### Slurry Preparing

**Roller benches**
**BL - series**
- adjustable rotation speed and time
- adjustable to different jar sizes

**Models:**
- 1, 3, 6, 8 Max. number of jars on rubber rollers
- Roller bench

### Tape Casting

**Laboratory tape casters**
**L-series**
- for laboratory or small production volume
- casting on PET film
- casting speed control
- gravity slurry feeding
- tape winding

**Compact tape casters**
**C-series**
- compact size requiring minimum floor size
- suitable for solvent and water based systems
- high accuracy in thickness control
- automatic tracking of carrier film
- automatic slurry feeding
- applicable for up to 150 micron tape thickness

### Horizontal Drying Zone Tape Casters

**H-series**
- thickness 5-500 microns (0.2 - 2 mils)
- advanced drying regimes possible
- high accuracy in thickness control
- automatic tracking of carrier film
- automatic slurry feeding

### Steel Belt Tape Casters

**S-series**
- suitable for price sensitive applications
- different drying regimes
- high accuracy doctor blade
- automatic tracking of steel belt
- automatic slurry feeding
- tape winding

### Tape Blanking

**Automatic green tape blanker**
**SC-series**
- blanks single sheets from a roll of green tape
- suitable for freestanding or Mylar based tapes
- trims sheet edges
- punch registration holes (option)
- transfers blanked sheets to a magazine
- sorting blanked sheets option (Vision, thickness)

### Mechanical Punching and Laser Drilling

**Punching machine**
**PAM-series**
- punch holes for vias and registration in green tape
- punch cavity rectangle or square holes
- manual, CAD, McDrill and DXF file input
- tool breakage detection
- automatic sheets re-alignment
- vision inspection option
**Mechanical punching and laser drilling**

**Punching and laser drilling machine**

**PLM-series**
- Punch or drills holes vias or registration holes in green tape, either by mechanical punching or laser drilling
- Punch rectangular or squared cavities mechanically, or cuts any shape by laser
- Manual, CAD, NCDrill and DXF file input
- One laser head + up to 4 punching tools possible
- Vision inspection option

**Laser drilling and cutting**

**LM-series**
- Drills vias or registration holes in green tape
- Cuts any shape by laser
- CAD, NCDrill and DXF file input
- Two laser types available: IR-fiber or UV
- Vision inspection option
* Material testing is recommended prior laser type selection

**Screen printing**

**Screen printers**

**P - 200/400 series**
- Economical, production proven manual screen printers
- Programmable printing parameters
- Print/print, print/flood, flood/print, on contact print, stencil printing, via filling
- Extensive options available

**Screen printers**

**P - 250/450 series**
- Newly developed screen printers
- Fully programmable printing parameters, no mechanical settings needed
- Print/print, print/flood, flood/print, on contact print, stencil printing, via filling
- Printing areas up to 250x250mm or 450x450mm
- Automatic versions available

**Automatic screen printers**

**P-series**
- Automatic sheet handling, printing, drying process
- Two models available to meet all requirements
- Fully programmable printing parameters
- Print/print, print/flood, flood/print, on contact print, stencil printing, via filling and screen cleaning
- Extensive options for demanding advanced technology applications

**Drying**

**Drier**

**SD, SDI, DIR-series**
- Drying sheets, substrates, wafers, hybrids
- Different designs for different purposes
- SD-type, high air flow / temperatures up to 120 deg.C
- SDI-type, for thick film pastes drying regimes
- DIR - fast IR drier
- Height adapted to Keko screen printers
- Custom designs available
**Cover sheets making**

**CSM-series**
- Makes cover sheets directly onto carrying palette or paper from a roll of tape
- Glues the cover sheet to custom carrying palette
- Sheet blanker and press in one unit

**Stacking press**

**SM-series**
- Simplified manual stacker
- Uniaxial lamination possibility
- Registration can be done by registration pins
- High pressing force up to 70 tons
- Option: Programmable pressing curve

**Universal stackers**

**SW & SWU-series**
- Manual or automatic stacker for low to high volume LTCC, HTCC or other similar component production
- Suitable for tapes with or without carrier film
- Process on vacuum plate or carrier block
- Possible to start building stack from top or from bottom
- Vacuum press for bubbling sensitive foils
- SWU type is suitable for more demanding production requirements and has more options available compared to SW type

**ST-series**
- Automatic sheet loading from cassettes
- Stacking on to carrier palette or vacuum
- Automatically removes carrier film first, than stacks
- Sheet pre-registration
- Automatic vision alignment
- Suitable also for very high layer count (MLCC, piezo)
- Not suitable for tapes with punched holes

**SB-series**
- Automatic sheet loading from cassettes
- Carrier palettes automatic loading / unloading
- Pressing first than removing carrier film
- Pre-registration
- Automatic vision alignment
- Suitable for high volume production
- Suitable for various components (up to 50 layers stack), especially MLCI

**Printing & stacking**

**PAL-series**
- Universal system for components up to 100 layers
- High productivity = low cost per component
- Suitable for smallest components size
- Uses carrier film tapes, freestanding tapes and individual sheets
- Special configurations like: several printers
- Several driers
- Sheet vision alignment
- Other special requirements

Contact supplier for particular application
Laminating

**Uniaxial thermal press**

**TPR**
- Multiple stacks are laminated simultaneously
- High stack lamination possibility
- Simplified versions available
- Easy to operate, quick product turn-around time
- Rigid, compact design takes little floor space

**Isostatic lamination press**

**ILS**
- Up to 40 stacks/substrates laminated simultaneously
- Wide selection range of bar size
- Easy to operate, quick product turn-around time
- Rigid, compact design takes little floor space
- Stores up to 99 pressure programs

Cutting

**Cutting machine**

**CM**
- Cuts the most difficult high thickness green Ceramic Ware
- Automatically positions knife with high accuracy
- Automatically finds cutting markers
- Adjustable speed and cutting depth
- High productivity due to high cutting speed

**Edge Trimmer**

**ET**
- Simple, flexible and accurate
- Bar Edge trimming and splitting possibility
- Laser pointers installed for precise block positioning

Machining with automatic alignmet

**CNC Milling / drilling**

**CNC - M / D**
- Cuts any shape out of green ceramic
- Drills holes
- Automatically positions bar by vision system
- DXF file conversion
- Vacuum bar fixing
- Two spindle simultaneous operation option (drilling version)

Termination

**Dipping machine**

**DM**
- Fully programmable dipping conditions ensure accurate and excellent termination
- Simple programming, more than 50 dipping programs can be stored
- Truth chip leveling mode ensure uniform dipping height
- High speed, high accuracy servo motors positioning
- Easy cleaning features

AOI

**Vision inspection**

**KVI**
- Designed for inspecting green ceramic sheets prints and punched holes
- Inspect wet and dry prints, via holes
- High inspection resolution
- Detects shorts, opens, neck downs, mouse bites, screen stretch, screen misalignment, contamination
- Inline or offline version available
Custom designed machines

One of Keko Equipment strongest part is custom designed equipment based on custom requirements and our long term designing and machines production experiences.

Many customers are satisfied with our innovative solutions adapted to their needs.

Experienced production team is guaranty for quality and success.

Contact us, if you are looking for custom solution, which you can not find on the market.

Materials and Technology

Based on experiences and cooperation with institutes in field of material and technology development, Keko Equipment new strategy is offering complete solutions for multilayer ceramic products, including compatible materials, technology and machines.

Please contact Keko equipment for particular solution.

Vacuum generating

Vacuum pump

VP-series

- For vacuum supply
- Consist of: vacuum pump, reservoir, electrical control with vacuum level switch switching pump on / off, vacuum filter

Suitable to connect one to several machines requiring vacuum connection.

Measuring

Measuring microscope

- Travel(X, Y) : 300 x300 mm Z : 120mm
- Resolution : 0.001mm Linear scales in 2-axes
- Request special catalog

For measuring prints, stencils, punched sheets and final product and many more.

Our machines are developed, designed and produced in our facilities bellow