



W 8.6.2 DIE SHOP AREA (QMS & SQF)

REV.: D
DATE: 08/14/2023
OWNER: Quality Manager.

PROTOTYPE SAMPLES

Specifications or physical samples supplied by the customer are received by Die-shop Supervisor to recreate pre-production samples in the CNC table.

An ID control number is assigned and stored in the Die-Shop database and ERP, Prototype samples are given to Customer Service Representative who in turn will forward them to the customer for approval.; Manufacturing of the die, the scrapper and the blanker will follow.

During **F 8.2.1.1 NEW ITEM MEETING RELEASE** the layout is determined as well as the location of the cutting blades for scrap.

DIE MANUFACTURING

Open Die-shop database and select the ID control number and the information that corresponds to the product.

Information is processed in Gerber (CNC-Router) machine, which cuts the wood according to design. Recommended wood is 5/16 " White Birch for the base and lid **and/or in send the design to laser cut machine (Lasercomb).**

If design is processed in Gerber (CNC-router) machine, secure the base and lid with glue ensuring that registration points match and avoiding that the cutting channels are misaligned. Place the die into the vacuum machine with a minimum of 15 PSI for 20 minutes for proper adhesion.

If die is processed in the Lasercomb, secure the material with the clamps.

Once the wood is already adhered, go to the ~~Ultra Bender machine~~ **rule bender machine** and open the file again to produce knives and corresponding scores. Make sure the blades and scores, match the digital file. Review visually to ensure that all panels, flaps, scores, angles, cuts, are correct.

Steel rule Knives and scores will be installed in stages to ensure that they are in accordance with relevant design measure (ensure no light between blades or installation that force or bents them). During installation make sure they are well connected avoiding "Natural Nicks".

Once all **steel rule blades** installed follow with placing ejector. Rubbers are placed only on the **cutting rule blades**; Do it on both sides, inside and out.

Check that no imperfections and hidden knives in the back of the die if processed in **Gerber CNC machine**. Brush with electric grinder for better finishing.

Finally, identify the die with the ID control number using permanent marker, and update the ERP at Pre-production> Dies.



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Plot Vinyl for Pre-press. Plot spot sheet for cutting. If necessary, cut printing coating blanket.

SCRAPPER MANUFACTURING

Open Die-shop database and select the ID control number and the information that corresponds to the product.

Recommended wood to use is White Birch 1/2 " for Lower and 5/8" to Upper tool. Run program at Gerber CNC-Router machine as well as support bars. **Upper tool can also be processed on Lasercomb machine.**

Load upper stripping tool to hybrid setter. Add all quick locks. Identify both tools with corresponding ID control number.

Compare Lower and Upper against the die, making sure that all scrapping areas match. Sand both components making sure they are **debris-free well-polished**. Add the support bars to Female component.

BLANKER MANUFACTURING

Open Die-shop database and select the ID control number and the information that corresponds to the product.

Recommended wood to use is White Birch 5/8 " for both the lower and upper tools. Run program at Gerber CNC-Router machine. Compare base against the die block, ensuring that all areas to blank match. Sand both components making sure they are well polished.

If lower tool takes a BSI grid. Run/ Bend the appropriate grid material. Insert on lower tool and use either TIG or MIG welders to secure grid to lower blanking tool.

To the upper blanking tool add Quick Lock and lock to the front edge of the die. Secure the base with the corresponding block using spacers. Identify both components with corresponding ID control number.

STORAGE AND CONTROL

After each production run the die, the scrapper and the blanker are returned to the storage area by production personnel.

Die shop operator makes an assessment of the status of the different components of the "tooling" and based on the findings he/ she will proceed to repair or stored directly.

Storage uses an alphanumeric system for better control and location of Tooling's; location is registered in ERP.

REFERENCE OF DOCUMENTED INFORMATION

- **F 8.2.1.1 NEW ITEM MEETING RELEASE**