 Nov  
15 Nov

Free SMTconnect ticket? Register now  
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XYZTEC at Semicon Korea  
Presentation at CSPT 2018  
Matelec show 2018 for the Electrical and

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20 Sep

29 Aug

11 Jul

05 Jun

20 Apr

Electronics Industry with Antycip  
Successful ESTC Conference in Dresden, Germany  
Is Fully Automatic Bond Testing Possible?  
LEGO® for Nepal sponsored by XYZTEC  
Visit us at SMT Hybrid Packaging Nuremberg  
Smart LED and Solar panels for XYZTEC head office

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