### Slurry Preparing

**Roller benches**

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

**Models:**
- BL-X
  - 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 or other carrier
- 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

### 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
**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

**Roll to roll screen printers**

**RTP-series**
- Unwinding tape from roll, printing, drying, winding
- High productivity
- Up to two printers with automatic alignment possible
- Print vision inspection option available
- Fully automatic run
- Most suitable for products like: MLCC, MLCV, fuel cells, printed electronics, etc.
**Drying**

**SD, SDI, DIR - series**
- drying sheets, substrates, wafers, hybrids
- different designs for different purposes
- SD-type, convection drier, high air flow, temperatures up to 120 deg.C
- SDI-type, for thick film pastes drying regimes (ceramic IR heaters + hot air)
- DIR - fast IR drier (IR lamps installed)
- 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 taking press in one unit

**Manual stacker / press**

**SM / SMP - series**
- Simple manual stacker (taking times up to 1 minute)
- SMP type has uniaxial lamination possibility,
  SMP type replaces previous TPR press
- SMP pressing time up to 99 minutes
- 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 compare to SW type

**Stacking**

**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 MLCC
**Printing & stacking**

- 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

**Printing and stacking machine**

**PAL - series**

- Lamination in a cavity
- High stack lamination possibility
- Simplified versions available
- Rigid, compact design takes little floor space

**Uniaxial thermal press**

**TPC**

- Pressing force: L - low up to 400kN
  H - high up to 700 kN
- Max. bar size in inch: 4 or 6
- Thermal Press - pressing in a cavity

**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 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

**CNC Milling / drilling**

**CNC**

- Cuts any shape out of green ceramic
- Up to 10 x 10 inches machining area
- Automatically positions bar by vision system
- DXF file conversion
- Vacuum product fixing
- Automatic tool changer (8 tools)

Contact supplier for detailed specification!
**Termination**  
**Dipping machine**  
**DM**  
- Fully programmable dipping conditions ensures accurate and excellant 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  

**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  

**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.  

**Custom designed equipment**  
One of Keko Equipment strongest part is custom designed equipment basted 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.  

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

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