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CPS APPLICATION NOTES FOR THE STONE PROCESSING INDUSTRY

There are two main applications for the CPS in the stone industry:

- PLACING FIXTURES AND PARTS ON CNC EQUIPMENT
- MARKING STONE SLABS FOR SAWING BASED ON DATA CONTAINED IN ELECTRONIC TEMPLATE FILES

For CNC Routers

For CNC routers, the CPS Laser Projection System can project an image which represents the tool path, part blank or vacuum hold down fixture locations. This allows you to: Project hold down fixture locations to speed up setup and ensure that no fixture is located where it will cause damage to, or be damaged by, the router tool

- Project part blank shape to eliminate the time consuming step of using the router head to place part locating pins
- Ensure that the correct blank has been chosen.
- Project final part shape to show the location of internal cuts such as sink cutouts and judge effects of local features or defects in the stone
- Contain all these elements in a single data file, with each item on a separate layer, making it possible to project each element separately while still maintaining perfect registration between all elements

Similar advantages are seen when projecting patterns for use with CNC waterjet machines, allowing you to: Preview and modify exact cut path before processing

- Improve process speed
- Eliminate errors
- Increase user safety

For Projection of Template Files for Bridgesawing

Many shops are using electronic templating systems to create data files defining the required geometry for the job. This increases speed, accuracy and efficiency. However, when the measuring team returns to the shop, they carry with them no physical template with which to mark the stone for cutting. How then do you transfer the required shape to the material effectively? Creating a wooden template requires time and material. Printing a full size vinyl template requires an expensive full scale printer and incurs thousands of dollars of material costs each year. And such templates are awkward to handle and difficult to lay out accurately. Relying on printed, scaled drawings with dimensions requires time consuming measuring and marking which can lead to potentially serious errors.

A much better method is to project the part geometry at full size directly onto the stone through the use of the laser projector system. Such systems:

- Use industry standard DXF files
- Output the geometric shapes as bright, highly visible light patterns directly on the surface of the stone
- Allows an operator to quickly mark the end and corner positions of the required cuts so that these marks can be easily aligned with the bridge saw's laser indicator for accurate sawing
- Allows the projected image shapes to be moved and rotated through the use of simple software controls
- Help to make optimum use of the stone's natural characteristics and shape in relation to the required finished part, without having to move the heavy stone itself
- Allow simultaneous projection of multiple template files with independent positioning of each file in relation to the others which allows manual "nesting" of multiple parts to make the most efficient use of the available surface area