

CBP Tweezer prior to closing

## Cold Bump Pull test

- Pull test solder balls
- Sensor accuracy  $\pm 0.075\%$
- Produces failure modes of interest like IMC bond failure and Pad Crater
- Reproduces pull loads that typically occur in most real failure events
- Test ball geometries down to 50 $\mu\text{m}$  diameter (dependent on ball height to diameter ratio)
- Grip force
- Closing speed
- Open and closed positions
- The **RMU** can hold up to 6 sensors in any combination, including up to 4 **USB Tweezers**
- In accordance with JEDEC JESD22-B115, JEITA EIAJ ET-7407 and IPC-9708
- **CBP Jaw Cleaner**
- **Copper pillar testing also possible**

[Video not included in PDF: [click here to view online](#)]

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## How to: Cold Bump Pull

We have added an **extensive how-to on Cold Bump Pull (CBP)** to our website. By doing this we aim to spread knowledge about bond testing in the industry. [Click here to go to \*\*www.coldbumpull.how\*\*](#).

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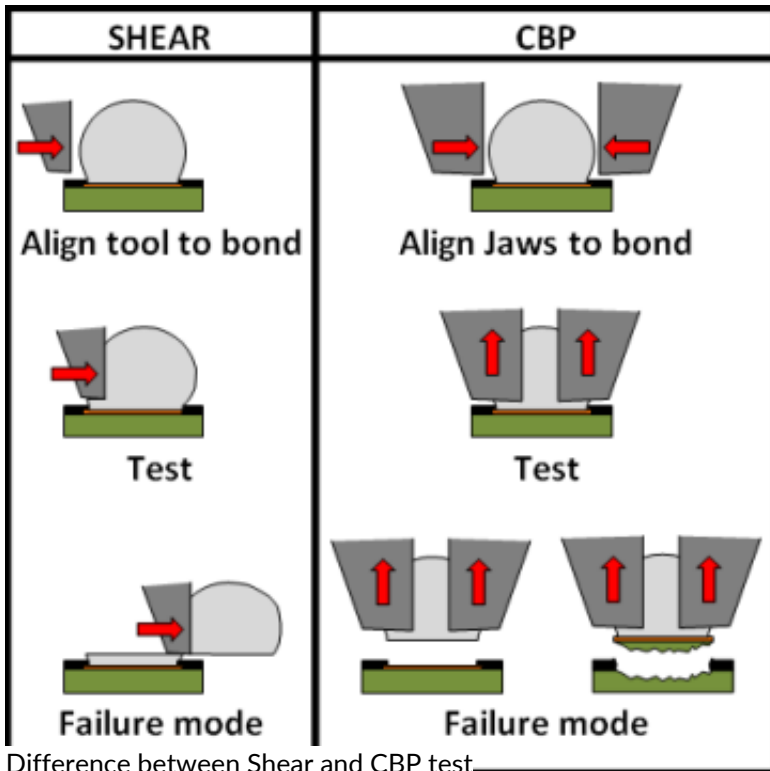
- Germany  
- Taiwan  
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- United Kingdom  
- USA: California  
- USA: Massachusetts  
- **Distributors**

### **Bond testers**

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

This is page 1/4  
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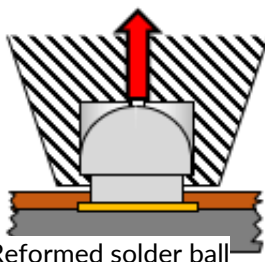
**Technology leader in bond testing worldwide**



Difference between Shear and CBP test

## Advantage of cold bump pull

Cold Bump Pull (CBP) testing with the **XYZTEC USB Tweezers** provides unparalleled precision and control. The bond of many solder balls is at the bottom of a cavity formed by solder resist layer. In a shear test this supports the bond, resulting in a predominance of solder shear failure modes.



Reformed solder ball

In a pull test the bond is not supported in this fashion, leading to the possibility of more relevant failure modes. Special jaws are required to grip the ball. These reform the upper part of the ball to enable the pull load to be applied without disturbing the bond. [Learn more about this](#) in the [how-to section of our website](#).

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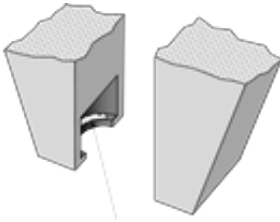
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This is page 2/4  
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Contamination inside CBP tweezer jaws

## CBP Jaw Cleaner

During use solder builds up in the cavity in cold bump pull (CBP) jaws. This reduces their grip efficiency and affects the quality of your measurements. Cleaning the cavities is very difficult and small ball cavities can be damaged easily. [Click here to find out more information about XYZTEC's patented solution: the CBP Jaw Cleaner.](#)



USB Tweezers performing cold bump pull (CBP)

## Tweezers flyer

[Click here](#) to download the [Tweezer Solutions flyer](#) (PDF) by XYZTEC.

## Contact us

Did we catch your attention? Please [contact us](#) for more information, to request a demonstration or a quotation.

## Relevant products

- Condor Sigma
- Condor Sigma Lite
- Condor Sigma W12
- Condor 150HF
- Revolving Measurement Unit
- Sensors
- Tweezers
- Vision
- Software

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This is page 3/4  
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***Technology leader in bond testing worldwide***



- Calibration
- Work holders

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## Increase your bondtesting throughput

The **Condor Sigma** is not only the most accurate bondtester in the world, but also the fastest. [Click here to read the study that proves the Condor Sigma is up to 39% faster than the competition.](#)

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## Special applications

Please [contact us](#) if you have any questions or special bond testing requirements.

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## Condor Sigma brochure

[Click here](#) to download the **Condor Sigma brochure**, the **Condor Sigma W12 brochure** or the **Condor Sigma Lite brochure** or the **Condor Sigma Vision brochure (PDF)**.

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## Representatives

To find your local representative, please select a region:

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[Click here to access the XYZTEC consumables webshop](#)

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