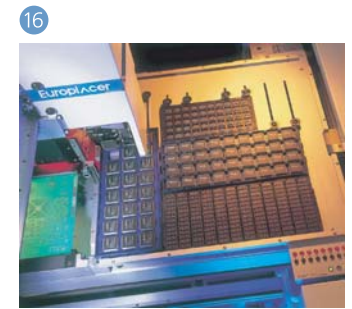### Feeder trolleys (14)

Trolley-mounted feeders provide rapid mass changeover, the mass trolley holds any combination of tape, belt, vibrating base plate feeders.

Belt feeders (15)

The belt feeder is the flexible solution for components in sticks. It allows for the distribution of SO, SO medium, SO large and TSSOP type components. It utilises a base unit with the ability to fit feeder sticks into eight positions and gives feed rates approaching that achieved on tape feeders.

Matrix tray holders (16)

Different types of matrix tray holders are available on the Europlacer range of equipments. They allow trays inside machines without reducing feeder capacity.

Auto tray loader (17)

The auto tray loader (or sequencer) is a vertical assembly storing up to 30 tray levels and each matrix tray is fed to the pick up position. The auto tray loader is wheeled to the machine in the same way as a tape trolley or feeder trolley. It can be programmed offline or online.

Label feeder (18)

Developed in conjunction with HOVER DAVIS, the world leader in component delivery systems, the EUROPLACER's programmable label feeder is the flexible solution for automatic label placement.

Solder ball feeder (19)

The solder ball feeder provides a low cost solution for solder ball assembly. By utilising exclusively patent protected techniques developed in conjunction with Novatec France, the feeder enables reliable assembly of solder balls as part of the standard surface mount pick&place process.

Feeder storage unit (20)

Feeder storage units may be linked directly to the system's host, wireless with the Wi-Fi option or via an RS232 link.

Feeder set-up help

This option allows preparing completely off-line your next product(s) production while the machines are running other jobs. It will indicate and locate parts needed, not needed or missing on the programming station and on the feeders using leds. The complete loading plan of machines can be verified before starting the product production allowing extremely fast and 'right first time' changeovers.
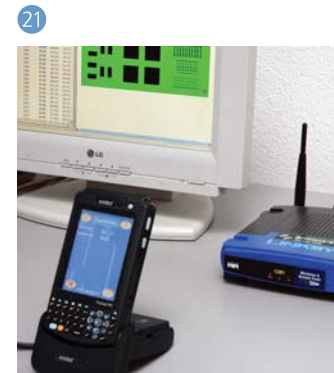
Wireless communication

The storage zones and the trolleys can be equipped with a Wi-Fi module. This function improves the powerful offline set-up help software, facilitates component search from the programming station regardless of its location in the factory and reduces product changeover times.

Micro terminal pocket PC (21)

Using a Microsoft Windows© operating system, the PDA is used for feeder programming using an RS232 link or a wireless Wi-Fi connection (option). It includes a bar code scanner as a standard.

Europlacer designs and manufactures a comprehensive range of highly flexible SMT placement systems for the global electronics industry. The Europlacer business unit is the largest in the Blakell Europlacer Group: a privately owned group of companies that has evolved and grown from successive acquisitions. As one of the world's fastest growing SMT placement system manufacturers, Europlacer attributes its growth to a commitment to its core values of customer-driven product innovation and integrity in all its business activities.

europlacer

www.europlacer.com

Adaptable Business Platform

integrated intelligence™

Integrated Intelligence™

The strength of Europlacer lies in its capability to provide innovative solutions without degrading the extraordinary flexibility that made its success. This provides a truly Adaptable Business Platform™. The Integrated Intelligence™ concept is based on Intelligent feeder and Intelligent machine which integrates with external systems.

The Intelligent Feeder was developed in 1990 by Europlacer and is now adopted by most manufacturers. The feeder records the component identity, inventory count and pickup correction so the machine can confirm it picks the correct component reliably.

As the creator of intelligent feeders Europlacer has designed its machines specifically to be integrated with the feeders rather than treating them as "bolt on". To benefit from intelligent feeders the machine must be able to enable high throughput when feeders are not in optimised positions. The Europlacer turret head and machine architecture are critical to enabling this potential to be released. Europlacer machines have been created with this principle – they have Integrated Intelligence™.

This technology is utilized across the whole range of Europlacer's SMT placers which have been designed to optimise placement performance when feeder positioning is sub-optimised. Central to this is the rotary turret technology which (because it does not depend on the multi-picking required by "pipette" heads to achieve speed) can cope with feeders in any position with limited reduction in placement rate.

The Europlacer turret head provides extraordinary flexibility resulting in a truly Adaptable Business Platform™

Europlacer's intelligent feeders are designed to be integrated into any system

Graphical user interface (1,2)

Intuitive Operator Interface to machine. More information displayed pictorially gives faster access without complication for the operator.
Europlacer's graphical programming software features easy to use tools for creating ready to run assembly programs helping users to maximise efficiency and enhance quality.

Component Outline Auto-generation (3,4)

The new graphical user interface allows users to automatically create any type of new package: chips, QFPs, BGAs and odd-forms in less than a minute. This analysis can be done on the machine itself or on the offline station. A test routine will validate the component, and then it can be run immediately in production.

3D³⁵ Adaptive Positioning System

The 3D³⁵ is an innovative Adaptive Positioning System that is used on the pick and place machine to optimise picking and placement of components. The turret head is fitted with an integrated high accuracy contact sensor, allowing the machine to know precisely when it contacts a component or the board.

Component Pick Up is compensated in X, Y and Z for each component type individually. During picking sequence, the 3D³⁵ system compensates for variation in picking altitudes. The system eliminates the need for manual picking adjustments. By automatically adjusting the pick height, there is less chance of nozzle bounce and hence, less miss-picks. Each feeder location picking height is automatically adjusted reducing the picking errors, therefore giving greater reliability. Feeders incorporate their own fiducial mark enabling fast automatic calibration of pick-up position when loaded to the machine. Additionally, this key feature provides extremely fast product changeovers.

Thanks to the Integrated Intelligence™ concept, feeders can be fitted anywhere on the machine without any dedicated feeder slot. When fitted to the machine they will be instantly detected and the machine will then scan for its exact location

The 3D³⁵ system also compensates for board bow and twist on placement. Placement height is adjusted to reflect a similar board height to adjacent components. The placement force is optimum, even on a warped PCB. More precise placement height gives greater placement accuracy. The automatic Z placement adjustment is an innovative feature that divides a board into zones. After a component is placed in one zone, the possible correction will apply on this zone. If the correction is significant, a partial correction will be done on the adjacent zones, increasing reliability. There is no de-rating and the automatic optimisation of Z travels results in improved throughput and speed.

The 3D³⁵ offers users numerous benefits, including stress less and smoother axis movement with continuous adjustments in real time. It allows a perfect picking in X,Y and Z on each individual feeder location. The placement force is optimum, even on a warped pcb.

Total Traceability™ (5)

Total Traceability allows users to introduce full traceability into their production system as an integrated solution.

This intelligent system provides full data logging for component-level build traceability, generating an ASCII format file for each board produced. The pcb camera reads board code and the Intelligent Feeders hold batch data. This feature is both bar code and data matrix supported. The resulting archives can then be processed by the production monitoring software PROMON or exported to a proprietary traceability analysis package.

It permits automatic program selection if required, the camera reads the product name, then the new program is loaded, giving instant change-over!

Promon (6,7,8)

Production and machine performance feedback is essential in today's manufacturing environments. Production quantity data is necessary for management and reporting purposes, whilst performance data is crucial to allow analysis of system efficiency levels if optimum process quality and productivity are to be achieved.

PROMON is the 'production instrument panel' for your Europlacer assembly machines, providing an easy to use single source of production management data. It continually collects and stores all of the production data from your machine, line or lines, allowing viewing and analysis locally or remotely in real time (Live Mode). Additionally data can be analysed or for a selected period (Statistical Mode). In addition, PROMON is the perfect tool to analyse and search your traceability data.

Feeder options (9)

Whether using quick-load single feeders or full feeder trolley changeover, every feeder is fully programmable with component and inventory data. Once the feeders are loaded this information is automatically recognized by the machine. This assists the operator to make set-up and changeover very fast and straightforward.

Tape feeders (10)

NT tape feeders are available in a double 8mm version and in single channel units for 12 to 88mm tape widths.

Tape trolleys (11,12,13)

Each trolley has 33 channels and may be equipped with elements for any combination of 8, 12, 16 and 24mm tapes.