

OUR PHILOSOPHY AND MISSION



F & K Delvotec's goal is to deliver state-of-the-art bonding technology and top-quality equipment to the worldwide microelectronics industry. We constantly improve our equipment to give you a head start over your competition. Continuous investment in product innovation and training for our employees increases the accumulated know-how and work in your favor as well as ours. Thanks to the long-term R&D partnerships we have formed with our customers we are always on top of the latest requirements and trends in bonding technology.

This advantage is passed on to you by incorporating the knowledge and experience we have gained into our bonding systems, lowering the total cost of ownership.

We strive to be one of the world's leading suppliers of semiconductor assembly technology with the best service staff and top organization for optimum customer support worldwide. Working in a healthy environment, our employees are motivated and committed to create a high-performance product, always keeping you one step ahead of your competition.

F. Farassat
Dr. Farhad Farassat



Rated best wire bonder supplier three years in a row.

STATE-OF-THE-ART PRODUCTS FOR ALL-ROUND SOLUTIONS

F & K Delvotec offers more than bonders. We provide products and services for perfectly matched, comprehensive and highly efficient bonding processes. From pilot to full-volume production, with convenient retooling options. F & K Delvotec adapts the machines seamlessly to your processes and smoothes the way to customized handling.

The name F & K Delvotec stands for high-value products, because every development is based on in-depth scientific know-how: with a homogeneous technical platform providing one-stop shopping for individually tailored quality solutions for all applications.

One base for all bonding technologies

- Gold ball bonder
- Thin wire wedge-wedge bonder
- Deep access bonder
- Heavy wire wedge-wedge bonder
- Heavy ribbon bonder

Consultancy, process development and optimized solutions

At F & K Delvotec a highly specialized consultancy, development and applications team ensures optimum support for you, with hardware and software from our own development department – with particular emphasis on thorough consulting with know-how transfer right from the start.

Compatible with the future in all aspects

The F & K Delvotec innovation leadership ensures better bond quality and all-round perfect products for customers. You benefit from production security resulting from high availability and long productive life at a low investment level. With excellent cost of ownership and high future compatibility, in particular with product change benefiting from easy machine retooling.



Staying Ahead in Bonding Technology

Advanced Production Equipment

- Single- and Double-Head Machines for extraordinary reliability
- Designed for highest productivity with low cost of ownership
- **Guaranteed high process stability without losing flexibility**
- The only "All-In-One" bonder supplier on the market



CONVERTIBLE BONDHEADS

GOLD BALL BOND HEAD (62000)

- 17 to 75 µm wire diameter
- Bond force programmable from 10 to 250 cN
- 90° wire feed, 2" wire spool
- Negative flame-off for different programmable ball sizes
- Stitch-on-ball and security ball function
- Bumping function to place balls with repeatable, constant tail length

THIN WIRE BOND HEAD (64000)

- 17 to 75 µm wire diameter
- Bond force programmable from 10 to 250 cN
- Standard wire feed, 45° wire feed angle (optional: 60°)
- 2" wire spool

DEEP ACCESS THIN WIRE BOND HEAD (64000DA)

- 17 to 75 µm wire diameter
- Ribbon up to 250 µm x 75 µm
- Bond force programmable from 10 to 250 cN
- 90° wire or ribbon feed
- 2" wire spool
- Single wire clamp, cascadable with support clamp for secure tear-off

HEAVY WIRE BOND HEAD (66000)

- 100 µm to 600 µm wire diameter
- Bond force programmable from 50 to 2000 cN
- 90° wire feed angle
- Snap-on wire guide (patented)
- 3" and 4" wire spool
- Quick-exchange cutter blades

HEAVY RIBBON BOND HEAD (66000HR)

- Ribbon up to 2000 x 300 µm
- Bond force programmable
- Up to 4000 cN (optionally higher)
- 90° wire feed angle
- Quick snap-on wire guide
- 3" and 4" wire spool

TAILOR-MADE SOLUTIONS

INPUT / OUTPUT LIFT

- Fully automatic magazine to magazine
- Single and multi magazine handling
- Stand-alone multi-language programming
- Different magazine widths without conversion

FULLY AUTOMATIC INDEXING SYSTEMS

- Standard or customized indexer systems
- Unheated or heated
- Fully automatic transport
- Including stopper system and anti-crash sensors
- Customized clamping units (vacuum and/or mechanical)
- Heated pre- and bond-station
- SMEMA-Standard

MANUAL WORKING TABLE

- 4 x 4" up to 10 x 8"
- Unheated or heated
- Vacuum and/or mechanical clamping
- Standard adapter for flat substrate
- Customized adapter plate

QUALITY ASSURANCE

- Bond Process Control (patented)
- Impedance Check
- Online non destructive Pulltester
- Inline non destructive Pulltester
- Tool-Inspection-Unit

SOFTWARE / GRAPHICAL INTERFACE

- Multi window interface
- Easy access and programming of wires and loops
- Group definition and repeat capabilities
- Freely programmable loop shapes
- Different user access levels
- Bond head library for quick change
- Customized software solutions

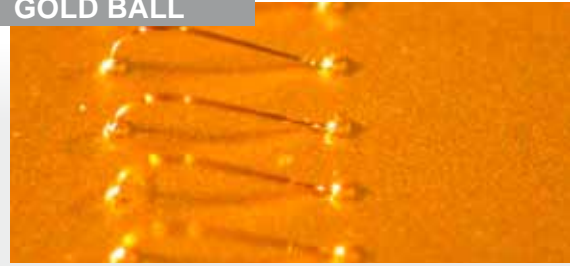


Machine	Dimensions (HxWxD)	Weight
G5 Single Head	1777 mm x 620 mm x 1273 mm	600 kg
G5-2 Double Head	1777 mm x 1380 mm x 1273 mm	1500 kg

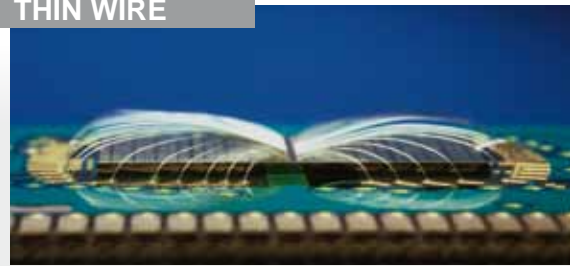
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APPLICATIONS

GOLD BALL



THIN WIRE



THIN WIRE DA



HEAVY WIRE



HEAVY RIBBON



MACHINE SPECIFICATION

Bond Area

- 254 mm (X) x 153 mm (Y)
Optional: 254 mm (X) x 204 mm (Y)
- Z-Axis: = 40 mm, optional 60 mm
- P-range: = +/- 200°

Work Height

- Adjustable (850 mm – 1050 mm), meets SMEMA requirements (940 mm – 965 mm)
- Optional elevated working table up to 270 mm

Safety Standard

- CE Certification

Monitor

- Flat Panel Color 19 inch

Microscope

- Stereo zoom with adjustable work distance
- Adjustable light intensity

Electrical Supply

- 200 – 240V -5% to +10%, optional 100 – 120 V -5% to +10%
- Single Phase 50-60 Hz

Power Consumption

- Minimum 0.6 kVA
- Maximum 3.2 kVA

Compressed Air

- 5 – 8 bar

Vacuum

- Minimum < - 0.8 bar

Positioning Accuracy

- Repeated positioning +/- 5 µm @ 3 sigma

Digital Ultrasonic generator

- 30 kHz – 250 kHz

Transducers

- 40 kHz – 145 kHz

Wire Spool

- Fully automatic

Control

- Compact PCI, Unix-based real time multi-tasking operating system

Pattern recognition

- Travelling CCD camera
- Cognex® 8000 (PatMax, Pat Quick)
- Resolution better than 0.1 Pixel

Lighting

- Program controlled type & intensity
- Direct red LED
- Other colors optional

Traceability

- Range of standard options for export of quality control data

Network Capability

- TCP/IP network standard built in, allowing remote access for diagnosing service and software maintenance

ABOUT F & K DELVOTEC

F & K Delvotec is one of the worldwide leaders in the field of Innovative Wire Bonding Technology. Established in 1978 with headquarters in Ottobrunn near Munich, F & K Delvotec is the only supplier able to support customers throughout the complete range of bonding technologies. With the G5 (5th generation) wire bonders F & K Delvotec supplies advanced technologies for the latest bond processes providing customers with a competitive edge and new potential for success.

Whatever bonding is required F & K Delvotec offers a suitable tailored solution – from bond process development through to complete automation and continuous Quality Assurance.

Our broad portfolio of high-tech products, specialised bonding applications and support services ensures satisfaction of customer's production requirements from a single source. A worldwide customer base is supported around the clock from our headquarters in Germany and our subsidiaries in Singapore and California, as well as our distributors in each country.

Over 30 patents in the field of bonding technology testify to our continuing emphasis on innovative technology. F & K Delvotec's Digital Ultrasonic System, Transducer Test System, Bond Process Control, Inhead Pulltester and Online Pulltester are among the advanced components and features earning high praise and positive acceptance in the market.



WEEE-Reg-No.:
DE 30114933



ISO 9001:2008

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