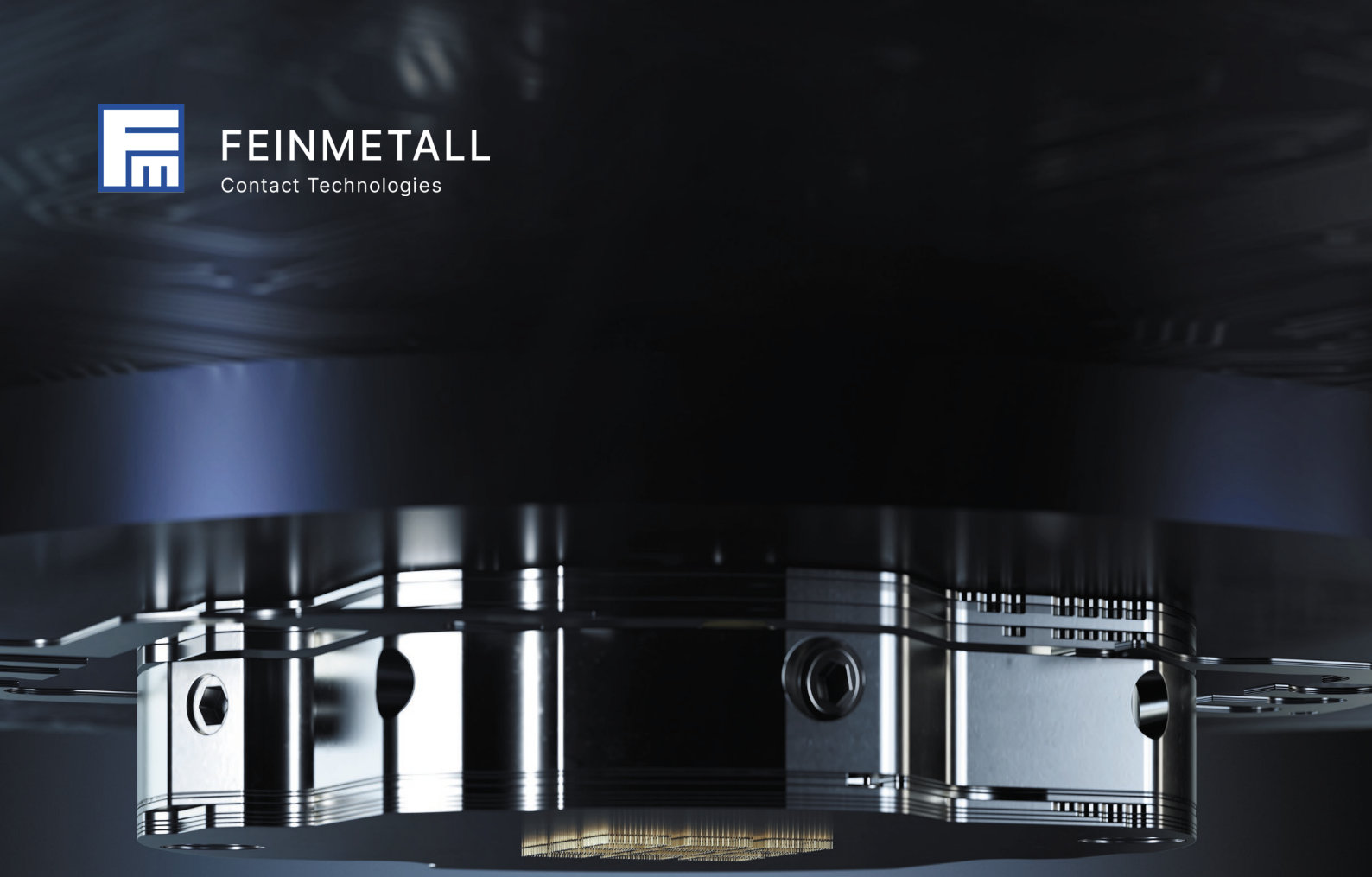
FEINMETALL
Contact Technologies



SEMICONDUCTOR TESTING PRODUCTS

Wafer Probe Cards

PRESICION, PERFORMANCE & VERSATILITY BEYOND LIMITS

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WAFER PROBE CARDS

Wafer probe card excellence

As numerous as the applications for semiconductor components and modules are the requirements to set up a suitable test strategy. Key is always to ensure the desired function during and after wafer processing before the bare die is further packaged and assembled. A maximized yield and a low-wear contacting solution resulting in a low total cost of ownership are therefore central. FEINMETALL convinces with years of experience in comprehensive advice and project-specific contacting solutions as well as further service support worldwide.

The greatest advantages of our Wafer probe cards

- Fine-pitch applications down to 50 µm
- High current applications up to 5 A
- Radio frequency applications up to 80 GHz
- Excellent pad (aluminum, copper and other alloys), solder bump and copper pillar probing
- Reliable probe card from -55°C to +180°C
- Multiple million Touch Downs
- Customized solutions for light and gyro sensors, nitrogen flush and non-magnetic
- Turnkey services and support in all fields of wafer testing and surrounding systems
- Service experts support you worldwide and minimize downtime

We make the impossible possible

Innovative technologies meet the extremely high demands of precision and quality for manufacturing our products. Clean rooms and manufacturing facilities, test equipment and specially developed machines combined with consequent and continual process optimization lead to zero-defect quality, short lead times and a high process stability.



Outstanding test equipment

State of the art probe card analyzers guarantee a final inspection of each probe card. A wide variety of testers allow a maximum of test flexibility and reliability. Flying probe testers enable inspections of SMD components on PCBs. Special test equipment has been implemented as inspection gates for high product quality and early failure detection along manufacturing.



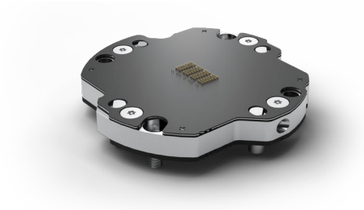
OUR PORTFOLIO

A dependable card every time

Feinmetall offers high-performance probe cards for demanding semiconductor testing, featuring a wide temperature range (–55 °C to 180 °C) and bandwidths up to 100 GHz. The portfolio includes versatile models like ViProbe®, ViProbe® II, LiProbe®, and FeinProbe®—all designed for long lifespan, easy maintenance, and excellent signal integrity. Global service and personalized support complete the offering.

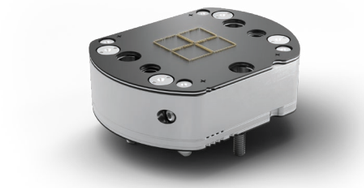
FeinProbe® - Dedicated to WLCSP

Probing WLCSP, SiP or flipchip wafers requires probes withstanding high current while simultaneously assuring high signal integrity. The FEINMETALL FeinProbe® spring probes addresses those applications with excellence.



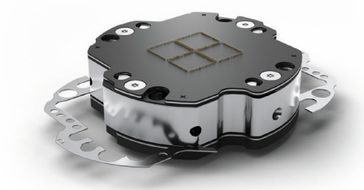
ViProbe® - The established solution

Customizable to an enormous range of applications and probing materials: the vertical solution especially appreciated for its unique simple reparability.



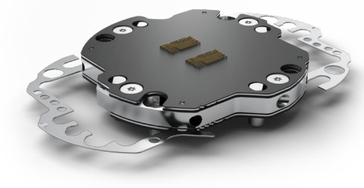
ViProbe® II - The next generation

With multiple lifetime extension options and various security features for the DUT, the ViProbe®II brings all the advantages of the ViProbe® to the next level.



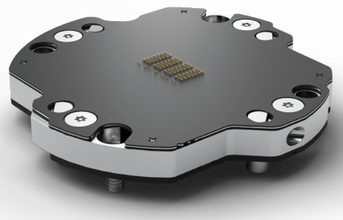
LiProbe® - From MHz to GHz - testing the future

Lamella probes offer various advantages in terms of RF and force requirements. The short length of the probe as well as the flexible amount of lamellae makes it the perfect solution for sophisticated applications.



Check online

FEINPROBE®



FeinProbe® - Dedicated to WLCSP

The FEINMETALL FeinProbe® uses contact probes as contact elements for contacting bumped wafers for WLCSP, SiP and Flip Chip Applications. By using FEINMETALL contact probes, the probe solution has several advantages because of the independent spring loaded pins and the crown tip of the contact element. This ensures a stable contact without a stressful impact on the bumps. Even more, signal transmission can be guaranteed when applying specific design rules.

Benefits

- Stable contact performance in terms of low contact resistance and force
- Self-aligning plunger and crown tip reduces stress to the bump
- Spring probes are able to withstand higher currents
- Signal transmission of up to 80 GHz (when following specific layout rules)
- Combined know-how from FM spring probe department, special adaptions and wafer probe cards

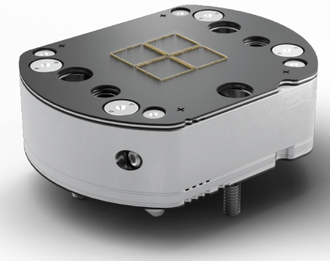




Specifications at a glance

Min. pitch of the DUT	Down to 150 µm
Diameter of plunger	Down to 110 µm
Max. active area	Up to 50 mm x 61 mm
Capable temperature range	From -40°C to 150°C
Current carrying capability at RT	Up to 2800 mA
Contact force at rec. OD	From 10 cN to 18 cN
Bandwidth analog @ -1dB limit	30 GHz (80 GHz on request)

VIPROBE®



Vertical Probe Card ViProbe®

This Probe Card can adapt to an enormous range of applications and pad materials. It’s no surprise they’ve been the market’s ideal vertical solution for many years, valued particularly for their unique ease of repair. Customizable to an enormous range of applications and probing materials it is the vertical solution in the market for many years and especially appreciated for its unique simple reparability.

Benefits

- Simple exchange of single contact elements, complete replacement of the probes and even probe heads by the customer leads to lowest cost-of-ownership
- Multiple lifetime extension
- Adjustable to most applications: from high pin count, to copper probing up to fine pitch
- Accurate wafer probing on fine pitch pads over the whole temperature range
- Extended security features of the probe head

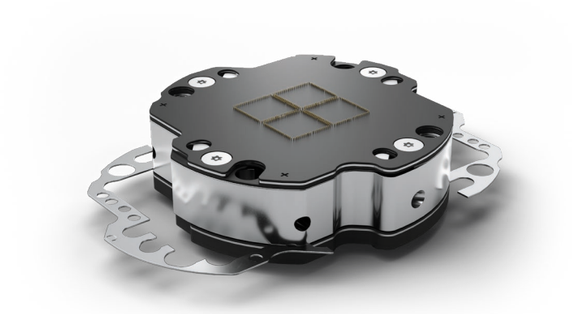




Specifications at a glance

Min. pitch of the DUT	Down to 56 µm
Diameter of the contact element	Down to 1.6 mil
Max. active area	Up to 80 mm x 80 mm
Capable temperature range	From -55°C to 180°C
Current carrying capability at RT	Up to 800 mA
Contact force at rec. OD	From 2.6 cN to 10.8 cN

VIPROBE®II



Vertical Probe Card ViProbe®II

The ViProbe® II builds on all the strengths of the original ViProbe®, enhancing them with advanced features for extended lifetime and added safety for the wafer. As the next generation of vertical wafer probing, it introduces multiple options for durability improvement along with enhanced protection mechanisms to ensure the safety of the device under test (DUT).

Benefits

- Simple exchange of single contact elements, complete replacement of the probes and even probe heads by the customer leads to lowest cost-of-ownership
- Shimming: Worldwide patented Lifetime Extension concept
- Adjustable to most applications: from high pin count, to copper probing up to fine pitch
- Accurate wafer probing on fine pitch pads over the whole temperature range
- Extended security features of the probe head

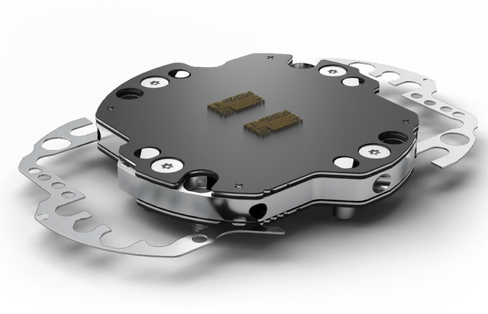




Specifications at a glance

Min. pitch of the DUT	Down to 40 µm
Diameter of the contact element	Down to 1.1 mil
Max. active area	Up to 105 mm x 105 mm
Capable temperature range	From -55°C to 180°C
Current carrying capability at RT	Up to 800 mA
Contact force at rec. OD	From 2.2 cN to 10.8 cN

LIPROBE®

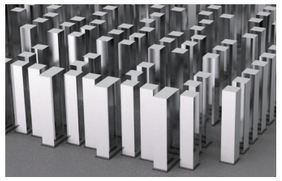


Probe Card LiProbe® - The Lamella Solution

The FEINMETALL LiProbe® is the solution for advanced probing requirements. It has been designed to ensure a specific contact force as well as maintaining it over the whole lifetime. The lamella technology allows the probe to be much shorter than a conventional buckling beam and therefore is used in applications which require advanced frequency requirements. Due to the flexibility of the probe design it is possible to equip a probe head with probes in different geometries depending on their specific function.

Benefits

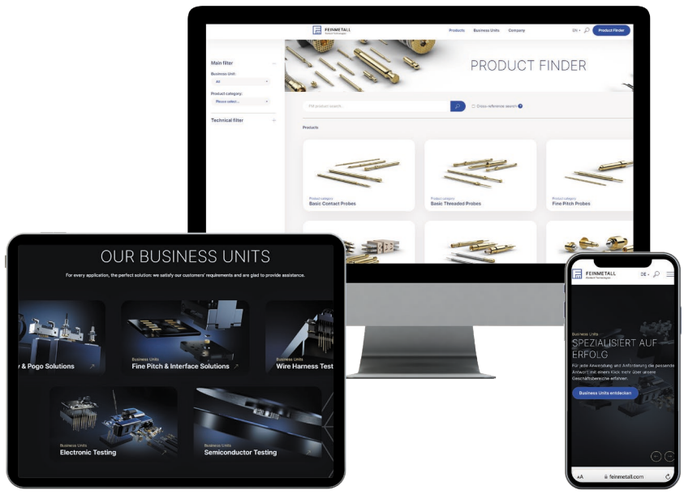
- FEINMETALL patented lamella design
- Shortness of the probe excellent for frequency-dependent applications
- Product families with different geometries in the same probe head
- High design flexibility in terms of defining exact contact force
- Stable contact force over the lifetime as well as a low contact resistance





Specifications at a glance

Min. pitch of the DUT	Down to 60 µm
Max. active area	Up to 105 mm x 105 mm
Capable temperature range	From -55°C to 180°C
Current carrying capability at RT	Up to 1300 mA
Contact force at rec. OD	From 2.8 cN to 5.4 cN
Bandwidth analog @ -1dB limit	Up to 30 GHz



FIND US ONLINE

Our website

Welcome to the digital world of FEINMETALL. We offer you innovative contacting solutions that exceed your expectations. Visit our website at FEINMETALL.com and be inspired by the wide range of services customized to industry-specific needs. By using innovative technologies and advanced manufacturing methods, we deliver products of the highest quality and precision that can be used in various industries such as automotive, electronics, aerospace and medical. Our dedicated team is on hand to understand your requirements and help you to find the best solutions to your challenges.

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