

To the limits. And beyond.

Breaking New Ground since 1986

Since its early beginnings in 1986, Datacon has been breaking new ground in the IC manufacturing and packaging industry. Datacon's main area of expertise is the development and production of high-precision assembly equipment for the microchip industry. Leading microelectronics companies worldwide, such as Bosch, Fairchild, Siemens, Philips, Infineon, ST Micro, Skyworks and Asian subcontractors like Amkor, ASE and STATSChip-PAC are among Datacon's customers.

Using a highly adaptable platform concept with modular systems, Datacon's product range offers a large degree of flexibility and modularity for the IC manufacturing industry. Datacon is one of the leading and most

innovative providers of assembly equipment for the semiconductor industry and is ahead of the field when it comes to new technologies such as flip chip and RFID (non-contact data transmission). Offering dynamic, flexible concept strategies and latest technologies, Datacon is known in the die bonder market as a solution supplier and an essential research partner for the semiconductor industry worldwide.

Serving the Semiconductor Industry

Datacon has been part of the Dutch Besi group (BE Semiconductor Industries N.V.) since early 2005. Besi and its subsidiaries form a leading group of manufacturers of semiconductor die sorting, flip chip and multichip die bonding, wire bonding, packag-

ing and plating equipment, for both array connect and leadframe assembly processes. Our technologically advanced equipment and integrated systems are used principally to produce semiconductor assemblies or "packages", which provide the electronic interface and physical connection between the chip and other electronic components and protect the chip from the external environment. Our innovative systems offer customers high productivity and improved yields from defect-free devices at a low total-cost-of-ownership.

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8800 FC Quantum

The Reference
in Flip Chip Bonding

Capability and Flexibility

Innovation and flexibility ... forward-looking concepts and strategies ... a strong focus on the success of our customers – these are the keys to Datacon's leading position in the flip chip packaging market. The Datacon 8800 flip chip platform provides all features needed to cope with the challenges of today's flip chip production and the demands of tomorrow, while at the same time offering easy, hassle-free machine operation.

Flip Chip Challenges

For flip chip production highly reliable equipment is needed. Today's cutting edge packages often contain thousands of electrical interconnections. It takes only one of these interconnections to fail and the package to be rejected. Flip chip assembly equipment needs to provide stable and reliable production runs over extended periods of time to guarantee high yield and low cost. Datacon, as the leading vendor, has optimized its flip chip equipment since 1995 in cooperation with all leading customers and material suppliers to provide a vast variety of future-proof options – while still allowing swift, straightforward operation.

From time to time in this young technology, sudden 'technology shifts' of existing products from wire bonding to flip chip technology occur, driven by new developments and price changes in raw materials. In these cases, a machine is needed, which allows for a fast, error-free ramping of production volumes without any delays and risks. The Datacon 8800 platform is developed to handle such special challenges.

High-volume Flip Chip Production

The 8800 dedicated flip chip platform offers a solution for high-volume flip chip production combining high accuracy with high flexibility. With its dual bond head system, its accurate sub-systems and its enhanced fully automatic calibration, this machine supports all mainstream flip chip assembly processes.

Inside the 8800 FC Quantum, simultaneously working systems provide a remarkable performance of up to 10,000 UPH, while making no sacrifices regarding process stability and reliability. For operator-independent machine calibration a software-controlled fully automatic calibration routine is available.

Flip Chip Bonder 8800 FC Quantum

Capability and Flexibility for High-Volume Production

High Accuracy, High Speed – Unbeatable Cost-of-Ownership for Flip Chip

- Exceptional accuracy of $\pm 10\mu\text{m}$ @ 3 Sigma at highest speed
- High productivity, highest yield
- Operator-independent quality by fully automatic machine calibration

High Flexibility – No Compromise for any Production Process

- Capability to handle any flip chip size
- No restriction on substrate type (lead frames, strips, panels, wafers)
- Ready for ultra thin die handling

High Reliability – Consistent Quality, Minimal Risk

- Field-proven, reliable machine concept and production process
- Matching the requirements of IDMs and subcons (90% market share)
- Unbeatable benchmark for flip chip assembly equipment



